1869 Maple Grove Road

Transportation Impact Assessment

Type of Document
Final Report

Project Number
OTT-00254810-A0

Prepared By
EXP Services Inc.
2650 Queensview Drive, Suite 100
Ottawa, ON K2B 8H6
www.exp.com
+1.613.688.1899

Date Submitted
April 6, 2020

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Aly Elgayar, M.A.Sc.
Engineering Designer
Infrastructure Services

Phil Desmarais, P.Eng.
Senior Project Manager
Infrastructure Services

Date Submitted:
April 6, 2020

Legal Notification

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1.0 Screening Form

A Traffic Impact Assessment (TIA) screening form for the proposed development was completed by Fotenn and submitted on July 19, 2019. A copy of the completed screening form is attached to this report as Appendix A.

During the pre-consultation meeting and through communications with the City, a Traffic Impact Assessment (TIA) is required in order to review community concerns with on-street parking in the area. The City acknowledges that the review of the Maple Grove Road and Huntmar Road intersection has been the focus of several TIA studies in recent years. Given the modest nature of the development, the scope of the TIA is limited to the background network travel demand (Module 3.2) and to the design review components (Modules 4.1 and 4.3). The network analysis components (Modules 3.1, 3.3 and 4.5-4.9) and the parking and access intersections design review (Modules 4.2 and 4.4) have been excluded.

2.0 Scoping

2.1 Existing and Planned Conditions

2.1.1 Proposed Development

10886378 Canada Inc. is proposing a residential development consisting of 18 townhouse units, 8 traditional townhouses fronting on Bensinger Way, 8 traditional townhouses fronting on Maple Grove Road and 2 semi-detached townhouses fronting on Mykonos Crescent. Refer to Figure 1 for the Site plan and Appendix B for the full-size Site plan.

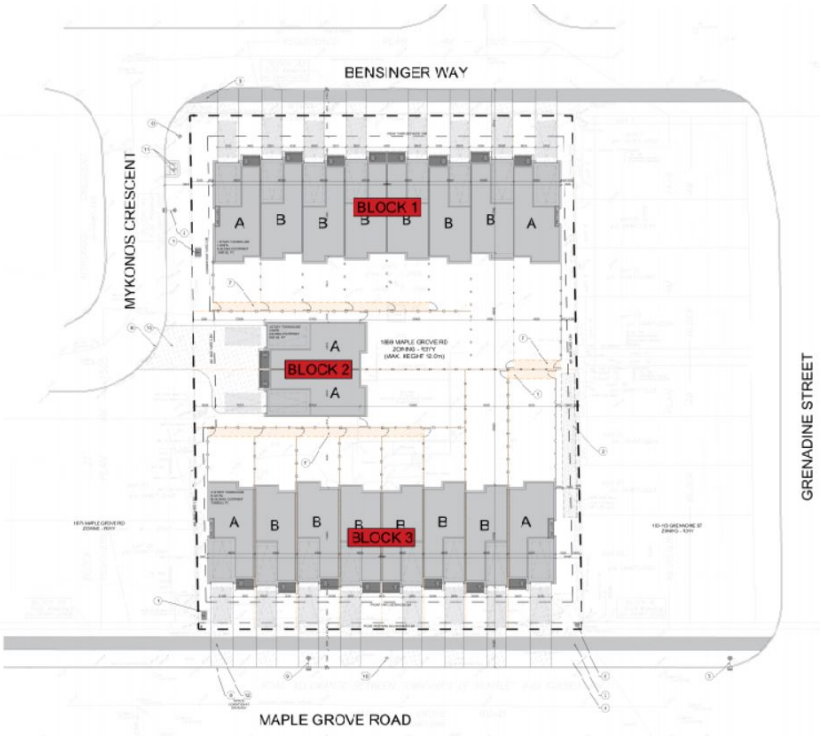


Figure 1 – Site Plan

The proposed residential development allocates 32 parking spaces for the traditional townhouses (16 residential, 16 visitor) and 4 parking spaces for the semi-detached townhouses (2 residential, 2 visitor).

The proposed residential development is in a General Urban Area (section 3.6.1) of the Official Plan. The property currently is occupied by a 1-storey single-detached dwelling and is zoned as DR – Development Reserve Zone. The property will undergo Major Zoning By-law Amendment to be rezoned as R3 – Residential Third Density Zone (subzone YY) for the development.

The zone R3 – Residential Third Density Zone (subzone YY) permits semi-detached and townhouse dwellings as detailed in Part 5, Section 138 of the Zoning By-Law. Additional applicable planning regulations are noted as By-Laws 2010-307, 2012-334 and 2014-189.

The proposed 18 residential units (2 semi-detached townhouses and 16 traditional townhouses) will be constructed in a single phase with expected occupancy to be in 2022.

The proposed development is arranged with all units to be freehold residential units on existing public streets, namely Maple Grove Road, Bensinger Way and Mykonos Crescent. The 16 traditional townhouses fronting on Maple Grove Road and Bensinger Way will be provided direct pedestrian access to the existing sidewalks on the boundary streets.

2.1.2 Existing Conditions

The following boundary roads are adjacent to the proposed development:

- **Maple Grove Road** is classified as a collector road west of the intersection of Huntmar Drive and Maple Grove Road (TMP Map 6, 2015 Revision). The road is under the jurisdiction of the City of Ottawa with a 2-lane, 2-way, undivided cross-section. The posted speed limit is 50 km/h west of Huntmar Drive.
- **Bensinger Way** is a local road under the jurisdiction of the City of Ottawa with a two-lane, two-way, undivided cross-section. A speed limit is not posted along the road; however, the posted speed limit for surrounding roads within the neighborhood is predominantly 40 km/h.
- **Mykonos Crescent** is a local road under the jurisdiction of the City of Ottawa with a two-lane, two-way, undivided cross-section. A speed limit is not posted along the road; however, the posted speed limit for surrounding roads within the neighborhood is predominantly 40 km/h.

