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Environmental Restoration

300 Moodie Drive, Ottawa

Transportation Impact Assessment

300 Moodie Drive, Ottawa Transportation Impact Assessment

Prepared By:

NOVATECH

Suite 200, 240 Michael Cowpland Drive Ottawa, Ontario K2M 1P6

April 2018

Novatech File: 118007 Ref: R-2018-014



April 16, 2018

City of Ottawa Planning and Growth Management Department 110 Laurier Ave. W., 4th Floor, Ottawa, Ontario K1P 1J1

Attention: Ms. Rosanna Baggs

Project Manager, Infrastructure Approvals

Dear Ms. Baggs:

Reference: 300 Moodie Drive

Transportation Impact Assessment Report

Novatech File No. 118007

We are pleased to submit the following Transportation Impact Assessment report in support of a Site Plan Application for 300 Moodie Drive, for your review and signoff. The structure and format of this report is in accordance with the City of Ottawa Transportation Impact Assessment Guidelines (June 2017).

A PDF version of this report and copies of the electronic software files are provided on the enclosed disk. If you have any questions or comments regarding this report, please feel free to contact the undersigned.

Yours truly,

NOVATECH

Brad Byvelds, P. Eng.

B. Byvelds

Project Coordinator | Transportation/Traffic

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EXECUTIVE SUMMARY

This Transportation Impact Assessment report has been prepared in support of a redevelopment of the property located at 300 Moodie Drive. The subject site is currently occupied by an auto repair shop, auto parts store, and a Salvation Army thrift store.

The proposed redevelopment will include a 135-suite hotel and 5,000 ft² commercial retail unit, and the layout will be modified to accommodate more parking (increasing from approximately 80 to 156 spaces).

The subject site is designated as 'Urban Employment Area' on Schedule 'B' of the Official Plan. The implementing Zoning for the property is "Business Park Industrial Zone" (IP). The proposed uses (hotel, commercial) are permitted uses in the IP Zone. There are no Secondary Plans or Community Design Plans applicable to the subject site. The redevelopment will replace two existing buildings containing an auto repair shop, auto parts store, and a Salvation Army thrift store. The proposed redevelopment is a 6-storey, 135-unit hotel, and a 5,000 ft² commercial unit. The site will be arranged to increase the amount of parking spaces available, increasing from approximately 80 to 156. The proposed redevelopment is expected to be completed with full occupancy by the year 2020. The proposed redevelopment will be completed in one stage with no proposed phasing.

From Fitzgerald Road, the southwestern access (full movement driveway) to the property will remain in place, while the two southeastern accesses will be removed, including one loading and one parking lot access. The access along Moodie Drive (right-in/right-out) will remain in place as well.

The study area for this report will include Moodie Drive, Timm Drive, Fitzgerald Road, Menten Place the Loblaws access, and Robertson Road within the vicinity of the subject area. The study area includes the signalized intersections at Moodie Drive/Timm Drive, Moodie Drive/Fitzgerald Road/Menten Place, Moodie Drive/Loblaws access and Moodie Drive/Robertson Road.

The selected time periods for the analysis are the weekday AM and PM peak hours, and the Saturday peak hour, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. Anticipated parking requirements will also be reviewed for the subject site. The proposed redevelopment is expected to be completed with full occupancy by the year 2020.

The conclusions and recommendations of this TIA can be summarized as follows:

<u>Development Design and Parking</u>

- Pedestrian facilities will be provided between the main building entrance to the hotel and commercial unit and the proposed parking lot. New sidewalks will be provided to the south and east of the proposed hotel. These new sidewalks will provide pedestrian connectivity between the hotel and commercial unit building entrances and the existing pedestrian facilities in the northwest corner of the Moodie Drive/Fitzgerald Road/Menten Place intersection.
- Bicycle parking for the hotel will be located near the northwest corner of the hotel. Bicycle
 parking for the commercial unit will be located near the loading area north of the commercial
 unit.

- All required TDM-supportive design and infrastructure measures in the TDM checklist are met, excluding the minimum parking requirement.
- Based on the City's ZBL, two loading spaces are required for the proposed hotel and one loading space is required for the proposed commercial development. Loading and garbage collection for the proposed development will take place north of the commercial unit (one loading space) and near the northwest corner of the hotel (two loading spaces).
- The proposed bicycle parking meets the minimum requirement of the ZBL, however a variance is required for relief of the minimum vehicular parking requirement. The development proposes a reduction in 19 vehicular parking spaces from the minimum requirement of the ZBL.
- As the subject site will contain multiple land uses, it is anticipated that some trips may be internally captured (i.e. people from the hotel going out for dinner) and will not require an additional parking space. It is also noteworthy that the parking demand for the hotel may fluctuate day-to-day, as not all rooms may not be occupied. Based on the foregoing, spillover parking from the site is anticipated infrequent and minimal. As the proposed parking equates to approximately 90% of the required parking under the ZBL, a review of spillover parking is not required under the TIA guidelines.

Boundary Streets

- Moodie Drive, south of Fitzgerald Road, meets the target TkLOS and Auto LOS, however it does not meet the target PLOS and BLOS.
- Moodie Drive, north of Fitzgerald Road, meets the target TkLOS and Auto LOS, however it does not meet the target PLOS and BLOS. As the subject site borders the City's Greenbelt to the north, the pedestrian desire line is to/from the south. The proposed development will provide pedestrian connections between the main building entrances and the existing pedestrian facilities to the south. This will provide sufficient pedestrian access to the site along the pedestrian desire line.
- If the City wishes to implement a sidewalk along Moodie Drive between the Fitzgerald Road intersection and the paved shoulder to the north, a PLOS D could be achieved.
- To achieve the target BLOS along Moodie Drive, the City could give consideration to a
 physically separated bicycle facility, or a reduction in operational speed and widening of the
 existing road platform to implement a southbound bike lane.
- The recommended pedestrian and cycling improvements along Moodie Drive are to address
 the existing conditions and are not attributable to the site. As the site provides pedestrian and
 cycling connectivity to the existing facilities along Moodie Drive south of Fitzgerald Road, the
 implementation of any pedestrian and cycling facilities along Moodie Drive should be a City
 lead initiative.
- Fitzgerald Road meets the target PLOS, TkLOS and Auto LOS, however it does not meet the target BLOS. To achieve the target BLOS, a reduction of the operational speed could be considered.

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Access Design

- The proposed redevelopment will be served by the existing western all movement access along Fitzgerald Road and right-in right-out access along Moodie Drive. The two existing eastern accesses along Fitzgerald Road will be removed and reinstated with a barrier curb as part of this application.
- The proposed accesses meet the minimum requirements of the City's Private Approach Bylaw.
- Based on the traffic projections at the accesses, approximately 30 to 40 vehicles are anticipated to arrive using each access during the critical peak hour (Saturday). This equates to one vehicle entering each access every 1.5 to 2 minutes. Based on the foregoing, spillover of queued vehicles onto Moodie Drive or Fitzgerald Road is anticipated to be infrequent, and the proposed clear throat lengths are considered sufficient.

Transit

• The additional transit trips generated by the proposed redevelopment are not anticipated to have a significant impact on the operations of OC Transpo route 97.

Intersection Design

- The Moodie Drive/Timm Road intersection meets the target TkLOS and Auto LOS, however it does not meet the target PLOS and BLOS.
- The Moodie Drive/Fitzgerald Road/Menten Place intersection meets the target Auto LOS, however it does not meet the target PLOS, BLOS and TkLOS.
- The Moodie Drive/Loblaws Access intersection meets the target Auto LOS, however it does not meet the target PLOS, BLOS and TkLOS.
- The Moodie Drive/Robertson Road intersection meets the target TkLOS, however it does not meet the target PLOS, BLOS, TLOS and Auto LOS.
- A reduction in the east-west crossing distance for pedestrians at the intersections along Moodie Drive and the north-south crossing distance at the Robertson Road intersection would provide the greatest improvement to the PLOS at the study area intersections. However, based on the projected traffic volumes the existing cross section along Moodie Drive and Robertson Road is appropriate.
- Based on the City's criteria for the implementation ladder crosswalks (minimum of 400,000 vehicle/pedestrian conflicts over 8 hours), a ladder crosswalk is warranted on the south approach to the Moodie Drive/Fitzgerald Road/Menten Place intersection, on the north approach to the Moodie Drive/Loblaws Access intersection, as well as all approaches to the Moodie Drive/Robertson Road intersection.
- To improve the BLOS associated with the left turn criteria at the intersections along Moodie Drive, the City could give consideration to implementing two-stage left turn bike boxes on the north and south approaches, as well as the east and west approaches to the Moodie Drive/Robertson Road intersection.

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- To improve the BLOS on the west approach to the MoodieDrive/Fitzgerald Road/Menten Place intersection, the City could give consideration to reducing the operating speed.
- To improve the BLOS associated with the right turn criteria on the north approach to the Moodie Drive/Robertson Road intersection, a reduction in the parallel length for the right turn lane could be considered. Based on the projected 2025 total traffic volumes and the TAC right turn storage length equation (S=NL/30), a storage length of approximately 45m would be sufficient for this right turn lane.
- Based on the southbound right turning volumes during the AM peak hour (approximately 185 vehicles), consideration could be given to providing a southbound right turn lane at the Moodie Drive/Fitzgerald Road/Menten Place intersection. The combined southbound through and right turning volumes during the AM peak hour equate to approximately half of the capacity of this approach. It is noteworthy that the Synchro analysis does not suggest capacity deficiencies at this intersection, and there is no significant collision history on the southbound approach over the last five years. Based on the foregoing, and in the interest of minimizing the east-west crossing distance for pedestrians, a southbound right turn lane is not recommended at this intersection.
- To meet the target Auto LOS D for this area, a reduction of approximately 110 eastbound through vehicles and 25 southbound left turning vehicles is required during the AM peak hour at the Moodie Drive/Robertson Road intersection. Based on the foregoing, continued support of transportation solutions that maximize the transit, bike and walk modes of travel will be critical along Robertson Road. Options to displace traffic along the study area roads include increased use of non-auto modes of transportation, alternate time of travel for drivers using the corridor to make use of off-peak capacity, and alternate routes for east-west travel.
- Under the background traffic conditions, all intersections are anticipated to meet the target Auto LOS D under the weekday AM and PM, and Saturday peak hours.
- The addition of site generated traffic is not anticipated to have a significant impact on the signalized intersections within the study area.
- Based on the southbound right turning volumes at the Moodie Drive access and the westbound right turning volumes at the Fitzgerald Road access, right turn lanes are not required at the accesses.
- Based on the Ministry of Transportation of Ontario (MTO) left turn lane warrant graphs, an eastbound left turn lane is not required at the Fitzgerald Road access.

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1.0 INTRODUCTION

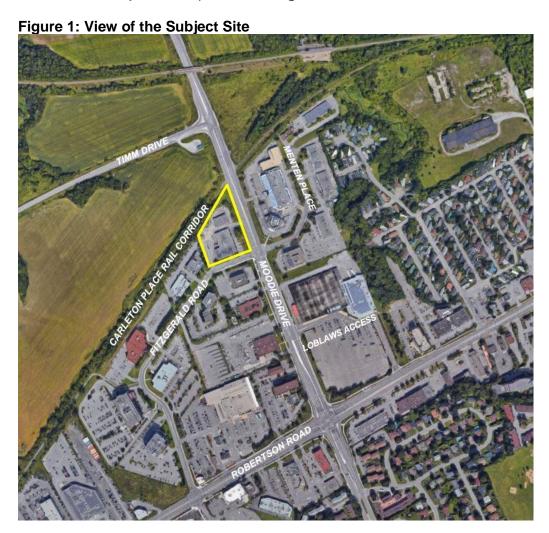
This Transportation Impact Assessment report has been prepared in support of a redevelopment of the property located at 300 Moodie Drive. The subject site is currently occupied by an auto repair shop, auto parts store, and a Salvation Army thrift store.

The proposed redevelopment will include a 135-suite hotel and 5,000 ft² commercial retail unit, and the layout will be modified to accommodate more parking (increasing from approximately 80 to 156 spaces).

The subject site is surrounded by the following:

- Carleton Place rail corridor to the north;
- Moodie Drive to the east;
- Fitzgerald Road to the south; and
- Business park uses to the west.

A view of the subject site is provided in Figure 1.



2.0 PROPOSED DEVELOPMENT

The subject site is designated as 'Urban Employment Area' on Schedule 'B' of the Official Plan. The implementing Zoning for the property is "Business Park Industrial Zone" (IP). The proposed uses (hotel, commercial) are permitted uses in the IP Zone. There are no Secondary Plans or Community Design Plans applicable to the subject site. The redevelopment will replace two existing buildings containing an auto repair shop, auto parts store, and a Salvation Army thrift store. The proposed redevelopment is a 6-storey, 135-unit hotel, and a 5,000 ft² commercial unit. The site will be arranged to increase the amount of parking spaces available, increasing from approximately 80 to 156. The proposed redevelopment is expected to be completed with full occupancy by the year 2020. The proposed redevelopment will be completed in one stage with no proposed phasing.

From Fitzgerald Road, the southwestern access (full movement driveway) to the property will remain in place, while the two southeastern accesses will be removed, including one loading and one parking lot access. The access along Moodie Drive (right-in/right-out) will remain in place as well.

A copy of the proposed site plan is included in **Appendix A**.

3.0 SCREENING

3.1 Screening Form

The City's 2017 TIA Guidelines identify three triggers for completing a TIA report, including trip generation, location, and safety. The criteria for each trigger are outlined in the City's TIA Screening Form.

The trigger results are as follows:

- Trip Generation Trigger: The hotel and restaurant are expected to generate over 60 person trips/peak hour more than the existing development; further assessment is required based on this trigger.
- Location Triggers The development is not located along a Transit Priority or Rapid Transit Route, but it is along a Spine Cycling Route; further assessment is required based on this trigger.
- Safety Triggers The proposed accesses are within 150 metres of the traffic signal at Moodie Drive/Fitzgerald Road/Menten Place, and one access is within the southbound auxiliary left-turn lane on Moodie Drive. Additionally, the development proposes a drivethru. For all these reasons, further assessment is required based on this trigger.

A copy of the TIA Screening Form is included in **Appendix B**.

4.0 SCOPING

4.1 Existing Conditions

4.1.1 Roadways

All roadways within the study area fall under the jurisdiction of the City of Ottawa.

Moodie Drive is an arterial roadway that generally runs on a north-south alignment between Carling Avenue and Old Richmond Road, where the roadway splits into Old Richmond Road to the west and Moodie Drive to the east. Beyond this split, Moodie Drive continues until intersecting with Brophy Drive in Richmond. At the subject site's existing driveway, this road transitions from a four-lane divided urban cross-section to the south to a four-lane divided rural cross-section to the north. The posted speed limit on Moodie Drive is 60 km/h in the subject area. Moodie Drive is classified as an urban truck route, allowing full loads. The City's Official Plan (OP) identifies a right-of-way (ROW) protection for Moodie Drive of 44.5m from the Bells Corners urban limit to Richmond Road. South of this limit, the ROW is 37.5m in the subject area.

Timm Drive is an arterial roadway that generally runs on an east-west alignment between Eagleson Road and Moodie Drive. West of Eagleson Road, this roadway continues as Katimavik Road. It has a two-lane undivided rural cross-section, with a posted speed limit of 80 km/h.

Fitzgerald Road is a collector roadway that runs east-west at the intersection with Moodie Drive. West of the subject site, Fitzgerald curves into a north-south alignment and terminates at Robertson Road. It has a two-lane undivided urban cross-section, and a posted speed limit of 50 km/h, with an advisory speed of 40 km/h for the curve at the west limit of the site. Street parking is not permitted on either side of Fitzgerald Road at the site, however parking is permitted in both directions immediately west of the property line. The ROW at Fitzgerald Road is currently 20m adjacent to the site. A road widening of approximately 2m will be required, as the OP identifies a 24m ROW protection for Fitzgerald Road.

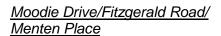
Menten Place is a local roadway that intersects with Moodie Drive, opposite Fitzgerald Road. Menten Place ends in a cul-de-sac approximately 250m from Moodie Drive. It has a two-lane undivided urban cross-section, with a posted speed limit of 40km/h.

Robertson Road is an arterial roadway that generally runs on an east-west alignment between Eagleson Road and Baseline Road. West of Eagleson Road, this roadway continues as Hazeldean Road. East of Baseline Road, this roadway continues as Richmond Road. Within the study area, it has a five-lane undivided urban cross-section with a two-way left turn lane, and a posted speed limit of 60 km/h. Robertson Road is classified as a truck route, allowing full loads.

4.1.2 Intersections

Moodie Drive/Timm Drive

- Signalized intersection
- Eastbound: one left turn lane and one channelized right turn lane
- Northbound: two through lanes and one left turn lane
- Southbound: two through lanes and one channelized right turn lane



- Signalized intersection
- Eastbound/Westbound: one shared through/right turn lane and one left turn lane
- Northbound/Southbound: one through lane, one shared through/right turn lane, and one left turn lane



- Signalized intersection
- Westbound: one shared left turn/right turn lane.
- Northbound: two through lanes and one right turn lane
- Southbound: two through lanes and one left turn lane







Moodie Drive/Robertson Road

- Signalized intersection
- Eastbound/Westbound: one left turn lane, two through lanes, and one channelized right turn lane with bus queue jump
- Northbound/Southbound: two left turn lanes, two through lanes, and one channelized right turn lane



4.1.3 Driveways

In accordance with the City's 2017 TIA guidelines, a review of adjacent driveways along the boundary roads are provided as follows:

Fitzgerald Road, North Side:

2 driveways to businesses at 15 & 17
Fitzgerald Road (adjacent driveway
offset approximately 38m to the west,
measuring nearest edge to nearest
edge at the ROW)

Moodie Drive, West Side:

 2 driveways to businesses at 326, 330 Moodie Drive

Fitzgerald Road, South Side:

 3 driveways to businesses at 326 Moodie Drive, 16 Fitzgerald Road, and a Bell office/storage yard at 340 Moodie Drive (adjacent driveway offset approximately 11m to the east, measuring nearest edge to nearest edge)

Moodie Drive, East Side:

 2 driveways to businesses at 303 Moodie Drive, shopping at 2065 Robertson Road

4.1.4 Pedestrian and Cycling Facilities

A concrete sidewalk is provided on the south side only of Fitzgerald Road. Adjacent to the subject site, there are no sidewalks along Moodie Drive. South of the Moodie Drive/Fitzgerald Road/Menten Place intersection, there are sidewalks on both sides of Moodie Drive.

Moodie Drive and Robertson Road are classified as part of Ottawa's primary cycling network as Spine Routes. Timm Drive and Fitzgerald Road are classified as local routes, and the adjacent rail corridor (currently used as Trans Canada Trails) is classified as a major pathway. The intersection of Moodie Drive and Robertson Road has designated bike lanes at all approaches. A bike lane is provided northbound along Moodie Drive, and terminates at the Moodie Drive/Fitzgerald Road/Menten Place intersection. Paved shoulders are provided on Moodie Drive north of the subject site, and on Timm Drive. Fitzgerald Road is a suggested cycling route, with connectivity to the Trans Canada Trail.

4.1.5 Transit

The nearest bus stops to the subject site are stop #1385 (for route 97; located on the south side of Fitzgerald Road), #1316 (for routes 97, 152, and 252; located southwest of Moodie Drive/Fitzgerald Road) and #5285 (for routes 152 and 252; located southeast of Moodie Drive/Fitzgerald Road). The aforementioned bus stop locations are shown in **Figure 2**.

Figure 2: OC Transpo Bus Stop Locations



OC Transpo Route 97 travels from Fitzgerald to Ottawa International Airport. The route operates every 30 minutes on weekdays between 6:00am and 11:00pm, and every 60 minutes on weekends between 8:00am and 10:00pm.

OC Transpo Route 152 travels from either Bell High School or the Moodie station to the Lincoln Fields station. Because it usually stops at the Moodie station, Route 152 only stops near the subject site at 11:30am, 1:30pm and 9:30pm on weekdays. This route does not provide service to the subject site on weekends.

OC Transpo Route 252 travels between the Mackenzie King station and the Cope/Yellowtail station. It is a peak route, operating every 15 minutes from 6:00am to 8:30am and 3:30pm to 7:00pm on weekdays. This route does not operate on weekends.

4.1.6 Existing Traffic Volumes

Weekday and Saturday traffic counts completed by the City of Ottawa and Novatech were used to determine the existing pedestrian, cyclist and vehicular traffic volumes at the study area intersections. The traffic counts were completed on the following dates:

Moodie Drive/Timm Drive

• Moodie Drive/Fitzgerald Road/Menten Place

March 8, 2017 and March 24, 2018 March 8, 2017 and March 24, 2018

Moodie Drive/Loblaws access

March 8, 2017 and March 24, 2018 March 8, 2017 and March 24, 2018

Moodie Drive/Robertson Road

The weekday counts were completed the Wednesday before March Break (March 13-17, 2017). Based on the 2017 data, Fitzgerald Road has an annual average daily traffic (AADT) of 3,690 vehicles/day. Moodie Drive has an AADT of 15,950 vehicles/day. Existing traffic volumes along the study area roadways are shown in **Figure 3**. Peak hour summary sheets of the above traffic counts are included in **Appendix C**.

4.1.7 Collision Records

Historical collision data from the last five years was obtained from the City's Public Works and Service Department for the study area intersections. Copies of the collision summary reports are included in **Appendix D**.

The collision data has been evaluated to determine if there are any identifiable collision patterns. The following **Table 1** summarizes the number of collisions at each intersection from January 1, 2012 to December 31, 2016.

Table 1: Reported Collisions

| Intersection | Number of Reported Collisions |
|---|-------------------------------|
| Moodie Drive/Timm Drive | 5 |
| Moodie Drive/Fitzgerald Road/Menten Place | 23 |
| Moodie Drive/Loblaws access | 9 |
| Moodie Drive/Robertson Road | 70 |

Moodie Drive/Timm Drive

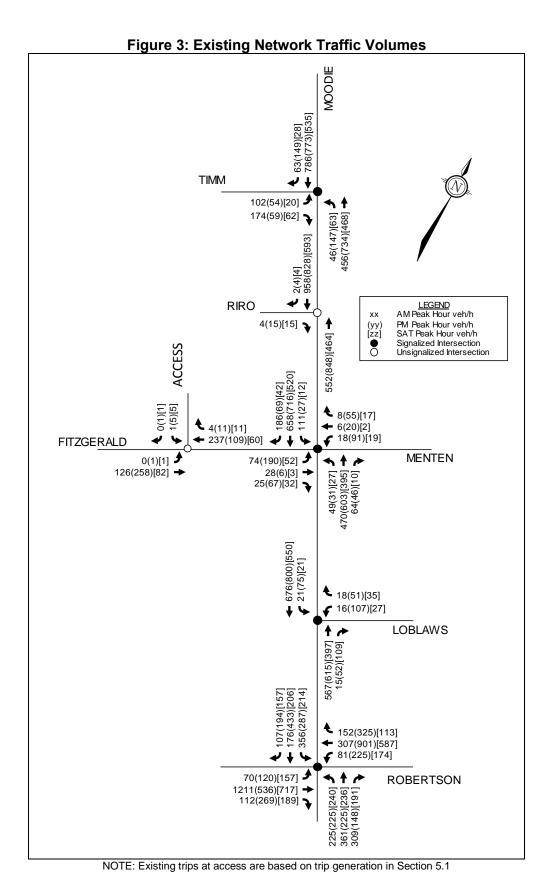
A total of five collisions were reported at this intersection over the last five years, of which there were two rear-end impacts, two turning movement impacts, and one angle impact. Two of the collisions caused injuries, but none caused fatalities.

Moodie Drive/Fitzgerald Road/Menten Place

A total of 23 collisions were reported at this intersection over the last five years, of which there were eight rear-end impacts, three turning movement impacts, two sideswipe impacts, six angle impacts, and four single-vehicle/other impacts. Five of the collisions caused injuries, but none caused fatalities.

Of the eight rear-end impacts, four occurred at the northbound approach, one occurred at the southbound approach, and three occurred at the eastbound approach.

Of the six angle impacts, three occurred at the northbound approach, one occurred at the southbound approach, and two occurred at the westbound approach.



Moodie Drive/Loblaws access

A total of nine collisions were reported at this intersection over the last five years, of which there were four rear-end impacts, three turning movement impacts, and two angle impacts. Two of the collisions caused injuries, but none caused fatalities.

Moodie Drive/Robertson Road

A total of 70 collisions were reported at this intersection over the last five years, of which there were 32 rear-end impacts, 10 turning movement impacts, 11 sideswipe impacts, 11 angle impacts, and 6 single-vehicle/other impacts. Twelve of the collisions caused injuries, but none caused fatalities.

Modifications were made to both Moodie Drive and Robertson Road from August to December 2013, with dual left turn lanes added to Moodie Drive and queue jump lanes for buses added to Robertson Road. Between 2012 and 2016, each year had 10-13 collisions reported except for 2013, which had 22. This can be attributed to the construction period, where 14 collisions occurred between August and December.

Of the 32 rear-end impacts, eight occurred at the northbound approach (two left turn, four right turn, and two through vehicle incidents), five occurred at the southbound approach (three left turn and two right turn incidents), 11 occurred at the eastbound approach (one left turn, one right turn, seven through vehicle, and two unknown incidents), and eight occurred at the westbound approach (two left turn, two right turn, and four through vehicle incidents). Eight of the 32 rear-end impacts took place in poor weather conditions.

Of the 10 turning movement impacts, six involved left turns at the northbound approach, three involved left turns at the southbound approach, and one involved a left turn at the eastbound approach. The road modifications in late 2013 provided dual turning lanes for northbound and southbound traffic.

Of the 11 sideswipe impacts, two occurred at the northbound approach, two occurred at the southbound approach, two occurred at the eastbound approach, and five occurred at the westbound approach. Five of the eleven sideswipe impacts occurred during the construction period.

Of the 11 angle impacts, one involved a northbound vehicle and an eastbound vehicle, one involved a northbound vehicle and a westbound vehicle, six involved a southbound vehicle and an eastbound vehicle and three involved a southbound vehicle and a westbound vehicle. Three of the eleven impacts took place in poor weather conditions.

Of the six single-vehicle/other impacts, two occurred at the northbound approach, one occurred at the southbound approach, two occurred at the eastbound approach, and one occurred at the westbound approach. One of the six collisions involved a pedestrian being struck by a right-turning vehicle from the southbound approach.

4.2 Planned Conditions

The City of Ottawa's 2013 Transportation Master Plan (TMP) does not identify any roadway projects within the study area in its Affordable Road Network. The Affordable Rapid Transit and Transit Priority (RTTP) Network identifies Robertson Road as a Transit Priority Corridor with isolated measures. Traffic signal priority and queue jump lanes are planned for Robertson Road/Richmond

Road between Eagleson Road and Holly Acres Road, to reduce travel time and improve reliability on OC Transpo Route 118, and enhance transit service between Kanata and Bells Corners.

The 2013 Ottawa Cycling Plan identifies a segregated bike facility on Robertson Road/Richmond Road from Moodie Drive to Baseline Road as a Phase 2 (2020-2025) affordable project.

There are no other developments under construction, approved, or in the approval process within the study area.

4.3 Study Area and Time Periods

The study area for this report will include Moodie Drive, Timm Drive, Fitzgerald Road, Menten Place the Loblaws access, and Robertson Road within the vicinity of the subject area. The study area includes the signalized intersections at Moodie Drive/Timm Drive, Moodie Drive/Fitzgerald Road/Menten Place, Moodie Drive/Loblaws access and Moodie Drive/Robertson Road.

The selected time periods for the analysis are the weekday AM and PM peak hours, and the Saturday peak hour, as they represent the 'worst case' combination of site generated traffic and adjacent street traffic. Anticipated parking requirements will also be reviewed for the subject site. The proposed redevelopment is expected to be completed with full occupancy by the year 2020.

4.4 Exemptions Review

This module reviews possible exemptions from the final Transportation Impact Assessment, as outlined in the TIA Guidelines. The applicable exemptions for this site are shown in **Table 2**.

Table 2: TIA Exemptions

| Module | Element | Exemption Criteria | Exemption Applies |
|--------------------------------------|-------------------------------------|--|-------------------|
| Design Review | Component | | |
| 4.1 | 4.1.2 Circulation and Access | Only required for site plans | No |
| Development Design | 4.1.3 New Street Networks | Only required for plans of subdivision | Yes |
| 4.2 | <i>4.2.1</i> Parking Supply | Only required for site plans | No |
| Parking | 4.2.2 Spillover Parking | Only required for site plans where parking supply is 15% below unconstrained demand | Yes |
| Network Impact | Component | | |
| 4.5 Transportation Demand Management | All elements | Not required for site plans expected to have fewer than 60 employees and/or students on location at any given time | Yes |
| 4.6 Neighbourhood Traffic Management | 4.6.1 Adjacent Neighbourhoods | Only required when the development relies on local or collector streets for access and total volumes exceed ATM capacity thresholds | Yes |

| Module | Element | Exemption Criteria | Exemption Applies |
|---------------------------|--------------|---|-------------------|
| 4.8 Network Concept | All elements | Only required when proposed development generates more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by the established zoning | Yes |

5.0 FORECASTING

5.1 Development-Generated Traffic

5.1.1 Trip Generation

Currently, the subject site is occupied by two auto repair shops with a combined 15,600 ft² GFA, and a thrift store with approximately 10,600 ft² GFA. The three businesses share approximately 82 parking stalls. The number of parking stalls and the gross floor areas were approximated using aerial photography. In the redevelopment, a hotel with 135 units and a restaurant with 5,000 ft² GFA are proposed.

As the trips generated by the existing development may not conform to specific land uses in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 9th Edition*, the trip generation for the existing uses is presented using two different methods. The two methods show the range of trips anticipated at the site today. **Table 3** outlines the results using ITE trip generation rates for the existing and proposed developments.

Table 3: Person Trip Generation (using the ITE Trip Generation Manual)

| able 5. Ferson Trip Generation (using the TTE Trip Generation Manual) | | | | | | | | | | | |
|---|--------|---------------------------|-----------------------|-----|-----|---------------|-----|-----|-----------|-----|-----|
| Land Use | ITE | Units/ | Inits/ AM Peak (PPH¹) | | | PM Peak (PPH) | | | Sat (PPH) | | |
| Land USE | Code | GFA | IN | OUT | ТОТ | IN | OUT | тот | IN | OUT | тот |
| Existing Developm | ent | | | | | | | | | | |
| Auto Care ² | 942 | 15,600 ft ² | 30 | 15 | 45 | 30 | 32 | 62 | 0 | 0 | 0 |
| Specialty Retail ³ | 826 | 10,500 ft ² | 6 | 3 | 9 | 16 | 20 | 36 | 24 | 23 | 47 |
| | | Total | 36 | 18 | 54 | 46 | 52 | 98 | 24 | 23 | 47 |
| Proposed Redevel | opment | | | | | | | | | | |
| Hotel | 310 | 135 units | 54 | 38 | 92 | 53 | 51 | 104 | 70 | 55 | 125 |
| High Turnover Restaurant | 932 | 5,000 ft ² | 38 | 31 | 69 | 37 | 25 | 63 | 48 | 42 | 90 |
| | | Total | 92 | 69 | 161 | 90 | 76 | 167 | 118 | 97 | 215 |
| | D | ifference | 56 | 51 | 107 | 44 | 24 | 69 | 94 | 74 | 168 |

¹⁾ PPH = Persons Per Hour – calculated using an ITE Trip to Person Trip factor of 1.28, consistent with the TIA Guidelines

From the previous table, the proposed redevelopment is anticipated to generate an additional 107 person trips in the AM peak, 69 person trips in the PM peak and 168 person trips on Saturdays.

²⁾ The auto care centres in the subject site are closed on Saturdays, and assumed to generate no trips

³⁾ Data for the AM and Saturday peaks are not available for this land use. Values for the AM and Saturday peaks are pro-rated from the Shopping Centre land use (ITE Code 820).

As the ITE land uses may not reflect the specific land uses currently provided on-site, trip generation has also been conducted based on the number of on-site parking stalls. Table 14-1 of the ITE *Traffic Engineering Handbook*, 5th *Edition*, suggests that the number of trips generated by a parking lot serving a retail/commercial development in the AM peak hour typically range between 10% and 30% of the total available parking for inbound trips and 10% to 20% of the total available parking for outbound trips. In the PM peak hour, the typical range is between 30% and 60% of the total available parking for inbound trips and 40% and 65% of the total available parking for outbound trips. As Saturday ranges are not provided in Table 14-1, the Saturday rates are assumed to be similar to the PM peak rates. Table 14-1 of the ITE *Traffic Engineering Handbook* is included in **Appendix E**.

Aerial photography of the subject site shows that some of the parking for the auto repair centres are used as storage rather than conventional parking. To reflect the reality that not all 82 spaces are truly available for parking, the lower limit of the range has been used to estimate trips generated by the existing developments. **Table 4** outlines the net differential of person trips, using the methodology identified above.

Table 4: Person Trip Generation (using the ITE *Traffic Engineering Handbook*)

| uble 4.1 croon trip deficition (using the tre Trame Engineering Tranabook) | | | | | | | | | | | |
|--|----------|--------------------------|------|---------|-------|------|---------|------|-----|---------|-----|
| Land Use | ITE | Units/ | AM F | Peak (F | PPH1) | PM F | Peak (I | PPH) | S | at (PPI | H) |
| Land USE | Code | GFA | IN | OUT | тот | IN | OUT | TOT | IN | OUT | тот |
| Existing Developm | ent | | | | | | | | | | |
| All businesses | 82 parki | ng stalls | 11 | 11 | 22 | 32 | 42 | 74 | 32 | 42 | 74 |
| | Total | 21 | 20 | 41 | 32 | 42 | 74 | 32 | 42 | 74 | |
| Proposed Redevel | opment | | | | | | | | | | |
| Hotel | 310 | 135 | 54 | 38 | 92 | 53 | 51 | 104 | 70 | 55 | 125 |
| High Turnover Restaurant | 932 | 5,000 ft ² | 38 | 31 | 69 | 37 | 26 | 63 | 48 | 42 | 90 |
| | | Total | 92 | 69 | 161 | 90 | 76 | 167 | 118 | 97 | 215 |
| | D | ifference | 81 | 58 | 139 | 58 | 34 | 93 | 86 | 55 | 141 |

¹⁾ PPH = Persons Per Hour - calculated using an ITE Trip to Person Trip factor of 1.28, consistent with the TIA Guidelines

From the previous table, the proposed redevelopment is anticipated to generate an additional 139 person trips in the AM peak, 93 person trips in the PM peak and 141 person trips on Saturdays. In the interest of not overestimating the existing traffic, the trip generation values based on the number of parking stalls has been carried forward. This method provided a higher net difference of person trips, resulting in a more robust and conservative analysis.

The modal shares for the proposed redevelopment are anticipated to be consistent with the modal shares outlined in the 2011 TRANS O-D Survey Report, specific to the Bayshore/Cedarview region. The modal share values applied to the trips generated by the existing and proposed commercial developments are based on all observed trips within the Bayshore/Cedarview district during the peak hours. The modal share values applied to the trips generated by the hotel are based on all trips to/from the Bayshore/Cedarview district with an origin or destination beyond that area. A full breakdown of the projected net increase in person trips by modal share are shown in **Table 5**.

Table 5: Person Trips by Modal Share

| able 5: Person Trips by Modal Share | | | | | | | | | | |
|-------------------------------------|------------|----|--------|-----|----|---------|-----|----|---------|-----|
| Travel Mode | Modal | | AM Pea | k | | PM Peal | k | 5 | Saturda | у |
| Traver Mode | Share | IN | OUT | TOT | IN | OUT | ТОТ | IN | OUT | ТОТ |
| Existing Developr | nent | | | | | | | | | |
| Commercial Per | son Trips | 11 | 11 | 22 | 32 | 42 | 74 | 32 | 42 | 74 |
| Auto Driver | 50% | 6 | 5 | 11 | 16 | 21 | 37 | 16 | 21 | 37 |
| Auto Passenger | 20% | 2 | 2 | 4 | 7 | 8 | 15 | 7 | 8 | 15 |
| Transit | 10% | 1 | 1 | 2 | 3 | 4 | 7 | 3 | 4 | 7 |
| Non-Auto | 20% | 2 | 3 | 5 | 6 | 9 | 15 | 6 | 9 | 15 |
| Auto Drive | er (Total) | 6 | 5 | 11 | 16 | 21 | 37 | 16 | 21 | 37 |
| Auto Passenge | er (Total) | 2 | 2 | 4 | 7 | 8 | 15 | 7 | 8 | 15 |
| Trans | it (Total) | 1 | 1 | 2 | 3 | 4 | 7 | 3 | 4 | 7 |
| Non-Aut | o (Total) | 2 | 3 | 5 | 6 | 9 | 15 | 6 | 9 | 15 |
| Proposed Redeve | elopment | | | | | | | | | |
| Hotel Pers | son Trips | 54 | 38 | 92 | 53 | 51 | 104 | 70 | 55 | 125 |
| Auto Driver | 65% | 35 | 24 | 59 | 34 | 33 | 67 | 45 | 36 | 81 |
| Auto Passenger | 15% | 8 | 6 | 14 | 8 | 8 | 16 | 11 | 8 | 19 |
| Transit | 15% | 8 | 6 | 14 | 8 | 8 | 16 | 11 | 8 | 19 |
| Non-Auto | 5% | 3 | 2 | 5 | 3 | 2 | 5 | 3 | 3 | 6 |
| Restaurant Pers | son Trips | 38 | 31 | 69 | 37 | 25 | 63 | 48 | 42 | 90 |
| Auto Driver | 50% | 19 | 16 | 35 | 19 | 13 | 32 | 24 | 21 | 45 |
| Auto Passenger | 20% | 8 | 6 | 14 | 7 | 5 | 12 | 10 | 8 | 18 |
| Transit | 10% | 3 | 3 | 6 | 4 | 3 | 7 | 4 | 5 | 9 |
| Non-Auto | 20% | 8 | 6 | 14 | 7 | 5 | 12 | 10 | 8 | 18 |
| Auto Drive | er (Total) | 54 | 40 | 94 | 53 | 46 | 99 | 69 | 57 | 126 |
| Auto Passenge | er (Total) | 16 | 12 | 28 | 15 | 13 | 28 | 21 | 16 | 37 |
| Trans | it (Total) | 11 | 9 | 20 | 12 | 11 | 23 | 15 | 13 | 28 |
| Non-Aut | o (Total) | 11 | 8 | 19 | 10 | 7 | 17 | 13 | 11 | 24 |
| Auto Driver (Dif | ference) | 48 | 35 | 83 | 37 | 25 | 62 | 53 | 36 | 89 |
| Auto Pass. (Dif | ference) | 14 | 10 | 24 | 8 | 5 | 13 | 14 | 8 | 22 |
| Transit (Dif | ference) | 10 | 8 | 18 | 9 | 7 | 16 | 12 | 9 | 21 |
| Non-Auto (Dif | ference) | 9 | 5 | 14 | 4 | -2 | 2 | 7 | 2 | 9 |
| | | | | | | | | | | |

From the previous table, the redevelopment is projected to generate an additional 83 vehicle trips during the AM peak hour, 62 vehicle trips during the PM peak hour and 89 vehicle trips during the Saturday peak.

The commercial land use is expected to generate two types of external peak hour trips: primary and pass-by trips. Primary trips are made for the specific purpose of visiting the site, and pass-by trips are made as intermediate stops on the way to another destination. Peak hour pass-by trips have been estimated based on a pass-by rate of 43%. The *ITE Trip Generation Handbook* identifies this percentage as an average rate for the High Turnover Restaurant (land use 932). The pass-by trips generated by the commercial development are part of the observed background traffic and do not constitute new trips on the adjacent road network. The primary and pass-by trip generation for the commercial land use is summarized in **Table 6**.

| Table 6: Primar | y and Pass-by | y Trips (| (Restaurant) | |
|-----------------|---------------|-----------|--------------|--|
|-----------------|---------------|-----------|--------------|--|

| Travel Mode | | AM Peak | (| | PM Peak | (| ; | Saturday | / |
|------------------|----|---------|-----|----|---------|-----|----|----------|-----|
| | IN | OUT | тот | IN | OUT | тот | IN | OUT | тот |
| Restaurant Trips | | | | | | | | | |
| Vehicle Trips | 19 | 16 | 35 | 19 | 13 | 32 | 24 | 21 | 45 |
| Pass-by | 7 | 7 | 14 | 6 | 6 | 12 | 9 | 9 | 18 |
| Primary | 12 | 9 | 21 | 13 | 7 | 20 | 15 | 12 | 27 |

5.1.2 Trip Distribution

The assumed distribution of trips generated by the existing and proposed development has been derived from existing traffic patterns on the roadways within the study area. As trips generated by the proposed commercial development will predominantly originate within the district, while the proposed hotel will have more of a regional draw, the distribution for each use will be different.

The distribution for the existing and proposed commercial developments has been derived based on the AADT along the study area roadways, and can be described as follows:

- 20% to/from the north via Moodie Drive
- 15% to/from the south via Moodie Drive
- 30% to/from the east via Robertson Road
- 25% to/from the west via Robertson Road
- 5% to/from the west via Fitzgerald Road
- 5% to/from the west via Timm Drive

Trips generated by the proposed hotel is anticipated to have more of a regional draw, with a higher percentage of trips to/from Highway 417 to the north. Based on the off-peak traffic along Moodie Drive, northbound and southbound traffic is split generally 50/50. Based on the foregoing, it has been assumed that 50% of the hotel trips originate from the north, while the remainder originate from the south (Moodie Drive or Robertson Road). The distribution for the proposed hotel can be described as follows:

- 50% to/from the north via Moodie Drive
- 10% to/from the south via Moodie Drive
- 20% to/from the east via Robertson Road
- 20% to/from the west via Robertson Road

Due to the access restrictions along Moodie Drive (right-in right-out), the trip assignment at the access will be different based on arrival and departure. Trips generated by the existing and proposed development will be assigned to the accesses as follows:

Moodie Drive Right-in Right-Out Access

- Trips arriving from the north via Moodie Drive and west via Timm Drive
- Trips departing to the south via Moodie Drive and east/west via Robertson Road

Fitzgerald Road All Movement Access

- Trips departing to the north via Moodie Drive and west via Timm Drive
- Trips arriving from the south via Moodie Drive and east/west via Robertson Road
- Trips arriving and departing to the west via Fitzgerald Drive

Pass-by trips generated by the proposed redevelopment have been distributed to the site accesses based on existing traffic conditions.

Trips generated by the existing development are shown in **Figure 4**. Trips generated by the proposed development are shown in **Figure 5**.

5.2 Background Traffic

5.2.1 General Background Growth Rate

A rate of background growth has been established through a review of the City of Ottawa's Strategic Long Range Model, comparing snapshots of 2011 and 2031 AM peak volumes. The snapshots suggest a growth rate of 2% per annum along Moodie Drive, 20% per annum along Timm Drive, - 3% per annum along Fitzgerald Road and no growth along Robertson Road.

The background growth along Moodie Drive and Robertson Road will be consistent with the snapshots of the long range model, as described above. To provide a conservative analysis, no growth has been assumed along Fitzgerald Road. The 2011 AM peak period snapshots from the long range model suggest nearly zero traffic used Timm Drive in the AM peak period, which is not supported by the installation of traffic signals at the Moodie Drive/Timm Drive intersection in 2009/2010. As such, a comparison between the 2017 traffic count and the 2031 snapshots from the long range model was conducted. This comparison suggests a growth rate of 4% per annum along Timm Drive, and was carried forward in the analysis.

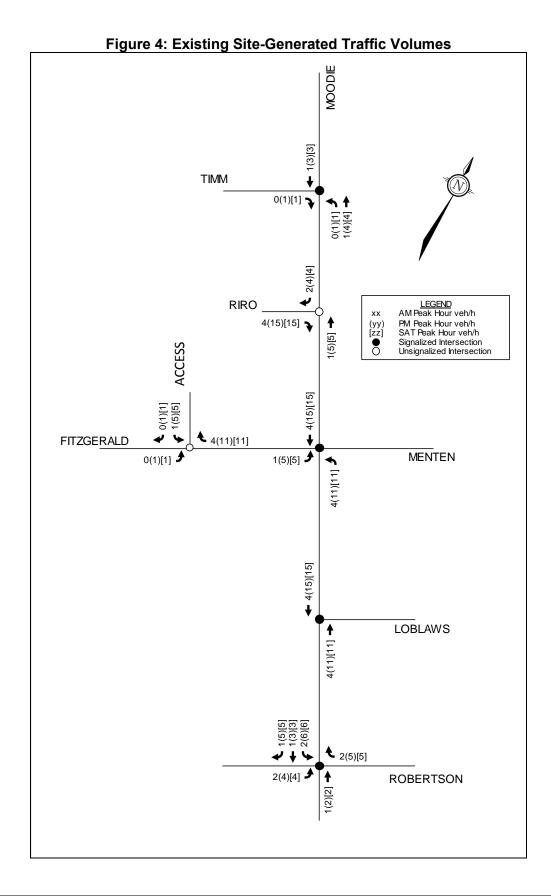
5.2.2 Other Area Development

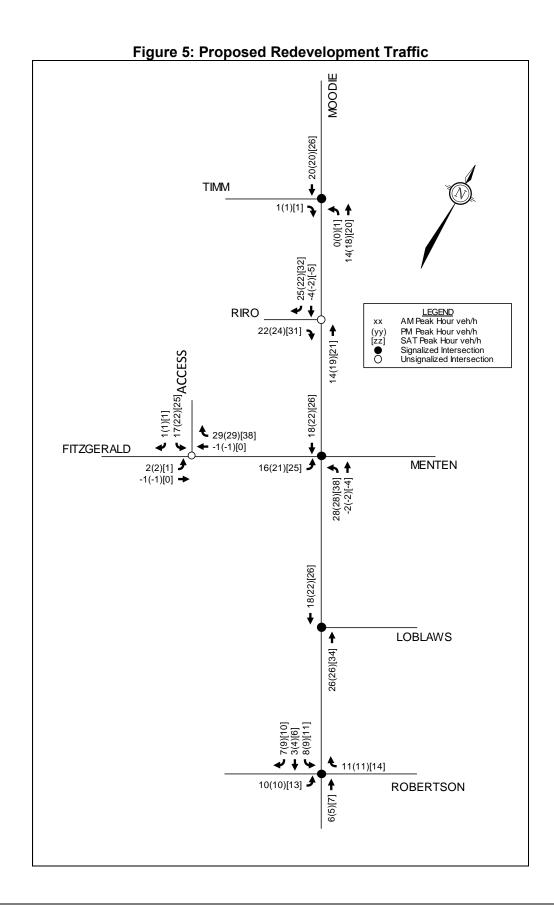
There are no other developments identified as under construction, approved, or in the approval process within the study area.

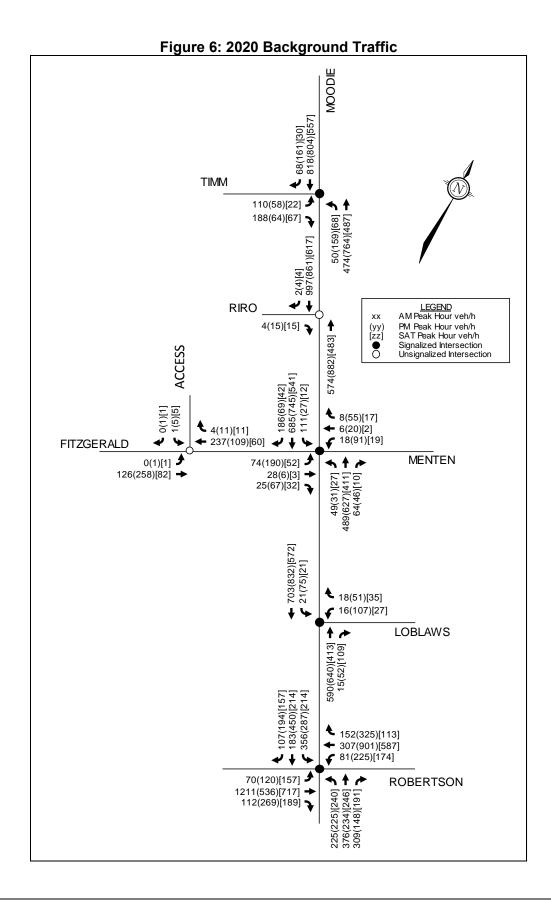
Background volumes for the 2020 build-out year and 2025 horizon year are shown in **Figures 6** and **7**, respectively. Total traffic volumes for 2020 and 2025, which subtract the traffic generated by the current development, are shown in **Figures 8** and **9**, respectively.

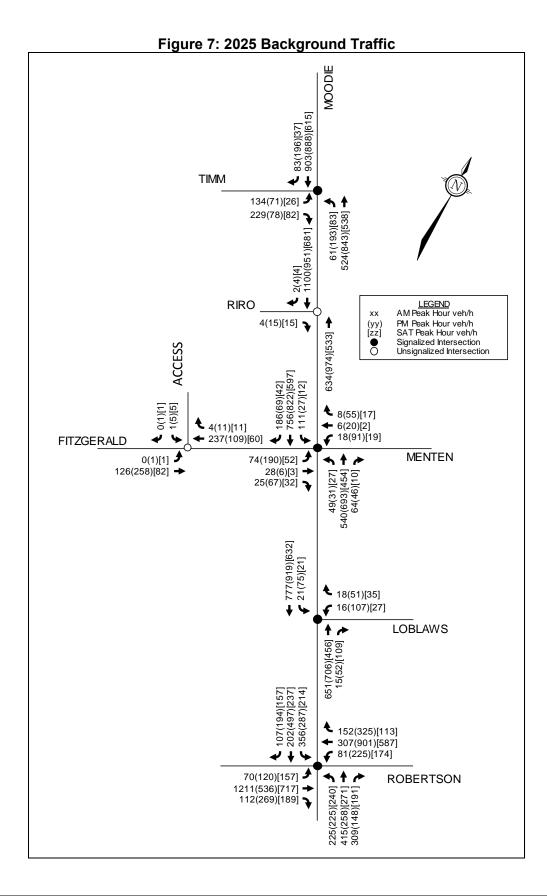
6.0 DEMAND RATIONALIZATION

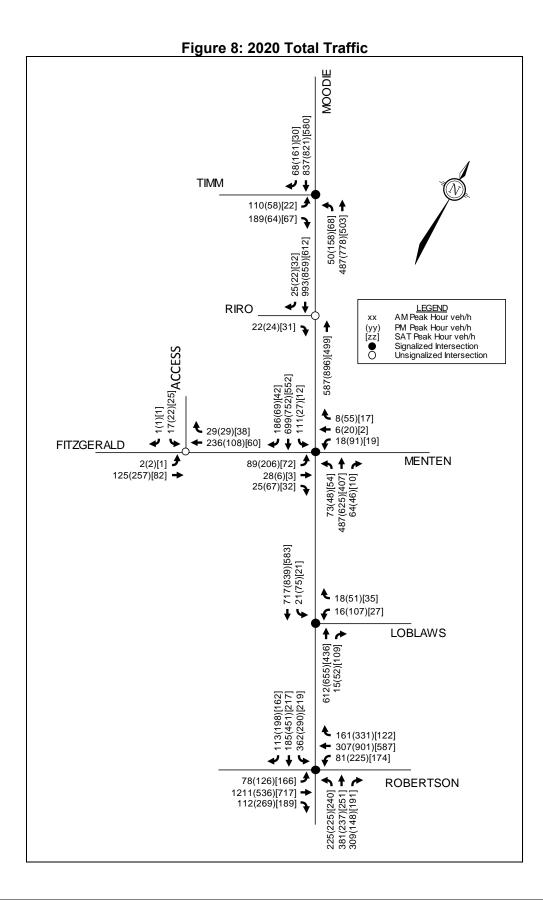
Based on the existing peak hour traffic volumes, capacity deficiencies are anticipated at the Moodie Drive/Robertson Road intersection. Based on the review of planned conditions in Section 4.2 above, no roadway widening is planned for Robertson Road to accommodate the existing capacity deficiencies. A review of the required reduction in background traffic volumes to alleviate capacity deficiencies at this intersection will be conducted in Module 4.9 – Intersection Design of the TIA.

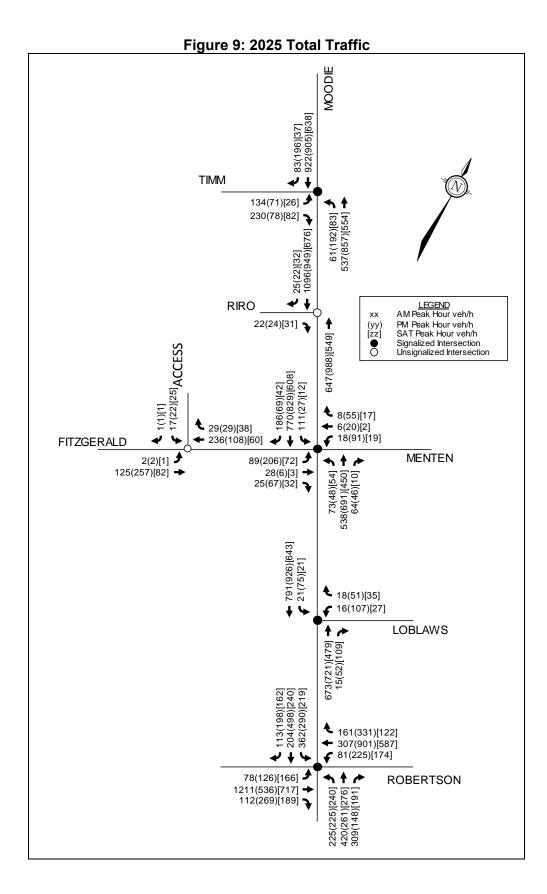












7.0 ANALYSIS

7.1 Development Design

7.1.1 Design for Sustainable Modes

Pedestrian facilities will be provided between the main building entrance to the hotel and commercial unit and the proposed parking lot. New sidewalks will be provided to the south and east of the proposed hotel. These new sidewalks will provide pedestrian connectivity between the hotel and commercial unit building entrances and the existing pedestrian facilities in the northwest corner of the Moodie Drive/Fitzgerald Road/Menten Place intersection.

The nearest bus stops to the subject site are stop #1385 (for route 97; located on the south side of Fitzgerald Road), #1316 (for routes 97, 152, and 252; located southwest of Moodie Drive/ Fitzgerald Road) and #5285 (for routes 152 and 252; located southeast of Moodie Drive/Fitzgerald Road).

Bicycle parking for the proposed development will be in accordance with the minimum requirement of the City's Zoning By-law (ZBL), as described in Section 6.2. Bicycle parking for the hotel will be located near the northwest corner of the hotel. Bicycle parking for the commercial unit will be located near the loading area north of the commercial unit. The location of the bicycle parking is shown on the site plan in **Appendix A**.

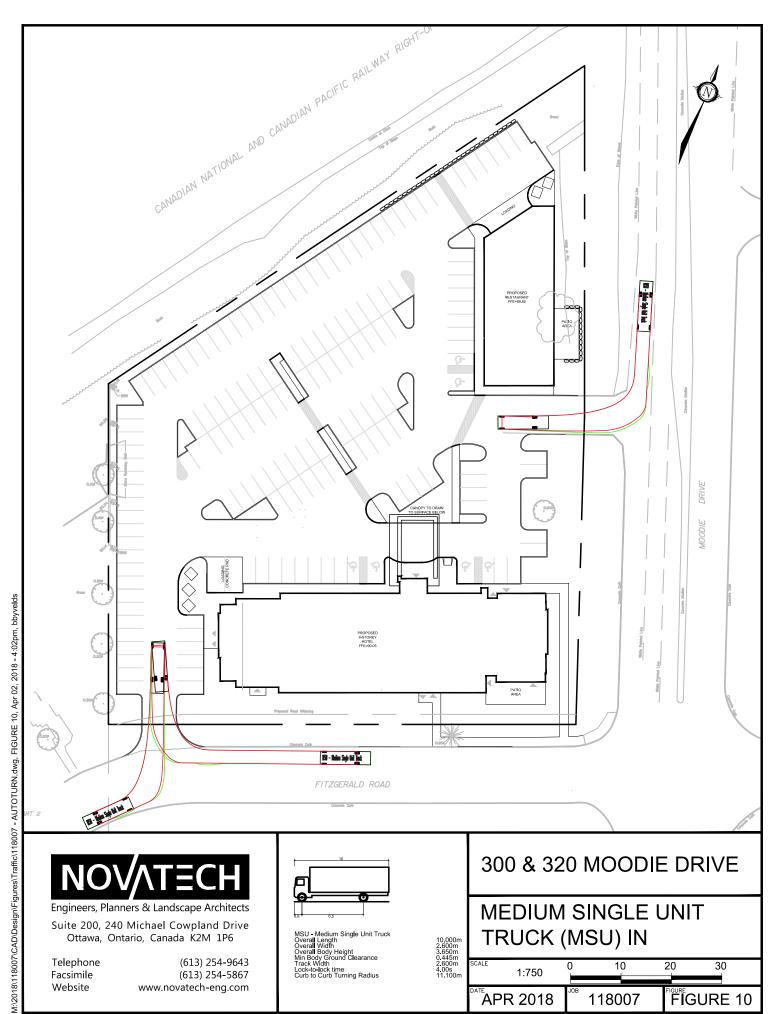
A review of the Transportation Demand Management (TDM) – Supportive Development Design and Infrastructure Checklist has been conducted. A copy of the TDM checklist is included in **Appendix F**. All required TDM-supportive design and infrastructure measures in the TDM checklist are met, excluding the minimum parking requirement. A variance is being sought for relief of the minimum parking requirement, as described in Section 6.2.

7.1.2 Circulation and Access

Based on the City's ZBL, two loading spaces are required for the proposed hotel and one loading space is required for the proposed commercial development. Loading and garbage collection for the proposed development will take place north of the commercial unit (one loading space) and near the northwest corner of the hotel (two loading spaces). The turning movements for a Medium Single Unit (MSU) Truck entering and exiting the site are shown in **Figures 10** and **11**.

7.2 Parking

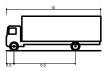
The subject site is located in Area C on Schedule 1 and 1A of the City of Ottawa's ZBL. Minimum vehicular and bicycle parking rates for the proposed development are identified in the ZBL, and are summarized in the following table.



Engineers, Planners & Landscape Architects Suite 200, 240 Michael Cowpland Drive Ottawa, Ontario, Canada K2M 1P6

Telephone Facsimile Website

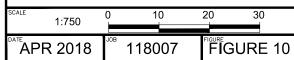
(613) 254-9643 (613) 254-5867 www.novatech-eng.com

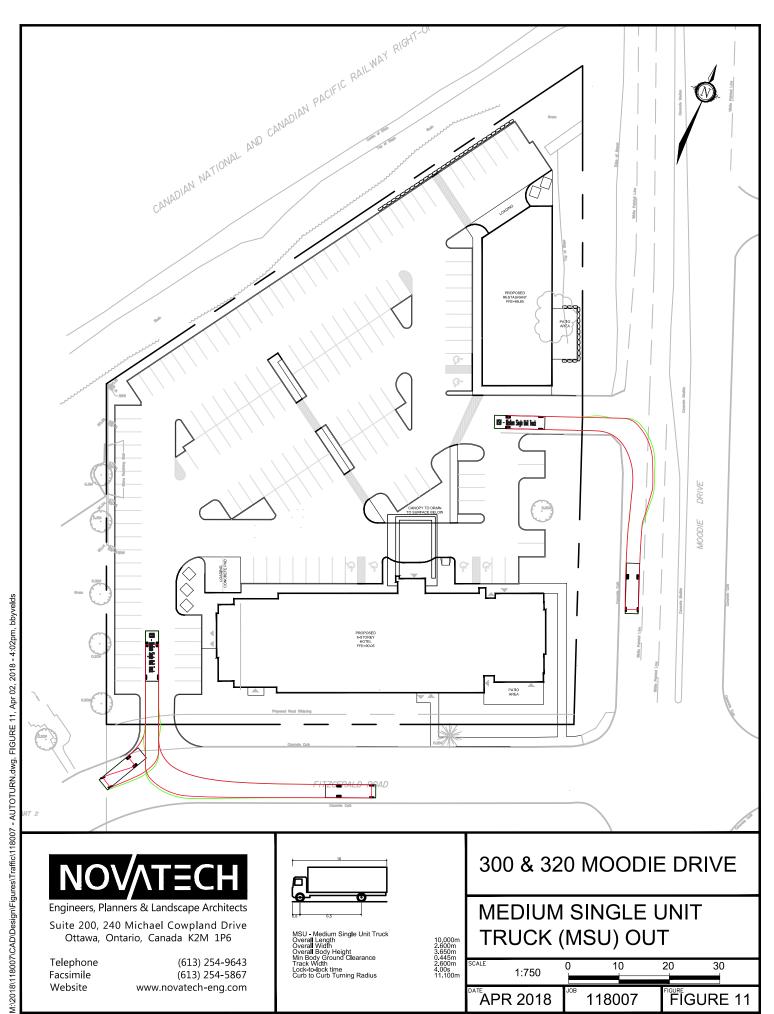


MSU - Medium Single Unit Tri Overall Length Overall Width Overall Body Height Min Body Ground Clearance Track Width Lock-to-lock time Curb to Curb Turning Radius

300 & 320 MOODIE DRIVE

MEDIUM SINGLE UNIT TRUCK (MSU) IN

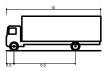




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Telephone Facsimile Website

(613) 254-9643 (613) 254-5867 www.novatech-eng.com



MSU - Medium Single Unit Tri Overall Length Overall Width Overall Body Height Min Body Ground Clearance Track Width Lock-to-lock time Curb to Curb Turning Radius

300 & 320 MOODIE DRIVE

MEDIUM SINGLE UNIT TRUCK (MSU) OUT

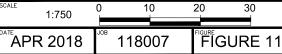


Table 7: Parking Requirement

| Land Use | Rate | Units/GFA | Requirement | Provided |
|-----------------|----------------------------------|---------------------|-------------|----------|
| Vehicle Parking | | | | |
| Hotel | 1 per Guest Unit | 135 | 135 | 135 |
| Restaurant | 10 per 100m ² of GFA | 465m ² | 47 | 29 |
| | | Total | 182 | 163 |
| Bicycle Parking | | | | |
| Hotel | 1 per 1,000m ² of GFA | 7,392m ² | 7 | 7 |
| Restaurant | 1 per 250m ² of GFA | 465m ² | 2 | 2 |
| | | Total | 9 | 9 |

Based on the foregoing, the proposed bicycle parking meets the minimum requirement of the ZBL, however a variance is required for relief of the minimum vehicular parking requirement. The development proposes a reduction in 19 vehicular parking spaces from the minimum requirement of the ZBL.

As the subject site will contain multiple land uses, it is anticipated that some trips may be internally captured (i.e. people from the hotel going out for dinner) and will not require an additional parking space. It is also noteworthy that the parking demand for the hotel may fluctuate day-to-day, as not all rooms may not be occupied. Based on the foregoing, spillover parking from the site is anticipated infrequent and minimal. As the proposed parking equates to approximately 90% of the required parking under the ZBL, a review of spillover parking is not required under the TIA guidelines.

7.3 Boundary Streets

This section provides a review of the boundary streets using complete streets principles. The Multi-Modal Level of Service (MMLOS) guidelines produced by IBI Group in 2015 were used to evaluate the LOS of the boundary roadways for each mode of transportation. Schedule B of the City of Ottawa's Official Plan indicates all boundary streets are located in the Urban Employment Area. Photos of the boundary streets (provided by Google Streetview) are provided below.





Figure 13: Moodie Drive – South of Fitzgerald Road (West Side)



Figure 14: Moodie Drive - North of Fitzgerald Road (East Side)



Figure 15: Moodie Drive – North of Fitzgerald Road (West Side)



Figure 16: Fitzgerald Road



Target PLOS, BLOS, TLOS, TkLOS and Auto LOS for the study area roadways are based on the Employment Area targets identified in Exhibit 22 of the MMLOS guidelines. The following table summarizes the findings of the MMLOS segment analysis. Detailed segment MMLOS calculations are included in **Appendix G**.

Table 8: Segment MMLOS Summary

| Segment | PLOS | BLOS | TLOS | TkLOS | Auto LOS |
|---|------|------|------|-------|----------|
| Moodie Drive – South of Fitzgerald Road | D | F | D | А | А |
| Target | С | С | - | В | D |
| Moodie Drive – North of Fitzgerald Road | F | F | D | А | А |
| Target | С | С | - | В | D |
| Fitzgerald Road | С | D | D | В | А |
| Target | С | С | - | D | D |

<u>Moodie Drive – South of Fitzgerald Road</u>

Moodie Drive, south of Fitzgerald Road, meets the target TkLOS and Auto LOS, however it does not meet the target PLOS and BLOS. To achieve the target PLOS, a reduction of the operational speed is required. To achieve the target BLOS, the City could give consideration to the following:

- a physically separated bicycle facility; or
- a reduction in operational speed and widening of the existing road platform to implement a southbound bike lane.

Moodie Drive – North of Fitzgerald Road

Moodie Drive, north of Fitzgerald Road, meets the target TkLOS and Auto LOS, however it does not meet the target PLOS and BLOS. As the subject site borders the City's Greenbelt to the north, the pedestrian desire line is to/from the south. The proposed development will provide pedestrian connections between the main building entrances and the existing pedestrian facilities to the south. This will provide sufficient pedestrian access to the site along the pedestrian desire line. If the City wishes to implement a sidewalk along Moodie Drive between the Fitzgerald Road intersection and the paved shoulder to the north, a PLOS D could be achieved. To achieve the target BLOS, the City could give consideration to the following:

- a physically separated bicycle facility; or
- a reduction in operational speed and widening of the existing road platform to implement bike lanes.

The recommended pedestrian and cycling improvements along Moodie Drive are to address the existing conditions along and are not attributable to the site. As the site provides pedestrian and cycling connectivity to the existing facilities along Moodie Drive south of Fitzgerald Road, the implementation of any pedestrian and cycling facilities along Moodie Drive should be a City lead initiative.

Fitzgerald Road

Fitzgerald Road meets the target PLOS, TkLOS and Auto LOS, however it does not meet the target BLOS. To achieve the target BLOS, a reduction of the operational speed could be considered.

7.4 Access Intersections Design

The proposed redevelopment will be served by the existing western all movement access along Fitzgerald Road and right-in right-out access along Moodie Drive. The two existing eastern accesses along Fitzgerald Road will be removed and reinstated with a barrier curb as part of this application.

The proposed Fitzgerald Road all movement access will be 6.7m in width, and will be located approximately 6.7m from the western property line and 79m from the Moodie Drive right-of-way limit. The proposed Moodie Drive right-in right-out access will be approximately 7.5m in width, and will be located approximately 65m from the northern property line and 57m from the Fitzgerald Road right-of-way limit. The proposed accesses meet the minimum requirements of the City's Private Approach By-law.

Transportation Association of Canada (TAC) guidelines suggest an access to an arterial and collector serving a hotel with less than 150 rooms should have a minimum clear throat length of 25m and 8m, respectively. A clear throat length of approximately 18m will be provided at the Moodie Drive right-in right-out access, which is sufficient to accommodate approximately three vehicles in queue entering the site. A clear throat length of approximately 5m will be provided at the Fitzgerald Road all movement access, which is sufficient to accommodate approximately one vehicles in queue entering the site.

Based on the traffic projections at the accesses, approximately 30 to 40 vehicles are anticipated to arrive using each access during the critical peak hour (Saturday). This equates to one vehicle entering each access every 1.5 to 2 minutes. Based on the foregoing, spillover of queued vehicles onto Moodie Drive or Fitzgerald Road is anticipated to be infrequent, and the proposed clear throat lengths are considered sufficient.

7.5 Transit

Based on the trip generation presented in Section 5.1, the proposed redevelopment is anticipated to generate an additional 18 transit trips (10 in, 8 out) during the weekday AM peak hour, 16 transit trips (9 in, 7 out) during the weekday PM peak hour and 21 transit trips (12 in, 9 out) during the Saturday peak hour.

It is anticipated that most transit trips will arrive/depart the subject site via OC Transpo route 97. OC Transpo Route 97 travels from Fitzgerald to Ottawa International Airport. The route operates every 30 minutes on weekdays between 6:00am and 11:00pm, and every 60 minutes on weekends between 8:00am and 10:00pm. The additional transit trips generated by the proposed redevelopment are not anticipated to have a significant impact on the operations of OC Transpo route 97.

7.6 Intersection Design

7.6.1 Existing Intersection MMLOS Analysis

This section provides a review of the study area intersections using complete streets principles. The MMLOS guidelines produced by IBI Group in October 2015 were used to evaluate the LOS of all study area intersections for each mode of transportation. Schedule B of the City of Ottawa's Official Plan indicates the Moodie Drive/Timm Drive intersection is in the Agricultural Resource Area, the Moodie Drive/Fitzgerald Road and Moodie Drive/Loblaws Access intersections are in the Urban Employment Area and the Moodie Drive/Robertson Road intersection is along an Arterial Mainstreet. Aerial photos of the study area intersections are provided in Section 4.1.2.

Target PLOS, BLOS, TLOS, TkLOS and Auto LOS for the study area intersections are based on the targets for the respective land use designation, as identified in Exhibit 22 of the MMLOS guidelines. The following table summarizes the findings of the MMLOS intersection analysis. Detailed intersection MMLOS calculations are included in **Appendix H**.

Table 9: Intersection MMLOS Summary

| Segment | PLOS | BLOS | TLOS | TkLOS | Auto LOS |
|----------------------------------|------|------|------|-------|----------|
| Moodie Drive/ Timm Road | E | F | D | С | А |
| Target | D | С | - | D | D |
| Moodie Drive/ Fitzgerald Road | E | F | D | F | В |
| Target | С | С | - | В | D |
| Moodie Drive/ Loblaws | E | F | В | С | А |
| Target | С | С | - | В | D |
| Moodie Drive/ Robertson Road | F | F | F | В | F |
| Target | С | В | D | D | D |

Moodie Drive/Timm Drive

This intersection meets the target TkLOS and Auto LOS, however it does not meet the target PLOS and BLOS.

A reduction in the east-west crossing distance for pedestrians would provide the greatest improvement to the PLOS at this intersection. However, based on the projected traffic volumes the existing four-lane cross section along Moodie Drive is appropriate.

To achieve the target BLOS on the south approach, the City could give consideration to providing a two-stage left turn bike box. To achieve the target BLOS on the west approach, a reduction in the parallel length for the right turn lane is required. Based on the projected 2025 traffic volumes above and the TAC right turn storage length equation (S=NL/30), approximately 55m of storage is required

for this turn lane (exclusive of the deceleration requirement). Based on the foregoing, a reduction in the parallel length for the right turn lane on this approach is not recommended.

Moodie Drive/Fitzgerald Road/Menten Place

This intersection meets the target Auto LOS, however it does not meet the target PLOS, BLOS and TkLOS.

A reduction in the east-west crossing distance for pedestrians would provide the greatest improvement to the PLOS at this intersection. However, based on the projected traffic volumes the existing four-lane cross section along Moodie Drive is appropriate. Based on the City's criteria for the implementation ladder crosswalks (minimum of 400,000 vehicle/pedestrian conflicts over 8 hours), a ladder crosswalk is warranted on the south approach.

To achieve the target BLOS on the north and south approaches, the City could give consideration to providing two-stage left turn bike boxes. To achieve the target BLOS on the west approach, consideration could be given to reducing the posted speed limit to 40km/hr.

Based on the criteria in the MMLOS guidelines, a TkLOS B is unachievable where there is one receiving lane on the departure from an intersection. To improve the TkLOS on the north and south approaches, consideration could be given to providing a larger corner radius. It is noteworthy that a larger corner radius will reduce the Pedestrian Exposure to Traffic at Signalized Intersections (PETSI) score for the PLOS above.

Based on the southbound right turning volumes during the AM peak hour (approximately 185 vehicles), consideration could be given to providing a southbound right turn lane at this intersection. The capacity of the southbound approach is estimated at approximately 2,000 vehicles per hour. The combined southbound through and right turning volumes during the AM peak hour equate to approximately half of the capacity of this approach. It is noteworthy that the Synchro analysis does not suggest capacity deficiencies at this intersection, and there is no significant collision history on the southbound approach over the last five years. Based on the foregoing, and in the interest of minimizing the east-west crossing distance for pedestrians, a southbound right turn lane is not recommended at this intersection.

Moodie Drive/Loblaws Access

This intersection meets the target Auto LOS, however it does not meet the target PLOS, BLOS and TkLOS.

A reduction in the east-west crossing distance for pedestrians would provide the greatest improvement to the PLOS at this intersection. However, based on the projected traffic volumes the existing four-lane cross section along Moodie Drive is appropriate. Based on the City's criteria for the implementation ladder crosswalks (minimum of 400,000 vehicle/pedestrian conflicts over 8 hours), a ladder crosswalk is warranted on the north approach.

To achieve the target BLOS on the north approach, the City could give consideration to providing a two-stage left turn bike box.

The south approach to this intersection does not meet the target TkLOS. This intersection accesses the general parking lot for the commercial development. As there is currently a radius larger than 15m and there is only one lane departing the intersection into the site, the TkLOS on the south

approach cannot be improved. It is noteworthy that loading for the commercial uses is conducted at the rear of the development, with a separate loading access to the north.

Moodie Drive/Robertson Road

This intersection meets the target TkLOS, however it does not meet the target PLOS, BLOS, TLOS and Auto LOS.

A reduction in the crossing distance for pedestrians at this intersection would provide the greatest improvement to the PLOS at this intersection. However, based on the projected traffic volumes the existing cross section along Moodie Drive and Robertson Road is appropriate. Based on the City's criteria for the implementation ladder crosswalks (minimum of 400,000 vehicle/pedestrian conflicts over 8 hours), ladder crosswalks are warranted on all approach.

To improve the BLOS on all approaches, the City could give consideration to implementing twostage left turn bike boxes as part of the City's plan for a segregated cycling facility along Robertson Road, as identified in Section 4.2. To improve the BLOS associated with the right turn criteria on the north approach, a reduction in the parallel length for the right turn lane could be considered. Based on the projected 2025 total traffic volumes and the TAC right turn storage length equation (S=NL/30), a storage length of approximately 45m would be sufficient for this right turn lane.

The eastbound through and southbound left turn movement are currently operating with a LOS E during the weekday AM peak hour. AM peak hour traffic signal optimization is not anticipated to improve the Auto LOS at this intersection. The southbound left turn movement is currently operating with a LOS F during the PM peak hour. PM peak hour traffic signal optimization is anticipated to improve the Auto LOS to LOS D, meeting the target for the area.

A review of the required reduction in existing traffic volumes to alleviate capacity deficiencies at this intersection during the AM peak hour has been conducted. To meet the target LOS D for this area, a reduction of approximately 110 eastbound through vehicles and 25 southbound left turning vehicles is required. Based on the foregoing, continued support of transportation solutions that maximize the transit, bike and walk modes of travel will be critical along Robertson Road. Options to displace traffic along the study area roads include:

- increased use of non-auto modes of transportation;
- alternate time of travel for drivers using the corridor to make use of off-peak capacity; and
- alternate routes for east-west travel.

7.6.2 2020 Background Intersection Operations

Intersection capacity analysis has been completed for the 2020 background traffic conditions. The intersection parameters used in the analysis are consistent with the TIA guidelines (saturation flow rate: 1800 vphpl, PHF: 1.0). The PM peak hour traffic signal timing has been optimized, as described above. The results of the synchro analysis are summarized in the following table for the weekday AM and PM, and Saturday peak hours. Detailed reports are included in **Appendix I**.

Table 10: 2020 Background Intersection Operations

| | | AM Peak | (| | PM Peak | | Sat | urday Po | eak |
|----------------------------------|--------------|---------|-------|--------------|---------|------|--------------|----------|-------|
| Intersection | V/C Ratio | LOS | Mvmt | V/C Ratio | LOS | Mvmt | V/C Ratio | LOS | Mvmt |
| Moodie Drive/ Timm Road | 0.52 | Α | EBR | 0.46 | А | SBT | 0.24 | Α | SBT |
| Moodie Drive/ Fitzgerald Road | 0.37 | Α | SBT/R | 0.61 | В | EBL | 0.23 | Α | SBT/R |
| Moodie Drive/ Loblaws Access | 0.24 | Α | SBT | 0.53 | Α | WB | 0.22 | Α | SBT |
| Moodie Drive/ Robertson Road | 0.87 | D | SBL | 0.80 | С | SBL | 0.72 | С | WBL |

Based on the foregoing, all intersections are anticipated to meet the target Auto LOS D under the weekday AM and PM, and Saturday peak hours.