Huntmar Drive is classified as an arterial road north of and as a major collector south of the intersection of Huntmar Drive and Maple Grove Road (TMP Map 6, 2015 Revision). The road is under the jurisdiction of the City of Ottawa with a two-lane, two-way, undivided cross-section north of and divided cross-section south of the intersection of Huntmar Drive and Maple Grove Road. The posted speed limit is 50 km/h.

Huntmar Drive and Maple Grove Road is a signalized intersection with a left-turn auxiliary lane only on the south approach of Huntmar Drive. Bensinger Way and Mykonos Crescent is a three-leg, one-way, stop controlled intersection. Refer to Figure 2 for the existing control and lane configuration at each intersection.

Several driveways exist within 200m of the proposed development on both sides of Maple Grove Road, Bensinger Way and Mykonos Crescent. Opposite of the proposed residential units fronting on Maple Grove Road is a driveway to an existing hydro substation. The remainder of individual driveways serve various residential dwelling types.

On-street painted cycle lanes are not provided on either side of the boundary roads adjacent to the proposed development or Huntmar Drive. Sidewalks abut Maple Grove Road on both sides, Bensinger Way on the south side and Mykonos on the north side. Sidewalks abut Huntmar Drive on both sides south of and are not provided north of the intersection of Huntmar Drive and Maple Grove Road.

There are currently two (2) OC Transpo bus routes that provide service within the study area. following bus routes stop at the intersection of Hazeldean Road & Victor Street; both the westbound and eastbound bus stops are located on the west side of the intersection:

- **Route 162** provides bus service from Fernbank Road to the Terry Fox Station via the Tanger Outlet Mall. The route has bus stops located along Maple Grove Road from Santolina Street to Huntmar Drive. The service does not operate during peak-periods and operates during off-peak hours with 60-minute intervals. All-day service is offered on Saturdays with 20-minute intervals. Service is not offered on Sundays.
- **Routes 261** are peak-only connection routes which travel from Stittsville Main directly to Tunney's Pasture via Huntmar Drive, Highway 417, and the Transitway. The route provides weekday service with approximately 20 to 30-minute intervals and does not operate on the weekend.

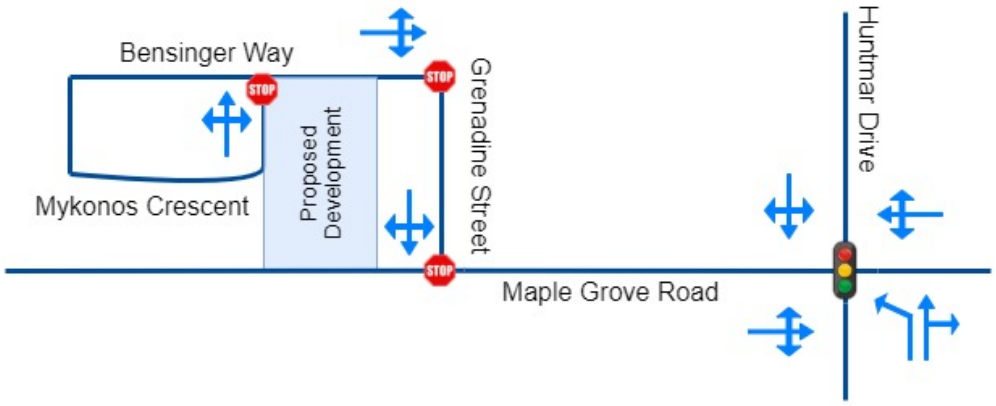


Figure 2 – Existing Traffic Control and Lane Configuration

An examination of the existing traffic management measures was completed by completing a site visit and through the use of Street View in Google Earth to assess the study area. The following existing traffic management measures were identified within the study area:

- Information signage indicating that the direction has "Limited Sight Distance" and the speed is reduced to 40 km/h is located at the intersection of Maple Grove Road and Grenadine Street, along the north bound direction of Maple Grove Road.
- Information signage indicating that the area has been designated as a "Traffic Calmed Neighbourhood" is located on the east side of Maple Grove Road, north of Montserrat Street/Warmstone Drive.
- Flexible traffic separator stakes are provided as vertical centerline treatment along Maple Grove Road between Montserrat Street/Warmstone Drive.

The existing peak hour travel demands (by mode) at the signalized intersection of Maple Grove Road and Huntmar Drive are shown in Figure 3. The demands were obtained from a City of Ottawa traffic count conducted in November 2017 (attached as Appendix C). While the observed active transportation mode split is very low, it is noted that these counts were taken in the fall and the mode split may change during warmer weather.

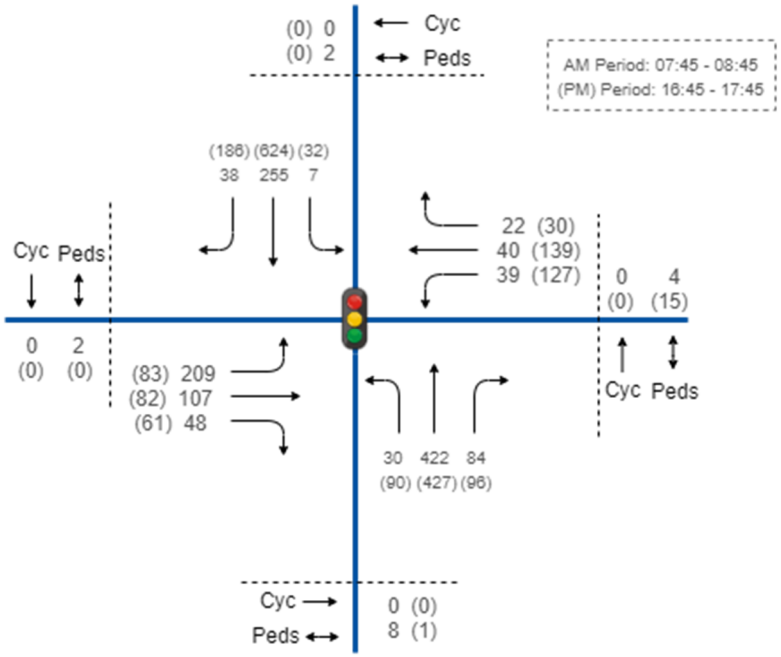


Figure 3 – Existing Peak Hour Travel Demands by Mode

A review of the historical collision data is provided. The most recent five (5) years of collision data for the Huntmar Drive and Maple Grove Road intersection was requested; however, the data provided by the City of Ottawa spanned from January 2014 to December 2018. Nineteen (19) collisions occurred at the subject intersection within the time period the provided data spans, which is an average of 4.75 collisions per year. Thirteen (13) of these collisions were rear end collisions, two (2) were angle collisions, two (2) were turning movement collisions, and two (2) were Single Motor Vehicle (SMV) collisions where vehicles were travelling east or west along Maple Grove Road or north or south along Huntmar Drive. One of the collisions was classified as non-fatal injury while the rest were classified as property damage only. The detailed collisions report is provided in Appendix D.

The City requires a safety review to be conducted if at least six (6) collisions have occurred for any one movement or of a discernible pattern over a five (5) year period. A review of the thirteen (13) rear end collisions indicates that:

- Five (5) of the collisions occurred during adverse environmental conditions such as rain, freezing rain and snow.
- Two (2) of the collisions occurred during the PM peak hour.

Most of the collisions occurred either during the PM peak hour or during adverse environmental conditions. Thus, it should be noted that the occurrence of the collisions was most likely due to inclement weather and not necessarily a result of the intersection design.

2.1.3 Planned Conditions

A review of the Transportation Mater Plan (TMP) Map 10 (Road Network – 2031 Concept) and Map 11 (Road Network – 2031 Affordable Network) identified the future road modifications that may impact the study area traffic. The noted road modification projects are as follows:

- Widening of Huntmar Drive between Campeau Drive and Maple Grove Road (2026-2031).
- Widening of Maple Grove Road between Terry Fox Drive and Huntmar Drive (Concept 2031).
- Realignment of Palladium Road to a proposed north-south arterial road near Huntmar Drive (2020-2025).
- Proposed north south arterial road between Fernbank Road and Palladium Road (2020-2025).
- Proposed Stittsville Main Street extension to connect to the north south arterial road continuing to Palladium Road (2026-2031).

The proposed north south arterial road between Fernbank Road and Palladium Road will be a transit priority corridor (isolated measures) with park and ride facilities at select intersections along the arterial. Hazeldean Road is a proposed transit priority corridor (isolated measures) as per Map 5 (Rapid Transit and Transit Priority Network - 2031 Affordable Network).

It is our understanding that there are three (3) proposed developments within approximately one kilometer of the site, which are currently under construction, approved or in the approval process. The first development is located at 1919 Maple Grove Road and is a property of approximately 6.1 hectares proposing the development of 79 townhouses/semi-detached residential units and 440 apartment units. The second development is located at 1981 Maple Grove Road and is a property of approximately 7.7 hectares proposing the development of 139 townhouses/semi-detached residential units and 57 single family homes. The third mixed-use development is located at 195 Huntmar Drive and is proposing the development of 155 single detached and 418 townhouses residential units, two car dealerships with an approximate building size of 4,000 m^2 per dealership, and a 41,948 m^2 office building.

Based upon the size and nature of these developments, we expect that the additional site traffic can be accommodated by the infrastructure required to support these other planned developments.

2.2 Study Area and Time Periods

2.2.1 Study Area

We propose that the study area to be the boundary streets (ie. Bensinger Way and Mykonos Crescent) and should include the intersection of Huntmar Drive and Maple Grove Road as highlighted in Figure 4.

Figure 4 – Study Area

2.2.2 Time Periods

It is expected that the proposed residential development will generate peak traffic in the weekday AM and PM peak periods.

2.2.3 Horizon Years

The proposed residential development of 18 units is anticipated to generate a relatively small number of trips. Therefore, it is proposed to analyze only the full build-out year of the development (2021).

2.3 Exemptions Review

Based upon Table 4 in the City of Ottawa TIA Guidelines, the following exemptions apply to the proposed development:

- Module 3.1 – Development generated Travel Demand is not required for sites that do not meet the trip generation trigger;
- Module 3.3 – Demand Rationalization is only required when the existing network cannot support the future vehicle volumes, which is not the case for this proposed development;
- Modules 4.1 and 4.2 – As the modules are only required for site plans or for new street networks, which are not the cases for the proposed development as it is a plan of subdivision and new roads are not proposed; and
- Modules 4.5 – 4.9 – As the Trip Generation Trigger was no satisfied, the Traffic Impact Assessment is exempt from the Network Impact Component.

A discussion on the parking supply is provided in section 4.2.1 to address the parking concerns as indicated by the City of Ottawa.

3.0 Forecasting

3.2 Background Network Travel Demands

3.2.1 Transportation Network Plans

As outlined in Section 2.1.3 – Planned Conditions, Map 10 (Road Network – 2031 Concept) and Map 11 (Road Network – 2031 Affordable Network) of the TMP identified the widening of Huntmar Drive and Maple

Grove Road, realignment of Palladium Road, construction of a new arterial road between Palldium Road and Fernbank Road, and the extension of Stittsville Main Street. Refer to section 2.1.3.

The proposed north south arterial road between Fernbank Road and Palladium Road will be a transit priority corridor (isolated measures) with park and ride facilities at select intersections along the arterial.as per Map 5 (Rapid Transit and Transit Priority Network - 2031 Affordable Network).

3.2.2 Background Growth

Based upon the size of the proposed development, we expect that the traffic impact from the proposed development will be negligeable compared to the existing traffic at the Huntmar Drive and Maple Grove Road intersection as outlined in Tables 1, 2 and 3 and Figure 4 (below). The estimated trip generation and distribution calculations were completed for full build-out of the development expected in 2021.