7.6.3 2025 Background Intersection Operations

Intersection capacity analysis has been completed for the 2025 background traffic conditions. The intersection parameters used in the analysis are consistent with the TIA guidelines (saturation flow rate: 1800 vphpl, PHF: 1.0). The results of the synchro analysis are summarized in the following table for the weekday AM and PM, and Saturday peak hours. Detailed reports are included in **Appendix I**.

Table 11: 2025 Background Intersection Operations

| able 11. 2023 Background intersection Operations | | | | | | | | | |
|--|--------------|-----|-------|--------------|-----|------|---------------|-----|-------|
| | AM Peak | | | PM Peak | | | Saturday Peak | | |
| Intersection | V/C Ratio | LOS | Mvmt | V/C Ratio | LOS | Mvmt | V/C Ratio | Los | Mvmt |
| Moodie Drive/ Timm Road | 0.65 | В | EBR | 0.52 | Α | SBT | 0.31 | А | SBT |
| Moodie Drive/ Fitzgerald Road | 0.40 | Α | SBT/R | 0.61 | В | EBL | 0.25 | А | SBT/R |
| Moodie Drive/ Loblaws Access | 0.26 | Α | SBT | 0.53 | Α | WB | 0.24 | А | SBT |
| Moodie Drive/ Robertson Road | 0.87 | D | SBL | 0.80 | С | SBL | 0.72 | С | WBL |

Based on the foregoing, all intersections are anticipated to meet the target Auto LOS D under the weekday AM and PM and Saturday peak hours.

7.6.4 2020 Total Intersection Operations

Intersection capacity analysis has been completed for the 2020 total traffic conditions. The intersection parameters used in the analysis are consistent with the TIA guidelines (saturation flow rate: 1800 vphpl, PHF: 1.0). The results of the synchro analysis are summarized in the following table for the weekday AM and PM, and Saturday peak hours. Detailed reports are included in **Appendix I**.

Table 12: 2020 Total Intersection Operations

| | | AM Peak | (| | PM Peak | | Sat | urday Po | eak |
|----------------------------------|-----------------|---------|------|-----------------|---------|------|-----------------|----------|------|
| Intersection | V/C or Delay | LOS | Mvmt | V/C or Delay | LOS | Mvmt | V/C or Delay | LOS | Mvmt |
| Moodie Drive/ Timm Road | 0.54 | Α | EBR | 0.47 | Α | SBT | 0.25 | Α | SBT |
| Moodie Drive/ Fitzgerald Road | 0.38 | Α | EBL | 0.64 | В | EBL | 0.27 | Α | EBL |
| Moodie Drive/ Loblaws Access | 0.24 | Α | SBT | 0.53 | Α | WB | 0.22 | Α | SBT |
| Moodie Drive/ Robertson Road | 0.88 | D | SBL | 0.81 | D | SBL | 0.73 | С | EBL |
| Moodie Drive/ RIRO | 11 sec | В | EB | 9 sec | Α | EB | 9 sec | Α | EB |
| Fitzgerald Road/ Access | 11 sec | В | SB | 11 sec | В | SB | 9 sec | Α | SB |

Based on the foregoing, the addition of site generated traffic is not anticipated to have a significant impact on the signalized intersections within the study area.

A review of the turn lane requirements has been conducted at the proposed site accesses. Based on the southbound right turning volumes at the Moodie Drive access and the westbound right turning volumes at the Fitzgerald Road access, right turn lanes are not required at the accesses. Based on the Ministry of Transportation of Ontario (MTO) left turn lane warrant graphs, an eastbound left turn lane is not required at the Fitzgerald Road access. A copy of the MTO left turn lane warrant graph is included in **Appendix J**.

7.6.5 2025 Total Intersection Operations

Intersection capacity analysis has been completed for the 2025 total traffic conditions. The intersection parameters used in the analysis are consistent with the TIA guidelines (saturation flow rate: 1800 vphpl, PHF: 1.0). The results of the synchro analysis are summarized in the following table for the weekday AM and PM, and Saturday peak hours. Detailed reports are included in **Appendix I**.

Table 13: 2025 Total Intersection Operations

| | | AM Peak | (| | PM Peak | | | Saturday Peak | | |
|----------------------------------|-----------------|---------|-------|-----------------|---------|------|-----------------|---------------|-------|--|
| Intersection | V/C or Delay | LOS | Mvmt | V/C or Delay | LOS | Mvmt | V/C or Delay | LOS | Mvmt | |
| Moodie Drive/ Timm Road | 0.66 | В | EBR | 0.53 | А | SBT | 0.32 | А | SBT | |
| Moodie Drive/ Fitzgerald Road | 0.40 | Α | SBT/R | 0.64 | В | EBL | 0.28 | Α | SBT/R | |
| Moodie Drive/ Loblaws Access | 0.27 | Α | SBT | 0.53 | Α | WB | 0.24 | Α | SBT | |
| Moodie Drive/ Robertson Road | 0.88 | D | SBL | 0.81 | D | SBL | 0.73 | С | EBL | |
| Moodie Drive/ RIRO | 11 sec | В | EB | 9 sec | А | EB | 9 sec | А | EB | |

| | | AM Peak | (| | PM Peak | | Sat | urday Pe | eak |
|----------------------------|-----------------|---------|------|-----------------|---------|------|-----------------|----------|------|
| Intersection | V/C or Delay | LOS | Mvmt | V/C or Delay | LOS | Mvmt | V/C or Delay | LOS | Mvmt |
| Fitzgerald Road/ Access | 11 sec | В | SB | 11 sec | В | SB | 9 sec | Α | SB |

Based on the foregoing, the addition of site generated traffic is not anticipated to have a significant impact on the signalized intersections within the study area.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the foregoing, the conclusions and recommendations of this TIA can be summarized as follows:

Development Design and Parking

- Pedestrian facilities will be provided between the main building entrance to the hotel and commercial unit and the proposed parking lot. New sidewalks will be provided to the south and east of the proposed hotel. These new sidewalks will provide pedestrian connectivity between the hotel and commercial unit building entrances and the existing pedestrian facilities in the northwest corner of the Moodie Drive/Fitzgerald Road/Menten Place intersection.
- Bicycle parking for the hotel will be located near the northwest corner of the hotel. Bicycle
 parking for the commercial unit will be located near the loading area north of the commercial
 unit.
- All required TDM-supportive design and infrastructure measures in the TDM checklist are met, excluding the minimum parking requirement.
- Based on the City's ZBL, two loading spaces are required for the proposed hotel and one loading space is required for the proposed commercial development. Loading and garbage collection for the proposed development will take place north of the commercial unit (one loading space) and near the northwest corner of the hotel (two loading spaces).
- The proposed bicycle parking meets the minimum requirement of the ZBL, however a variance is required for relief of the minimum vehicular parking requirement. The development proposes a reduction in 19 vehicular parking spaces from the minimum requirement of the ZBL.
- As the subject site will contain multiple land uses, it is anticipated that some trips may be internally captured (i.e. people from the hotel going out for dinner) and will not require an additional parking space. It is also noteworthy that the parking demand for the hotel may fluctuate day-to-day, as not all rooms may not be occupied. Based on the foregoing, spillover parking from the site is anticipated infrequent and minimal. As the proposed parking equates to approximately 90% of the required parking under the ZBL, a review of spillover parking is not required under the TIA guidelines.

Boundary Streets

- Moodie Drive, south of Fitzgerald Road, meets the target TkLOS and Auto LOS, however it does not meet the target PLOS and BLOS.
- Moodie Drive, north of Fitzgerald Road, meets the target TkLOS and Auto LOS, however it
 does not meet the target PLOS and BLOS. As the subject site borders the City's Greenbelt
 to the north, the pedestrian desire line is to/from the south. The proposed development will
 provide pedestrian connections between the main building entrances and the existing
 pedestrian facilities to the south. This will provide sufficient pedestrian access to the site
 along the pedestrian desire line.
- If the City wishes to implement a sidewalk along Moodie Drive between the Fitzgerald Road intersection and the paved shoulder to the north, a PLOS D could be achieved.
- To achieve the target BLOS along Moodie Drive, the City could give consideration to a
 physically separated bicycle facility, or a reduction in operational speed and widening of the
 existing road platform to implement a southbound bike lane.
- The recommended pedestrian and cycling improvements along Moodie Drive are to address
 the existing conditions and are not attributable to the site. As the site provides pedestrian and
 cycling connectivity to the existing facilities along Moodie Drive south of Fitzgerald Road, the
 implementation of any pedestrian and cycling facilities along Moodie Drive should be a City
 lead initiative.
- Fitzgerald Road meets the target PLOS, TkLOS and Auto LOS, however it does not meet the target BLOS. To achieve the target BLOS, a reduction of the operational speed could be considered.

Access Design

- The proposed redevelopment will be served by the existing western all movement access along Fitzgerald Road and right-in right-out access along Moodie Drive. The two existing eastern accesses along Fitzgerald Road will be removed and reinstated with a barrier curb as part of this application.
- The proposed accesses meet the minimum requirements of the City's Private Approach Bylaw.
- Based on the traffic projections at the accesses, approximately 30 to 40 vehicles are anticipated to arrive using each access during the critical peak hour (Saturday). This equates to one vehicle entering each access every 1.5 to 2 minutes. Based on the foregoing, spillover of queued vehicles onto Moodie Drive or Fitzgerald Road is anticipated to be infrequent, and the proposed clear throat lengths are considered sufficient.

Transit

• The additional transit trips generated by the proposed redevelopment are not anticipated to have a significant impact on the operations of OC Transpo route 97.

Intersection Design

- The Moodie Drive/Timm Road intersection meets the target TkLOS and Auto LOS, however it does not meet the target PLOS and BLOS.
- The Moodie Drive/Fitzgerald Road/Menten Place intersection meets the target Auto LOS, however it does not meet the target PLOS, BLOS and TkLOS.
- The Moodie Drive/Loblaws Access intersection meets the target Auto LOS, however it does not meet the target PLOS, BLOS and TkLOS.
- The Moodie Drive/Robertson Road intersection meets the target TkLOS, however it does not meet the target PLOS, BLOS, TLOS and Auto LOS.
- A reduction in the east-west crossing distance for pedestrians at the intersections along Moodie Drive and the north-south crossing distance at the Robertson Road intersection would provide the greatest improvement to the PLOS at the study area intersections. However, based on the projected traffic volumes the existing cross section along Moodie Drive and Robertson Road is appropriate.
- Based on the City's criteria for the implementation ladder crosswalks (minimum of 400,000 vehicle/pedestrian conflicts over 8 hours), a ladder crosswalk is warranted on the south approach to the Moodie Drive/Fitzgerald Road/Menten Place intersection, on the north approach to the Moodie Drive/Loblaws Access intersection, as well as all approaches to the Moodie Drive/Robertson Road intersection.
- To improve the BLOS associated with the left turn criteria at the intersections along Moodie Drive, the City could give consideration to implementing two-stage left turn bike boxes on the north and south approaches, as well as the east and west approaches to the Moodie Drive/Robertson Road intersection.
- To improve the BLOS on the west approach to the MoodieDrive/Fitzgerald Road/Menten Place intersection, the City could give consideration to reducing the operating speed.
- To improve the BLOS associated with the right turn criteria on the north approach to the Moodie Drive/Robertson Road intersection, a reduction in the parallel length for the right turn lane could be considered. Based on the projected 2025 total traffic volumes and the TAC right turn storage length equation (S=NL/30), a storage length of approximately 45m would be sufficient for this right turn lane.
- Based on the southbound right turning volumes during the AM peak hour (approximately 185 vehicles), consideration could be given to providing a southbound right turn lane at the Moodie Drive/Fitzgerald Road/Menten Place intersection. The combined southbound through and right turning volumes during the AM peak hour equate to approximately half of the capacity of this approach. It is noteworthy that the Synchro analysis does not suggest capacity deficiencies at this intersection, and there is no significant collision history on the southbound approach over the last five years. Based on the foregoing, and in the interest of minimizing the east-west crossing distance for pedestrians, a southbound right turn lane is not recommended at this intersection.

- To meet the target Auto LOS D for this area, a reduction of approximately 110 eastbound through vehicles and 25 southbound left turning vehicles is required during the AM peak hour at the Moodie Drive/Robertson Road intersection. Based on the foregoing, continued support of transportation solutions that maximize the transit, bike and walk modes of travel will be critical along Robertson Road. Options to displace traffic along the study area roads include increased use of non-auto modes of transportation, alternate time of travel for drivers using the corridor to make use of off-peak capacity, and alternate routes for east-west travel.
- Under the background traffic conditions, all intersections are anticipated to meet the target Auto LOS D under the weekday AM and PM, and Saturday peak hours.
- The addition of site generated traffic is not anticipated to have a significant impact on the signalized intersections within the study area.
- Based on the southbound right turning volumes at the Moodie Drive access and the westbound right turning volumes at the Fitzgerald Road access, right turn lanes are not required at the accesses.
- Based on the Ministry of Transportation of Ontario (MTO) left turn lane warrant graphs, an eastbound left turn lane is not required at the Fitzgerald Road access.

NOVATECH

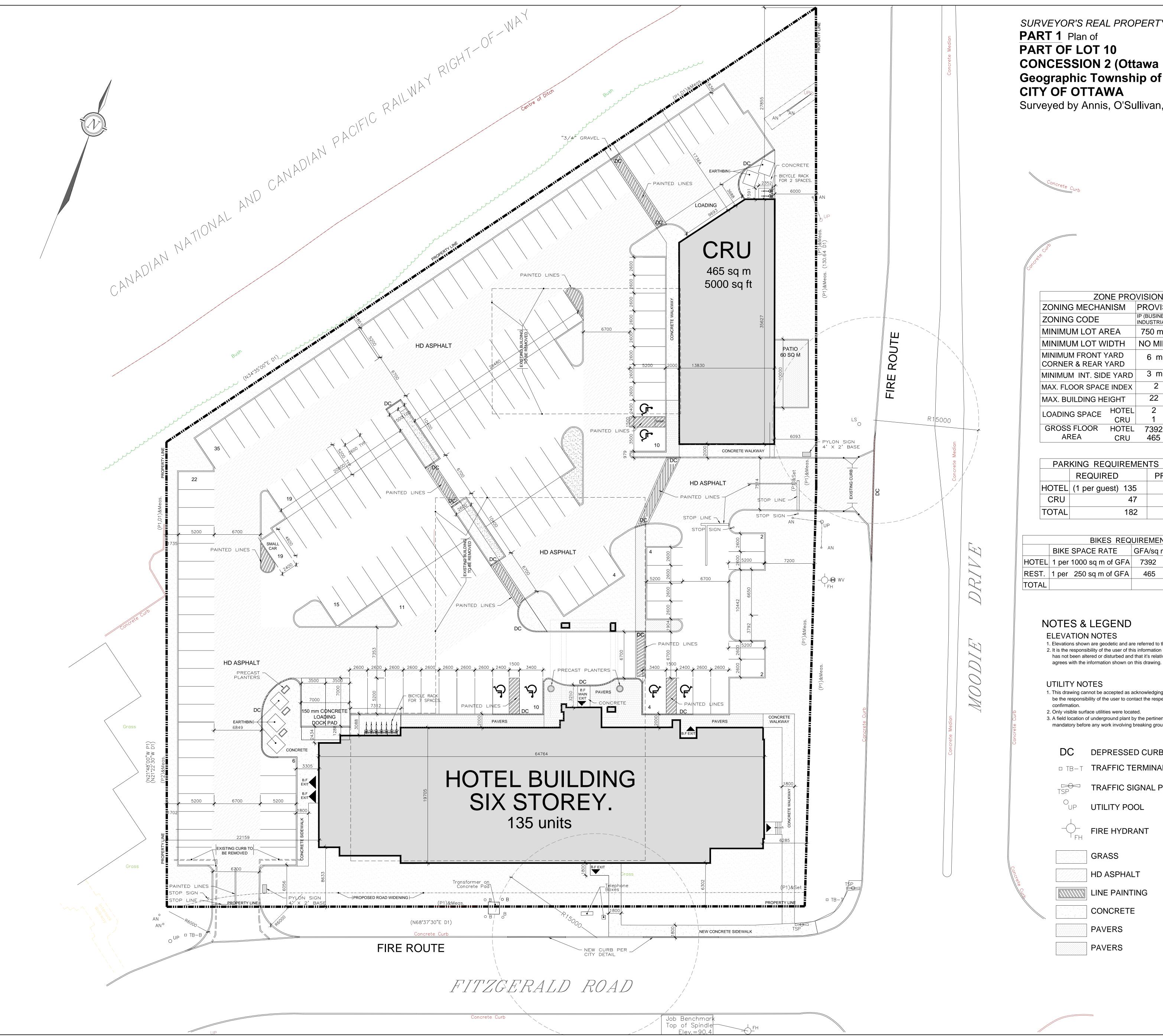
Prepared by:



Brad Byvelds, P. Eng.
Project Coordinator | Transportation/Traffic

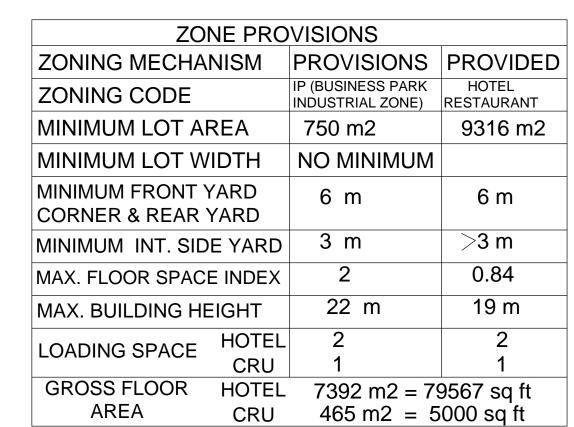
APPENDIX A

Proposed Site Plan



SURVEYOR'S REAL PROPERTY REPORT PART 1 Plan of PART OF LOT 10 **CONCESSION 2 (Ottawa Front)** Geographic Township of Nepean

Surveyed by Annis, O'Sullivan, Vollebekk Ltd.



| PAR | PARKING REQUIREMENTS | | | | | | |
|-------|----------------------|-----|--|--|--|--|--|
| | REQUIRED PROVIDED | | | | | | |
| HOTEL | (1 per guest) 135 | 135 | | | | | |
| CRU | 47 | 28 | | | | | |
| TOTAL | 182 | 163 | | | | | |

| | BIKES REQUIREMENTS | | | | | | | |
|-------|------------------------|----------|----------|----------|--|--|--|--|
| | BIKE SPACE RATE | GFA/sq m | REQUIRED | PROVIDED | | | | |
| HOTEL | 1 per 1000 sq m of GFA | 7392 | 7 | 7 | | | | |
| REST. | 1 per 250 sq m of GFA | 465 | 2 | 2 | | | | |
| TOTAL | | | 9 | 9 | | | | |

NOTES & LEGEND

ELEVATION NOTES

1. Elevations shown are geodetic and are referred to the CGVD28 geodetic datum. 2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description

UTILITY NOTES

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for

2. Only visible surface utilities were located.

3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

DEPRESSED CURB

□ TB-T TRAFFIC TERMINAL BOX

TRAFFIC SIGNAL POST

UTILITY POOL

GRASS

HD ASPHALT

CONCRETE

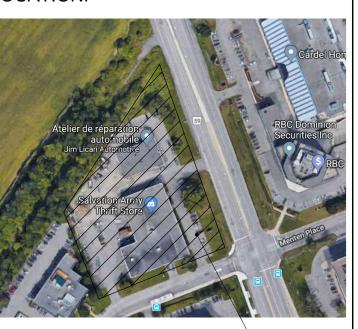
PAVERS PAVERS

300 MOODIE DRIVE

N SITE AND TO REPORT ALL ERRORS AND/OF CODES AND BYLAWS AND OTHER AUTHORITIES HAVING JURISDICTION OVER THE WORK.

OO NOT SCALE DRAWINGS. THIS DRAWING MAY NOT BE USED FOR CONSTRUCTION UNTIL SIGNED BY THE ARCHITECT

LOCATION:



300 MOODIE DR.

| 23 | | |
|-----|-------------------------|-----------------|
| 22 | | |
| 21 | | |
| 20 | | |
| 19 | | |
| 14 | | |
| 13 | | |
| 12 | | |
| 11 | | |
| 10 | | |
| 09 | | |
| 80 | | |
| 07 | | |
| 06 | | |
| 05 | | |
| 04 | ISSUED FOR SITE PLAN | 04/16/1 |
| 03 | ISSUED FOR COORDINATION | 03/26/1 |
| 02 | ISSUED FOR COORDINATION | 03/09/1 |
| 01 | ISSUED FOR START-UP | 03/07/1 |
| NO. | REVISION | MM/DD/Y DATE |





Colonnade







4 BEECHWOOD, SUITE 201 OTTAWA, ONTARIO, CANADA K1L 8L9 TEL: 613 228 9850 • FAX 613 228 9848 • mailbox@woodmanarchitect.com

> HAMPTON INN 300 MOODIE DR.

DRAWING:

SITE PLAN

| | | DRAWING NO. |
|-------------|-------------|-------------|
| DATE | MARCH, 2018 | |
| SCALE | 1: 200 | |
| DRAWN BY | J.G. | SP-0 |
| REVIEWED BY | R.W | 3F-0 |
| JOB NO. | 1802 | |

SP-01

APPENDIX B

TIA Screening Form



City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

| Municipal Address | 300 & 320 Moodie Drive |
|----------------------------------|---|
| Description of Location | The 0.92-hectare property is bound by the Carleton Place rail corridor to the north, Moodie Drive to the east, Fitzgerald Road to the south, and existing businesses to the west. |
| Land Use Classification | Hotel/Restaurant |
| Development Size (units) | 135 units (hotel) |
| Development Size (m²) | 4,000 ft ² (restaurant) |
| Number of Accesses and Locations | The subject site has one proposed right-in/right-out access on Moodie Drive and one all-movement access on Fitzgerald Road. |
| Phase of Development | 1 |
| Buildout Year | 2020 |

If available, please attach a sketch of the development or site plan to this form.

2. Trip Generation Trigger

Considering the Development's Land Use type and Size (as filled out in the previous section), please refer to the Trip Generation Trigger checks below.

| Land Use Type | Minimum Development Size |
|-------------------------------------|--------------------------|
| Single-family homes | 40 units |
| Townhomes or apartments | 90 units |
| Office | 3,500 m² |
| Industrial | 5,000 m ² |
| Fast-food restaurant or coffee shop | 100 m² |
| Destination retail | 1,000 m ² |
| Gas station or convenience market | 75 m² |

^{*} If the development has a land use type other than what is presented in the table above, estimates of person-trip generation may be made based on average trip generation characteristics represented in the current edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual.



Transportation Impact Assessment Screening Form

If the proposed development size is greater than the sizes identified above, <u>the Trip Generation</u> <u>Trigger is satisfied.</u>

3. Location Triggers

| | Yes | No |
|--|-----|----|
| Does the development propose a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit or Spine Bicycle Networks? | ✓ | |
| Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?* | | ✓ |

^{*}DPA and TOD are identified in the City of Ottawa Official Plan (DPA in Section 2.5.1 and Schedules A and B; TOD in Annex 6). See Chapter 4 for a list of City of Ottawa Planning and Engineering documents that support the completion of TIA).

If any of the above questions were answered with 'Yes,' the Location Trigger is satisfied.

4. Safety Triggers

| | Yes | No |
|---|-----|----|
| Are posted speed limits on a boundary street are 80 km/hr or greater? | | ✓ |
| Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway? | | ✓ |
| Is the proposed driveway within the area of influence of an adjacent traffic signal or roundabout (i.e. within 300 m of intersection in rural conditions, or within 150 m of intersection in urban/ suburban conditions)? | ✓ | |
| Is the proposed driveway within auxiliary lanes of an intersection? | ✓ | |
| Does the proposed driveway make use of an existing median break that serves an existing site? | | ✓ |
| Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development? | | ✓ |
| Does the development include a drive-thru facility? | ✓ | |

If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.



Transportation Impact Assessment Screening Form

5. Summary

| | Yes | No |
|---|-----|----|
| Does the development satisfy the Trip Generation Trigger? | ✓ | |
| Does the development satisfy the Location Trigger? | ✓ | |
| Does the development satisfy the Safety Trigger? | ✓ | |

If none of the triggers are satisfied, <u>the TIA Study is complete</u>. If one or more of the triggers is satisfied, <u>the TIA Study must continue into the next stage</u> (Screening and Scoping).

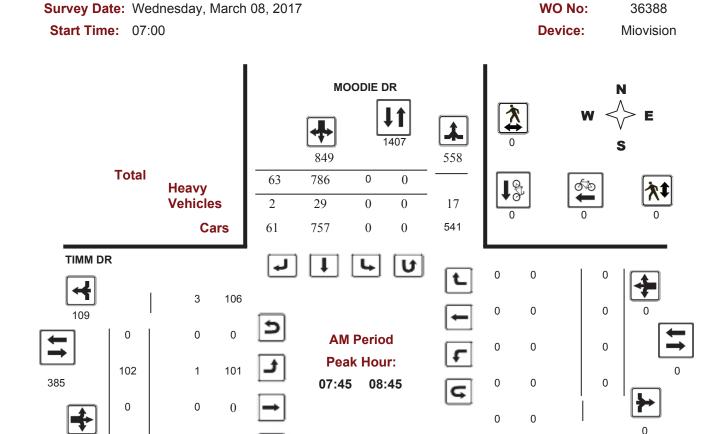
APPENDIX C

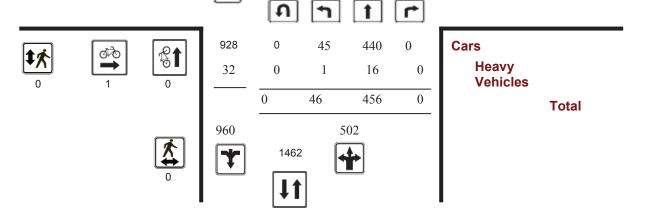
Traffic Count and Signal Timing Data



Turning Movement Count - Full Study Peak Hour Diagram

MOODIE DR @ TIMM DR





Comments

174

3

171

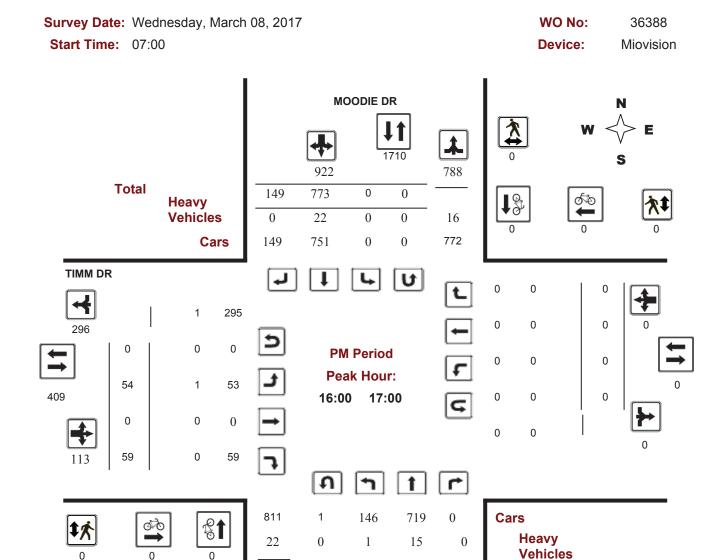
7

2017-Nov-03 Page 1 of 4



Turning Movement Count - Full Study Peak Hour Diagram

MOODIE DR @ TIMM DR



147

1715

833

734

882

0

Total

Comments

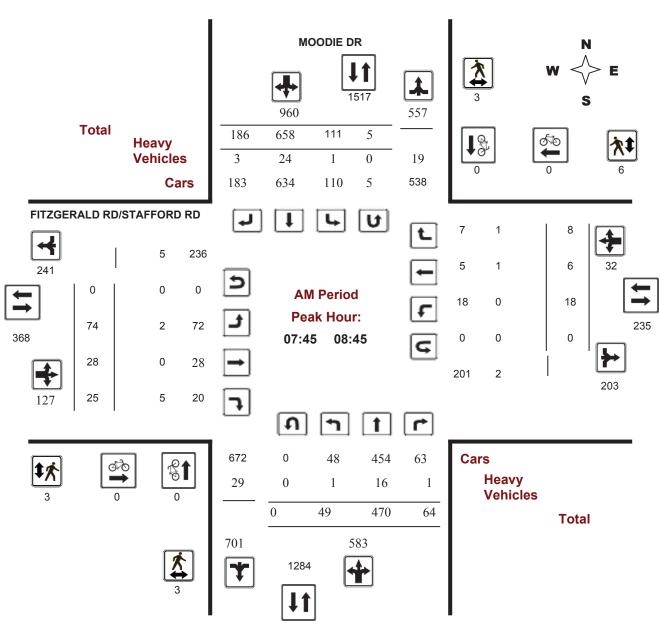
2017-Nov-03 Page 4 of 4



Turning Movement Count - Full Study Peak Hour Diagram

MOODIE DR @ FITZGERALD RD/STAFFORD RD

Survey Date:Wednesday, March 08, 2017WO No:36641Start Time:07:00Device:Miovision



Comments

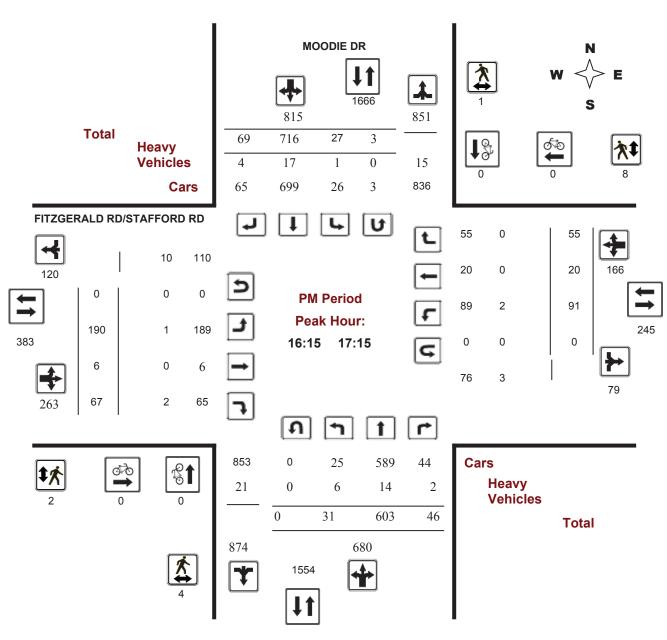
2018-Jan-25 Page 1 of 4



Turning Movement Count - Full Study Peak Hour Diagram

MOODIE DR @ FITZGERALD RD/STAFFORD RD

Survey Date: Wednesday, March 08, 2017 WO No: 36641
Start Time: 07:00 Device: Miovision



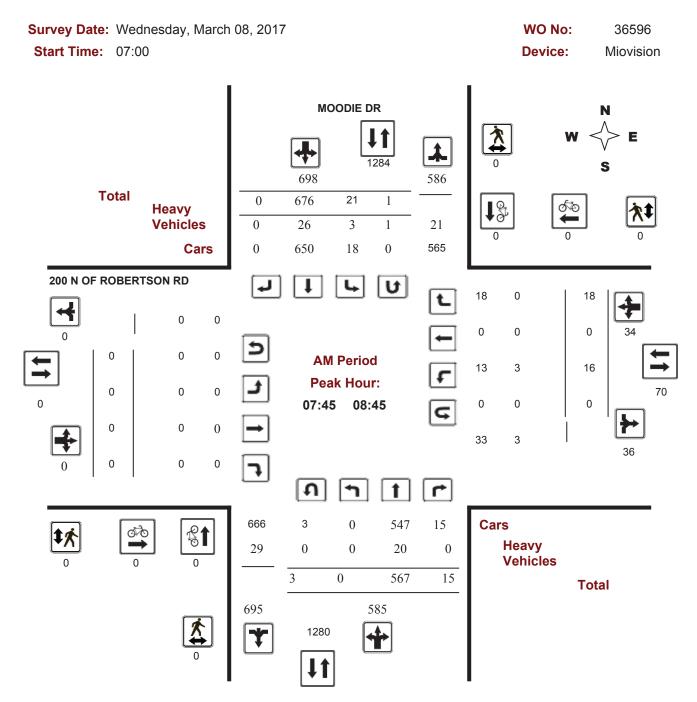
Comments

2018-Jan-25 Page 4 of 4



Turning Movement Count - Full Study Peak Hour Diagram

MOODIE DR @ 200 N OF ROBERTSON RD



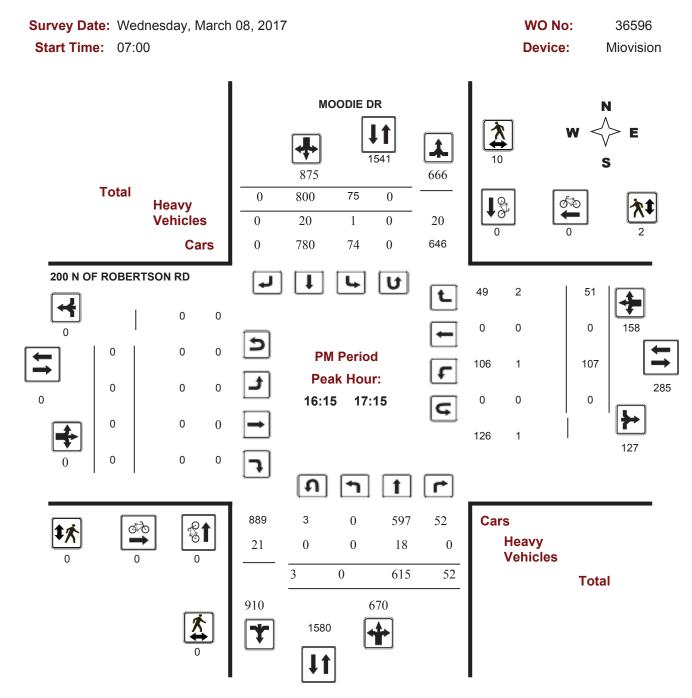
Comments

2018-Jan-25 Page 1 of 4



Turning Movement Count - Full Study Peak Hour Diagram

MOODIE DR @ 200 N OF ROBERTSON RD



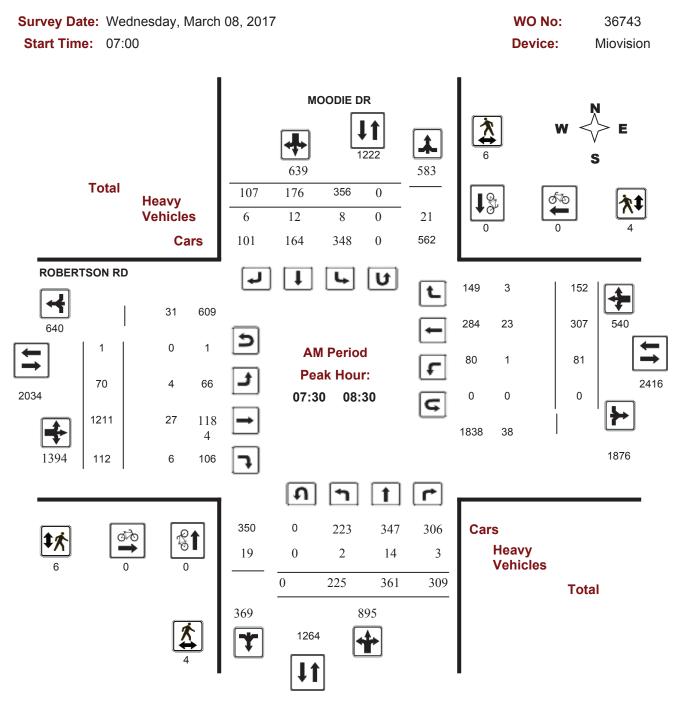
Comments

2018-Jan-25 Page 4 of 4



Turning Movement Count - Full Study Peak Hour Diagram

MOODIE DR @ ROBERTSON RD



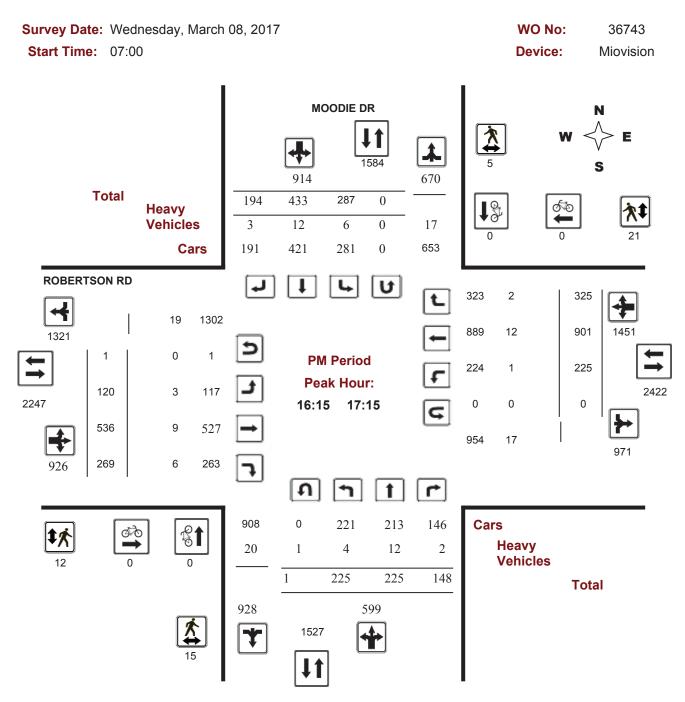
Comments

2018-Jan-25 Page 1 of 4



Turning Movement Count - Full Study Peak Hour Diagram

MOODIE DR @ ROBERTSON RD



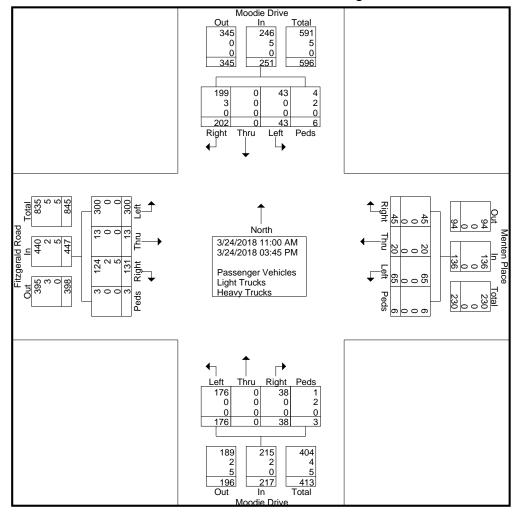
Comments

2018-Jan-25 Page 4 of 4



File Name: Moodie_Fitzgerald_Menten

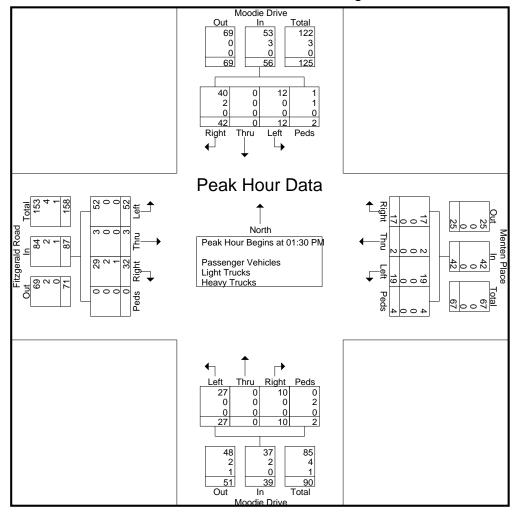
Site Code : 11800704 Start Date : 3/24/2018





File Name: Moodie_Fitzgerald_Menten

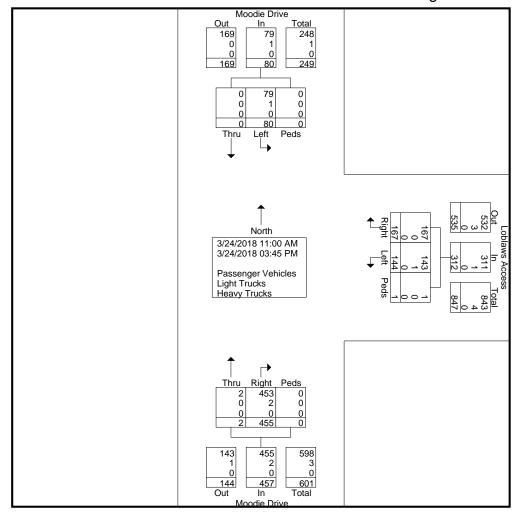
Site Code : 11800704 Start Date : 3/24/2018





File Name: Moodie_Loblaws

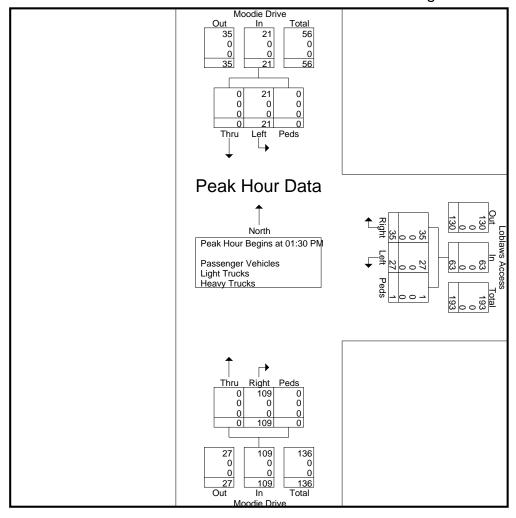
Site Code : 11800705 Start Date : 3/24/2018





File Name: Moodie_Loblaws

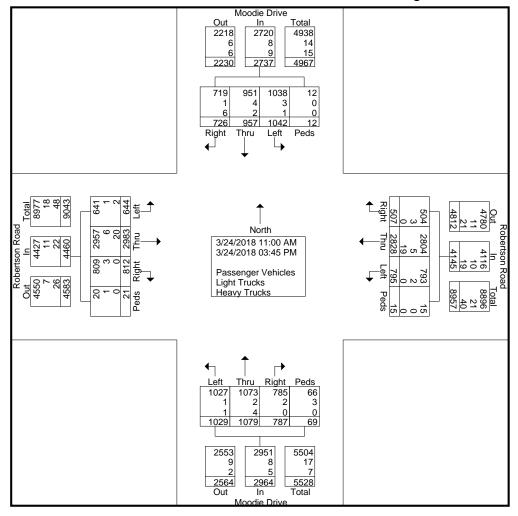
Site Code : 11800705 Start Date : 3/24/2018





File Name: Moodie_Robertson

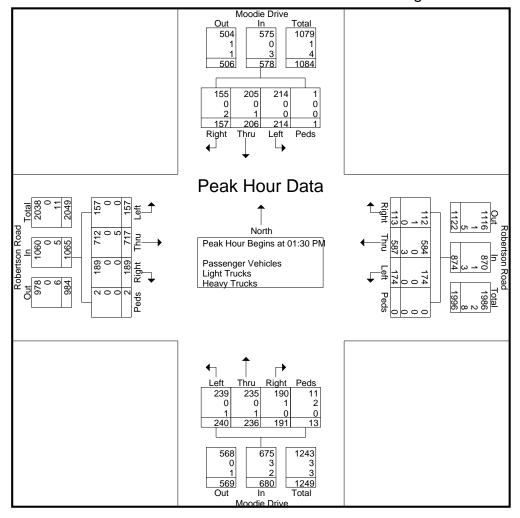
Site Code : 11800701 Start Date : 3/24/2018





File Name: Moodie_Robertson

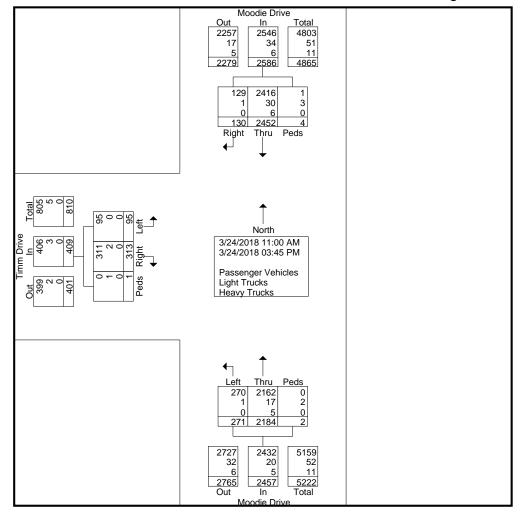
Site Code : 11800701 Start Date : 3/24/2018





File Name: Moodie_Timm Site Code: 11800703

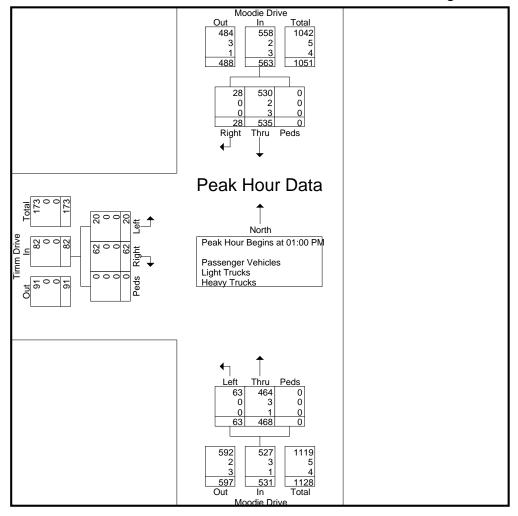
Start Date : 3/24/2018





File Name: Moodie_Timm Site Code: 11800703

Start Date : 3/24/2018



Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

 Intersection:
 Main:
 Moodie
 Side:
 Timm

 Controller:
 MS-3200
 TSD:
 5989

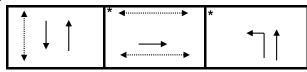
 Author:
 Spencer Willows
 Date:
 25-Jan-2018

Existing Timing Plans[†]

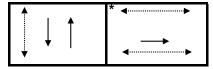
Plan **Ped Minimum Time** Off Peak PM Peak Walk DW A+R AM Peak Night 2 3 Cycle 80 65 70 60 Offset 6 48 55 Χ NB Thru 37 42 32 3.7 + 1.93.7 + 1.9 SB Thru 32 5 52 26 31 14 28 EB Thru 28 28 28 7 15 4.6 + 1.7 NB Left 11 11 3.7 + 1.9

Phasing Sequence[‡]

Plan: 2, 3



Plan: 1, 4



Schedule

Weekday

| Time | Plan |
|-------|------|
| 0:15 | 4 |
| 6:30 | 1 |
| 9:30 | 2 |
| 15:00 | 3 |
| 18:30 | 2 |
| 21:30 | 4 |

Saturday

| Time | Plan |
|-------|------|
| 0:15 | 4 |
| 9:00 | 3 |
| 18:00 | 2 |
| 22:00 | 4 |

Sunday

| Time | Plan |
|-------|------|
| 0:15 | 4 |
| 9:00 | 2 |
| 19:00 | 4 |

Notes

- †: Time for each direction includes amber and all red intervals
- ‡: Start of first phase should be used as reference point for offset

Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

Intersection: Main: Moodie Side: Fitzgerald/Stafford

Controller: ATC-3 TSD: 5871

Author: Spencer Willows Date: 25-Jan-2018

Existing Timing Plans[†]

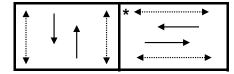
Plan

Ped Minimum Time

| | AM Peak | Off Peak | PM Peak | Night 4 | Walk | DW | A+R |
|---------|---------|----------|---------|------------|------|----|---------|
| Cycle | 80 | 65 | 70 | 65 | | | |
| Offset | 68 | 0 | 0 | 0 | | | |
| NB Thru | 46 | 31 | 36 | 31 | 9 | 16 | 3.7+2.0 |
| SB Thru | 46 | 31 | 36 | 31 | 9 | 16 | 3.7+2.0 |
| EB Thru | 34 | 34 | 34 | 34 | 7 | 21 | 3.3+2.7 |
| WB Thru | 34 | 34 | 34 | 34 | 7 | 21 | 3.3+2.7 |

Phasing Sequence[‡]

Plan: All



Schedule

Weekday

| Time | Plan | | | |
|-------|------|--|--|--|
| 0:15 | 4 | | | |
| 6:30 | 1 | | | |
| 9:30 | 2 | | | |
| 15:00 | 3 | | | |
| 18:30 | 2 | | | |
| 21:30 | 4 | | | |

Saturday

| Time | Plan |
|-------|------|
| 0:15 | 4 |
| 9:00 | 3 |
| 18:00 | 2 |
| 22:00 | 4 |

Sunday

| Time | Plan |
|-------|------|
| 0:15 | 4 |
| 9:00 | 2 |
| 19:00 | 4 |

Notes

- †: Time for each direction includes amber and all red intervals
- ‡: Start of first phase should be used as reference point for offset Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

Intersection: Main: Moodie Side: Zellers/200 m N of Robertson

Controller: MS-3200 TSD: 5768

Author: Spencer Willows Date: 25-Jan-2018

Existing Timing Plans[†]

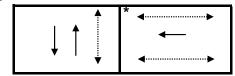
Plan

Ped Minimum Time

| | AM Peak | Off Peak | PM Peak | Night | Walk | DW | A+R |
|---------|---------|----------|---------|-------|------|----|---------|
| | 1 | 2 | 3 | 4 | | | |
| Cycle | 80 | 65 | 70 | 62 | | | |
| Offset | 58 | 5 | 9 | Х | | | |
| NB Thru | 47 | 32 | 37 | 29 | 7 | 16 | 3.7+2.2 |
| SB Thru | 47 | 32 | 37 | 29 | - | - | 3.7+2.2 |
| WB Thru | 33 | 33 | 33 | 33 | 7 | 20 | 3.3+2.3 |

Phasing Sequence[‡]

Plan: All



Schedule

Weekday

| Plan |
|------|
| 4 |
| 1 |
| 2 |
| 3 |
| 2 |
| 4 |
| |

Saturday

| Time | Plan |
|-------|------|
| 0:15 | 4 |
| 9:00 | 3 |
| 18:00 | 2 |
| 22:00 | 4 |

Sunday

| Time | Plan |
|-------|------|
| 0:15 | 4 |
| 9:00 | 2 |
| 19:00 | 4 |

Notes

†: Time for each direction includes amber and all red intervals

‡: Start of first phase should be used as reference point for offset Asterisk (*) Indicates actuated phase

(fp): Fully Protected Left Turn

◄·····

Pedestrian signal

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

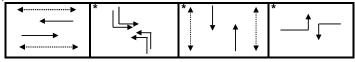
| Intersection: | Main: | Robertson | Side: | Moodie | |
|---------------|---------|-----------|-------|--------|-------------|
| Controller: | ATC-3 | | | TSD: | 5647 |
| Author: | Spencer | Willows | | Date: | 25-Jan-2018 |

Existing Timing Plans[†]

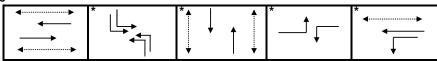
| | Plan | | | | | Ped Min | imum T | ime |
|--------------|---------|----------|---------|-------|---------|----------------|--------|---------|
| | AM Peak | Off Peak | PM Peak | Night | Weekend | Walk | DW | A+R |
| | 1 | 2 | 3 | 4 | 13 | | | |
| Cycle | 130 | 110 | 120 | 93 | 130 | | | |
| Offset | 119 | 0 | 100 | Х | 0 | | | |
| EB Thru | 54 | 34 | 39 | 34 | 35 | 7 | 20 | 3.7+2.7 |
| WB Thru | 54 | 34 | 44 | 34 | 40 | 7 | 20 | 3.7+2.7 |
| NB Left (fp) | 23 | 25 | 18 | 11 | 27 | - | - | 3.7+2.8 |
| SB Left (fp) | 23 | 25 | 18 | 11 | 27 | | 1 | 3.7+2.8 |
| NB Thru | 38 | 37 | 38 | 37 | 37 | 7 | 24 | 3.7+3.0 |
| SB Thru | 38 | 37 | 38 | 37 | 37 | 7 | 24 | 3.7+3.0 |
| EB Left (fp) | 15 | 14 | 20 | 11 | 26 | - | - | 3.7+2.7 |
| WB Left (fp) | 15 | 14 | 25 | 11 | 31 | - | - | 3.7+2.7 |

Phasing Sequence[‡]





Plan: 3, 13



Notes:

1) If there is no pedestrian actuation in the north-south direction, the NB and SB Thru phases are forced off 14 seconds early for Plan 2, and 11 seconds early for Plan 4.

Schedule

| Weekday | |
|---------|------|
| Time | Plan |
| 0:15 | 4 |
| 6:30 | 1 |
| 9:30 | 2 |
| 15:00 | 3 |
| 18:30 | 2 |
| 21:30 | 4 |

| Saturda | Saturday | | | | | | | | | |
|---------|----------|--|--|--|--|--|--|--|--|--|
| Time | Plan | | | | | | | | | |
| 0:15 | 4 | | | | | | | | | |
| 9:00 | 3 | | | | | | | | | |
| 11:00 | 13 | | | | | | | | | |
| 18:00 | 2 | | | | | | | | | |
| 22:00 | 4 | | | | | | | | | |
| | • | | | | | | | | | |

| Sunday | | | | | | | | | | |
|--------|------|--|--|--|--|--|--|--|--|--|
| Time | Plan | | | | | | | | | |
| 0:15 | 4 | | | | | | | | | |
| 9:00 | 2 | | | | | | | | | |
| 19:00 | 4 | | | | | | | | | |

Notes

Asterisk (*) Indicates actuated phase (fp): Fully Protected Left Turn

^{†:} Time for each direction includes amber and all red intervals

 $[\]ensuremath{\ddagger}\xspace$ Start of first phase should be used as reference point for offset

APPENDIX D

Collision Records

OnTRAC Reporting System FROM: 2012-01-01 TO: 2014-01-01

200 N OF ROBERTSON RD & MOODIE DR

| Former Municip | pality: Nepean | Traffic Control: Traffic signal | Numb | er of Collisions: 4 | | |
|----------------|----------------------------|-----------------------------------|----------------------------------|---|---|------------|
| | DATE DAY TIME ENV | IMPACT LIGHT TYPE CLASS | SURFACE COND'N | VEHICLE MANOEUVRE VEHICLE TYPE | FIRST EVENT | No. PED |
| 1 | 2012-01-06 Fri 14:41 Clear | Daylight Turning P.D. only | V1 N Wet V2 N Wet | Making U-Turn Truck - closed Going ahead Automobile, station | Other motor vehicle Other motor vehicle | 0 |
| 2 | 2012-02-22 We 14:48 Clear | Daylight Rear end P.D. only | V1 N Dry V2 N Dry V3 N Dry | Going ahead Automobile, station Going ahead Automobile, station Stopped Pick-up truck | Other motor vehicle Other motor vehicle Other motor vehicle | 0 |
| 3 | 2013-01-31 Thu 14:50 Clear | Daylight Angle P.D. only | , | Going ahead Passenger van Turning left Automobile, station | Other motor vehicle Other motor vehicle | 0 |
| 4 | 2013-10-25 Fri 19:20 Clear | Dark Angle P.D. only | V1 S Dry V2 W Dry | Going ahead Automobile, station Turning left Automobile, station | Other motor vehicle Other motor vehicle | 0 |
| FITZGERALI | ORD & MOODIE DR | | • | _ | | |
| Former Municip | pality: Nepean | Traffic Control: Traffic signal | Numb | er of Collisions: 13 | | |
| | DATE DAY TIME ENV | IMPACT LIGHT TYPE CLASS | SURFACE DIR COND'N | VEHICLE MANOEUVRE VEHICLE TYPE | FIRST EVENT | No. PED |
| 5 | 2012-01-18 We 10:24 Clear | Daylight Rear end P.D. only | V1 E Ice V2 E Wet | Turning left Automobile, station Turning left Pick-up truck | Other motor vehicle Other motor vehicle | 0 |
| 6 | 2012-01-27 Fri 15:00 Clear | Daylight Angle P.D. only | V1 W Ice V2 S Ice | Going ahead Pick-up truck Turning left Pick-up truck | Other motor vehicle Other motor vehicle | 0 |
| 7 | 2012-02-09 Thu 17:00 Clear | Dusk Angle P.D. only | V1 W Dry V2 N Dry | Turning left Pick-up truck Going ahead Pick-up truck | Other motor vehicle Other motor vehicle | 0 |
| 8 | 2012-02-24 Fri 16:15 Snow | Daylight Single vehicle P.D. only | V1 N Loose snow | Turning left Automobile, station | Skidding/Sliding | 0 |
| 9 | 2012-02-24 Fri 14:45 Snow | Daylight Rear end P.D. only | V1 N Ice V2 N Ice | Slowing or Automobile, station Stopped Truck - closed | Other motor vehicle Other motor vehicle | 0 |
| 10 | 2012-05-25 Fri 15:45 Clear | Daylight Angle P.D. only | V1 N Dry V2 W Dry | Going ahead Automobile, station Turning left Automobile, station | Other motor vehicle Other motor vehicle | 0 |

(Note: Time of Day = "00:00" represents unknown collision time

Friday, January 19, 2018

| | OnTRAC Reporting System | • | | | | | | FROM: 2012-01-01 | TO: 2014-01-01 |
|----------|--|----------------------------|------------------------|--------------|-------------------|--------------------------------|--|--|----------------|
| 11 | 2012-06-08 Fri 12:30 Clear | Daylight Single vehicle | Non-fatal | V1 S | Dry | Turning left | Automobile, station | Pedestrian | 1 |
| 12 13 | 2012-10-04 Thu 12:20 Clear 2012-11-30 Fri 14:10 Clear | | Non-fatal P.D. only | | Dry Dry | Turning left Making U-Turn | Automobile, station Pick-up truck | Pedestrian Curb | 2 |
| 13 | 2012-11-30 111 14.10 Clear | Daylight Other | , | V2 N V3 N | Dry Dry | Going ahead Going ahead | Automobile, station Automobile, station | Other motor vehicle Other motor vehicle | Ü |
| 14 | 2013-02-12 Tue 17:21 Clear | Dark Angle | Non-fatal | - | Wet Wet | Going ahead Turning left | Automobile, station Automobile, station | Other motor vehicle Other motor vehicle | 0 |
| 15 | 2013-04-03 We 12:41 Clear | Daylight Turning | P.D. only | | Dry Dry | Turning right Turning right | Automobile, station Automobile, station | Other motor vehicle Other motor vehicle | 0 |
| 16 | 2013-07-03 We 13:48 Clear | Daylight Rear end | | V2 N | Dry Dry | Going ahead Stopped | Automobile, station Automobile, station | Other motor vehicle Other motor vehicle | 0 |
| 17 | 2013-11-23 Sat 09:20 Clear | Daylight Sideswipe | P.D. only | V3 N V1 S | Dry Dry | Stopped Going ahead | Automobile, station | Other motor vehicle Other motor vehicle | 0 |
| | E DR & TIMM DR | | | V2 S | Dry | Going ahead | Automobile, station | Other motor vehicle | |
| Former N | Municipality: Nepean | Traffic Control: Traffic s | ignal | | Numbe | er of Collisions: 4 | | | |
| | DATE DAY TIME ENV | IMPACT LIGHT TYPE | CLASS | DIR | SURFACE COND'N | VEHICLE MANOEUVRE | VEHICLE TYPE | FIRST EVENT | No. PED |
| 18 | 2012-06-12 Tue 12:06 Clear | Daylight Rear end | P.D. only | V1 N V2 N | Dry Dry | Going ahead Stopped | Automobile, station Passenger van | Other motor vehicle Other motor vehicle | 0 |
| 19 | 2012-10-30 Tue 16:41 Clear | Daylight Turning | Non-fatal | V1 N V2 S | Dry Dry | Turning left Going ahead | Automobile, station Automobile, station | Other motor vehicle Other motor vehicle | 0 |
| 20 | 2013-05-15 We 15:00 Clear | Daylight Rear end | | V1 E V2 E | Dry Dry | Turning right Turning right | Automobile, station Automobile, station | Other motor vehicle Other motor vehicle | 0 |
| 21 | 2013-11-08 Fri 17:00 Clear | Dark Turning | Non-fatal | V1 N V2 S | Dry Dry | Turning left Going ahead | Automobile, station Automobile, station | Other motor vehicle Other motor vehicle | 0 |

(Note: Time of Day = "00:00" represents unknown collision time

Friday, January 19, 2018

OnTRAC Reporting System FROM: 2012-01-01 TO: 2014-01-01

MOODIE DR & ROBERTSON RD

Traffic Control: Traffic signal Number of Collisions: 35 Former Municipality: Nepean **IMPACT** SURFACE **VEHICLE** No. DATE DAY TIME ENV LIGHT **TYPE** CLASS DIR COND'N MANOEUVRE VEHICLE TYPE FIRST EVENT **PED** 2012-01-21 Sat 12:50 Clear Daylight Angle Non-fatal V1 S 0 1 Dry Going ahead Automobile, station Other motor vehicle V2 E Dry Going ahead Automobile, station Other motor vehicle 2 2012-01-31 Tue 16:44 Snow Other P.D. only V1 W Loose snow Turning left Pick-up truck Curb 0 Dusk V2 E Loose snow Stopped Automobile, station Other motor vehicle V3 E Loose snow Stopped Automobile, station Other motor vehicle 3 2012-05-07 Mo 16:23 Clear Daylight Sideswipe P.D. only V1 W Dry Merging Pick-up truck Other motor vehicle 0 V2 W Dry Going ahead Pick-up truck Other motor vehicle P.D. only V1 S Automobile, station Other motor vehicle 4 2012-05-10 Thu 15:00 Rain Daylight Angle Wet Going ahead 0 V2 E Wet Going ahead Automobile, station Other motor vehicle V3 E Pick-up truck Other motor vehicle Wet Going ahead 5 2012-05-23 We 04:20 Clear Non-fatal V1 S 0 Dark Turning Drv Turning left Automobile, station Other motor vehicle Going ahead Automobile, station Other motor vehicle V2 N Dry 6 Turning left 2012-06-22 Fri 14:50 Clear Daylight Turning P.D. only V1 N Dry Automobile, station Other motor vehicle 0 V2 S Going ahead Other motor vehicle Dry Pick-up truck 7 2012-06-23 Sat 02:01 Clear Dark Turning Non-fatal V1 N Drv Turning left Pick-up truck Other motor vehicle 0 V2 S Dry Going ahead Automobile, station Other motor vehicle 8 2012-08-07 Tue 09:46 Clear Daylight Angle P.D. only V1 S Dry Going ahead Automobile, station Other motor vehicle 0 V2 E Truck - other Dry Going ahead Other motor vehicle 9 2012-08-08 We 00:30 Clear Dark Rear end P.D. only V1 W Drv Turning left Pick-up truck Other motor vehicle 0 V2 W Dry Turning left Automobile, station Other motor vehicle 10 2012-08-28 Tue 21:30 Clear Rear end P.D. only V1 W Dry Turning left Automobile, station Other motor vehicle 0 Dark V2 W Dry Turning left Automobile, station Other motor vehicle 11 V1 N 0 2012-10-27 Sat 11:11 Rain Daylight Turning P.D. only Wet Going ahead Automobile, station Other motor vehicle V2 S Wet Turning left Pick-up truck Other motor vehicle

(Note: Time of Day = "00:00" represents unknown collision time

Friday, January 19, 2018 Page 1 of 3

OnTRAC Reporting System

| 12 | 2012-12-20 Thu 19 | 9:46 Clear | Dark Angle | P.D. only | V1 S | Dry | Turning right | Automobile, station | Other motor vehicle | 0 |
|----|-------------------|------------|-------------------------|-----------|------|------------|---------------|-----------------------|-----------------------|---|
| | | | | | V2 W | Dry | Stopped | Automobile, station | Other motor vehicle | |
| 13 | 2012-12-26 We 17 | 7:25 Clear | Dark Turning | Non-fatal | | Dry | Turning left | Automobile, station | Other motor vehicle | 0 |
| | | | | | V2 S | Dry | Going ahead | Automobile, station | Other motor vehicle | |
| 14 | 2013-01-05 Sat 14 | 1:03 Clear | Daylight Turning | P.D. only | V1 N | Wet | Turning left | Automobile, station | Other motor vehicle | 0 |
| | | | | | V2 S | Wet | Going ahead | Automobile, station | Other motor vehicle | |
| 15 | 2013-02-09 Sat 12 | 2:39 Snow | Daylight Rear end | P.D. only | V1 S | Ice | Turning left | Passenger van | Other motor vehicle | 0 |
| | | | | | V2 S | Ice | Turning left | Automobile, station | Other motor vehicle | |
| 16 | 2013-02-27 We 13 | 3:50 Snow | Daylight Rear end | P.D. only | V1 N | Loose snow | Slowing or | Automobile, station | Other motor vehicle | 0 |
| | | | | - | V2 N | Loose snow | Stopped | Pick-up truck | Other motor vehicle | |
| 17 | 2013-03-22 Fri 10 |):57 Clear | Daylight Rear end | P.D. only | V1 W | Dry | Turning right | Automobile, station | Other motor vehicle | 0 |
| | | | , • | | V2 W | Dry | Turning right | Automobile, station | Other motor vehicle | |
| 18 | 2013-04-23 Tue 11 | 1:55 Clear | Daylight Sideswipe | P.D. only | V1 W | Dry | Turning right | Automobile, station | Other motor vehicle | 0 |
| | | | | - | V2 W | | Stopped | Automobile, station | Other motor vehicle | |
| 19 | 2013-04-30 Tue 16 | 6:15 Clear | Daylight Rear end | P.D. only | V1 E | Dry | Going ahead | Pick-up truck | Other motor vehicle | 0 |
| | | | , 0 | , | V2 E | Dry | Stopped | Pick-up truck | Other motor vehicle | |
| 20 | 2013-07-03 We 15 | 5:45 Clear | Daylight Rear end | P.D. only | V1 N | Wet | Turning left | Pick-up truck | Other motor vehicle | 0 |
| | | | , • | | V2 N | Wet | Turning left | Pick-up truck | Other motor vehicle | |
| 21 | 2013-07-18 Thu 17 | 7:06 Clear | Daylight Rear end | P.D. only | V1 E | Dry | Going ahead | Pick-up truck | Other motor vehicle | 0 |
| | | | | - | V2 E | Dry | Stopped | Automobile, station | Other motor vehicle | |
| 22 | 2013-08-07 We 13 | 3:08 Clear | Daylight Turning | P.D. only | V1 S | Dry | Turning left | Automobile, station | Other motor vehicle | 0 |
| | | | , , | | V2 N | Dry | Going ahead | Automobile, station | Other motor vehicle | |
| 23 | 2013-08-29 Thu 07 | 7:55 Clear | Daylight Rear end | P.D. only | V1 W | Dry | Turning right | Passenger van | Other motor vehicle | 0 |
| | | | , • | | V2 W | Dry | Turning right | Automobile, station | Other motor vehicle | |
| 24 | 2013-09-01 Sun 16 | 6:58 Clear | Daylight Single vehicle | P.D. only | V1 E | Dry | Going ahead | Municipal transit bus | Pole (utility, tower) | 0 |
| | | | , , | | | • | · · | | | |
| 25 | 2013-09-07 Sat 13 | 3:00 Clear | Daylight Rear end | P.D. only | V1 W | Dry | Going ahead | Delivery van | Other motor vehicle | 0 |
| | | | , 5 | | V2 W | | Stopped | Automobile, station | Other motor vehicle | |
| 26 | 2013-09-10 Tue 14 | 1:26 Clear | Daylight Angle | P.D. only | V1 W | Dry | Going ahead | Automobile, station | Other motor vehicle | 0 |
| | | | , 5 | | V2 S | Drý | Going ahead | Automobile, station | Other motor vehicle | |
| | | | | | | | | | | |

FROM: 2012-01-01 TO: 2014-01-01

(Note: Time of Day = "00:00" represents unknown collision time

Friday, January 19, 2018

OnTRAC Reporting System

| 27 | 2013-09-12 Thu | 19:21 | Rain | Dusk | Sideswipe | P.D. only | V1 E | Ξ | Wet | Changing lanes | Passenger van | Other motor vehicle | 0 |
|----|-----------------|-------|-------|-----------|-----------|-------------|------|---|------------|----------------|-----------------------|---------------------|---|
| | | | | | | | V2 E | Ξ | Wet | Stopped | Passenger van | Other motor vehicle | |
| 28 | 2013-09-23 Mo | 13:41 | Clear | Daylight | Sideswipe | P.D. only | V1 \ | Ν | Dry | Turning left | Automobile, station | Other motor vehicle | 0 |
| | | | | , , | • | • | ۷2 \ | Ν | Dry | Stopped | Passenger van | Other motor vehicle | |
| 29 | 2013-10-07 Mo | 11:22 | Clear | Davlight | Sideswipe | P.D. only | V1 I | V | Drv | Changing lanes | Automobile, station | Other motor vehicle | 0 |
| | | | | , 3 | | | V2 1 | | Drv | Stopped | Automobile, station | Other motor vehicle | - |
| 30 | 2013-10-22 Tue | 13:20 | Clear | Daylight | Sideswipe | P.D. only | V1 5 | 3 | Drv | Turning left | Pick-up truck | Other motor vehicle | 0 |
| 00 | 2010 10 22 100 | 10.20 | Oloui | Dayligili | Oldoompo | D. oy | V2 S | | Dry | Stopped | Municipal transit bus | Other motor vehicle | Ü |
| 31 | 2013-10-28 Mo | 18:10 | Clear | Daylight | Rear end | P.D. only | | | Drv | Going ahead | Pick-up truck | Other motor vehicle | Ω |
| 31 | 2010 10 20 WIO | 10.10 | Olcai | Daylight | rtear end | i .D. Oilly | V2 E | | Dry | Stopped | Automobile, station | Other motor vehicle | U |
| 00 | 0040 40 04 11/- | 45.00 | 01 | David ala | O'de ende | D D | | | , | | • | | ^ |
| 32 | 2013-12-04 We | 15:20 | Clear | Daylight | Sideswipe | P.D. only | | | Wet | Changing lanes | Automobile, station | Other motor vehicle | U |
| | | | | | | | ۷2 \ | Ν | Wet | Going ahead | Automobile, station | Other motor vehicle | |
| 33 | 2013-12-11 We | 18:18 | Clear | Dark | Rear end | Non-fatal | V1 \ | Ν | Dry | Going ahead | Automobile, station | Other motor vehicle | 0 |
| | | | | | | | ۷2 ۱ | Ν | Dry | Stopped | Automobile, station | Other motor vehicle | |
| 34 | 2013-12-15 Sun | 00:29 | Snow | Dark | Other | Non-fatal | V1 I | V | Drv | Going ahead | Pick-up truck | Pole (sign, parking | 0 |
| • | | | | | | | V2 \ | | Dry | Turning left | Automobile, station | Other motor vehicle | - |
| 35 | 2013-12-31 Tue | 11.25 | Snow | Daylight | Rear end | P.D. only | | | Loose snow | Turning right | Automobile, station | Other motor vehicle | Λ |
| 33 | 2015-12-51 Tue | 11.23 | SHOW | Dayligit | iteai enu | i .D. Oilly | | | | 0 0 | • | | U |
| | | | | | | | V2 I | V | Loose snow | Turning right | Passenger van | Other motor vehicle | |
| | | | | | | | | | | | | | |

FROM: 2012-01-01 TO: 2014-01-01

(Note: Time of Day = "00:00" represents unknown collision time

Friday, January 19, 2018



City Operations - Transportation Services

Collision Details Report - Public Version

From: January 1, 2014 **To:** December 31, 2016

Location: MOODIE DR @ 200 N OF ROBERTSON RD

Traffic Control: Traffic signal Total Collisions: 5

| Date/Day/Time | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuver | Vehicle type | First Event | No. Ped |
|------------------------|-------------|------------------|------------------|-------------------|----------|---------------------|--------------------------------|---------------------|---------|
| 2014-May-25, Sun,15:23 | Clear | Turning movement | Non-fatal injury | Dry | North | Making "U" turn | Automobile, station wagon | Other motor vehicle | |
| | | | | | North | Going ahead | Motorcycle | Other motor vehicle | |
| 2014-Dec-04, Thu,12:55 | Clear | Turning movement | Non-fatal injury | Dry | South | Turning left | Automobile, station wagon | Other motor vehicle | |
| | | | | | North | Going ahead | Automobile, station wagon | Other motor vehicle | |
| 2014-Nov-08, Sat,13:45 | Snow | Rear end | P.D. only | Wet | South | Going ahead | Pick-up truck | Other motor vehicle | |
| | | | | | South | Stopped | Automobile, station wagon | Other motor vehicle | |
| 2015-Jun-24, Wed,12:20 | Clear | Rear end | P.D. only | Dry | North | Going ahead | Pick-up truck | Other motor vehicle | |
| | | | | | North | Making "U" turn | Automobile, station wagon | Other motor vehicle | |
| 2016-Jan-21, Thu,20:09 | Clear | Rear end | P.D. only | Dry | North | Slowing or stopping | g Automobile, station wagon | Other motor vehicle | |
| | | | | | North | Stopped | Automobile, station wagon | Other motor vehicle | |

Friday, January 19, 2018 Page 1 of 3

Location: MOODIE DR @ FITZGERALD RD/STAFFORD RD

Traffic Control: Traffic signal Total Collisions: 10

| | 3 - | | | | | | | | |
|------------------------|---------------|------------------|------------------|-------------------|----------|---------------------|--------------------------------|---------------------|---------|
| Date/Day/Time | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuve | r Vehicle type | First Event | No. Ped |
| 2014-Mar-12, Wed,14:18 | Drifting Snow | Angle | P.D. only | Packed snow | North | Going ahead | Passenger van | Other motor vehicle | |
| | | | | | West | Going ahead | Pick-up truck | Other motor vehicle | |
| 2014-May-21, Wed,12:45 | Clear | Sideswipe | P.D. only | Dry | North | Changing lanes | Automobile, station wagon | Other motor vehicle | |
| | | | | | North | Going ahead | Automobile, station wagon | Other motor vehicle | |
| 2014-Aug-01, Fri,15:49 | Clear | Turning movement | P.D. only | Dry | East | Turning left | Unknown | Other motor vehicle | |
| | | | | | West | Going ahead | Pick-up truck | Other motor vehicle | |
| 2014-Oct-01, Wed,08:27 | Clear | Rear end | Non-fatal injury | Dry | South | Slowing or stopping | g Municipal transit bus | Other motor vehicle | |
| | | | | | South | Stopped | Automobile, station wagon | Other motor vehicle | |
| | | | | | South | Stopped | Automobile, station wagon | Other motor vehicle | |
| | | | | | South | Stopped | Automobile, station wagon | Other motor vehicle | |
| | | | | | South | Stopped | Automobile, station wagon | Other motor vehicle | |
| 2015-Jan-27, Tue,16:49 | Clear | Rear end | P.D. only | Dry | North | Slowing or stopping | g Automobile, station wagon | Other motor vehicle | |
| | | | | | North | Stopped | Automobile, station wagon | Other motor vehicle | |
| 2016-Sep-09, Fri,09:15 | Clear | Turning movement | P.D. only | Dry | South | Turning right | Automobile, station wagon | Cyclist | |

Friday, January 19, 2018 Page 2 of 3

| | | | | | South | Turning right | Bicycle | Other motor vehicle |
|------------------------|-------|----------|------------------|-----|-------|---------------|------------------------------|---------------------|
| 2016-Aug-08, Mon,12:03 | Clear | Rear end | P.D. only | Dry | East | Turning right | Truck - closed | Other motor vehicle |
| | | | | | East | Turning right | Automobile, station wagon | Other motor vehicle |
| 2016-Nov-01, Tue,13:02 | Clear | Rear end | P.D. only | Dry | East | Going ahead | Automobile, station wagon | Other motor vehicle |
| | | | | | East | Going ahead | Automobile, station wagon | Other motor vehicle |
| 2015-Nov-03, Tue,07:15 | Clear | Angle | P.D. only | Wet | North | Going ahead | Automobile, station wagon | Other motor vehicle |
| | | | | | West | Turning right | Truck and trailer | Other motor vehicle |
| 2016-Dec-08, Thu,10:52 | Clear | Rear end | Non-fatal injury | Dry | North | Going ahead | Automobile, station wagon | Other motor vehicle |
| | | | | | North | Stopped | Automobile, station wagon | Other motor vehicle |