Table 1 – Estimated Trip Generation (ITE 10th Edition)

ITE Land Use	Size	Period	Rate	Total Trips	Entering		Exiting	
#220 Multi-Family Housing (Low Rise)	18 units	AM Peak	0.46	8	23%	2	77%	6
		PM Peak	0.56	10	63%	6	37%	4

Table 2 – Estimated Mode Split Person – Trip Rate Generation

	Proposed Site Mode Share Targets (AM Peak Hour)			Proposed Site Mode Share Targets (PM Peak Hour)		
Travel Mode	Mode Share Target	Vehicle-Trip Rate (ITE)	Person-Trip Rate	Mode Share Target	Vehicle-Trip Rate (ITE)	Person-Trip Rate
Auto Driver	59%	5	5	73%	7	9
Auto Passenger	9%	1	1	17%	2	2
Transit	24%	2	2	7%	1	1
Bicycle	0%	0	0	0%	0	0
Walk	0%	0	0	0%	0	0
Other	7%	0	1	3%	0	0

Table 3 – Proposed Site Automobile Trip Distribution

To/From	Existing Trip Distribution	AM Peak Period Trips		PM Peak Period Trips	
		In	Out	In	Out
		1	4	5	3
Maple Grove EB*	70%	1	3	3	2
Maple Grove WB**	30%	0	1	2	1

*EB - East Bound
**WB - West Bound

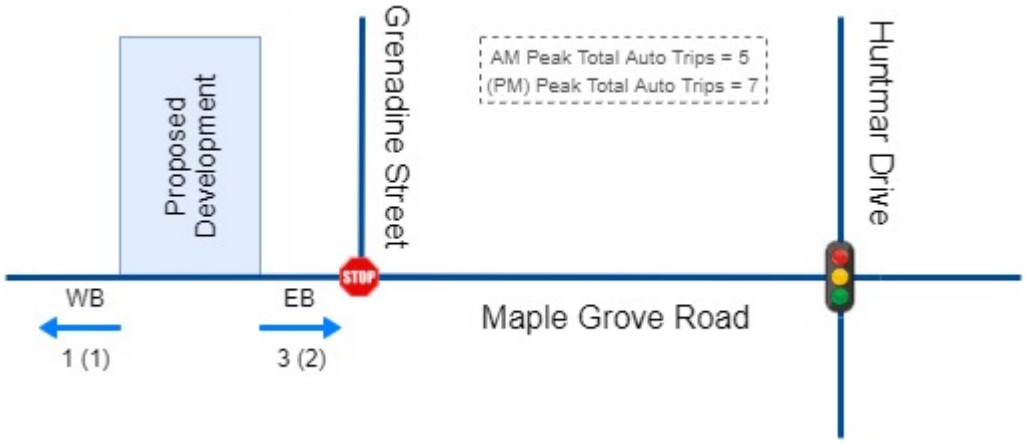


Figure 5 – Proposed Site Trip Distribution

Examination of the existing and proposed intersection capacity was completed using the existing intersection geometry and signal timing to evaluate the Intersection Capacity Utilization (ICU) Level of Service in previous TIA reports prepared for the identified proposed developments within the vicinity of the subject site. A review of the previous reports indicated that there is an existing capacity issue at the intersection of Huntmar Drive and Maple Grove Road. Moreover, the reports determined that the intersection will operate well above its theoretical capacity by 2026, regardless of whether the proposed developments are constructed. Traffic signal timing provided by the City of Ottawa were requested and are presented in Appendix E.

The automobile traffic impact from the site is negligible in comparison to the existing traffic volumes, and estimated traffic impacts of the surrounding proposed developments. The proposed development is expected to contribute an additional 8 automobile trips (total both directions) on Maple Grove Road during the PM peak hour.

4.0 Analysis

4.2 Parking

4.2.1 Parking Supply

The site is following the City's Subdivision planning process and is exempt from the 'Parking Supply' and the 'Spillover Parking' elements per Section 2.3 – Exemptions Review. However, the Parking Supply analysis is conducted to address the City of Ottawa's concern with parking in the area.

The proposed development provides 36 parking spaces (18 for residents, 18 for visitors) for the semi-detached and traditional townhouses. The townhouses meet the City requirements of 1.0 residential parking spaces per dwelling and exceed the requirements of 0.2 visitor parking spaces per dwelling. The proposed supply of parking is consistent with parking requirements for elsewhere in the City of Ottawa. Currently, along the south side of Maple Grove Road there is a lack of peak period parking restrictions. However, spillover parking is not anticipated due to the site's generated potential parking demand will not exceed the parking supply and the site's proximity to transit routes. Driveways will be spaced as to minimize the number of on-street parking spaces impacted, where possible.

Garages are provided for each townhouse to accommodate bicycle parking/storage. No additional bicycle parking is required.

4.3 Boundary Street Design

The boundary street for the proposed development is Maple Grove Road as identified in section 2.2.1. The widening of Maple Grove Road is planned between Terry Fox Drive and Huntmar Drive as per Map 10 (Road Network – 2031 Concept). The existing roadway geometry consists of the following features:

- Approximately 18m R.O.W. road allowance, street width of 8.5m;
- One (1) vehicular traffic lane in each direction;
- Sidewalk width of 1.8m;
- Less than 3,000 vehicles per day;
- Posted speed limit of 50km/h, assumed operating speed of 40-50km;
- No dedicated transit facilities;
- No dedicated cycling facilities,
- No shoulder of road; and
- On-street parking with no peak hour restrictions on the south side of the road.

The Multi-Modal Level of Service (MMLOS) analysis for the road segment along Maple Grove Road was thoroughly conducted by the previous TIA reports of the two (2) proposed developments to the west of the site along Maple Grove Road. However, the projected MMLOS of the boundary road was reconducted and is summarized below in Table 4. The truck level of service has not been analyzed as Maple Grove Road is not a designated truck route.

Table 4 – MMLOS – Projected Maple Grove Road Segment (Both Sides of Roadway)

Road Segment	Level of Service					
	Pedestrian (PLOS)		Bicycle (BLOS)		Transit (TLOS)	
	PLOS	Target	BLOS	Target	TLOS	Target
Maple Grove Road	B	B	D	C	D	D

Based upon the location of the development in a general suburban area, adjacent to a local roadway with pedestrian facilities, and no dedicated bike facilities with a Level of Traffic Stress (LTS) score of LTS3, the target levels of service for pedestrians and cyclists are PLOS 'B' and BLOS 'C'. The road currently does not have dedicated transit facilities or transit priority plans; however, there is low friction on the road and the ratio of the average transit travel speed to the posted speed limit is equal to or greater than 80%. Therefore, the target level of service for transit is TLOS 'D'.

5.0 Conclusions

Based upon the information examined and presented in this report, the following transportation related conclusions are provided:

- A total of 18 residential units (2 semidetached and 16 traditional townhouses) are being proposed at 1869 Maple Grove Road;
- Parking provided exceeds the minimum required by the City;
- Driveways will be spaced as to minimize the number of on-street parking spaces impacted, where possible;
- Transit services are provided by OC Transpo and are located beyond the south east corner of the site along the Maple Grove Road R.O.W. within 100m walking distance of the site;
- The traffic impacts from the proposed development can be considered negligible on the Huntmar Drive and Maple Grove Road signalized intersection; and
- Based upon the results of the report, Roadway Modification Application or Monitoring Plan are not required.

Appendix A - TIA Screening Form (By Foteen)

City of Ottawa 2017 TIA Guidelines Screening Form

1. Description of Proposed Development

Municipal Address	1869 Maple Grove Road
Description of Location	North side of Maple Grove Road, west of Grenadine St
Land Use Classification	Planned Unit Development
Development Size (units)	18
Development Size (m^2)	
Number of Accesses and Locations	1-2 (depending on layout)
Phase of Development	1 phase
Buildout Year	2021-2022

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 m^2
Industrial	5,000 m^2
Fast-food restaurant or coffee shop	100 m^2
Destination retail	1,000 m^2
Gas station or convenience market	75 m^2

** 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.*

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

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?		X
Is the development in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone?*		x

**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?		X
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?		X
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)?		X
Is the proposed driveway within auxiliary lanes of an intersection?		X
Does the proposed driveway make use of an existing median break that serves an existing site?		X
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?		X
Does the development include a drive-thru facility?		X

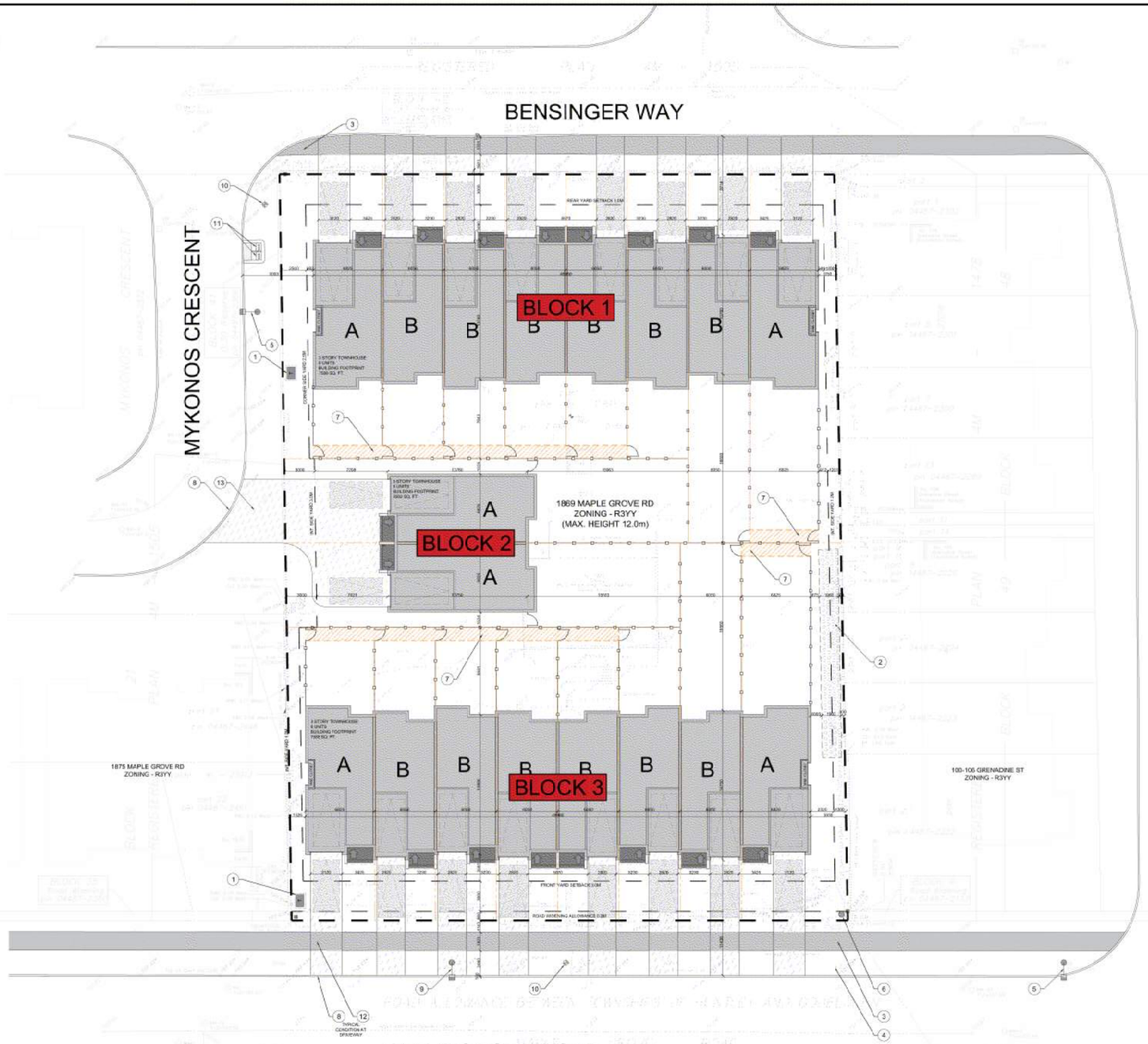
If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.

5. Summary

	Yes	No
Does the development satisfy the Trip Generation Trigger?		X
Does the development satisfy the Location Trigger?		X
Does the development satisfy the Safety Trigger?		X

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

Appendix B - Site Plan



IT IS THE RESPONSIBILITY OF THE APPROPRIATE CONTRACTOR TO CHECK AND VERIFY ALL DIMENSIONS ON SITE AND TO REPORT ALL ERRORS AND/OR OMISSIONS TO THE ARCHITECT.