Location: MOODIE DR @ TIMM DR

Traffic Control: Stop sign Total Collisions: 1

| Date/Day/Time | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuve | er Vehicle type | First Event | No. Ped |
|------------------------|-------------|-------------|----------------|-------------------|----------|------------------|---------------------------|---------------------|---------|
| 2016-Dec-29, Thu,13:00 | Snow | Angle | P.D. only | Slush | East | Going ahead | Pick-up truck | Other motor vehicle | |
| | | | | | South | Going ahead | Automobile, station wagon | Other motor vehicle | |

Friday, January 19, 2018 Page 3 of 3



City Operations - Transportation Services

Collision Details Report - Public Version

From: January 1, 2014 **To:** December 31, 2016

Location: MOODIE DR @ ROBERTSON RD

Traffic Control: Traffic signal Total Collisions: 35

| Date/Day/Time | Environment | Impact Type | Classification | Surface Cond'n | Veh. Dir | Vehicle Manoeuve | r Vehicle type | First Event | No. Ped |
|------------------------|-------------|------------------|------------------|-------------------|----------|------------------|------------------------------|---------------------|---------|
| 2014-Jan-20, Mon,18:10 | Clear | Rear end | P.D. only | Packed snow | South | Turning left | Automobile, station wagon | Other motor vehicle | |
| | | | | | South | Turning left | Automobile, station wagon | Other motor vehicle | |
| 2014-Jan-21, Tue,16:15 | Clear | Rear end | P.D. only | Dry | East | Going ahead | Automobile, station wagon | Other motor vehicle | |
| | | | | | East | Stopped | Automobile, station wagon | Other motor vehicle | |
| 2014-Apr-08, Tue,08:25 | Rain | Turning movement | P.D. only | Wet | North | Turning left | Automobile, station wagon | Other motor vehicle | |
| | | | | | South | Going ahead | Passenger van | Other motor vehicle | |
| 2014-May-22, Thu,15:05 | Clear | Rear end | Non-fatal injury | Dry | East | Other | Automobile, station wagon | Other motor vehicle | |
| | | | | | East | Stopped | Automobile, station wagon | Other motor vehicle | |
| 2014-May-27, Tue,16:47 | Clear | Rear end | P.D. only | Dry | North | Turning left | Automobile, station wagon | Other motor vehicle | |
| | | | | | North | Turning left | Automobile, station wagon | Other motor vehicle | |
| 2014-Aug-06, Wed,16:50 | Clear | Rear end | P.D. only | Dry | East | Turning right | Pick-up truck | Other motor vehicle | |

Friday, January 19, 2018 Page 1 of 5

| | | | | | East | Turning right | Automobile, station wagon | Other motor vehicle | |
|------------------------|-------|-----------|------------------|------------|-------|---------------------|------------------------------|---------------------|---|
| 2014-Sep-02, Tue,17:47 | Rain | SMV other | Non-fatal injury | Wet | South | Turning right | Unknown | Pedestrian | 1 |
| 2014-Sep-12, Fri,12:19 | Clear | Rear end | P.D. only | Dry | South | Turning left | Truck and trailer | Other motor vehicle | |
| | | | | | South | Turning left | Automobile, station wagon | Other motor vehicle | |
| 2014-Oct-10, Fri,09:59 | Clear | Sideswipe | P.D. only | Dry | West | Changing lanes | Passenger van | Other motor vehicle | |
| | | | | | West | Turning left | Passenger van | Other motor vehicle | |
| 2014-Nov-03, Mon,08:40 | Clear | Rear end | P.D. only | Dry | West | Going ahead | Automobile, station wagon | Other motor vehicle | |
| | | | | | West | Stopped | Automobile, station wagon | Other motor vehicle | |
| 2014-Nov-22, Sat,12:15 | Clear | Rear end | P.D. only | Dry | East | Turning right | Passenger van | Other motor vehicle | |
| | | | | | East | Turning right | Pick-up truck | Other motor vehicle | |
| 2014-Dec-23, Tue,15:05 | Rain | Sideswipe | P.D. only | Wet | East | Changing lanes | Automobile, station wagon | Other motor vehicle | |
| | | | | | East | Turning right | Automobile, station wagon | Other motor vehicle | |
| 2015-Jan-03, Sat,14:53 | Snow | Angle | P.D. only | Loose snow | South | Slowing or stopping | Pick-up truck | Skidding/sliding | |
| | | | | | East | Stopped | Pick-up truck | Other motor vehicle | |

Friday, January 19, 2018 Page 2 of 5

| 2015-Feb-09, Mon,09:23 | Snow | SMV other | P.D. only | Loose snow | North | Slowing or stopping | g Automobile, station wagon | Snowbank/drift |
|------------------------|-------|------------------|------------------|------------|-------|---------------------|--------------------------------|---------------------|
| 2015-Mar-29, Sun,15:10 | Clear | Angle | P.D. only | Dry | East | Going ahead | Automobile, station wagon | Other motor vehicle |
| | | | | | South | Going ahead | Automobile, station wagon | Other motor vehicle |
| 2015-Jun-24, Wed,15:17 | Clear | Turning movement | P.D. only | Dry | North | Turning left | Automobile, station wagon | Other motor vehicle |
| | | | | | South | Going ahead | Automobile, station wagon | Other motor vehicle |
| 2015-Sep-25, Fri,10:05 | Clear | Rear end | Non-fatal injury | Dry | North | Turning right | Pick-up truck | Other motor vehicle |
| | | | | | North | Turning right | Automobile, station wagon | Other motor vehicle |
| 2015-Sep-30, Wed,08:00 | Clear | Rear end | P.D. only | Dry | East | Going ahead | Automobile, station wagon | Other motor vehicle |
| | | | | | East | Stopped | Automobile, station wagon | Other motor vehicle |
| 2015-Oct-09, Fri,11:34 | Clear | Rear end | P.D. only | Dry | South | Turning right | Pick-up truck | Other motor vehicle |
| | | | | | South | Turning right | Automobile, station wagon | Other motor vehicle |
| 2015-Nov-03, Tue,13:15 | Clear | Turning movement | Non-fatal injury | Dry | East | Turning left | Automobile, station wagon | Other motor vehicle |
| | | | | | East | Going ahead | Automobile, station wagon | Other motor vehicle |
| 2015-Nov-22, Sun,14:25 | Clear | Angle | P.D. only | Dry | South | Turning right | Pick-up truck | Other motor vehicle |
| | | | | | West | Going ahead | Automobile, station wagon | Other motor vehicle |

Friday, January 19, 2018 Page 3 of 5

| 2015-Dec-31, Thu,20:34 | Clear | Sideswipe | P.D. only | Wet | North | Changing lanes | Passenger van | Other motor vehicle |
|------------------------|-------|-----------|------------------|------------|-------|---------------------|------------------------------|---------------------|
| | | | | | North | Going ahead | Automobile, station wagon | Other motor vehicle |
| 2016-Jan-12, Tue,22:03 | Snow | Rear end | P.D. only | Loose snow | East | Slowing or stopping | g Pick-up truck | Other motor vehicle |
| | | | | | East | Stopped | Automobile, station wagon | Other motor vehicle |
| 2016-May-22, Sun,12:48 | Clear | Angle | Non-fatal injury | Dry | East | Going ahead | Automobile, station wagon | Other motor vehicle |
| | | | | | North | Turning left | Automobile, station wagon | Other motor vehicle |
| 2016-Jun-17, Fri,17:00 | Clear | Angle | P.D. only | Dry | South | Turning left | Automobile, station wagon | Other motor vehicle |
| | | | | | East | Going ahead | Passenger van | Other motor vehicle |
| 2016-Jun-23, Thu,16:09 | Clear | Rear end | P.D. only | Dry | South | Turning right | Pick-up truck | Other motor vehicle |
| | | | | | South | Turning right | Pick-up truck | Other motor vehicle |
| 2016-Jun-23, Thu,17:52 | Clear | Rear end | P.D. only | Dry | West | Going ahead | Automobile, station wagon | Other motor vehicle |
| | | | | | West | Stopped | Automobile, station wagon | Other motor vehicle |
| | | | | | West | Stopped | Automobile, station wagon | Other motor vehicle |
| 2016-Aug-27, Sat,11:24 | Clear | Rear end | P.D. only | Dry | East | Turning left | Automobile, station wagon | Other motor vehicle |
| | | | | | East | Turning left | Automobile, station wagon | Other motor vehicle |
| | | | | | | | | |

Friday, January 19, 2018 Page 4 of 5

| 2016-Sep-04, Sun,14:01 | Clear | Rear end | P.D. only | Dry | North | Turning right | Automobile, station wagon | Other motor vehicle |
|------------------------|-------|-------------|------------------|--------|-------|--------------------|---------------------------|---------------------|
| | | | | | North | Turning right | Automobile, station wagon | Other motor vehicle |
| | | | | | | | | |
| 2016-Sep-23, Fri,10:45 | Clear | Rear end | P.D. only | Dry | North | Turning right | Automobile, station wagon | Other motor vehicle |
| | | | | | North | Turning right | Automobile, station wagon | Other motor vehicle |
| | | | | | | | | |
| 2016-Oct-10, Mon,15:30 | Clear | Rear end | P.D. only | Dry | East | Unknown | Unknown | Other motor vehicle |
| | | | | | East | Stopped | Automobile, station wagon | Other motor vehicle |
| | | | | | | | | |
| 2016-Oct-18, Tue,07:49 | Clear | Angle | Non-fatal injury | Wet | West | Turning left | Pick-up truck | Other motor vehicle |
| | | | | | North | Going ahead | Automobile, station wagon | Other motor vehicle |
| 0040 O-4 00 Thu 40-25 | Delia | Olds sories | D.D. araba | 10/-4 | 041- | Ob an aire a lance | A . A la il a | Otherwooden |
| 2016-Oct-20, Thu,12:35 | Rain | Sideswipe | P.D. only | Wet | South | Changing lanes | Automobile, station wagon | Other motor vehicle |
| | | | | | South | Going ahead | Automobile, station wagon | Other motor vehicle |
| 2016-Nov-20, Sun,17:20 | Snow | SMV other | P.D. only | Packed | East | Going ahead | Automobile, | Skidding/sliding |
| | | | | snow | | | station wagon | |
| 2016-Dec-22, Thu,10:21 | Clear | Rear end | P.D. only | Slush | North | Going ahead | Automobile, station wagon | Other motor vehicle |
| | | | | | North | Turning left | Passenger van | Other motor vehicle |

Friday, January 19, 2018 Page 5 of 5

APPENDIX E

Table 14-1 of the ITE Traffic Engineering Handbook, 5th Edition

THE THE STATE OF PRINCES OF THE STATE OF

Table 14–1 Typical Peak-Hour Volumes as a Percentage of the Total Parking Stalls

| | A.M. I | Peak Hour | | P.M. Peak Hour | | |
|-----------------------------|-------------------------|-----------|-----|-----------------------------|----------------------------|--|
| Type of Activity | las | (| Out | | Out | |
| Hotel-motel | 30 50 | 30 | 50 | 30 60 | 10 - 30 | |
| Residential | 5 10 | 30 | 50 | 30 50 | 10 30 | |
| Office | 40 - 70 | 5 | 15 | 5 - 20 | 40 - 70 | |
| Medical Office | 40 - 60 | 10 | 20 | 10 - 30 | 60 - 80 | |
| Hospital | | | | | | |
| Visitor | 30 40 | -10 | 50 | 40 60 | 50 - 75 | |
| Employee | 50 75 | 5 | 10 | 10 15 | 60 - 75 | |
| Retail-commercial | 10 - 30 | 10 | 20 | 30 - 60 | 40 - 65 | |
| Central business district | 40 - 60 | 14) | 200 | 10 30 | 40 m0 | |
| Airport All Traffic | 40 65 | 30 | 50 | $\gamma_{ij} = \gamma_{ij}$ | i(j in | |
| Short-term (0-3 hr) | 50 - 75 | 80 - 1 | 100 | 90 100 | 90 100 | |
| Mid-term (4-24 hr) | 10 - 30 | 5 | 10 | 10 - 30 | 10 - 30 | |
| Long-term (more than 24 hr) | 5 - 10 | 5 | 10 | 5 - 10 | 5 10 | |
| Special events | Before event- 80 100 | —(ln) | | Aiter | ev :mi —(Out) 85 – 200° | |

Parking and bypass (loading-unloading).

Source: Adapted from Robert A. Weant and Herbert S. Levinson, Parking, Westport, Conn. Eno Foundation for Transportation, Inc., 1990. Adapted from Robert W. Crommelin, Entrance-Exit Design and Control for Major Parking Facilities, a seminar presentation (Encine, Calif., 1972); and Anthony P. Chest, Mary S. Smith, and Sam Bhuyan, Parking Structures Planting, Design, Construction, Maintenance and Repair (New York, Jan Nostrand Reinhold, 1989).

on the type of generator served, user characteristics temployee, shopper, etc.), and parking capacity. Volumes are typically expressed as a ratio of the number of vehicles to the number of parking stalls in the facility. Table 14–1 gives peak-hour ratios for a number of activities.

The number of vehicles that carrenter (acceptance rate) or leave a parking facility, per lane, is related to the angle of approach (sharp turns have less capacity then straight-in runs), whether any control is used, the familiarity of the driver with the facility, the freedom of internal circulation (for entry), the amount of vehicular traffic on the streets (for exit) and the degree of conflict with pedestrians crossing the driveway. In general, for a self-parking facility with no control, the capacity per lane ranges up to 800 vph. One engineer has recommended a design value of 400 vph. Guidelines have been developed for considering capacities related to control methods, and also to street traffic (but not pedestrian sidewalk conflicts).

Table 14–2 Vehicle Acceptance Rates of Large Parking Areas

| | | Average Acceptance Rates Vehicles per Hour per Lane | | |
|----------------------|-------------------|--|----------------------|--|
| Approach to Entrance | Number of Studies | Unfamiliar Entrance | Familiar Entrance | |
| Straight approach | | | | |
| (no turn movement) | 20 | 850 | 1.100 | |
| 90° right turn | 15 | 750 | 1.000 | |
| 90° left turn | 2-1 | 830 | 900 | |
| Oblique angle, right | 8 | 650 | 1.000 | |
| Oblique angle, left | 7 | 720 | : | |

Includes racetracks, stadiums, and other facility, anot frequently visited by the same individuals.

 Includes industrial plants, military basis, and other facilities where the same drivers onter daily.

No data available

Source: A.A. Carter, Jr. "Vehicle Acceptance Rate" of Parking Areas," *Public Roads* (Oct. 1959).

[&]quot;Maximum assume a 30-min departure,

R.T. Hintersteiner, "Parking Control Guidelines for the Design of Parking Facility Portals," ITE Journal (Jan. 1989), p. 28-31

J.M. Frantze-kakis, "Traffic Flow Analysis for Dimensioning Entrances-Exits and Reservoir Space for Off Street Parking. ITE Journal (May 1981), pp. 16–24

APPENDIX F

TDM – Supportive Development Design Checklist

TDM-Supportive Development Design and Infrastructure Checklist:

Non-Residential Developments (office, institutional, retail or industrial)

| Legend | | | | | | |
|----------|--|--|--|--|--|--|
| REQUIRED | The Official Plan or Zoning By-law provides related guidance that must be followed | | | | | |
| BASIC | The measure is generally feasible and effective, and in most cases would benefit the development and its users | | | | | |
| BETTER | The measure could maximize support for users of sustainable modes, and optimize development performance | | | | | |

| | TDM-s | supportive design & infrastructure measures: Non-residential developments | Check if completed & add descriptions, explanations or plan/drawing references |
|----------|-------|--|--|
| | 1. | WALKING & CYCLING: ROUTES | |
| | 1.1 | Building location & access points | |
| BASIC | 1.1.1 | Locate building close to the street, and do not locate parking areas between the street and building entrances | |
| BASIC | 1.1.2 | Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations | |
| BASIC | 1.1.3 | Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort | |
| | 1.2 | Facilities for walking & cycling | |
| REQUIRED | 1.2.1 | Provide convenient, direct access to stations or major stops along rapid transit routes within 600 metres; minimize walking distances from buildings to rapid transit; provide pedestrian-friendly, weather-protected (where possible) environment between rapid transit accesses and building entrances; ensure quality linkages from sidewalks through building entrances to integrated stops/stations (see Official Plan policy 4.3.3) | |
| REQUIRED | 1.2.2 | Provide safe, direct and attractive pedestrian access from public sidewalks to building entrances through such measures as: reducing distances between public sidewalks and major building entrances; providing walkways from public streets to major building entrances; within a site, providing walkways along the front of adjoining buildings, between adjacent buildings, and connecting areas where people may congregate, such as courtyards and transit stops; and providing weather protection through canopies, colonnades, and other design elements wherever possible (see Official Plan policy 4.3.12) | |

| | TDM-s | supportive design & infrastructure measures: Non-residential developments | Check if completed & add descriptions, explanations or plan/drawing references |
|----------|-------|--|--|
| REQUIRED | 1.2.3 | Provide sidewalks of smooth, well-drained walking surfaces of contrasting materials or treatments to differentiate pedestrian areas from vehicle areas, and provide marked pedestrian crosswalks at intersection sidewalks (see Official Plan policy 4.3.10) | |
| REQUIRED | 1.2.4 | Make sidewalks and open space areas easily accessible through features such as gradual grade transition, depressed curbs at street corners and convenient access to extra-wide parking spaces and ramps (see Official Plan policy 4.3.10) | |
| REQUIRED | 1.2.5 | Include adequately spaced inter-block/street cycling and pedestrian connections to facilitate travel by active transportation. Provide links to the existing or planned network of public sidewalks, multi-use pathways and onroad cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians (see Official Plan policy 4.3.11) | |
| BASIC | 1.2.6 | Provide safe, direct and attractive walking routes from building entrances to nearby transit stops | |
| BASIC | 1.2.7 | Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible | |
| BASIC | 1.2.8 | Design roads used for access or circulation by cyclists using a target operating speed of no more than 30 km/h, or provide a separated cycling facility | X |
| | 1.3 | Amenities for walking & cycling | |
| BASIC | 1.3.1 | Provide lighting, landscaping and benches along walking and cycling routes between building entrances and streets, sidewalks and trails | |
| BASIC | 1.3.2 | Provide wayfinding signage for site access (where required, e.g. when multiple buildings or entrances exist) and egress (where warranted, such as when directions to reach transit stops/stations, trails or other common destinations are not obvious) | |

| | TDM-s | supportive design & infrastructure measures: Non-residential developments | Check if completed & add descriptions, explanations or plan/drawing references |
|----------|-------|---|--|
| | 2. | WALKING & CYCLING: END-OF-TRIP FACILI | TIES |
| | 2.1 | Bicycle parking | |
| REQUIRED | 2.1.1 | Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible (see Official Plan policy 4.3.6) | |
| REQUIRED | 2.1.2 | Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas (see Zoning By-law Section 111) | |
| REQUIRED | 2.1.3 | Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored (see Zoning By-law Section 111) | |
| BASIC | 2.1.4 | Provide bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met), plus the expected peak number of customer/visitor cyclists | \boxtimes |
| BETTER | 2.1.5 | Provide bicycle parking spaces equivalent to the expected number of commuter and customer/visitor cyclists, plus an additional buffer (e.g. 25 percent extra) to encourage other cyclists and ensure adequate capacity in peak cycling season | |
| | 2.2 | Secure bicycle parking | |
| REQUIRED | 2.2.1 | Where more than 50 bicycle parking spaces are provided for a single office building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers (see Zoning By-law Section 111) | ⊠ _{N/A} |
| BETTER | 2.2.2 | Provide secure bicycle parking spaces equivalent to the expected number of commuter cyclists (assuming the cycling mode share target is met) | \boxtimes |
| | 2.3 | Shower & change facilities | |
| BASIC | 2.3.1 | Provide shower and change facilities for the use of active commuters | \boxtimes |
| BETTER | 2.3.2 | In addition to shower and change facilities, provide dedicated lockers, grooming stations, drying racks and laundry facilities for the use of active commuters | \boxtimes |
| | 2.4 | Bicycle repair station | |
| BETTER | 2.4.1 | Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided) | X |

| | TDM-s | supportive design & infrastructure measures: Non-residential developments | Check if completed & add descriptions, explanations or plan/drawing references |
|--------|-------|---|--|
| | 3. | TRANSIT | |
| | 3.1 | Customer amenities | |
| BASIC | 3.1.1 | Provide shelters, lighting and benches at any on-site transit stops | \boxtimes |
| BASIC | 3.1.2 | Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter | |
| BETTER | 3.1.3 | Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building | X |
| | 4. | RIDESHARING | |
| | 4.1 | Pick-up & drop-off facilities | |
| BASIC | 4.1.1 | Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones | |
| | 4.2 | Carpool parking | |
| BASIC | 4.2.1 | Provide signed parking spaces for carpools in a priority location close to a major building entrance, sufficient in number to accommodate the mode share target for carpools | |
| BETTER | 4.2.2 | At large developments, provide spaces for carpools in a separate, access-controlled parking area to simplify enforcement | |
| | 5. | CARSHARING & BIKESHARING | |
| | 5.1 | Carshare parking spaces | |
| BETTER | 5.1.1 | Provide carshare parking spaces in permitted non-residential zones, occupying either required or provided parking spaces (see Zoning By-law Section 94) | |
| | 5.2 | Bikeshare station location | |
| BETTER | 5.2.1 | Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection | |

| | TDM-s | supportive design & infrastructure measures: Non-residential developments | Check if completed & add descriptions, explanations or plan/drawing references | | | |
|----------|-------|--|--|--|--|--|
| | 6. | PARKING | | | | |
| | 6.1 | Number of parking spaces | | | | |
| REQUIRED | 6.1.1 | Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for | ∀ariance is being applied for | | | |
| BASIC | 6.1.2 | Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking | \boxtimes | | | |
| BASIC | 6.1.3 | Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly (see Zoning By-law Section 104) | \boxtimes | | | |
| BETTER | 6.1.4 | Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking (see Zoning By-law Section 111) | | | | |
| | 6.2 | Separate long-term & short-term parking areas | | | | |
| BETTER | 6.2.1 | Separate short-term and long-term parking areas using signage or physical barriers, to permit access controls and simplify enforcement (i.e. to discourage employees from parking in visitor spaces, and vice versa) | | | | |
| | 7. | OTHER | | | | |
| | 7.1 | On-site amenities to minimize off-site trips | | | | |
| BETTER | 7.1.1 | Provide on-site amenities to minimize mid-day or mid-commute errands | \boxtimes | | | |

APPENDIX G

Segment MMLOS Analysis

Pedestrian Level of Service (PLOS)

| Sidewalk Width | Boulevard Width | Avg. Daily Curb Lane Traffic Volume | Presence of On-Street Parking | Operating Speed ¹ | Segment PLOS | | | | |
|-------------------|---|---|-------------------------------------|---------------------------------|-----------------|--|--|--|--|
| Moodie Dr | Moodie Drive - South of Fitzgerald Road (East Side) | | | | | | | | |
| 2.0m | >2.0m | >3,000 vpd | >3,000 vpd No >60 kr | | D | | | | |
| Moodie Dr | rive – South | of Fitzgerald Road (W | est Side) | | | | | | |
| 2.0m | >2.0m | >3,000 vpd | No | >60 km/hr | D | | | | |
| Moodie Dr | rive – North o | of Fitzgerald Road (Ea | st Side) ² | | | | | | |
| None | None | >3,000 vpd | No | >60 km/hr | F | | | | |
| Moodie Dr | rive – North o | of Fitzgerald Road (W | est Side) ² | | | | | | |
| None | None | >3,000 vpd | No | >60 km/hr | F | | | | |
| Fitzgerald | Road | | | | | | | | |
| 2.0m | None | ≤3,000 vpd | Yes | 60 km/hr | С | | | | |

- 1. Operating Speed identified as 10 km/h above the speed limit
- 2. No sidewalk between Fitzgerald Road/Menten Place and access to 299 and 300 Moodie Drive; Paved shoulders north of access. No sidewalk governs segment PLOS

Bicycle Level of Service (BLOS)

| Road Class | Bike Route | Type of Bikeway | Travel Lanes | Centerline Markings | Operating Speed | Segment BLOS |
|---------------|---------------|--------------------|-----------------|------------------------|--------------------|-----------------|
| Moodie Driv | e - South of | Fitzgerald Ro | oad (East Sid | le) | | |
| Arterial | Spine | Bike Lane | 4 | N/A | 60 km/hr | Е |
| Moodie Driv | e - South of | Fitzgerald Ro | oad (West Sid | de) | | |
| Arterial | Spine | Mixed Traffic | 4 | N/A | 60 km/hr | F |
| Moodie Driv | e - North of | Fitzgerald Ro | oad (East Sid | e) ¹ | | |
| Arterial | Spine | Mixed Traffic | 4 | N/A | 60 km/hr | F |
| Moodie Driv | e - North of | Fitzgerald Ro | oad (West Sid | le) ¹ | | |
| Arterial | Spine | Mixed Traffic | 4 | N/A | 60 km/hr | F |
| Fitzgerald R | Road | | | | | |
| Collector | Local | Mixed Traffic | 2 | Yes | 50km/hr | D |

Mixed traffic between Fitzgerald Road/Menten Place and access to 299 and 300 Moodie Drive; Paved shoulders north of access. Mixed traffic governs segment PLOS

Transit Level of Service (TLOS)

| Facility Type | Level/Exposure | Commant TLOS | | | | |
|------------------|---|------------------|-----------------------|--------------|--|--|
| Facility Type | Congestion | Friction | Incident Potential | Segment TLOS | | |
| Moodie Drive - S | Moodie Drive – South of Fitzgerald Road (East Side) | | | | | |
| Mixed Traffic | Yes | Low | Medium | D | | |
| Moodie Drive - S | outh of Fitzgerald | Road (West Side) | | | | |
| Mixed Traffic | Yes | Low | Medium | D | | |
| Moodie Drive - N | orth of Fitzgerald | Road (East Side) | | | | |
| Mixed Traffic | Yes | Low | Medium | D | | |
| Moodie Drive - N | orth of Fitzgerald | Road (West Side) | | | | |
| Mixed Traffic | Yes | Low | Medium | D | | |
| Fitzgerald Road | | | | | | |
| Mixed Traffic | Yes | Low | Medium | D | | |

Truck Level of Service (TkLOS)

| Curb Lane Width | Number of Travel Lanes (Per Direction) | Segment TkLOS | | | | | | | |
|-------------------------------|---|---------------|--|--|--|--|--|--|--|
| Moodie Drive – South of Fitz | Moodie Drive – South of Fitzgerald Road (East Side) | | | | | | | | |
| ≤3.5m | 2 | А | | | | | | | |
| Moodie Drive – South of Fitz | gerald Road (West Side) | | | | | | | | |
| >3.7m | 2 | А | | | | | | | |
| Moodie Drive – North of Fitzg | gerald Road (East Side) | | | | | | | | |
| >3.7m | 2 | А | | | | | | | |
| Moodie Drive – North of Fitzg | gerald Road (East Side) | | | | | | | | |
| >3.7m | 2 | А | | | | | | | |
| Fitzgerald Road | | | | | | | | | |
| >3.7m | 1 | В | | | | | | | |

Auto LOS

| | Directional | Traffic Volumes | | | V/C Ratio and LOS | | | | | Auto | |
|------------|-----------------------|-----------------|----------|---------|-------------------|------|------|------|------|------|-----|
| Direction | Capacity ¹ | AM | PM | SAT | | Peak | | Peak | | Peak | LOS |
| | Capacity | Peak | Peak | Peak | V/C | LOS | V/C | LOS | V/C | LOS | |
| Moodie Dr | ive – South o | f Fitzge | erald Re | oad (Ea | st Sid | e) | | | | | |
| NB | 2000 vph | 583 | 680 | 432 | 0.29 | Α | 0.34 | Α | 0.22 | Α | Α |
| Moodie Dr | ive – North o | f Fitzge | erald Ro | oad (We | est Sid | le) | | | | | |
| SB | 2000 vph | 701 | 874 | 571 | 0.35 | Α | 0.44 | Α | 0.29 | Α | Α |
| Moodie Dr | ive – North o | f Fitzge | rald Ro | oad (Ea | st Side | e) | | | | | |
| NB | 2000 vph | 557 | 851 | 464 | 0.28 | Α | 0.43 | Α | 0.23 | Α | Α |
| Moodie Dr | ive - North o | f Fitzge | rald Ro | oad (We | est Sid | le) | | | | | |
| SB | 2000 vph | 960 | 815 | 574 | 0.48 | А | 0.41 | Α | 0.29 | А | Α |
| Fitzgerald | Road | | | | | | | | | | |
| EB | 600 vph | 127 | 263 | 87 | 0.21 | А | 0.44 | А | 0.15 | А | А |
| WB | 600 vph | 241 | 120 | 71 | 0.40 | А | 0.20 | Α | 0.12 | Α | A |

^{1.} Typical lane capacity based on the City's guidelines for the TRANS long-range transportation model

Segment MMLOS Summary

| | Segment | Moodie South of Fitzgerald | Moodie North of Fitzgerald | Fitzgerald |
|------------|--|----------------------------------|----------------------------------|---------------|
| | Sidewalk Width | 2.0m | None | 2.0m |
| | Boulevard Width | >2.0m | None | None |
| Pedestrian | Average Daily Curb Lane Traffic Volume | > 3000 vpd | >3000 vpd | ≤3000 vpd |
| dest | On-Street Parking | No | No | Yes |
| Ъ | Operating Speed | >60 km/h | >60 km/hr | 60 km/hr |
| | Level of Service | D | F | С |
| | Target | | С | |
| | Road Classification | Arterial | Arterial | Collector |
| | Bike Route Classification | Spine | Spine | Local |
| | Type of Bikeway | Mixed Traffic | Mixed Traffic | Mixed Traffic |
| Cyclist | Travel Lanes | 4 | 4 | 2 |
| Š | Centerline Markings | N/A | N/A | Yes |
| | Operating Speed | 60 km/h | 60 km/hr | 50 km/hr |
| | Level of Service | F | F | D |
| | Target | | С | |
| | Facility Type | Mixed Traffic | Mixed Traffic | Mixed Traffic |
| Transit | Friction/Congestion/Incident Potential | Limited | Limited | Limited |
| Tra | Level of Service | D | D | D |
| | Target | | | |
| | Lane Width | ≤3.5m | >3.7m | >3.7m |
| <u>c</u> k | Travel Lanes (per direction) | 2 | 2 | 1 |
| Truc | Level of Service | А | А | В |
| | Target | E | 3 | D |
| | Volume | 874 vph | 960 vph | 263 vph |
| | Capacity | 2000 vph | 2000 vph | 600 vph |
| Auto | Volume to Capacity Ratio | 0.44 | 0.48 | 0.44 |
| | Level of Service | А | А | А |
| | Target | | D | |

APPENDIX H

Intersection MMLOS Analysis

Pedestrian Level of Service (PLOS)

Moodie Drive/Timm Road

| CRITERIA | North Approach | | South Approach | | West Approach | |
|----------------------------------|--------------------------|---------|-------------------------|------|---------------------|------|
| | | PETSI S | CORE | | | |
| CROSSING DISTANCE CONDITION | NS | | | | | |
| Median > 2.4m in Width | No | 55 | No | 55 | No | - 88 |
| Lanes Crossed | 6 | 55 | 6 | 55 | 4 | 88 |
| SIGNAL PHASING AND TIMING | _ | | | | | |
| Left Turn Conflict | Permissive | -8 | No Left Turn/Prohibited | 0 | Perm + Prot | -8 |
| Right Turn Conflict | No Right Turn/Prohibited | 0 | Permissive or Yield | -5 | Permissive or Yield | -5 |
| Right Turn on Red | N/A | 0 | N/A | 0 | N/A | 0 |
| Leading Pedestrian Interval | No | -2 | No | -2 | No | -2 |
| CORNER RADIUS | | | | | | |
| Parallel Radius | No Right Turn | 0 | > 15m to 25m | -8 | > 15m to 25m | -8 |
| Parallel Right Turn Channel | No Right Turn | 0 | Smart Channel | 2 | Smart Channel | 2 |
| Perpendicular Radius | > 15m to 25m | -8 | N/A | 0 | > 15m to 25m | -8 |
| Perpendicular Right Turn Channel | Smart Channel | 2 | N/A | 0 | Smart Channel | 2 |
| CROSSING TREATMENT | | | | | | |
| Treatment | Standard | -7 | Standard | -7 | Standard | -7 |
| | PETSI SCORE | 32 | | 35 | | 54 |
| | LOS | E | | E | | D |
| | | DELAY S | CORE | | | |
| Cycle Length | | 80 | | 80 | | 70 |
| Pedestrian Walk Time | | 6.7 | | 6.7 | | 20.4 |
| | DELAY SCORE | 33.6 | | 33.6 | | 17.6 |
| | LOS | D | | D | | В |
| | OVERALL | Е | | Е | | D |

Moodie Drive/Fitzgerald Road/Menten Place

| CRITERIA | North Approach | | South Approach | | East Approach | | West Approach | |
|----------------------------------|-----------------------|------|-----------------------|------|-----------------------|------|-----------------------|------|
| | | | PETSI SCORE | | | | | |
| CROSSING DISTANCE CONDITION | ONS | | | | | | | |
| Median > 2.4m in Width | No | 72 | No | 72 | No | 405 | No | 405 |
| Lanes Crossed | 5 | 12 | 5 | 12 | 3 | 105 | 3 | 105 |
| SIGNAL PHASING AND TIMING | | | | | | | | |
| Left Turn Conflict | Permissive | -8 | Permissive | -8 | Permissive | -8 | Permissive | -8 |
| Right Turn Conflict | Permissive or Yield | -5 |
| Right Turn on Red | RTOR Allowed | -3 |
| Leading Pedestrian Interval | No | -2 | No | -2 | No | -2 | No | -2 |
| CORNER RADIUS | • | | | | | | | |
| Parallel Radius | > 10m to 15m | -6 | > 5m to 10m | -5 | > 10m to 15m | -6 | > 5m to 10m | -5 |
| Parallel Right Turn Channel | No Right Turn Channel | -4 |
| Perpendicular Radius | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 |
| Perpendicular Right Turn Channel | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 |
| CROSSING TREATMENT | | | | | | | • | • |
| Treatment | Standard | -7 | Standard | -7 | Standard | -7 | Standard | -7 |
| | PETSI SCORE | 37 | | 38 | | 70 | | 71 |
| | LOS | E | | E | | С | | С |
| | | | DELAY SCORE | | | | | |
| Cycle Length | | 70 | | 70 | | 70 | | 70 |
| Pedestrian Walk Time | | 7 | | 7 | | 14.3 | | 14.3 |
| | DELAY SCORE | 28.4 | | 28.4 | | 22.2 | | 22.2 |
| | LOS | С | | С | | С | | С |
| | OVERALL | Е | | Е | | С | | С |

Moodie Drive/Loblaws Access

| CRITERIA | North Approach | | South Approach | | East Approach | |
|----------------------------------|-------------------------|---------|--------------------------|-----|-----------------------|------|
| | | PETSI S | CORE | | | |
| CROSSING DISTANCE CONDITION | NS | | | | | |
| Median > 2.4m in Width | No | | No | | No | -00 |
| Lanes Crossed | 6 | 55 | 6 | 55 | 4 | 88 |
| SIGNAL PHASING AND TIMING | | | | | | |
| Left Turn Conflict | No Left Turn/Prohibited | 0 | Permissive | -8 | Permissive | -8 |
| Right Turn Conflict | Permissive or Yield | -5 | No Right Turn/Prohibited | 0 | Permissive or Yield | -5 |
| Right Turn on Red | N/A | 0 | RTOR Allowed | -3 | RTOR Allowed | -3 |
| Leading Pedestrian Interval | No | -2 | No | -2 | No | -2 |
| CORNER RADIUS | | | | | | • |
| Parallel Radius | > 10m to 15m | -6 | No Right Turn | 0 | > 15m to 25m | -8 |
| Parallel Right Turn Channel | No Right Turn Channel | -4 | No Right Turn | 0 | No Right Turn Channel | -4 |
| Perpendicular Radius | N/A | 0 | N/A | 0 | N/A | 0 |
| Perpendicular Right Turn Channel | N/A | 0 | N/A | 0 | N/A | 0 |
| CROSSING TREATMENT | | | - | | • | |
| Treatment | Standard | -7 | Standard | -7 | Standard | -7 |
| | PETSI SCORE | 31 | | 35 | | 51 |
| | LOS | E | | E | | D |
| | Ċ | DELAY S | CORE | | | |
| Cycle Length | | 70 | | 70 | | 70 |
| Pedestrian Walk Time | | 7.4 | | 7.4 | | 15.1 |
| | DELAY SCORE | 28 | | 28 | | 21.5 |
| | LOS | С | | С | | С |
| | OVERALL | E | | Е | | D |

Moodie Drive/Robertson Road

| CRITERIA | North Approach | | South Approach | | East Approach | | West Approach | |
|----------------------------------|---------------------|------|---------------------|------|---------------------|------|---------------------|------|
| | | | PETSI SCORE | | | | | |
| CROSSING DISTANCE CONDITION | ONS | | | | | | | |
| Median > 2.4m in Width | No | 23 | No | 23 | No | 6 | No | 6 |
| Lanes Crossed | 8 | 23 | 8 | 23 | 9 | ٦ ٥ | 9 | ٥ ا |
| SIGNAL PHASING AND TIMING | | | | | | | | • |
| Left Turn Conflict | Protected | 0 | Protected | 0 | Protected | 0 | Protected | 0 |
| Right Turn Conflict | Permissive or Yield | -5 |
| Right Turn on Red | N/A | 0 | N/A | 0 | N/A | 0 | N/A | 0 |
| Leading Pedestrian Interval | No | -2 | No | -2 | No | -2 | No | -2 |
| CORNER RADIUS | | | | | | | | |
| Parallel Radius | > 10m to 15m | -6 |
| Parallel Right Turn Channel | Smart Channel | 2 |
| Perpendicular Radius | > 10m to 15m | -6 |
| Perpendicular Right Turn Channel | Smart Channel | 2 |
| CROSSING TREATMENT | | | | • | | | | • |
| Treatment | Standard | -7 | Standard | -7 | Standard | -7 | Standard | -7 |
| | PETSI SCORE | 1 | | 1 | | -16 | | -16 |
| | LOS | F | | F | | F | | F |
| | | | DELAY SCORE | | | | | |
| Cycle Length | | 130 | | 130 | | 130 | | 130 |
| Pedestrian Walk Time | | 27.6 | | 27.6 | | 7.3 | | 7.3 |
| | DELAY SCORE | 40.3 | | 40.3 | | 57.9 | | 57.9 |
| | LOS | E | | E | | E | | E |
| | OVERALL | F | | F | | F | | F |

Bicycle Level of Service (BLOS)

| Approach | Bikeway Facility Type | Criteria | Travel Lanes and/or Speed | BLOS | | | |
|------------------------|-----------------------------|------------------------------------|--|------|--|--|--|
| Moodie Drive/Timm Road | | | | | | | |
| North Approach | Pocket Bike | Right Turn Lane Characteristics | Right turn lane ≤50m; Turning speed ≤25km/hr | В | | | |
| | Lane | Left Turn Accommodation | No left turn | - | | | |
| South Approach | Paved | Right Turn Lane Characteristics | No impact on LTS | Α | | | |
| Codii 7 ippiodoii | Shoulder | Left Turn Accommodation | Two lanes crossed; ≥50km/hr | F | | | |
| West Approach | Pocket Bike Lane | Right Turn Lane Characteristics | Right turn lane ≥50m; turning speed ≤30km/hr | D | | | |
| West Apploach | | Left Turn Accommodation | No lanes crossed; ≥60km/hr | С | | | |
| Moodie Drive/Fit | zgerald Road/l | Menten Place | | | | | |
| North Approach | Mixed Traffic | Right Turn Lane Characteristics | Shared through/right turn lane | Α | | | |
| Попт Арргоаст | | Left Turn Accommodation | Two lanes crossed; ≥50km/hr | F | | | |
| South Approach | Bike Lane | Right Turn Lane Characteristics | No impact to LTS | Α | | | |
| | | Left Turn Accommodation | Two lanes crossed; ≥50km/hr | F | | | |
| East Approach | Mixed Traffic | Right Turn Lane Characteristics | Shared through/right turn lane | Α | | | |
| Last Approach | | Left Turn Accommodation | One lane crossed; 50km/hr | D | | | |
| West Approach | Mixed Traffic | Right Turn Lane Characteristics | Shared through/right turn lane | А | | | |
| West Approach | | Left Turn Accommodation | One lane crossed; ≤40km/hr | В | | | |
| Moodie Drive/Lo | Moodie Drive/Loblaws Access | | | | | | |
| North Approach | Mixed Traffic | Right Turn Lane Characteristics | No impact to LTS | Α | | | |
| Попп Арргоасп | | Left Turn Accommodation | Two lanes crossed; ≥50km/hr | F | | | |
| South Approach | Pocket Bike Lane | Right Turn Lane Characteristics | Right turn lane ≤50m; Turning speed ≤25km/hr | В | | | |
| | | Left Turn Accommodation | No left turn | - | | | |
| East Approach | Mixed Traffic | Right Turn Lane Characteristics | Shared right/left turn lane | Α | | | |
| | WILLOW FRAIIIC | Left Turn Accommodation | No lanes crossed; ≤50km/hr | В | | | |

| Approach | Bikeway Facility Type | Criteria | Travel Lanes and/or Speed | BLOS | | |
|-----------------------------|--------------------------|------------------------------------|--|------|--|--|
| Moodie Drive/Robertson Road | | | | | | |
| North Approach | Pocket Bike Lane | Right Turn Lane Characteristics | Right turn lane ≥50m; turning speed ≤30km/hr | D | | |
| | | Left Turn Accommodation | Two lanes crossed; ≥50km/hr; Dual left turn lanes | F | | |
| South Approach | Pocket Bike Lane | Right Turn Lane Characteristics | Right turn lane ≤50m; Turning speed ≤25km/hr | В | | |
| | | Left Turn Accommodation | Two lanes crossed; ≥50km/hr; Dual left turn lanes | F | | |
| East Approach | Bike Lane | Right Turn Lane Characteristics | No impact to LTS | А | | |
| | | Left Turn Accommodation | Three lanes crossed; ≥50km/hr | F | | |
| West Approach | Bike Lane | Right Turn Lane Characteristics | No impact to LTS | Α | | |
| | | Left Turn Accommodation | Three lanes crossed; ≥50km/hr | F | | |

Transit Level of Service (TLOS)

| Approach | Facility Type | Facility Type Delay ¹ | | | | | |
|-------------------------|-----------------------------|----------------------------------|-----|--|--|--|--|
| Moodie Drive/Timm Drive | | | | | | | |
| North Approach | Mixed Traffic (No TSP) | 15 seconds | С | | | | |
| South Approach | Mixed Traffic (No TSP) | 5 seconds | В | | | | |
| West Approach | Mixed Traffic (No TSP) | 25 seconds D | | | | | |
| Moodie Drive/Fitz | gerald Road/Menter | n Place | | | | | |
| North Approach | Mixed Traffic (No TSP) | 10 seconds | В | | | | |
| South Approach | Mixed Traffic (No TSP) | 10 seconds | В | | | | |
| East Approach | N/A (No transit service) | N/A | N/A | | | | |
| West Approach | Mixed Traffic (No TSP) | 26 coconde | | | | | |
| Moodie Drive/Lob | Moodie Drive/Loblaws Access | | | | | | |
| North Approach | Mixed Traffic (No TSP) | 5 seconds | В | | | | |
| South Approach | Mixed Traffic (No TSP) | 5 seconds | В | | | | |
| East Approach | N/A (No transit service) | · NI/A | | | | | |
| Moodie Drive/Rob | ertson Road | | | | | | |
| North Approach | Mixed Traffic (No TSP) | 65 seconds | F | | | | |
| South Approach | Mixed Traffic (No TSP) | 55 seconds F | | | | | |
| East Approach | High Level TSP | ≤10 seconds B | | | | | |
| West Approach | High Level TSP | ≤10 seconds | В | | | | |

^{1.} Mixed traffic delay based on approach delay in Synchro analysis

Truck Level of Service (TkLOS)

| Approach | Effective Corner Radius | Number of Receiving Lanes on Departure from Intersection | LOS | | | | |
|-----------------------------|----------------------------|--|-----|--|--|--|--|
| Moodie Drive/Timm Drive | | | | | | | |
| North Approach | >15m | One | С | | | | |
| South Approach | No Right Turn | N/A | N/A | | | | |
| West Approach | >15m | Two | А | | | | |
| Moodie Drive/Fitz | gerald Road/Mente | n Place | | | | | |
| North Approach | <10m | One | F | | | | |
| South Approach | 10m to 15m | One | Е | | | | |
| East Approach | 10m to 15m | Two | В | | | | |
| West Approach | <10m | Two | D | | | | |
| Moodie Drive/Loblaws Access | | | | | | | |
| North Approach | No right turn | N/A | N/A | | | | |
| South Approach | >15m | One | С | | | | |
| East Approach | 10m to 15m | Two | В | | | | |
| Moodie Drive/Robertson Road | | | | | | | |
| North Approach | 10m to 15m | Three | В | | | | |
| South Approach | 10m to 15m | Three | В | | | | |
| East Approach | 10m to 15m | Two | В | | | | |
| West Approach | 10m to 15m | Two | В | | | | |

Auto LOS

| | AM Peak | | PM Peak | | | Saturday Peak | | | |
|----------------------------------|--------------|-----|---------|--------------|-----|---------------|--------------|-----|-------|
| Intersection | V/C Ratio | LOS | Mvmt | V/C Ratio | Los | Mvmt | V/C Ratio | LOS | Mvmt |
| Moodie Drive/ Timm Road | 0.56 | Α | EBR | 0.49 | Α | SBT | 0.30 | А | SBT |
| Moodie Drive/ Fitzgerald Road | 0.40 | А | SBT/R | 0.66 | В | EBL | 0.26 | А | SBT/R |
| Moodie Drive/ Loblaws Access | 0.27 | Α | SBT | 0.57 | Α | WB | 0.23 | Α | SBT |
| Moodie Drive/ Robertson Road | 0.99 | Е | EBT | 1.01 | F | SBL | 0.76 | С | EBL |

Notes:

- Intersection paramaters used in the analysis are consistent with the TIA guidelines (saturation flow rate: 1800vphpl, PHF: 0.90).
- Traffic signal timings obtained from City of Ottawa, included in Appendix C.
- Detailed Synchro reports are included in Appendix I.

Intersection MMLOS Analysis 300-320 Moodie Drive

MMLOS Summary Table

| | lutana ati an | | Moodie Drive/Timm Roa | nd | | Moodie Drive/Fitzgera | ld Road/Menten Place | |
|------------|------------------------------|------------------|-----------------------|-------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | Intersection | North | South | West | North | South | East | West |
| | Median > 2.4m in Width | No | No | No | No | No | No | No |
| | Lanes | Six | Six | Four | Five | Five | Three | Three |
| | Conflicting Left Turns | Permissive | N/A | Permitted and Protected | Permissive | Permissive | Permissive | Permissive |
| | Conflicting Right Turns | N/A | Permissive | Permissive | Permissive | Permissive | Permissive | Permissive |
| | Right Turn on Red | N/A | N/A | N/A | Allowed | Allowed | Allowed | Allowed |
| | Ped Leading Interval | No | No | No | No | No | No | No |
| an | Parallel Radius | N/A | >15m to 25m | >15m to 25m | >10m to 15m | >5m to 10m | >10m to 15m | >5m to 10m |
| stri | Parallel Channel | N/A | Smart Channel | Smart Channel | No Right Turn Channel | No Right Turn Channel | No Right Turn Channel | No Right Turn Channel |
| es G | Perpendicular Radius | >15m to 25m | N/A | >15m to 25m | N/A | N/A | N/A | N/A |
| Pedestrian | Perpendicular Channel | Smart Channel | N/A | Smart Channel | N/A | N/A | N/A | N/A |
| _ | Crosswalk Type | Standard | Standard | Standard | Standard | Standard | Standard | Standard |
| | PETSI Score | 32 | 35 | 54 | 37 | 38 | 70 | 71 |
| | Delay Score | 33.6 | 33.6 | 17.6 | 28.4 | 28.4 | 22.2 | 22.2 |
| | Level of Service | Ш | E | D | Е | Е | С | С |
| | Level of Service | | E | | | | | |
| | Target | | D | | | | | |
| | Type of Bikeway | Pocket Bike Lane | Paved Shoulder | Pocket Bike Lane | Mixed Traffic | Bike Lane | Mixed Traffic | Mixed Traffic |
| | Turning Speed | ≤25km/hr | N/A | ≤30km/hr | N/A | N/A | N/A | N/A |
| | Right Turn Storage | ≤50m | N/A | ≥50m | N/A | N/A | N/A | N/A |
| | Dual Right Turn Lanes | No | N/A | No | No | No | No | No |
| پې | Shared Through-Right Lane | No | N/A | No | Yes | Yes | Yes | Yes |
| <u>:</u> | Bike Box | No | No | No | No | No | No | No |
| Cyclist | Lanes Crossed for Left Turns | N/A | Two | None | Two | Two | One | One |
| O | Dual Left Turn Lanes | N/A | No | No | No | No | No | No |
| | Approach Speed | 60km/hr | 60km/hr | 80km/hr | 60km/hr | 60km/hr | 50km/hr | 40km/hr |
| | Level of Service | В | F | D | F | F | D | В |
| | Level of Service | | F | | | ŀ | = | |
| | Target | | С | | | (| | |
| <u></u> | Average Signal Delay | 15 seconds | 5 seconds | 25 seconds | 10 seconds | 10 seconds | N/A | 25 seconds |
| ansit | Level of Service | С | В | D | В | В | N/A | D |
| <u> </u> | | | D | | | [|) | |
| _ | Target | | | | | | - | |
| | Turning Radius | >15m | N/A | >15m | <10m | 10m to 15m | 10m to 15m | <10m |
| × | Receiving Lanes | One | N/A | Two | One | One | Two | Two |
| Truck | Level of Service | С | N/A | A | F | Е | В | D |
| F | | | С | | | F | = | |
| | Target | | D | | | | 3 | |
| 0 | Level of Service | | А | | | E | 3 | |
| Auto | | | | | | | | |
| 4 | Target | | D | | | |) | |

Intersection MMLOS Analysis 300-320 Moodie Drive

| Island Refuge | No Nine Ntected missive N/A N/A n to 15m t Channel n to 15m t Channel andard -16 57.9 |
|--|---|
| Lanes | Nine otected missive N/A N/A n to 15m t Channel n to 15m t Channel andard -16 57.9 |
| Lanes | otected missive N/A N/A n to 15m t Channel n to 15m t Channel andard -16 57.9 |
| Conflicting Right Turns Permissive N/A Allowed Allowed N/A | missive N/A N/A n to 15m t Channel n to 15m t Channel andard -16 |
| Right Turn on Red | N/A N/A n to 15m t Channel n to 15m t Channel andard -16 57.9 |
| Ped Leading Interval No No No No No N/A | N/A n to 15m t Channel n to 15m t Channel andard -16 57.9 |
| Parallel Radius >10m to 15m N/A >15m to 25m >10m to 15m < | n to 15m t Channel n to 15m t Channel andard -16 57.9 |
| Crosswalk Type Standard | t Channel n to 15m t Channel andard -16 57.9 |
| Crosswalk Type Standard | n to 15m t Channel andard -16 57.9 |
| Crosswalk Type Standard | t Channel andard -16 57.9 |
| Crosswalk Type Standard | andard -16 57.9 |
| Crosswalk Type Standard | -16 57.9 |
| Delay Score 28 28 21.5 40.3 40.3 57.9 5 Level of Service E E D F F F | 57.9 |
| Level of Service E E D F F F | |
| Level of Service E | E |
| E F | |
| Target | |
| | |
| Type of Bikeway Mixed Traffic Pocket Bike Lane Mixed Traffic Pocket Bike Lane Pocket Bike Lane Bike Lane Bike | e Lane |
| | N/A |
| | N/A |
| | No |
| Shared Through-Right Lane N/A No Yes No No No | No |
| Bike Box No N/A No No No No | No |
| | hree |
| Dual Left Turn Lanes No N/A No Yes Yes No | No |
| | km/hr |
| Level of Service F B B F F F | F |
| F F | |
| Target C B | |
| Average Signal Delay 5 seconds 5 seconds 5 seconds 5 seconds 55 seconds ≤10 seconds ≤10 seconds | seconds |
| Average Signal Delay 5 seconds 5 sec | В |
| β 1 | |
| Taiget - | |
| · · | to 15m |
| Receiving Lanes N/A One Two Three Three Two T | Two |
| Receiving Lanes | В |
| | |
| Target B | |
| Level of Service A Target | |
| Target D D | |

APPENDIX I

Synchro Analysis Reports

1: Moodie Dr & Timm Dr AM Peak

| | ٦ | • | 4 | † | | 4 |
|---|-------|-------|----------|------------------|------------------|-------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | EBL | EBK | NBL NBL | ↑ ↑ | ↑ ↑ | SBK |
| Traffic Volume (vph) | 102 | 174 | 1 | ተተ 456 | 77 786 | 63 |
| Future Volume (vph) | 102 | 174 | 46 | 456 | 786 | 63 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | 1000 | 1000 | 40.0 |
| Storage Lanes | 1 | 1 | 120.0 | | | 1 |
| Taper Length (m) | 7.6 | • | 60.0 | | | • |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Ped Bike Factor | | 0.99 | | | 2.00 | |
| Frt | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | 0.950 | | | 2.000 |
| Satd. Flow (prot) | 1712 | 1517 | 1695 | 3325 | 3325 | 1502 |
| Flt Permitted | 0.950 | | 0.311 | 0020 | 0020 | |
| Satd. Flow (perm) | 1712 | 1497 | 555 | 3325 | 3325 | 1502 |
| Right Turn on Red | 1112 | Yes | - 000 | 0020 | 0020 | Yes |
| Satd. Flow (RTOR) | | 149 | | | | 70 |
| Link Speed (k/h) | 80 | 170 | | 60 | 60 | 10 |
| Link Distance (m) | 221.1 | | | 297.6 | 191.7 | |
| Travel Time (s) | 9.9 | | | 17.9 | 11.5 | |
| Confl. Bikes (#/hr) | 3.3 | 1 | | 11.3 | 11.0 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 4% | 4% | 3% |
| | 113 | 193 | 2% 51 | 4% 507 | 4% 873 | 70 |
| Adj. Flow (vph) | 113 | 193 | 31 | 507 | 0/3 | 70 |
| Shared Lane Traffic (%) Lane Group Flow (vph) | 113 | 193 | 51 | 507 | 873 | 70 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| | | | | | | |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | | | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Number of Detectors | . 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | | 28.7 | 28.7 | |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | Perm | Perm | NA | NA | Perm |
| Protected Phases | 4 | | | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 15.6 | 15.6 | 24.6 | 24.6 |
| Total Split (s) | 28.3 | 28.3 | 52.0 | 52.0 | 52.0 | 52.0 |
| Total Split (%) | 35.2% | 35.2% | 64.8% | 64.8% | 64.8% | 64.8% |
| Maximum Green (s) | 22.0 | 22.0 | 46.4 | 46.4 | 46.4 | 46.4 |
| Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| , tod 11110 (3) | 1.7 | 1.7 | 1.0 | 1.5 | 1.5 | 1.5 |

| | • | * | 1 | † | ↓ | 4 |
|-----------------------------------|-----------------|------------|---------------|----------|--------------|-----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 |
| _ead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | O Max | O Max | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | | 0.0 | 0.0 |
| Act Effct Green (s) | 11.6 | 11.6 | 56.8 | 56.8 | 56.8 | 56.8 |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.71 | 0.71 | 0.71 | 0.71 |
| v/c Ratio | 0.14 | | 0.71 | 0.71 | 0.71 | 0.71 |
| | 0.46 37.4 | 0.56 | | | 0.37 5.4 | 1.4 |
| Control Delay | | 16.1 | 5.2 | 4.5 | | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.4 | 16.1 | 5.2 | 4.5 | 5.4 | 1.4 |
| LOS | D | В | Α | Α | Α | Α |
| Approach Delay | 23.9 | | | 4.6 | 5.1 | |
| Approach LOS | С | | | Α | Α | |
| Queue Length 50th (m) | 16.3 | 6.1 | 2.0 | 10.9 | 21.7 | 0.0 |
| Queue Length 95th (m) | 29.5 | 23.3 | 6.5 | 19.7 | 36.9 | 3.5 |
| Internal Link Dist (m) | 197.1 | | | 273.6 | 167.7 | |
| Turn Bay Length (m) | | 100.0 | 120.0 | | | 40.0 |
| Base Capacity (vph) | 469 | 518 | 392 | 2353 | 2353 | 1083 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.24 | 0.37 | 0.13 | 0.22 | 0.37 | 0.06 |
| | 0.27 | 0.01 | 0.10 | 0.22 | 0.01 | 0.00 |
| Intersection Summary Area Type: | Other | | | | | |
| | Other | | | | | |
| Cycle Length: 80.3 | | | | | | |
| Actuated Cycle Length: 80.3 | ONDTI - | C.ODT C | -4 -6 O · · · | | | |
| Offset: 6 (7%), Referenced to ph | nase 2:NBTL and | o:SBT, Sta | art of Green | | | |
| Natural Cycle: 55 | | | | | | |
| Control Type: Actuated-Coordinate | ated | | | | | |
| Maximum v/c Ratio: 0.56 | | | | | | |
| Intersection Signal Delay: 8.1 | | | | | tersection L | |
| Intersection Capacity Utilization | 54.2% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| O. III | | | | | | |
| Splits and Phases: 1: Moodie | Dr & Timm Dr | | | | | |
| Ø2 (R) | | | | | | |
| 52 s | | | | | | |
| J28 | | | | | | |
| ∮ ∮ Ø6 (R) | | | | | | |
| + 20 (N) | | | | | | |

| | ۶ | → | * | • | ← | • | 1 | † | ~ | > | ļ | 4 |
|----------------------------------|------------|-------------|-------|------------|------------|-------|------------|------------|-------|-------------|------------|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | î. | | * | 1 | | * | ∳ ሴ | | * | ♦ % | |
| Traffic Volume (vph) | 74 | 1 28 | 25 | 18 | 6 | 8 | 49 | 470 | 64 | 111 | 658 | 186 |
| Future Volume (vph) | 74 | 28 | 25 | 18 | 6 | 8 | 49 | 470 | 64 | 111 | 658 | 186 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 0.99 | |
| Frt | | 0.929 | | | 0.916 | | | 0.982 | | | 0.967 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1679 | 1534 | 0 | 1729 | 1413 | 0 | 1695 | 3289 | 0 | 1712 | 3211 | 0 |
| Flt Permitted | 0.747 | | | 0.719 | | | 0.287 | | | 0.428 | | |
| Satd. Flow (perm) | 1317 | 1534 | 0 | 1305 | 1413 | 0 | 512 | 3289 | 0 | 768 | 3211 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 28 | | | 9 | | | 27 | | | 65 | |
| Link Speed (k/h) | | 50 | | | 40 | | | 60 | | | 60 | |
| Link Distance (m) | | 92.8 | | | 87.6 | | | 186.4 | | | 297.6 | |
| Travel Time (s) | | 6.7 | | | 7.9 | | | 11.2 | | | 17.9 | |
| Confl. Peds. (#/hr) | 3 | | 3 | 3 | | 3 | 3 | | 6 | 6 | | 3 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 3% | 0% | 20% | 0% | 17% | 17% | 2% | 3% | 2% | 1% | 4% | 2% |
| Adj. Flow (vph) | 82 | 31 | 28 | 20 | 7 | 9 | 54 | 522 | 71 | 123 | 731 | 207 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 82 | 59 | 0 | 20 | 16 | 0 | 54 | 593 | 0 | 123 | 938 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.9 | | | 4.9 | | | 4.9 | | | 4.9 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 14 | 24 | 1.00 | 14 | 24 | 1.00 | 14 | 24 | 1.00 | 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 | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | |
| Detector 1 Channel | OI · EX | OI · LX | | OI · LX | OI · LX | | OI · LA | OI · EX | | OI- LX | OI LX | |
| 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) | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | OITLX | | | OITLX | | | OITLX | | | OITEX | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | reiiii | 4 | | Feiiii | 8 | | Feiiii | 2 | | Fellil | 6 | |
| Permitted Phases | 4 | 4 | | 8 | 0 | | 2 | | | 6 | U | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | 4 | 4 | | 0 | 0 | | | | | U | Ü | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| | 34.0 | 34.0 | | 34.0 | 34.0 | | | 30.7 | | 30.7 | 30.7 | |
| Minimum Split (s) | | | | | | | 30.7 | | | | | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 46.0 | 46.0 | | 46.0 | 46.0 | |
| Total Split (%) | 42.5% | 42.5% | | 42.5% | 42.5% | | 57.5% | 57.5% | | 57.5% | 57.5% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 40.3 | 40.3 | | 40.3 | 40.3 | |
| Yellow Time (s) All-Red Time (s) | 3.3 2.7 | 3.3 2.7 | | 3.3 2.7 | 3.3 2.7 | | 3.7 2.0 | 3.7 2.0 | | 3.7 2.0 | 3.7 2.0 | |
| | | ., / | | .) / | ., / | | 20 | 2.0 | | .) (1 | .7 (1 | |

| | • | - | • | • | ← | • | 4 | † | ~ | - | ↓ | 1 |
|------------------------------------|-------------------|-------------|--------------|------|--------------|----------|-------------|----------|-----|-------|----------|-----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBI |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| 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 | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 14.1 | 14.1 | | 14.1 | 14.1 | | 58.5 | 58.5 | | 58.5 | 58.5 | |
| Actuated g/C Ratio | 0.18 | 0.18 | | 0.18 | 0.18 | | 0.73 | 0.73 | | 0.73 | 0.73 | |
| v/c Ratio | 0.35 | 0.20 | | 0.09 | 0.06 | | 0.14 | 0.25 | | 0.22 | 0.40 | |
| Control Delay | 31.1 | 16.6 | | 24.7 | 16.1 | | 5.6 | 3.7 | | 8.1 | 6.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 31.1 | 16.6 | | 24.7 | 16.1 | | 5.6 | 3.7 | | 8.1 | 6.7 | |
| LOS | С | В | | С | В | | Α | Α | | Α | Α | |
| Approach Delay | | 25.0 | | | 20.9 | | | 3.8 | | | 6.9 | |
| Approach LOS | | С | | | С | | | Α | | | Α | |
| Queue Length 50th (m) | 11.8 | 4.3 | | 2.7 | 1.0 | | 0.4 | 0.0 | | 5.0 | 21.3 | |
| Queue Length 95th (m) | 18.2 | 10.6 | | 6.3 | 4.5 | | 11.7 | 37.4 | | 22.1 | 62.5 | |
| Internal Link Dist (m) | | 68.8 | | | 63.6 | | | 162.4 | | | 273.6 | |
| Turn Bay Length (m) | 35.0 | | | 20.0 | | | 65.0 | | | 45.0 | | |
| Base Capacity (vph) | 460 | 555 | | 456 | 500 | | 374 | 2413 | | 561 | 2366 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.18 | 0.11 | | 0.04 | 0.03 | | 0.14 | 0.25 | | 0.22 | 0.40 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 80 | | | | | | | | | | | | |
| Actuated Cycle Length: 80 | | | | | | | | | | | | |
| Offset: 68 (85%), Referenced to | phase 2:NBTL a | nd 6:SBTL, | Start of Gre | een | | | | | | | | |
| Natural Cycle: 65 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | ated | | | | | | | | | | | |
| Maximum v/c Ratio: 0.40 | | | | | | | | | | | | |
| Intersection Signal Delay: 7.5 | | | | | ersection LO | | | | | | | |
| Intersection Capacity Utilization | 60.5% | | | ICI | J Level of S | ervice B | | | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie | Dr & Fitzgerald F | Rd/Menten F | 이 | | | | | | | | | |
| -4. | <u> </u> | , | | | | 1 | 1 Ø4 | | | | | |
| Ø2 (R) | | | | | | | 194 | | | | | |
| 46 s | | | | | | 34 s | | | | | | |



Synchro 10 Report Brad Byvelds, Novatech

| ane Configurations raffic Volume (vph) 16 18 567 15 21 676 168 168 17 15 21 676 168 168 17 15 21 676 168 168 17 15 21 676 168 168 17 15 21 676 168 168 17 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18 | ` | • | • | † | / | / | |
|--|------------------------|---------|-------|-----------------|--------------|----------|----------------|
| ane Configurations rare (Traffic Volume (vph) | Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| raffic Volume (vph) | | | TIDIT | | | | |
| ulture Volume (vph) 16 18 567 15 21 676 deal Flow (vphpl) 1800 200 2050 1800 1800 1800 200 2050 3325 1547 1517 3325 1547 1517 3325 1547 1517 3325 1547 1517 3325 1547 1517 3325 1547 1517 <td></td> <td></td> <td>18</td> <td></td> <td></td> <td></td> <td></td> | | | 18 | | | | |
| | | | | | | | |
| Storage Length (m) | | | | | | | |
| Storage Lanes | | | | | | | |
| Taper Length (m) 7.6 | | 1 | | | | | |
| Ame Util. Factor 1.00 | Taper Length (m) | | | | | 40.0 | |
| Company Comp | Lane Util. Factor | | 1.00 | 0.95 | 1.00 | | 0.95 |
| Sith Protected 0,977 0,950 Sitd Flow (prot) 1515 0 3325 1547 5325 Sidd Flow (prom) 1515 0 3325 1547 659 3325 Sight Turn on Red Yes Yes Yes Yes Yes Sight Turn on Red Yes Yes Yes Yes Sight Turn on Red Yes Yes Yes Sight Turn on Red Yes Yes Yes Sight Turn on Red Yes Yes Yes Sight Clow (Poth) 40 60 60 66 Sink Speed (k/h) 40 60 90 | Frt | | | | | | |
| Stade Flow (prot) 1515 0 3325 1547 1517 3325 1547 1517 3325 1547 1517 3325 1547 1517 3325 1547 1517 3325 1547 1517 3325 1547 1517 3325 1544 1509 3325 1547 1509 1509 15 | Flt Protected | | | | 000 | 0.950 | |
| State Clow (perm) 1515 | Satd. Flow (prot) | | 0 | 3325 | 1547 | | 3325 |
| Sald, Flow (perm) 1515 0 3325 1547 659 3325 Night Turn on Red Yes Yes Natid Flow (RTOR) 20 | Flt Permitted | | | 3020 | .011 | | 5020 |
| Right Turn on Red | | | 0 | 3325 | 1547 | | 3325 |
| Seld, Flow (RTOR) | | 1010 | | 0020 | | 000 | 5020 |
| ink Speed (k/h) | | 20 | 163 | | | | |
| 186.4 200.0 186.4 12.0 11.6 11.2 | | | | 60 | 17 | | 60 |
| Travel Time (s) | | | | | | | |
| Peak Hour Factor 0.90 0. | | | | | | | |
| Heavy Vehicles (%) | | | 0.00 | | 0.00 | 0.00 | |
| Adj. Flow (vph) 18 20 630 17 23 751 | | | | | | | |
| Shared Lane Traffic (%) 38 | , , | | | | | | |
| Ame Group Flow (vph) 38 | | 18 | 20 | 630 | 17 | 23 | /51 |
| Inter Blocked Intersection No No No No No No No | | | | 222 | | 20 | |
| Left Right Left Right Left | | | | | | | |
| Median Width(m) 3.7 7.4 7.4 ink Offset(m) 0.0 0.0 0.0 crosswalk Width(m) 4.9 4.9 4.9 Crosswalk Width(m) 4.0 4.1 4.1 4.1 Cros | | | | | | | |
| Link Offset(m) 0.0 0.0 0.0 Crosswalk Width(m) 4.9 4.9 4.9 Vivo way Left Turn Lane 4.9 4.9 4.9 Vivo way Left Turn Lane 4.0 1.06 | | | Right | | Right | Left | |
| A-9 | | | | | | | |
| Now way Left Turn Lane Headway Factor 1.06 | Link Offset(m) | | | | | | |
| Readway Factor | Crosswalk Width(m) | 4.9 | | 4.9 | | | 4.9 |
| furning Speed (k/h) 24 14 14 24 Jumber of Detectors 1 2 1 1 2 Jetector Template Left Thru Right Left Thru Leading Detector (m) 6.1 30.5 6.1 6.1 30.5 Grailing Detector (m) 0.0 | Two way Left Turn Lane | | | | | | |
| Aumber of Detectors | Headway Factor | | | 1.06 | | | 1.06 |
| Detector Template | Turning Speed (k/h) | | 14 | | 14 | 24 | |
| Seading Detector (m) 6.1 30.5 6.1 6.1 30.5 Trailing Detector (m) 0.0 0.0 0.0 0.0 0.0 Detector 1 Position(m) 0.0 0.0 0.0 0.0 0.0 Detector 1 Size(m) 6.1 1.8 6.1 6.1 1.8 Detector 1 Type CI+Ex CI+Ex CI+Ex CI+Ex Detector 1 Type CI+Ex CI+Ex CI+Ex CI+Ex Detector 1 Channel CI+Ex CI+Ex CI+Ex Detector 1 Extend (s) 0.0 0.0 0.0 0.0 Detector 1 Queue (s) 0.0 0.0 0.0 0.0 Detector 1 Delay (s) 0.0 0.0 0.0 0.0 Detector 1 Delay (s) 0.0 0.0 0.0 0.0 Detector 2 Position(m) 28.7 28.7 Detector 2 Size(m) 1.8 1.8 Detector 2 Size(m) 1.8 1.8 Detector 2 CI+Ex CI+Ex Detector 2 Extend (s) 0.0 0.0 Detector 3 Extend (s) 0.0 0.0 Detector 4 Phases 2 6 Detector 6 Phases 8 2 2 6 6 Detector 7 Phase 8 2 2 6 6 Detector 8 8 2 2 6 6 Detector 9 Phase 9 9 9 9 Detector 9 Phase 9 9 9 9 9 9 Detector 9 Phase 9 9 9 9 9 9 9 Detector 9 Phase 9 9 9 9 9 9 9 9 9 | Number of Detectors | | | 2 | • | 1 | 2 |
| Seading Detector (m) 6.1 30.5 6.1 6.1 30.5 Trailing Detector (m) 0.0 0.0 0.0 0.0 0.0 Detector 1 Position(m) 0.0 0.0 0.0 0.0 0.0 Detector 1 Size(m) 6.1 1.8 6.1 6.1 1.8 Detector 1 Type CI+Ex CI+Ex CI+Ex CI+Ex Detector 1 Type CI+Ex CI+Ex CI+Ex CI+Ex Detector 1 Channel CI+Ex CI+Ex CI+Ex Detector 1 Extend (s) 0.0 0.0 0.0 0.0 Detector 1 Queue (s) 0.0 0.0 0.0 0.0 Detector 1 Delay (s) 0.0 0.0 0.0 0.0 Detector 1 Delay (s) 0.0 0.0 0.0 0.0 Detector 2 Position(m) 28.7 28.7 Detector 2 Size(m) 1.8 1.8 Detector 2 Size(m) 1.8 1.8 Detector 2 CI+Ex CI+Ex Detector 2 Extend (s) 0.0 0.0 Detector 3 Extend (s) 0.0 0.0 Detector 4 Phases 2 6 Detector 6 Phases 8 2 2 6 6 Detector 7 Phase 8 2 2 6 6 Detector 8 8 2 2 6 6 Detector 9 Phase 9 9 9 9 Detector 9 Phase 9 9 9 9 9 9 Detector 9 Phase 9 9 9 9 9 9 9 Detector 9 Phase 9 9 9 9 9 9 9 9 9 | Detector Template | Left | | Thru | Right | Left | Thru |
| Trailing Detector (m) 0.0 0.0 0.0 0.0 Detector 1 Position(m) 0.0 0.0 0.0 0.0 Detector 1 Size(m) 6.1 1.8 6.1 6.1 1.8 Detector 1 Type CI+Ex CI+Ex CI+Ex CI+Ex CI+Ex Detector 1 Channel Verescore 1 Extend (s) 0.0 | Leading Detector (m) | | | | | | 30.5 |
| Detector 1 Position(m) 0.0 0.0 0.0 0.0 Detector 1 Size(m) 6.1 1.8 6.1 6.1 1.8 Detector 1 Type CI+Ex D.0 0.0 <t< td=""><td>Trailing Detector (m)</td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | Trailing Detector (m) | | | | | | |
| Detector 1 Size(m) 6.1 1.8 6.1 6.1 1.8 Detector 1 Type CI+Ex CI+Ex CI+Ex CI+Ex Detector 1 Channel Detector 1 Extend (s) 0.0 0.0 0.0 0.0 Detector 1 Queue (s) 0.0 0.0 0.0 0.0 Detector 1 Delay (s) 0.0 0.0 0.0 0.0 Detector 2 Position(m) 28.7 28.7 Detector 2 Size(m) 1.8 1.8 Detector 2 Type CI+Ex CI+Ex Detector 2 Type CI+Ex CI+Ex Detector 2 Extend (s) 0.0 0.0 Detector 2 Extend (s) 0.0 0.0 Urin Type Prot NA Perm Perm NA Permitted Phases 2 6 Permitted Phases 2 6 6 Detector Phase 8 2 2 6 6 Switch Split (s) 32.6 28.9 28.9 23.9 23.9 Total Split (s) 33.0 47.0 47.0 47.0 47.0 Total Split (s) 41.3% 58.8% 58.8% 58.8% 58.8% Aximum Green (s) 27.4 41.1 41.1 41.1 41.1 Cellow Time (s) 3.3 3.7 3.7 3.7 All-Red Time (s) 2.2 2.2 2.2 2.2 Detector 1 Clerk CI+Ex CI+Ex CI+Ex CI | | | | | | | |
| Detector 1 Type | | | | | | | |
| Detector 1 Channel Detector 1 Extend (s) Detector 1 Extend (s) Detector 1 Queue (s) Detector 1 Queue (s) Detector 1 Delay (s) Detector 2 Position(m) Detector 2 Size(m) Detector 2 Size(m) Detector 2 Type CI+Ex Detector 2 Channel Detector 2 Extend (s) Detector 3 Extend (s) Detector 4 Extend (s) Detector 5 Extend (s) Detector 6 Extend (s) Detector 6 Extend (s) Detector 7 Extend (s) Detector 8 Extend (s) Detector 9 Det | Detector 1 Type | | | | | | |
| Detector 1 Extend (s) 0.0 0.0 0.0 0.0 0.0 0.0 Detector 1 Queue (s) 0.0 0.0 0.0 0.0 0.0 0.0 Detector 1 Delay (s) 0.0 0.0 0.0 0.0 0.0 Detector 2 Position(m) 28.7 28.7 Detector 2 Size(m) 1.8 1.8 Detector 2 Type CI+Ex CI+Ex Detector 2 Channel Detector 2 Extend (s) 0.0 0.0 Urn Type Prot NA Perm Perm NA Permitted Phases 8 2 6 Permitted Phases 2 6 Detector Phase 8 2 2 6 Detector 2 Extend (s) 0.0 Detector 2 Extend (s) 0.0 | | OI - LX | | Ų. · L A | ♥ L N | J.: LA | ∪. . Lx |
| Detector 1 Queue (s) 0.0 | | . 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) 0.0 0.0 0.0 0.0 Detector 2 Position(m) 28.7 28.7 Detector 2 Size(m) 1.8 1.8 Detector 2 Type CI+Ex CI+Ex Detector 2 Channel 0.0 0.0 Detector 2 Extend (s) 0.0 0.0 Port of type Prot NA Perm Perm NA Protected Phases 8 2 6 | | | | | | | |
| Detector 2 Position(m) 28.7 28.7 Detector 2 Size(m) 1.8 1.8 Detector 2 Type CI+Ex CI+Ex Detector 2 Channel Detector 2 Extend (s) 0.0 0.0 Fund Type Prot NA Perm Perm NA Protected Phases 8 2 6 6 Permitted Phases 2 6 6 6 Witch Phase 8 2 2 8 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 7 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> | | | | | | | |
| Detector 2 Size(m) | D ((O D () () | 0.0 | | 00 = | 0.0 | 0.0 | ~~ = |
| Cl+Ex Cl+E | | | | | | | |
| Detector 2 Channel Detector 2 Extend (s) Detector 3 Extend (s) Detecto | | | | | | | |
| Detector 2 Extend (s) 0.0 0.0 Furn Type Prot NA Perm Perm NA Protected Phases 8 2 6 6 Permitted Phases 2 6 6 Detector Phase 8 2 2 6 6 Switch Phase 8 2 2 6 6 Switch Phase 8 2 2 6 6 Minimum Initial (s) 10.0< | | | | CI+Ex | | | CI+Ex |
| Furn Type Prot NA Perm Perm NA Perm Perm NA Protected Phases 8 2 6 6 Permitted Phases 2 6 6 Permitted Phases 8 2 2 6 6 6 Permitted Phase 8 2 2 6 6 6 Permitted Phase 8 2 2 6 6 6 Permitted Phase 8 8 2 2 2 6 6 6 Permitted Phase 8 9 2 8 9 2 8 9 8 9 9 9 9 9 9 9 9 9 9 9 | | | | | | | |
| Protected Phases 8 2 6 Permitted Phases 2 6 Permitted Phases 8 2 2 6 6 Permitted Phase 8 2 8 9 8 9 Permitted Phase 8 2 8 9 8 9 Permitted Phase 8 2 8 9 8 Permitted Phase 8 8 2 8 9 8 Permitted Phase 8 8 8 9 8 Permitted Phase 8 9 8 9 8 Permitted Phase 8 8 8 9 8 Permitted Phase 8 9 9 9 9 Permitted Phase 8 9 Permitted Phase 8 9 Permitted Phase 8 9 Permitted Phase 8 9 | | | | | | _ | |
| Permitted Phases 2 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 | Turn Type | | | | Perm | Perm | |
| Detector Phase 8 2 2 6 6 Switch Phase Minimum Initial (s) 10.0 | Protected Phases | 8 | | 2 | | | 6 |
| Switch Phase June 1 June 2 J | Permitted Phases | | | | | | |
| Ainimum Initial (s) 10.0 10.0 10.0 10.0 Ainimum Split (s) 32.6 28.9 28.9 23.9 Fotal Split (s) 33.0 47.0 47.0 47.0 Fotal Split (%) 41.3% 58.8% 58.8% 58.8% 58.8% Maximum Green (s) 27.4 41.1 41.1 41.1 41.1 Yellow Time (s) 3.3 3.7 3.7 3.7 All-Red Time (s) 2.3 2.2 2.2 2.2 2.2 | Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Ainimum Split (s) 32.6 28.9 28.9 23.9 Fotal Split (s) 33.0 47.0 47.0 47.0 Fotal Split (%) 41.3% 58.8% 58.8% 58.8% 58.8% Maximum Green (s) 27.4 41.1 41.1 41.1 41.1 Yellow Time (s) 3.3 3.7 3.7 3.7 XII-Red Time (s) 2.3 2.2 2.2 2.2 | Switch Phase | | | | | | |
| Ainimum Split (s) 32.6 28.9 28.9 23.9 Fotal Split (s) 33.0 47.0 47.0 47.0 Fotal Split (%) 41.3% 58.8% 58.8% 58.8% 58.8% Maximum Green (s) 27.4 41.1 41.1 41.1 41.1 Yellow Time (s) 3.3 3.7 3.7 3.7 XII-Red Time (s) 2.3 2.2 2.2 2.2 | Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Total Split (s) 33.0 47.0 47.0 47.0 Total Split (%) 41.3% 58.8% 58.8% 58.8% 58.8% Maximum Green (s) 27.4 41.1 41.1 41.1 41.1 Yellow Time (s) 3.3 3.7 3.7 3.7 3.7 All-Red Time (s) 2.3 2.2 2.2 2.2 2.2 | Minimum Split (s) | | | | | | |
| Fotal Split (%) 41.3% 58.8% 58.8% 58.8% 58.8% Maximum Green (s) 27.4 41.1 41.1 41.1 41.1 Yellow Time (s) 3.3 3.7 3.7 3.7 3.7 All-Red Time (s) 2.3 2.2 2.2 2.2 2.2 | Total Split (s) | | | | | | |
| Maximum Green (s) 27.4 41.1 41.1 41.1 41.1 Yellow Time (s) 3.3 3.7 3.7 3.7 All-Red Time (s) 2.3 2.2 2.2 2.2 2.2 | | | | | | | |
| Yellow Time (s) 3.3 3.7 3.7 3.7 All-Red Time (s) 2.3 2.2 2.2 2.2 | | | | | | | |
| All-Red Time (s) 2.3 2.2 2.2 2.2 | | | | | | | |
| | | | | | | | |
| | Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| , () | Total Lost Time (s) | | | | | | |