ALL CONTRACTORS MUST COMPLY WITH ALL PERTINENT CODES AND BY-LAWS.

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

DO NOT SCALE DRAWINGS.

NOTATION SYMBOLS:

- (ID) INDICATES DRAWING NOTES, LISTED ON EACH SHEET.
- ID INDICATES ASSEMBLIES TYPE; REFER TO TYPICAL ASSEMBLIES SCHEDULE.
- WD INDICATES WINDOW TYPE; REFER TO WINDOW ELEVATIONS AND DETAILS ON A900 SERIES.
- D80 INDICATES DOOR TYPE; REFER TO DOOR SCHEDULE AND DETAILS ON A900 SERIES.
- 08 / A501 DETAIL NUMBER / TITLE / SCALE / DETAIL REFERENCE PAGE / DETAIL CROSS REFERENCE PAGE

PROJECT NOTES

1. TRANSFORMER
2. STORM WATER MANAGEMENT TANK
3. CONCRETE SIDEWALK BUILT TO CITY OF OTTAWA STANDARDS
4. BUS STOP TO POTENTIALLY BE RELOCATED
5. EXISTING LIGHT STANDARD (EXACT LOCATION TO BE CONFIRMED BY SURVEYOR)
6. EXISTING UTILITY POLE (EXACT LOCATION TO BE CONFIRMED ON SURVEY DRAWING)
7. 1300mm WIDE REAR YARD ACCESS EASEMENT (TO BE CONFIRMED ON SURVEY DRAWING)
8. 150mm WIDE MOUNTABLE CURB
9. EXISTING LIGHT STANDARD TO BE RELOCATED
10. NEW FIRE HYDRANT (EXACT LOCATION TO BE CONFIRMED BY CIVIL ENGINEER)
11. COMMON MAIL BOXES
12. PROVIDE DEPRESSED SIDEWALK
13. SHARED DRIVEWAY (REQUIRES JUMA)
14. RESERVED
15. RESERVED
16. RESERVED
17. RESERVED
18. RESERVED
19. RESERVED
20. RESERVED

LEGEND

- UNIT ENTRY POINT
- GEODETIC ELEVATION MARKER
- TOP OF CURB MARKER
- FIRE HYDRANT
- UTILITY POLE
- LIGHT STANDARD
- PROPERTY LINE
- SETBACK LINE
- SUBDIVIDED PROPERTY LINE
- EASEMENT OUTLINE
- NEW 2.5m HT PRIVACY FENCE
- PROPOSED BUILDING OUTLINE
- NEW PRIVATE DRIVEWAY
- PUBLIC SIDEWALKS

GENERAL NOTES:

- (A) REFER TO TYPICAL ASSEMBLIES SHEET FOR WALL, PARTITION, ROOF CEILING & FLOOR TYPES.
- (B) FOR DOOR TYPES AND HARDWARE REQUIREMENTS REFER TO DOOR SCHEDULE ON A900 SERIES.
- (C) ALL INTERIOR DIMENSIONS ARE TAKEN FROM THE FACE OF STUD
- (D) ALL EXTERIOR DIMENSIONS ARE TAKEN FROM THE FACE OF STUD
- (E) ALL EXTERIOR WALLS ARE "O BE TYPE 'W1' UNLESS NOTED OTHERWISE.
- (F) ALL INTERIOR PARTITIONS ARE TO BE TYPE 'P1' UNLESS NOTED OTHERWISE.
- (G) ALL REINFORCED CONCRETE SUSPENDED SLABS COLUMNS & BEAMS HAVE A MIN. FRR OF 1.5 HRS (AS DETERMINED BY OBC 9B-2) UNLESS OTHERWISE STATED.

No.	DESCRIPTION	DATE
3	ISSUED FOR COORDINATION	28-02-2020
2	ISSUED FOR COORDINATION	30-01-2020
1	ISSUED FOR COORDINATION	10-01-2020

REVISIONS:

ARCHITECT SEAL: ONTARIO ASSOCIATION OF ARCHITECTS — RODERICK LAHEY — LICENCE 4575 — SEAL DATE: STAMP DATE

NORTH ARROW:

CLIENT: gncr DEVELOPMENTS

ARCHITECT:
rla/architecture
roderick lahey architect inc.
56 beech street, ottawa, ontario K1S 3J9
t 613.724.9932 f 613.724.1209 rlaarchitecture.ca

PROJECT TITLE:
1869 MAPLE GROVE ROAD
OTTAWA ONTARIO

SHEET TITLE:
SITE PLAN

DRAWN:	CHECKED:
L.M.	R.V.
SCALE: 1:200	SHEET No. SP-00
PROJECT No. 1921	

D07-12-19-0089

PROJECT DEVELOPER
GNCR DEVELOPMENTS

Konaklar Mh. Akasyalı Sk.
No:26 34330
Besiktaş İstanbul Turkey

PHONE: +90 212 212 60 60
FAX: +90 212 284 82 77

CIVIL ENGINEER
EXP SERVICES INC.

2650 QUEENSVIEW DRIVE
SUITE 100
OTTAWA, ONTARIO
K2B 8H6

PHONE: 613 688 1899

TRAFFIC ENGINEER
EXP SERVICES INC.

2650 QUEENSVIEW DRIVE
SUITE 100
OTTAWA, ONTARIO
K2B 8H6

PHONE: 613 688 1899

LANDSCAPE ARCHITECT
JAMES B. LENNOX AND ASSCCIATES INC

3332 CARLING AVE.
OTTAWA, ONTARIO, CANADA
K2H 5A8

PHONE: 613 722 5168
FAX: 1 866 343 3942

SURVEYOR
ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 CONCOURSE GATE, SUITE 500
NEPEAN ONTARIO, CANADA
K2E 7S6

PHONE: 513 727 0850
FAX: 813 727 1079

SITE INFORMATION

ZONING	DR
MAX BUILDING HEIGHT	11.0 M.
LOT AREA	4,051.7 SQ. M.
1169 MAPLE GROVE RD STITTSVILLE, ONTARIO, CANADA K2S 1B9	
RE-ZONE TO	R3YY
MAX BUILDING HEIGHT	12.0 M.
LOT AREA	4,051.7 SQ. M.
1169 MAPLE GROVE RD STITTSVILLE, ONTARIO, CANADA K2S 1B9	
SITE AREA	
TOTAL SITE AREA	4,051.7 SQ. M.