| | • | • | † | ~ | \ | ļ |
|-------------------------------------|-----------------|------------|--------------|-------|--------------|-----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | | |
| Act Effct Green (s) | 10.0 | | 67.1 | 67.1 | 67.1 | 67.1 |
| Actuated g/C Ratio | 0.12 | | 0.84 | 0.84 | 0.84 | 0.84 |
| v/c Ratio | 0.18 | | 0.23 | 0.01 | 0.04 | 0.27 |
| Control Delay | 21.9 | | 2.8 | 1.5 | 3.5 | 2.9 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 21.9 | | 2.8 | 1.5 | 3.5 | 2.9 |
| LOS | C | | Α | A | A | Α |
| Approach Delay | 21.9 | | 2.7 | ,, | ,, | 2.9 |
| Approach LOS | C | | Α. | | | Α |
| Queue Length 50th (m) | 2.5 | | 13.4 | 0.0 | 0.8 | 15.8 |
| Queue Length 95th (m) | 10.7 | | 18.6 | 1.3 | m2.5 | 24.5 |
| Internal Link Dist (m) | 36.4 | | 176.0 | 1.0 | 1112.0 | 162.4 |
| Turn Bay Length (m) | 30.4 | | 170.0 | 30.0 | 50.0 | 102.4 |
| Base Capacity (vph) | 532 | | 2789 | 1300 | 552 | 2789 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.07 | | 0.23 | 0.01 | 0.04 | 0.27 |
| | 0.07 | | 0.23 | 0.01 | 0.04 | 0.21 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 80 | | | | | | |
| Actuated Cycle Length: 80 | | | | | | |
| Offset: 58 (73%), Referenced to | phase 2:NBT and | d 6:SBTL, | Start of Gre | en | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordina | ted | | | | | |
| Maximum v/c Ratio: 0.27 | | | | | | |
| Intersection Signal Delay: 3.3 | | | | Int | tersection L | OS: A |
| Intersection Capacity Utilization 3 | 37.6% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| m Volume for 95th percentile qu | ueue is metered | by upstrea | ım signal. | | | |
| | | | | | | |
| Splits and Phases: 3: Moodie [| Or & Loblaws | | | | | |
| | | | | | | |
| Ø2 (R) | | | | | | |
| 47 s | | | | | | |
| 1 | | | | | | |
| Ø6 (R) | | | | | | - 1, |
| ▼ 106 (R) | | | | | | |

| | • | → | • | • | ← | • | • | † | ~ | \ | ↓ ¯ | 1 |
|---|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|---------------|--------------|--------------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | ^ | 7 | * | 44 | 7 | 14.54 | 44 | 7 | 14.54 | 44 | 7 |
| Traffic Volume (vph) | 70 | 1211 | 112 | 81 | 307 | 152 | 225 | 361 | 309 | 356 | 176 | 107 |
| Future Volume (vph) | 70 | 1211 | 112 | 81 | 307 | 152 | 225 | 361 | 309 | 356 | 176 | 107 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | 0.05 | 4.00 | 40.0 | 0.05 | 4.00 | 40.0 | 0.05 | 4.00 | 50.0 | ٥٥٢ | 4.00 |
| Lane Util. Factor | 1.00 0.99 | 0.95 | 1.00 0.98 | 1.00 1.00 | 0.95 | 1.00 0.98 | 0.97 0.99 | 0.95 | 1.00 0.98 | 0.97 1.00 | 0.95 | 1.00 0.98 |
| Ped Bike Factor Frt | 0.99 | | 0.98 | 1.00 | | 0.850 | 0.99 | | 0.98 | 1.00 | | 0.850 |
| Flt Protected | 0.950 | | 0.000 | 0.950 | | 0.050 | 0.950 | | 0.000 | 0.950 | | 0.050 |
| Satd. Flow (prot) | 1631 | 3390 | 1473 | 1712 | 3232 | 1517 | 3321 | 3325 | 1532 | 3288 | 3232 | 1459 |
| Flt Permitted | 0.950 | 0000 | 1410 | 0.950 | 0202 | 1017 | 0.950 | 0020 | 1002 | 0.950 | OZOZ | 1400 |
| Satd. Flow (perm) | 1622 | 3390 | 1447 | 1710 | 3232 | 1486 | 3289 | 3325 | 1506 | 3273 | 3232 | 1431 |
| Right Turn on Red | | | Yes | | | Yes | 0_00 | *** | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 139 | | | 169 | | | 137 | | | 137 |
| Link Speed (k/h) | | 60 | | | 60 | | | 60 | | | 60 | |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | 6 | | 4 | 4 | | 6 | 6 | | 4 | 4 | | 6 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 6% | 2% | 5% | 1% | 7% | 2% | 1% | 4% | 1% | 2% | 7% | 6% |
| Adj. Flow (vph) | 78 | 1346 | 124 | 90 | 341 | 169 | 250 | 401 | 343 | 396 | 196 | 119 |
| Shared Lane Traffic (%) Lane Group Flow (vph) | 78 | 1346 | 124 | 90 | 341 | 169 | 250 | 401 | 343 | 396 | 196 | 119 |
| Enter Blocked Intersection | No | No | No | No No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | LEIL | 3.7 | Nigrit | Leit | 3.7 | Rigiit | Leit | 7.4 | Night | Leit | 7.4 | Right |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | | 14 | 24 | | 14 | 24 | | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) Detector 1 Type | 6.1 CI+Ex | 1.8 CI+Ex | 6.1 CI+Ex | 6.1 CI+Ex | 1.8 CI+Ex | 6.1 CI+Ex | 6.1 CI+Ex | 1.8 CI+Ex | 6.1 CI+Ex | 6.1 CI+Ex | 1.8 CI+Ex | 6.1 CI+Ex |
| Detector 1 Channel | CITLX | CITLX | CITEX | CITLX | CITEX | CITLX | CITLX | CITLX | CITLX | CITLX | CITLX | CITEX |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | _ | | 2 | 4 | ^ | 6 | 2 | | 8 | | 4 | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | ΕO | 10.0 | 10.0 | ΕO | 10.0 | 10.0 | E 0 | 10.0 | 10.0 | ΕO | 10.0 | 10.0 |
| Minimum Initial (s) | 5.0 | 10.0 33.4 | 10.0 33.4 | 5.0 | 10.0 | 10.0 33.4 | 5.0 | 10.0 37.7 | 10.0 | 5.0 | 10.0 37.7 | 10.0 |
| Minimum Split (s) Total Split (s) | 11.4 15.0 | 54.0 | 54.0 | 11.4 15.0 | 33.4 54.0 | 54.0 | 11.5 23.0 | 38.0 | 37.7 38.0 | 11.5 23.0 | 38.0 | 37.7 38.0 |
| Total Split (%) | 11.5% | 41.5% | 41.5% | 11.5% | 41.5% | 41.5% | 23.0 17.7% | 29.2% | 29.2% | 23.0 17.7% | 29.2% | 29.2% |
| | 8.6 | 47.6 | 47.6 | 8.6 | 47.6 | 47.6 | 16.5 | 31.3 | 31.3 | 16.5 | 31.3 | 31.3 |
| Maximum Green (c) | | | | | | | | | | | | |
| Maximum Green (s) Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 31.3 | 31.3 | 3.7 | 31.3 | 3.7 |

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|-------------------------|-------|--------|-------|-------|-------|-------|------|----------|------|-------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 |
| Act Effct Green (s) | 9.5 | 52.3 | 52.3 | 10.1 | 52.9 | 52.9 | 14.4 | 25.1 | 25.1 | 16.5 | 27.1 | 27.1 |
| Actuated g/C Ratio | 0.07 | 0.40 | 0.40 | 0.08 | 0.41 | 0.41 | 0.11 | 0.19 | 0.19 | 0.13 | 0.21 | 0.21 |
| v/c Ratio | 0.66 | 0.99 | 0.19 | 0.68 | 0.26 | 0.24 | 0.68 | 0.63 | 0.86 | 0.95 | 0.29 | 0.29 |
| Control Delay | 83.9 | 60.5 | 3.9 | 83.3 | 27.5 | 4.9 | 65.0 | 51.9 | 49.8 | 89.3 | 43.7 | 6.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 83.9 | 60.5 | 3.9 | 83.3 | 27.5 | 4.9 | 65.0 | 51.9 | 49.8 | 89.3 | 43.7 | 6.3 |
| LOS | F | E | Α | F | С | Α | Е | D | D | F | D | Α |
| Approach Delay | | 57.1 | | | 29.5 | | | 54.5 | | | 62.8 | |
| Approach LOS | | E | | | С | | | D | | | E | |
| Queue Length 50th (m) | 19.4 | ~202.4 | 0.0 | 22.2 | 31.8 | 0.0 | 32.0 | 49.4 | 52.7 | 52.6 | 22.2 | 0.0 |
| Queue Length 95th (m) | #45.3 | #245.7 | 9.9 | #52.4 | 44.4 | 14.6 | 45.4 | 63.0 | 86.0 | #82.9 | 32.2 | 11.2 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 121 | 1364 | 665 | 133 | 1315 | 705 | 421 | 800 | 466 | 417 | 778 | 448 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.64 | 0.99 | 0.19 | 0.68 | 0.26 | 0.24 | 0.59 | 0.50 | 0.74 | 0.95 | 0.25 | 0.27 |

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 119 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 135

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 53.2 Intersection Capacity Utilization 84.9%

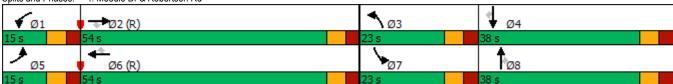
Intersection LOS: D ICU Level of Service E

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

1: Moodie Dr & Timm Dr PM Peak

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|----------------------------|-------|---------|-----------|------------------|------------------|----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | EDL K | EDK | INDL K | <u>ND1</u> | <u>>DI</u> | JDR 7 |
| Traffic Volume (vph) | 54 | 59 | 147 | TT 734 | TT 773 | 149 |
| Future Volume (vph) | 54 | 59 | 147 | 734 | 773 | 149 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | | | 40.0 |
| Storage Lanes | 1 | 1 | 1 | | | 1 |
| Taper Length (m) | 7.6 | | 60.0 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | 0.950 | | | |
| Satd. Flow (prot) | 1695 | 1547 | 1712 | 3390 | 3357 | 1547 |
| Flt Permitted | 0.950 | | 0.235 | 0.000 | 00 | |
| Satd. Flow (perm) | 1695 | 1547 | 423 | 3390 | 3357 | 1547 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | 66 | | | | 166 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 297.6 | 191.7 | |
| Travel Time (s) | 9.9 | | | 17.9 | 11.5 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 2% | 0% | 1% | 2% | 3% | 0% |
| Adj. Flow (vph) | 60 | 66 | 163 | 816 | 859 | 166 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 60 | 66 | 163 | 816 | 859 | 166 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | | | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | | 28.7 | 28.7 | 3.0 |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| Detector 2 Channel | | | | J | J | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | 1 31111 | 5 | 2 | 6 | . 01111 |
| Permitted Phases | 7 | 4 | 2 | | U | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | 7 | 7 | J | | U | 0 |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 10.6 | 15.6 | 24.6 | 24.6 |
| Total Split (s) | 28.3 | 28.3 | 11.0 | 42.0 | 31.0 | 31.0 |
| Total Split (%) | 40.3% | 40.3% | 15.6% | 59.7% | 44.1% | 44.1% |
| Maximum Green (s) | 22.0 | 22.0 | 5.4 | 36.4 | 25.4 | 25.4 |
| Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 |
| TULAL LUST TITLE (S) | 0.3 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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|-----------------------------------|----------------|-------------|--------------|----------|--------------|-----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | 140110 | O Max | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 2 | 2 | | | 2 | 2 |
| Act Effct Green (s) | 12.4 | 12.4 | 49.3 | 50.4 | 36.7 | 36.7 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.70 | 0.72 | 0.52 | 0.52 |
| v/c Ratio | 0.16 | 0.16 | 0.70 | 0.72 | 0.52 | 0.52 |
| | | | | | | |
| Control Delay | 24.7 | 7.7 | 8.4 | 6.2 | 14.2 | 3.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 24.7 | 7.7 | 8.4 | 6.2 | 14.2 | 3.2 |
| LOS | С | Α | Α | Α | В | Α |
| Approach Delay | 15.8 | | | 6.6 | 12.5 | |
| Approach LOS | В | | | Α | В | |
| Queue Length 50th (m) | 7.2 | 0.0 | 6.1 | 19.0 | 37.7 | 0.0 |
| Queue Length 95th (m) | 13.2 | 7.6 | 19.9 | 46.3 | 69.3 | 10.7 |
| Internal Link Dist (m) | 197.1 | | | 273.6 | 167.7 | |
| Turn Bay Length (m) | | 100.0 | 120.0 | | | 40.0 |
| Base Capacity (vph) | 530 | 529 | 424 | 2429 | 1752 | 886 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.11 | 0.12 | 0.38 | 0.34 | 0.49 | 0.19 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70.3 | | | | | | |
| Actuated Cycle Length: 70.3 | | | | | | |
| Offset: 55 (78%), Referenced to | phase 2:NBTL a | nd 6:SBT, 9 | Start of Gre | en | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordin | ated | | | | | |
| Maximum v/c Ratio: 0.49 | | | | | | |
| Intersection Signal Delay: 10.0 | | | | Int | tersection L | OS: A |
| Intersection Capacity Utilization | 54 1% | | | | U Level of S | |
| Analysis Period (min) 15 | 01.170 | | | 10 | 0 20101 01 0 | 701110071 |
| | | | | | | |
| Splits and Phases: 1: Moodie | Dr & Timm Dr | | | | | |
| ≪ † | | | | | | - 1 |
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| ` `\ Ø5 | Ø6 (R) | | | | | - 1 |
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|----------------------------|---------|----------|-------|---------|----------|-------|---------|------------|-------------|-------------|---------|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 75 | 1 | | 7 | ĵ. | | 7 | ቀ ሴ | | - 1 | ٨ß | |
| Traffic Volume (vph) | 190 | 6 | 67 | 91 | 20 | 55 | 31 | 603 | 46 | 27 | 716 | 69 |
| Future Volume (vph) | 190 | 6 | 67 | 91 | 20 | 55 | 31 | 603 | 46 | 27 | 716 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.863 | | | 0.890 | | | 0.989 | | | 0.987 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1712 | 1508 | 0 | 1695 | 1605 | 0 | 1453 | 3341 | 0 | 1662 | 3328 | 0 |
| Flt Permitted | 0.703 | | | 0.704 | | | 0.290 | | | 0.357 | | |
| Satd. Flow (perm) | 1266 | 1508 | 0 | 1253 | 1605 | 0 | 443 | 3341 | 0 | 622 | 3328 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 74 | | | 61 | | | 14 | | | 18 | |
| Link Speed (k/h) | | 50 | | | 40 | | | 60 | | | 60 | |
| Link Distance (m) | | 92.8 | | | 87.6 | | | 186.4 | | | 297.6 | |
| Travel Time (s) | | 6.7 | | | 7.9 | | | 11.2 | | | 17.9 | |
| Confl. Peds. (#/hr) | 1 | | 4 | 4 | | 1 | 2 | | 8 | 8 | | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 1% | 0% | 3% | 2% | 0% | 0% | 19% | 2% | 4% | 4% | 2% | 6% |
| Adj. Flow (vph) | 211 | 7 | 74 | 101 | 22 | 61 | 34 | 670 | 51 | 30 | 796 | 77 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 211 | 81 | 0 | 101 | 83 | 0 | 34 | 721 | 0 | 30 | 873 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 3.7 | | 20.0 | 3.7 | |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 14 | 24 | 1.00 | 14 | 24 | 1.00 | 14 | 24 | 1.00 | 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 | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | Cl+Ex | CI+Ex | |
| Detector 1 Channel | OI · EX | OI · LX | | OI · LX | OI · LX | | OI · LA | OI · LX | | OI LX | OI- LX | |
| 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) | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | CI+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | OITEX | | | OITEX | | | OITEX | | | OITLX | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | reiiii | 4 | | Fellii | 8 | | FeIIII | 2 | | Fellii | 6 | |
| Permitted Phases | 1 | 4 | | 8 | O . | | 2 | | | 6 | U | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | 4 | 4 | | 0 | 0 | | | | | Ü | Ü | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| | 34.0 | 34.0 | | 34.0 | 34.0 | | | 30.7 | | 30.7 | 30.7 | |
| Minimum Split (s) | | | | 34.0 | | | 30.7 | | | | | |
| Total Split (s) | 34.0 | 34.0 | | | 34.0 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Total Split (%) | 48.6% | 48.6% | | 48.6% | 48.6% | | 51.4% | 51.4% | | 51.4% | 51.4% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 30.3 | 30.3 | | 30.3 | 30.3 | |
| Yellow Time (s) | 3.3 | 3.3 | | 3.3 | 3.3 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| All-Red Time (s) | 2.7 | 2.7 | | 2.7 | 2.7 | | 2.0 | 2.0 | | 2.0 | 2.0 | |

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|---|-------------------|-------------|--------------|------|--------------|----------|-------|----------|-----|-------|-------|-----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBF |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| 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 | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 17.8 | 17.8 | | 17.8 | 17.8 | | 40.5 | 40.5 | | 40.5 | 40.5 | |
| Actuated g/C Ratio | 0.25 | 0.25 | | 0.25 | 0.25 | | 0.58 | 0.58 | | 0.58 | 0.58 | |
| v/c Ratio | 0.66 | 0.18 | | 0.32 | 0.18 | | 0.13 | 0.37 | | 0.08 | 0.45 | |
| Control Delay | 31.9 | 6.1 | | 21.5 | 7.9 | | 8.8 | 7.2 | | 10.2 | 10.6 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 31.9 | 6.1 | | 21.5 | 7.9 | | 8.8 | 7.2 | | 10.2 | 10.6 | |
| LOS | С | A | | С | A | | A | Α | | В | В | |
| Approach Delay | | 24.7 | | | 15.4 | | | 7.3 | | _ | 10.6 | |
| Approach LOS | | C | | | В | | | A | | | В | |
| Queue Length 50th (m) | 25.1 | 0.7 | | 10.9 | 2.2 | | 1.5 | 15.6 | | 1.5 | 29.2 | |
| Queue Length 95th (m) | 35.9 | 7.6 | | 17.9 | 9.0 | | 4.8 | 25.0 | | 7.1 | 60.3 | |
| Internal Link Dist (m) | 00.0 | 68.8 | | | 63.6 | | | 162.4 | | | 273.6 | |
| Turn Bay Length (m) | 35.0 | 00.0 | | 20.0 | 00.0 | | 65.0 | .02 | | 45.0 | 2.0.0 | |
| Base Capacity (vph) | 506 | 647 | | 501 | 678 | | 255 | 1937 | | 359 | 1931 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.42 | 0.13 | | 0.20 | 0.12 | | 0.13 | 0.37 | | 0.08 | 0.45 | |
| | 0.42 | 0.10 | | 0.20 | 0.12 | | 0.10 | 0.01 | | 0.00 | 0.40 | |
| Intersection Summary Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 70 | Outo | | | | | | | | | | | |
| Actuated Cycle Length: 70 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to pha | see 2:NIPTL and | 6-CDTI Ct | art of Groon | , | | | | | | | | |
| Natural Cycle: 65 | ise Z.NDTL and | 0.3DTL, 30 | art or Greer | I | | | | | | | | |
| Control Type: Actuated-Coordinat | tod | | | | | | | | | | | |
| Maximum v/c Ratio: 0.66 | leu | | | | | | | | | | | |
| Intersection Signal Delay: 11.8 | | | | Int | ersection LC | NC- D | | | | | | |
| Intersection Signal Delay, 11.6 Intersection Capacity Utilization 5 | E 10/ | | | | U Level of S | | | | | | | |
| Analysis Period (min) 15 | 5.4 % | | | 101 | U LEVEI OI S | ervice D | | | | | | |
| Analysis i ellou (Illill) 10 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie [| Or & Fitzgerald F | Rd/Menten F | 기 | | | | | | | | | |
| 1 Ø2 (R) | | | | | - 4 | Ø4 | | | | | | |
| 36 s | | | | | 34 s | | | | | | | |
| ac (n) | | | | | - 1 | | | | | | | |
| ▼ Ø6 (R) | | | | | - W | Ø8 | | | | | | |

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|----------------------------|--------|-------|----------|-----------------|--------------|----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | | 44 | 7 | * | 44 |
| Traffic Volume (vph) | 107 | 51 | 615 | 52 | 75 | 800 |
| Future Volume (vph) | 107 | 51 | 615 | 52 | 75 | 800 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | | 30.0 | 50.0 | |
| Storage Lanes | 1 | 0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | | | | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Ped Bike Factor | 0.99 | | | 0.98 | 1.00 | |
| Frt | 0.956 | | | 0.850 | | |
| Flt Protected | 0.967 | | | | 0.950 | |
| Satd. Flow (prot) | 1538 | 0 | 3357 | 1547 | 1712 | 3357 |
| Flt Permitted | 0.967 | | | | 0.391 | |
| Satd. Flow (perm) | 1538 | 0 | 3357 | 1511 | 704 | 3357 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | 40 | . 50 | | 58 | | |
| Link Speed (k/h) | 40 | | 60 | - 00 | | 60 |
| Link Opeed (MI) | 60.4 | | 200.0 | | | 186.4 |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| Confl. Peds. (#/hr) | ე.4 | 10 | 12.0 | 2 | 2 | 11.2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| | | | | | | |
| Heavy Vehicles (%) | 11% | 4% | 3% | 0% | 1% | 3% |
| Adj. Flow (vph) | 119 | 57 | 683 | 58 | 83 | 889 |
| Shared Lane Traffic (%) | 170 | _ | 000 | | 00 | 000 |
| Lane Group Flow (vph) | 176 | 0 | 683 | 58 | 83 | 889 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Number of Detectors | 1 | | 2 | 1 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | CI+Ex | Cl+Ex |
| Detector 1 Channel | OI: LX | | J.: LA | Ų. · L ∧ | ∪ L N | J LX |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | | 28.7 | 0.0 | 0.0 | 28.7 |
| | | | 1.8 | | | 1.8 |
| Detector 2 Size(m) | | | | | | |
| Detector 2 Type | | | CI+Ex | | | CI+Ex |
| Detector 2 Channel | | | 2.2 | | | ^ ^ |
| Detector 2 Extend (s) | | | 0.0 | - | - | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | | | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Total Split (s) | 33.0 | | 37.0 | 37.0 | 37.0 | 37.0 |
| Total Split (%) | 47.1% | | 52.9% | 52.9% | 52.9% | 52.9% |
| Maximum Green (s) | 27.4 | | 31.1 | 31.1 | 31.1 | 31.1 |
| Yellow Time (s) | 3.3 | | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.3 | | 2.2 | 2.2 | 2.2 | 2.2 |
| (0) | 2.0 | | | | | |

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|-----------------------------------|-----------------|-----------|--------------|-------|--------------|-------------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |
| Lead/Lag | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | O-IVIAX | O-IVIAX |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 0 | | 0.0 | 0.0 | | |
| Act Effet Green (s) | 12.7 | | 45.8 | 45.8 | 45.8 | 45.8 |
| \ / | | | | | | |
| Actuated g/C Ratio | 0.18 | | 0.65 | 0.65 | 0.65 | 0.65 |
| v/c Ratio | 0.57 | | 0.31 | 0.06 | 0.18 | 0.40 |
| Control Delay | 26.9 | | 6.1 | 2.0 | 3.5 | 3.1 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 26.9 | | 6.1 | 2.0 | 3.5 | 3.1 |
| LOS | С | | Α | Α | Α | Α |
| Approach Delay | 26.9 | | 5.8 | | | 3.2 |
| Approach LOS | С | | Α | | | Α |
| Queue Length 50th (m) | 16.5 | | 16.4 | 0.0 | 1.7 | 9.9 |
| Queue Length 95th (m) | 31.1 | | 31.0 | 3.8 | 4.0 | 14.2 |
| Internal Link Dist (m) | 36.4 | | 176.0 | | | 162.4 |
| Turn Bay Length (m) | | | | 30.0 | 50.0 | |
| Base Capacity (vph) | 626 | | 2198 | 1009 | 460 | 2198 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.28 | | 0.31 | 0.06 | 0.18 | 0.40 |
| | 0.28 | | 0.51 | 0.00 | 0.10 | 0.40 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70 | | | | | | |
| Actuated Cycle Length: 70 | | | | | | |
| Offset: 9 (13%), Referenced to | phase 2:NBT and | 6:SBTL, S | tart of Gree | n | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordin | nated | | | | | |
| Maximum v/c Ratio: 0.57 | | | | | | |
| Intersection Signal Delay: 6.4 | | | | In | tersection L | OS: A |
| Intersection Capacity Utilization | 1 55 5% | | | | U Level of S | |
| Analysis Period (min) 15 | . 00.070 | | | | 0 2010. 0. 0 | JO: 1100 D |
| 7 manyolo 1 onou (mm) 10 | | | | | | |
| Splits and Phases: 3: Moodie | e Dr & Loblaws | | | | | |
| A | 2. 4.200.4 | | | | | |
| Fø2 (R) | | | | | | |
| 27 - | | | | | | |
| 3/8 | | | | | | |
| L.N | | | | | | √ Ø8 |
| | | | | | | ♥ Ø8 |

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|-------------------------------------|------------|----------|-------------|-------|----------|------------|-------|-------|-------------|----------|----------|-------------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | 44 | 7 | * | ^ | # | 16.56 | 44 | # | 75.75 | 44 | 7 |
| Traffic Volume (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 225 | 148 | 287 | 433 | 194 |
| Future Volume (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 225 | 148 | 287 | 433 | 194 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | | | 40.0 | | | 40.0 | | | 50.0 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Ped Bike Factor | 1.00 | | 0.97 | 0.99 | | 0.98 | 0.99 | | 0.96 | 0.97 | | 0.97 |
| Frt | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 |
| Flt Protected | 0.950 | 2200 | 4547 | 0.950 | 0404 | 4500 | 0.950 | 2002 | 4500 | 0.950 | 2257 | 4547 |
| Satd. Flow (prot) | 1679 | 3390 | 1517 | 1729 | 3424 | 1532 | 3288 | 3293 | 1532 | 3288 | 3357 | 1517 |
| Flt Permitted | 0.950 | 2200 | 1400 | 0.950 | 2404 | 4500 | 0.950 | 2002 | 4.477 | 0.950 | 2257 | 4.470 |
| Satd. Flow (perm) | 1676 | 3390 | 1469 Yes | 1714 | 3424 | 1503 | 3249 | 3293 | 1477 Yes | 3194 | 3357 | 1478 Yes |
| Right Turn on Red | | | 299 | | | Yes 361 | | | 164 | | | 216 |
| Satd. Flow (RTOR) | | 60 | 299 | | 60 | 301 | | 60 | 104 | | 60 | 210 |
| Link Speed (k/h) Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| ` , | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Travel Time (s) Confl. Peds. (#/hr) | 5 | 10.2 | 15 | 15 | 23.1 | 5 | 12 | 11.2 | 21 | 21 | 12.0 | 12 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 3% | 2% | 2% | 0.90 | 1% | 1% | 2% | 5% | 1% | 2% | 3% | 2% |
| Adj. Flow (vph) | 133 | 596 | 299 | 250 | 1001 | 361 | 250 | 250 | 164 | 319 | 481 | 216 |
| Shared Lane Traffic (%) | 100 | 330 | 233 | 230 | 1001 | 301 | 250 | 230 | 104 | 313 | 401 | 210 |
| Lane Group Flow (vph) | 133 | 596 | 299 | 250 | 1001 | 361 | 250 | 250 | 164 | 319 | 481 | 216 |
| 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) | LOIL | 3.7 | rtigrit | LOIL | 3.7 | rtigrit | LOIL | 7.4 | rtigrit | LOIL | 7.4 | rtigrit |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | | 14 | 24 | | 14 | 24 | | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | | CI+Ex | | | CI+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | _ |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | • | 1 | 6 | • | 3 | 8 | • | 7 | 4 | |
| Permitted Phases | | | 2 | 4 | _ | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | 5.0 | 40.0 | 40.0 | F 0 | 40.0 | 40.0 | F 0 | 40.0 | 40.0 | F 0 | 40.0 | 40.0 |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 20.0 | 39.0 | 39.0 | 25.0 | 44.0 | 44.0 | 18.0 | 38.0 | 38.0 | 18.0 | 38.0 | 38.0 |
| Total Split (%) | 16.7% | 32.5% | 32.5% | 20.8% | 36.7% | 36.7% | 15.0% | 31.7% | 31.7% | 15.0% | 31.7% | 31.7% |
| Maximum Green (s) | 13.6 | 32.6 | 32.6 | 18.6 | 37.6 | 37.6 | 11.5 | 31.3 | 31.3 | 11.5 | 31.3 | 31.3 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |

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|-------------------------|-------|-------|-------|--------|--------|-------|-------|----------|------|-------------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effct Green (s) | 13.9 | 37.1 | 37.1 | 22.0 | 45.1 | 45.1 | 11.4 | 23.4 | 23.4 | 11.5 | 23.6 | 23.6 |
| Actuated g/C Ratio | 0.12 | 0.31 | 0.31 | 0.18 | 0.38 | 0.38 | 0.10 | 0.20 | 0.20 | 0.10 | 0.20 | 0.20 |
| v/c Ratio | 0.68 | 0.57 | 0.45 | 0.79 | 0.78 | 0.46 | 0.80 | 0.39 | 0.39 | 1.01 | 0.73 | 0.47 |
| Control Delay | 68.6 | 38.4 | 6.2 | 65.4 | 39.5 | 5.1 | 73.0 | 42.9 | 8.4 | 107.8 | 51.7 | 8.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 68.6 | 38.4 | 6.2 | 65.4 | 39.5 | 5.1 | 73.0 | 42.9 | 8.4 | 107.8 | 51.7 | 8.3 |
| LOS | Е | D | Α | Е | D | Α | Е | D | Α | F | D | Α |
| Approach Delay | | 33.0 | | | 35.8 | | | 45.7 | | | 60.1 | |
| Approach LOS | | С | | | D | | | D | | | Е | |
| Queue Length 50th (m) | 30.2 | 64.1 | 0.0 | 54.9 | 109.8 | 0.0 | 30.2 | 27.2 | 0.0 | ~40.0 | 56.5 | 0.0 |
| Queue Length 95th (m) | #53.6 | 84.7 | 21.2 | #103.1 | #160.0 | 21.3 | #49.3 | 36.8 | 16.4 | #69.3 | 69.6 | 18.4 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 208 | 1048 | 660 | 316 | 1287 | 790 | 315 | 858 | 506 | 315 | 875 | 545 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.64 | 0.57 | 0.45 | 0.79 | 0.78 | 0.46 | 0.79 | 0.29 | 0.32 | 1.01 | 0.55 | 0.40 |

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 100 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01 Intersection Signal Delay: 42.4 Intersection Capacity Utilization 83.1%

Intersection LOS: D

ICU Level of Service E

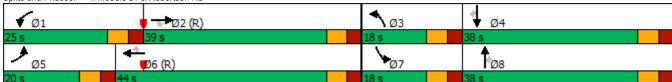
Analysis Period (min) 15

- Volume exceeds capacity, queue is theoretically infinite.
- Queue shown is maximum after two cycles.

 # 95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

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|----------------------------------|------------|-------|-----------|------------|---------------|----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | CDL T | EDK 7 | INDL K | <u>ND1</u> | <u>361</u> | JDR 7 |
| Traffic Volume (vph) | 20 | 62 | 63 | 468 | TT 535 | 28 |
| Future Volume (vph) | 20 | 62 | 63 | 468 | 535 | 28 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | | | 40.0 |
| Storage Lanes | 1 | 1 | 1 | | | 1 |
| Taper Length (m) | 7.6 | | 60.0 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | 0.950 | | | |
| Satd. Flow (prot) | 1729 | 1547 | 1729 | 3424 | 3424 | 1547 |
| Flt Permitted | 0.950 | | 0.359 | | | |
| Satd. Flow (perm) | 1729 | 1547 | 653 | 3424 | 3424 | 1547 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | 69 | | | | 31 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 297.6 | 191.7 | |
| Travel Time (s) | 9.9 | | | 17.9 | 11.5 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 0% |
| Adj. Flow (vph) | 22 | 69 | 70 | 520 | 594 | 31 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 22 | 69 | 70 | 520 | 594 | 31 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | | | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex |
| Detector 1 Channel | OITLX | OITEX | OFFLA | OITLA | OFFLA | OITEX |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| D ((O D (0) () | 0.0 | 0.0 | 0.0 | 00 = | | 0.0 |
| Detector 2 Position(m) | | | | 28.7 | 28.7 | |
| Detector 2 Size(m) | | | | CI+Ex | CI+Ex | |
| Detector 2 Type | | | | CI+EX | CI+EX | |
| Detector 2 Channel | | | | 0.0 | 0.0 | |
| Detector 2 Extend (s) | Dest | D | n na | 0.0 | 0.0 | D |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | 4 | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | _ | _ | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | 10.0 | 40.0 | - ^ | 40.0 | 40.0 | 40.0 |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 10.6 | 15.6 | 24.6 | 24.6 |
| Total Split (s) | 28.3 | 28.3 | 11.0 | 42.0 | 31.0 | 31.0 |
| Total Split (%) | 40.3% | 40.3% | 15.6% | 59.7% | 44.1% | 44.1% |
| | 22.0 | 22.0 | 5.4 | 36.4 | 25.4 | 25.4 |
| Maximum Green (s) | | | | 2.7 | 3.7 | 3.7 |
| Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | | |
| Yellow Time (s) All-Red Time (s) | 4.6 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| Yellow Time (s) | 4.6 | | | | | |

| | • | • | 4 | † | ↓ | 4 |
|-----------------------------------|------------------|-------------|--------------|----------|--------------|-----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 2 | 2 | | | 2 | 2 |
| Act Effct Green (s) | 12.4 | 12.4 | 49.3 | 50.4 | 41.0 | 41.0 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.70 | 0.72 | 0.58 | 0.58 |
| v/c Ratio | 0.07 | 0.10 | 0.13 | 0.72 | 0.30 | 0.03 |
| Control Delay | 22.2 | 7.5 | 6.3 | 5.5 | 11.5 | 5.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 22.2 | 7.5 | 6.3 | 5.5 | 11.5 | 5.4 |
| LOS | C C | 7.5 A | 0.5 A | 3.5 A | Н.5 | 3.4 A |
| Approach Delay | 11.1 | ٨ | ٨ | 5.6 | 11.2 | ^ |
| Approach LOS | В | | | 3.0 A | 11.2 B | |
| Queue Length 50th (m) | 2.6 | 0.0 | 2.5 | 10.8 | 22.3 | 0.0 |
| Queue Length 95th (m) | 6.4 | 7.6 | 2.5 9.8 | 27.7 | 44.6 | 4.8 |
| Internal Link Dist (m) | 197.1 | 1.0 | 9.0 | 27.7 | 167.7 | 4.0 |
| | 197.1 | 100.0 | 120.0 | 2/3.0 | 107.7 | 40.0 |
| Turn Bay Length (m) | F 4.4 | | | 0450 | 1000 | |
| Base Capacity (vph) | 541 | 531 | 549 | 2453 | 1996 | 914 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.04 | 0.13 | 0.13 | 0.21 | 0.30 | 0.03 |
| Intersection Summary | 0.11 | | | | | |
| Area Type: Cycle Length: 70.3 | Other | | | | | |
| Actuated Cycle Length: 70.3 | | | | | | |
| | O.NDTL - | -4 C.CDT. (| N-4 -t O | | | |
| Offset: 55 (78%), Referenced to | o pnase 2:NB1L a | na 6:5B1, 8 | start of Gre | en | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordin | nated | | | | | |
| Maximum v/c Ratio: 0.30 | | | | | | |
| Intersection Signal Delay: 8.7 | | | | | tersection L | |
| Intersection Capacity Utilization | า 42.7% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| 0.111 | | | | | | |
| Splits and Phases: 1: Moodie | e Dr & Timm Dr | | | | | |
| 1 ø2 (R) ■ | | | | | | - 1. |
| 1 02 (R) | | | | | | |
| 42 s | | | | | | 2 |
| | | | | | | |
| ` `\ Ø5 | Ø6 (R) | | | | | |
| 11 6 21 | | | | | | |

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|----------------------------|---------|----------|-------|---------|----------|----------|---------|------------|-------|-------------|------------|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | 1 | | 7 | 1 | | * | ♦ % | | * | ∳ ሴ | |
| Traffic Volume (vph) | 52 | 3 | 32 | 19 | 2 | 17 | 27 | 395 | 10 | 12 | 520 | 42 |
| Future Volume (vph) | 52 | 3 | 32 | 19 | 2 | 17 | 27 | 395 | 10 | 12 | 520 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | | | | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.862 | | | 0.864 | | | 0.996 | | | 0.989 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1729 | 1436 | 0 | 1729 | 1551 | 0 | 1729 | 3409 | 0 | 1729 | 3370 | 0 |
| Flt Permitted | 0.744 | | • | 0.732 | | <u> </u> | 0.415 | 0.00 | • | 0.492 | 00.0 | |
| Satd. Flow (perm) | 1350 | 1436 | 0 | 1332 | 1551 | 0 | 754 | 3409 | 0 | 894 | 3370 | 0 |
| Right Turn on Red | 1000 | 1 100 | Yes | 1002 | 1001 | Yes | 701 | 0100 | Yes | 001 | 0010 | Yes |
| Satd. Flow (RTOR) | | 36 | 100 | | 19 | 100 | | 4 | 100 | | 15 | 100 |
| Link Speed (k/h) | | 50 | | | 40 | | | 60 | | | 60 | |
| Link Distance (m) | | 92.8 | | | 87.6 | | | 186.4 | | | 297.6 | |
| Travel Time (s) | | 6.7 | | | 7.9 | | | 11.2 | | | 17.9 | |
| Confl. Peds. (#/hr) | 4 | 0.7 | | | 1.9 | 4 | 2 | 11.2 | 2 | 2 | 17.9 | 2 |
| , | | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | | | 0.00 | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 10% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 1% | 5% |
| Adj. Flow (vph) | 58 | 3 | 36 | 21 | 2 | 19 | 30 | 439 | 11 | 13 | 578 | 47 |
| Shared Lane Traffic (%) | 50 | 00 | _ | 0.4 | 0.4 | | 00 | 450 | ^ | 40 | 005 | • |
| Lane Group Flow (vph) | 58 | 39 | 0 | 21 | 21 | 0 | 30 | 450 | 0 | 13 | 625 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.9 | | | 4.9 | | | 4.9 | | | 4.9 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| 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 | CI+Ex | Cl+Ex | | CI+Ex | Cl+Ex | | CI+Ex | CI+Ex | | Cl+Ex | CI+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) | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | OI · LX | | | OI. LX | | | OI · LX | | | OI LX | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 1 Cilli | 4 | | I Cilli | 8 | | I Cilli | 2 | | 1 Cilli | 6 | |
| Permitted Phases | 4 | 7 | | 8 | U | | 2 | | | 6 | U | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | 4 | 4 | | 0 | 0 | | | | | Ü | U | |
| | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Total Split (%) | 48.6% | 48.6% | | 48.6% | 48.6% | | 51.4% | 51.4% | | 51.4% | 51.4% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 30.3 | 30.3 | | 30.3 | 30.3 | |
| Yellow Time (s) | 3.3 | 3.3 | | 3.3 | 3.3 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| All-Red Time (s) | 2.7 | 2.7 | | 2.7 | 2.7 | | 2.0 | 2.0 | | 2.0 | 2.0 | |

| | • | → | • | 1 | ← | • | 1 | † | 1 | - | ↓ | 1 |
|------------------------------------|-------------------|---------------|--------------|-----------|--------------|----------|----------|----------|-----|----------|----------|----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SB |
| ost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| _ead/Lag | | | | | | | | | | | | |
| _ead-Lag Optimize? | | | | | | | | | | | | |
| /ehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 13.6 | 13.6 | | 13.6 | 13.6 | | 49.0 | 49.0 | | 49.0 | 49.0 | |
| Actuated g/C Ratio | 0.19 | 0.19 | | 0.19 | 0.19 | | 0.70 | 0.70 | | 0.70 | 0.70 | |
| /c Ratio | 0.22 | 0.13 | | 0.08 | 0.07 | | 0.06 | 0.19 | | 0.02 | 0.26 | |
| Control Delay | 23.4 | 8.2 | | 20.4 | 9.3 | | 6.4 | 5.1 | | 8.0 | 6.7 | |
| Queue Delay | 0.0 | 0.2 | | 0.0 | 0.0 | | 0.4 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 23.4 | 8.2 | | 20.4 | 9.3 | | 6.4 | 5.1 | | 8.0 | 6.7 | |
| -OS | 23.4 C | 0.2 A | | 20.4 C | 9.5 A | | 0.4 A | J. 1 | | 0.0 A | Α | |
| | U | 17.3 | | U | 14.8 | | A | 5.2 | | А | 6.7 | |
| Approach Delay | | | | | | | | | | | | |
| Approach LOS | 0.0 | В | | 0.4 | В | | 4.0 | A | | ٥٦ | A | |
| Queue Length 50th (m) | 6.9 | 0.3 | | 2.4 | 0.3 | | 1.0 | 8.6 | | 0.5 | 13.0 | |
| Queue Length 95th (m) | 11.2 | 5.3 | | 5.5 | 3.9 | | 4.2 | 16.2 | | 3.8 | 40.2 | |
| nternal Link Dist (m) | 25.0 | 68.8 | | 00.0 | 63.6 | | 0= 0 | 162.4 | | 45.0 | 273.6 | |
| Turn Bay Length (m) | 35.0 | | | 20.0 | | | 65.0 | | | 45.0 | | |
| Base Capacity (vph) | 540 | 596 | | 532 | 631 | | 528 | 2389 | | 626 | 2365 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.11 | 0.07 | | 0.04 | 0.03 | | 0.06 | 0.19 | | 0.02 | 0.26 | |
| ntersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 70 | | | | | | | | | | | | |
| Actuated Cycle Length: 70 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to pha | ase 2:NBTL and | 6:SBTL, St | art of Greer | 1 | | | | | | | | |
| Natural Cycle: 65 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinat | ted | | | | | | | | | | | |
| Maximum v/c Ratio: 0.26 | | | | | | | | | | | | |
| ntersection Signal Delay: 7.2 | | | | Int | ersection LC | S: A | | | | | | |
| ntersection Capacity Utilization 4 | 3.6% | | | ICI | J Level of S | ervice A | | | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie D | Or & Fitzgerald F | Rd/Menten F | Pl | | | | | | | | | |
| ∡ | or a rangerala r | ta/moritori i | | | 1.8 | | | | | | | |
| Ø2 (R) | | | | | | Ø4 | | | | | | |
| 36 S | | | | | 34 s | | | | | | | |
| ₩ Ø6 (R) | | | | | 17 | Ø8 | | | | | | |

| | • | • | † | / | - | ↓ |
|---------------------------------------|---------------|-------|----------|----------|-------|----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ** | | 44 | # | ሻ | 44 |
| Traffic Volume (vph) | 27 | 35 | 397 | 109 | 21 | 550 |
| Future Volume (vph) | 27 | 35 | 397 | 109 | 21 | 550 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | | 30.0 | 50.0 | |
| Storage Lanes | 1 | 0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | - | | | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Ped Bike Factor | 1.00 | | | | | 3.00 |
| Frt | 0.924 | | | 0.850 | | |
| Flt Protected | 0.979 | | | 0.000 | 0.950 | |
| Satd. Flow (prot) | 1646 | 0 | 3424 | 1547 | 1729 | 3424 |
| Flt Permitted | 0.979 | 0 | UTLT | 1071 | 0.496 | U727 |
| Satd. Flow (perm) | 1646 | 0 | 3424 | 1547 | 903 | 3424 |
| Right Turn on Red | 1040 | Yes | J+Z4 | Yes | 303 | J424 |
| Satd. Flow (RTOR) | 39 | 169 | | 121 | | |
| | 39 40 | | 60 | IZI | | 60 |
| Link Speed (k/h) Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| | | | | | | |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| Confl. Peds. (#/hr) | 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 0% | 1% | 0% | 0% | 1% |
| Adj. Flow (vph) | 30 | 39 | 441 | 121 | 23 | 611 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 69 | 0 | 441 | 121 | 23 | 611 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Number of Detectors | 1 | | 2 | 1 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.1 | 0.1 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| | | | | | | |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | Cl+Ex | CI+Ex |
| Detector 1 Channel | 0.0 | | ^ ^ | ^ ^ | ^ ^ | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | 28.7 | | | 28.7 |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | CI+Ex | | | CI+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | | | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | | | _ | _ | | |
| Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| | 33.0 | | 37.0 | 37.0 | 37.0 | 37.0 |
| | | | | | 52.9% | 52.9% |
| Total Split (s) | | | E2 00/ | | | 7/ 4% |
| Total Split (%) | 47.1% | | 52.9% | 52.9% | | |
| Total Split (%) Maximum Green (s) | 47.1% 27.4 | | 31.1 | 31.1 | 31.1 | 31.1 |
| Total Split (%) | 47.1% | | | | | |

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|-----------------------------------|-----------------|-----------|--------------|----------|--------------|-----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |
| Lead/Lag | | | *** | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 2 | | 2 | 2 | | |
| Act Effct Green (s) | 13.4 | | 53.7 | 53.7 | 53.7 | 53.7 |
| Actuated g/C Ratio | 0.19 | | 0.77 | 0.77 | 0.77 | 0.77 |
| v/c Ratio | 0.20 | | 0.17 | 0.10 | 0.03 | 0.23 |
| Control Delay | 12.4 | | 5.5 | 2.3 | 2.1 | 1.5 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 12.4 | | 5.5 | 2.3 | 2.1 | 1.5 |
| LOS | В | | A | 2.5 A | Α | Α |
| Approach Delay | 12.4 | | 4.8 | Λ. | Λ. | 1.6 |
| Approach LOS | 12.4 B | | 4.0 A | | | Α |
| Queue Length 50th (m) | 3.5 | | 8.6 | 0.0 | 0.3 | 3.4 |
| Queue Length 95th (m) | 9.3 | | 27.3 | 7.7 | 1.1 | 6.5 |
| Internal Link Dist (m) | 36.4 | | 176.0 | 1.1 | 1.1 | 162.4 |
| Turn Bay Length (m) | | | 170.0 | 30.0 | 50.0 | 102.7 |
| Base Capacity (vph) | 668 | | 2626 | 1215 | 692 | 2626 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.10 | | 0.17 | 0.10 | 0.03 | 0.23 |
| | 0.10 | | 0.17 | 0.10 | 0.00 | 0.20 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70 | | | | | | |
| Actuated Cycle Length: 70 | | | | | | |
| Offset: 9 (13%), Referenced to | phase 2:NBT and | 6:SBTL, S | tart of Gree | n | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordin | nated | | | | | |
| Maximum v/c Ratio: 0.23 | | | | | | |
| Intersection Signal Delay: 3.6 | | | | | tersection L | |
| Intersection Capacity Utilization | 1 36.3% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| | | | | | | |
| Splits and Phases: 3: Moodie | e Dr & Loblaws | | | | | |
| ↑ | | | | | | |
| [√] Ø2 (R) | | | | | | |
| 37 s | | | | | | |
| - k | | | | | | |
| √ √ Ø6 (R) | | | | | | ÿ8 |
| T DO (K) | | | | | | T 100 |

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|--------------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|--------------|-------------|--------------|---------------|-------------|------------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 75 | 44 | 7 | ¥ | 44 | 7 | 14.54 | 44 | 7 | 14.54 | 44 | 7 |
| Traffic Volume (vph) | 157 | 717 | 189 | 174 | 587 | 113 | 240 | 236 | 191 | 214 | 206 | 157 |
| Future Volume (vph) | 157 | 717 | 189 | 174 | 587 | 113 | 240 | 236 | 191 | 214 | 206 | 157 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 1.00 | 0.95 | 1.00 | 40.0 1.00 | 0.95 | 1.00 | 40.0 0.97 | 0.95 | 1.00 | 50.0 0.97 | 0.95 | 1.00 |
| Lane Util. Factor Ped Bike Factor | 1.00 | 0.95 | 0.99 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 0.97 | 0.97 | 0.95 | 0.99 |
| Frt | | | 0.850 | 1.00 | | 0.850 | 1.00 | | 0.850 | 0.90 | | 0.850 |
| Flt Protected | 0.950 | | 0.000 | 0.950 | | 0.000 | 0.950 | | 0.000 | 0.950 | | 0.050 |
| Satd. Flow (prot) | 1729 | 3424 | 1547 | 1729 | 3424 | 1532 | 3321 | 3424 | 1532 | 3321 | 3424 | 1532 |
| Flt Permitted | 0.950 | 0121 | 1041 | 0.950 | 0121 | 1002 | 0.950 | 0121 | 1002 | 0.950 | 0121 | 1002 |
| Satd. Flow (perm) | 1729 | 3424 | 1524 | 1727 | 3424 | 1532 | 3316 | 3424 | 1489 | 3258 | 3424 | 1511 |
| Right Turn on Red | 20 | 0.2. | Yes | | V | Yes | 00.0 | 0.2. | Yes | 0200 | 0.2. | Yes |
| Satd. Flow (RTOR) | | | 210 | | | 139 | | | 212 | | | 174 |
| Link Speed (k/h) | | 60 | | | 60 | | | 60 | | | 60 | |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | | | 2 | 2 | | | 1 | | 13 | 13 | | 1 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 174 | 797 | 210 | 193 | 652 | 126 | 267 | 262 | 212 | 238 | 229 | 174 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 174 | 797 | 210 | 193 | 652 | 126 | 267 | 262 | 212 | 238 | 229 | 174 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 7.4 | | | 7.4 | |
| 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 | 1.00 | 4.00 | 4.00 | 1.00 | 1.00 | 4.00 | 4.00 | 4.00 | 4.00 | 1.00 | 1.00 | 4.00 |
| Headway Factor Turning Speed (k/h) | 1.06 24 | 1.06 | 1.06 14 | 1.06 24 | 1.06 | 1.06 14 | 1.06 24 | 1.06 | 1.06 14 | 1.06 24 | 1.06 | 1.06 14 |
| Number of Detectors | 1 | 2 | 14 | 1 | 2 | 14 | 1 | 2 | 14 | 1 | 2 | 14 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | | CI+Ex | | | CI+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | _ | 2 | | | 6 | _ | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 26.0 | 35.0 | 35.0 | 31.0 | 40.0 | 40.0 | 27.0 | 37.7 | 37.7 | 27.0 | 37.7 | 37.7 |
| Total Split (%) | 19.9% | 26.8% 28.6 | 26.8% 28.6 | 23.7% 24.6 | 30.6% 33.6 | 30.6% 33.6 | 20.7% | 28.8% | 28.8% | 20.7% 20.5 | 28.8% | 28.8% |
| Maximum Green (s) Yellow Time (s) | 19.6 3.7 | | 3.7 | 3.7 | | | 20.5 3.7 | 31.0 3.7 | 31.0 3.7 | 3.7 | 31.0 3.7 | 31.0 |
| All-Red Time (s) | 3.7 2.7 | 3.7 2.7 | 2.7 | 2.7 | 3.7 2.7 | 3.7 2.7 | 2.8 | 3.7 | 3.7 | 2.8 | 3.7 | 3.7 |
| הוויולט וווווכ (ס) | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 |

| | • | → | • | • | • | • | 4 | † | / | - | ļ | 4 |
|-------------------------|------|----------|-------|------|-------|-------|------|----------|------|------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 |
| Act Effct Green (s) | 17.4 | 52.5 | 52.5 | 19.5 | 54.6 | 54.6 | 15.8 | 18.1 | 18.1 | 14.6 | 16.9 | 16.9 |
| Actuated g/C Ratio | 0.13 | 0.40 | 0.40 | 0.15 | 0.42 | 0.42 | 0.12 | 0.14 | 0.14 | 0.11 | 0.13 | 0.13 |
| v/c Ratio | 0.76 | 0.58 | 0.28 | 0.75 | 0.46 | 0.17 | 0.67 | 0.55 | 0.55 | 0.64 | 0.52 | 0.50 |
| Control Delay | 74.9 | 35.2 | 6.0 | 70.8 | 31.5 | 5.0 | 63.1 | 55.9 | 11.0 | 63.4 | 55.9 | 11.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 74.9 | 35.2 | 6.0 | 70.8 | 31.5 | 5.0 | 63.1 | 55.9 | 11.0 | 63.4 | 55.9 | 11.4 |
| LOS | E | D | Α | Е | С | Α | Е | Е | В | Е | Е | В |
| Approach Delay | | 35.9 | | | 35.9 | | | 45.6 | | | 46.6 | |
| Approach LOS | | D | | | D | | | D | | | D | |
| Queue Length 50th (m) | 43.4 | 80.4 | 0.0 | 48.1 | 61.1 | 0.0 | 34.4 | 34.4 | 0.0 | 30.7 | 30.1 | 0.0 |
| Queue Length 95th (m) | 67.3 | #158.4 | 20.0 | 70.8 | 103.0 | 12.4 | 47.0 | 41.5 | 19.2 | 42.8 | 37.2 | 17.8 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 264 | 1375 | 737 | 326 | 1430 | 721 | 520 | 819 | 517 | 520 | 812 | 491 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.66 | 0.58 | 0.28 | 0.59 | 0.46 | 0.17 | 0.51 | 0.32 | 0.41 | 0.46 | 0.28 | 0.35 |
| | | | | | | | | | | | | |

Intersection Summary

Area Type: Other

Cycle Length: 130.7

Actuated Cycle Length: 130.7

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 39.9
Intersection Capacity Utilization 75.3%

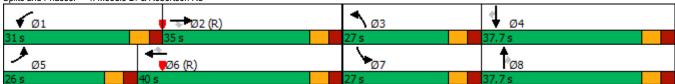
Intersection LOS: D ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

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|--|---------------|-------------|------------|---------------|-------------|-------|---------------|-------------|------------|---------------|-------------|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | 44 | 7 | * | 44 | # | 7575 | 44 | # | 75.75 | 44 | 7 |
| Traffic Volume (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 225 | 148 | 287 | 433 | 194 |
| Future Volume (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 225 | 148 | 287 | 433 | 194 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | | | 40.0 | | | 40.0 | | | 50.0 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Ped Bike Factor | 1.00 | | 0.97 | 0.99 | | 0.98 | 0.99 | | 0.96 | 0.97 | | 0.97 |
| Frt | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 |
| Flt Protected | 0.950 | 2200 | 4547 | 0.950 1729 | 2404 | 4500 | 0.950 | 2002 | 4520 | 0.950 | 2257 | 1517 |
| Satd. Flow (prot) | 1679 0.950 | 3390 | 1517 | 0.950 | 3424 | 1532 | 3288 0.950 | 3293 | 1532 | 3288 0.950 | 3357 | 1517 |
| Flt Permitted Satd. Flow (perm) | 1676 | 3390 | 1469 | 1714 | 3424 | 1503 | 3249 | 3293 | 1477 | 3194 | 3357 | 1478 |
| Right Turn on Red | 1070 | 3390 | Yes | 17 14 | 3424 | Yes | 3249 | 3293 | Yes | 3194 | 3331 | Yes |
| Satd. Flow (RTOR) | | | 299 | | | 361 | | | 206 | | | 216 |
| Link Speed (k/h) | | 60 | 200 | | 60 | 301 | | 60 | 200 | | 60 | 210 |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | 5 | | 15 | 15 | | 5 | 12 | | 21 | 21 | | 12 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 3% | 2% | 2% | 0% | 1% | 1% | 2% | 5% | 1% | 2% | 3% | 2% |
| Adj. Flow (vph) | 133 | 596 | 299 | 250 | 1001 | 361 | 250 | 250 | 164 | 319 | 481 | 216 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 133 | 596 | 299 | 250 | 1001 | 361 | 250 | 250 | 164 | 319 | 481 | 216 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 7.4 | | | 7.4 | |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | • | 14 | 24 | • | 14 | 24 | • | 14 | 24 | • | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 0.0 | 30.5 0.0 | 6.1 0.0 | 6.1 0.0 | 30.5 0.0 | 6.1 | 6.1 0.0 | 30.5 0.0 | 6.1 0.0 | 6.1 0.0 | 30.5 0.0 | 6.1 |
| Trailing Detector (m) Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | Cl+Ex | CI+Ex | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | Olick | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 2 | | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 18.0 | 34.1 | 34.1 | 28.2 | 44.3 | 44.3 | 18.4 | 37.7 | 37.7 | 20.0 | 39.3 | 39.3 |
| Total Split (%) | 15.0% | 28.4% | 28.4% | 23.5% | 36.9% | 36.9% | 15.3% | 31.4% | 31.4% | 16.7% | 32.8% | 32.8% |
| Maximum Green (s) | 11.6 | 27.7 | 27.7 | 21.8 | 37.9 | 37.9 | 11.9 | 31.0 | 31.0 | 13.5 | 32.6 | 32.6 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |

| | • | → | • | • | ← | • | • | † | ~ | \ | ļ | 1 |
|-------------------------|-------|----------|-------|-------|----------|-------|-------|----------|------|----------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effct Green (s) | 14.4 | 36.9 | 36.9 | 21.9 | 44.4 | 44.4 | 11.7 | 21.8 | 21.8 | 13.5 | 23.6 | 23.6 |
| Actuated g/C Ratio | 0.12 | 0.31 | 0.31 | 0.18 | 0.37 | 0.37 | 0.10 | 0.18 | 0.18 | 0.11 | 0.20 | 0.20 |
| v/c Ratio | 0.66 | 0.57 | 0.45 | 0.79 | 0.79 | 0.46 | 0.78 | 0.42 | 0.38 | 0.87 | 0.73 | 0.47 |
| Control Delay | 66.5 | 39.5 | 6.6 | 65.1 | 40.6 | 5.2 | 70.5 | 44.7 | 4.6 | 75.7 | 51.6 | 8.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 66.5 | 39.5 | 6.6 | 65.1 | 40.6 | 5.2 | 70.5 | 44.7 | 4.6 | 75.7 | 51.6 | 8.3 |
| LOS | Е | D | Α | Е | D | Α | Е | D | Α | Ε | D | Α |
| Approach Delay | | 33.4 | | | 36.4 | | | 44.5 | | | 50.0 | |
| Approach LOS | | С | | | D | | | D | | | D | |
| Queue Length 50th (m) | 29.9 | 63.0 | 0.0 | 56.0 | 111.9 | 0.0 | 30.0 | 27.7 | 0.0 | 38.6 | 56.5 | 0.0 |
| Queue Length 95th (m) | #56.4 | 89.8 | 22.8 | #85.4 | #158.9 | 21.2 | #47.9 | 37.5 | 8.4 | #62.4 | 69.5 | 18.4 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 204 | 1041 | 658 | 337 | 1265 | 783 | 326 | 850 | 534 | 369 | 911 | 558 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.65 | 0.57 | 0.45 | 0.74 | 0.79 | 0.46 | 0.77 | 0.29 | 0.31 | 0.86 | 0.53 | 0.39 |

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 100 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 40.1 Intersection Capacity Utilization 83.1%

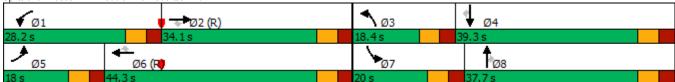
Intersection LOS: D ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

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|---------------------------------------|----------|----------|---------------|--------------|--------------|---------------|---------|--------------|---------------|----------|-----------|---------------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 75 | 44 | 7 | ¥ | 44 | 7 | 14.54 | 44 | 7 | 14.54 | 44 | 7 |
| Traffic Volume (vph) | 70 | 1101 | 112 | 81 | 307 | 152 | 225 | 361 | 309 | 331 | 176 | 107 |
| Future Volume (vph) | 70 | 1101 | 112 | 81 | 307 | 152 | 225 | 361 | 309 | 331 | 176 | 107 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | ۸۸۲ | 1.00 | 40.0 | 0.05 | 4.00 | 40.0 | 0.05 | 1.00 | 50.0 | 0.05 | 1.00 |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Ped Bike Factor Frt | 0.99 | | 0.98 0.850 | 1.00 | | 0.98 0.850 | 0.99 | | 0.98 0.850 | 1.00 | | 0.98 0.850 |
| Flt Protected | 0.950 | | 0.050 | 0.950 | | 0.000 | 0.950 | | 0.000 | 0.950 | | 0.050 |
| Satd. Flow (prot) | 1631 | 3390 | 1473 | 1712 | 3232 | 1517 | 3321 | 3325 | 1532 | 3288 | 3232 | 1459 |
| Flt Permitted | 0.950 | 3330 | 1473 | 0.950 | JZJZ | 1317 | 0.950 | 3323 | 1302 | 0.950 | JZJZ | 1400 |
| Satd. Flow (perm) | 1622 | 3390 | 1447 | 1710 | 3232 | 1486 | 3289 | 3325 | 1506 | 3273 | 3232 | 1431 |
| Right Turn on Red | 1022 | 0000 | Yes | 17 10 | OLOL | Yes | 0200 | 0020 | Yes | 0210 | OZOZ | Yes |
| Satd. Flow (RTOR) | | | 139 | | | 169 | | | 141 | | | 137 |
| Link Speed (k/h) | | 60 | | | 60 | | | 60 | | | 60 | |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | 6 | | 4 | 4 | | 6 | 6 | | 4 | 4 | | 6 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 6% | 2% | 5% | 1% | 7% | 2% | 1% | 4% | 1% | 2% | 7% | 6% |
| Adj. Flow (vph) | 78 | 1223 | 124 | 90 | 341 | 169 | 250 | 401 | 343 | 368 | 196 | 119 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 78 | 1223 | 124 | 90 | 341 | 169 | 250 | 401 | 343 | 368 | 196 | 119 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 7.4 | | | 7.4 | |
| 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 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 1 | 2 | 14 1 | 24 1 | 2 | 14 1 | 24 1 | 2 | 14 1 | 24 1 | 2 | 14 1 |
| Number of Detectors Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Z Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | | •. = | | •. <u></u> . | •. <u></u> . | · | · | •. <u></u> . | •. <u></u> | · · | · · | V 1 — |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | <u>_</u> | | 2 | | | 6 | | | 8 | _ | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 15.0 | 54.0 | 54.0 | 15.0 | 54.0 | 54.0 | 23.0 | 38.0 | 38.0 | 23.0 | 38.0 | 38.0 |
| Total Split (%) | 11.5% | 41.5% | 41.5% | 11.5% | 41.5% | 41.5% | 17.7% | 29.2% | 29.2% | 17.7% | 29.2% | 29.2% |
| Maximum Green (s) | 8.6 | 47.6 | 47.6 | 8.6 | 47.6 | 47.6 | 16.5 | 31.3 | 31.3 | 16.5 | 31.3 | 31.3 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |

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|-------------------------|-------|----------|-------|-------|-------|-------|------|----------|------|-------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 |
| Act Effct Green (s) | 9.6 | 52.6 | 52.6 | 10.2 | 53.2 | 53.2 | 14.4 | 24.9 | 24.9 | 16.4 | 26.8 | 26.8 |
| Actuated g/C Ratio | 0.07 | 0.40 | 0.40 | 0.08 | 0.41 | 0.41 | 0.11 | 0.19 | 0.19 | 0.13 | 0.21 | 0.21 |
| v/c Ratio | 0.65 | 0.89 | 0.19 | 0.68 | 0.26 | 0.24 | 0.68 | 0.63 | 0.85 | 0.89 | 0.29 | 0.30 |
| Control Delay | 83.3 | 46.5 | 3.9 | 82.8 | 27.3 | 4.9 | 65.0 | 52.2 | 49.0 | 79.8 | 43.9 | 6.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 83.3 | 46.5 | 3.9 | 82.8 | 27.3 | 4.9 | 65.0 | 52.2 | 49.0 | 79.8 | 43.9 | 6.3 |
| LOS | F | D | Α | F | С | Α | Е | D | D | Ε | D | Α |
| Approach Delay | | 44.8 | | | 29.3 | | | 54.3 | | | 56.7 | |
| Approach LOS | | D | | | С | | | D | | | Ε | |
| Queue Length 50th (m) | 19.4 | 161.1 | 0.0 | 22.2 | 31.6 | 0.0 | 32.0 | 49.6 | 51.7 | 48.5 | 22.3 | 0.0 |
| Queue Length 95th (m) | #45.3 | #210.7 | 9.9 | #52.4 | 44.4 | 14.6 | 45.4 | 63.0 | 84.8 | #74.6 | 32.2 | 11.2 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 122 | 1371 | 667 | 134 | 1322 | 708 | 421 | 800 | 469 | 417 | 778 | 448 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.64 | 0.89 | 0.19 | 0.67 | 0.26 | 0.24 | 0.59 | 0.50 | 0.73 | 0.88 | 0.25 | 0.27 |

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 119 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 125

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection LOS: D ICU Level of Service D

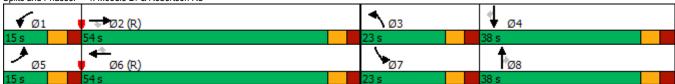
Intersection Signal Delay: 47.0
Intersection Capacity Utilization 80.9%

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

1: Moodie Dr & Timm Dr Timing Plan: AM Peak

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|------------------------------------|-------|-------|------------|------------------|------------------|-------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | , LDL | LDK | NDL N | * | <u>₩</u> | JUN. |
| Traffic Volume (vph) | 110 | 188 | 5 0 | TT 474 | TT 818 | 68 |
| Future Volume (vph) | 110 | 188 | 50 | 474 | 818 | 68 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | | | 40.0 |
| Storage Lanes | 1 | 1 | 1 | | | 1 |
| Taper Length (m) | 7.6 | | 60.0 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Ped Bike Factor | | 0.99 | | | | |
| Frt | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | 0.950 | | | |
| Satd. Flow (prot) | 1712 | 1517 | 1695 | 3325 | 3325 | 1502 |
| Flt Permitted | 0.950 | | 0.333 | | | |
| Satd. Flow (perm) | 1712 | 1497 | 594 | 3325 | 3325 | 1502 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | 170 | | | | 68 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 297.6 | 191.7 | |
| Travel Time (s) | 9.9 | | | 17.9 | 11.5 | |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 4% | 4% | 3% |
| Adj. Flow (vph) | 110 | 188 | 50 | 474 | 818 | 68 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 110 | 188 | 50 | 474 | 818 | 68 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | | _510 | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | 7.3 | | | 7.0 | 7.0 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 24 | 1.00 | 1.00 | 1.00 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ` , | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Size(m) | CI+Ex | | CI+Ex | | CI+Ex | CI+Ex |
| Detector 1 Type Detector 1 Channel | UI+EX | CI+Ex | UI+EX | CI+Ex | UI+EX | UI+EX |
| | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | | 28.7 | 28.7 | |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | _ | _ | 0.0 | 0.0 | |
| Turn Type | Prot | Perm | Perm | NA | NA | Perm |
| Protected Phases | 4 | | | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 15.6 | 15.6 | 24.6 | 24.6 |
| Total Split (s) | 28.3 | 28.3 | 52.0 | 52.0 | 52.0 | 52.0 |
| Total Split (%) | 35.2% | 35.2% | 64.8% | 64.8% | 64.8% | 64.8% |
| Maximum Green (s) | 22.0 | 22.0 | 46.4 | 46.4 | 46.4 | 46.4 |
| Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| | | | | | | |

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|-----------------------------------|----------------|------------|--------------|----------|--------------|------------|-------------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Recall Mode | None | None | C-Max | C-Max | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 | |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | 0 | 0 | |
| Act Effct Green (s) | 11.4 | 11.4 | 57.0 | 57.0 | 57.0 | 57.0 | |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.71 | 0.71 | 0.71 | 0.71 | |
| v/c Ratio | 0.45 | 0.52 | 0.12 | 0.20 | 0.35 | 0.06 | |
| Control Delay | 37.3 | 12.5 | 5.0 | 4.4 | 5.2 | 1.4 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 37.3 | 12.5 | 5.0 | 4.4 | 5.2 | 1.4 | |
| LOS | D | В | Α | Α | Α | Α | |
| Approach Delay | 21.6 | | | 4.5 | 4.9 | | |
| Approach LOS | С | | | Α | Α | | |
| Queue Length 50th (m) | 15.9 | 2.5 | 1.9 | 10.0 | 19.6 | 0.0 | |
| Queue Length 95th (m) | 29.0 | 18.7 | 6.2 | 18.2 | 33.5 | 3.4 | |
| Internal Link Dist (m) | 197.1 | | | 273.6 | 167.7 | | |
| Turn Bay Length (m) | | 100.0 | 120.0 | | | 40.0 | |
| Base Capacity (vph) | 469 | 533 | 421 | 2358 | 2358 | 1084 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.23 | 0.35 | 0.12 | 0.20 | 0.35 | 0.06 | |
| Intersection Summary | | | | | | | |
| Area Type: | Other | | | | | | |
| Cycle Length: 80.3 | | | | | | | |
| Actuated Cycle Length: 80.3 | | | | | | | |
| Offset: 6 (7%), Referenced to ph | ase 2:NBTL and | 6:SBT, Sta | art of Green | | | | |
| Natural Cycle: 55 | and | | 5. 5. 5011 | | | | |
| Control Type: Actuated-Coordina | ated | | | | | | |
| Maximum v/c Ratio: 0.52 | | | | | | | |
| Intersection Signal Delay: 7.7 | | | | In | tersection L | OS: A | |
| Intersection Capacity Utilization | 55 1% | | | | U Level of S | | |
| Analysis Period (min) 15 | 00.170 | | | 10 | 0 20101 01 0 | JOI TIOU D | |
| ruidiyele r elled (iliil) re | | | | | | | |
| Splits and Phases: 1: Moodie | Dr & Timm Dr | | | | | | |
| | | | | | | | • |
| Ø2 (R) | | | | | | | ₹ ø4 |
| 52 s | | | | | | | 28.3 s |
| a | | | | | | | |
| Ø6 (R) | | | | | | | |
| FD - | | | | | | | |