RESIDENTIAL UNITS

TRADITIONAL TOWNHOUSES:	16
SEMI-DETACHED HOUSES:	2
TOTAL UNITS:	18

DEVELOPMENT STATISTICS

SITE SETBACKS (R3YY)	REQUIRED	PROVIDED
FRONT YARD (MAPLE GROVE ROAD)	3.0m	3.0m
CORNER SIDE YARD (MYKONOS CRESCENT)	2.5m	2.5m
TYPICAL INTERIOR SIDE YARD	1.2m	1.2m
REAR YARD (BENSINGER WAY)	6.0m	3.0m

BUILDING FOOTPRINTS	# OF UNITS	TOTAL AREA
BLOCK 1 -	8	7,588 SQFT
BLOCK 2 -	2	2,082 SQFT
BLOCK 3 -	8	7,588 SQFT
TOTAL -		17,258 SQFT (1,603.3 SQM)

BUILDING STATISTICS	AREA	# OF UNITS	TOTAL UNIT AREA
TRADITIONAL TOWN TYPE A -	2,414 SQFT	4	9,656 SQFT
TRADITIONAL TOWN TYPE B -	2,145 SQFT	12	25,740 SQFT
SEMI-DETACHED TYPE A -	2,610 SQFT	2	5,220 SQFT
TOTAL -		18	40,616 SQFT (3,773.4 SQM)

PARKING	REQUIRED
TRADITIONAL TOWNS	
RESIDENTIAL:	1.0 PER DWELLING
VISITOR:	0.2 PER DWELLING
SEMI-DETACHED TOWNS	
RESIDENTIAL:	1.0 PER DWELLING
VISITOR:	0.2 PER DWELLING

PARKING	REQUIRED	PROVIDED
TRADITIONAL TOWNS		
RESIDENTIAL:	16	16
VISITOR:	3.2	16
SEMI-DETACHED TOWNS		
RESIDENTIAL:	2	2
VISITOR:	0.4	2
TOTAL:	21.6	36

*REQUIRED BICYCLE PARKING PROVIDED IN GARAGE

SITE COVERAGE

SPACE		AREA (sq.m.)
BUILDING FOOTPRINT	-	1,803.3
PARKING LOT	-	0.0
SIDEWALKS	-	0.0
DRIVEWAYS	-	398.3
TOTAL	-	2001.6
LOT AREA		
1869 MAPLE GROVE ROAD	-	4,051.7
LANDSCAPE SPACE	-	2,050.1
TOTAL LANDSCAPE SPACE (%)	-	50.6

ADDITIONAL NOTES

1. DEDICATED SNOW STORAGE WILL NOT BE PROVIDED ON THIS SITE - AS ALL UNITS FRONT ONTO PUBLIC STREETS, STREET SNOW REMOVAL WILL BE THE RESPONSIBILITY OF THE CITY OF OTTAWA.

2. AS ALL UNITS FRONT ONTO PUBLIC STREETS, ALL UNITS SHOULD BE ELIGIBLE FOR CITY GARBAGE COLLECTION

3. BLOCK 2 WILL REQUIRE A JOINT USE MAINTENANCE AGREEMENT GIVEN THE SHARED DRIVEWAY

4. EXISTING BUILDING TO BE DEMOLISHED PRIOR TO CONSTRUCTION

PLOT DATE: Friday, February 28, 2020

Plan No.: #18003

Appendix C - Existing Turning Movement Counts

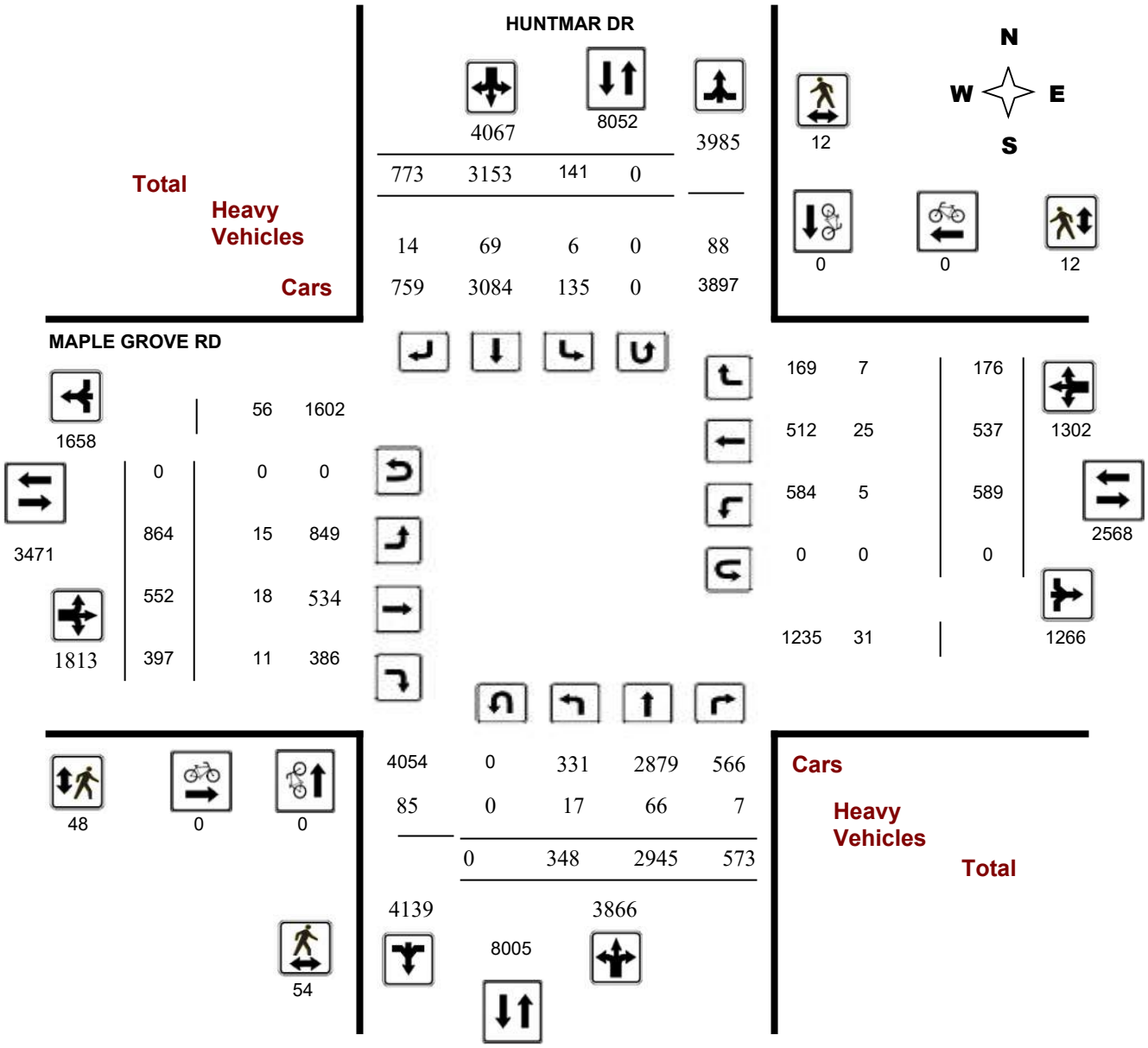
Transportation Services - Traffic Services