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|--------------------------------------|---------------|------------|-------|-------|----------|-------|-------|------------|-------------|----------|------------|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | ĵ, | | * | 1 | | * | ቀ ሴ | | * | ♦ % | |
| Traffic Volume (vph) | 74 | 28 | 25 | 18 | 6 | 8 | 49 | 489 | 64 | 111 | 685 | 186 |
| Future Volume (vph) | 74 | 28 | 25 | 18 | 6 | 8 | 49 | 489 | 64 | 111 | 685 | 186 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 0.99 | |
| Frt | | 0.929 | | | 0.914 | | | 0.983 | | | 0.968 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1679 | 1534 | 0 | 1729 | 1410 | 0 | 1695 | 3293 | 0 | 1712 | 3215 | 0 |
| Flt Permitted | 0.748 | | | 0.722 | | | 0.312 | | | 0.445 | | |
| Satd. Flow (perm) | 1318 | 1534 | 0 | 1311 | 1410 | 0 | 556 | 3293 | 0 | 798 | 3215 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 25 | | | 8 | | | 26 | | | 62 | |
| Link Speed (k/h) | | 50 | | | 40 | | | 60 | | | 60 | |
| Link Distance (m) | | 92.8 | | | 87.6 | | | 186.4 | | | 297.6 | |
| Travel Time (s) | | 6.7 | | | 7.9 | | | 11.2 | | | 17.9 | |
| Confl. Peds. (#/hr) | 3 | | 3 | 3 | | 3 | 3 | | 6 | 6 | | 3 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 3% | 0% | 20% | 0% | 17% | 17% | 2% | 3% | 2% | 1% | 4% | 2% |
| Adj. Flow (vph) | 74 | 28 | 25 | 18 | 6 | 8 | 49 | 489 | 64 | 111 | 685 | 186 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 74 | 53 | 0 | 18 | 14 | 0 | 49 | 553 | 0 | 111 | 871 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.9 | | | 4.9 | | | 4.9 | | | 4.9 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| 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 | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+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 | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | 0. <u></u> | | | U | | | U/. | | | U. 2. | |
| 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 | 7 | 7 | | | | | | <u></u> | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 46.0 | 46.0 | | 46.0 | 46.0 | |
| Total Split (%) | 42.5% | 42.5% | | 42.5% | 42.5% | | 57.5% | 57.5% | | 57.5% | 57.5% | |
| rotal Oplit (70) | 42.5% 28.0 | 28.0 | | 28.0 | 28.0 | | 40.3 | 40.3 | | 40.3 | 40.3 | |
| | | | | | | | | 40.3 | | 40.0 | 40.3 | |
| Maximum Green (s) Yellow Time (s) | 3.3 | 3.3 | | 3.3 | 3.3 | | 3.7 | 3.7 | | 3.7 | 3.7 | |

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|--------------------------------------|------------------|-------------|--------------|------|--------------|----------|-------|----------|-----|-------|-------|-----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| 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 | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 13.9 | 13.9 | | 13.9 | 13.9 | | 58.7 | 58.7 | | 58.7 | 58.7 | |
| Actuated g/C Ratio | 0.17 | 0.17 | | 0.17 | 0.17 | | 0.73 | 0.73 | | 0.73 | 0.73 | |
| v/c Ratio | 0.32 | 0.18 | | 0.08 | 0.06 | | 0.12 | 0.23 | | 0.19 | 0.37 | |
| Control Delay | 30.5 | 16.7 | | 24.6 | 16.4 | | 5.7 | 4.2 | | 7.7 | 6.4 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 30.5 | 16.7 | | 24.6 | 16.4 | | 5.7 | 4.2 | | 7.7 | 6.4 | |
| LOS | C | В | | C | В | | A | Α | | A | A | |
| Approach Delay | | 24.7 | | | 21.0 | | | 4.3 | | /\ | 6.6 | |
| Approach LOS | | C | | | C | | | Α. | | | Α | |
| Queue Length 50th (m) | 10.6 | 3.9 | | 2.5 | 0.8 | | 1.9 | 11.6 | | 4.3 | 18.8 | |
| Queue Length 95th (m) | 16.7 | 9.9 | | 6.0 | 4.2 | | 10.4 | 34.7 | | 19.5 | 56.5 | |
| Internal Link Dist (m) | 10.7 | 68.8 | | 0.0 | 63.6 | | 10.4 | 162.4 | | 13.5 | 273.6 | |
| Turn Bay Length (m) | 35.0 | 00.0 | | 20.0 | 03.0 | | 65.0 | 102.4 | | 45.0 | 213.0 | |
| Base Capacity (vph) | 461 | 553 | | 458 | 498 | | 408 | 2423 | | 585 | 2375 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 23/3 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.16 | 0.10 | | 0.04 | 0.03 | | 0.12 | 0.23 | | 0.19 | 0.37 | |
| | 0.10 | 0.10 | | 0.04 | 0.03 | | 0.12 | 0.23 | | 0.19 | 0.37 | |
| Intersection Summary | Other | | | | | | | | | | | |
| 71 - | Other | | | | | | | | | | | |
| Cycle Length: 80 | | | | | | | | | | | | |
| Actuated Cycle Length: 80 | O NIDTI | LOODTI | 01 1 60 | | | | | | | | | |
| Offset: 68 (85%), Referenced to ph | nase 2:NBTL a | ind 6:SBTL, | Start of Gre | een | | | | | | | | |
| Natural Cycle: 65 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinate | ed | | | | | | | | | | | |
| Maximum v/c Ratio: 0.37 | | | | | | | | | | | | |
| Intersection Signal Delay: 7.4 | | | | | ersection LC | | | | | | | |
| Intersection Capacity Utilization 61 | 1.3% | | | ICI | J Level of S | ervice B | | | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie Dr | r & Fitzgerald F | Rd/Menten F | Pl | | | | | | | | | |
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| Ø2 (R) | | | | | | 24- | 104 | | | | | |
| 46 c | | | | | | | | | | | | |
| 46 s | | | | | | 34 s | _ | | | | | |

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|---|---|-------|--------------------------------------|--------------------------------------|------------------------------|------------------------------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | WDL W | WOIL | * | ₹ T | SDL | * |
| Traffic Volume (vph) | 16 | 18 | 7.7 590 | 15 | 1 21 | 71 |
| Future Volume (vpn) | 16 | 18 | 590 590 | 15 | 21 | 703 |
| (, , | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Ideal Flow (vphpl) | 0.0 | 0.0 | 1800 | 30.0 | 50.0 | 1800 |
| Storage Length (m) | 0.0 | | | 30.0 | | |
| Storage Lanes | • | 0 | | T | 1 | |
| Taper Length (m) | 7.6 | 4.00 | 0.05 | 4.00 | 40.0 | 0.05 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | 0.929 | | | 0.850 | 0.050 | |
| Flt Protected | 0.977 | | | | 0.950 | |
| Satd. Flow (prot) | 1516 | 0 | 3325 | 1547 | 1517 | 3325 |
| Flt Permitted | 0.977 | | | | 0.429 | |
| Satd. Flow (perm) | 1516 | 0 | 3325 | 1547 | 685 | 3325 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | 18 | | | 15 | | |
| Link Speed (k/h) | 40 | | 60 | | | 60 |
| Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 19% | 0% | 4% | 0% | 14% | 4% |
| Adj. Flow (vph) | 16 | 18 | 590 | 15 | 21 | 703 |
| Shared Lane Traffic (%) | 10 | 10 | 330 | 10 | ۷۱ | 103 |
| | 24 | 0 | 500 | 4.5 | 04 | 700 |
| Lane Group Flow (vph) | 34 | 0 | 590 | 15 | 21 | 703 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 1.00 | 14 | 24 | 1.00 |
| Number of Detectors | 1 | 17 | 2 | 14 | 1 | 2 |
| | Left | | Thru | • | Left | Thru |
| Detector Template | | | | Right | | |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | CI+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Decition/m | 0.0 | | | 0.0 | 0.0 | |
| Detector 2 Position(m) | | | 28.7 | | | 28.7 |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | CI+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | , and the same of | | _ | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| | U | | ۷ | | U | U |
| | | | 10.0 | 40.0 | 40.0 | 40.0 |
| | 10.0 | | | 10.0 | 10.0 | 10.0 |
| Switch Phase Minimum Initial (s) | 10.0 | | | | | |
| Minimum Initial (s) Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Minimum Initial (s) Minimum Split (s) Total Split (s) | 32.6 33.0 | | 28.9 47.0 | 28.9 47.0 | 47.0 | 47.0 |
| Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) | 32.6 33.0 41.3% | | 28.9 47.0 58.8% | 28.9 47.0 58.8% | 47.0 58.8% | 47.0 58.8% |
| Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) | 32.6 33.0 41.3% 27.4 | | 28.9 47.0 | 28.9 47.0 | 47.0 | 47.0 58.8% 41.1 |
| Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) Maximum Green (s) | 32.6 33.0 41.3% | | 28.9 47.0 58.8% | 28.9 47.0 58.8% | 47.0 58.8% | 47.0 58.8% |
| Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) Maximum Green (s) Yellow Time (s) | 32.6 33.0 41.3% 27.4 3.3 | | 28.9 47.0 58.8% 41.1 3.7 | 28.9 47.0 58.8% 41.1 3.7 | 47.0 58.8% 41.1 3.7 | 47.0 58.8% 41.1 3.7 |
| Minimum Initial (s) | 32.6 33.0 41.3% 27.4 | | 28.9 47.0 58.8% 41.1 | 28.9 47.0 58.8% 41.1 | 47.0 58.8% 41.1 | 47.0 58.8% 41.1 |

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|-----------------------------------|-------------------|------------|--------------|-------|--------------|-----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | | |
| Act Effct Green (s) | 10.0 | | 71.4 | 71.4 | 71.4 | 71.4 |
| Actuated g/C Ratio | 0.12 | | 0.89 | 0.89 | 0.89 | 0.89 |
| v/c Ratio | 0.17 | | 0.20 | 0.01 | 0.03 | 0.24 |
| Control Delay | 22.0 | | 2.0 | 1.5 | 2.5 | 1.9 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 22.0 | | 2.0 | 1.5 | 2.5 | 1.9 |
| LOS | C | | Α | A | A | A |
| Approach Delay | 22.0 | | 2.0 | | ., | 1.9 |
| Approach LOS | C | | Α. | | | A |
| Queue Length 50th (m) | 2.2 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Length 95th (m) | 9.9 | | 17.3 | 1.2 | m2.0 | 19.6 |
| Internal Link Dist (m) | 36.4 | | 176.0 | 1.5 | | 162.4 |
| Turn Bay Length (m) | ООТ | | 170.0 | 30.0 | 50.0 | 102.4 |
| Base Capacity (vph) | 531 | | 2967 | 1382 | 611 | 2967 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.06 | | 0.20 | 0.01 | 0.03 | 0.24 |
| | 0.00 | | 0.20 | 0.01 | 0.00 | 0.24 |
| Intersection Summary | 0.0 | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 80 | | | | | | |
| Actuated Cycle Length: 80 | | | | | | |
| Offset: 58 (73%), Referenced to | o phase 2:NBT and | d 6:SBTL, | Start of Gre | en | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coording | nated | | | | | |
| Maximum v/c Ratio: 0.24 | | | | | | |
| Intersection Signal Delay: 2.4 | | | | | tersection L | |
| Intersection Capacity Utilization | า 38.4% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| m Volume for 95th percentile | queue is metered | by upstrea | m signal. | | | |
| | | | | | | |
| Splits and Phases: 3: Moodie | e Dr & Loblaws | | | | | |
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| ï2 (R) | | | | | | |
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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | 44 | 7 | * | 44 | 7 | 14.54 | 44 | 7 | 16.56 | 44 | 7 |
| Traffic Volume (vph) | 70 | 1211 | 112 | 81 | 307 | 152 | 225 | 376 | 309 | 356 | 183 | 107 |
| Future Volume (vph) | 70 | 1211 | 112 | 81 | 307 | 152 | 225 | 376 | 309 | 356 | 183 | 107 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | | | 40.0 | | | 40.0 | | | 50.0 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Ped Bike Factor | 0.99 | | 0.98 | 1.00 | | 0.98 | 0.99 | | 0.98 | 1.00 | | 0.98 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1631 | 3390 | 1473 | 1712 | 3232 | 1517 | 3321 | 3325 | 1532 | 3288 | 3232 | 1459 |
| Flt Permitted | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 1622 | 3390 | 1447 | 1710 | 3232 | 1486 | 3289 | 3325 | 1506 | 3272 | 3232 | 1431 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 139 | | | 152 | | | 142 | | | 137 |
| Link Speed (k/h) | | 60 | | | 60 | | | 60 | | | 60 | |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | 6 | | 4 | 4 | | 6 | 6 | | 4 | 4 | | 6 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 6% | 2% | 5% | 1% | 7% | 2% | 1% | 4% | 1% | 2% | 7% | 6% |
| Adj. Flow (vph) | 70 | 1211 | 112 | 81 | 307 | 152 | 225 | 376 | 309 | 356 | 183 | 107 |
| Shared Lane Traffic (%) | 70 | 4044 | 440 | 0.4 | 007 | 450 | 005 | 070 | 000 | 050 | 400 | 407 |
| Lane Group Flow (vph) | 70 | 1211 | 112 | 81 | 307 | 152 | 225 | 376 | 309 | 356 | 183 | 107 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 7.4 | | | 7.4 | |
| Link Offset(m) | | 0.0 4.9 | | | 0.0 4.9 | | | 0.0 4.9 | | | 0.0 | |
| Crosswalk Width(m) | | 4.9 | | | 4.9 | | | 4.9 | | | 4.9 | |
| Two way Left Turn Lane | 1.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | 1.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Headway Factor | 1.06 24 | 1.06 | 1.06 14 | 1.06 24 | 1.06 | 1.06 14 | 1.06 24 | 1.06 | 1.06 14 | 1.06 24 | 1.06 | 1.06 |
| Turning Speed (k/h) Number of Detectors | 1 | 2 | 14 | 1 | 2 | 14 | 1 | 2 | 14 | 1 | 2 | 14 |
| Detector Template | Left | Thru | | Left | Thru | Right | Left | Thru | • | Left | Thru | - |
| Leading Detector (m) | 6.1 | 30.5 | Right 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | Right 6.1 | 6.1 | 30.5 | Right 6.1 |
| Trailing Detector (m) | 0.1 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex |
| Detector 1 Channel | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OI+LX | OITEX | OITEX | OITLX | CITLX |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | U/ | | | U | | | U | | | υ. <u>Ε</u> χ | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 2 | | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 15.0 | 54.0 | 54.0 | 15.0 | 54.0 | 54.0 | 23.0 | 38.0 | 38.0 | 23.0 | 38.0 | 38.0 |
| Total Split (%) | 11.5% | 41.5% | 41.5% | 11.5% | 41.5% | 41.5% | 17.7% | 29.2% | 29.2% | 17.7% | 29.2% | 29.2% |
| Maximum Green (s) | 8.6 | 47.6 | 47.6 | 8.6 | 47.6 | 47.6 | 16.5 | 31.3 | 31.3 | 16.5 | 31.3 | 31.3 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |
| | | | | | | | | | | | | |

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|-------------------------|-------|--------|-------|-------|-------|-------|------|----------|------|-------|----------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 |
| Act Effct Green (s) | 9.8 | 54.7 | 54.7 | 10.2 | 57.8 | 57.8 | 13.8 | 22.9 | 22.9 | 16.2 | 25.3 | 25.3 |
| Actuated g/C Ratio | 0.08 | 0.42 | 0.42 | 0.08 | 0.44 | 0.44 | 0.11 | 0.18 | 0.18 | 0.12 | 0.19 | 0.19 |
| v/c Ratio | 0.57 | 0.85 | 0.16 | 0.61 | 0.21 | 0.20 | 0.64 | 0.64 | 0.81 | 0.87 | 0.29 | 0.28 |
| Control Delay | 76.4 | 42.0 | 2.7 | 76.9 | 25.1 | 4.9 | 64.1 | 54.2 | 43.4 | 77.3 | 45.0 | 4.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 76.4 | 42.0 | 2.7 | 76.9 | 25.1 | 4.9 | 64.1 | 54.2 | 43.4 | 77.3 | 45.0 | 4.6 |
| LOS | Е | D | Α | Е | С | Α | Е | D | D | Е | D | Α |
| Approach Delay | | 40.5 | | | 27.2 | | | 53.0 | | | 56.1 | |
| Approach LOS | | D | | | С | | | D | | | E | |
| Queue Length 50th (m) | 17.4 | 147.7 | 0.0 | 20.1 | 26.3 | 0.0 | 28.8 | 48.0 | 43.0 | 46.7 | 21.4 | 0.0 |
| Queue Length 95th (m) | #39.4 | #207.3 | 7.5 | #46.0 | 40.2 | 13.8 | 41.4 | 59.2 | 71.2 | #70.8 | 30.3 | 8.1 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 126 | 1427 | 689 | 136 | 1436 | 745 | 421 | 800 | 470 | 417 | 778 | 448 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.56 | 0.85 | 0.16 | 0.60 | 0.21 | 0.20 | 0.53 | 0.47 | 0.66 | 0.85 | 0.24 | 0.24 |

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 119 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 44.6 Intersection Capacity Utilization 85.3%

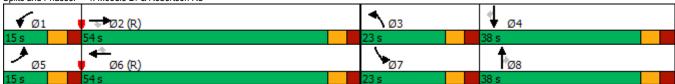
Intersection LOS: D ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

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|----------------------------|-------|---------------|-------|-----------|------------------|------------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | 7 | ₹ | NDL N | * | ↑ ↑ | <u>35R</u> |
| Traffic Volume (vph) | 58 | 64 | 159 | 77 | TT 804 | 161 |
| Future Volume (vph) | 58 | 64 | 159 | 764 | 804 | 161 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | 1000 | 1000 | 40.0 |
| Storage Lanes | 1 | 100.0 | 120.0 | | | 1 |
| Taper Length (m) | 7.6 | | 60.0 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | 1.00 | 0.850 | 1.00 | 0.90 | 0.90 | 0.850 |
| Flt Protected | 0.950 | 0.000 | 0.950 | | | 0.000 |
| | 1695 | 1517 | 1712 | 3390 | 3357 | 1547 |
| Satd. Flow (prot) | | 1547 | | JJ90 | 333 <i>1</i> | 1547 |
| Flt Permitted | 0.950 | 1547 | 0.258 | 2200 | 2257 | 4547 |
| Satd. Flow (perm) | 1695 | 1547 | 465 | 3390 | 3357 | 1547 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | 64 | | | | 161 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 297.6 | 191.7 | |
| Travel Time (s) | 9.9 | | | 17.9 | 11.5 | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 2% | 0% | 1% | 2% | 3% | 0% |
| Adj. Flow (vph) | 58 | 64 | 159 | 764 | 804 | 161 |
| Shared Lane Traffic (%) | 30 | 7 | 100 | 707 | JUT | 101 |
| Lane Group Flow (vph) | 58 | 64 | 159 | 764 | 804 | 161 |
| | | | | | | |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | | | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Trailing Detector (m) | | | | | | |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | 0.0 | 0.0 | 28.7 | 28.7 | 0.0 |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| \ , | | | | CI+Ex | CI+Ex | |
| Detector 2 Type | | | | CI+EX | CI+EX | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | · _ | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 10.6 | 15.6 | 24.6 | 24.6 |
| 1 \ / | 28.3 | 28.3 | 11.0 | 42.0 | 31.0 | 31.0 |
| Total Split (s) | | | | | | |
| Total Split (%) | 40.3% | 40.3% | 15.6% | 59.7% | 44.1% | 44.1% |
| Maximum Green (s) | 22.0 | 22.0 | 5.4 | 36.4 | 25.4 | 25.4 |
| Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 |
| - (-) | | *** | *** | *** | | |

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|-----------------------------------|----------------|-------------|--------------|-----------------|---------------|------------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | الأرزيء | | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 2 | 2 | | | 2 | 2 |
| Act Effct Green (s) | 12.4 | 12.4 | 49.3 | 50.4 | 36.9 | 36.9 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.70 | 0.72 | 0.52 | 0.52 |
| v/c Ratio | 0.19 | 0.10 | 0.76 | 0.72 | 0.32 | 0.32 |
| Control Delay | 24.6 | 7.6 | 8.0 | 6.1 | 13.7 | 3.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| Total Delay | 24.6 | 7.6 | 8.0 | 6.1 | 13.7 | 3.3 |
| LOS | | | | | | |
| | C | Α | Α | Α | B | Α |
| Approach Delay | 15.7 | | | 6.4 | 12.0 | |
| Approach LOS | В | | | A | В | ^ ^ |
| Queue Length 50th (m) | 6.9 | 0.0 | 5.9 | 17.4 | 34.2 | 0.0 |
| Queue Length 95th (m) | 12.9 | 7.3 | 19.4 | 42.7 | 63.7 | 10.5 |
| Internal Link Dist (m) | 197.1 | | | 273.6 | 167.7 | |
| Turn Bay Length (m) | | 100.0 | 120.0 | | | 40.0 |
| Base Capacity (vph) | 530 | 528 | 446 | 2429 | 1760 | 887 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.11 | 0.12 | 0.36 | 0.31 | 0.46 | 0.18 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70.3 | | | | | | |
| Actuated Cycle Length: 70.3 | | | | | | |
| Offset: 55 (78%), Referenced to | phase 2:NBTL a | nd 6:SBT, S | Start of Gre | en | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordin | nated | | | | | |
| Maximum v/c Ratio: 0.46 | | | | | | |
| Intersection Signal Delay: 9.7 | | | | ln ⁴ | tersection Lo | OS: A |
| Intersection Capacity Utilization | 155.7% | | | | CU Level of S | |
| Analysis Period (min) 15 | 100.170 | | | 10 | 0 20101 01 0 | 501 VIOO B |
| , maryone i oriou (min) io | | | | | | |
| Splits and Phases: 1: Moodie | e Dr & Timm Dr | | | | | |
| A Triadect 1: Medale | , D. Q. T | | | | | - |
| ¶Ø2 (R) ■ | | | | | | |
| 102 (K) | | | | | | |
| | | | | | | 2 |
| 42 S | | | | | | |
| 428 ↑ Ø5 | Ø6 (R) | | | | | |

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|----------------------------|------------|------------|---------|-------|----------|---------|-------|------------|---------|-------------|----------|---------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 75 | 1 | | 7 | î, | | 7 | ቀ ሴ | | - 1 | ۸ß | |
| Traffic Volume (vph) | 190 | 6 | 67 | 91 | 20 | 55 | 31 | 627 | 46 | 27 | 745 | 69 |
| Future Volume (vph) | 190 | 6 | 67 | 91 | 20 | 55 | 31 | 627 | 46 | 27 | 745 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.862 | | | 0.890 | | | 0.990 | | | 0.987 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1712 | 1506 | 0 | 1695 | 1605 | 0 | 1453 | 3345 | 0 | 1662 | 3329 | 0 |
| Flt Permitted | 0.708 | | | 0.709 | | | 0.317 | | | 0.383 | | |
| Satd. Flow (perm) | 1275 | 1506 | 0 | 1262 | 1605 | 0 | 484 | 3345 | 0 | 668 | 3329 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 67 | | | 55 | | | 14 | | | 17 | |
| Link Speed (k/h) | | 50 | | | 40 | | | 60 | | | 60 | |
| Link Distance (m) | | 92.8 | | | 87.6 | | | 186.4 | | | 297.6 | |
| Travel Time (s) | | 6.7 | | | 7.9 | | | 11.2 | | | 17.9 | |
| Confl. Peds. (#/hr) | 1 | | 4 | 4 | | 1 | 2 | | 8 | 8 | | 2 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 1% | 0% | 3% | 2% | 0% | 0% | 19% | 2% | 4% | 4% | 2% | 6% |
| Adj. Flow (vph) | 190 | 6 | 67 | 91 | 20 | 55 | 31 | 627 | 46 | 27 | 745 | 69 |
| Shared Lane Traffic (%) | 100 | | O, | 01 | | | 0. | OL. | 10 | | 1 10 | |
| Lane Group Flow (vph) | 190 | 73 | 0 | 91 | 75 | 0 | 31 | 673 | 0 | 27 | 814 | 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) | Leit | 3.7 | rtigrit | Leit | 3.7 | rtigrit | Leit | 3.7 | rtigrit | Leit | 3.7 | rtigrit |
| 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 | | 7.5 | | | 7.5 | | | 7.5 | | | т.5 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 1.00 | 24 | 1.00 | 1.00 | 24 | 1.00 | 1.00 | 24 | 1.00 | 1.00 |
| Number of Detectors | 1 | 2 | 17 | 1 | 2 | 17 | 1 | 2 | 17 | 1 | 2 | 14 |
| 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) | 0.1 | 0.0 | | 0.0 | 0.0 | | 0.1 | 0.0 | | 0.1 | 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 | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | Cl+Ex | CI+Ex | |
| Detector 1 Channel | CI+EX | UI+EX | | OI+EX | UI+EX | | CI+EX | OI+EX | | CI+EX | CI+EX | |
| | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| 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 | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | | | | | | | | | | 2.0 | |
| 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) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Total Split (%) | 48.6% | 48.6% | | 48.6% | 48.6% | | 51.4% | 51.4% | | 51.4% | 51.4% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 30.3 | 30.3 | | 30.3 | 30.3 | |
| maximam Groom (o) | | | | | | | | | | | | |
| Yellow Time (s) | 3.3 2.7 | 3.3 2.7 | | 3.3 | 3.3 | | 3.7 | 3.7 2.0 | | 3.7 | 3.7 | |

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|------------------------------------|-------------------|-------------|--------------|-----------|--------------|----------|----------|----------|-----|----------|----------|----|
| ane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SB |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| _ead/Lag | | | | | | | | | | | | |
| _ead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 17.1 | 17.1 | | 17.1 | 17.1 | | 41.2 | 41.2 | | 41.2 | 41.2 | |
| Actuated g/C Ratio | 0.24 | 0.24 | | 0.24 | 0.24 | | 0.59 | 0.59 | | 0.59 | 0.59 | |
| //c Ratio | 0.24 | 0.24 | | 0.24 | 0.24 | | 0.33 | 0.34 | | 0.07 | 0.33 | |
| Control Delay | 30.7 | 6.3 | | 21.7 | 8.2 | | 8.3 | 6.9 | | 9.7 | 9.8 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.2 | | 0.0 | 0.9 | | 0.0 | 0.0 | |
| Total Delay | 30.7 | 6.3 | | 21.7 | 8.2 | | 8.3 | 6.9 | | 9.7 | 9.8 | |
| OS | 30.7 C | 0.3 A | | 21.7 C | 0.2 A | | 6.5 A | 0.9 A | | 9.7 A | 9.0 A | |
| | C | 23.9 | | U | 15.6 | | A | 7.0 | | А | 9.8 | |
| Approach Delay | | 23.9 C | | | | | | | | | | |
| Approach LOS | 00.7 | | | 40.0 | В | | 4.0 | A | | 4.0 | Α | |
| Queue Length 50th (m) | 22.7 | 0.6 | | 10.0 | 2.1 | | 1.3 | 14.6 | | 1.3 | 25.1 | |
| Queue Length 95th (m) | 32.2 | 7.3 | | 16.4 | 8.5 | | 4.5 | 23.3 | | 6.4 | 55.2 | |
| nternal Link Dist (m) | 25.2 | 68.8 | | 00.0 | 63.6 | | 0= 0 | 162.4 | | 45.0 | 273.6 | |
| Turn Bay Length (m) | 35.0 | 0.10 | | 20.0 | 077 | | 65.0 | 4075 | | 45.0 | 400= | |
| Base Capacity (vph) | 510 | 642 | | 504 | 675 | | 284 | 1975 | | 393 | 1967 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.37 | 0.11 | | 0.18 | 0.11 | | 0.11 | 0.34 | | 0.07 | 0.41 | |
| ntersection Summary | Other | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 70 | | | | | | | | | | | | |
| Actuated Cycle Length: 70 | and OMPTI - 1 | C.CDTI O | | | | | | | | | | |
| Offset: 0 (0%), Referenced to pha | ase Z:NBTL and | o:SBIL, St | art of Greer | 1 | | | | | | | | |
| Natural Cycle: 65 | 1.1 | | | | | | | | | | | |
| Control Type: Actuated-Coordina | ated | | | | | | | | | | | |
| Maximum v/c Ratio: 0.61 | | | | | | 00 D | | | | | | |
| ntersection Signal Delay: 11.2 | | | | | ersection LC | | | | | | | |
| ntersection Capacity Utilization 5 | 55.4% | | | IC | U Level of S | ervice B | | | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie I | Dr & Fitzgerald F | Rd/Menten F | 기 | | | | | | | | | |
| | | | | | 12 | | | | | | | |
| Ø2 (R) | | | | | 24- | Ø4 | | | | | | |
| 36 s | | | | | 34 S | _ | | | | | | |
| Ø6 (R) | | | | | 7 | Ø8 | | | | | | |
| | | | | | | | | | | | | |

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|-------------------------------------|-------|-------|---------------|--------|--------|--------------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | , DIV | 44 | ₹ |) T | * |
| Traffic Volume (vph) | 107 | 51 | TT 640 | 52 | 75 | 832 |
| Future Volume (vph) | 107 | 51 | 640 | 52 | 75 | 832 |
| deal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | 1000 | 30.0 | 50.0 | 1000 |
| Storage Lanes | 1 | 0.0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | 0 | | - | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Ped Bike Factor | 0.99 | 1.00 | 0.00 | 0.98 | 1.00 | 0.00 |
| Frt | 0.956 | | | 0.850 | 1.00 | |
| FIt Protected | 0.950 | | | 0.000 | 0.950 | |
| Satd. Flow (prot) | 1537 | 0 | 3357 | 1547 | 1712 | 3357 |
| Flt Permitted | 0.967 | U | 3331 | 1347 | 0.409 | 5551 |
| | 1537 | 0 | 3357 | 1511 | 736 | 3357 |
| Satd. Flow (perm) | 1537 | | 333 <i>1</i> | | 130 | 335 <i>1</i> |
| Right Turn on Red | 40 | Yes | | Yes | | |
| Satd. Flow (RTOR) | 40 | | 20 | 52 | | |
| Link Speed (k/h) | 40 | | 60 | | | 60 |
| Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| Confl. Peds. (#/hr) | | 10 | | 2 | 2 | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 11% | 4% | 3% | 0% | 1% | 3% |
| Adj. Flow (vph) | 107 | 51 | 640 | 52 | 75 | 832 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 158 | 0 | 640 | 52 | 75 | 832 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 4.9 | | 4.9 | | | 4.9 |
| Two way Left Turn Lane | 1.0 | | | | | 1.0 |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 1.00 | 1.00 | 24 | 1.00 |
| Number of Detectors | 1 | 14 | 2 | 14 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Z Thru |
| | | | | | | |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | 28.7 | | | 28.7 |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | CI+Ex | | | Cl+Ex |
| Detector 2 Type Detector 2 Channel | | | J1 - LA | | | J1 · L∧ |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| | | | | reiiii | reiiii | |
| Protected Phases | 8 | | 2 | 0 | ^ | 6 |
| Permitted Phases | | | ^ | 2 | 6 | _ |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | 40.0 | | 40.0 | 400 | 40.0 | 40.0 |
| Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Total Split (s) | 33.0 | | 37.0 | 37.0 | 37.0 | 37.0 |
| Total Split (%) | 47.1% | | 52.9% | 52.9% | 52.9% | 52.9% |
| Maximum Green (s) | 27.4 | | 31.1 | 31.1 | 31.1 | 31.1 |
| Yellow Time (s) | 3.3 | | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.3 | | 2.2 | 2.2 | 2.2 | 2.2 |
| (0) | 2.0 | | ۷.۲ | ۷.۲ | ۷.۲ | ۲.۲ |

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|---|-----------------|-----------|--------------|----------|--------------|-------------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |
| Lead/Lag | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | | |
| Act Effct Green (s) | 12.0 | | 46.5 | 46.5 | 46.5 | 46.5 |
| Actuated g/C Ratio | 0.17 | | 0.66 | 0.66 | 0.66 | 0.66 |
| v/c Ratio | 0.53 | | 0.29 | 0.05 | 0.15 | 0.37 |
| Control Delay | 25.9 | | 5.6 | 1.9 | 3.1 | 2.9 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 25.9 | | 5.6 | 1.9 | 3.1 | 2.9 |
| LOS | 23.9 C | | J.0 | 1.9 A | J. 1 | 2.9 A |
| Approach Delay | 25.9 | | 5.4 | A | А | 3.0 |
| Approach LOS | 25.9 C | | 5.4 A | | | 3.0 A |
| | 14.4 | | 14.3 | 0.0 | 1.5 | 9.1 |
| Queue Length 50th (m) Queue Length 95th (m) | 28.2 | | 27.3 | 3.5 | 3.6 | 12.8 |
| | | | | 3.5 | 3.0 | |
| Internal Link Dist (m) | 36.4 | | 176.0 | 20.0 | F0.0 | 162.4 |
| Turn Bay Length (m) | 005 | | 0007 | 30.0 | 50.0 | 0007 |
| Base Capacity (vph) | 625 | | 2227 | 1020 | 488 | 2227 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.25 | | 0.29 | 0.05 | 0.15 | 0.37 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70 | | | | | | |
| Actuated Cycle Length: 70 | | | | | | |
| Offset: 9 (13%), Referenced to | phase 2:NBT and | 6:SBTL, S | tart of Gree | n | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordi | nated | | | | | |
| Maximum v/c Ratio: 0.53 | | | | | | |
| Intersection Signal Delay: 6.0 | | | | Int | tersection L | OS: A |
| Intersection Capacity Utilization | n 55.5% | | | IC | U Level of S | Service B |
| Analysis Period (min) 15 | | | | | | |
| . , | | | | | | |
| Splits and Phases: 3: Moodi | e Dr & Loblaws | | | | | |
| A | | | | | | |
| Ø2 (R) | | | | | | |
| 37 s | | | | | | |
| 1 | | | | | | |
| √ Ø6 (R) | | | | | | √ Ø8 |
| ▼ . 00 (K) | | | | | | ▼ Ø8 |

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|--|----------|----------|------------|-------|----------|------------|-------|----------|-------------|----------|----------|------------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 7 | 44 | 7 | * | 44 | 7 | 14.54 | 44 | 7 | 16.56 | 44 | 7 |
| Traffic Volume (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 234 | 148 | 287 | 450 | 194 |
| Future Volume (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 234 | 148 | 287 | 450 | 194 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | | | 40.0 | | | 40.0 | | | 50.0 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Ped Bike Factor | 1.00 | | 0.97 | 0.99 | | 0.98 | 0.99 | | 0.96 | 0.97 | | 0.97 |
| Frt | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 |
| Flt Protected | 0.950 | 0000 | 4547 | 0.950 | 0.40.4 | 4500 | 0.950 | 0000 | 4500 | 0.950 | 0057 | 4547 |
| Satd. Flow (prot) | 1679 | 3390 | 1517 | 1729 | 3424 | 1532 | 3288 | 3293 | 1532 | 3288 | 3357 | 1517 |
| Flt Permitted | 0.950 | 2200 | 1400 | 0.950 | 2404 | 4500 | 0.950 | 2002 | 4.477 | 0.950 | 2257 | 4.470 |
| Satd. Flow (perm) | 1675 | 3390 | 1469 | 1713 | 3424 | 1503 | 3248 | 3293 | 1477 | 3192 | 3357 | 1478 |
| Right Turn on Red | | | Yes 269 | | | Yes 325 | | | Yes 206 | | | Yes 206 |
| Satd. Flow (RTOR) | | 60 | 209 | | 60 | 323 | | 60 | 200 | | 60 | 200 |
| Link Speed (k/h) Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| ` , | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Travel Time (s) Confl. Peds. (#/hr) | 5 | 10.2 | 15 | 15 | 23.1 | 5 | 12 | 11.2 | 21 | 21 | 12.0 | 12 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 3% | 2% | 2% | 0% | 1.00 | 1% | 2% | 5% | 1.00 | 2% | 3% | 2% |
| Adj. Flow (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 234 | 148 | 287 | 450 | 194 |
| Shared Lane Traffic (%) | 120 | 330 | 203 | 223 | 301 | 323 | 223 | 204 | 140 | 201 | 430 | 134 |
| Lane Group Flow (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 234 | 148 | 287 | 450 | 194 |
| 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) | Lon | 3.7 | rtigitt | Loit | 3.7 | rugiit | Loit | 7.4 | ragne | Loit | 7.4 | rtigrit |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | | 14 | 24 | | 14 | 24 | | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | | CI+Ex | | | CI+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | Fellii | 1 | 6 | Feiiii | 3 | 8 | Fellii | 7 | 4 | Fellii |
| Permitted Phases | J | | 2 | I | U | 6 | J | O O | 8 | 1 | 4 | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | <u> </u> | | | ' | 0 | | J | 0 | | ' | | 7 |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 18.0 | 34.1 | 34.1 | 28.2 | 44.3 | 44.3 | 18.4 | 37.7 | 37.7 | 20.0 | 39.3 | 39.3 |
| Total Split (%) | 15.0% | 28.4% | 28.4% | 23.5% | 36.9% | 36.9% | 15.3% | 31.4% | 31.4% | 16.7% | 32.8% | 32.8% |
| Maximum Green (s) | 11.6 | 27.7 | 27.7 | 21.8 | 37.9 | 37.9 | 11.9 | 31.0 | 31.0 | 13.5 | 32.6 | 32.6 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |
| | | | | = | = | | | *** | | | | |

| | • | - | • | • | ← | • | • | † | ~ | \ | ļ | 1 |
|-------------------------|------|-------|-------|------|-------|-------|------|----------|------|----------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effct Green (s) | 13.5 | 39.5 | 39.5 | 20.4 | 46.5 | 46.5 | 11.5 | 20.9 | 20.9 | 13.2 | 22.5 | 22.5 |
| Actuated g/C Ratio | 0.11 | 0.33 | 0.33 | 0.17 | 0.39 | 0.39 | 0.10 | 0.17 | 0.17 | 0.11 | 0.19 | 0.19 |
| v/c Ratio | 0.63 | 0.48 | 0.41 | 0.77 | 0.68 | 0.42 | 0.72 | 0.41 | 0.35 | 0.80 | 0.71 | 0.44 |
| Control Delay | 65.9 | 36.0 | 6.3 | 64.2 | 35.4 | 5.0 | 65.9 | 45.3 | 3.6 | 69.0 | 51.9 | 7.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 65.9 | 36.0 | 6.3 | 64.2 | 35.4 | 5.0 | 65.9 | 45.3 | 3.6 | 69.0 | 51.9 | 7.5 |
| LOS | Е | D | Α | Ε | D | Α | Е | D | Α | Е | D | Α |
| Approach Delay | | 31.2 | | | 33.0 | | | 42.8 | | | 47.9 | |
| Approach LOS | | С | | | С | | | D | | | D | |
| Queue Length 50th (m) | 27.2 | 53.2 | 0.0 | 50.8 | 93.2 | 0.0 | 26.8 | 26.1 | 0.0 | 34.3 | 53.0 | 0.0 |
| Queue Length 95th (m) | 46.6 | 80.2 | 21.4 | 74.6 | 128.8 | 19.8 | 39.9 | 35.8 | 4.8 | #53.2 | 65.7 | 15.4 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 196 | 1117 | 664 | 330 | 1325 | 781 | 326 | 850 | 534 | 369 | 911 | 551 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.61 | 0.48 | 0.41 | 0.68 | 0.68 | 0.42 | 0.69 | 0.28 | 0.28 | 0.78 | 0.49 | 0.35 |

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 100 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection LOS: D ICU Level of Service E

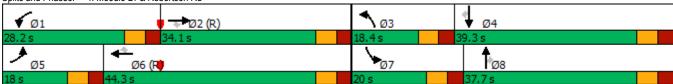
Intersection Signal Delay: 37.7
Intersection Capacity Utilization 83.1%

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

| | • | • | • | † | 1 | 1 |
|---|------------|------------|------------|------------------|------------------|--------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Group Lane Configurations | EBL Š | EBK | NBL | ↑ ↑ | ♦ ♦ | SBK |
| Traffic Volume (vph) | 22 | 67 | 6 8 | ተተ 487 | TT 557 | 30 |
| Future Volume (vph) | 22 | 67 | 68 | 487 | 557 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | | | 40.0 |
| Storage Lanes | 1 | 1 | 1 | | | 1 |
| Taper Length (m) | 7.6 | | 60.0 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | 0.950 | | | |
| Satd. Flow (prot) | 1729 | 1547 | 1729 | 3424 | 3424 | 1547 |
| Flt Permitted | 0.950 | | 0.388 | | | |
| Satd. Flow (perm) | 1729 | 1547 | 706 | 3424 | 3424 | 1547 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | 67 | | | | 30 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 297.6 | 191.7 | |
| Travel Time (s) | 9.9 | | | 17.9 | 11.5 | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 0% |
| Adj. Flow (vph) | 22 | 67 | 68 | 487 | 557 | 30 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 22 | 67 | 68 | 487 | 557 | 30 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | | | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | OI. LX | OI. LX | OI. LX | OI. LX | OI. LX | OI. LX |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | 0.0 | 0.0 | 28.7 | 28.7 | 0.0 |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | Cl+Ex | Cl+Ex | |
| Detector 2 Channel | | | | CI+EX | CI+EX | |
| | | | | 0.0 | 0.0 | |
| Detector 2 Extend (s) | Prot | Perm | nmint | 0.0 | 0.0 NA | Perm |
| Turn Type | | Perm | pm+pt | NA | | Perm |
| Protected Phases Permitted Phases | 4 | 1 | 5 | 2 | 6 | 6 |
| | | 4 | 2 | 0 | ^ | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | 40.0 | 40.0 | - 0 | 40.0 | 40.0 | 40.0 |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 10.6 | 15.6 | 24.6 | 24.6 |
| Total Split (s) | 28.3 | 28.3 | 11.0 | 42.0 | 31.0 | 31.0 |
| | 40.3% | 40.3% | 15.6% | 59.7% | 44.1% | 44.1% |
| | | 22.0 | 5.4 | 36.4 | 25.4 | 25.4 |
| Maximum Green (s) | 22.0 | | | | 27 | 27 |
| Maximum Green (s) Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| Maximum Green (s) Yellow Time (s) All-Red Time (s) | 4.6 1.7 | 4.6 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| Total Split (%) Maximum Green (s) Yellow Time (s) All-Red Time (s) Lost Time Adjust (s) Total Lost Time (s) | 4.6 | 4.6 | | | | |

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|-----------------------------------|-------------------|--------------|--------------|----------|--------------|-----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 2 | 2 | | | 2 | 2 |
| Act Effct Green (s) | 12.4 | 12.4 | 52.5 | 54.8 | 47.7 | 47.7 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.75 | 0.78 | 0.68 | 0.68 |
| v/c Ratio | 0.07 | 0.20 | 0.11 | 0.18 | 0.24 | 0.03 |
| Control Delay | 22.3 | 7.6 | 5.8 | 4.8 | 9.7 | 5.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 22.3 | 7.6 | 5.8 | 4.8 | 9.7 | 5.5 |
| LOS | C | Α | A | Α. | A | A |
| Approach Delay | 11.2 | , , | ,, | 4.9 | 9.5 | ,, |
| Approach LOS | В | | | 4.5 A | Α. | |
| Queue Length 50th (m) | 2.6 | 0.0 | 2.4 | 10.0 | 20.5 | 0.0 |
| Queue Length 95th (m) | 6.4 | 7.6 | 9.6 | 25.9 | 41.6 | 4.7 |
| Internal Link Dist (m) | 197.1 | 1.0 | 0.0 | 273.6 | 167.7 | 7.1 |
| Turn Bay Length (m) | 107.1 | 100.0 | 120.0 | 210.0 | 101.7 | 40.0 |
| Base Capacity (vph) | 541 | 530 | 613 | 2667 | 2323 | 1059 |
| Starvation Cap Reductn | 0 | 0 | 013 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.04 | 0.13 | 0.11 | 0.18 | 0.24 | 0.03 |
| | 0.04 | 0.10 | 0.11 | 0.10 | 0.24 | 0.00 |
| Intersection Summary | 011 | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70.3 | | | | | | |
| Actuated Cycle Length: 70.3 | | | | | | |
| Offset: 55 (78%), Referenced | to phase 2:NBTL a | ind 6:SB1, S | Start of Gre | en | | |
| Natural Cycle: 65 | l' () | | | | | |
| Control Type: Actuated-Coord | dinated | | | | | |
| Maximum v/c Ratio: 0.24 | | | | | | |
| Intersection Signal Delay: 7.6 | | | | | tersection L | |
| Intersection Capacity Utilization | on 43.3% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| 0.111 | | | | | | |
| Splits and Phases: 1: Mood | die Dr & Timm Dr | | | | | |
| ≪ †> | | | | | | I. |
| Ø2 (R) | | | | | | |
| 42 s | | | | | | 2 |
| - | d | | | | | |
| 7 Ø5 | ▼ Ø6 (R) | | | | | - 1 |

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|----------------------------|----------|------------|--------|-------|--------------|---------|------------|------------|---------|-------------|------------|---------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 75 | 1 3 | | * | 1 , 2 | | * | ት ቤ | | * | ♦ % | |
| Traffic Volume (vph) | 52 | 3 | 32 | 19 | 2 | 17 | 27 | 411 | 10 | 12 | 541 | 42 |
| Future Volume (vph) | 52 | 3 | 32 | 19 | 2 | 17 | 27 | 411 | 10 | 12 | 541 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | | | | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.863 | | | 0.866 | | | 0.996 | | | 0.989 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1729 | 1439 | 0 | 1729 | 1555 | 0 | 1729 | 3409 | 0 | 1729 | 3371 | 0 |
| Flt Permitted | 0.745 | | | 0.734 | | | 0.432 | | | 0.506 | | |
| Satd. Flow (perm) | 1352 | 1439 | 0 | 1336 | 1555 | 0 | 785 | 3409 | 0 | 919 | 3371 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 32 | | | 17 | | | 4 | | | 14 | |
| Link Speed (k/h) | | 50 | | | 40 | | | 60 | | | 60 | |
| Link Distance (m) | | 92.8 | | | 87.6 | | | 186.4 | | | 297.6 | |
| Travel Time (s) | | 6.7 | | | 7.9 | | | 11.2 | | | 17.9 | |
| Confl. Peds. (#/hr) | 4 | | | | | 4 | 2 | | 2 | 2 | | 2 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 0% | 0% | 10% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 1% | 5% |
| Adj. Flow (vph) | 52 | 3 | 32 | 19 | 2 | 17 | 27 | 411 | 10 | 12 | 541 | 42 |
| Shared Lane Traffic (%) | <u> </u> | • | | | | | | | | | | |
| Lane Group Flow (vph) | 52 | 35 | 0 | 19 | 19 | 0 | 27 | 421 | 0 | 12 | 583 | 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) | Lon | 3.7 | rtigit | Loit | 3.7 | rtigrit | Loit | 3.7 | rtigitt | Loit | 3.7 | rtigitt |
| 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 | | 7.0 | | | 7.0 | | | 7.0 | | | 7.0 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 14 | 24 | 1.00 | 14 | 24 | 1.00 | 14 | 24 | 1.00 | 14 |
| Number of Detectors | 1 | 2 | 17 | 1 | 2 | 17 | 1 | 2 | 17 | 1 | 2 | 1.7 |
| 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 | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | Cl+Ex | | Cl+Ex | CI+Ex | |
| Detector 1 Channel | OITLX | OITEX | | OITEX | OITLX | | OITEX | OITLX | | OITLX | OITLX | |
| 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) | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | |
| | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Size(m) | | CI+Ex | | | CI+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Type | | UI+EX | | | UI+EX | | | CI+EX | | | CI+EX | |
| Detector 2 Channel | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Detector 2 Extend (s) | D | 0.0 | | D | 0.0 | | D | 0.0 | | D | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 4 | 4 | | 0 | 8 | | 0 | 2 | | ^ | 6 | |
| Permitted Phases | 4 | | | 8 | _ | | 2 | _ | | 6 | _ | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Total Split (%) | 48.6% | 48.6% | | 48.6% | 48.6% | | 51.4% | 51.4% | | 51.4% | 51.4% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 30.3 | 30.3 | | 30.3 | 30.3 | |
| Yellow Time (s) | 3.3 | 3.3 2.7 | | 3.3 | 3.3 2.7 | | 3.7 2.0 | 3.7 2.0 | | 3.7 | 3.7 | |
| All-Red Time (s) | 2.7 | | | 2.7 | | | | | | 2.0 | 2.0 | |

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|---|-------------------|-------------|---------------|------|--------------|----------|-------|----------|-----|-------|----------|-----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBF |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| 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 | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 13.6 | 13.6 | | 13.6 | 13.6 | | 53.4 | 53.4 | | 53.4 | 53.4 | |
| Actuated g/C Ratio | 0.19 | 0.19 | | 0.19 | 0.19 | | 0.76 | 0.76 | | 0.76 | 0.76 | |
| v/c Ratio | 0.20 | 0.11 | | 0.07 | 0.06 | | 0.05 | 0.16 | | 0.02 | 0.23 | |
| Control Delay | 23.0 | 8.4 | | 20.2 | 9.5 | | 6.3 | 4.4 | | 8.0 | 5.9 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 23.0 | 8.4 | | 20.2 | 9.5 | | 6.3 | 4.4 | | 8.0 | 5.9 | |
| LOS | C | A | | C | A | | A | Α | | A | A | |
| Approach Delay | | 17.1 | | | 14.8 | | , , | 4.6 | | ,, | 6.0 | |
| Approach LOS | | В | | | В | | | 4.0 A | | | Α | |
| Queue Length 50th (m) | 6.2 | 0.3 | | 2.2 | 0.3 | | 0.9 | 8.0 | | 0.4 | 12.0 | |
| Queue Length 95th (m) | 10.3 | 5.0 | | 5.0 | 3.6 | | 3.9 | 15.3 | | 3.6 | 37.2 | |
| Internal Link Dist (m) | 10.0 | 68.8 | | 0.0 | 63.6 | | 0.0 | 162.4 | | 0.0 | 273.6 | |
| Turn Bay Length (m) | 35.0 | 00.0 | | 20.0 | 00.0 | | 65.0 | 102.4 | | 45.0 | 210.0 | |
| Base Capacity (vph) | 540 | 594 | | 534 | 632 | | 598 | 2600 | | 701 | 2574 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.10 | 0.06 | | 0.04 | 0.03 | | 0.05 | 0.16 | | 0.02 | 0.23 | |
| | 0.10 | 0.00 | | 0.04 | 0.03 | | 0.05 | 0.10 | | 0.02 | 0.23 | |
| Intersection Summary | Other | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 70 | | | | | | | | | | | | |
| Actuated Cycle Length: 70 | and ONDTL and | C.CDTL C | | | | | | | | | | |
| Offset: 0 (0%), Referenced to pha | ase 2:NBTL and | 6:5B1L, St | art of Greer | 1 | | | | | | | | |
| Natural Cycle: 65 | tl | | | | | | | | | | | |
| Control Type: Actuated-Coordina | tea | | | | | | | | | | | |
| Maximum v/c Ratio: 0.23 | | | | | | | | | | | | |
| Intersection Signal Delay: 6.5 | 0.00/ | | | | ersection LC | | | | | | | |
| Intersection Capacity Utilization 4 Analysis Period (min) 15 | 3.6% | | | ICI | J Level of S | ervice A | | | | | | |
| Analysis Fellou (IIIIII) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie [| Or & Fitzgerald F | Rd/Menten F | Pl | | | | | | | | | |
| 1 Ø2 (R) | | | | | - 4 | Ø4 | | | | | | |
| 36 s | | | | | 34 s | - | | | | | | |
| \ | | | | | 4- | _ | | | | | | |
| | | | | | - ₩ | Ø8 | | | | | | |

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|------------------------------------|-------|-------|----------|----------|--------|----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | | 44 | # | ሻ | 44 |
| Traffic Volume (vph) | 27 | 35 | 413 | 109 | 21 | 572 |
| Future Volume (vph) | 27 | 35 | 413 | 109 | 21 | 572 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | | 30.0 | 50.0 | |
| Storage Lanes | 1 | 0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | | | | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Ped Bike Factor | 1.00 | | | | | |
| Frt | 0.924 | | | 0.850 | | |
| Flt Protected | 0.979 | | | | 0.950 | |
| Satd. Flow (prot) | 1646 | 0 | 3424 | 1547 | 1729 | 3424 |
| Flt Permitted | 0.979 | 0 | U ILT | 1011 | 0.510 | U ILT |
| Satd. Flow (perm) | 1646 | 0 | 3424 | 1547 | 928 | 3424 |
| Right Turn on Red | 1070 | Yes | UTLT | Yes | 320 | U727 |
| Satd. Flow (RTOR) | 35 | 103 | | 109 | | |
| Link Speed (k/h) | 40 | | 60 | 103 | | 60 |
| Link Speed (k/n) Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| | 5.4 | | 12.0 | | | 11.2 |
| Confl. Peds. (#/hr) | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 1% | 0% | 0% | 1% |
| Adj. Flow (vph) | 27 | 35 | 413 | 109 | 21 | 572 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 62 | 0 | 413 | 109 | 21 | 572 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Number of Detectors | 1 | | 2 | 1 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | OITEX | | OITEX | OITEX | OI! LX | OITEX |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 28.7 | 0.0 | 0.0 | 28.7 |
| Detector 2 Position(m) | | | | | | |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | CI+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | _ | _ | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | | | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Total Split (s) | 33.0 | | 37.0 | 37.0 | 37.0 | 37.0 |
| Total Split (%) | 47.1% | | 52.9% | 52.9% | 52.9% | 52.9% |
| Maximum Green (s) | 27.4 | | 31.1 | 31.1 | 31.1 | 31.1 |
| Yellow Time (s) | 3.3 | | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.3 | | 2.2 | 2.2 | 2.2 | 2.2 |
| , 1 tou 1 11110 (3) | 2.5 | | ۷.۷ | ۷.۷ | ۷.۷ | ۷.۷ |

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|-----------------------------------|-----------------|-----------|--------------|----------|--------------|-------------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 2 | | 2 | 2 | | |
| Act Effct Green (s) | 13.4 | | 53.7 | 53.7 | 53.7 | 53.7 |
| Actuated g/C Ratio | 0.19 | | 0.77 | 0.77 | 0.77 | 0.77 |
| v/c Ratio | 0.18 | | 0.16 | 0.09 | 0.03 | 0.22 |
| Control Delay | 12.5 | | 5.5 | 2.4 | 2.0 | 1.5 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 12.5 | | 5.5 | 2.4 | 2.0 | 1.5 |
| LOS | В | | Α. | Α. | Α. | Α |
| Approach Delay | 12.5 | | 4.9 | , (| ,, | 1.5 |
| Approach LOS | 12.3 B | | 4.5 A | | | 1.5 A |
| Queue Length 50th (m) | 3.1 | | 8.1 | 0.0 | 0.2 | 3.2 |
| Queue Length 95th (m) | 8.8 | | 25.6 | 7.3 | 1.0 | 6.1 |
| Internal Link Dist (m) | 36.4 | | 176.0 | 7.0 | 1.0 | 162.4 |
| Turn Bay Length (m) | ООТ | | 170.0 | 30.0 | 50.0 | 102.4 |
| Base Capacity (vph) | 665 | | 2626 | 1212 | 711 | 2626 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.09 | | 0.16 | 0.09 | 0.03 | 0.22 |
| | 0.03 | | 0.10 | 0.03 | 0.00 | 0.22 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70 | | | | | | |
| Actuated Cycle Length: 70 | | | | | | |
| Offset: 9 (13%), Referenced to | phase 2:NBT and | 6:SBTL, S | tart of Gree | n | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coording | nated | | | | | |
| Maximum v/c Ratio: 0.22 | | | | | | |
| Intersection Signal Delay: 3.6 | | | | | tersection L | |
| Intersection Capacity Utilization | 1 36.3% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| | | | | | | |
| Splits and Phases: 3: Moodie | e Dr & Loblaws | | | | | |
| l † | | | | | | |
| Ø2 (R) | | | | | | |
| 37 s | | | | | | |
| - K | | | | | | _ |
| ▼ Ø6 (R) | | | | | | √ Ø8 |
| - 20 (10) | | | | | | |

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|--|------------|-------------|---------------|------------|-------------|------------|------------|-------------|---------------|------------|-------------|------------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 75 | 44 | 7 | ¥ | 44 | 7 | 14.54 | 44 | 7 | 14.54 | 44 | 7 |
| Traffic Volume (vph) | 157 | 717 | 189 | 174 | 587 | 113 | 240 | 246 | 191 | 214 | 214 | 157 |
| Future Volume (vph) | 157 | 717 | 189 | 174 | 587 | 113 | 240 | 246 | 191 | 214 | 214 | 157 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | 0.05 | 4.00 | 40.0 | 0.05 | 4.00 | 40.0 | ٥٥٢ | 4.00 | 50.0 | 0.05 | 1.00 |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Ped Bike Factor Frt | | | 0.99 0.850 | 1.00 | | 0.850 | 1.00 | | 0.97 0.850 | 0.98 | | 0.99 |
| FIt Protected | 0.950 | | 0.000 | 0.950 | | 0.000 | 0.950 | | 0.000 | 0.950 | | 0.850 |
| Satd. Flow (prot) | 1729 | 3424 | 1547 | 1729 | 3424 | 1532 | 3321 | 3424 | 1532 | 3321 | 3424 | 1532 |
| Flt Permitted | 0.950 | 3424 | 1347 | 0.950 | 3424 | 1332 | 0.950 | 3424 | 1332 | 0.950 | 3424 | 1332 |
| Satd. Flow (perm) | 1729 | 3424 | 1524 | 1727 | 3424 | 1532 | 3316 | 3424 | 1489 | 3256 | 3424 | 1511 |
| Right Turn on Red | 1123 | J424 | Yes | 1121 | J424 | Yes | 3310 | J424 | Yes | 3230 | J424 | Yes |
| Satd. Flow (RTOR) | | | 189 | | | 139 | | | 191 | | | 157 |
| Link Speed (k/h) | | 60 | 100 | | 60 | 100 | | 60 | 101 | | 60 | 101 |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | | | 2 | 2 | | | 1 | | 13 | 13 | .2.0 | 1 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 157 | 717 | 189 | 174 | 587 | 113 | 240 | 246 | 191 | 214 | 214 | 157 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 157 | 717 | 189 | 174 | 587 | 113 | 240 | 246 | 191 | 214 | 214 | 157 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 7.4 | | | 7.4 | |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | • | 14 | 24 | | 14 | 24 | • | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 0.0 | 30.5 0.0 | 6.1 0.0 | 6.1 0.0 | 30.5 0.0 | 6.1 0.0 | 6.1 0.0 | 30.5 0.0 | 6.1 0.0 | 6.1 0.0 | 30.5 0.0 | 6.1 0.0 |
| Trailing Detector (m) Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | Cl+Ex | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex |
| Detector 1 Channel | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OITEX | OIILX |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 2 | | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 26.0 | 35.0 | 35.0 | 31.0 | 40.0 | 40.0 | 27.0 | 37.7 | 37.7 | 27.0 | 37.7 | 37.7 |
| Total Split (%) | 19.9% | 26.8% | 26.8% | 23.7% | 30.6% | 30.6% | 20.7% | 28.8% | 28.8% | 20.7% | 28.8% | 28.8% |
| Maximum Green (s) | 19.6 | 28.6 | 28.6 | 24.6 | 33.6 | 33.6 | 20.5 | 31.0 | 31.0 | 20.5 | 31.0 | 31.0 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |

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|-------------------------|------|----------|-------|------|----------|-------|------|----------|------|----------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 |
| Act Effct Green (s) | 16.7 | 55.0 | 55.0 | 18.4 | 56.7 | 56.7 | 14.7 | 17.6 | 17.6 | 13.7 | 16.6 | 16.6 |
| Actuated g/C Ratio | 0.13 | 0.42 | 0.42 | 0.14 | 0.43 | 0.43 | 0.11 | 0.13 | 0.13 | 0.10 | 0.13 | 0.13 |
| v/c Ratio | 0.71 | 0.50 | 0.25 | 0.72 | 0.40 | 0.15 | 0.64 | 0.53 | 0.52 | 0.61 | 0.49 | 0.48 |
| Control Delay | 71.8 | 32.3 | 5.9 | 69.6 | 29.3 | 3.6 | 63.3 | 55.7 | 11.2 | 63.4 | 55.6 | 11.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 71.8 | 32.3 | 5.9 | 69.6 | 29.3 | 3.6 | 63.3 | 55.7 | 11.2 | 63.4 | 55.6 | 11.5 |
| LOS | Е | С | Α | Е | С | Α | Е | Е | В | Е | Е | В |
| Approach Delay | | 33.4 | | | 34.0 | | | 45.8 | | | 46.6 | |
| Approach LOS | | С | | | С | | | D | | | D | |
| Queue Length 50th (m) | 39.2 | 67.2 | 0.0 | 43.4 | 51.5 | 0.0 | 30.9 | 32.3 | 0.0 | 27.6 | 28.1 | 0.0 |
| Queue Length 95th (m) | 60.5 | #129.2 | 18.6 | 64.2 | 91.6 | 9.1 | 43.2 | 39.1 | 18.3 | 39.3 | 34.9 | 17.2 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 264 | 1440 | 750 | 326 | 1484 | 742 | 520 | 818 | 500 | 520 | 812 | 478 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.59 | 0.50 | 0.25 | 0.53 | 0.40 | 0.15 | 0.46 | 0.30 | 0.38 | 0.41 | 0.26 | 0.33 |

Intersection Summary

Area Type: Other

Cycle Length: 130.7

Actuated Cycle Length: 130.7

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 38.6 Intersection Capacity Utilization 75.3%

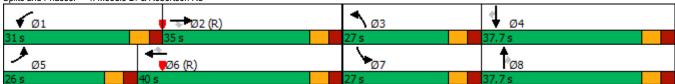
Intersection LOS: D ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

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|---|--|---|---|--|--|---|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | <u> </u> | | NDL N | * | ↑ ↑ | 7 |
| Traffic Volume (vph) | 134 | 229 | 1 61 | TT 524 | TT 903 | 83 |
| Future Volume (vph) | 134 | 229 | 61 | 524 | 903 | 83 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | 1000 | 1000 | 40.0 |
| Storage Lanes | 1 | 100.0 | 120.0 | | | 40.0 |
| Taper Length (m) | 7.6 | | 60.0 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Ped Bike Factor | 1.00 | 0.99 | 1.00 | 0.90 | 0.90 | 1.00 |
| Frt Frt | | 0.99 | | | | 0.850 |
| Flt Protected | 0.950 | 0.000 | 0.950 | | | 0.000 |
| | | 1517 | | 2205 | 2205 | 1500 |
| Satd. Flow (prot) | 1712 | 1517 | 1695 | 3325 | 3325 | 1502 |
| Flt Permitted | 0.950 | 4407 | 0.297 | 2005 | 2025 | 4500 |
| Satd. Flow (perm) | 1712 | 1497 | 530 | 3325 | 3325 | 1502 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | 139 | | | | 83 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 297.6 | 191.7 | |
| Travel Time (s) | 9.9 | | | 17.9 | 11.5 | |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 4% | 4% | 3% |
| Adj. Flow (vph) | 134 | 229 | 61 | 524 | 903 | 83 |
| Shared Lane Traffic (%) | 107 | | V 1 | V- 1 | 300 | |
| Lane Group Flow (vph) | 134 | 229 | 61 | 524 | 903 | 83 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | | Left | Left | Left | Right |
| Median Width(m) | 3.7 | Right | Leit | 3.7 | 3.7 | Rigiil |
| | | | | | | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | 4.05 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | OI - EX | Ų. · L A | J. L. | J. L. | J. L. | J. LA |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | | | | | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | | 28.7 | 28.7 | |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| D / / 0.01 | | | | | | |
| Detector 2 Channel | | | | 0.0 | 0.0 | |
| Detector 2 Channel Detector 2 Extend (s) | | | | | A L A | D |
| | Prot | Perm | Perm | NA | NA | Perm |
| Detector 2 Extend (s) | Prot 4 | Perm | Perm | NA 2 | NA 6 | Perm |
| Detector 2 Extend (s) Turn Type Protected Phases | | | | | | |
| Detector 2 Extend (s) Turn Type Protected Phases Permitted Phases | 4 | 4 | 2 | 2 | 6 | 6 |
| Detector 2 Extend (s) Turn Type Protected Phases Permitted Phases Detector Phase | | | | | | |
| Detector 2 Extend (s) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase | 4 | 4 | 2 2 | 2 | 6 | 6 6 |
| Detector 2 Extend (s) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) | 4 10.0 | 4 4 | 2 2 | 2 2 10.0 | 6 10.0 | 6 6 10.0 |
| Detector 2 Extend (s) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) | 4 4 10.0 28.3 | 4 4 10.0 28.3 | 2 2 10.0 15.6 | 2 2 10.0 15.6 | 6 6 10.0 24.6 | 6 6 10.0 24.6 |
| Detector 2 Extend (s) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) | 4 4 10.0 28.3 28.3 | 4 4 10.0 28.3 28.3 | 2 2 10.0 15.6 52.0 | 2 2 10.0 15.6 52.0 | 6 6 10.0 24.6 52.0 | 6 6 10.0 24.6 52.0 |
| Detector 2 Extend (s) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) | 4 10.0 28.3 28.3 35.2% | 4 4 10.0 28.3 28.3 35.2% | 2 2 10.0 15.6 52.0 64.8% | 2 2 10.0 15.6 52.0 64.8% | 6 6 10.0 24.6 52.0 64.8% | 6 6 10.0 24.6 52.0 64.8% |
| Detector 2 Extend (s) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) Maximum Green (s) | 4 10.0 28.3 28.3 35.2% 22.0 | 4 4 10.0 28.3 28.3 35.2% 22.0 | 2 2 10.0 15.6 52.0 64.8% 46.4 | 2 10.0 15.6 52.0 64.8% 46.4 | 6 10.0 24.6 52.0 64.8% 46.4 | 6 6 10.0 24.6 52.0 64.8% 46.4 |
| Detector 2 Extend (s) Turn Type Protected Phases Permitted Phases Detector Phase Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) | 4 10.0 28.3 28.3 35.2% | 4 4 10.0 28.3 28.3 35.2% | 2 2 10.0 15.6 52.0 64.8% | 2 2 10.0 15.6 52.0 64.8% | 6 6 10.0 24.6 52.0 64.8% | 6 6 10.0 24.6 52.0 64.8% |

| | • | * | 1 | † | Ţ | 1 | |
|-------------------------------------|----------------|------------|--------------|----------|--------------|-----------|-----|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 | |
| Lead/Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Recall Mode | None | None | C-Max | C-Max | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 | |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 | |
| Pedestrian Calls (#/hr) | 0 | 0 | | | 0 | 0 | |
| Act Effct Green (s) | 12.7 | 12.7 | 55.7 | 55.7 | 55.7 | 55.7 | |
| Actuated g/C Ratio | 0.16 | 0.16 | 0.69 | 0.69 | 0.69 | 0.69 | |
| v/c Ratio | 0.50 | 0.65 | 0.17 | 0.23 | 0.39 | 0.08 | |
| Control Delay | 36.6 | 21.8 | 6.5 | 5.1 | 6.2 | 1.6 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 36.6 | 21.8 | 6.5 | 5.1 | 6.2 | 1.6 | |
| LOS | D | С | Α | Α | Α | Α | |
| Approach Delay | 27.3 | | | 5.3 | 5.8 | | |
| Approach LOS | С | | | Α | Α | | |
| Queue Length 50th (m) | 19.3 | 12.7 | 2.5 | 12.1 | 24.1 | 0.0 | |
| Queue Length 95th (m) | 32.5 | 31.6 | 8.9 | 23.5 | 44.5 | 4.4 | |
| Internal Link Dist (m) | 197.1 | | | 273.6 | 167.7 | | |
| Turn Bay Length (m) | | 100.0 | 120.0 | | | 40.0 | |
| Base Capacity (vph) | 469 | 511 | 367 | 2307 | 2307 | 1067 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.29 | 0.45 | 0.17 | 0.23 | 0.39 | 0.08 | |
| Intersection Summary | | | | | | | |
| Area Type: | Other | | | | | | |
| Cycle Length: 80.3 | | | | | | | |
| Actuated Cycle Length: 80.3 | | | | | | | |
| Offset: 6 (7%), Referenced to pha | ase 2:NBTL and | 6:SBT, Sta | art of Green | | | | |
| Natural Cycle: 55 | | | | | | | |
| Control Type: Actuated-Coordina | ited | | | | | | |
| Maximum v/c Ratio: 0.65 | | | | | | | |
| Intersection Signal Delay: 9.7 | | | | Int | ersection L | OS: A | |
| Intersection Capacity Utilization 5 | 57.6% | | | IC | U Level of S | Service B | |
| Analysis Period (min) 15 | | | | | | | |
| Outto and Discours A. Mandia | D. 0 T D. | | | | | | |
| Splits and Phases: 1: Moodie I | Dr & Timm Dr | | | | | | |
| . ≪ 1 an m | | | | | | | 4 |
| Ø2 (R) | | | | | | | |
| 528 | | | | | | | 28. |
| (1) (n) | | | | | | | ı |
| Ø6 (R) | | | | | | | |

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|---|----------|----------|-------|-------|----------|--------|-------|------------|-------------|----------|------------|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 7 | ĵ. | | * | 1 | | * | ት ቤ | | * | ∳ ሴ | |
| Traffic Volume (vph) | 74 | 28 | 25 | 18 | 6 | 8 | 49 | 540 | 64 | 111 | 756 | 186 |
| Future Volume (vph) | 74 | 28 | 25 | 18 | 6 | 8 | 49 | 540 | 64 | 111 | 756 | 186 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 0.050 | 0.929 | | 0.050 | 0.914 | | 0.050 | 0.984 | | 0.050 | 0.970 | |
| Flt Protected | 0.950 | 4504 | ^ | 0.950 | 4440 | ^ | 0.950 | 0007 | ^ | 0.950 | 0000 | • |
| Satd. Flow (prot) | 1679 | 1534 | 0 | 1729 | 1410 | 0 | 1695 | 3297 | 0 | 1712 | 3222 | 0 |
| Flt Permitted | 0.748 | 4504 | ^ | 0.722 | 4440 | 0 | 0.286 | 2007 | ^ | 0.423 | 2000 | 0 |
| Satd. Flow (perm) | 1318 | 1534 | 0 | 1311 | 1410 | 0 | 510 | 3297 | 0 | 759 | 3222 | 0 |
| Right Turn on Red | | ٥٢ | Yes | | 0 | Yes | | 00 | Yes | | ГЛ | Yes |
| Satd. Flow (RTOR) | | 25 50 | | | 8 40 | | | 23 60 | | | 54 60 | |
| Link Speed (k/h) | | 92.8 | | | 87.6 | | | 186.4 | | | 297.6 | |
| Link Distance (m) | | 6.7 | | | 7.9 | | | 11.2 | | | 17.9 | |
| Travel Time (s) | 3 | 0.7 | 3 | 3 | 7.9 | 3 | 3 | 11.2 | 6 | 6 | 17.9 | 2 |
| Confl. Peds. (#/hr) Peak Hour 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 |
| Heavy Vehicles (%) | 3% | 0% | 20% | 0% | 17% | 1.00 | 2% | 3% | 2% | 1.00 | 4% | 2% |
| , , | 3% 74 | 28 | 20% | 18 | 17% | 8 | 49 | 540 | 64 | 111 | 756 | 186 |
| Adj. Flow (vph) Shared Lane Traffic (%) | 74 | 20 | 20 | 10 | U | 0 | 49 | 340 | 04 | 111 | 730 | 100 |
| Lane Group Flow (vph) | 74 | 53 | 0 | 18 | 14 | 0 | 49 | 604 | 0 | 111 | 942 | 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) | Leit | 3.7 | Night | Leit | 3.7 | Nigrit | Leit | 3.7 | Right | Leit | 3.7 | Right |
| 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 | | 1.0 | | | 1.0 | | | 1.0 | | | 1.0 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1100 | 14 | 24 | | 14 | 24 | 1100 | 14 | 24 | 1100 | 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 | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+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 | | CI+Ex | | | CI+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| 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 | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 46.0 | 46.0 | | 46.0 | 46.0 | |
| Total Split (%) | 42.5% | 42.5% | | 42.5% | 42.5% | | 57.5% | 57.5% | | 57.5% | 57.5% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 40.3 | 40.3 | | 40.3 | 40.3 | |
| Yellow Time (s) | 3.3 | 3.3 | | 3.3 | 3.3 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| All-Red Time (s) | 2.7 | 2.7 | | 2.7 | 2.7 | | 2.0 | 2.0 | | 2.0 | 2.0 | |

| Lane Group Lost Time Adjust (s) Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) Flash Dont Walk (s) Pedestrian Calls (#/hr) Act Effct Green (s) Actuated g/C Ratio v/c Ratio Control Delay | 3.0 None 7.0 21.0 2 13.9 0.17 0.32 | 3.0 None 7.0 21.0 2 | EBR | 3.0 None | 0.0 6.0 3.0 None | WBR | NBL 0.0 5.7 | NBT 0.0 5.7 | NBR | SBL 0.0 5.7 | SBT 0.0 5.7 | SBF |
|---|---|---|---------------|-------------|---------------------------|----------|-------------------|-------------------|-----|-------------------|-------------------|-----|
| Total Lost Time (s) Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) Flash Dont Walk (s) Pedestrian Calls (#/hr) Act Effct Green (s) Actuated g/C Ratio v/c Ratio | 3.0 None 7.0 21.0 2 13.9 0.17 0.32 | 3.0 None 7.0 21.0 2 | | 3.0 None | 3.0 None | | 3.0 | 5.7 3.0 | | 5.7 | 5.7 | |
| Lead/Lag Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) Flash Dont Walk (s) Pedestrian Calls (#/hr) Act Effct Green (s) Actuated g/C Ratio | 3.0 None 7.0 21.0 2 13.9 0.17 0.32 | 3.0 None 7.0 21.0 2 13.9 | | 3.0 None | 3.0 None | | 3.0 | 3.0 | | | | |
| Lead-Lag Optimize? Vehicle Extension (s) Recall Mode Walk Time (s) Flash Dont Walk (s) Pedestrian Calls (#/hr) Act Effct Green (s) Actuated g/C Ratio | None 7.0 21.0 2 13.9 0.17 0.32 | None 7.0 21.0 2 13.9 | | None | None | | | | | 3.0 | 3.0 | |
| Vehicle Extension (s) Recall Mode Walk Time (s) Flash Dont Walk (s) Pedestrian Calls (#/hr) Act Effct Green (s) Actuated g/C Ratio V/c Ratio | None 7.0 21.0 2 13.9 0.17 0.32 | None 7.0 21.0 2 13.9 | | None | None | | | | | 3.0 | 3.0 | |
| Vehicle Extension (s) Recall Mode Walk Time (s) Flash Dont Walk (s) Pedestrian Calls (#/hr) Act Effct Green (s) Actuated g/C Ratio V/c Ratio | None 7.0 21.0 2 13.9 0.17 0.32 | None 7.0 21.0 2 13.9 | | None | None | | | | | 3.0 | 3.0 | |
| Recall Mode Walk Time (s) Flash Dont Walk (s) Pedestrian Calls (#/hr) Act Effct Green (s) Actuated g/C Ratio V/c Ratio | 7.0 21.0 2 13.9 0.17 0.32 | 7.0 21.0 2 13.9 | | | | | 0.14 | | | | | |
| Flash Dont Walk (s) Pedestrian Calls (#/hr) Act Effct Green (s) Actuated g/C Ratio v/c Ratio | 21.0 2 13.9 0.17 0.32 | 21.0 2 13.9 | | 7.0 | | | C-Max | C-Max | | C-Max | C-Max | |
| Flash Dont Walk (s) Pedestrian Calls (#/hr) Act Effct Green (s) Actuated g/C Ratio v/c Ratio | 2 13.9 0.17 0.32 | 2 13.9 | | | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Pedestrian Calls (#/hr) Act Effct Green (s) Actuated g/C Ratio //c Ratio | 2 13.9 0.17 0.32 | 2 13.9 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Act Effct Green (s) Actuated g/C Ratio v/c Ratio | 13.9 0.17 0.32 | 13.9 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Actuated g/C Ratio | 0.17 0.32 | | | 13.9 | 13.9 | | 58.7 | 58.7 | | 58.7 | 58.7 | |
| v/c Ratio | 0.32 | 0.17 | | 0.17 | 0.17 | | 0.73 | 0.73 | | 0.73 | 0.73 | |
| | | 0.18 | | 0.08 | 0.06 | | 0.13 | 0.25 | | 0.20 | 0.40 | |
| | 30.5 | 16.7 | | 24.6 | 16.4 | | 5.9 | 4.2 | | 7.9 | 6.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 30.5 | 16.7 | | 24.6 | 16.4 | | 5.9 | 4.2 | | 7.9 | 6.7 | |
| LOS | 30.5 C | В | | 24.0 C | В | | J.9 A | 4.2 A | | 7.9 A | Α | |
| Approach Delay | U | 24.7 | | U | 21.0 | | | 4.4 | | | 6.9 | |
| Approach LOS | | 24.7 C | | | 21.0 C | | | 4.4 A | | | 0.9 A | |
| Queue Length 50th (m) | 10.6 | 3.9 | | 2.5 | 0.8 | | 1.9 | 12.9 | | 4.3 | 21.4 | |
| | 16.7 | 9.9 | | 6.0 | 4.2 | | 10.6 | 38.4 | | 19.8 | 63.5 | |
| Queue Length 95th (m) nternal Link Dist (m) | 10.7 | 68.8 | | 0.0 | 63.6 | | 10.0 | 162.4 | | 19.0 | | |
| | 25.0 | 00.0 | | 20.0 | 03.0 | | CE 0 | 102.4 | | 45.0 | 273.6 | |
| Turn Bay Length (m) | 35.0 461 | 553 | | 20.0 458 | 498 | | 65.0 374 | 2425 | | 45.0 557 | 0270 | |
| Base Capacity (vph) | | | | | | | | | | | 2378 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | - | - | | _ | - | | • | - | | • | | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.16 | 0.10 | | 0.04 | 0.03 | | 0.13 | 0.25 | | 0.20 | 0.40 | |
| Intersection Summary | | | | | | | | | | | | |
| 71 | ther | | | | | | | | | | | |
| Cycle Length: 80 | | | | | | | | | | | | |
| Actuated Cycle Length: 80 | | | | | | | | | | | | |
| Offset: 68 (85%), Referenced to phase | se 2:NBTL a | nd 6:SBTL, | Start of Gree | en | | | | | | | | |
| Natural Cycle: 65 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinated | | | | | | | | | | | | |
| Maximum v/c Ratio: 0.40 | | | | | | | | | | | | |
| Intersection Signal Delay: 7.4 | | | | | ersection LO | | | | | | | |
| Intersection Capacity Utilization 63.4 | % | | | ICl | J Level of Se | ervice B | | | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie Dr & | Fitzgerald F | Rd/Menten F | Pl | | | | | | | | | |
| | | | | | | | | | | | | |
| Ø2 (R) | | | | | | | Ø4 | | | | | |
| 46 s | | | | | | 34 s | | | | | | |
| Ø6 (R) | | | | | | 12 | Ø8 | | | | | |

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|--|------------|-------|------------------|--------|-----------------|------------------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | WDL W | WDIC | ↑ ↑ | NDK ** | SDL K | ↑ ↑ |
| Traffic Volume (vph) | 16 | 18 | TT 651 | 15 | 21 | TT 777 |
| Future Volume (vph) | 16 | 18 | 651 | 15 | 21 | 777 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | 1000 | 30.0 | 50.0 | 1000 |
| Storage Lanes | 1 | 0.0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | | | | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | 0.929 | | | 0.850 | | |
| Flt Protected | 0.977 | | | | 0.950 | |
| Satd. Flow (prot) | 1516 | 0 | 3325 | 1547 | 1517 | 3325 |
| Flt Permitted | 0.977 | | | | 0.404 | |
| Satd. Flow (perm) | 1516 | 0 | 3325 | 1547 | 645 | 3325 |
| Right Turn on Red | | Yes | - 7 | Yes | | |
| Satd. Flow (RTOR) | 18 | . 30 | | 15 | | |
| Link Speed (k/h) | 40 | | 60 | | | 60 |
| Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 19% | 0% | 4% | 0% | 1.00 | 4% |
| Adj. Flow (vph) | 16 | 18 | 651 | 15 | 21 | 777 |
| Shared Lane Traffic (%) | 10 | 10 | 001 | 10 | 4 1 | 111 |
| Lane Group Flow (vph) | 34 | 0 | 651 | 15 | 21 | 777 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | | Left | Right | Left | Left |
| Median Width(m) | 3.7 | Right | 7.4 | ragni | LUIL | 7.4 |
| | 0.0 | | 0.0 | | | 0.0 |
| Link Offset(m) Crosswalk Width(m) | 4.9 | | 4.9 | | | 4.9 |
| | 4.9 | | 4.9 | | | 4.9 |
| Two way Left Turn Lane | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Headway Factor | | | 1.06 | | | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 0 | 14 | 24 | |
| Number of Detectors | 1 | | 2 | 1 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | 28.7 | | | 28.7 |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | CI+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | ****** | ****** | 6 |
| Permitted Phases | | | | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | | | _ | _ | | |
| Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Total Split (s) | 33.0 | | 47.0 | 47.0 | 47.0 | 47.0 |
| Total Split (%) | 41.3% | | 58.8% | 58.8% | 58.8% | 58.8% |
| Maximum Green (s) | 27.4 | | 41.1 | 41.1 | 41.1 | 41.1 |
| Yellow Time (s) | 3.3 | | 3.7 | 3.7 | 3.7 | 3.7 |
| | 2.3 | | 2.2 | 2.2 | 2.2 | 2.2 |
| All-Red Time (s) | | | 0.0 | 0.0 | 0.0 | 0.0 |
| I + T: A - + / - \ | | | | ()() | | 0.0 |
| Lost Time Adjust (s) Total Lost Time (s) | 0.0 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |

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|-----------------------------------|--------------------|-------------|--------------|-------------|--------------|-----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | | |
| Act Effct Green (s) | 10.0 | | 71.4 | 71.4 | 71.4 | 71.4 |
| Actuated g/C Ratio | 0.12 | | 0.89 | 0.89 | 0.89 | 0.89 |
| v/c Ratio | 0.12 | | 0.03 | 0.03 | 0.03 | 0.26 |
| Control Delay | 22.0 | | 2.1 | 1.5 | 3.1 | 2.3 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 22.0 | | 2.1 | 1.5 | 3.1 | 2.3 |
| LOS | 22.0 C | | 2.1 A | 1.5 A | 3.1 A | 2.3 A |
| Approach Delay | 22.0 | | 2.0 | А | А | 2.3 |
| Approach LOS | 22.0 C | | | | | |
| | | | A | 0.0 | 0.0 | A |
| Queue Length 50th (m) | 2.2 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Length 95th (m) | 9.9 | | 19.3 | 1.2 | m2.3 | 25.9 |
| Internal Link Dist (m) | 36.4 | | 176.0 | 00.0 | 50.0 | 162.4 |
| Turn Bay Length (m) | =0.4 | | 0007 | 30.0 | 50.0 | 0007 |
| Base Capacity (vph) | 531 | | 2967 | 1382 | 575 | 2967 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.06 | | 0.22 | 0.01 | 0.04 | 0.26 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 80 | | | | | | |
| Actuated Cycle Length: 80 | | | | | | |
| Offset: 58 (73%), Referenced t | to phase 2:NBT and | d 6:SBTL, S | Start of Gre | en | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordi | inated | | | | | |
| Maximum v/c Ratio: 0.26 | | | | | | |
| Intersection Signal Delay: 2.6 | | | | Int | tersection L | OS: A |
| Intersection Capacity Utilization | n 40.6% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| m Volume for 95th percentile | e aueue is metered | by upstream | m signal. | | | |
| tolamo loi com porconale | quous is motores | aponou. | o.ga | | | |
| Splits and Phases: 3: Moodi | ie Dr & Loblaws | | | | | |
| A | | | | | | |
| ∮ ⁽ Ø2 (R) | | | | | | |
| 47 s | | | | | | |
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|-------------------------------------|----------|-----------|------------|-------|-----------|------------|-------|-----------|------------|----------|-----------|------------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | 44 | 7 | * | 44 | 7 | 16.56 | 44 | 7 | 16.5% | ^ | 7 |
| Traffic Volume (vph) | 70 | 1211 | 112 | 81 | 307 | 152 | 225 | 415 | 309 | 356 | 202 | 107 |
| Future Volume (vph) | 70 | 1211 | 112 | 81 | 307 | 152 | 225 | 415 | 309 | 356 | 202 | 107 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | | | 40.0 | | | 40.0 | | | 50.0 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Ped Bike Factor | 0.99 | | 0.98 | 1.00 | | 0.98 | 0.99 | | 0.98 | 1.00 | | 0.98 |
| Frt | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 |
| Flt Protected | 0.950 | 0000 | 4.470 | 0.950 | 0000 | 4547 | 0.950 | 0005 | 4500 | 0.950 | 0000 | 4.450 |
| Satd. Flow (prot) | 1631 | 3390 | 1473 | 1712 | 3232 | 1517 | 3321 | 3325 | 1532 | 3288 | 3232 | 1459 |
| Flt Permitted | 0.950 | 2200 | 4447 | 0.950 | 2020 | 1400 | 0.950 | 2205 | 4500 | 0.950 | 2020 | 1.121 |
| Satd. Flow (perm) | 1622 | 3390 | 1447 | 1710 | 3232 | 1486 | 3289 | 3325 | 1506 | 3273 | 3232 | 1431 |
| Right Turn on Red | | | Yes 139 | | | Yes 152 | | | Yes 142 | | | Yes 137 |
| Satd. Flow (RTOR) | | 60 | 139 | | 60 | 102 | | 60 | 142 | | 60 | 137 |
| Link Speed (k/h) Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| ` , | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Travel Time (s) Confl. Peds. (#/hr) | 6 | 10.2 | 4 | 4 | 23.1 | 6 | 6 | 11.2 | 4 | 4 | 12.0 | 6 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 6% | 2% | 5% | 1.00 | 7% | 2% | 1.00 | 4% | 1.00 | 2% | 7% | 6% |
| Adj. Flow (vph) | 70 | 1211 | 112 | 81 | 307 | 152 | 225 | 415 | 309 | 356 | 202 | 107 |
| Shared Lane Traffic (%) | 70 | 1211 | 112 | O I | 307 | 102 | 223 | 410 | 303 | 330 | 202 | 107 |
| Lane Group Flow (vph) | 70 | 1211 | 112 | 81 | 307 | 152 | 225 | 415 | 309 | 356 | 202 | 107 |
| 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) | Lon | 3.7 | rtigitt | Loit | 3.7 | rugiit | Loit | 7.4 | rugiit | Loit | 7.4 | rtigrit |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | | 14 | 24 | | 14 | 24 | | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | | CI+Ex | | | CI+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Detector 2 Extend (s) Turn Type | Prot | 0.0 NA | Perm | Prot | 0.0 NA | Perm | Prot | 0.0 NA | Perm | Prot | 0.0 NA | Perm |
| Protected Phases | 5 | 2 | reiiii | 1 | 6 | Feiiii | 3 | 8 | reiiii | 7 | 4 | Feiiii |
| Permitted Phases | J | | 2 | ı | U | 6 | J | 0 | 8 | - 1 | 4 | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | <u> </u> | | | ' | 0 | | J | 0 | - U | ' | | 7 |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 15.0 | 54.0 | 54.0 | 15.0 | 54.0 | 54.0 | 23.0 | 38.0 | 38.0 | 23.0 | 38.0 | 38.0 |
| Total Split (%) | 11.5% | 41.5% | 41.5% | 11.5% | 41.5% | 41.5% | 17.7% | 29.2% | 29.2% | 17.7% | 29.2% | 29.2% |
| Maximum Green (s) | 8.6 | 47.6 | 47.6 | 8.6 | 47.6 | 47.6 | 16.5 | 31.3 | 31.3 | 16.5 | 31.3 | 31.3 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |
| (3) | | | | | | | | 0.0 | 0.0 | | | 5.5 |

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|-------------------------|-------|--------|-------|-------|-------|-------|------|----------|------|-------|----------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 |
| Act Effct Green (s) | 9.8 | 54.0 | 54.0 | 10.2 | 57.0 | 57.0 | 13.8 | 23.7 | 23.7 | 16.2 | 26.1 | 26.1 |
| Actuated g/C Ratio | 0.08 | 0.42 | 0.42 | 0.08 | 0.44 | 0.44 | 0.11 | 0.18 | 0.18 | 0.12 | 0.20 | 0.20 |
| v/c Ratio | 0.57 | 0.86 | 0.16 | 0.61 | 0.22 | 0.21 | 0.64 | 0.69 | 0.79 | 0.87 | 0.31 | 0.27 |
| Control Delay | 76.4 | 43.2 | 2.7 | 76.9 | 25.5 | 4.9 | 64.1 | 55.2 | 41.6 | 77.3 | 44.9 | 4.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 76.4 | 43.2 | 2.7 | 76.9 | 25.5 | 4.9 | 64.1 | 55.2 | 41.6 | 77.3 | 44.9 | 4.6 |
| LOS | Е | D | Α | Е | С | Α | Е | Е | D | Е | D | Α |
| Approach Delay | | 41.6 | | | 27.4 | | | 52.9 | | | 55.7 | |
| Approach LOS | | D | | | С | | | D | | | Ε | |
| Queue Length 50th (m) | 17.4 | 150.1 | 0.0 | 20.1 | 26.7 | 0.0 | 28.8 | 53.1 | 42.5 | 46.7 | 23.5 | 0.0 |
| Queue Length 95th (m) | #39.4 | #207.3 | 7.5 | #46.0 | 40.2 | 13.8 | 41.4 | 65.2 | 71.2 | #70.8 | 33.2 | 8.1 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 126 | 1407 | 681 | 136 | 1417 | 737 | 421 | 800 | 470 | 417 | 778 | 448 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.56 | 0.86 | 0.16 | 0.60 | 0.22 | 0.21 | 0.53 | 0.52 | 0.66 | 0.85 | 0.26 | 0.24 |

Intersection Summary

Area Type: Other

Cycle Length: 130 Actuated Cycle Length: 130

Offset: 119 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection LOS: D ICU Level of Service E

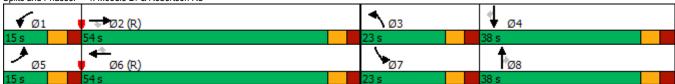
Intersection Signal Delay: 45.1
Intersection Capacity Utilization 86.3%

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

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|--|------------|------------|-----------|------------------|------------------|----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | TOL. | EDK | INDL * | <u>ND1</u> | <u>361</u> | JDR 7 |
| Traffic Volume (vph) | 71 | 78 | 193 | TT 843 | TT 888 | 196 |
| Future Volume (vph) | 71 | 78 | 193 | 843 | 888 | 196 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | | | 40.0 |
| Storage Lanes | 1 | 1 | 1 | | | 1 |
| Taper Length (m) | 7.6 | | 60.0 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | 0.950 | | | |
| Satd. Flow (prot) | 1695 | 1547 | 1712 | 3390 | 3357 | 1547 |
| Flt Permitted | 0.950 | | 0.221 | | | |
| Satd. Flow (perm) | 1695 | 1547 | 398 | 3390 | 3357 | 1547 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | 78 | | | | 196 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 297.6 | 191.7 | |
| Travel Time (s) | 9.9 | | | 17.9 | 11.5 | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 2% | 0% | 1% | 2% | 3% | 0% |
| Adj. Flow (vph) | 71 | 78 | 193 | 843 | 888 | 196 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 71 | 78 | 193 | 843 | 888 | 196 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | | | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | OI. LX | OI. LX | OI. LX | OI. EX | OI. LX | OI. LX |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| D ((O D ()) () | 0.0 | 0.0 | 0.0 | | | 0.0 |
| Detector 2 Position(m) Detector 2 Size(m) | | | | 28.7 | 28.7 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| Detector 2 Type Detector 2 Channel | | | | OI+EX | OI+EX | |
| | | | | 0.0 | 0.0 | |
| Detector 2 Extend (s) | Prot | Perm | nmint | NA | NA | Perm |
| Turn Type | | Perm | pm+pt | | | Perm |
| Protected Phases Permitted Phases | 4 | A | 5 | 2 | 6 | 6 |
| | | 4 | 2 | _ | ^ | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | 40.0 | 40.0 | | 400 | 40.0 | 40.0 |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 10.6 | 15.6 | 24.6 | 24.6 |
| Total Split (s) | 28.3 | 28.3 | 11.0 | 42.0 | 31.0 | 31.0 |
| Total Split (%) | 40.3% | 40.3% | 15.6% | 59.7% | 44.1% | 44.1% |
| | | 22.0 | 5.4 | 36.4 | 25.4 | 25.4 |
| Maximum Green (s) | 22.0 | | | | | |
| Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| Yellow Time (s) All-Red Time (s) | 4.6 1.7 | 4.6 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| Yellow Time (s) | 4.6 | 4.6 | | | | |

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|-------------------------------|-------------------|------------|--------------|----------|-------|-------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 2 | 2 | | | 2 | 2 |
| Act Effct Green (s) | 12.4 | 12.4 | 49.3 | 50.4 | 35.9 | 35.9 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.70 | 0.72 | 0.51 | 0.51 |
| v/c Ratio | 0.24 | 0.23 | 0.46 | 0.35 | 0.52 | 0.22 |
| Control Delay | 25.3 | 7.4 | 10.4 | 6.3 | 15.0 | 3.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 25.3 | 7.4 | 10.4 | 6.3 | 15.0 | 3.2 |
| LOS | С | Α | В | Α | В | Α |
| Approach Delay | 16.0 | | | 7.1 | 12.9 | |
| Approach LOS | В | | | Α | В | |
| Queue Length 50th (m) | 8.5 | 0.0 | 7.3 | 19.7 | 41.0 | 0.0 |
| Queue Length 95th (m) | 15.0 | 8.2 | #25.4 | 48.3 | 72.3 | 11.6 |
| Internal Link Dist (m) | 197.1 | | | 273.6 | 167.7 | |
| Turn Bay Length (m) | | 100.0 | 120.0 | | | 40.0 |
| Base Capacity (vph) | 530 | 537 | 423 | 2429 | 1715 | 886 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.13 | 0.15 | 0.46 | 0.35 | 0.52 | 0.22 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70.3 | 0.1101 | | | | | |
| Actuated Cycle Length: 70.3 | | | | | | |
| Offset: 55 (78%), Referenced | to phase 2:NBTL a | nd 6:SBT 9 | Start of Gre | en | | |
| Natural Cycle: 65 | p L. I L u | 0.051, 0 | J 01 010 | . | | |
| Control Type: Actuated-Coordi | inated | | | | | |
| Maximum v/c Ratio: 0.52 | matou | | | | | |

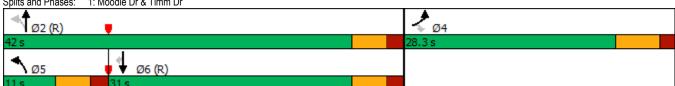
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Maximum v/c Ratio: 0.52
Intersection Signal Delay: 10.4
Intersection Capacity Utilization 60.1%
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Moodie Dr & Timm Dr



Intersection LOS: B ICU Level of Service B

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|-----------------------------------|--------|-----------|---------|--------|-----------|---------|--------|------------|-------------|----------|---------------|---------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 7 | 1 | | * | ĵ, | | 7 | ት ጌ | | * | ♦ % | |
| Traffic Volume (vph) | 190 | 6 | 67 | 91 | 20 | 55 | 31 | 693 | 46 | 27 | 822 | 69 |
| Future Volume (vph) | 190 | 6 | 67 | 91 | 20 | 55 | 31 | 693 | 46 | 27 | 822 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 0.050 | 0.862 | | 0.050 | 0.890 | | 0.050 | 0.991 | | 0.050 | 0.988 | |
| Flt Protected | 0.950 | 4500 | ^ | 0.950 | 4005 | • | 0.950 | 00.40 | ^ | 0.950 | 0000 | • |
| Satd. Flow (prot) | 1712 | 1506 | 0 | 1695 | 1605 | 0 | 1453 | 3349 | 0 | 1662 | 3333 | 0 |
| Flt Permitted | 0.708 | 4500 | ٥ | 0.709 | 1005 | 0 | 0.285 | 2240 | ٥ | 0.351 | 2222 | 0 |
| Satd. Flow (perm) | 1275 | 1506 | 0 | 1262 | 1605 | 0 | 436 | 3349 | 0 | 612 | 3333 | 0 |
| Right Turn on Red | | 67 | Yes | | 55 | Yes | | 12 | Yes | | 16 | Yes |
| Satd. Flow (RTOR) | | 50 | | | 40 | | | 60 | | | 60 | |
| Link Speed (k/h) | | 92.8 | | | 87.6 | | | 186.4 | | | 297.6 | |
| Link Distance (m) Travel Time (s) | | 92.8 | | | 7.9 | | | 11.2 | | | 297.6 17.9 | |
| Confl. Peds. (#/hr) | 1 | 0.7 | 4 | 4 | 7.9 | 1 | 2 | 11.2 | 8 | 8 | 17.9 | 2 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 1.00 | 0% | 3% | 2% | 0% | 0% | 19% | 2% | 4% | 4% | 2% | 6% |
| Adj. Flow (vph) | 190 | 6 | 67 | 91 | 20 | 55 | 31 | 693 | 46 | 27 | 822 | 69 |
| Shared Lane Traffic (%) | 130 | U | O1 | 31 | 20 | 33 | 01 | 033 | 40 | 21 | 022 | 03 |
| Lane Group Flow (vph) | 190 | 73 | 0 | 91 | 75 | 0 | 31 | 739 | 0 | 27 | 891 | 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) | LOIL | 3.7 | rtigiit | LOIL | 3.7 | rtigrit | LOIL | 3.7 | rtigiit | LOIL | 3.7 | rtigrit |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| 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 | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+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 | | CI+Ex | | | CI+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Detector 2 Extend (s) Turn Type | Perm | 0.0 NA | | Perm | 0.0 NA | | Perm | 0.0 NA | | Perm | 0.0 NA | |
| Protected Phases | reilli | 4 | | reiiii | 8 | | Fellii | 2 | | reiiii | 6 | |
| Permitted Phases | 4 | 4 | | 8 | 0 | | 2 | | | 6 | U | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | | 7 | | U | U | | | | | U | U | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Total Split (%) | 48.6% | 48.6% | | 48.6% | 48.6% | | 51.4% | 51.4% | | 51.4% | 51.4% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 30.3 | 30.3 | | 30.3 | 30.3 | |
| Yellow Time (s) | 3.3 | 3.3 | | 3.3 | 3.3 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| All-Red Time (s) | 2.7 | 2.7 | | 2.7 | 2.7 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| | 2.1 | 2.1 | | ۷.1 | 2.1 | | 2.0 | 2.0 | | 2.0 | 2.0 | |

| r IVI r Cak | • | _ | _ | _ | — | ₹. | • | † | / | <u> </u> | L | 4 |
|---------------------------------------|-------------------|-------------|--------------|------|--------------|----------|-------|----------|----------|----------|-------|----|
| Lane Group | EBL | EBT | ₽ EBR | ₩BL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SB |
| Lost Time Adjust (s) | 0.0 | 0.0 | LDIX | 0.0 | 0.0 | WDIX | 0.0 | 0.0 | NDIX | 0.0 | 0.0 | OD |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| _ead/Lag | 0.0 | 0.0 | | 0.0 | 0.0 | | 3.1 | J.1 | | J.1 | J.1 | |
| _ead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Recall Mode | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 21.0 | 21.0 | | 21.0 | 21.0 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 17.1 | 17.1 | | 17.1 | 17.1 | | 41.2 | 41.2 | | 41.2 | 41.2 | |
| Actuated g/C Ratio | 0.24 | 0.24 | | 0.24 | 0.24 | | 0.59 | 0.59 | | 0.59 | 0.59 | |
| v/c Ratio | 0.24 | 0.24 | | 0.24 | 0.24 | | 0.39 | 0.39 | | 0.59 | 0.39 | |
| Control Delay | 30.7 | 6.3 | | 21.7 | 8.2 | | 8.5 | 7.0 | | 9.9 | 10.2 | |
| • | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Queue Delay Total Delay | 30.7 | 6.3 | | 21.7 | 8.2 | | 8.5 | 7.0 | | 9.9 | 10.2 | |
| LOS | | | | | | | | | | | | |
| | С | Α | | С | A | | Α | A | | Α | B | |
| Approach Delay | | 23.9 | | | 15.6 | | | 7.1 | | | 10.2 | |
| Approach LOS | 00.7 | С | | 40.0 | В | | 4.4 | Α | | 4.0 | В | |
| Queue Length 50th (m) | 22.7 | 0.6 | | 10.0 | 2.1 | | 1.4 | 16.2 | | 1.3 | 28.3 | |
| Queue Length 95th (m) | 32.2 | 7.3 | | 16.4 | 8.5 | | 4.4 | 25.1 | | 6.4 | 62.0 | |
| nternal Link Dist (m) | | 68.8 | | | 63.6 | | | 162.4 | | | 273.6 | |
| Turn Bay Length (m) | 35.0 | | | 20.0 | | | 65.0 | | | 45.0 | | |
| Base Capacity (vph) | 510 | 642 | | 504 | 675 | | 256 | 1977 | | 360 | 1969 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.37 | 0.11 | | 0.18 | 0.11 | | 0.12 | 0.37 | | 0.07 | 0.45 | |
| Intersection Summary | Other | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 70 | | | | | | | | | | | | |
| Actuated Cycle Length: 70 | ONDT | 0.0071 01 | | | | | | | | | | |
| Offset: 0 (0%), Referenced to pha | ase 2:NBTL and | 6:SBTL, St | art of Greer | 1 | | | | | | | | |
| Natural Cycle: 65 | | | | | | | | | | | | |
| Control Type: Actuated-Coordina | ated | | | | | | | | | | | |
| Maximum v/c Ratio: 0.61 | | | | | | | | | | | | |
| ntersection Signal Delay: 11.2 | | | | | ersection LC | | | | | | | |
| Intersection Capacity Utilization 5 | 55.4% | | | ICI | U Level of S | ervice B | | | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie I | Dr & Fitzgerald F | Rd/Menten F | Pl | | | | | | | | | |
| ♦ † | | | | | 12 | | | | | | | |
| 02 (R) | | | | | 24 - | Ø4 | | | | | | |
| 36 s I | | | | | 34 S | | | | | | | |
| Ø6 (R) | | | | | - ₹ | Ø8 | | | | | | |
| '- '- '- '- '- '- '- '- '- '- '- '- ' | | | | | | | | | | | | |

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|------------------------------------|----------------------|-------|----------|----------|-------------|-------------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | , DIV | 44 | ₩ M |) T | * |
| Traffic Volume (vph) | 107 | 51 | 706 | 52 | 75 | 919 |
| Future Volume (vph) | 107 | 51 | 706 | 52 | 75 | 919 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | | 30.0 | 50.0 | 1000 |
| Storage Lanes | 1 | 0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | - | | | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Ped Bike Factor | 0.99 | | | 0.98 | 1.00 | |
| Frt | 0.956 | | | 0.850 | | |
| Flt Protected | 0.967 | | | | 0.950 | |
| Satd. Flow (prot) | 1537 | 0 | 3357 | 1547 | 1712 | 3357 |
| Flt Permitted | 0.967 | 0 | 0001 | 10-11 | 0.381 | 0001 |
| Satd. Flow (perm) | 1537 | 0 | 3357 | 1511 | 686 | 3357 |
| Right Turn on Red | 1001 | Yes | 0001 | Yes | 000 | 0001 |
| Satd. Flow (RTOR) | 40 | 169 | | 52 | | |
| Link Speed (k/h) | 40 | | 60 | ÜZ | | 60 |
| Link Speed (k/n) Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| () | | | | | | |
| Travel Time (s) | 5.4 | 40 | 12.0 | 0 | 0 | 11.2 |
| Confl. Peds. (#/hr) | 4.00 | 10 | 4.00 | 2 | 2 | 4.00 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 11% | 4% | 3% | 0% | 1% | 3% |
| Adj. Flow (vph) | 107 | 51 | 706 | 52 | 75 | 919 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 158 | 0 | 706 | 52 | 75 | 919 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Number of Detectors | 1 | | 2 | 1 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | CI+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | | 28.7 | 0.0 | 0.0 | 28.7 |
| | | | 1.8 | | | 1.8 |
| Detector 2 Size(m) | | | | | | |
| Detector 2 Type | | | CI+Ex | | | CI+Ex |
| Detector 2 Channel | | | 2.2 | | | ^ ^ |
| Detector 2 Extend (s) | - · | | 0.0 | - | _ | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | | | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Total Split (s) | 33.0 | | 37.0 | 37.0 | 37.0 | 37.0 |
| rotal Oplit (3) | | | 52.9% | 52.9% | 52.9% | 52.9% |
| | 47.1% | | 02.070 | | | |
| Total Split (%) | 47.1% 27.4 | | | 31.1 | 31.1 | 31.1 |
| | 47.1% 27.4 3.3 | | 31.1 | | 31.1 3.7 | 31.1 3.7 |

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|-----------------------------------|-----------------|-----------|--------------|----------|--------------|------------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |
| Lead/Lag | 0.0 | | | 0.0 | 0.0 | 0.0 |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | w. | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | | |
| Act Effct Green (s) | 12.0 | | 46.5 | 46.5 | 46.5 | 46.5 |
| Actuated g/C Ratio | 0.17 | | 0.66 | 0.66 | 0.66 | 0.66 |
| v/c Ratio | 0.53 | | 0.32 | 0.05 | 0.16 | 0.41 |
| Control Delay | 25.9 | | 5.8 | 1.9 | 3.1 | 2.9 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 25.9 | | 5.8 | 1.9 | 3.1 | 2.9 |
| LOS | 25.9 C | | 5.6 A | | 3.1 A | 2.9 A |
| | | | | Α | A | |
| Approach Delay | 25.9 | | 5.6 | | | 2.9 |
| Approach LOS | C 14.4 | | A 16.2 | 0.0 | 1.4 | A |
| Queue Length 50th (m) | | | | | 1.4 | 9.5 |
| Queue Length 95th (m) | 28.2 | | 30.6 | 3.5 | 3.4 | 13.1 |
| Internal Link Dist (m) | 36.4 | | 176.0 | | =0.0 | 162.4 |
| Turn Bay Length (m) | 225 | | 2007 | 30.0 | 50.0 | 2227 |
| Base Capacity (vph) | 625 | | 2227 | 1020 | 455 | 2227 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.25 | | 0.32 | 0.05 | 0.16 | 0.41 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70 | | | | | | |
| Actuated Cycle Length: 70 | | | | | | |
| Offset: 9 (13%), Referenced to | phase 2:NBT and | 6:SBTL, S | tart of Gree | n | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordin | nated | | | | | |
| Maximum v/c Ratio: 0.53 | | | | | | |
| Intersection Signal Delay: 5.9 | | | | In | tersection L | OS: A |
| Intersection Capacity Utilization | า 56.9% | | | | U Level of S | |
| Analysis Period (min) 15 | . 66.676 | | | | 0 2010: 0: 0 | JO: 1100 D |
| , | | | | | | |
| Splits and Phases: 3: Moodie | e Dr & Loblaws | | | | | |
| A | | | | | | |
| Ø2 (R) | | | | | | |
| 37 s | | | | | | |
| l | | | | | | _ |
| ▼ Ø6 (R) | | | | | | ï8 |
| V-/ | | | | | | |

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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | 44 | 7 | * | 44 | 7 | 16.56 | 44 | 7 | 16.56 | 44 | 7 |
| Traffic Volume (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 258 | 148 | 287 | 497 | 194 |
| Future Volume (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 258 | 148 | 287 | 497 | 194 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | | | 40.0 | | | 40.0 | | | 50.0 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Ped Bike Factor | 1.00 | | 0.97 | 0.99 | | 0.98 | 0.99 | | 0.96 | 0.97 | | 0.97 |
| Frt | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 |
| Flt Protected | 0.950 | 0000 | 4547 | 0.950 | 0.40.4 | 4500 | 0.950 | 0000 | 4500 | 0.950 | 0057 | 4547 |
| Satd. Flow (prot) | 1679 | 3390 | 1517 | 1729 | 3424 | 1532 | 3288 | 3293 | 1532 | 3288 | 3357 | 1517 |
| Flt Permitted | 0.950 | 2200 | 1400 | 0.950 | 2404 | 4500 | 0.950 | 2002 | 4.477 | 0.950 | 2257 | 4.470 |
| Satd. Flow (perm) | 1675 | 3390 | 1469 | 1713 | 3424 | 1503 | 3250 | 3293 | 1477 | 3195 | 3357 | 1478 |
| Right Turn on Red | | | Yes 269 | | | Yes 325 | | | Yes 206 | | | Yes 206 |
| Satd. Flow (RTOR) | | 60 | 209 | | 60 | 323 | | 60 | 200 | | 60 | 200 |
| Link Speed (k/h) Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| ` , | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Travel Time (s) Confl. Peds. (#/hr) | 5 | 10.2 | 15 | 15 | 23.1 | 5 | 12 | 11.2 | 21 | 21 | 12.0 | 12 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 3% | 2% | 2% | 0% | 1.00 | 1% | 2% | 5% | 1.00 | 2% | 3% | 2% |
| Adj. Flow (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 258 | 148 | 287 | 497 | 194 |
| Shared Lane Traffic (%) | 120 | 330 | 203 | 223 | 301 | 323 | 223 | 230 | 140 | 201 | 431 | 134 |
| Lane Group Flow (vph) | 120 | 536 | 269 | 225 | 901 | 325 | 225 | 258 | 148 | 287 | 497 | 194 |
| 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) | Lon | 3.7 | rtigitt | Loit | 3.7 | rugiit | Loit | 7.4 | rtigitt | Loit | 7.4 | rtigitt |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | | 14 | 24 | | 14 | 24 | | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | | CI+Ex | | | CI+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Detector 2 Extend (s) Turn Type | Prot | 0.0 NA | Perm | Prot | 0.0 NA | Perm | Prot | 0.0 NA | Perm | Prot | 0.0 NA | Perm |
| Protected Phases | 5 | 2 | reiiii | 1 | 6 | Feiiii | 3 | 8 | reiiii | 7 | 4 | Feiiii |
| Permitted Phases | J | | 2 | ı | U | 6 | J | 0 | 8 | - 1 | 4 | 1 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | <u> </u> | | | ' | 0 | | J | 0 | | ' | | 7 |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 18.0 | 34.1 | 34.1 | 28.2 | 44.3 | 44.3 | 18.4 | 37.7 | 37.7 | 20.0 | 39.3 | 39.3 |
| Total Split (%) | 15.0% | 28.4% | 28.4% | 23.5% | 36.9% | 36.9% | 15.3% | 31.4% | 31.4% | 16.7% | 32.8% | 32.8% |
| Maximum Green (s) | 11.6 | 27.7 | 27.7 | 21.8 | 37.9 | 37.9 | 11.9 | 31.0 | 31.0 | 13.5 | 32.6 | 32.6 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |
| | | | | = | = | | | *** | | | | |

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|-------------------------|-------|-------|-------|------|----------|-------|------|----------|------|-------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effct Green (s) | 13.2 | 38.3 | 38.3 | 20.1 | 45.2 | 45.2 | 11.5 | 22.5 | 22.5 | 13.2 | 24.2 | 24.2 |
| Actuated g/C Ratio | 0.11 | 0.32 | 0.32 | 0.17 | 0.38 | 0.38 | 0.10 | 0.19 | 0.19 | 0.11 | 0.20 | 0.20 |
| v/c Ratio | 0.65 | 0.50 | 0.41 | 0.78 | 0.70 | 0.42 | 0.72 | 0.42 | 0.33 | 0.80 | 0.74 | 0.42 |
| Control Delay | 67.9 | 37.1 | 6.5 | 66.0 | 36.7 | 5.1 | 65.9 | 44.2 | 3.3 | 69.0 | 51.4 | 7.0 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 67.9 | 37.1 | 6.5 | 66.0 | 36.7 | 5.1 | 65.9 | 44.2 | 3.3 | 69.0 | 51.4 | 7.0 |
| LOS | Е | D | Α | E | D | Α | Е | D | Α | E | D | Α |
| Approach Delay | | 32.2 | | | 34.2 | | | 42.4 | | | 47.7 | |
| Approach LOS | | С | | | С | | | D | | | D | |
| Queue Length 50th (m) | 27.2 | 54.3 | 0.0 | 50.8 | 95.4 | 0.0 | 26.8 | 28.5 | 0.0 | 34.3 | 58.4 | 0.0 |
| Queue Length 95th (m) | #50.6 | 80.2 | 21.4 | 76.1 | 128.8 | 19.8 | 39.9 | 38.4 | 4.7 | #53.2 | 71.4 | 15.1 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 191 | 1081 | 652 | 325 | 1289 | 768 | 326 | 850 | 534 | 369 | 911 | 551 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.63 | 0.50 | 0.41 | 0.69 | 0.70 | 0.42 | 0.69 | 0.30 | 0.28 | 0.78 | 0.55 | 0.35 |

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 100 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

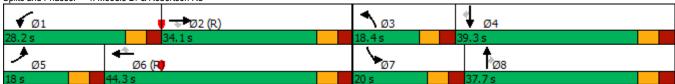
Intersection Signal Delay: 38.3 Intersection Capacity Utilization 83.1%

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Intersection LOS: D ICU Level of Service E

Synchro 10 Report Brad Byvelds, Novatech

| | • | * | 1 | † | | 1 |
|----------------------------|----------|------------|----------|---------------|------------------|----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | LDL K | T T | NDL T | * | <u> </u> | 7 |
| Traffic Volume (vph) | 26 | 82 | 83 | TT 538 | ተተ 615 | 37 |
| Future Volume (vph) | 26 | 82 82 | 83 | 538 | 615 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | 1000 | 1000 | 40.0 |
| Storage Lanes | 1 | 100.0 | 120.0 | | | 1 |
| Taper Length (m) | 7.6 | | 60.0 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.850 | | | 3.00 | 0.850 |
| Flt Protected | 0.950 | | 0.950 | | | |
| Satd. Flow (prot) | 1729 | 1547 | 1729 | 3424 | 3424 | 1547 |
| Flt Permitted | 0.950 | | 0.349 | | | |
| Satd. Flow (perm) | 1729 | 1547 | 635 | 3424 | 3424 | 1547 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | 82 | | | | 37 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 297.6 | 191.7 | |
| Travel Time (s) | 9.9 | | | 17.9 | 11.5 | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 0% |
| Adj. Flow (vph) | 26 | 82 | 83 | 538 | 615 | 37 |
| Shared Lane Traffic (%) | 20 | V <u>L</u> | | 300 | 0.0 | <u> </u> |
| Lane Group Flow (vph) | 26 | 82 | 83 | 538 | 615 | 37 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | ragiit | LOIL | 3.7 | 3.7 | ragin |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | 7.3 | | | 7.0 | 7.0 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 24 | 1.00 | 1.00 | 1.00 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 14 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | | | | | | |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | 0.0 | 0.0 | | | 0.0 | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | | 28.7 | 28.7 | |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 10.6 | 15.6 | 24.6 | 24.6 |
| Total Split (s) | 28.3 | 28.3 | 11.0 | 42.0 | 31.0 | 31.0 |
| Total Split (%) | 40.3% | 40.3% | 15.6% | 59.7% | 44.1% | 44.1% |
| Maximum Green (s) | 22.0 | 22.0 | 5.4 | 36.4 | 25.4 | 25.4 |
| Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 |
| (0) | 3.0 | 0.0 | | | | 0.0 |

Brad Byvelds, Novatech

Synchro 10 Report

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|-----------------------------------|----------------|----------------------|--------------|----------|--------------|-----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 2 | 2 | | | 2 | 2 |
| Act Effct Green (s) | 12.4 | 12.4 | 49.3 | 50.4 | 40.9 | 40.9 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.70 | 0.72 | 0.58 | 0.58 |
| v/c Ratio | 0.09 | 0.24 | 0.15 | 0.72 | 0.31 | 0.04 |
| Control Delay | 22.6 | 7.4 | 6.4 | 5.6 | 11.7 | 5.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 22.6 | 7.4 | 6.4 | 5.6 | 11.7 | 5.1 |
| LOS | ZZ.0 | 7. 4 A | 0.4 A | 3.0 A | В | J.1 |
| Approach Delay | 11.1 | ^ | ٨ | 5.7 | 11.3 | ^ |
| Approach LOS | В | | | 3.7 A | 11.3 B | |
| | 3.0 | 0.0 | 3.0 | 11.2 | 23.4 | 0.0 |
| Queue Length 50th (m) | 7.2 | 8.3 | 11.2 | 28.7 | 46.3 | 5.2 |
| Queue Length 95th (m) | | 0.3 | 11.2 | | | 5.2 |
| Internal Link Dist (m) | 197.1 | 100.0 | 120.0 | 273.6 | 167.7 | 40.0 |
| Turn Bay Length (m) | | 100.0 | | 0450 | 1004 | |
| Base Capacity (vph) | 541 | 540 | 540 | 2453 | 1991 | 915 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.05 | 0.15 | 0.15 | 0.22 | 0.31 | 0.04 |
| Intersection Summary | Other | | | | | |
| Area Type: | Otner | | | | | |
| Cycle Length: 70.3 | | | | | | |
| Actuated Cycle Length: 70.3 | L CAIRTI | LOODT | 21 1 60 | | | |
| Offset: 55 (78%), Referenced to | pnase 2:NB1L a | na 6:5B1, 3 | Start of Gre | en | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordina | ated | | | | | |
| Maximum v/c Ratio: 0.31 | | | | | | |
| Intersection Signal Delay: 8.8 | | | | | ersection L | |
| Intersection Capacity Utilization | 45.7% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| | | | | | | |
| Splits and Phases: 1: Moodie | Dr & Timm Dr | | | | | |
| | | | | | | |
| Ø2 (R) | | | | | | I · |
| 42 s | | | | | | 2 |
| | | | | | | |
| ↑ | 05 (D) | | | | | |
| \ Ø5 | Ø6 (R) | | | | | |

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|----------------------------|---------|---------------|----------|------------|---------------|-------|---------|------------|----------|-------------|---------------|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | 1 , | | 75 | 1 , | | * | ቀ ሴ | | * | ♦ % | |
| Traffic Volume (vph) | 52 | 3 | 32 | 19 | 2 | 17 | 27 | 454 | 10 | 12 | 597 | 42 |
| Future Volume (vph) | 52 | 3 | 32 | 19 | 2 | 17 | 27 | 454 | 10 | 12 | 597 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | | | | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.863 | | | 0.866 | | | 0.997 | | | 0.990 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1729 | 1439 | 0 | 1729 | 1555 | 0 | 1729 | 3413 | 0 | 1729 | 3376 | 0 |
| Flt Permitted | 0.745 | | <u> </u> | 0.734 | 1000 | • | 0.409 | 00 | <u> </u> | 0.485 | 00.0 | |
| Satd. Flow (perm) | 1352 | 1439 | 0 | 1336 | 1555 | 0 | 744 | 3413 | 0 | 881 | 3376 | 0 |
| Right Turn on Red | 1002 | 1 100 | Yes | 1000 | 1000 | Yes | | 0110 | Yes | 001 | 0010 | Yes |
| Satd. Flow (RTOR) | | 32 | 100 | | 17 | 100 | | 4 | 100 | | 13 | 100 |
| Link Speed (k/h) | | 50 | | | 40 | | | 60 | | | 60 | |
| Link Distance (m) | | 92.8 | | | 87.6 | | | 186.4 | | | 297.6 | |
| Travel Time (s) | | 6.7 | | | 7.9 | | | 11.2 | | | 17.9 | |
| Confl. Peds. (#/hr) | 4 | 0.7 | | | 1.5 | 4 | 2 | 11.2 | 2 | 2 | 17.3 | 2 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 0% | 0% | 10% | 0% | 0% | 0% | 0% | 1.00 | 0% | 0% | 1.00 | 5% |
| | 52 | 3 | 32 | 19 | 2 | 17 | 27 | 454 | 10 | 12 | 597 | 42 |
| Adj. Flow (vph) | 52 | J | 32 | 19 | 2 | 17 | 21 | 404 | 10 | 12 | 591 | 42 |
| Shared Lane Traffic (%) | 52 | 35 | 0 | 19 | 19 | ^ | 27 | 464 | ^ | 12 | 639 | 0 |
| Lane Group Flow (vph) | | | - | | | 0 | | | 0 | | | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 3.7 | | | 3.7 | |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| 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 | CI+Ex | CI+Ex | | CI+Ex | Cl+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+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 | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | 0. <u>L</u> . | | | 0. <u>-</u> x | | | U/. | | | 0. <u>-</u> x | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | 1 01111 | 4 | | 1 01111 | 8 | | 1 01111 | 2 | | 1 01111 | 6 | |
| Permitted Phases | 4 | 7 | | 8 | U | | 2 | | | 6 | U | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| | 4 | 4 | | 0 | 0 | | | | | U | - 0 | |
| Switch Phase | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Total Split (%) | 48.6% | 48.6% | | 48.6% | 48.6% | | 51.4% | 51.4% | | 51.4% | 51.4% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 30.3 | 30.3 | | 30.3 | 30.3 | |
| Yellow Time (s) | 3.3 | 3.3 2.7 | | 3.3 2.7 | 3.3 2.7 | | 3.7 | 3.7 2.0 | | 3.7 | 3.7 | |
| All-Red Time (s) | 2.7 | | | | | | 2.0 | | | 2.0 | 2.0 | |

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|-----------------------------------|-------------------|--------------|---------------|------|--------------|----------|-------|----------|-----|-------------|----------|-----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| 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 | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 13.6 | 13.6 | | 13.6 | 13.6 | | 53.4 | 53.4 | | 53.4 | 53.4 | |
| Actuated g/C Ratio | 0.19 | 0.19 | | 0.19 | 0.19 | | 0.76 | 0.76 | | 0.76 | 0.76 | |
| v/c Ratio | 0.20 | 0.11 | | 0.07 | 0.06 | | 0.05 | 0.18 | | 0.02 | 0.25 | |
| Control Delay | 23.0 | 8.4 | | 20.2 | 9.5 | | 6.3 | 4.4 | | 8.0 | 6.1 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 23.0 | 8.4 | | 20.2 | 9.5 | | 6.3 | 4.4 | | 8.0 | 6.1 | |
| LOS | С | Α | | С | Α | | Α | Α | | Α | Α | |
| Approach Delay | | 17.1 | | | 14.8 | | | 4.5 | | | 6.1 | |
| Approach LOS | | В | | | В | | | Α | | | Α | |
| Queue Length 50th (m) | 6.2 | 0.3 | | 2.2 | 0.3 | | 0.9 | 9.0 | | 0.4 | 13.3 | |
| Queue Length 95th (m) | 10.3 | 5.0 | | 5.0 | 3.6 | | 3.8 | 16.4 | | 3.6 | 41.3 | |
| Internal Link Dist (m) | | 68.8 | | | 63.6 | | | 162.4 | | | 273.6 | |
| Turn Bay Length (m) | 35.0 | | | 20.0 | | | 65.0 | | | 45.0 | | |
| Base Capacity (vph) | 540 | 594 | | 534 | 632 | | 567 | 2603 | | 671 | 2577 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.10 | 0.06 | | 0.04 | 0.03 | | 0.05 | 0.18 | | 0.02 | 0.25 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 70 | | | | | | | | | | | | |
| Actuated Cycle Length: 70 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to ph | nase 2:NBTL and | l 6:SBTL, St | art of Greer | า | | | | | | | | |
| Natural Cycle: 65 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinate | ated | | | | | | | | | | | |
| Maximum v/c Ratio: 0.25 | | | | | | | | | | | | |
| Intersection Signal Delay: 6.5 | | | | | ersection LO | | | | | | | |
| Intersection Capacity Utilization | 43.6% | | | IC | U Level of S | ervice A | | | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie | Dr & Fitzgerald I | Rd/Menten F | 기 | | | | | | | | | |
| -4. | <u> </u> | | | | 1.2 | | | | | | | |
| Ø2 (R) | | | | | | Ø4 | | | | | | |
| 36 s | | | | | 34 s | | | | | | | |
| Ø6 (R) | | | | | - I ₹ | Ø8 | | | | | | |
| V-7 | | | | | | | | | | | | |

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|----------------------------|----------|-------|----------|-------|----------|----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ** | | 44 | # | * | 44 |
| Traffic Volume (vph) | 27 | 35 | 456 | 109 | 21 | 632 |
| Future Volume (vph) | 27 | 35 | 456 | 109 | 21 | 632 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | 1000 | 30.0 | 50.0 | 1000 |
| Storage Lanes | 1 | 0.0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | 0 | | | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Ped Bike Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt Frt | 0.924 | | | 0.850 | | |
| Fit Protected | | | | 0.850 | 0.050 | |
| | 0.979 | 0 | 2404 | 15 47 | 0.950 | 2404 |
| Satd. Flow (prot) | 1646 | 0 | 3424 | 1547 | 1729 | 3424 |
| Flt Permitted | 0.979 | | 0.404 | 45.15 | 0.489 | 0.40.4 |
| Satd. Flow (perm) | 1646 | 0 | 3424 | 1547 | 890 | 3424 |
| Right Turn on Red | | Yes | | Yes | | |
| Satd. Flow (RTOR) | 35 | | | 109 | | |
| Link Speed (k/h) | 40 | | 60 | | | 60 |
| Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| Confl. Peds. (#/hr) | 1 | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 1% | 0% | 0% | 1% |
| Adj. Flow (vph) | 27 | 35 | 456 | 109 | 21 | 632 |
| Shared Lane Traffic (%) | ۷۱ | 55 | 100 | 100 | <u> </u> | 002 |
| Lane Group Flow (vph) | 62 | 0 | 456 | 109 | 21 | 632 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| | | | | | | |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Number of Detectors | 1 | | 2 | 1 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | CI+Ex | Cl+Ex |
| Detector 1 Channel | CITLX | | OITLX | OITLX | OITLX | OITLX |
| | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | 28.7 | | | 28.7 |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | CI+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | <u> </u> | | | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | U | | | | U | U |
| | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Total Split (s) | 33.0 | | 37.0 | 37.0 | 37.0 | 37.0 |
| Total Split (%) | 47.1% | | 52.9% | 52.9% | 52.9% | 52.9% |
| Maximum Green (s) | 27.4 | | 31.1 | 31.1 | 31.1 | 31.1 |
| Yellow Time (s) | 3.3 | | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.3 | | 2.2 | 2.2 | 2.2 | 2.2 |
| - 1-1 | | | | | | |

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|-----------------------------------|-----------------|-----------|--------------|----------|--------------|-----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 2 | | 2 | 2 | | |
| Act Effct Green (s) | 13.4 | | 53.7 | 53.7 | 53.7 | 53.7 |
| Actuated g/C Ratio | 0.19 | | 0.77 | 0.77 | 0.77 | 0.77 |
| v/c Ratio | 0.18 | | 0.17 | 0.09 | 0.03 | 0.24 |
| Control Delay | 12.5 | | 5.6 | 2.4 | 2.0 | 1.5 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 12.5 | | 5.6 | 2.4 | 2.0 | 1.5 |
| LOS | В | | Α. | Α. | Α. | Α |
| Approach Delay | 12.5 | | 4.9 | ,, | ,, | 1.5 |
| Approach LOS | 12.3 B | | 4.5 A | | | 1.5 A |
| Queue Length 50th (m) | 3.1 | | 9.1 | 0.0 | 0.2 | 3.3 |
| Queue Length 95th (m) | 8.8 | | 28.2 | 7.3 | 1.0 | 6.2 |
| Internal Link Dist (m) | 36.4 | | 176.0 | 7.0 | 1.0 | 162.4 |
| Turn Bay Length (m) | ООТ | | 170.0 | 30.0 | 50.0 | 102.4 |
| Base Capacity (vph) | 665 | | 2626 | 1212 | 682 | 2626 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.09 | | 0.17 | 0.09 | 0.03 | 0.24 |
| | 0.03 | | 0.17 | 0.03 | 0.00 | 0.24 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70 | | | | | | |
| Actuated Cycle Length: 70 | | | | | | |
| Offset: 9 (13%), Referenced to | phase 2:NBT and | 6:SBTL, S | tart of Gree | n | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordin | nated | | | | | |
| Maximum v/c Ratio: 0.24 | | | | | | |
| Intersection Signal Delay: 3.5 | | | | Int | tersection L | OS: A |
| Intersection Capacity Utilization | 36.4% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| | | | | | | |
| Splits and Phases: 3: Moodie | e Dr & Loblaws | | | | | |
| A | | | | | | |
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|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 75 | 44 | 7 | ¥ | 44 | 7 | 14.54 | 44 | 7 | 14.54 | 44 | 7 |
| Traffic Volume (vph) | 157 | 717 | 189 | 174 | 587 | 113 | 240 | 271 | 191 | 214 | 237 | 157 |
| Future Volume (vph) | 157 | 717 | 189 | 174 | 587 | 113 | 240 | 271 | 191 | 214 | 237 | 157 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 1.00 | 0.95 | 1.00 | 40.0 1.00 | 0.95 | 1.00 | 40.0 0.97 | 0.95 | 1.00 | 50.0 0.97 | 0.95 | 1.00 |
| Lane Util. Factor Ped Bike Factor | 1.00 | 0.95 | 0.99 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 0.97 | 0.97 | 0.95 | 0.99 |
| Frt | | | 0.850 | 1.00 | | 0.850 | 1.00 | | 0.850 | 0.90 | | 0.850 |
| Flt Protected | 0.950 | | 0.000 | 0.950 | | 0.000 | 0.950 | | 0.000 | 0.950 | | 0.000 |
| Satd. Flow (prot) | 1729 | 3424 | 1547 | 1729 | 3424 | 1532 | 3321 | 3424 | 1532 | 3321 | 3424 | 1532 |
| Flt Permitted | 0.950 | 0121 | 1041 | 0.950 | 0121 | 1002 | 0.950 | 0121 | 1002 | 0.950 | UTLT | 1002 |
| Satd. Flow (perm) | 1729 | 3424 | 1524 | 1727 | 3424 | 1532 | 3316 | 3424 | 1489 | 3259 | 3424 | 1511 |
| Right Turn on Red | 0 | 0.2. | Yes | | V | Yes | 00.0 | 0.2. | Yes | 0200 | 0.2. | Yes |
| Satd. Flow (RTOR) | | | 189 | | | 139 | | | 191 | | | 157 |
| Link Speed (k/h) | | 60 | | | 60 | | | 60 | | | 60 | |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | | | 2 | 2 | | | 1 | | 13 | 13 | | 1 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 157 | 717 | 189 | 174 | 587 | 113 | 240 | 271 | 191 | 214 | 237 | 157 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 157 | 717 | 189 | 174 | 587 | 113 | 240 | 271 | 191 | 214 | 237 | 157 |
| Enter Blocked Intersection | No |
| Lane Alignment | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 7.4 | | | 7.4 | |
| 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 | 1.00 | 4.00 | 4.00 | 1.00 | 1.00 | 4.00 | 4.00 | 1.00 | 1.00 | 1.00 | 4.00 | 4.00 |
| Headway Factor Turning Speed (k/h) | 1.06 24 | 1.06 | 1.06 14 |
| Number of Detectors | 1 | 2 | 14 | 1 | 2 | 14 | 1 | 2 | 14 | 1 | 2 | 14 |
| Detector Template | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | | CI+Ex | | | CI+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | _ | 0 | 2 | 4 | • | 6 | • | 0 | 8 | _ | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | 5.0 | 40.0 | 40.0 | F 0 | 40.0 | 40.0 | F 0 | 40.0 | 40.0 | F 0 | 40.0 | 40.0 |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) Total Split (%) | 26.0 19.9% | 35.0 26.8% | 35.0 26.8% | 31.0 23.7% | 40.0 30.6% | 40.0 30.6% | 27.0 20.7% | 37.7 28.8% | 37.7 28.8% | 27.0 20.7% | 37.7 28.8% | 37.7 28.8% |
| Maximum Green (s) | 19.9% | 28.6 | 28.6 | 23.7% | 30.6% | 30.6% | 20.7% | 31.0 | 31.0 | 20.7% | 31.0 | 31.0 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 31.0 | 31.0 | 3.7 | 31.0 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |
| / iii (O) | 2.1 | ۷.1 | ۷.۱ | 2.1 | 2.1 | ۷.1 | 2.0 | 5.0 | 0.0 | 2.0 | 5.0 | 5.0 |

| | • | - | • | • | ← | • | 4 | † | / | - | ļ | 1 |
|-------------------------|------|--------|-------|------|-------|-------|------|----------|------|------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 |
| Act Effct Green (s) | 16.7 | 54.3 | 54.3 | 18.4 | 55.9 | 55.9 | 14.7 | 18.3 | 18.3 | 13.7 | 17.3 | 17.3 |
| Actuated g/C Ratio | 0.13 | 0.42 | 0.42 | 0.14 | 0.43 | 0.43 | 0.11 | 0.14 | 0.14 | 0.10 | 0.13 | 0.13 |
| v/c Ratio | 0.71 | 0.50 | 0.25 | 0.72 | 0.40 | 0.15 | 0.64 | 0.56 | 0.51 | 0.61 | 0.52 | 0.47 |
| Control Delay | 71.8 | 32.8 | 5.9 | 69.6 | 29.8 | 3.6 | 63.3 | 55.9 | 10.8 | 63.4 | 55.7 | 11.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 71.8 | 32.8 | 5.9 | 69.6 | 29.8 | 3.6 | 63.3 | 55.9 | 10.8 | 63.4 | 55.7 | 11.2 |
| LOS | Е | С | Α | Е | С | Α | Е | Е | В | Е | Е | В |
| Approach Delay | | 33.8 | | | 34.3 | | | 46.2 | | | 46.9 | |
| Approach LOS | | С | | | С | | | D | | | D | |
| Queue Length 50th (m) | 39.2 | 68.3 | 0.0 | 43.4 | 52.4 | 0.0 | 30.9 | 35.6 | 0.0 | 27.6 | 31.1 | 0.0 |
| Queue Length 95th (m) | 60.5 | #129.2 | 18.6 | 64.2 | 91.6 | 9.1 | 43.2 | 42.9 | 18.3 | 39.3 | 38.4 | 17.2 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 264 | 1422 | 743 | 326 | 1465 | 735 | 520 | 818 | 500 | 520 | 812 | 478 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.59 | 0.50 | 0.25 | 0.53 | 0.40 | 0.15 | 0.46 | 0.33 | 0.38 | 0.41 | 0.29 | 0.33 |

Intersection Summary

Area Type: Other

Cycle Length: 130.7

Actuated Cycle Length: 130.7

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 39.1 Intersection Capacity Utilization 75.3%

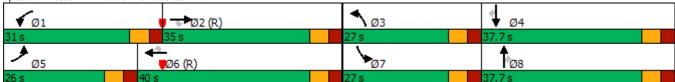
Intersection LOS: D ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

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|--|---------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | EDL K | EDR. | INDL K | <u>ND1</u> | <u>361</u> | JDR 7 |
| Traffic Volume (vph) | 110 | 189 | 5 0 | ተተ 487 | 77 837 | 68 |
| Future Volume (vph) | 110 | 189 | 50 | 487 | 837 | 68 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | 1000 | 1000 | 40.0 |
| Storage Lanes | 1 | 1 | 120.0 | | | 1 |
| Taper Length (m) | 7.6 | | 60.0 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Ped Bike Factor | 1.00 | 0.99 | | 3.00 | 3.00 | |
| Frt | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | 3.000 | 0.950 | | | 3.000 |
| Satd. Flow (prot) | 1712 | 1517 | 1695 | 3325 | 3325 | 1502 |
| Flt Permitted | 0.950 | 1011 | 0.325 | 0020 | 0020 | 1002 |
| Satd. Flow (perm) | 1712 | 1497 | 580 | 3325 | 3325 | 1502 |
| Right Turn on Red | 17.12 | Yes | 300 | JJZJ | JJZJ | Yes |
| Satd. Flow (RTOR) | | 163 | | | | 68 |
| Link Speed (k/h) | 80 | 103 | | 60 | 60 | 00 |
| Link Speed (k/n) Link Distance (m) | 221.1 | | | 218.9 | 191.7 | |
| \ | | | | | | |
| Travel Time (s) | 9.9 | 1 | | 13.1 | 11.5 | |
| Confl. Bikes (#/hr) | 4.00 | 1 1 00 | 1.00 | 1.00 | 1.00 | 4.00 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 4% | 4% | 3% |
| Adj. Flow (vph) | 110 | 189 | 50 | 487 | 837 | 68 |
| Shared Lane Traffic (%) | 110 | 400 | | 407 | 007 | 20 |
| Lane Group Flow (vph) | 110 | 189 | 50 | 487 | 837 | 68 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | | | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | 0.0 | 0.0 | 28.7 | 28.7 | 0.0 |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| Detector 2 Channel | | | | OITLX | OITEX | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | Perm | Perm | NA | NA | Perm |
| Protected Phases | 4 | reilli | FUIII | NA 2 | NA 6 | FEIIII |
| Permitted Phases | 4 | 1 | 2 | 2 | O | 6 |
| | 4 | 4 | 2 | 2 | c | |
| | 4 | 4 | 2 | 2 | 6 | 6 |
| Detector Phase | | | | | | 40.0 |
| Switch Phase | | 400 | 40.0 | 400 | | |
| Switch Phase Minimum Initial (s) | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Switch Phase Minimum Initial (s) Minimum Split (s) | 10.0 28.3 | 28.3 | 15.6 | 15.6 | 24.6 | 24.6 |
| Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) | 10.0 28.3 28.3 | 28.3 28.3 | 15.6 52.0 | 15.6 52.0 | 24.6 52.0 | 24.6 52.0 |
| Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) | 10.0 28.3 28.3 35.2% | 28.3 28.3 35.2% | 15.6 52.0 64.8% | 15.6 52.0 64.8% | 24.6 52.0 64.8% | 24.6 52.0 64.8% |
| Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) Maximum Green (s) | 10.0 28.3 28.3 35.2% 22.0 | 28.3 28.3 35.2% 22.0 | 15.6 52.0 64.8% 46.4 | 15.6 52.0 64.8% 46.4 | 24.6 52.0 64.8% 46.4 | 24.6 52.0 64.8% 46.4 |
| Switch Phase Minimum Initial (s) Minimum Split (s) Total Split (s) Total Split (%) | 10.0 28.3 28.3 35.2% | 28.3 28.3 35.2% | 15.6 52.0 64.8% | 15.6 52.0 64.8% | 24.6 52.0 64.8% | 24.6 52.0 64.8% |

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|-------------------------------------|------------------|------------|--------------|----------|--------------|-----------------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | | 0 | 0 |
| Act Effct Green (s) | 11.4 | 11.4 | 57.0 | 57.0 | 57.0 | 57.0 |
| Actuated g/C Ratio | 0.14 | 0.14 | 0.71 | 0.71 | 0.71 | 0.71 |
| v/c Ratio | 0.45 | 0.54 | 0.12 | 0.21 | 0.35 | 0.06 |
| Control Delay | 37.3 | 13.6 | 5.0 | 4.4 | 5.2 | 1.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 37.3 | 13.6 | 5.0 | 4.4 | 5.2 | 1.4 |
| LOS | 37.3 D | 13.0 B | 3.0 A | 4.4 A | J.2 A | 1. 4 |
| Approach Delay | 22.3 | U | ^ | 4.5 | 4.9 | Α. |
| Approach LOS | 22.3 C | | | 4.5 A | 4.9 A | |
| Queue Length 50th (m) | 15.9 | 3.6 | 1.9 | 10.3 | 20.3 | 0.0 |
| Queue Length 95th (m) | 29.0 | 20.1 | 6.2 | 18.6 | 34.5 | 3.4 |
| Internal Link Dist (m) | 197.1 | 20.1 | 0.2 | 194.9 | 167.7 | 3.4 |
| Turn Bay Length (m) | 197.1 | 100.0 | 120.0 | 194.9 | 107.7 | 40.0 |
| Base Capacity (vph) | 469 | 528 | 411 | 2358 | 2358 | 1084 |
| | | | 411 | 2358 | | |
| Starvation Cap Reductn | 0 | 0 | | - | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.23 | 0.36 | 0.12 | 0.21 | 0.35 | 0.06 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 80.3 | | | | | | |
| Actuated Cycle Length: 80.3 | | | | | | |
| Offset: 6 (7%), Referenced to pha | ase 2:NBTL and | 6:SBT, Sta | art of Green | | | |
| Natural Cycle: 55 | | | | | | |
| Control Type: Actuated-Coordina | ted | | | | | |
| Maximum v/c Ratio: 0.54 | | | | | | |
| Intersection Signal Delay: 7.8 | | | | | tersection L | |
| Intersection Capacity Utilization 5 | 55.7% | | | IC | U Level of S | Service B |
| Analysis Period (min) 15 | | | | | | |
| Splits and Phases: 1: Moodie [| Or & Timm Dr | | | | | |
| Spins and Phases. 1. Moodle L | וט וווווווו א וכ | | | | | |
| Tø2 (R) | | | | | | |
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|---|----------|----------|-----------|-------|----------|-------|----------|------------|-------------|-----------|------------|-----------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | ĵ. | | 7 | î. | | * | ት ጌ | | * | ∳ ሴ | |
| Traffic Volume (vph) | 89 | 28 | 25 | 18 | 1 | 8 | 73 | 487 | 64 | 111 | 699 | 186 |
| Future Volume (vph) | 89 | 28 | 25 | 18 | 6 | 8 | 73 | 487 | 64 | 111 | 699 | 186 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 0.99 | |
| Frt | | 0.929 | | | 0.914 | | | 0.983 | | | 0.968 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | _ |
| Satd. Flow (prot) | 1679 | 1534 | 0 | 1729 | 1410 | 0 | 1695 | 3293 | 0 | 1712 | 3215 | 0 |
| Flt Permitted | 0.748 | 4504 | • | 0.722 | 4440 | • | 0.306 | 2000 | • | 0.446 | 2045 | • |
| Satd. Flow (perm) | 1318 | 1534 | 0 | 1311 | 1410 | 0 | 545 | 3293 | 0 | 800 | 3215 | 0 |
| Right Turn on Red | | 0.5 | Yes | | • | Yes | | 00 | Yes | | 00 | Yes |
| Satd. Flow (RTOR) | | 25 | | | 8 | | | 26 | | | 60 | |
| Link Speed (k/h) | | 48 | | | 48 | | | 60 | | | 60 | |
| Link Distance (m) | | 104.0 | | | 87.6 | | | 186.4 | | | 78.7 | |
| Travel Time (s) | • | 7.8 | 2 | 2 | 6.6 | ^ | 2 | 11.2 | ^ | ^ | 4.7 | 2 |
| Confl. Peds. (#/hr) | 3 | 4.00 | 3 | 3 | 1.00 | 3 | 3 | 4.00 | 6 | 6 | 4.00 | 3 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 3% 89 | 0% 28 | 20% 25 | 0% | 17% 6 | 17% | 2% 73 | 3% 487 | 2% 64 | 1% 111 | 4% 699 | 2% 186 |
| Adj. Flow (vph) | 09 | 20 | 25 | 18 | 0 | 8 | 13 | 401 | 04 | 111 | 099 | 100 |
| Shared Lane Traffic (%) Lane Group Flow (vph) | 89 | 53 | 0 | 18 | 14 | 0 | 73 | 551 | 0 | 111 | 885 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | | Left | Left | | Left | Left | Right |
| Median Width(m) | Leit | 3.7 | Rigiit | Leit | 3.7 | Right | Leit | 3.7 | Right | Leit | 3.7 | Rigiit |
| 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 | | 7.0 | | | 4.0 | | | 4.0 | | | 7.0 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | | 14 | 24 | 1100 | 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 | CI+Ex | CI+Ex | | CI+Ex | Cl+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+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 | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| 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 | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 46.0 | 46.0 | | 46.0 | 46.0 | |
| Total Split (%) | 42.5% | 42.5% | | 42.5% | 42.5% | | 57.5% | 57.5% | | 57.5% | 57.5% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 40.3 | 40.3 | | 40.3 | 40.3 | |
| Yellow Time (s) | 3.3 | 3.3 | | 3.3 | 3.3 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| All-Red Time (s) | 2.7 | 2.7 | | 2.7 | 2.7 | | 2.0 | 2.0 | | 2.0 | 2.0 | |

| AIVI Peak | • | | _ | | _ | _ | _ | _ | | $\overline{}$ | I | , |
|-------------------------------------|-------------------|------------|--------------|------|--------------|----------|-------|-------|-----|---------------|----------|----|
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| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SB |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| _ead/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 | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 14.3 | 14.3 | | 14.3 | 14.3 | | 58.4 | 58.4 | | 58.4 | 58.4 | |
| Actuated g/C Ratio | 0.18 | 0.18 | | 0.18 | 0.18 | | 0.73 | 0.73 | | 0.73 | 0.73 | |
| v/c Ratio | 0.38 | 0.18 | | 0.08 | 0.10 | | 0.18 | 0.73 | | 0.19 | 0.73 | |
| Control Delay | 31.6 | 16.4 | | 24.2 | 16.1 | | 6.7 | 4.2 | | 7.9 | 6.6 | |
| • | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.7 | 0.0 | | 0.0 | 0.0 | |
| Queue Delay | 31.6 | 16.4 | | 24.2 | 16.1 | | 6.7 | 4.2 | | 7.9 | 6.6 | |
| Total Delay | | | | | | | | | | | | |
| LOS | С | В | | С | В | | Α | Α | | Α | A | |
| Approach Delay | | 25.9 | | | 20.7 | | | 4.5 | | | 6.8 | |
| Approach LOS | | С | | | С | | | A | | | A | |
| Queue Length 50th (m) | 12.8 | 3.8 | | 2.5 | 0.8 | | 3.1 | 12.0 | | 4.5 | 20.3 | |
| Queue Length 95th (m) | 19.5 | 9.9 | | 6.0 | 4.2 | | 15.0 | 34.4 | | 19.5 | 57.9 | |
| Internal Link Dist (m) | | 80.0 | | | 63.6 | | | 162.4 | | | 54.7 | |
| Turn Bay Length (m) | 35.0 | | | 20.0 | | | 65.0 | | | 45.0 | | |
| Base Capacity (vph) | 461 | 553 | | 458 | 498 | | 397 | 2409 | | 584 | 2361 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.19 | 0.10 | | 0.04 | 0.03 | | 0.18 | 0.23 | | 0.19 | 0.37 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 80 | | | | | | | | | | | | |
| Actuated Cycle Length: 80 | | | | | | | | | | | | |
| Offset: 68 (85%), Referenced to p | phase 2:NBTL a | nd 6:SBTL, | Start of Gre | een | | | | | | | | |
| Natural Cycle: 65 | | | | | | | | | | | | |
| Control Type: Actuated-Coordina | ited | | | | | | | | | | | |
| Maximum v/c Ratio: 0.38 | | | | | | | | | | | | |
| Intersection Signal Delay: 7.8 | | | | Int | ersection LC | S: A | | | | | | |
| Intersection Capacity Utilization 6 | 62.5% | | | ICI | J Level of S | ervice B | | | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie I | Dr & Fitzgerald F | 54 | | | | | | | | | | |
| -4. | writegorald I | | | | | | | | | | | |
| Ø2 (R) | | | | | | | Ø4 | | | | | |
| 46 s | | | | | | 34 s | | | | | | |
| ▼ Ø6 (R) | | | | | | 17 | Ø8 | | | | | |
| . 20(0) | | | | | | , | | | | | _ | |

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|----------------------------------|------------|---------|------------|----------|----------|------------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W. | HOIC | ** | ₹ |) N | * |
| Traffic Volume (vph) | 16 | 18 | 612 | 15 | 21 | 717 |
| Future Volume (vph) | 16 | 18 | 612 | 15 | 21 | 717 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | | 30.0 | 50.0 | |
| Storage Lanes | 1 | 0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | | | | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frt | 0.929 | | | 0.850 | | |
| Flt Protected | 0.977 | | | | 0.950 | |
| Satd. Flow (prot) | 1516 | 0 | 3325 | 1547 | 1517 | 3325 |
| Flt Permitted | 0.977 | | | | 0.420 | |
| Satd. Flow (perm) | 1516 | 0 | 3325 | 1547 | 671 | 3325 |
| Right Turn on Red | | Yes | | Yes | • • • | |
| Satd. Flow (RTOR) | 18 | | | 15 | | |
| Link Speed (k/h) | 40 | | 60 | 10 | | 60 |
| Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 19% | 0% | 4% | 0% | 1.00 | 4% |
| Adj. Flow (vph) | 19% | 18 | 612 | 15 | 21 | 717 |
| Shared Lane Traffic (%) | 10 | 10 | 012 | 10 | ۷۱ | 111 |
| Lane Group Flow (vph) | 34 | 0 | 612 | 15 | 21 | 717 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | No Left | Right | Left | | Left | Left |
| Median Width(m) | 3.7 | rtigfit | 7.4 | Right | Leit | Leπ 7.4 |
| | | | | | | |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 4.9 | | 4.9 | | | 4.9 |
| Two way Left Turn Lane | 4.00 | 1.00 | 1.00 | 1.00 | 1.00 | 4.00 |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Number of Detectors | 1 | | 2 | 1 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | Cl+Ex | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | 28.7 | | | 28.7 |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | CI+Ex | | | CI+Ex |
| Detector 2 Channel | | | 51. EX | | | 51. EX |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | i Gilli | Cilli | 6 |
| Permitted Phases | 0 | | | 2 | 6 | U |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | 0 | | | | Ö | 0 |
| | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Initial (s) | | | 10.0 | | 10.0 | |
| Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Total Split (s) | 33.0 | | 47.0 | 47.0 | 47.0 | 47.0 |
| Total Split (%) | 41.3% | | 58.8% | 58.8% | 58.8% | 58.8% |
| Mandana One of A | | | 41.1 | 41.1 | 41.1 | 41.1 |
| Maximum Green (s) | 27.4 | | ^ - | | 27 | 27 |
| Yellow Time (s) | 3.3 | | 3.7 | 3.7 | 3.7 | 3.7 |
| Yellow Time (s) All-Red Time (s) | 3.3 2.3 | | 2.2 | 2.2 | 2.2 | 2.2 |
| Yellow Time (s) | 3.3 | | | | | |

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|-----------------------------------|------------------|------------|--------------|-------|--------------|-----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | | |
| Act Effct Green (s) | 10.0 | | 71.4 | 71.4 | 71.4 | 71.4 |
| Actuated g/C Ratio | 0.12 | | 0.89 | 0.89 | 0.89 | 0.89 |
| v/c Ratio | 0.17 | | 0.21 | 0.01 | 0.04 | 0.24 |
| Control Delay | 22.0 | | 2.0 | 1.5 | 2.6 | 2.0 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 22.0 | | 2.0 | 1.5 | 2.6 | 2.0 |
| LOS | C | | A | Α | A | A |
| Approach Delay | 22.0 | | 2.0 | | - ' | 2.0 |
| Approach LOS | C | | Α. | | | Α |
| Queue Length 50th (m) | 2.2 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Length 95th (m) | 9.9 | | 18.1 | 1.2 | m2.1 | 20.8 |
| Internal Link Dist (m) | 36.4 | | 176.0 | | | 162.4 |
| Turn Bay Length (m) | 00.1 | | 170.0 | 30.0 | 50.0 | 102.1 |
| Base Capacity (vph) | 531 | | 2967 | 1382 | 599 | 2967 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.06 | | 0.21 | 0.01 | 0.04 | 0.24 |
| | 0.00 | | 0.21 | 0.01 | 0.04 | V.Z-T |
| Intersection Summary | 0.11 | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 80 | | | | | | |
| Actuated Cycle Length: 80 | L CAIDT | LOODTI | 0, , , , | | | |
| Offset: 58 (73%), Referenced to | phase 2:NBT and | 16:SBTL, | Start of Gre | en | | |
| Natural Cycle: 65 | 4 1 | | | | | |
| Control Type: Actuated-Coordin | nated | | | | | |
| Maximum v/c Ratio: 0.24 | | | | | | |
| Intersection Signal Delay: 2.5 | 00.00/ | | | | tersection L | |
| Intersection Capacity Utilization | 38.8% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| m Volume for 95th percentile | queue is metered | by upstrea | m signal. | | | |
| Oullie and Discours Ou Mandia | D. O. L. alalana | | | | | |
| Splits and Phases: 3: Moodie | Dr & Lobiaws | | | | | |
| tian m | | | | | | |
| ¹ Ø2 (R) | | | | | | |
| 47 s | | | | | | |
| L.N | | | | | | . |
| ▼ Ø6 (R) | | | | | | |

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|---|---------------|----------|-------|---------------|-------|-------|---------------|----------|-------|---------------|-------|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ሻ | ^ | 7 | * | 44 | 7 | 14.54 | 44 | 7 | 16.54 | 44 | 7 |
| Traffic Volume (vph) | 78 | 1211 | 112 | 81 | 307 | 161 | 225 | 391 | 309 | 362 | 185 | 113 |
| Future Volume (vph) | 78 | 1211 | 112 | 81 | 307 | 161 | 225 | 391 | 309 | 362 | 185 | 113 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | | | 40.0 | | | 40.0 | | | 50.0 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Ped Bike Factor | 0.99 | | 0.98 | 1.00 | | 0.98 | 0.99 | | 0.98 | 1.00 | | 0.98 |
| Frt | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 | 0.050 | | 0.850 |
| Fit Protected | 0.950 | 2200 | 4.470 | 0.950 | 2020 | 1517 | 0.950 | 2205 | 4520 | 0.950 | 2020 | 1450 |
| Satd. Flow (prot) | 1631 0.950 | 3390 | 1473 | 1712 0.950 | 3232 | 1517 | 3321 0.950 | 3325 | 1532 | 3288 0.950 | 3232 | 1459 |
| Flt Permitted Satd. Flow (perm) | 1622 | 3390 | 1447 | 1710 | 3232 | 1486 | 3289 | 3325 | 1506 | 3272 | 3232 | 1431 |
| Right Turn on Red | 1022 | 3390 | Yes | 17 10 | 3232 | Yes | 3209 | 3323 | Yes | 3212 | 3232 | Yes |
| Satd. Flow (RTOR) | | | 139 | | | 161 | | | 142 | | | 137 |
| Link Speed (k/h) | | 60 | 100 | | 60 | 101 | | 60 | 142 | | 60 | 101 |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | 6 | 10.2 | 4 | 4 | 20.1 | 6 | 6 | | 4 | 4 | 12.0 | 6 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 6% | 2% | 5% | 1% | 7% | 2% | 1% | 4% | 1% | 2% | 7% | 6% |
| Adj. Flow (vph) | 78 | 1211 | 112 | 81 | 307 | 161 | 225 | 391 | 309 | 362 | 185 | 113 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 78 | 1211 | 112 | 81 | 307 | 161 | 225 | 391 | 309 | 362 | 185 | 113 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 7.4 | | | 7.4 | |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | • | 14 | 24 | • | 14 | 24 | | 14 | 24 | • | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex |
| Detector 1 Channel | OI+LX | OITLX | CITEX | OITLX | OITEX | OITEX | OITEX | OITEX | OITLX | OITLX | OITEX | OITEX |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | CI+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 2 | | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 15.0 | 54.0 | 54.0 | 15.0 | 54.0 | 54.0 | 23.0 | 38.0 | 38.0 | 23.0 | 38.0 | 38.0 |
| Total Split (%) | 11.5% | 41.5% | 41.5% | 11.5% | 41.5% | 41.5% | 17.7% | 29.2% | 29.2% | 17.7% | 29.2% | 29.2% |
| Maximum Green (s) | 8.6 | 47.6 | 47.6 | 8.6 | 47.6 | 47.6 | 16.5 | 31.3 | 31.3 | 16.5 | 31.3 | 31.3 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |

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|-------------------------|-------|--------|-------|-------|-------|-------|------|----------|------|-------|----------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 |
| Act Effct Green (s) | 10.2 | 54.5 | 54.5 | 10.2 | 54.4 | 54.4 | 13.8 | 23.1 | 23.1 | 16.3 | 25.6 | 25.6 |
| Actuated g/C Ratio | 0.08 | 0.42 | 0.42 | 0.08 | 0.42 | 0.42 | 0.11 | 0.18 | 0.18 | 0.13 | 0.20 | 0.20 |
| v/c Ratio | 0.61 | 0.85 | 0.16 | 0.61 | 0.23 | 0.23 | 0.64 | 0.66 | 0.80 | 0.88 | 0.29 | 0.29 |
| Control Delay | 77.8 | 42.3 | 2.7 | 76.9 | 26.2 | 4.9 | 64.1 | 54.7 | 42.9 | 78.6 | 44.8 | 5.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 77.8 | 42.3 | 2.7 | 76.9 | 26.2 | 4.9 | 64.1 | 54.7 | 42.9 | 78.6 | 44.8 | 5.5 |
| LOS | E | D | Α | E | С | Α | Ε | D | D | Ε | D | Α |
| Approach Delay | | 41.1 | | | 27.4 | | | 53.0 | | | 56.6 | |
| Approach LOS | | D | | | С | | | D | | | Е | |
| Queue Length 50th (m) | 19.4 | 147.7 | 0.0 | 20.1 | 26.6 | 0.0 | 28.8 | 50.1 | 43.0 | 47.6 | 21.6 | 0.0 |
| Queue Length 95th (m) | #45.3 | #207.3 | 7.5 | #46.0 | 40.2 | 14.2 | 41.4 | 61.4 | 71.2 | #72.7 | 30.7 | 9.7 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 130 | 1420 | 686 | 136 | 1352 | 715 | 421 | 800 | 470 | 417 | 778 | 448 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.60 | 0.85 | 0.16 | 0.60 | 0.23 | 0.23 | 0.53 | 0.49 | 0.66 | 0.87 | 0.24 | 0.25 |

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 119 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection LOS: D

Intersection Signal Delay: 45.0
Intersection Capacity Utilization 85.8%

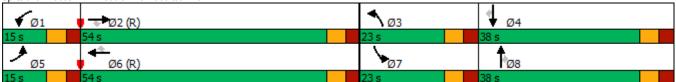
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

| | • | • | • | † | . | 4 |
|-----------------------------------|------|-----------|-------|----------|-----------------|------|
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | 7 | | 44 | ♦ % | |
| Traffic Volume (veh/h) | 0 | 22 | 0 | 587 | 993 | 25 |
| Future Volume (Veh/h) | 0 | 22 | 0 | 587 | 993 | 25 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 22 | 0 | 587 | 993 | 25 |
| Pedestrians | | | | 001 | 000 | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | 140110 | 140110 | |
| Upstream signal (m) | | | | 79 | 219 | |
| pX, platoon unblocked | 0.94 | 0.92 | 0.92 | 13 | Z 13 | |
| vC, conflicting volume | 1299 | 509 | 1018 | | | |
| vC1, stage 1 conf vol | 1233 | 303 | 1010 | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 984 | 294 | 847 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | 0.0 | 0.9 | 4.1 | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 3.3 97 | 100 | | | |
| cM capacity (veh/h) | 232 | 646 | 723 | | | |
| civi capacity (ven/n) | 232 | 040 | 123 | | | |
| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | |
| Volume Total | 22 | 294 | 294 | 662 | 356 | |
| Volume Left | 0 | 0 | 0 | 0 | 0 | |
| Volume Right | 22 | 0 | 0 | 0 | 25 | |
| cSH | 646 | 1700 | 1700 | 1700 | 1700 | |
| Volume to Capacity | 0.03 | 0.17 | 0.17 | 0.39 | 0.21 | |
| Queue Length 95th (m) | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Control Delay (s) | 10.8 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Lane LOS | В | | | | | |
| Approach Delay (s) | 10.8 | 0.0 | | 0.0 | | |
| Approach LOS | В | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.1 | | | |
| Intersection Capacity Utilization | | | 39.8% | ICI | U Level of Serv | rice |
| Analysis Period (min) | | | 15 | | | |
| | | | | | | |

| | • | → | ← | • | \ | 4 |
|-----------------------------------|------|----------|-----------------|------|--------------|--------|
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | च | | | W | |
| Traffic Volume (veh/h) | 2 | 125 | 1 236 | 29 | 17 | 1 |
| Future Volume (Veh/h) | 2 | 125 | 236 | 29 | 17 | 1 |
| Sign Control | | Free | Free | 25 | Stop | ' |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | 1.00 | 1.00 | 236 | 29 | 1.00 | 1.00 |
| Hourly flow rate (vph) | | 125 | 230 | 29 | 17 | ı |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | 104 | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 265 | | | | 380 | 250 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 265 | | | | 380 | 250 |
| 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 | | | | 97 | 100 |
| cM capacity (veh/h) | 1299 | | | | 622 | 788 |
| | | | | | 022 | 700 |
| Direction, Lane # | EB 1 | WB 1 | SB 1 | | | |
| Volume Total | 127 | 265 | 18 | | | |
| Volume Left | 2 | 0 | 17 | | | |
| Volume Right | 0 | 29 | 1 | | | |
| cSH | 1299 | 1700 | 629 | | | |
| Volume to Capacity | 0.00 | 0.16 | 0.03 | | | |
| Queue Length 95th (m) | 0.0 | 0.0 | 0.7 | | | |
| Control Delay (s) | 0.1 | 0.0 | 10.9 | | | |
| Lane LOS | A | 0.0 | В | | | |
| Approach Delay (s) | 0.1 | 0.0 | 10.9 | | | |
| Approach LOS | 0.1 | 0.0 | В | | | |
| •• | | | U | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.5 | | | |
| Intersection Capacity Utilization | | | 25.0% | ICI | U Level of S | ervice |
| Analysis Period (min) | | | 15 | | | |

| | • | • | 4 | † | ↓ | 1 |
|----------------------------|------------|-----------|----------|------------------|------------------|-------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | LDL Š | LDK | NDL N | * | <u>\$61</u> | 7 |
| Traffic Volume (vph) | 5 8 | 64 | 158 | TT 778 | TT 821 | 161 |
| Future Volume (vph) | 58 | 64 | 158 | 778 | 821 | 161 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | 1000 | 1000 | 40.0 |
| Storage Lanes | 1 | 100.0 | 120.0 | | | 40.0 |
| Taper Length (m) | 7.6 | 1 | 60.0 | | | - |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | 1.00 | 0.850 | 1.00 | 0.00 | 0.00 | 0.850 |
| Flt Protected | 0.950 | 0.000 | 0.950 | | | 0.000 |
| Satd. Flow (prot) | 1695 | 1547 | 1712 | 3390 | 3357 | 1547 |
| Flt Permitted | 0.950 | 1341 | 0.251 | 5550 | 5551 | 1347 |
| Satd. Flow (perm) | 1695 | 1547 | 452 | 3390 | 3357 | 1547 |
| Right Turn on Red | 1090 | Yes | 402 | JJ90 | JJ31 | Yes |
| | | Yes 64 | | | | 161 |
| Satd. Flow (RTOR) | | 04 | | CO | C0 | 101 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 218.3 | 191.7 | |
| Travel Time (s) | 9.9 | 4.00 | 4.00 | 13.1 | 11.5 | 4 00 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 2% | 0% | 1% | 2% | 3% | 0% |
| Adj. Flow (vph) | 58 | 64 | 158 | 778 | 821 | 161 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 58 | 64 | 158 | 778 | 821 | 161 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | | | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex |
| Detector 1 Channel | CITLX | OITLX | OITLX | OITLX | OITLX | OITLX |
| | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Extend (s) | | | | | | |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | | 28.7 | 28.7 | |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | _ | | 0.0 | 0.0 | |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 10.6 | 15.6 | 24.6 | 24.6 |
| Total Split (s) | 28.3 | 28.3 | 11.0 | 42.0 | 31.0 | 31.0 |
| Total Split (%) | 40.3% | 40.3% | 15.6% | 59.7% | 44.1% | 44.1% |
| Maximum Green (s) | 22.0 | 22.0 | 5.4 | 36.4 | 25.4 | 25.4 |
| Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 |
| rotar Loot Tillio (3) | 0.3 | 0.5 | 5.0 | 5.0 | 5.0 | 5.0 |

| | • | * | 1 | † | | 4 |
|-----------------------------------|----------------|-------------|--------------|----------|--------------|-----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 2 | 2 | | | 2 | 2 |
| Act Effct Green (s) | 12.4 | 12.4 | 49.3 | 50.4 | 36.9 | 36.9 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.70 | 0.72 | 0.52 | 0.52 |
| v/c Ratio | 0.19 | 0.20 | 0.36 | 0.32 | 0.47 | 0.18 |
| Control Delay | 24.6 | 7.6 | 8.0 | 6.1 | 13.9 | 3.3 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 24.6 | 7.6 | 8.0 | 6.1 | 13.9 | 3.3 |
| LOS | 24.0 C | 7.0 A | 0.0 A | Α | 13.3 B | 3.5 A |
| Approach Delay | 15.7 | ^ | ٨ | 6.5 | 12.1 | ٨ |
| Approach LOS | 15. <i>1</i> | | | 0.5 A | 12.1 B | |
| Queue Length 50th (m) | 6.9 | 0.0 | 5.9 | 17.8 | 35.2 | 0.0 |
| | 12.9 | 7.3 | 19.4 | 43.6 | 65.3 | 10.5 |
| Queue Length 95th (m) | | 1.5 | 19.4 | | | 10.5 |
| Internal Link Dist (m) | 197.1 | 100.0 | 120.0 | 194.3 | 167.7 | 40.0 |
| Turn Bay Length (m) | F20 | 100.0 | | 0.400 | 4700 | |
| Base Capacity (vph) | 530 | 528 | 438 | 2429 | 1760 | 887 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.11 | 0.12 | 0.36 | 0.32 | 0.47 | 0.18 |
| Intersection Summary | 0.11 | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70.3 | | | | | | |
| Actuated Cycle Length: 70.3 | | | | | | |
| Offset: 55 (78%), Referenced to | phase 2:NBTL a | nd 6:SBT, S | Start of Gre | en | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordin | ated | | | | | |
| Maximum v/c Ratio: 0.47 | | | | | | |
| Intersection Signal Delay: 9.7 | | | | Int | tersection L | OS: A |
| Intersection Capacity Utilization | 56.1% | | | IC | U Level of S | Service B |
| Analysis Period (min) 15 | | | | | | |
| Splits and Phases: 1: Moodie | Dr & Timm Dr | | | | | |
| 4 | | | | | | |
| Ø2 (R) | | | | | | - 1- |
| 42.0 | | | | | | 28 |
| 123 | | | | | | 20 |
| | | | | | | - 1 |



| | • | - | \rightarrow | • | ← | • | 4 | † | / | - | ļ | 4 |
|--|-------|----------|---------------|--------|-------------|--------|-------|------------|----------|-------|------------|--------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | | | * | | | * | ት ጌ | | * | ♦ % | |
| Traffic Volume (vph) | 206 | 1 | 67 | 91 | 1 20 | 55 | 48 | 625 | 46 | 27 | 752 | 69 |
| Future Volume (vph) | 206 | 6 | 67 | 91 | 20 | 55 | 48 | 625 | 46 | 27 | 752 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.862 | | | 0.890 | | | 0.990 | | | 0.987 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1712 | 1506 | 0 | 1695 | 1605 | 0 | 1453 | 3345 | 0 | 1662 | 3329 | 0 |
| Flt Permitted | 0.708 | | | 0.709 | | | 0.312 | | | 0.382 | | |
| Satd. Flow (perm) | 1275 | 1506 | 0 | 1262 | 1605 | 0 | 477 | 3345 | 0 | 666 | 3329 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 67 | | | 55 | | | 14 | | | 17 | |
| Link Speed (k/h) | | 48 | | | 48 | | | 60 | | | 60 | |
| Link Distance (m) | | 106.9 | | | 87.6 | | | 186.4 | | | 79.2 | |
| Travel Time (s) | | 8.0 | | | 6.6 | | | 11.2 | | | 4.8 | |
| Confl. Peds. (#/hr) | 1 | | 4 | 4 | | 1 | 2 | | 8 | 8 | | 2 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 1% | 0% | 3% | 2% | 0% | 0% | 19% | 2% | 4% | 4% | 2% | 6% |
| Adj. Flow (vph) | 206 | 6 | 67 | 91 | 20 | 55 | 48 | 625 | 46 | 27 | 752 | 69 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 206 | 73 | 0 | 91 | 75 | 0 | 48 | 671 | 0 | 27 | 821 | 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) | Lon | 3.7 | rugiit | Lon | 3.7 | rugiit | Lon | 3.7 | ragne | Loit | 3.7 | rugiit |
| 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 | | 1.0 | | | 1.0 | | | 1.0 | | | 1.0 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 14 | 24 | 1.00 | 14 | 24 | 1.00 | 14 | 24 | 1.00 | 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 | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | |
| Detector 1 Channel | OITEX | OIILX | | OILLX | OILLX | | OI LX | OI LX | | OITEX | OITEX | |
| 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) | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | |
| Detector 2 Fosition(m) Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | CI+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | UI+EX | | | CI+EX | | | CI+EX | | | CI+EX | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| | Darm | 0.0 | | Perm | NA | | Dorm | NA | | Darm | NA | |
| Turn Type Protected Phases | Perm | NA | | Pellii | NA 8 | | Perm | | | Perm | | |
| | 4 | 4 | | 0 | 0 | | ^ | 2 | | C | 6 | |
| Permitted Phases | 4 | 1 | | 8 | 0 | | 2 | 0 | | 6 | 6 | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | р | |
| Switch Phase | 40.0 | 40.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 40.0 | 40.0 | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Total Split (%) | 48.6% | 48.6% | | 48.6% | 48.6% | | 51.4% | 51.4% | | 51.4% | 51.4% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 30.3 | 30.3 | | 30.3 | 30.3 | |
| Yellow Time (s) | 3.3 | 3.3 | | 3.3 | 3.3 | | 3.7 | 3.7 | | 3.7 | 3.7 2.0 | |
| All-Red Time (s) | 2.7 | 2.7 | | 2.7 | 2.7 | | 2.0 | 2.0 | | 2.0 | | |

| I W F Cak | • | → | ` | • | — | • | • | † | <i>></i> | \ | 1 | 4 |
|---|-------------------|------------|--------------|------|--------------|----------|-------|----------|-------------|----------|-------|----|
| Lane Group | EBL | EBT | EBR | ₩BL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SB |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| 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 | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 17.6 | 17.6 | | 17.6 | 17.6 | | 40.7 | 40.7 | | 40.7 | 40.7 | |
| Actuated g/C Ratio | 0.25 | 0.25 | | 0.25 | 0.25 | | 0.58 | 0.58 | | 0.58 | 0.58 | |
| v/c Ratio | 0.64 | 0.17 | | 0.29 | 0.17 | | 0.17 | 0.34 | | 0.07 | 0.42 | |
| Control Delay | 31.5 | 6.2 | | 21.0 | 8.0 | | 9.0 | 7.1 | | 10.0 | 10.2 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 31.5 | 6.2 | | 21.0 | 8.0 | | 9.0 | 7.1 | | 10.0 | 10.2 | |
| LOS | C C | Α.2 | | C C | Α | | A.0 | Α | | Α | В | |
| Approach Delay | U | 24.8 | | U | 15.2 | | | 7.2 | | | 10.1 | |
| Approach LOS | | 24.0 C | | | 13.2 B | | | 7.2 A | | | В | |
| Queue Length 50th (m) | 24.6 | 0.6 | | 9.8 | 2.0 | | 2.1 | 14.5 | | 1.3 | 26.5 | |
| Queue Length 95th (m) | 34.9 | 7.3 | | 16.4 | 8.5 | | 6.0 | 23.2 | | 6.4 | 55.8 | |
| Internal Link Dist (m) | 34.9 | 82.9 | | 10.4 | 63.6 | | 0.0 | 162.4 | | 0.4 | 55.2 | |
| Turn Bay Length (m) | 35.0 | 02.9 | | 20.0 | 03.0 | | 65.0 | 102.4 | | 45.0 | 55.2 | |
| | 510 | 642 | | 504 | 675 | | 277 | 1949 | | 387 | 1941 | |
| Base Capacity (vph) | | 042 | | 0 | 0/5 | | 0 | | | 0 | 1941 | |
| Starvation Cap Reductn Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | | | | | | | | | | | |
| Reduced v/c Ratio | 0.40 | 0.11 | | 0.18 | 0.11 | | 0.17 | 0.34 | | 0.07 | 0.42 | |
| Intersection Summary Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 70 | Otriei | | | | | | | | | | | |
| Actuated Cycle Length: 70 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to ph | ana 2:NIPTL and | 6-CDTI C+ | art of Croor | | | | | | | | | |
| Natural Cycle: 65 | ase 2.NDTL and | U.SDIL, SI | art or Green | ļ | | | | | | | | |
| Natural Cycle. ช่ว Control Type: Actuated-Coordina | ato d | | | | | | | | | | | |
| | aleu | | | | | | | | | | | |
| Maximum v/c Ratio: 0.64 | | | | 11 | ersection LC |)C. D | | | | | | |
| Intersection Signal Delay: 11.5 Intersection Capacity Utilization 6 | CC 40/ | | | | | | | | | | | |
| Analysis Period (min) 15 | 00.4% | | | IU | U Level of S | ervice C | | | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie | Dr & Fitzgerald F | Rd | | | | | | | | | | |
| 1 Ø2 (R) | | | | | - 4 | Ø4 | | | | | | |
| 36 s | | | | | 34 s | - | | | | | | |
| 1 | | | | | - + | | | | | | | |
| ▼ Ø6 (R) | | | | | ₹ | Ø8 | | | | | | |
| 9E a | | | | | 274 - | | | | | | | |

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|---|-----------------|----------|---------|---------|----------|----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | 1151 | 44 | ₩ 7 |) j | * |
| Traffic Volume (vph) | 107 | 51 | 655 | 52 | 75 | 839 |
| Future Volume (vph) | 107 | 51 | 655 | 52 | 75 | 839 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | | 30.0 | 50.0 | .000 |
| Storage Lanes | 1 | 0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | - | | | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Ped Bike Factor | 0.99 | | | 0.98 | 1.00 | |
| Frt | 0.956 | | | 0.850 | | |
| Flt Protected | 0.967 | | | | 0.950 | |
| Satd. Flow (prot) | 1537 | 0 | 3357 | 1547 | 1712 | 3357 |
| Flt Permitted | 0.967 | - | | | 0.403 | |
| Satd. Flow (perm) | 1537 | 0 | 3357 | 1511 | 725 | 3357 |
| Right Turn on Red | .001 | Yes | 5551 | Yes | 0 | 0001 |
| Satd. Flow (RTOR) | 40 | . 00 | | 52 | | |
| Link Speed (k/h) | 40 | | 60 | UL. | | 60 |
| Link Opeed (MI) | 60.4 | | 200.0 | | | 186.4 |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| Confl. Peds. (#/hr) | J. T | 10 | 12.0 | 2 | 2 | 11.4 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 11% | 4% | 3% | 0% | 1.00 | 3% |
| | 107 | 4% 51 | 655 | 52 | 1% 75 | 839 |
| Adj. Flow (vph) | 107 | อเ | სეე | IJΖ | 15 | 039 |
| Shared Lane Traffic (%) Lane Group Flow (vph) | 158 | 0 | 655 | 52 | 75 | 839 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| | | | | | | |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| Link Offset(m) | 0.0 | | 0.0 | | | 0.0 |
| Crosswalk Width(m) | 4.9 | | 4.9 | | | 4.9 |
| Two way Left Turn Lane | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Number of Detectors | 1 | | _ 2 | 1 | 1 | _ 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | CI+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | | 28.7 | | | 28.7 |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | CI+Ex | | | Cl+Ex |
| Detector 2 Channel | | | J1. L∧ | | | J1 · L∧ |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | i Gilli | , Cilli | 6 |
| Permitted Phases | U | | | 2 | 6 | U |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | U | | | | U | U |
| | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Initial (s) | | | | 10.0 | 10.0 | |
| Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Total Split (s) | 33.0 | | 37.0 | 37.0 | 37.0 | 37.0 |
| Total Split (%) | 47.1% | | 52.9% | 52.9% | 52.9% | 52.9% |
| Maximum Green (s) | 27.4 | | 31.1 | 31.1 | 31.1 | 31.1 |
| | 2.2 | | 3.7 | 3.7 | 3.7 | 3.7 |
| Yellow Time (s) All-Red Time (s) | 3.3 2.3 | | 2.2 | 2.2 | 2.2 | 2.2 |

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|-----------------------------------|-----------------|-----------|--------------|-------------|--------------|-----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |
| Lead/Lag | | | *** | *** | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | | |
| Act Effct Green (s) | 12.0 | | 46.5 | 46.5 | 46.5 | 46.5 |
| Actuated g/C Ratio | 0.17 | | 0.66 | 0.66 | 0.66 | 0.66 |
| v/c Ratio | 0.53 | | 0.29 | 0.05 | 0.16 | 0.38 |
| Control Delay | 25.9 | | 5.7 | 1.9 | 3.1 | 2.9 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 25.9 | | 5.7 | 1.9 | 3.1 | 2.9 |
| LOS | 23.9 C | | A.7 | Α | Α | 2.5 A |
| Approach Delay | 25.9 | | 5.4 | ٨ | ٨ | 2.9 |
| Approach LOS | 25.9 C | | 5.4 A | | | 2.9 A |
| Queue Length 50th (m) | 14.4 | | 14.7 | 0.0 | 1.5 | 9.0 |
| Queue Length 95th (m) | 28.2 | | 28.1 | 3.5 | 3.6 | 12.8 |
| Internal Link Dist (m) | 36.4 | | 176.0 | 3.3 | 3.0 | 162.4 |
| | 30.4 | | 170.0 | 20.0 | F0 0 | 102.4 |
| Turn Bay Length (m) | COF | | 2227 | 30.0 | 50.0 481 | 2227 |
| Base Capacity (vph) | 625 | | | 1020 | | |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.25 | | 0.29 | 0.05 | 0.16 | 0.38 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70 | | | | | | |
| Actuated Cycle Length: 70 | | | | | | |
| Offset: 9 (13%), Referenced to | phase 2:NBT and | 6:SBTL, S | tart of Gree | n | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordin | nated | | | | | |
| Maximum v/c Ratio: 0.53 | | | | | | |
| Intersection Signal Delay: 6.0 | | | | In | tersection L | OS: A |
| Intersection Capacity Utilization | า 55.5% | | | IC | U Level of S | Service B |
| Analysis Period (min) 15 | | | | | | |
| , , , | | | | | | |
| Splits and Phases: 3: Moodie | e Dr & Loblaws | | | | | |
| A | | | | | | |
| Tø2 (R) | | | | | | |
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| k. | | | | | | _ |
| ▼ Ø6 (R) | | | | | | ï8 |
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|---|-------|------------|---------------|-------|------------|---------------|-------|------------|---------------|----------|------------|---------------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 75 | 44 | 7 | ¥ | 44 | 7 | 14.54 | 44 | 7 | 14.54 | 44 | 7 |
| Traffic Volume (vph) | 126 | 536 | 269 | 225 | 901 | 331 | 225 | 237 | 148 | 290 | 451 | 198 |
| Future Volume (vph) | 126 | 536 | 269 | 225 | 901 | 331 | 225 | 237 | 148 | 290 | 451 | 198 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | 0.05 | 1.00 | 40.0 | 0.05 | 1.00 | 40.0 | 0.05 | 1.00 | 50.0 | 0.05 | 1.00 |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Ped Bike Factor Frt | 1.00 | | 0.97 0.850 | 0.99 | | 0.98 0.850 | 0.99 | | 0.96 0.850 | 0.97 | | 0.97 0.850 |
| Flt Protected | 0.950 | | 0.030 | 0.950 | | 0.000 | 0.950 | | 0.050 | 0.950 | | 0.030 |
| Satd. Flow (prot) | 1679 | 3390 | 1517 | 1729 | 3424 | 1532 | 3288 | 3293 | 1532 | 3288 | 3357 | 1517 |
| Flt Permitted | 0.950 | 0000 | 1011 | 0.950 | 0121 | 1002 | 0.950 | 0200 | 1002 | 0.950 | 0001 | 1011 |
| Satd. Flow (perm) | 1675 | 3390 | 1469 | 1713 | 3424 | 1503 | 3248 | 3293 | 1477 | 3192 | 3357 | 1478 |
| Right Turn on Red | | 0000 | Yes | | V | Yes | 02.0 | 0200 | Yes | 0.02 | 000. | Yes |
| Satd. Flow (RTOR) | | | 269 | | | 331 | | | 206 | | | 206 |
| Link Speed (k/h) | | 60 | | | 60 | | | 60 | | | 60 | |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | 5 | | 15 | 15 | | 5 | 12 | | 21 | 21 | | 12 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 3% | 2% | 2% | 0% | 1% | 1% | 2% | 5% | 1% | 2% | 3% | 2% |
| Adj. Flow (vph) | 126 | 536 | 269 | 225 | 901 | 331 | 225 | 237 | 148 | 290 | 451 | 198 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 126 | 536 | 269 | 225 | 901 | 331 | 225 | 237 | 148 | 290 | 451 | 198 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | | | 3.7 | | | 7.4 | | | 7.4 | |
| Link Offset(m) | | 0.0 4.9 | | | 0.0 4.9 | | | 0.0 4.9 | | | 0.0 4.9 | |
| Crosswalk Width(m) Two way Left Turn Lane | | 4.9 | | | 4.9 | | | 4.9 | | | 4.9 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 1.00 | 24 | 1.00 | 1.00 | 24 | 1.00 | 1.00 | 24 | 1.00 | 1.00 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | 5.4 | 0.0 | - | ъ. | 0.0 | - | ъ , | 0.0 | _ | ъ. | 0.0 | - |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | ^ | 1 | 6 | ^ | 3 | 8 | 0 | 7 | 4 | 4 |
| Permitted Phases | _ | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Detector Phase Switch Phase | 5 | | ۷ | I | U | U | J | 0 | 0 | 1 | 4 | 4 |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 18.0 | 34.1 | 34.1 | 28.2 | 44.3 | 44.3 | 18.4 | 37.7 | 37.7 | 20.0 | 39.3 | 39.3 |
| Total Split (%) | 15.0% | 28.4% | 28.4% | 23.5% | 36.9% | 36.9% | 15.3% | 31.4% | 31.4% | 16.7% | 32.8% | 32.8% |
| Maximum Green (s) | 11.6 | 27.7 | 27.7 | 21.8 | 37.9 | 37.9 | 11.9 | 31.0 | 31.0 | 13.5 | 32.6 | 32.6 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |
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|-------------------------|------|-------|-------|------|-------|-------|------|----------|------|-------|----------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effct Green (s) | 14.0 | 39.5 | 39.5 | 20.4 | 46.0 | 46.0 | 11.5 | 20.8 | 20.8 | 13.2 | 22.5 | 22.5 |
| Actuated g/C Ratio | 0.12 | 0.33 | 0.33 | 0.17 | 0.38 | 0.38 | 0.10 | 0.17 | 0.17 | 0.11 | 0.19 | 0.19 |
| v/c Ratio | 0.64 | 0.48 | 0.41 | 0.77 | 0.69 | 0.42 | 0.72 | 0.42 | 0.35 | 0.81 | 0.72 | 0.44 |
| Control Delay | 65.7 | 36.0 | 6.3 | 64.2 | 35.9 | 5.0 | 65.9 | 45.4 | 3.6 | 69.6 | 52.0 | 7.9 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 65.7 | 36.0 | 6.3 | 64.2 | 35.9 | 5.0 | 65.9 | 45.4 | 3.6 | 69.6 | 52.0 | 7.9 |
| LOS | Е | D | Α | Е | D | Α | Е | D | Α | Е | D | Α |
| Approach Delay | | 31.4 | | | 33.2 | | | 42.8 | | | 48.1 | |
| Approach LOS | | С | | | С | | | D | | | D | |
| Queue Length 50th (m) | 28.5 | 53.2 | 0.0 | 50.8 | 94.1 | 0.0 | 26.8 | 26.4 | 0.0 | 34.7 | 53.1 | 0.0 |
| Queue Length 95th (m) | 48.4 | 80.2 | 21.4 | 74.6 | 128.8 | 20.4 | 39.9 | 36.2 | 4.8 | #54.0 | 66.0 | 16.6 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 201 | 1117 | 664 | 330 | 1311 | 779 | 326 | 850 | 534 | 369 | 911 | 551 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.63 | 0.48 | 0.41 | 0.68 | 0.69 | 0.42 | 0.69 | 0.28 | 0.28 | 0.79 | 0.50 | 0.36 |

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 100 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection Signal Delay: 37.9
Intersection Capacity Utilization 83.2%

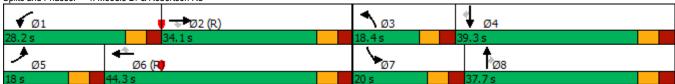
Intersection LOS: D ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

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|-----------------------------------|------|------|-------|----------|-----------------|------|
| | | ▼ | , | ı | ▼ | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | 7 | | 44 | ♦ 1₃ | |
| Traffic Volume (veh/h) | 0 | 24 | 0 | 896 | 859 | 22 |
| Future Volume (Veh/h) | 0 | 24 | 0 | 896 | 859 | 22 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 24 | 0 | 896 | 859 | 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) | | | | 79 | 218 | |
| pX, platoon unblocked | 0.90 | 0.85 | 0.85 | | | |
| vC, conflicting volume | 1318 | 440 | 881 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 660 | 0 | 515 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 97 | 100 | | | |
| cM capacity (veh/h) | 356 | 925 | 892 | | | |
| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | |
| Volume Total | 24 | 448 | 448 | 573 | 308 | |
| Volume Left | 0 | 448 | 448 | 0 | 0 | |
| | 24 | 0 | 0 | 0 | 22 | |
| Volume Right | | - | - | | | |
| cSH Valume to Conneits | 925 | 1700 | 1700 | 1700 | 1700 | |
| Volume to Capacity | 0.03 | 0.26 | 0.26 | 0.34 | 0.18 | |
| Queue Length 95th (m) | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Control Delay (s) | 9.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Lane LOS | A | | | | | |
| Approach Delay (s) | 9.0 | 0.0 | | 0.0 | | |
| Approach LOS | А | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.1 | | | |
| Intersection Capacity Utilization | | | 35.8% | IC | U Level of Serv | /ice |
| Analysis Period (min) | | | 15 | | | |
| a., o.o r onou (min) | | | | | | |

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|-----------------------------------|------|---------------|----------|------|--------------|--------|
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | र्व | 1 | 1151 | * | OBIC |
| Traffic Volume (veh/h) | 2 | 257 | 108 | 29 | 22 | 1 |
| Future Volume (Veh/h) | 2 | 257 | 108 | 29 | 22 | 1 |
| Sign Control | 2 | Free | Free | 23 | Stop | ı |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| | | 257 | 1.00 | | | 1.00 |
| Hourly flow rate (vph) | 2 | 257 | 108 | 29 | 22 | I |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | 107 | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 137 | | | | 384 | 122 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 137 | | | | 384 | 122 |
| 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 | | | | 96 | 100 |
| cM capacity (veh/h) | 1447 | | | | 618 | 929 |
| Direction, Lane # | EB 1 | WB 1 | SB 1 | | | 020 |
| Volume Total | 259 | 137 | 23 | | | |
| Volume Left | 209 | 0 | 23 22 | | | |
| | 0 | 29 | | | | |
| Volume Right | - | | 1 | | | |
| cSH | 1447 | 1700 | 627 | | | |
| Volume to Capacity | 0.00 | 0.08 | 0.04 | | | |
| Queue Length 95th (m) | 0.0 | 0.0 | 0.9 | | | |
| Control Delay (s) | 0.1 | 0.0 | 11.0 | | | |
| Lane LOS | Α | | В | | | |
| Approach Delay (s) | 0.1 | 0.0 | 11.0 | | | |
| Approach LOS | | | В | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.6 | | | |
| Intersection Capacity Utilization | | | 26.0% | ICI | J Level of S | ervice |
| Analysis Period (min) | | | 15 | | | |

| | • | • | • | † | 1 | 1 |
|---|-------|-------|------------|---------------|---------------|--------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Group Lane Configurations | EBL N | EBK | NBL T | ★ ★ | ♦ ♦ | SBK |
| Traffic Volume (vph) | 22 | 67 | 6 8 | TT 503 | TT 580 | 30 |
| Future Volume (vph) | 22 | 67 | 68 | 503 | 580 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | 1000 | 1000 | 40.0 |
| Storage Lanes | 1 | 1 | 1 | | | 1 |
| Taper Length (m) | 7.6 | | 60.0 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | 0.950 | | | |
| Satd. Flow (prot) | 1729 | 1547 | 1729 | 3424 | 3424 | 1547 |
| Flt Permitted | 0.950 | | 0.377 | | | |
| Satd. Flow (perm) | 1729 | 1547 | 686 | 3424 | 3424 | 1547 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | 67 | | | | 30 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 224.9 | 191.7 | |
| Travel Time (s) | 9.9 | | | 13.5 | 11.5 | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 0% |
| Adj. Flow (vph) | 22 | 67 | 68 | 503 | 580 | 30 |
| Shared Lane Traffic (%) | | 01 | | 000 | 300 | |
| Lane Group Flow (vph) | 22 | 67 | 68 | 503 | 580 | 30 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | ragnt | LGIL | 3.7 | 3.7 | ragiit |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | 4.3 | | | 4.5 | 4.3 | |
| Two way Leπ Turn Lane Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| | 1.06 | 1.06 | 1.06 | 1.00 | 1.00 | 1.06 |
| Turning Speed (k/h) | 1 | 14 | 24 1 | 2 | 2 | 14 |
| Number of Detectors | • | | | 2 Thru | | • |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | | 28.7 | 28.7 | |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | | | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 10.6 | 15.6 | 24.6 | 24.6 |
| Total Split (s) | 28.3 | 28.3 | 11.0 | 42.0 | 31.0 | 31.0 |
| Total Split (%) | 40.3% | 40.3% | 15.6% | 59.7% | 44.1% | 44.1% |
| Maximum Green (s) | 22.0 | 22.0 | 5.4 | 36.4 | 25.4 | 25.4 |
| Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 |
| (4) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

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|-----------------------------------|------------------|-------------|--------------|----------|--------------|------------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 2 | 2 | | | 2 | 2 |
| Act Effct Green (s) | 12.4 | 12.4 | 52.5 | 54.8 | 47.7 | 47.7 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.75 | 0.78 | 0.68 | 0.68 |
| v/c Ratio | 0.10 | 0.10 | 0.73 | 0.70 | 0.00 | 0.03 |
| Control Delay | 22.3 | 7.6 | 5.8 | 4.8 | 9.8 | 5.5 |
| • | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Delay | 22.3 | 7.6 | 5.8 | 4.8 | 9.8 | 5.5 |
| Total Delay | | | | | | |
| LOS | C | Α | A | Α | A | Α |
| Approach Delay | 11.2 | | | 4.9 | 9.6 | |
| Approach LOS | В | | | A | A | |
| Queue Length 50th (m) | 2.6 | 0.0 | 2.4 | 10.4 | 21.5 | 0.0 |
| Queue Length 95th (m) | 6.4 | 7.6 | 9.6 | 26.7 | 43.5 | 4.7 |
| Internal Link Dist (m) | 197.1 | | | 200.9 | 167.7 | |
| Turn Bay Length (m) | | 100.0 | 120.0 | | | 40.0 |
| Base Capacity (vph) | 541 | 530 | 599 | 2667 | 2323 | 1059 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.04 | 0.13 | 0.11 | 0.19 | 0.25 | 0.03 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70.3 | | | | | | |
| Actuated Cycle Length: 70.3 | | | | | | |
| Offset: 55 (78%), Referenced to | phase 2:NBTL a | nd 6:SBT, S | Start of Gre | en | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coordin | ated | | | | | |
| Maximum v/c Ratio: 0.25 | | | | | | |
| Intersection Signal Delay: 7.6 | | | | Inf | ersection L | OS: A |
| Intersection Capacity Utilization | 44 0% | | | | U Level of S | |
| Analysis Period (min) 15 | 77.070 | | | 10 | O LOVOI OI C | JOI VICE A |
| Allarysis i criod (illiii) io | | | | | | |
| Splits and Phases: 1: Moodie | Dr & Timm Dr | | | | | |
| A Tridoco. 1: Woodie | DI W TIITIIII DI | | | | | |
| [™] Tø2 (R) • | | | | | | |
| 102 (K) | | | | | | - |
| 42 S | | | | | | 2 |
| | | | | | | |
| `\ø5 • • • | Ø6 (R) | | | | | |
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|--|------------|------------|----------|------------|--------------|----------|------------|------------|-------------|------------|------------|----------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | î, | | 7 | 1 , 2 | | * | ት ጌ | | 7 | ∳ ኄ | |
| Traffic Volume (vph) | 72 | 1 | 32 | 19 | 2 | 17 | 54 | 407 | 10 | 12 | 552 | 42 |
| Future Volume (vph) | 72 | 3 | 32 | 19 | 2 | 17 | 54 | 407 | 10 | 12 | 552 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | 0.000 | | | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 0.050 | 0.863 | | 0.050 | 0.866 | | 0.050 | 0.996 | | 0.050 | 0.989 | |
| Flt Protected | 0.950 | 4.400 | ^ | 0.950 | 4555 | ^ | 0.950 | 2400 | ^ | 0.950 | 2074 | 0 |
| Satd. Flow (prot) | 1729 | 1439 | 0 | 1729 | 1555 | 0 | 1729 | 3409 | 0 | 1729 | 3371 | 0 |
| Flt Permitted | 0.745 | 4.420 | ٥ | 0.734 | 4555 | 0 | 0.428 | 2400 | ٥ | 0.508 | 2274 | 0 |
| Satd. Flow (perm) | 1352 | 1439 | 0 Yes | 1336 | 1555 | 0 Yes | 778 | 3409 | 0 Yes | 923 | 3371 | 0 Yes |
| Right Turn on Red Satd. Flow (RTOR) | | 32 | res | | 17 | res | | 4 | res | | 14 | res |
| Link Speed (k/h) | | 48 | | | 48 | | | 60 | | | 60 | |
| Link Distance (m) | | 101.2 | | | 87.6 | | | 186.4 | | | 72.7 | |
| Travel Time (s) | | 7.6 | | | 6.6 | | | 11.2 | | | 4.4 | |
| Confl. Peds. (#/hr) | 4 | 7.0 | | | 0.0 | 4 | 2 | 11.2 | 2 | 2 | 7.7 | 2 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 0% | 0% | 10% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 1% | 5% |
| Adj. Flow (vph) | 72 | 3 | 32 | 19 | 2 | 17 | 54 | 407 | 10 | 12 | 552 | 42 |
| Shared Lane Traffic (%) | | | | | | | • | | | | | |
| Lane Group Flow (vph) | 72 | 35 | 0 | 19 | 19 | 0 | 54 | 417 | 0 | 12 | 594 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(m) | | 3.7 | · | | 3.7 | · | | 3.7 | · · | | 3.7 | · · |
| Link Offset(m) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Crosswalk Width(m) | | 4.9 | | | 4.9 | | | 4.9 | | | 4.9 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| 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 6.1 | 0.0 1.8 | | 0.0 6.1 | 0.0 1.8 | | 0.0 6.1 | 0.0 1.8 | | 0.0 6.1 | 0.0 1.8 | |
| Detector 1 Size(m) Detector 1 Type | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | |
| Detector 1 Channel | CITLX | CITEX | | CITLX | CITLX | | CITLX | CITLX | | CITLX | CITLX | |
| 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) | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | | 0.0 | 28.7 | |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | <u> </u> | | | <u> </u> | | | | | | <u> </u> | |
| 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) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Total Split (%) | 48.6% | 48.6% | | 48.6% | 48.6% | | 51.4% | 51.4% | | 51.4% | 51.4% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 30.3 | 30.3 | | 30.3 | 30.3 | |
| Yellow Time (s) | 3.3 | 3.3 | | 3.3 | 3.3 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| All-Red Time (s) | 2.7 | 2.7 | | 2.7 | 2.7 | | 2.0 | 2.0 | | 2.0 | 2.0 | |

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|-------------------------------------|--------------------|------------|--------------|------|---------------|----------|-------|----------|-----|-------|----------|-----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| 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 | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 13.7 | 13.7 | | 13.7 | 13.7 | | 48.9 | 48.9 | | 48.9 | 48.9 | |
| Actuated g/C Ratio | 0.20 | 0.20 | | 0.20 | 0.20 | | 0.70 | 0.70 | | 0.70 | 0.70 | |
| v/c Ratio | 0.27 | 0.11 | | 0.07 | 0.06 | | 0.10 | 0.18 | | 0.02 | 0.25 | |
| Control Delay | 24.3 | 8.3 | | 19.9 | 9.4 | | 6.5 | 5.1 | | 8.1 | 6.7 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 24.3 | 8.3 | | 19.9 | 9.4 | | 6.5 | 5.1 | | 8.1 | 6.7 | |
| LOS | С | Α | | В | Α | | Α | Α | | Α | Α | |
| Approach Delay | | 19.0 | | | 14.7 | | | 5.3 | | | 6.7 | |
| Approach LOS | | В | | | В | | | Α | | | Α | |
| Queue Length 50th (m) | 8.7 | 0.3 | | 2.2 | 0.3 | | 1.9 | 7.9 | | 0.4 | 12.2 | |
| Queue Length 95th (m) | 13.3 | 5.0 | | 5.0 | 3.6 | | 6.2 | 15.1 | | 3.6 | 38.1 | |
| Internal Link Dist (m) | | 77.2 | | | 63.6 | | | 162.4 | | | 48.7 | |
| Turn Bay Length (m) | 35.0 | | | 20.0 | | | 65.0 | | | 45.0 | | |
| Base Capacity (vph) | 540 | 594 | | 534 | 632 | | 543 | 2382 | | 644 | 2359 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.13 | 0.06 | | 0.04 | 0.03 | | 0.10 | 0.18 | | 0.02 | 0.25 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 70 | | | | | | | | | | | | |
| Actuated Cycle Length: 70 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to pha | ase 2:NBTL and | 6:SBTL, St | art of Greer | 1 | | | | | | | | |
| Natural Cycle: 65 | | | | | | | | | | | | |
| Control Type: Actuated-Coordina | ited | | | | | | | | | | | |
| Maximum v/c Ratio: 0.27 | | | | | | | | | | | | |
| Intersection Signal Delay: 7.5 | | | | Int | ersection LO | S: A | | | | | | |
| Intersection Capacity Utilization 5 | 54.5% | | | ICI | J Level of Se | ervice A | | | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie [| Dr & Fitzgerald F | ₹d | | | | | | | | | | |
| -4 | Di a i inggiraia i | tu | | | 1 4 | | | | | | | |
| Ø2 (R) | | | | | | Ø4 | | | | | | |
| 36 S | | | | | 34 S | | | | | | | |
| √ √ Ø6 (R) | | | | | - 17 | Ø8 | | | | | | |

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|---|---------------|-------|----------|----------|----------|----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | ** | | 44 | # | ሻ | 44 |
| Traffic Volume (vph) | 27 | 35 | 436 | 109 | 21 | 583 |
| Future Volume (vph) | 27 | 35 | 436 | 109 | 21 | 583 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | | 30.0 | 50.0 | |
| Storage Lanes | 1 | 0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | - | | | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Ped Bike Factor | 1.00 | | | | | |
| Frt | 0.924 | | | 0.850 | | |
| Flt Protected | 0.979 | | | 0.000 | 0.950 | |
| Satd. Flow (prot) | 1646 | 0 | 3424 | 1547 | 1729 | 3424 |
| Flt Permitted | 0.979 | 0 | UTLT | 1071 | 0.499 | U727 |
| Satd. Flow (perm) | 1646 | 0 | 3424 | 1547 | 908 | 3424 |
| Right Turn on Red | 1040 | Yes | J+Z4 | Yes | 300 | J424 |
| Satd. Flow (RTOR) | 35 | 169 | | 109 | | |
| | 35 40 | | 60 | 109 | | 60 |
| Link Speed (k/h) Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| | | | | | | |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| Confl. Peds. (#/hr) | 1 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 1% | 0% | 0% | 1% |
| Adj. Flow (vph) | 27 | 35 | 436 | 109 | 21 | 583 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 62 | 0 | 436 | 109 | 21 | 583 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Number of Detectors | 1 | | 2 | 1 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.1 | 0.1 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Size(m) | | | | | | |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | Cl+Ex | Cl+Ex |
| Detector 1 Channel | 2.2 | | ^ ^ | | ^ ^ | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | 28.7 | | | 28.7 |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | CI+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | · · | | _ | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | | | _ | _ | | |
| Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Minimum Split (c) | | | 37.0 | 37.0 | | 37.0 |
| Minimum Split (s) | ວວ ∩ | | 31.0 | | 37.0 | |
| Total Split (s) | 33.0 | | E2 00/ | E2 00/ | | |
| Total Split (s) Total Split (%) | 47.1% | | 52.9% | 52.9% | 52.9% | 52.9% |
| Total Split (s) Total Split (%) Maximum Green (s) | 47.1% 27.4 | | 31.1 | 31.1 | 31.1 | 31.1 |
| Total Split (s) Total Split (%) | 47.1% | | | | | |

| | • | 4 | † | <i>></i> | \ | \ |
|-----------------------------------|-----------------|-----------|--------------|-------------|--------------|--------------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |
| Lead/Lag | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | J | • |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 2 | | 2 | 2 | | |
| Act Effct Green (s) | 13.4 | | 53.7 | 53.7 | 53.7 | 53.7 |
| Actuated g/C Ratio | 0.19 | | 0.77 | 0.77 | 0.77 | 0.77 |
| v/c Ratio | 0.18 | | 0.17 | 0.09 | 0.03 | 0.77 |
| Control Delay | 12.5 | | 5.5 | 2.4 | 2.0 | 1.5 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| | 12.5 | | 5.5 | 2.4 | 2.0 | 1.5 |
| Total Delay LOS | 12.5 B | | | | | |
| | | | A | Α | Α | A |
| Approach Delay | 12.5 | | 4.9 | | | 1.5 |
| Approach LOS | B | | A | 0.0 | 0.0 | A |
| Queue Length 50th (m) | 3.1 | | 8.6 | 0.0 | 0.2 | 3.2 |
| Queue Length 95th (m) | 8.8 | | 27.0 | 7.3 | 1.0 | 6.0 |
| Internal Link Dist (m) | 36.4 | | 176.0 | 00.6 | 50. 0 | 162.4 |
| Turn Bay Length (m) | 00- | | 0005 | 30.0 | 50.0 | 0005 |
| Base Capacity (vph) | 665 | | 2626 | 1212 | 696 | 2626 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.09 | | 0.17 | 0.09 | 0.03 | 0.22 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70 | | | | | | |
| Actuated Cycle Length: 70 | | | | | | |
| Offset: 9 (13%), Referenced to | phase 2:NBT and | 6:SBTL, S | tart of Gree | n | | |
| Natural Cycle: 65 | ' | | | | | |
| Control Type: Actuated-Coordin | nated | | | | | |
| Maximum v/c Ratio: 0.22 | | | | | | |
| Intersection Signal Delay: 3.6 | | | | In | tersection L | OS: A |
| Intersection Capacity Utilization | 36.3% | | | | U Level of S | |
| Analysis Period (min) 15 | 1 00.0 /0 | | | 10 | O LOVOI OI C | JOI VIOO 7 C |
| 7 thanyono i chica (min) io | | | | | | |
| Splits and Phases: 3: Moodie | e Dr & Loblaws | | | | | |
| A STREET | DI a Lobiano | | | | | |
| Tø2 (R) | | | | | | |
| 37 s | | | | | | |
| k. | | | | | | _ |
| ▼ Ø6 (R) | | | | | | √ Ø8 |
| . 20(0) | | | | | | |

| | ٠ | → | • | • | ← | • | 4 | † | / | / | ↓ | ✓ |
|--|--------------|------------|-------------|--------------|------------|------------|--------------|-------------|--------------|--------------|-------------|-----------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ሻ | 44 | 7 | * | 44 | 7 | 16.56 | 44 | 7 | 16.54 | 44 | 7 |
| Traffic Volume (vph) | 166 | 717 | 189 | 174 | 587 | 122 | 240 | 246 | 191 | 219 | 217 | 162 |
| Future Volume (vph) | 166 | 717 | 189 | 174 | 587 | 122 | 240 | 246 | 191 | 219 | 217 | 162 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 1.00 | 0.95 | 1.00 | 40.0 1.00 | 0.95 | 1.00 | 40.0 0.97 | 0.95 | 1.00 | 50.0 0.97 | 0.95 | 1.00 |
| Lane Util. Factor Ped Bike Factor | 1.00 | 0.95 | 0.99 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 0.97 | 0.97 | 0.95 | 0.99 |
| Frt | | | 0.850 | 1.00 | | 0.850 | 1.00 | | 0.850 | 0.90 | | 0.850 |
| Flt Protected | 0.950 | | 0.000 | 0.950 | | 0.000 | 0.950 | | 0.000 | 0.950 | | 0.000 |
| Satd. Flow (prot) | 1729 | 3424 | 1547 | 1729 | 3424 | 1532 | 3321 | 3424 | 1532 | 3321 | 3424 | 1532 |
| Flt Permitted | 0.950 | 0121 | 1011 | 0.950 | 0121 | 1002 | 0.950 | 0121 | 1002 | 0.950 | 0121 | 1002 |
| Satd. Flow (perm) | 1729 | 3424 | 1524 | 1727 | 3424 | 1532 | 3316 | 3424 | 1489 | 3256 | 3424 | 1511 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 189 | | | 139 | | | 191 | | | 162 |
| Link Speed (k/h) | | 60 | | | 60 | | | 60 | | | 60 | |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | | | 2 | 2 | | | 1 | | 13 | 13 | | 1 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 166 | 717 | 189 | 174 | 587 | 122 | 240 | 246 | 191 | 219 | 217 | 162 |
| Shared Lane Traffic (%) | 100 | 717 | 189 | 174 | F07 | 122 | 240 | 0.40 | 191 | 219 | 217 | 100 |
| Lane Group Flow (vph) Enter Blocked Intersection | 166 No | No | No | No | 587 No | No | No No | 246 No | No | No | No | 162 No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | | Left | Left | Right |
| Median Width(m) | Leit | 3.7 | Rigiit | Leit | 3.7 | Rigiit | Leit | 7.4 | Right | Leit | 7.4 | Rigit |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | | 14 | 24 | | 14 | 24 | | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Extend (s) | | | | | | | | 0.0 | | | | |
| Detector 1 Queue (s) Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | | 2 | | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 26.0 | 35.0 | 35.0 | 31.0 | 40.0 | 40.0 | 27.0 | 37.7 | 37.7 | 27.0 | 37.7 | 37.7 |
| Total Split (%) | 19.9% | 26.8% | 26.8% | 23.7% | 30.6% | 30.6% | 20.7% | 28.8% | 28.8% | 20.7% | 28.8% | 28.8% |
| Maximum Green (s) Yellow Time (s) | 19.6 3.7 | 28.6 | 28.6 3.7 | 24.6 3.7 | 33.6 | 33.6 | 20.5 3.7 | 31.0 3.7 | 31.0 3.7 | 20.5 3.7 | 31.0 3.7 | 31.0 |
| All-Red Time (s) | 3.7 2.7 | 3.7 2.7 | 2.7 | 2.7 | 3.7 2.7 | 3.7 2.7 | 2.8 | 3.7 | 3.7 | 2.8 | 3.7 | 3.7 |
| הודולפע דווווב (פ) | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.1 | 2.0 | 3.0 | 3.0 | 2.0 | 3.0 | 3.0 |

| | • | - | • | • | ← | • | • | † | 1 | - | ļ | 4 |
|-------------------------|------|--------|-------|------|-------|-------|------|----------|------|------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 |
| Act Effct Green (s) | 17.2 | 54.9 | 54.9 | 18.4 | 56.1 | 56.1 | 14.7 | 17.5 | 17.5 | 13.9 | 16.7 | 16.7 |
| Actuated g/C Ratio | 0.13 | 0.42 | 0.42 | 0.14 | 0.43 | 0.43 | 0.11 | 0.13 | 0.13 | 0.11 | 0.13 | 0.13 |
| v/c Ratio | 0.73 | 0.50 | 0.25 | 0.72 | 0.40 | 0.17 | 0.64 | 0.54 | 0.52 | 0.62 | 0.50 | 0.49 |
| Control Delay | 72.7 | 32.4 | 5.9 | 69.6 | 29.7 | 4.5 | 63.3 | 55.9 | 11.2 | 63.4 | 55.6 | 11.5 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 72.7 | 32.4 | 5.9 | 69.6 | 29.7 | 4.5 | 63.3 | 55.9 | 11.2 | 63.4 | 55.6 | 11.5 |
| LOS | E | С | Α | E | С | Α | Е | Е | В | Е | Ε | В |
| Approach Delay | | 34.0 | | | 34.1 | | | 45.9 | | | 46.5 | |
| Approach LOS | | С | | | С | | | D | | | D | |
| Queue Length 50th (m) | 41.5 | 67.5 | 0.0 | 43.4 | 52.2 | 0.0 | 30.9 | 32.3 | 0.0 | 28.2 | 28.5 | 0.0 |
| Queue Length 95th (m) | 63.4 | #129.2 | 18.6 | 64.2 | 91.6 | 11.2 | 43.2 | 39.2 | 18.3 | 40.1 | 35.4 | 17.4 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 266 | 1438 | 749 | 326 | 1469 | 736 | 520 | 817 | 500 | 520 | 812 | 481 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.62 | 0.50 | 0.25 | 0.53 | 0.40 | 0.17 | 0.46 | 0.30 | 0.38 | 0.42 | 0.27 | 0.34 |

Intersection Summary

Area Type: Other

Cycle Length: 130.7

Actuated Cycle Length: 130.7

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection LOS: D ICU Level of Service D

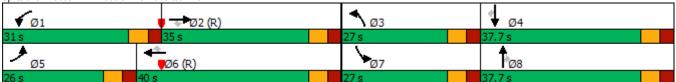
Intersection Signal Delay: 38.8 Intersection Capacity Utilization 75.4%

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

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|-----------------------------------|----------|-------------|-------|----------|------------------|------|
| V | EDI | T DD | ND. | I | ▼ | 000 |
| Movement | EBL | EBR | NBL | NBT | | SBR |
| Lane Configurations | | 7 | | 44 | 4 13 | |
| Traffic Volume (veh/h) | 0 | 31 | 0 | 499 | 612 | 32 |
| Future Volume (Veh/h) | 0 | 31 | 0 | 499 | 612 | 32 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 31 | 0 | 499 | 612 | 32 |
| Pedestrians | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh) | | | | | 7.00 | |
| Upstream signal (m) | | | | 73 | 225 | |
| pX, platoon unblocked | 0.96 | 0.94 | 0.94 | , , | 220 | |
| vC, conflicting volume | 878 | 322 | 644 | | | |
| vC1, stage 1 conf vol | 010 | 322 | 044 | | | |
| vC1, stage 1 conf vol | | | | | | |
| | 622 | 159 | 500 | | | |
| vCu, unblocked vol | | | | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 96 | 100 | | | |
| cM capacity (veh/h) | 402 | 809 | 999 | | | |
| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | |
| Volume Total | 31 | 250 | 250 | 408 | 236 | |
| Volume Left | 0 | 0 | 0 | 0 | 0 | |
| Volume Right | 31 | 0 | 0 | 0 | 32 | |
| cSH | 809 | 1700 | 1700 | 1700 | 1700 | |
| Volume to Capacity | 0.04 | 0.15 | 0.15 | 0.24 | 0.14 | |
| Queue Length 95th (m) | 0.04 | 0.13 | 0.13 | 0.24 | 0.14 | |
| Control Delay (s) | 9.6 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Lane LOS | 9.0 A | 0.0 | 0.0 | 0.0 | 0.0 | |
| | 9.6 | 0.0 | | 0.0 | | |
| Approach LOS | | 0.0 | | 0.0 | | |
| Approach LOS | А | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.3 | | | |
| Intersection Capacity Utilization | | | 28.9% | ICI | U Level of Servi | ice |
| Analysis Period (min) | | | 15 | | | |

| | • | → | ← | 4 | \ | 4 |
|-----------------------------------|------|----------------|----------|------|--------------|---------|
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | | | | 14 | |
| Traffic Volume (veh/h) | 1 | ₄ 82 | 1 | 38 | 25 | 1 |
| Future Volume (Veh/h) | 1 | 82 | 60 | 38 | 25 | 1 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 1.00 | 82 | 60 | 38 | 25 | 1.00 |
| Pedestrians | ı | 02 | 00 | 30 | 20 | ı |
| | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | 101 | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 98 | | | | 163 | 79 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 98 | | | | 163 | 79 |
| 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 | | | | 97 | 100 |
| cM capacity (veh/h) | 1495 | | | | 827 | 981 |
| | | WD 4 | CD 4 | | 021 | 301 |
| Direction, Lane # | EB 1 | WB 1 | SB 1 | | | |
| Volume Total | 83 | 98 | 26 | | | |
| Volume Left | 1 | 0 | 25 | | | |
| Volume Right | 0 | 38 | 1 | | | |
| cSH | 1495 | 1700 | 832 | | | |
| Volume to Capacity | 0.00 | 0.06 | 0.03 | | | |
| Queue Length 95th (m) | 0.0 | 0.0 | 0.7 | | | |
| Control Delay (s) | 0.1 | 0.0 | 9.5 | | | |
| Lane LOS | Α | | Α | | | |
| Approach Delay (s) | 0.1 | 0.0 | 9.5 | | | |
| Approach LOS | | | A | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 1.2 | | | |
| Intersection Capacity Utilization | | | 15.8% | ICI | J Level of S | ervice |
| Analysis Period (min) | | | 15.070 | 100 | 2 20101 01 0 | J. 7100 |
| Analysis i Gilou (IIIII) | | | 10 | | | |

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|------------------------------------|------------|------------|-------------|-------------------|------------------|------------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | EBL | EBK | NBL NBL | | | SBK |
| Traffic Volume (vph) | 134 | 230 | 1 61 | ♣ ♠ 537 | ↑↑ 922 | 83 |
| Future Volume (vph) | 134 | 230 | 61 | 537 | 922 | 83 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | 1000 | 1000 | 40.0 |
| Storage Lanes | 1 | 1 | 120.0 | | | 1 |
| Taper Length (m) | 7.6 | • | 60.0 | | | • |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Ped Bike Factor | 1.00 | 0.99 | | 0.00 | 0.50 | |
| Frt | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | 0.000 | 0.950 | | | 0.000 |
| Satd. Flow (prot) | 1712 | 1517 | 1695 | 3325 | 3325 | 1502 |
| Flt Permitted | 0.950 | 1017 | 0.290 | 0020 | 0020 | 1002 |
| Satd. Flow (perm) | 1712 | 1497 | 517 | 3325 | 3325 | 1502 |
| Right Turn on Red | 1112 | Yes | 317 | JJZJ | JJZJ | Yes |
| Satd. Flow (RTOR) | | 133 | | | | 83 |
| Link Speed (k/h) | 80 | 133 | | 60 | 60 | 03 |
| Link Speed (k/n) Link Distance (m) | 221.1 | | | 225.7 | 191.7 | |
| \ , | | | | | | |
| Travel Time (s) | 9.9 | 1 | | 13.5 | 11.5 | |
| Confl. Bikes (#/hr) | 4.00 | 1 1 00 | 1.00 | 1.00 | 1.00 | 4.00 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 4% | 4% | 3% |
| Adj. Flow (vph) | 134 | 230 | 61 | 537 | 922 | 83 |
| Shared Lane Traffic (%) | 101 | 000 | 0.4 | 507 | 000 | 00 |
| Lane Group Flow (vph) | 134 | 230 | 61 | 537 | 922 | 83 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | | | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | 0.0 | 0.0 | 28.7 | 28.7 | 0.0 |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| Detector 2 Channel | | | | OI ' LX | OI'LX | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | Perm | Perm | NA | NA | Perm |
| Protected Phases | 4 | I GIIII | i Giiii | 2 | 6 | I CIIII |
| Permitted Phases | 4 | 4 | 2 | | U | 6 |
| Detector Phase | 4 | 4 | 2 | 2 | 6 | 6 |
| Switch Phase | 4 | 4 | | | U | U |
| Minimum Initial (s) | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | | 15.6 | 15.6 | | 24.6 |
| | | 28.3 | | | 24.6 | 52.0 |
| Total Split (s) | 28.3 | 28.3 | 52.0 | 52.0 | 52.0 | |
| Total Split (%) | 35.2% | 35.2% | 64.8% | 64.8% | 64.8% | 64.8% |
| | 22.0 | 22.0 | 46.4 | 46.4 | 46.4 | 46.4 |
| Maximum Green (s) | | 4.0 | 2.7 | | | |
| Yellow Time (s) All-Red Time (s) | 4.6 1.7 | 4.6 1.7 | 3.7 1.9 | 3.7 1.9 | 3.7 1.9 | 3.7 1.9 |

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|-------------------------------------|----------------|------------|--------------|----------|--------------|-----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 0 | 0 | | | 0 | 0 |
| Act Effct Green (s) | 12.8 | 12.8 | 55.6 | 55.6 | 55.6 | 55.6 |
| Actuated g/C Ratio | 0.16 | 0.16 | 0.69 | 0.69 | 0.69 | 0.69 |
| v/c Ratio | 0.49 | 0.66 | 0.17 | 0.23 | 0.40 | 0.08 |
| Control Delay | 36.2 | 22.7 | 6.7 | 5.3 | 6.4 | 1.6 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 36.2 | 22.7 | 6.7 | 5.3 | 6.4 | 1.6 |
| LOS | D | 22.7 C | Α | 3.5 A | 0.4 A | 1.0 A |
| Approach Delay | 27.7 | U | ^ | 5.4 | 6.0 | ^ |
| Approach LOS | 21.1 C | | | 3.4 A | 0.0 A | |
| Queue Length 50th (m) | 19.3 | 13.7 | 2.6 | 12.5 | 24.8 | 0.0 |
| Queue Length 95th (m) | 32.3 | 32.4 | 9.2 | 24.5 | 46.4 | 4.5 |
| Internal Link Dist (m) | 197.1 | 32.4 | 3.2 | 201.7 | 167.7 | 4.5 |
| Turn Bay Length (m) | 197.1 | 100.0 | 120.0 | 201.7 | 107.7 | 40.0 |
| Base Capacity (vph) | 469 | 506 | 357 | 2300 | 2300 | 1064 |
| | 469 | 0 0 | 357 | 2300 | 2300 | 1064 |
| Starvation Cap Reductn | | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | | | | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 10 | 0 |
| Reduced v/c Ratio | 0.29 | 0.45 | 0.17 | 0.23 | 0.40 | 0.08 |
| Intersection Summary | 0.11 | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 80.3 | | | | | | |
| Actuated Cycle Length: 80.3 | | | | | | |
| Offset: 6 (7%), Referenced to pha | ase 2:NBTL and | 6:SBT, Sta | art of Green | | | |
| Natural Cycle: 55 | | | | | | |
| Control Type: Actuated-Coordina | ited | | | | | |
| Maximum v/c Ratio: 0.66 | | | | | | |
| Intersection Signal Delay: 9.8 | | | | | tersection L | |
| Intersection Capacity Utilization 5 | 58.2% | | | IC | U Level of S | Service B |
| Analysis Period (min) 15 | | | | | | |
| Splits and Phases: 1: Moodie [| Dr & Timm Dr | | | | | |
| Spiils and Friases. 1. Woodle I | | | | | | |
| Tø2 (R) | | | | | | |
| 52 s | | | | | | |
| d | | | | | | |
| ▶ ▼ Ø6 (R) | | | | | | |

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|----------------------------|-------|-------------|------------|-------|----------|---------|-------|-------------|----------|-------|-------------|---------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | Ť. | | * | 1 | | * | ት ቤ | | * | ∳ ሴ | |
| Traffic Volume (vph) | 89 | 1 28 | 25 | 18 | 6 | 8 | 73 | 538 | 64 | 111 | 770 | 186 |
| Future Volume (vph) | 89 | 28 | 25 | 18 | 6 | 8 | 73 | 538 | 64 | 111 | 770 | 186 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.929 | | | 0.914 | | | 0.984 | | | 0.971 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1679 | 1534 | 0 | 1729 | 1410 | 0 | 1695 | 3297 | 0 | 1712 | 3225 | 0 |
| Flt Permitted | 0.748 | | | 0.722 | | | 0.280 | | | 0.424 | | |
| Satd. Flow (perm) | 1318 | 1534 | 0 | 1311 | 1410 | 0 | 499 | 3297 | 0 | 761 | 3225 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 25 | | | 8 | | | 23 | | | 53 | |
| Link Speed (k/h) | | 48 | | | 48 | | | 60 | | | 60 | |
| Link Distance (m) | | 101.2 | | | 87.6 | | | 186.4 | | | 71.9 | |
| Travel Time (s) | | 7.6 | | | 6.6 | | | 11.2 | | | 4.3 | |
| Confl. Peds. (#/hr) | 3 | | 3 | 3 | | 3 | 3 | | 6 | 6 | | 3 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 3% | 0% | 20% | 0% | 17% | 17% | 2% | 3% | 2% | 1% | 4% | 2% |
| Adj. Flow (vph) | 89 | 28 | 25 | 18 | 6 | 8 | 73 | 538 | 64 | 111 | 770 | 186 |
| Shared Lane Traffic (%) | | | | | | | | | • | | | |
| Lane Group Flow (vph) | 89 | 53 | 0 | 18 | 14 | 0 | 73 | 602 | 0 | 111 | 956 | 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) | LOIL | 3.7 | rtigrit | Lon | 3.7 | rtigrit | LOIL | 3.7 | rtigrit | LOIL | 3.7 | rtigrit |
| 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 | | 7.5 | | | т.5 | | | т.5 | | | 7.5 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 1.00 | 24 | 1.00 | 14 | 24 | 1.00 | 1.00 | 24 | 1.00 | 1.00 |
| Number of Detectors | 1 | 2 | 17 | 1 | 2 | 17 | 1 | 2 | 17 | 1 | 2 | 17 |
| 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) | 0.1 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.1 | 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 | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | Cl+Ex | |
| Detector 1 Channel | CITEX | CITEX | | CITLX | CITLX | | CITLX | CITEX | | CITEX | CITEX | |
| Detector 1 Extend (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| | 0.0 | | | 0.0 | 0.0 | | | | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | 0.0 | | | 0.0 | 0.0 | | 0.0 | | |
| Detector 1 Delay (s) | 0.0 | 0.0 28.7 | | 0.0 | 0.0 | | 0.0 | 0.0 28.7 | | 0.0 | 0.0 28.7 | |
| Detector 2 Position(m) | | | | | 28.7 | | | | | | | |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| 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) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 46.0 | 46.0 | | 46.0 | 46.0 | |
| Total Split (%) | 42.5% | 42.5% | | 42.5% | 42.5% | | 57.5% | 57.5% | | 57.5% | 57.5% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 40.3 | 40.3 | | 40.3 | 40.3 | |
| Yellow Time (s) | 3.3 | 3.3 | | 3.3 | 3.3 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| I CHOW THILE (3) | | | | | | | | | | | | |

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|-----------------------------------|-------------------|-------------|---------------|------|--------------|--------|-------|----------|-----|-------------|-------------|-----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| 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 | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 14.3 | 14.3 | | 14.3 | 14.3 | | 58.4 | 58.4 | | 58.4 | 58.4 | |
| Actuated g/C Ratio | 0.18 | 0.18 | | 0.18 | 0.18 | | 0.73 | 0.73 | | 0.73 | 0.73 | |
| v/c Ratio | 0.38 | 0.18 | | 0.08 | 0.10 | | 0.20 | 0.75 | | 0.20 | 0.40 | |
| Control Delay | 31.6 | 16.4 | | 24.2 | 16.1 | | 7.0 | 4.3 | | 8.1 | 7.0 | |
| • | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Queue Delay | 31.6 | 16.4 | | 24.2 | 16.1 | | 7.0 | 4.3 | | 8.1 | 7.0 | |
| Total Delay | | | | | 16.1 B | | | | | | | |
| LOS | С | В | | С | _ | | Α | Α | | Α | A | |
| Approach Delay | | 25.9 | | | 20.7 | | | 4.6 | | | 7.1 | |
| Approach LOS | | С | | | С | | | Α | | | Α | |
| Queue Length 50th (m) | 12.8 | 3.8 | | 2.5 | 0.8 | | 3.1 | 13.4 | | 4.5 | 22.9 | |
| Queue Length 95th (m) | 19.5 | 9.9 | | 6.0 | 4.2 | | 15.5 | 38.1 | | 19.8 | 64.8 | |
| Internal Link Dist (m) | | 77.2 | | | 63.6 | | | 162.4 | | | 47.9 | |
| Turn Bay Length (m) | 35.0 | | | 20.0 | | | 65.0 | | | 45.0 | | |
| Base Capacity (vph) | 461 | 553 | | 458 | 498 | | 364 | 2411 | | 555 | 2366 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.19 | 0.10 | | 0.04 | 0.03 | | 0.20 | 0.25 | | 0.20 | 0.40 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 80 | | | | | | | | | | | | |
| Actuated Cycle Length: 80 | | | | | | | | | | | | |
| Offset: 68 (85%), Referenced to | phase 2:NBTL a | ind 6:SBTL, | Start of Gree | en | | | | | | | | |
| Natural Cycle: 65 | • | | | | | | | | | | | |
| Control Type: Actuated-Coordinate | ated | | | | | | | | | | | |
| Maximum v/c Ratio: 0.40 | | | | | | | | | | | | |
| Intersection Signal Delay: 7.8 | | | | Int | ersection LC | S: A | | | | | | |
| Intersection Capacity Utilization | 64.6% | | | | J Level of S | | | | | | | |
| Analysis Period (min) 15 | 01.070 | | | 10 | 2 20101 01 0 | 011100 | | | | | | |
| 0.111 1.111 0.14 1.1 | D 0 E'' 111 | . . | | | | | | | | | | |
| Splits and Phases: 2: Moodie | Dr & Fitzgerald I | ≺a | | | | 1 4 | | | | | | |
| ™ ø2 (R) | | | | | | - 4 | Ø4 | | | | | |
| 46 s | | | | | | 34 s | | | | | | |
| . No | | | | | | 1 | | | | · · · · · · | · · · · · · | |
| | | | | | | - 1 ▼ | Ø8 | | | | | |

| Lane Group Lane Configurations Traffic Volume (vph) Future Volume (vph) Ideal Flow (vphpl) Storage Length (m) Storage Lanes Taper Length (m) Lane Util. Factor Frt Fit Protected | WBL 16 16 | WBR | NBT ♠♠ | NBR | SBL | SBT |
|--|-----------------|-------|------------------|---------|----------------|-----------|
| Lane Configurations Traffic Volume (vph) Future Volume (vph) Ideal Flow (vphpl) Storage Length (m) Storage Lanes Taper Length (m) Lane Util. Factor Frt | 16 16 | | | 11511 | | |
| Traffic Volume (vph) Future Volume (vph) Ideal Flow (vphpl) Storage Length (m) Storage Lanes Taper Length (m) Lane Util. Factor Frt | 16 16 | | | 7 | * | 44 |
| Future Volume (vph) Ideal Flow (vphpl) Storage Length (m) Storage Lanes Taper Length (m) Lane Util. Factor | 16 | 18 | TT 673 | 15 | 1 21 | 77 791 |
| Ideal Flow (vphpl) Storage Length (m) Storage Lanes Taper Length (m) Lane Util. Factor Frt | | 18 | 673 | 15 | 21 | 791 |
| Storage Length (m) Storage Lanes Taper Length (m) Lane Util. Factor Frt | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Lanes Taper Length (m) Lane Util. Factor Frt | 0.0 | 0.0 | 1000 | 30.0 | 50.0 | 1000 |
| Taper Length (m) Lane Util. Factor Frt | 1 | 0.0 | | 1 | 1 | |
| Lane Util. Factor Frt | 7.6 | U | | | 40.0 | |
| Frt | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| | 0.929 | 1.00 | 0.30 | 0.850 | 1.00 | 0.90 |
| | 0.929 | | | 0.030 | 0.950 | |
| Satd. Flow (prot) | 1516 | 0 | 3325 | 1547 | 1517 | 3325 |
| Flt Permitted | 0.977 | U | 3323 | 1347 | 0.396 | 3323 |
| | 1516 | 0 | 3325 | 1547 | 632 | 3325 |
| Satd. Flow (perm) | 0101 | | აა25 | | 032 | აა∠5 |
| Right Turn on Red | 10 | Yes | | Yes | | |
| Satd. Flow (RTOR) | 18 | | | 15 | | |
| Link Speed (k/h) | 40 | | 60 | | | 60 |
| Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| Travel Time (s) | 5.4 | 4.00 | 12.0 | 4.00 | 4.00 | 11.2 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 19% | 0% | 4% | 0% | 14% | 4% |
| Adj. Flow (vph) | 16 | 18 | 673 | 15 | 21 | 791 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 34 | 0 | 673 | 15 | 21 | 791 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Number of Detectors | 1 | | 2 | 1 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| | 6.1 | | | | 6.1 | |
| Detector 1 Size(m) | | | 1.8 | 6.1 | | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | Cl+Ex | CI+Ex |
| Detector 1 Channel | 2.2 | | | | | |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | 28.7 | | | 28.7 |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | Cl+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | . 31111 | . 51111 | 6 |
| Permitted Phases | | | | 2 | 6 | 3 |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | U | | | | U | J |
| Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Initial (s) Minimum Split (s) | 32.6 | | 28.9 | 28.9 | | 23.9 |
| | | | | | 23.9 | |
| Total Split (s) | 33.0 | | 47.0 | 47.0 | 47.0 | 47.0 |
| Total Split (%) | 41.3% | | 58.8% | 58.8% | 58.8% | 58.8% |
| Maximum Green (s) | 27.4 | | 41.1 | 41.1 | 41.1 | 41.1 |
| Yellow Time (s) | 3.3 | | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.3 | | 2.2 | 2.2 | 2.2 | 2.2 |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |

| | • | • | † | 1 | > | ↓ |
|-----------------------------------|-------------------|-------------|--------------|-------|--------------|-----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 0 | | 0 | 0 | | |
| Act Effct Green (s) | 10.0 | | 71.4 | 71.4 | 71.4 | 71.4 |
| Actuated g/C Ratio | 0.12 | | 0.89 | 0.89 | 0.89 | 0.89 |
| v/c Ratio | 0.17 | | 0.23 | 0.01 | 0.04 | 0.27 |
| Control Delay | 22.0 | | 2.1 | 1.5 | 3.2 | 2.3 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 22.0 | | 2.1 | 1.5 | 3.2 | 2.3 |
| LOS | C | | A | Α | A | A |
| Approach Delay | 22.0 | | 2.1 | ., | ., | 2.4 |
| Approach LOS | C | | Α | | | A |
| Queue Length 50th (m) | 2.2 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Queue Length 95th (m) | 9.9 | | 20.1 | 1.2 | m2.3 | 27.1 |
| Internal Link Dist (m) | 36.4 | | 176.0 | 1.2 | 1112.0 | 162.4 |
| Turn Bay Length (m) | ЭОТ | | 170.0 | 30.0 | 50.0 | 102.4 |
| Base Capacity (vph) | 531 | | 2967 | 1382 | 564 | 2967 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.06 | | 0.23 | 0.01 | 0.04 | 0.27 |
| | 0.00 | | 0.20 | 0.01 | 0.04 | 0.21 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 80 | | | | | | |
| Actuated Cycle Length: 80 | | | | | | |
| Offset: 58 (73%), Referenced to | o phase 2:NBT and | d 6:SBTL, S | Start of Gre | en | | |
| Natural Cycle: 65 | | | | | | |
| Control Type: Actuated-Coording | nated | | | | | |
| Maximum v/c Ratio: 0.27 | | | | | | |
| Intersection Signal Delay: 2.7 | | | | | ersection L | |
| Intersection Capacity Utilization | n 41.0% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| m Volume for 95th percentile | queue is metered | by upstrea | m signal. | | | |
| | | | | | | |
| Splits and Phases: 3: Moodie | e Dr & Loblaws | | | | | |
| . ♣. | | | | | | |
| Ø2 (R) | | | | | | - 1 |
| 47 s | | | | | | |
| L. | | | | | | |
| Ø6 (R) | | | | | | _ · |
| ▼ ₩6 (K) | | | | | | |

| | ۶ | → | • | √ | ← | • | 1 | † | / | / | ↓ | -√ |
|---|----------|----------|-----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 75 | 44 | 7 | * | 44 | 7 | 14.54 | 44 | 7 | 16.56 | 44 | 7 |
| Traffic Volume (vph) | 78 | 1211 | 112 | 81 | 307 | 161 | 225 | 420 | 309 | 362 | 204 | 113 |
| Future Volume (vph) | 78 | 1211 | 112 | 81 | 307 | 161 | 225 | 420 | 309 | 362 | 204 | 113 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | | | 40.0 | | | 40.0 | | | 50.0 | | |
| Lane Util. Factor | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 | 0.97 | 0.95 | 1.00 |
| Ped Bike Factor | 0.99 | | 0.98 | 1.00 | | 0.98 | 0.99 | | 0.98 | 1.00 | | 0.98 |
| Frt | | | 0.850 | | | 0.850 | | | 0.850 | | | 0.850 |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1631 | 3390 | 1473 | 1712 | 3232 | 1517 | 3321 | 3325 | 1532 | 3288 | 3232 | 1459 |
| Flt Permitted | 0.950 | 0000 | 4.4. | 0.950 | 0000 | 4.400 | 0.950 | 0005 | 4500 | 0.950 | 0000 | 4.40.4 |
| Satd. Flow (perm) | 1622 | 3390 | 1447 | 1710 | 3232 | 1486 | 3290 | 3325 | 1506 | 3273 | 3232 | 1431 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 00 | 139 | | 00 | 161 | | 00 | 142 | | 00 | 137 |
| Link Speed (k/h) | | 60 | | | 60 | | | 60 | | | 60 | |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | • | 18.2 | 4 | 4 | 23.1 | ^ | ^ | 11.2 | 1 | 4 | 12.0 | C |
| Confl. Peds. (#/hr) | 6 | 4.00 | 4 | 4 | 1.00 | 6 | 6 | 1.00 | 4 | 4 | 4.00 | 6 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 6% 78 | 2% | 5% 112 | 1% 81 | 7% 307 | 2% 161 | 1% 225 | 4% 420 | 1% 309 | 2% 362 | 7% 204 | 6% 113 |
| Adj. Flow (vph) | 70 | 1211 | 112 | 01 | 307 | 101 | 225 | 420 | 309 | 302 | 204 | 113 |
| Shared Lane Traffic (%) Lane Group Flow (vph) | 78 | 1211 | 112 | 81 | 307 | 161 | 225 | 420 | 309 | 362 | 204 | 113 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | | Left | Left | | Left | Left | | Left | Left | |
| Median Width(m) | Leit | 3.7 | Right | Leit | 3.7 | Right | Leit | 7.4 | Right | Leit | 7.4 | Right |
| 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 | | 4.0 | | | 7.0 | | | 7.0 | | | 7.0 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | | 14 | 24 | | 14 | 24 | | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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 | | CI+Ex | | | CI+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | _ | 0.0 | _ | _ | 0.0 | _ | _ | 0.0 | _ | _ | 0.0 | _ |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | _ | 3 | 8 | | 7 | 4 | |
| Permitted Phases | _ | _ | 2 | | | 6 | _ | _ | 8 | _ | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 | | 40.0 | 40.0 |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 15.0 | 54.0 | 54.0 | 15.0 | 54.0 | 54.0 | 23.0 | 38.0 | 38.0 | 23.0 | 38.0 | 38.0 |
| Total Split (%) | 11.5% | 41.5% | 41.5% | 11.5% | 41.5% | 41.5% | 17.7% | 29.2% | 29.2% | 17.7% | 29.2% | 29.2% |
| Maximum Green (s) | 8.6 | 47.6 | 47.6 | 8.6 | 47.6 | 47.6 | 16.5 | 31.3 | 31.3 | 16.5 | 31.3 | 31.3 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |

| | • | - | • | • | ← | • | 4 | † | / | - | ↓ | 1 |
|-------------------------|-------|--------|-------|-------|-------|-------|------|----------|------|-------|----------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 |
| Act Effct Green (s) | 10.2 | 53.8 | 53.8 | 10.2 | 53.7 | 53.7 | 13.8 | 23.8 | 23.8 | 16.3 | 26.3 | 26.3 |
| Actuated g/C Ratio | 0.08 | 0.41 | 0.41 | 0.08 | 0.41 | 0.41 | 0.11 | 0.18 | 0.18 | 0.13 | 0.20 | 0.20 |
| v/c Ratio | 0.61 | 0.86 | 0.16 | 0.61 | 0.23 | 0.23 | 0.64 | 0.69 | 0.79 | 0.88 | 0.31 | 0.28 |
| Control Delay | 77.8 | 43.4 | 2.7 | 76.9 | 26.6 | 4.9 | 64.1 | 55.3 | 41.3 | 78.6 | 44.8 | 5.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 77.8 | 43.4 | 2.7 | 76.9 | 26.6 | 4.9 | 64.1 | 55.3 | 41.3 | 78.6 | 44.8 | 5.4 |
| LOS | Е | D | Α | Е | С | Α | Е | Е | D | Е | D | Α |
| Approach Delay | | 42.1 | | | 27.7 | | | 52.8 | | | 56.3 | |
| Approach LOS | | D | | | С | | | D | | | Е | |
| Queue Length 50th (m) | 19.4 | 150.5 | 0.0 | 20.1 | 27.1 | 0.0 | 28.8 | 53.7 | 42.4 | 47.6 | 23.7 | 0.0 |
| Queue Length 95th (m) | #45.3 | #207.3 | 7.5 | #46.0 | 40.2 | 14.2 | 41.4 | 66.0 | 71.2 | #72.7 | 33.4 | 9.7 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 130 | 1402 | 679 | 136 | 1335 | 708 | 421 | 800 | 470 | 417 | 778 | 448 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.60 | 0.86 | 0.16 | 0.60 | 0.23 | 0.23 | 0.53 | 0.53 | 0.66 | 0.87 | 0.26 | 0.25 |

Intersection Summary

Area Type: Other

Cycle Length: 130

Actuated Cycle Length: 130

Offset: 119 (92%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 115

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection LOS: D

Intersection Signal Delay: 45.4
Intersection Capacity Utilization 86.6%

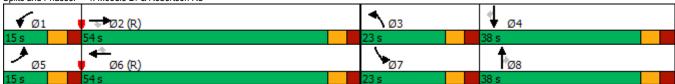
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

| | → | • | 4 | † | . | 4 |
|-----------------------------------|-----------|------|-------|----------|-----------------|------|
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | 7 | | 44 | ♦ % | |
| Traffic Volume (veh/h) | 0 | 22 | 0 | 647 | 1096 | 25 |
| Future Volume (Veh/h) | 0 | 22 | 0 | 647 | 1096 | 25 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 22 | 0.00 | 647 | 1096 | 25 |
| Pedestrians | 0 | 22 | U | 047 | 1030 | 25 |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | None | None | |
| Median type | | | | None | ivone | |
| Median storage veh) | | | | 70 | 200 | |
| Upstream signal (m) | 0.05 | 0.05 | 0.00 | 72 | 226 | |
| pX, platoon unblocked | 0.93 | 0.90 | 0.90 | | | |
| vC, conflicting volume | 1432 | 560 | 1121 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 1045 | 287 | 910 | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF(s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 97 | 100 | | | |
| cM capacity (veh/h) | 207 | 638 | 669 | | | |
| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | |
| Volume Total | 22 | 324 | 324 | 731 | 390 | |
| Volume Left | 0 | 0 | 0 | 0 | 0 | |
| Volume Right | 22 | 0 | 0 | 0 | 25 | |
| cSH | 638 | 1700 | 1700 | 1700 | 1700 | |
| Volume to Capacity | 0.03 | 0.19 | 0.19 | 0.43 | 0.23 | |
| Queue Length 95th (m) | 0.03 | 0.19 | 0.19 | 0.43 | 0.23 | |
| Control Delay (s) | 10.8 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Lane LOS | 10.6 B | 0.0 | 0.0 | 0.0 | 0.0 | |
| | | 0.0 | | 0.0 | | |
| Approach LOS | 10.8 B | 0.0 | | 0.0 | | |
| Approach LOS | В | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.1 | | | |
| Intersection Capacity Utilization | | | 42.8% | ICI | U Level of Serv | rice |
| Analysis Period (min) | | | 15 | | | |
| , | | | | | | |

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|-----------------------------------|------|----------|-----------------|------|--------------|--------|
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | £ĵ | | | ** | |
| Traffic Volume (veh/h) | 2 | 125 | 1 236 | 29 | 17 | 1 |
| Future Volume (Veh/h) | 2 | 125 | 236 | 29 | 17 | 1 |
| Sign Control | | Free | Free | 20 | Stop | ' |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 2 | 125 | 236 | 29 | 1.00 | 1.00 |
| Pedestrians | 2 | 123 | 230 | 29 | 17 | ı |
| | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | | | | |
| Upstream signal (m) | | | 101 | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 265 | | | | 380 | 250 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 265 | | | | 380 | 250 |
| 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 | | | | 97 | 100 |
| cM capacity (veh/h) | 1299 | | | | 622 | 788 |
| | | 11/5 (| 00.4 | | | |
| Direction, Lane # | EB 1 | WB 1 | SB 1 | | | |
| Volume Total | 127 | 265 | 18 | | | |
| Volume Left | 2 | 0 | 17 | | | |
| Volume Right | 0 | 29 | 1 | | | |
| cSH | 1299 | 1700 | 629 | | | |
| Volume to Capacity | 0.00 | 0.16 | 0.03 | | | |
| Queue Length 95th (m) | 0.0 | 0.0 | 0.7 | | | |
| Control Delay (s) | 0.1 | 0.0 | 10.9 | | | |
| Lane LOS | Α | | В | | | |
| Approach Delay (s) | 0.1 | 0.0 | 10.9 | | | |
| Approach LOS | | | В | | | |
| Intersection Summary | | | | | | |
| | | | 0.5 | | | |
| Average Delay | | | | 101 | II amal at O | : |
| Intersection Capacity Utilization | | | 25.0% | iCl | J Level of S | ervice |
| Analysis Period (min) | | | 15 | | | |

| | • | • | 1 | † | ↓ | 1 |
|----------------------------|------------|----------|------------|------------------|------------------|----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | <u> </u> | ZDI€ | NDE N | 44 | * | <u>⊘</u> |
| Traffic Volume (vph) | 71 | 78 | 192 | TT 857 | TT 905 | 196 |
| Future Volume (vph) | 71 | 78 78 | 192 | 857 | 905 | 196 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | 1000 | 1000 | 40.0 |
| Storage Lanes | 1 | 100.0 | 120.0 | | | 1 |
| Taper Length (m) | 7.6 | | 60.0 | | | 1 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | 1.00 | 0.850 | 1.00 | 0.33 | 0.33 | 0.850 |
| Flt Protected | 0.950 | 0.000 | 0.950 | | | 0.000 |
| Satd. Flow (prot) | 1695 | 1547 | 1712 | 3390 | 3357 | 1547 |
| Flt Permitted | 0.950 | 1341 | 0.214 | 5550 | 5551 | 1347 |
| Satd. Flow (perm) | 1695 | 1547 | 386 | 3390 | 3357 | 1547 |
| | 1093 | Yes | 300 | JJ90 | JJ31 | Yes |
| Right Turn on Red | | | | | | |
| Satd. Flow (RTOR) | - 00 | 78 | | | | 196 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 227.5 | 191.7 | |
| Travel Time (s) | 9.9 | , | , | 13.7 | 11.5 | , |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 2% | 0% | 1% | 2% | 3% | 0% |
| Adj. Flow (vph) | 71 | 78 | 192 | 857 | 905 | 196 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 71 | 78 | 192 | 857 | 905 | 196 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | | | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | 1.00 | 7.00 | 14 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | | | | | | |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex |
| Detector 1 Channel | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | | 28.7 | 28.7 | |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | | 0.0 | 0.0 | |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | I CIIII | рш+рt 5 | 2 | 6 | i Cilii |
| Permitted Phases | 4 | 4 | 2 | | U | 6 |
| | A | 4 | | 2 | 6 | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | Ö | Ö |
| Switch Phase | 40.0 | 40.0 | - A | 400 | 40.0 | 40.0 |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 10.6 | 15.6 | 24.6 | 24.6 |
| Total Split (s) | 28.3 | 28.3 | 11.0 | 42.0 | 31.0 | 31.0 |
| Total Split (%) | 40.3% | 40.3% | 15.6% | 59.7% | 44.1% | 44.1% |
| Maximum Green (s) | 22.0 | 22.0 | 5.4 | 36.4 | 25.4 | 25.4 |
| Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 |
| | 0.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |

| | | • | • | • | • | | |
|---------------------------------|------------------|-------------|--------------|-------|-------|-------|--|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR | |
| Lead/Lag | | | Lead | | Lag | Lag | |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 | |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | | 2 | 2 | |
| Act Effct Green (s) | 12.4 | 12.4 | 49.3 | 50.4 | 35.8 | 35.8 | |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.70 | 0.72 | 0.51 | 0.51 | |
| v/c Ratio | 0.24 | 0.23 | 0.46 | 0.35 | 0.53 | 0.22 | |
| Control Delay | 25.3 | 7.4 | 10.7 | 6.4 | 15.2 | 3.2 | |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Total Delay | 25.3 | 7.4 | 10.7 | 6.4 | 15.2 | 3.2 | |
| LOS | С | Α | В | Α | В | Α | |
| Approach Delay | 16.0 | | | 7.2 | 13.1 | | |
| Approach LOS | В | | | Α | В | | |
| Queue Length 50th (m) | 8.5 | 0.0 | 7.3 | 20.3 | 42.2 | 0.0 | |
| Queue Length 95th (m) | 15.0 | 8.2 | #26.0 | 49.2 | 73.9 | 11.6 | |
| Internal Link Dist (m) | 197.1 | | | 203.5 | 167.7 | | |
| Turn Bay Length (m) | | 100.0 | 120.0 | | | 40.0 | |
| Base Capacity (vph) | 530 | 537 | 418 | 2429 | 1711 | 884 | |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | |
| Reduced v/c Ratio | 0.13 | 0.15 | 0.46 | 0.35 | 0.53 | 0.22 | |
| Intersection Summary | | | | | | | |
| Area Type: | Other | | | | | | |
| Cycle Length: 70.3 | | | | | | | |
| Actuated Cycle Length: 70.3 | | | | | | | |
| Offset: 55 (78%), Referenced to | o phase 2:NBTL a | nd 6:SBT, S | Start of Gre | en | | | |
| Natural Cycle: 65 | | | | | | | |
| Control Type: Actuated-Coordin | nated | | | | | | |

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 10.6
Intersection Capacity Utilization 60.6%

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

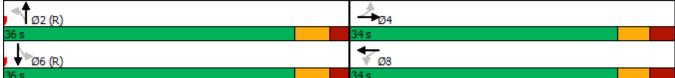
Queue shown is maximum after two cycles.

Splits and Phases: 1: Moodie Dr & Timm Dr ₹<u>ø4</u> Ø6 (R)

Intersection LOS: B ICU Level of Service B

| | • | - | \rightarrow | • | ← | • | 4 | † | / | - | ļ | 1 |
|----------------------------|-------|-------------|---------------|----------|-------------|---------|-------|-------------|----------|-------|-------------|-------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | î. | | * | î. | | * | ት ቤ | | * | ∳ ሴ | |
| Traffic Volume (vph) | 206 | 1 | 67 | 91 | 1 20 | 55 | 48 | 691 | 46 | 27 | 829 | 69 |
| Future Volume (vph) | 206 | 6 | 67 | 91 | 20 | 55 | 48 | 691 | 46 | 27 | 829 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.862 | | | 0.890 | | | 0.991 | | | 0.988 | |
| Flt Protected | 0.950 | | | 0.950 | | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 1712 | 1506 | 0 | 1695 | 1605 | 0 | 1453 | 3349 | 0 | 1662 | 3334 | 0 |
| Flt Permitted | 0.708 | | | 0.709 | | | 0.280 | | | 0.350 | | |
| Satd. Flow (perm) | 1275 | 1506 | 0 | 1262 | 1605 | 0 | 428 | 3349 | 0 | 610 | 3334 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 67 | | | 55 | | | 12 | | | 15 | |
| Link Speed (k/h) | | 48 | | | 48 | | | 60 | | | 60 | |
| Link Distance (m) | | 102.5 | | | 87.6 | | | 186.4 | | | 70.1 | |
| Travel Time (s) | | 7.7 | | | 6.6 | | | 11.2 | | | 4.2 | |
| Confl. Peds. (#/hr) | 1 | | 4 | 4 | | 1 | 2 | | 8 | 8 | | 2 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 1% | 0% | 3% | 2% | 0% | 0% | 19% | 2% | 4% | 4% | 2% | 6% |
| Adj. Flow (vph) | 206 | 6 | 67 | 91 | 20 | 55 | 48 | 691 | 46 | 27 | 829 | 69 |
| Shared Lane Traffic (%) | | | . | <u> </u> | | | | | | | 020 | |
| Lane Group Flow (vph) | 206 | 73 | 0 | 91 | 75 | 0 | 48 | 737 | 0 | 27 | 898 | 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) | LOIL | 3.7 | rtigitt | Lon | 3.7 | rtigrit | LOIL | 3.7 | rtigrit | LOIL | 3.7 | ragni |
| 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 | | 7.5 | | | т.5 | | | т.5 | | | 7.5 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 1.00 | 24 | 1.00 | 14 | 24 | 1.00 | 14 | 24 | 1.00 | 1.00 |
| Number of Detectors | 1 | 2 | 1-7 | 1 | 2 | | 1 | 2 | 17 | 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) | 0.1 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.1 | 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 | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | CI+Ex | CI+Ex | | Cl+Ex | Cl+Ex | |
| Detector 1 Channel | CITEX | CITEX | | CITLX | CITLX | | CITEX | CITEX | | CITLX | CITEX | |
| | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Detector 1 Extend (s) | 0.0 | | | 0.0 | 0.0 | | 0.0 | | | 0.0 | 0.0 | |
| Detector 1 Queue (s) | | 0.0 | | 0.0 | | | 0.0 | 0.0 | | 0.0 | | |
| Detector 1 Delay (s) | 0.0 | 0.0 28.7 | | 0.0 | 0.0 | | 0.0 | 0.0 28.7 | | 0.0 | 0.0 28.7 | |
| Detector 2 Position(m) | | | | | 28.7 | | | | | | | |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| 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) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Total Split (%) | 48.6% | 48.6% | | 48.6% | 48.6% | | 51.4% | 51.4% | | 51.4% | 51.4% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 30.3 | 30.3 | | 30.3 | 30.3 | |
| Yellow Time (s) | 3.3 | 3.3 | | 3.3 | 3.3 | | 3.7 | 3.7 | | 3.7 | 3.7 | |
| T CHOW THITIC (3) | | | | | | | | | | | | |

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|-------------------------------------|-------------------|------------|--------------|------|--------------|-------------|-------|----------|-----|-------|----------|----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SB |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| 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 | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 17.6 | 17.6 | | 17.6 | 17.6 | | 40.7 | 40.7 | | 40.7 | 40.7 | |
| Actuated g/C Ratio | 0.25 | 0.25 | | 0.25 | 0.25 | | 0.58 | 0.58 | | 0.58 | 0.58 | |
| v/c Ratio | 0.64 | 0.17 | | 0.29 | 0.17 | | 0.19 | 0.38 | | 0.08 | 0.46 | |
| Control Delay | 31.5 | 6.2 | | 21.0 | 8.0 | | 9.4 | 7.2 | | 10.1 | 10.6 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | 31.5 | 6.2 | | 21.0 | 8.0 | | 9.4 | 7.2 | | 10.1 | 10.6 | |
| LOS | С | Α | | С | Α | | Α | Α | | В | В | |
| Approach Delay | | 24.8 | | | 15.2 | | | 7.4 | | | 10.6 | |
| Approach LOS | | С | | | В | | | Α | | | В | |
| Queue Length 50th (m) | 24.6 | 0.6 | | 9.8 | 2.0 | | 2.1 | 16.2 | | 1.4 | 29.8 | |
| Queue Length 95th (m) | 34.9 | 7.3 | | 16.4 | 8.5 | | 6.0 | 25.0 | | 6.5 | 62.8 | |
| Internal Link Dist (m) | | 78.5 | | | 63.6 | | | 162.4 | | | 46.1 | |
| Turn Bay Length (m) | 35.0 | | | 20.0 | | | 65.0 | | | 45.0 | | |
| Base Capacity (vph) | 510 | 642 | | 504 | 675 | | 248 | 1951 | | 354 | 1943 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.40 | 0.11 | | 0.18 | 0.11 | | 0.19 | 0.38 | | 0.08 | 0.46 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 70 | | | | | | | | | | | | |
| Actuated Cycle Length: 70 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to pha | ase 2:NBTL and | 6:SBTL, St | art of Greer | 1 | | | | | | | | |
| Natural Cycle: 65 | | | | | | | | | | | | |
| Control Type: Actuated-Coordina | ted | | | | | | | | | | | |
| Maximum v/c Ratio: 0.64 | | | | | | | | | | | | |
| Intersection Signal Delay: 11.6 | | | | | ersection LC | | | | | | | |
| Intersection Capacity Utilization 6 | 88.6% | | | IC | U Level of S | ervice C | | | | | | |
| Analysis Period (min) 15 | | | | | | | | | | | | |
| Splits and Phases: 2: Moodie [| Or & Fitzgerald F | Rd | | | | | | | | | | |
| 1 Ø2 (R) | | | | | - 4 | 1 Ø4 | | | | | | |
| 36 s | | | | | 34 s | 21 | | | | | | |
| | | | | | 913 | | | | | | | |



Synchro 10 Report Brad Byvelds, Novatech

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|----------------------------|--------|-------|----------|----------|--------|----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | | 44 | # | * | 44 |
| Traffic Volume (vph) | 107 | 51 | 721 | 52 | 75 | 926 |
| Future Volume (vph) | 107 | 51 | 721 | 52 | 75 | 926 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | | 30.0 | 50.0 | |
| Storage Lanes | 1 | 0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | | | | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Ped Bike Factor | 0.99 | | | 0.98 | 1.00 | |
| Frt | 0.956 | | | 0.850 | | |
| Flt Protected | 0.967 | | | | 0.950 | |
| Satd. Flow (prot) | 1537 | 0 | 3357 | 1547 | 1712 | 3357 |
| Flt Permitted | 0.967 | 0 | 0001 | 1011 | 0.375 | 0001 |
| Satd. Flow (perm) | 1537 | 0 | 3357 | 1511 | 675 | 3357 |
| Right Turn on Red | 1007 | Yes | 0001 | Yes | 010 | 0001 |
| Satd. Flow (RTOR) | 40 | 163 | | 52 | | |
| Link Speed (k/h) | 40 | | 60 | JZ | | 60 |
| Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| | 5.4 | 10 | 12.0 | 2 | 2 | 11.2 |
| Confl. Peds. (#/hr) | 1.00 | | 1.00 | | | 1.00 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 11% | 4% | 3% | 0% | 1% | 3% |
| Adj. Flow (vph) | 107 | 51 | 721 | 52 | 75 | 926 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 158 | 0 | 721 | 52 | 75 | 926 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Number of Detectors | 1 | | 2 | 1 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | OI. LX | | OI. LX | OI. EX | OI. LX | OI. LX |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 28.7 | 0.0 | 0.0 | 28.7 |
| Detector 2 Position(m) | | | | | | |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | CI+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | _ | _ | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | | | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Total Split (s) | 33.0 | | 37.0 | 37.0 | 37.0 | 37.0 |
| Total Split (%) | 47.1% | | 52.9% | 52.9% | 52.9% | 52.9% |
| Maximum Green (s) | 27.4 | | 31.1 | 31.1 | 31.1 | 31.1 |
| Yellow Time (s) | 3.3 | | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.3 | | 2.2 | 2.2 | 2.2 | 2.2 |
| , 1 (Od 111110 (O) | 2.0 | | ۷.۷ | ۷.۷ | ۷.۷ | ۷.۷ |

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|-----------------------------------|-----------------|-----------|--------------|-------|--------------|------------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |
| Lead/Lag | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | UIVIUA | UNIUA |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 0 | | 0.0 | 0 | | |
| Act Effct Green (s) | 12.0 | | 46.5 | 46.5 | 46.5 | 46.5 |
| | 0.17 | | 0.66 | 0.66 | 0.66 | 0.66 |
| Actuated g/C Ratio | | | | | | |
| v/c Ratio | 0.53 | | 0.32 | 0.05 | 0.17 | 0.42 |
| Control Delay | 25.9 | | 5.9 | 1.9 | 3.1 | 2.9 |
| Queue Delay | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 25.9 | | 5.9 | 1.9 | 3.1 | 2.9 |
| LOS | С | | Α | Α | Α | Α |
| Approach Delay | 25.9 | | 5.6 | | | 2.9 |
| Approach LOS | С | | Α | | | Α |
| Queue Length 50th (m) | 14.4 | | 16.6 | 0.0 | 1.4 | 9.3 |
| Queue Length 95th (m) | 28.2 | | 31.4 | 3.5 | 3.4 | 13.1 |
| Internal Link Dist (m) | 36.4 | | 176.0 | | | 162.4 |
| Turn Bay Length (m) | | | | 30.0 | 50.0 | |
| Base Capacity (vph) | 625 | | 2227 | 1020 | 447 | 2227 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.25 | | 0.32 | 0.05 | 0.17 | 0.42 |
| | 0.20 | | 0.02 | 0.00 | 0.11 | U.TL |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70 | | | | | | |
| Actuated Cycle Length: 70 | | | | | | |
| Offset: 9 (13%), Referenced to | phase 2:NBT and | 6:SBTL, S | tart of Gree | n | | |
| Natural Cycle: 65 | , | , • | | | | |
| Control Type: Actuated-Coordin | nated | | | | | |
| Maximum v/c Ratio: 0.53 | | | | | | |
| Intersection Signal Delay: 5.9 | | | | In | tersection L | OS: A |
| Intersection Capacity Utilization | 57 3% | | | | U Level of | |
| Analysis Period (min) 15 | 107.070 | | | 10 | O LEVELUI (| DOI VICE D |
| Analysis Fellou (IIIIII) 13 | | | | | | |
| Califo and Dhagon: 2: Mandie | o Dr. 9 Loblows | | | | | |
| Splits and Phases: 3: Moodie | e Dr & Loblaws | | | | | |
| Tigo (p) | | | | | - 1 | |
| [™] Ø2 (R) | | | | | | |
| 37 s | | | | | | |
| \ | | | | | | _ |
| ▼ Ø6 (R) | | | | | | Ø8 |
| 27.0 | | | | | 20 | 1- |

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|--------------------------------------|---------------|-----------|---------------|---------------|-------------------|---------------|--------------|---------------|---------------|--------------|---------------|--------------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | ^ | 7 | * | 44 | 7 | 16.54 | 44 | # | 7575 | 44 | # |
| Traffic Volume (vph) | 126 | 536 | 269 | 225 | 901 | 331 | 225 | 261 | 148 | 290 | 498 | 198 |
| Future Volume (vph) | 126 | 536 | 269 | 225 | 901 | 331 | 225 | 261 | 148 | 290 | 498 | 198 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 | 0.05 | 4.00 | 40.0 | 0.05 | 4.00 | 40.0 | 0.05 | 4.00 | 50.0 | 0.05 | 4.00 |
| Lane Util. Factor | 1.00 1.00 | 0.95 | 1.00 0.97 | 1.00 0.99 | 0.95 | 1.00 0.98 | 0.97 0.99 | 0.95 | 1.00 0.96 | 0.97 0.97 | 0.95 | 1.00 0.97 |
| Ped Bike Factor Frt | 1.00 | | 0.850 | 0.99 | | 0.850 | 0.99 | | 0.850 | 0.97 | | 0.850 |
| Flt Protected | 0.950 | | 0.000 | 0.950 | | 0.050 | 0.950 | | 0.000 | 0.950 | | 0.050 |
| Satd. Flow (prot) | 1679 | 3390 | 1517 | 1729 | 3424 | 1532 | 3288 | 3293 | 1532 | 3288 | 3357 | 1517 |
| Flt Permitted | 0.950 | 0000 | 1017 | 0.950 | 0 1 21 | 1002 | 0.950 | 0200 | 1002 | 0.950 | 0001 | 1017 |
| Satd. Flow (perm) | 1675 | 3390 | 1469 | 1713 | 3424 | 1503 | 3250 | 3293 | 1477 | 3195 | 3357 | 1478 |
| Right Turn on Red | 10.0 | 0000 | Yes | | 0.2. | Yes | 0200 | 0200 | Yes | 0.00 | 0001 | Yes |
| Satd. Flow (RTOR) | | | 269 | | | 331 | | | 206 | | | 206 |
| Link Speed (k/h) | | 60 | | | 60 | | | 60 | | | 60 | |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | 5 | | 15 | 15 | | 5 | 12 | | 21 | 21 | | 12 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 3% | 2% | 2% | 0% | 1% | 1% | 2% | 5% | 1% | 2% | 3% | 2% |
| Adj. Flow (vph) | 126 | 536 | 269 | 225 | 901 | 331 | 225 | 261 | 148 | 290 | 498 | 198 |
| Shared Lane Traffic (%) | 400 | F00 | 269 | 005 | 004 | 224 | 005 | 004 | 440 | 290 | 400 | 400 |
| Lane Group Flow (vph) | 126 No | 536 No | Z69 No | 225 No. | 901 No | 331 No. | 225 No | 261 No. | 148 No | No | 498 No | 198 |
| Enter Blocked Intersection | Left | Left | | No Left | Left | No Dight | Left | No Left | | Left | Left | No Dight |
| Lane Alignment Median Width(m) | Leit | 3.7 | Right | Leit | 3.7 | Right | Leit | 7.4 | Right | Leit | 7.4 | Right |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | | 14 | 24 | | 14 | 24 | | 14 | 24 | | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type Detector 1 Channel | CI+Ex | CI+Ex | Cl+Ex | Cl+Ex | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 | 0.0 | 28.7 | 0.0 |
| Detector 2 Size(m) | | 1.8 | | | 1.8 | | | 1.8 | | | 1.8 | |
| Detector 2 Type | | CI+Ex | | | CI+Ex | | | CI+Ex | | | Cl+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | | _ | 2 | | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | - 0 | 400 | 40.0 | 5 0 | 40.0 | 40.0 | - 0 | 400 | 400 | | 40.0 | 10.0 |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 18.0 | 34.1 | 34.1 | 28.2 | 44.3 | 44.3 | 18.4 | 37.7 | 37.7 | 20.0 | 39.3 | 39.3 |
| Total Split (%) Maximum Green (s) | 15.0% 11.6 | 28.4% | 28.4% 27.7 | 23.5% 21.8 | 36.9% 37.9 | 36.9% 37.9 | 15.3% | 31.4% 31.0 | 31.4% 31.0 | 16.7% | 32.8% 32.6 | 32.8% |
| | 0.11 | 27.7 | 21.1 | Z 1.0 | 31.9 | 31.9 | 11.9 | 31.0 | J I.U | 13.5 | JZ.0 | 32.6 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |

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|-------------------------|-------|----------|-------|------|----------|-------|------|----------|------|----------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 |
| Act Effct Green (s) | 13.7 | 38.3 | 38.3 | 20.1 | 44.7 | 44.7 | 11.5 | 22.5 | 22.5 | 13.2 | 24.2 | 24.2 |
| Actuated g/C Ratio | 0.11 | 0.32 | 0.32 | 0.17 | 0.37 | 0.37 | 0.10 | 0.19 | 0.19 | 0.11 | 0.20 | 0.20 |
| v/c Ratio | 0.66 | 0.50 | 0.41 | 0.78 | 0.71 | 0.43 | 0.72 | 0.42 | 0.33 | 0.81 | 0.74 | 0.43 |
| Control Delay | 67.7 | 37.1 | 6.5 | 66.0 | 37.3 | 5.1 | 65.9 | 44.3 | 3.3 | 69.6 | 51.4 | 7.4 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 67.7 | 37.1 | 6.5 | 66.0 | 37.3 | 5.1 | 65.9 | 44.3 | 3.3 | 69.6 | 51.4 | 7.4 |
| LOS | Е | D | Α | Е | D | Α | Е | D | Α | Е | D | Α |
| Approach Delay | | 32.4 | | | 34.4 | | | 42.4 | | | 47.9 | |
| Approach LOS | | С | | | С | | | D | | | D | |
| Queue Length 50th (m) | 28.5 | 54.3 | 0.0 | 50.8 | 96.3 | 0.0 | 26.8 | 28.8 | 0.0 | 34.7 | 58.5 | 0.0 |
| Queue Length 95th (m) | #54.0 | 80.2 | 21.4 | 76.1 | 128.8 | 20.4 | 39.9 | 38.8 | 4.7 | #54.0 | 71.5 | 16.3 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 196 | 1080 | 652 | 325 | 1274 | 767 | 326 | 850 | 534 | 369 | 911 | 551 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.64 | 0.50 | 0.41 | 0.69 | 0.71 | 0.43 | 0.69 | 0.31 | 0.28 | 0.79 | 0.55 | 0.36 |

Intersection Summary

Area Type: Other

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 100 (83%), Referenced to phase 2:EBT and 6:WBT, Start of Green Natural Cycle: 105

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.81

Intersection LOS: D ICU Level of Service E

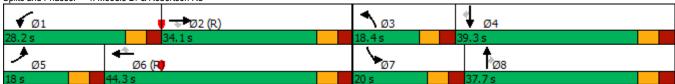
Intersection Signal Delay: 38.5 Intersection Capacity Utilization 83.2%

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



Synchro 10 Report Brad Byvelds, Novatech

5: Moodie Dr & RIRO PM Peak

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|-----------------------------------|----------|-------|-------|------------------|-----------------|------|
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | LUL | - LDK | HDL | * | ↑ Ъ | JUIN |
| | 0 | 24 | 0 | 77 988 | 949 | 22 |
| Traffic Volume (veh/h) | 0 | 24 | 0 | 988 | 949 | 22 |
| Future Volume (Veh/h) | | 24 | U | | | 22 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 24 | 0 | 988 | 949 | 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) | | | | 70 | 227 | |
| pX, platoon unblocked | 0.88 | 0.82 | 0.82 | | | |
| vC, conflicting volume | 1454 | 486 | 971 | | | |
| vC1, stage 1 conf vol | 1404 | 400 | 311 | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 679 | 0 | 537 | | | |
| | | | | | | |
| tC, single (s) | 6.8 | 6.9 | 4.1 | | | |
| tC, 2 stage (s) | 0.5 | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 97 | 100 | | | |
| cM capacity (veh/h) | 338 | 893 | 846 | | | |
| Direction, Lane # | EB 1 | NB 1 | NB 2 | SB 1 | SB 2 | |
| Volume Total | 24 | 494 | 494 | 633 | 338 | |
| Volume Left | 0 | 0 | 0 | 0 | 0 | |
| Volume Right | 24 | 0 | 0 | 0 | 22 | |
| cSH | 893 | 1700 | 1700 | 1700 | 1700 | |
| Volume to Capacity | 0.03 | 0.29 | 0.29 | 0.37 | 0.20 | |
| Queue Length 95th (m) | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Control Delay (s) | 9.1 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Lane LOS | 9.1 A | 0.0 | 0.0 | 0.0 | 0.0 | |
| | 9.1 | 0.0 | | 0.0 | | |
| Approach LOS | 9.1 A | 0.0 | | 0.0 | | |
| Approach LOS | A | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.1 | | | |
| Intersection Capacity Utilization | | | 38.4% | ICI | U Level of Serv | ice |
| Analysis Period (min) | | | 15 | | | |

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|-----------------------------------|-------------|----------|--------------|------|--------------|--------|
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | र्ध | | | 14 | |
| Traffic Volume (veh/h) | 2 | 257 | 1 108 | 29 | 22 | 1 |
| Future Volume (Veh/h) | 2 | 257 | 108 | 29 | 22 | 1 |
| Sign Control | | Free | Free | 20 | Stop | ' |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 2 | 257 | 108 | 29 | 22 | 1.00 |
| Pedestrians | 2 | 231 | 100 | 29 | 22 | ļ |
| | | | | | | |
| Lane Width (m) | | | | | | |
| Walking Speed (m/s) | | | | | | |
| Percent Blockage | | | | | | |
| Right turn flare (veh) | | Maria | News | | | |
| Median type | | None | None | | | |
| Median storage veh) | | | 400 | | | |
| Upstream signal (m) | | | 102 | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 137 | | | | 384 | 122 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 137 | | | | 384 | 122 |
| 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 | | | | 96 | 100 |
| cM capacity (veh/h) | 1447 | | | | 618 | 929 |
| | 50 4 | 14/D 4 | 00.4 | | | |
| Direction, Lane # | EB 1 | WB 1 | SB 1 | | | |
| Volume Total | 259 | 137 | 23 | | | |
| Volume Left | 2 | 0 | 22 | | | |
| Volume Right | 0 | 29 | 1 | | | |
| cSH | 1447 | 1700 | 627 | | | |
| Volume to Capacity | 0.00 | 0.08 | 0.04 | | | |
| Queue Length 95th (m) | 0.0 | 0.0 | 0.9 | | | |
| Control Delay (s) | 0.1 | 0.0 | 11.0 | | | |
| Lane LOS | Α | | В | | | |
| Approach Delay (s) | 0.1 | 0.0 | 11.0 | | | |
| Approach LOS | | | В | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.6 | | | |
| Intersection Capacity Utilization | | | 26.0% | ICI | J Level of S | ervice |
| Analysis Period (min) | | | 15 | 100 | 2 2010: 01 0 | |
| Analysis i Gilou (IIIIII) | | | 10 | | | |

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|-------------------------------------|----------------|-------|---------|------------------|---------------|-------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Group Lane Configurations | EBL | EBK | NBL NBL | ↑ ↑ | ♦ ♦ | SBK |
| Traffic Volume (vph) | 1 26 | 82 | 83 | TT 554 | TT 638 | 37 |
| Future Volume (vph) | 26 | 82 | 83 | 554 | 638 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 100.0 | 120.0 | | | 40.0 |
| Storage Lanes | 1 | 1 | 1 | | | 1 |
| Taper Length (m) | 7.6 | | 60.0 | | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 |
| Frt | | 0.850 | | | | 0.850 |
| Flt Protected | 0.950 | | 0.950 | | | |
| Satd. Flow (prot) | 1729 | 1547 | 1729 | 3424 | 3424 | 1547 |
| Flt Permitted | 0.950 | | 0.338 | | | |
| Satd. Flow (perm) | 1729 | 1547 | 615 | 3424 | 3424 | 1547 |
| Right Turn on Red | | Yes | | | | Yes |
| Satd. Flow (RTOR) | | 82 | | | | 37 |
| Link Speed (k/h) | 80 | | | 60 | 60 | |
| Link Distance (m) | 221.1 | | | 227.4 | 191.7 | |
| Travel Time (s) | 9.9 | | | 13.6 | 11.5 | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 1% | 1% | 0% |
| Adj. Flow (vph) | 26 | 82 | 83 | 554 | 638 | 37 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 26 | 82 | 83 | 554 | 638 | 37 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 3.7 | J | | 3.7 | 3.7 | J |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 4.9 | | | 4.9 | 4.9 | |
| Two way Left Turn Lane | 0 | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Number of Detectors | 1 | 1 | 1 | 2 | 2 | 1 |
| Detector Template | Left | Right | Left | Thru | Thru | Right |
| Leading Detector (m) | 6.1 | 6.1 | 6.1 | 30.5 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.1 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 6.1 | 6.1 | 1.8 | 1.8 | 6.1 |
| Detector 1 Type | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Type Detector 1 Channel | OI+EX | OITEX | OITEX | OITEX | OITEX | OITEX |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| () | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | | | | | | |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | | 28.7 | 28.7 | |
| Detector 2 Size(m) | | | | 1.8 | 1.8 | |
| Detector 2 Type | | | | CI+Ex | CI+Ex | |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | _ | | 0.0 | 0.0 | |
| Turn Type | Prot | Perm | pm+pt | NA | NA | Perm |
| Protected Phases | 4 | | 5 | 2 | 6 | |
| Permitted Phases | | 4 | 2 | _ | _ | 6 |
| Detector Phase | 4 | 4 | 5 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 28.3 | 28.3 | 10.6 | 15.6 | 24.6 | 24.6 |
| Total Split (s) | 28.3 | 28.3 | 11.0 | 42.0 | 31.0 | 31.0 |
| Total Split (%) | 40.3% | 40.3% | 15.6% | 59.7% | 44.1% | 44.1% |
| Maximum Green (s) | 22.0 | 22.0 | 5.4 | 36.4 | 25.4 | 25.4 |
| Yellow Time (s) | 4.6 | 4.6 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 1.7 | 1.7 | 1.9 | 1.9 | 1.9 | 1.9 |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.3 | 6.3 | 5.6 | 5.6 | 5.6 | 5.6 |
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|-----------------------------------|-------------------|-------------|--------------|----------|-----------------------|-----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lead/Lag | | | Lead | | Lag | Lag |
| Lead-Lag Optimize? | | | Yes | | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | None | None | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | 7.0 | | | 14.0 | 14.0 |
| Flash Dont Walk (s) | 15.0 | 15.0 | | | 5.0 | 5.0 |
| Pedestrian Calls (#/hr) | 2 | 2 | | | 2 | 2 |
| Act Effct Green (s) | 12.4 | 12.4 | 49.3 | 50.4 | 40.9 | 40.9 |
| Actuated g/C Ratio | 0.18 | 0.18 | 0.70 | 0.72 | 0.58 | 0.58 |
| v/c Ratio | 0.09 | 0.24 | 0.16 | 0.23 | 0.32 | 0.04 |
| Control Delay | 22.6 | 7.4 | 6.4 | 5.6 | 11.8 | 5.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 22.6 | 7.4 | 6.4 | 5.6 | 11.8 | 5.1 |
| LOS | 22.0 C | 7.4 A | 0.4 A | 3.0 A | В | A |
| Approach Delay | 11.1 | ^ | ٨ | 5.7 | 11.4 | ^ |
| Approach LOS | В | | | 3.7 A | 11. 4 B | |
| Queue Length 50th (m) | 3.0 | 0.0 | 3.0 | 11.7 | 24.5 | 0.0 |
| Queue Length 95th (m) | 7.2 | 8.3 | 11.2 | 29.7 | 48.3 | 5.2 |
| Internal Link Dist (m) | | 0.3 | 11.2 | 29.7 | 167.7 | 5.2 |
| | 197.1 | 100.0 | 120.0 | 203.4 | 107.7 | 40.0 |
| Turn Bay Length (m) | F 4.4 | | | 0450 | 1001 | |
| Base Capacity (vph) | 541 | 540 | 528 | 2453 | 1991 | 915 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.05 | 0.15 | 0.16 | 0.23 | 0.32 | 0.04 |
| Intersection Summary | Other | | | | | |
| Area Type: Cycle Length: 70.3 | Other | | | | | |
| Actuated Cycle Length: 70.3 | | | | | | |
| Offset: 55 (78%), Referenced t | to phone 2:NDTL o | nd G.CDT (| Start of Cro | on | | |
| Natural Cycle: 65 | to phase Z:NBTL a | na 6:5B1, 8 | start of Gre | en | | |
| Control Type: Actuated-Coordi | | | | | | |
| | nated | | | | | |
| Maximum v/c Ratio: 0.32 | | | | | | 00.4 |
| Intersection Signal Delay: 8.8 | 10.10/ | | | | tersection L | |
| Intersection Capacity Utilization | n 46.4% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |
| Outto and Dharas A. Mard | . D. 0 T D. | | | | | |
| Splits and Phases: 1: Moodi | ie Dr & Timm Dr | | | | | |
| 1 Ø2 (R) ■ | | | | | | - 1. |
| 1 Ø2 (R) | | | | | | |
| 42 s | | | | | | 2 |
| - ∉ | | | | | | |
| √ Ø5 • • • | ♥ Ø6 (R) | | | | | |
| 11 6 21 | | | | | | |

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|---|----------|------------|-----------|----------|------------|----------|------------|------------|-------------|----------|------------|----------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | * | î. | | * | î. | | * | ት ጌ | | * | ∳ ኄ | |
| Traffic Volume (vph) | 72 | 1 3 | 32 | 19 | 1 | 17 | 54 | 450 | 10 | 12 | 608 | 42 |
| Future Volume (vph) | 72 | 3 | 32 | 19 | 2 | 17 | 54 | 450 | 10 | 12 | 608 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 35.0 | | 0.0 | 20.0 | | 0.0 | 65.0 | | 0.0 | 45.0 | | 0.0 |
| Storage Lanes | 1 | | 0 | 1 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (m) | 30.0 | | | 25.0 | | | 40.0 | | | 20.0 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 1.00 | 0.95 | 0.95 |
| Ped Bike Factor | 1.00 | | | | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | | 0.863 | | | 0.866 | | | 0.997 | | | 0.990 | |
| Flt Protected | 0.950 | 4.400 | • | 0.950 | 4=== | • | 0.950 | 0.1.10 | • | 0.950 | 0070 | • |
| Satd. Flow (prot) | 1729 | 1439 | 0 | 1729 | 1555 | 0 | 1729 | 3413 | 0 | 1729 | 3376 | 0 |
| Flt Permitted | 0.745 | 4.400 | • | 0.734 | 4=== | | 0.405 | 0.1.10 | • | 0.487 | 0070 | • |
| Satd. Flow (perm) | 1352 | 1439 | 0 | 1336 | 1555 | 0 | 736 | 3413 | 0 | 885 | 3376 | 0 |
| Right Turn on Red | | 00 | Yes | | 47 | Yes | | | Yes | | 40 | Yes |
| Satd. Flow (RTOR) | | 32 | | | 17 | | | 4 | | | 13 | |
| Link Speed (k/h) | | 48 | | | 48 | | | 60 | | | 60 | |
| Link Distance (m) | | 99.8 | | | 87.6 | | | 186.4 | | | 70.2 | |
| Travel Time (s) | 1 | 7.5 | | | 6.6 | 1 | 2 | 11.2 | 2 | 2 | 4.2 | 2 |
| Confl. Peds. (#/hr) | 4 | 4.00 | 1.00 | 1.00 | 1.00 | 4 | | 4.00 | 2 | 2 | 1.00 | 1.00 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 0% 72 | 0% | 10% 32 | 0% 19 | 0% 2 | 0% 17 | 0% 54 | 1% 450 | 0% 10 | 0% 12 | 1% | 5% 42 |
| Adj. Flow (vph) | 12 | 3 | 32 | 19 | 2 | 17 | 54 | 450 | 10 | 12 | 608 | 42 |
| Shared Lane Traffic (%) Lane Group Flow (vph) | 72 | 35 | 0 | 19 | 19 | 0 | 54 | 460 | 0 | 12 | 650 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | | Left | Left | | Left | Left | Right |
| Median Width(m) | Leit | 3.7 | Rigiit | Leit | 3.7 | Right | Leit | 3.7 | Right | Leit | 3.7 | Rigiti |
| 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 | | 7.0 | | | 7.0 | | | 4.0 | | | 7.0 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1100 | 14 | 24 | 1100 | 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 | CI+Ex | CI+Ex | | CI+Ex | Cl+Ex | | CI+Ex | CI+Ex | | CI+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 | | CI+Ex | | | Cl+Ex | | | CI+Ex | | | CI+Ex | |
| Detector 2 Channel | | | | | | | | | | | | |
| 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 | 4 | | 8 | • | | 2 | • | | 6 | _ | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 6 | 6 | |
| Switch Phase | 40.0 | 40.0 | | 40.0 | 10.0 | | 40.0 | 10.0 | | 40.0 | 40.0 | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Minimum Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 30.7 | 30.7 | | 30.7 | 30.7 | |
| Total Split (s) | 34.0 | 34.0 | | 34.0 | 34.0 | | 36.0 | 36.0 | | 36.0 | 36.0 | |
| Total Split (%) | 48.6% | 48.6% | | 48.6% | 48.6% | | 51.4% | 51.4% | | 51.4% | 51.4% | |
| Maximum Green (s) | 28.0 | 28.0 | | 28.0 | 28.0 | | 30.3 | 30.3 | | 30.3 | 30.3 | |
| Yellow Time (s) | 3.3 | 3.3 | | 3.3 | 3.3 2.7 | | 3.7 2.0 | 3.7 | | 3.7 | 3.7 | |
| All-Red Time (s) | 2.7 | 2.7 | | 2.7 | 2.1 | | 2.0 | 2.0 | | 2.0 | 2.0 | |

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|-------------------------------------|-------------------|----------------|--------------|-----------|--------------|------|-------|----------|-----|----------|----------|-----|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | 6.0 | 6.0 | | 6.0 | 6.0 | | 5.7 | 5.7 | | 5.7 | 5.7 | |
| 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 | None | None | | None | None | | C-Max | C-Max | | C-Max | C-Max | |
| Walk Time (s) | 7.0 | 7.0 | | 7.0 | 7.0 | | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Flash Dont Walk (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Pedestrian Calls (#/hr) | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 | |
| Act Effct Green (s) | 13.7 | 13.7 | | 13.7 | 13.7 | | 48.9 | 48.9 | | 48.9 | 48.9 | |
| Actuated g/C Ratio | 0.20 | 0.20 | | 0.20 | 0.20 | | 0.70 | 0.70 | | 0.70 | 0.70 | |
| v/c Ratio | 0.27 | 0.20 | | 0.20 | 0.26 | | 0.11 | 0.19 | | 0.02 | 0.78 | |
| Control Delay | 24.3 | 8.3 | | 19.9 | 9.4 | | 6.5 | 5.1 | | 8.1 | 6.9 | |
| Queue Delay | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.9 | |
| | 24.3 | 8.3 | | 19.9 | 9.4 | | 6.5 | 5.1 | | 8.1 | 6.9 | |
| Total Delay LOS | 24.3 C | 6.3 A | | 19.9 B | 9.4 A | | | - | | | | |
| | C | | | В | | | Α | Α | | Α | A | |
| Approach Delay | | 19.0 | | | 14.7 | | | 5.3 | | | 6.9 | |
| Approach LOS | | В | | | В | | 4.0 | A | | 0.4 | Α | |
| Queue Length 50th (m) | 8.7 | 0.3 | | 2.2 | 0.3 | | 1.9 | 8.9 | | 0.4 | 13.6 | |
| Queue Length 95th (m) | 13.3 | 5.0 | | 5.0 | 3.6 | | 6.2 | 16.2 | | 3.6 | 42.2 | |
| Internal Link Dist (m) | | 75.8 | | | 63.6 | | | 162.4 | | | 46.2 | |
| Turn Bay Length (m) | 35.0 | | | 20.0 | | | 65.0 | | | 45.0 | | |
| Base Capacity (vph) | 540 | 594 | | 534 | 632 | | 514 | 2385 | | 618 | 2362 | |
| Starvation Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | 0.13 | 0.06 | | 0.04 | 0.03 | | 0.11 | 0.19 | | 0.02 | 0.28 | |
| Intersection Summary | | | | | | | | | | | | |
| Area Type: | Other | | | | | | | | | | | |
| Cycle Length: 70 | | | | | | | | | | | | |
| Actuated Cycle Length: 70 | | | | | | | | | | | | |
| Offset: 0 (0%), Referenced to pha | ase 2:NBTL and | 6:SBTL, St | art of Greer | ı | | | | | | | | |
| Natural Cycle: 65 | | | | | | | | | | | | |
| Control Type: Actuated-Coordinate | ted | | | | | | | | | | | |
| Maximum v/c Ratio: 0.28 | | | | | | | | | | | | |
| Intersection Signal Delay: 7.5 | | | | Int | ersection LC | S: A | | | | | | |
| Intersection Capacity Utilization 5 | 4 5% | | | | J Level of S | | | | | | | |
| Analysis Period (min) 15 | | | | | 2 2010, 0, 0 | | | | | | | |
| Culita and Dhasses O. Mandia F | D. 0 F:t | 7-1 | | | | | | | | | | |
| Splits and Phases: 2: Moodie [| Or & Fitzgerald F | 1 0 | | | 1 4 | | | | | | | |
| Tø2 (R) | | | | | | Ø4 | | | | | | |
| 36 s | | | | | 34 s | | | | | | | |
| Ø6 (R) | | | | | 1 🛨 | Ø8 | | | | | | |

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|------------------------------------|------------|-------|----------|----------|----------|----------|
| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations | W | , DIV | * | ₹ |) T | * |
| Traffic Volume (vph) | 27 | 35 | 479 | 109 | 21 | 643 |
| Future Volume (vph) | 27 | 35 | 479 | 109 | 21 | 643 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 0.0 | 0.0 | .000 | 30.0 | 50.0 | .000 |
| Storage Lanes | 1 | 0 | | 1 | 1 | |
| Taper Length (m) | 7.6 | | | | 40.0 | |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Ped Bike Factor | 1.00 | 1.00 | 0.00 | 1.00 | 1.50 | 0.00 |
| Frt | 0.924 | | | 0.850 | | |
| Flt Protected | 0.979 | | | 0.500 | 0.950 | |
| Satd. Flow (prot) | 1646 | 0 | 3424 | 1547 | 1729 | 3424 |
| Flt Permitted | 0.979 | 0 | U424 | 1041 | 0.478 | J424 |
| Satd. Flow (perm) | 1646 | 0 | 3424 | 1547 | 870 | 3424 |
| Right Turn on Red | 1040 | Yes | 3424 | Yes | 0/0 | J4Z4 |
| Satd. Flow (RTOR) | 35 | 162 | | 109 | | |
| Link Speed (k/h) | 40 | | 60 | 109 | | 60 |
| Link Speed (k/n) Link Distance (m) | 60.4 | | 200.0 | | | 186.4 |
| | | | | | | |
| Travel Time (s) | 5.4 | | 12.0 | | | 11.2 |
| Confl. Peds. (#/hr) | 1 | 1.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 1% | 0% | 0% | 1% |
| Adj. Flow (vph) | 27 | 35 | 479 | 109 | 21 | 643 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 62 | 0 | 479 | 109 | 21 | 643 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Right | Left | Left |
| Median Width(m) | 3.7 | | 7.4 | | | 7.4 |
| 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 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | | 14 | 24 | |
| Number of Detectors | 1 | | 2 | 1 | 1 | 2 |
| Detector Template | Left | | Thru | Right | Left | Thru |
| Leading Detector (m) | 6.1 | | 30.5 | 6.1 | 6.1 | 30.5 |
| Trailing Detector (m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | | 1.8 | 6.1 | 6.1 | 1.8 |
| Detector 1 Type | CI+Ex | | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | OITEX | | OI! LX | OITEX | OI! LX | OITEX |
| Detector 1 Extend (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| | | | | | | |
| Detector 1 Queue (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | | 28.7 | | | 28.7 |
| Detector 2 Size(m) | | | 1.8 | | | 1.8 |
| Detector 2 Type | | | CI+Ex | | | Cl+Ex |
| Detector 2 Channel | | | | | | |
| Detector 2 Extend (s) | | | 0.0 | | | 0.0 |
| Turn Type | Prot | | NA | Perm | Perm | NA |
| Protected Phases | 8 | | 2 | | | 6 |
| Permitted Phases | | | | 2 | 6 | |
| Detector Phase | 8 | | 2 | 2 | 6 | 6 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 10.0 | 10.0 | 10.0 | 10.0 |
| Minimum Split (s) | 32.6 | | 28.9 | 28.9 | 23.9 | 23.9 |
| Total Split (s) | 33.0 | | 37.0 | 37.0 | 37.0 | 37.0 |
| Total Split (%) | 47.1% | | 52.9% | 52.9% | 52.9% | 52.9% |
| Maximum Green (s) | 27.4 | | 31.1 | 31.1 | 31.1 | 31.1 |
| Yellow Time (s) | 3.3 | | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.3 | | 2.2 | 2.2 | 2.2 | 2.2 |
| 100 11110 (0) | 2.0 | | ۷.۲ | ۲.۲ | ۷.۲ | L.L |

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| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
| Lost Time Adjust (s) | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 5.6 | | 5.9 | 5.9 | 5.9 | 5.9 |
| Lead/Lag | | | | | | |
| Lead-Lag Optimize? | | | | | | |
| Vehicle Extension (s) | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | | C-Max | C-Max | C-Max | C-Max |
| Walk Time (s) | 7.0 | | 7.0 | 7.0 | | |
| Flash Dont Walk (s) | 20.0 | | 16.0 | 16.0 | | |
| Pedestrian Calls (#/hr) | 2 | | 2 | 2 | | |
| Act Effct Green (s) | 13.4 | | 53.7 | 53.7 | 53.7 | 53.7 |
| Actuated g/C Ratio | 0.19 | | 0.77 | 0.77 | 0.77 | 0.77 |
| v/c Ratio | 0.19 | | 0.17 | 0.77 | 0.77 | 0.77 |
| Control Delay | 12.5 | | 5.6 | 2.4 | 2.0 | 1.4 |
| | 0.0 | | | 0.0 | 0.0 | 0.0 |
| Queue Delay | | | 0.0 | | | |
| Total Delay | 12.5 | | 5.6 | 2.4 | 2.0 | 1.4 |
| LOS | В | | A | Α | Α | A |
| Approach Delay | 12.5 | | 5.0 | | | 1.5 |
| Approach LOS | В | | Α | | | Α |
| Queue Length 50th (m) | 3.1 | | 9.6 | 0.0 | 0.2 | 3.4 |
| Queue Length 95th (m) | 8.8 | | 29.7 | 7.3 | 1.0 | 6.3 |
| Internal Link Dist (m) | 36.4 | | 176.0 | | | 162.4 |
| Turn Bay Length (m) | | | | 30.0 | 50.0 | |
| Base Capacity (vph) | 665 | | 2626 | 1212 | 667 | 2626 |
| Starvation Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.09 | | 0.18 | 0.09 | 0.03 | 0.24 |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Cycle Length: 70 | | | | | | |
| Actuated Cycle Length: 70 | | | | | | |
| Offset: 9 (13%), Referenced to | nhase 2·NRT and | 6:SBTL S | tart of Gree | n | | |
| Natural Cycle: 65 | pridoc 2.14BT drid | 0.0012, 0 | tart or Oroo | | | |
| Control Type: Actuated-Coordin | natod | | | | | |
| Maximum v/c Ratio: 0.24 | ialeu | | | | | |
| | | | | lmi | tersection L | OC. A |
| Intersection Signal Delay: 3.6 | 20.70/ | | | | | |
| Intersection Capacity Utilization | 36.7% | | | IC | U Level of | Service A |
| Analysis Period (min) 15 | | | | | | |
| Outto and Dhanna O. Maratia | D. O.L. ablanca | | | | | |
| Splits and Phases: 3: Moodie | Dr & Loblaws | | | | | |
| T ^{®2 (R)} | | | | | | |
| | | | | | | |
| 37 s | | | | | | |
| 1 | | | | | | √ Ø8 |
| ▼ Ø6 (R) | | | | | | ▼ Ø8 |

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|------------------------------------|--------------|--------------|---------|--------------|-------------|---------|--------------|-------------|--------------|--------------|--------------|---------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | 75 | 44 | 7 | ¥ | 44 | 7 | 14.54 | 44 | 7 | 14.54 | 44 | 7 |
| Traffic Volume (vph) | 166 | 717 | 189 | 174 | 587 | 122 | 240 | 276 | 191 | 219 | 240 | 162 |
| Future Volume (vph) | 166 | 717 | 189 | 174 | 587 | 122 | 240 | 276 | 191 | 219 | 240 | 162 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Storage Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Storage Lanes | 1 | | 1 | 1 | | 1 | 2 | | 1 | 2 | | 1 |
| Taper Length (m) | 40.0 1.00 | 0.95 | 1.00 | 40.0 1.00 | 0.95 | 1.00 | 40.0 0.97 | 0.95 | 1.00 | 50.0 0.97 | 0.95 | 1.00 |
| Lane Util. Factor Ped Bike Factor | 1.00 | 0.95 | 0.99 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 | 1.00 0.97 | 0.97 | 0.95 | 0.99 |
| Frt | | | 0.850 | 1.00 | | 0.850 | 1.00 | | 0.850 | 0.90 | | 0.850 |
| Flt Protected | 0.950 | | 0.000 | 0.950 | | 0.000 | 0.950 | | 0.000 | 0.950 | | 0.000 |
| Satd. Flow (prot) | 1729 | 3424 | 1547 | 1729 | 3424 | 1532 | 3321 | 3424 | 1532 | 3321 | 3424 | 1532 |
| Flt Permitted | 0.950 | V | | 0.950 | V | 1002 | 0.950 | 0.2. | 1002 | 0.950 | 0.2. | .002 |
| Satd. Flow (perm) | 1729 | 3424 | 1524 | 1727 | 3424 | 1532 | 3316 | 3424 | 1489 | 3259 | 3424 | 1511 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 189 | | | 139 | | | 191 | | | 162 |
| Link Speed (k/h) | | 60 | | | 60 | | | 60 | | | 60 | |
| Link Distance (m) | | 303.5 | | | 384.4 | | | 186.5 | | | 200.0 | |
| Travel Time (s) | | 18.2 | | | 23.1 | | | 11.2 | | | 12.0 | |
| Confl. Peds. (#/hr) | | | 2 | 2 | | | 1 | | 13 | 13 | | 1 |
| Peak Hour 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 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 1% | 1% | 1% | 1% | 1% | 1% | 1% |
| Adj. Flow (vph) | 166 | 717 | 189 | 174 | 587 | 122 | 240 | 276 | 191 | 219 | 240 | 162 |
| Shared Lane Traffic (%) | 100 | | 400 | | | 400 | 0.10 | 070 | 404 | 0.10 | 0.40 | 400 |
| Lane Group Flow (vph) | 166 | 717 | 189 | 174 | 587 | 122 | 240 | 276 | 191 | 219 | 240 | 162 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left 3.7 | Right | Left | Left 3.7 | Right | Left | Left 7.4 | Right | Left | Left 7.4 | Right |
| Median Width(m) 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 | | 4.3 | | | 4.3 | | | 4.3 | | | 4.3 | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 1.00 | 14 | 24 | 1.00 | 14 | 24 | 1.00 | 14 | 24 | 1.00 | 14 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 2 | 1 |
| Detector Template | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right | Left | Thru | Right |
| Leading Detector (m) | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 | 6.1 | 30.5 | 6.1 |
| Trailing Detector (m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Position(m) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Size(m) | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 | 6.1 | 1.8 | 6.1 |
| Detector 1 Type | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | Cl+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex | CI+Ex |
| Detector 1 Channel | | | | | | | | | | | | |
| Detector 1 Extend (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Queue (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 1 Delay (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Detector 2 Position(m) | | 28.7 | | | 28.7 | | | 28.7 | | | 28.7 | |
| Detector 2 Size(m) | | 1.8 Cl+Ex | | | 1.8 | | | 1.8 | | | 1.8 CI+Ex | |
| Detector 2 Type Detector 2 Channel | | CI+EX | | | CI+Ex | | | CI+Ex | | | UI+EX | |
| Detector 2 Extend (s) | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Turn Type | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | 1 Cilli | 1 | 6 | 1 Cilli | 3 | 8 | 1 Cilli | 7 | 4 | 1 Cilli |
| Permitted Phases | <u> </u> | | 2 | | | 6 | | | 8 | ' | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 | 5.0 | 10.0 | 10.0 |
| Minimum Split (s) | 11.4 | 33.4 | 33.4 | 11.4 | 33.4 | 33.4 | 11.5 | 37.7 | 37.7 | 11.5 | 37.7 | 37.7 |
| Total Split (s) | 26.0 | 35.0 | 35.0 | 31.0 | 40.0 | 40.0 | 27.0 | 37.7 | 37.7 | 27.0 | 37.7 | 37.7 |
| Total Split (%) | 19.9% | 26.8% | 26.8% | 23.7% | 30.6% | 30.6% | 20.7% | 28.8% | 28.8% | 20.7% | 28.8% | 28.8% |
| Maximum Green (s) | 19.6 | 28.6 | 28.6 | 24.6 | 33.6 | 33.6 | 20.5 | 31.0 | 31.0 | 20.5 | 31.0 | 31.0 |
| Yellow Time (s) | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 | 3.7 |
| All-Red Time (s) | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.7 | 2.8 | 3.0 | 3.0 | 2.8 | 3.0 | 3.0 |

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|-------------------------|------|--------|-------|------|-------|-------|------|----------|------|------|-------|------|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lost Time Adjust (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Lost Time (s) | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.4 | 6.5 | 6.7 | 6.7 | 6.5 | 6.7 | 6.7 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Recall Mode | None | C-Max | C-Max | None | C-Max | C-Max | None | None | 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) | | 20.0 | 20.0 | | 20.0 | 20.0 | | 24.0 | 24.0 | | 24.0 | 24.0 |
| Pedestrian Calls (#/hr) | | 2 | 2 | | 2 | 2 | | 2 | 2 | | 2 | 2 |
| Act Effct Green (s) | 17.2 | 54.0 | 54.0 | 18.4 | 55.2 | 55.2 | 14.7 | 18.4 | 18.4 | 13.9 | 17.6 | 17.6 |
| Actuated g/C Ratio | 0.13 | 0.41 | 0.41 | 0.14 | 0.42 | 0.42 | 0.11 | 0.14 | 0.14 | 0.11 | 0.13 | 0.13 |
| v/c Ratio | 0.73 | 0.51 | 0.26 | 0.72 | 0.41 | 0.17 | 0.64 | 0.57 | 0.51 | 0.62 | 0.52 | 0.47 |
| Control Delay | 72.7 | 33.0 | 5.9 | 69.6 | 30.3 | 4.5 | 63.3 | 56.2 | 10.8 | 63.4 | 55.5 | 11.1 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 72.7 | 33.0 | 5.9 | 69.6 | 30.3 | 4.5 | 63.3 | 56.2 | 10.8 | 63.4 | 55.5 | 11.1 |
| LOS | Е | С | Α | Е | С | Α | Е | Е | В | Е | Е | В |
| Approach Delay | | 34.4 | | | 34.5 | | | 46.3 | | | 46.7 | |
| Approach LOS | | С | | | С | | | D | | | D | |
| Queue Length 50th (m) | 41.5 | 68.7 | 0.0 | 43.4 | 53.2 | 0.0 | 30.9 | 36.3 | 0.0 | 28.2 | 31.4 | 0.0 |
| Queue Length 95th (m) | 63.4 | #129.2 | 18.6 | 64.2 | 91.6 | 11.2 | 43.2 | 43.7 | 18.3 | 40.1 | 38.9 | 17.4 |
| Internal Link Dist (m) | | 279.5 | | | 360.4 | | | 162.5 | | | 176.0 | |
| Turn Bay Length (m) | 60.0 | | 200.0 | 60.0 | | 250.0 | 60.0 | | 50.0 | 70.0 | | 70.0 |
| Base Capacity (vph) | 266 | 1415 | 741 | 326 | 1446 | 727 | 520 | 817 | 500 | 520 | 812 | 481 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.62 | 0.51 | 0.26 | 0.53 | 0.41 | 0.17 | 0.46 | 0.34 | 0.38 | 0.42 | 0.30 | 0.34 |

Intersection Summary

Area Type: Other

Cycle Length: 130.7

Actuated Cycle Length: 130.7

Offset: 0 (0%), Referenced to phase 2:EBT and 6:WBT, Start of Green

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 39.3 Intersection Capacity Utilization 75.4%

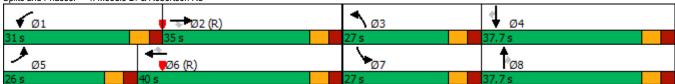
Intersection LOS: D ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 4: Moodie Dr & Robertson Rd



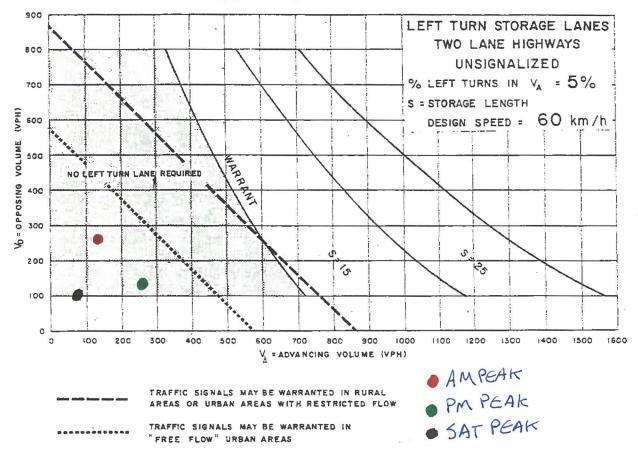
Synchro 10 Report Brad Byvelds, Novatech

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|-----------------------------------|-------|-------|------|------|--------------|----------|
| Lane Group | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations | | # | | 44 | ♠ ₺ | |
| Traffic Volume (vph) | 0 | 31 | 0 | 549 | 676 | 32 |
| Future Volume (vph) | 0 | 31 | 0 | 549 | 676 | 32 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 0.95 | 0.95 | 0.95 |
| Frt | | 0.865 | | | 0.993 | |
| Flt Protected | | | | | | |
| Satd. Flow (prot) | 0 | 1543 | 0 | 3390 | 3366 | 0 |
| Flt Permitted | | | | | | |
| Satd. Flow (perm) | 0 | 1543 | 0 | 3390 | 3366 | 0 |
| Link Speed (k/h) | 48 | | | 60 | 60 | |
| Link Distance (m) | 49.5 | | | 70.2 | 227.4 | |
| Travel Time (s) | 3.7 | | | 4.2 | 13.6 | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 0 | 31 | 0 | 549 | 676 | 32 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 31 | 0 | 549 | 708 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Right | Left | Left | Left | Right |
| Median Width(m) | 0.0 | | | 3.7 | 3.7 | |
| Link Offset(m) | 0.0 | | | 0.0 | 0.0 | |
| Crosswalk Width(m) | 1.6 | | | 1.6 | 1.6 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | 14 | 24 | | | 14 |
| Sign Control | Stop | | | Free | Free | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: Unsignalized | | | | | | |
| Intersection Capacity Utilization | 30.8% | | | ICI | J Level of S | ervice A |
| Analysis Period (min) 15 | | | | | | |

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|-----------------------------------|-------|------------------|-------|-------|--------------|-----------------|
| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR |
| Lane Configurations | | ∡î | ĵ. | | */ | |
| Traffic Volume (vph) | 1 | ₄ 1 82 | 60 | 38 | 25 | 1 |
| Future Volume (vph) | 1 | 82 | 60 | 38 | 25 | 1 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | | | 0.948 | | 0.995 | |
| Flt Protected | | 0.999 | | | 0.954 | |
| Satd. Flow (prot) | 0 | 1783 | 1692 | 0 | 1694 | 0 |
| Flt Permitted | | 0.999 | | | 0.954 | |
| Satd. Flow (perm) | 0 | 1783 | 1692 | 0 | 1694 | 0 |
| Link Speed (k/h) | | 48 | 48 | | 48 | |
| Link Distance (m) | | 55.2 | 99.8 | | 45.8 | |
| Travel Time (s) | | 4.1 | 7.5 | | 3.4 | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj. Flow (vph) | 1 | 82 | 60 | 38 | 25 | 1 |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 0 | 83 | 98 | 0 | 26 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Left | Right | Left | Right |
| Median Width(m) | | 3.7 | 3.7 | | 3.7 | , in the second |
| Link Offset(m) | | 0.0 | 0.0 | | 0.0 | |
| Crosswalk Width(m) | | 1.6 | 4.9 | | 1.6 | |
| Two way Left Turn Lane | | | | | | |
| Headway Factor | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 | 1.06 |
| Turning Speed (k/h) | 24 | | | 14 | 24 | 14 |
| Sign Control | | Free | Free | | Stop | |
| Intersection Summary | | | | | | |
| Area Type: | Other | | | | | |
| Control Type: Unsignalized | | | | | | |
| Intersection Capacity Utilization | 15.8% | | | IC | U Level of S | Service A |
| Analysis Period (min) 15 | | | | | | |

APPENDIX J

MTO Left Turn Lane Warrants



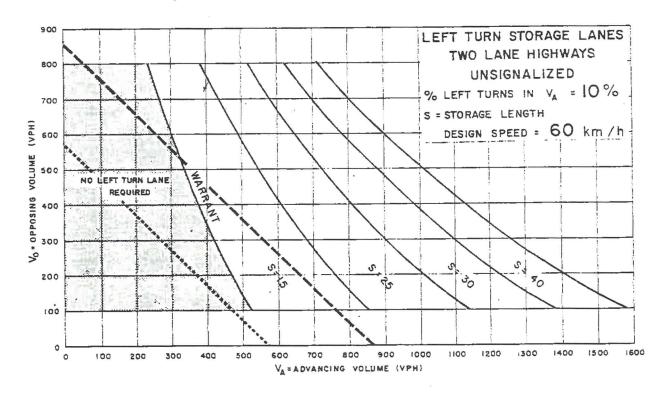


Figure EA-6