Turning Movement Count - Study Results

HUNTMAR DR @ MAPLE GROVE RD

Survey Date: Thursday, November 23, 2017
Start Time: 07:00
WO No: 37335
Device: Miovision

Full Study Diagram



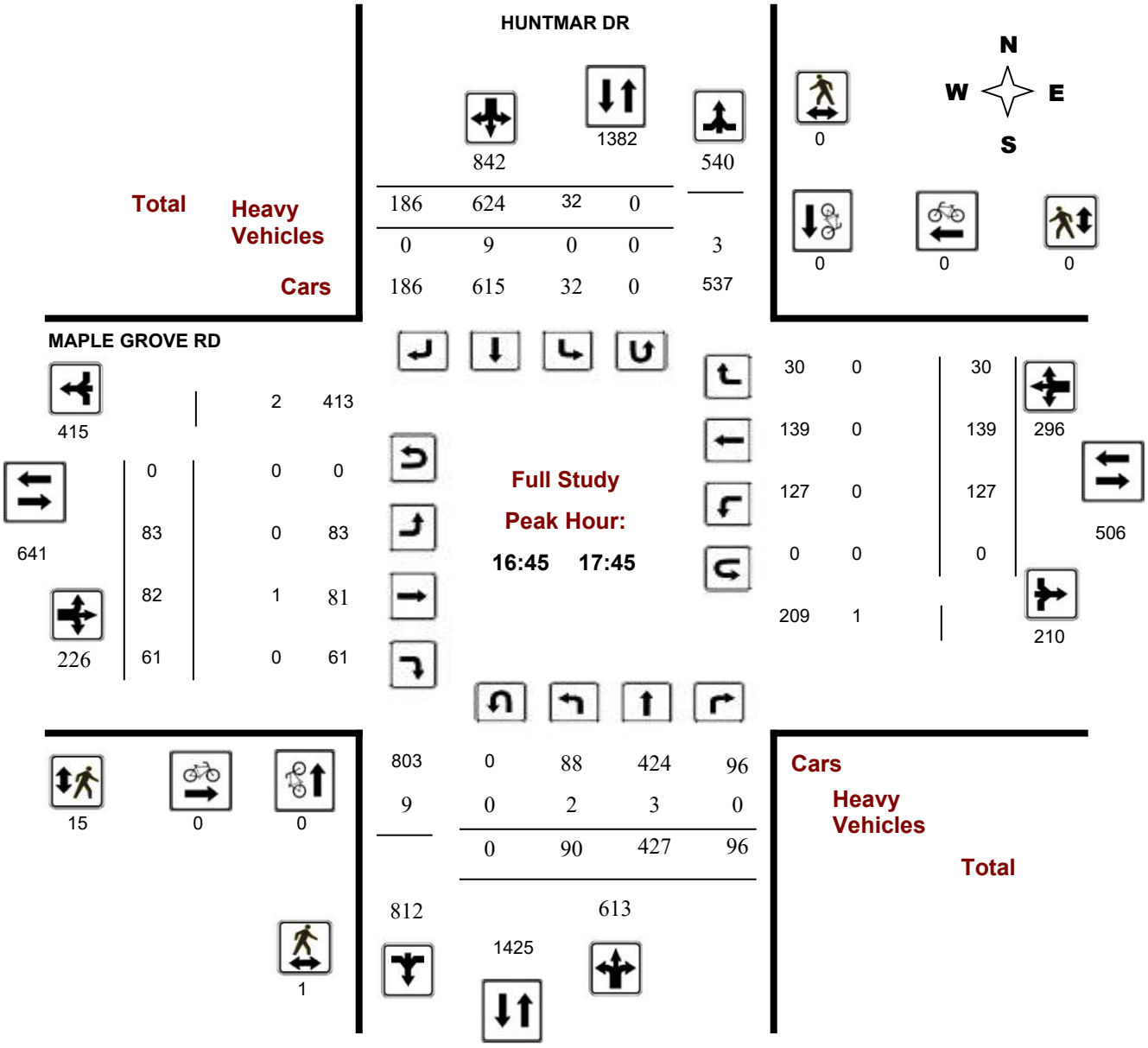
Transportation Services - Traffic Services

Turning Movement Count - Study Results

HUNTMAR DR @ MAPLE GROVE RD

Survey Date: Thursday, November 23, 2017
Start Time: 07:00
WO No: 37335
Device: Miovision

Full Study Peak Hour Diagram



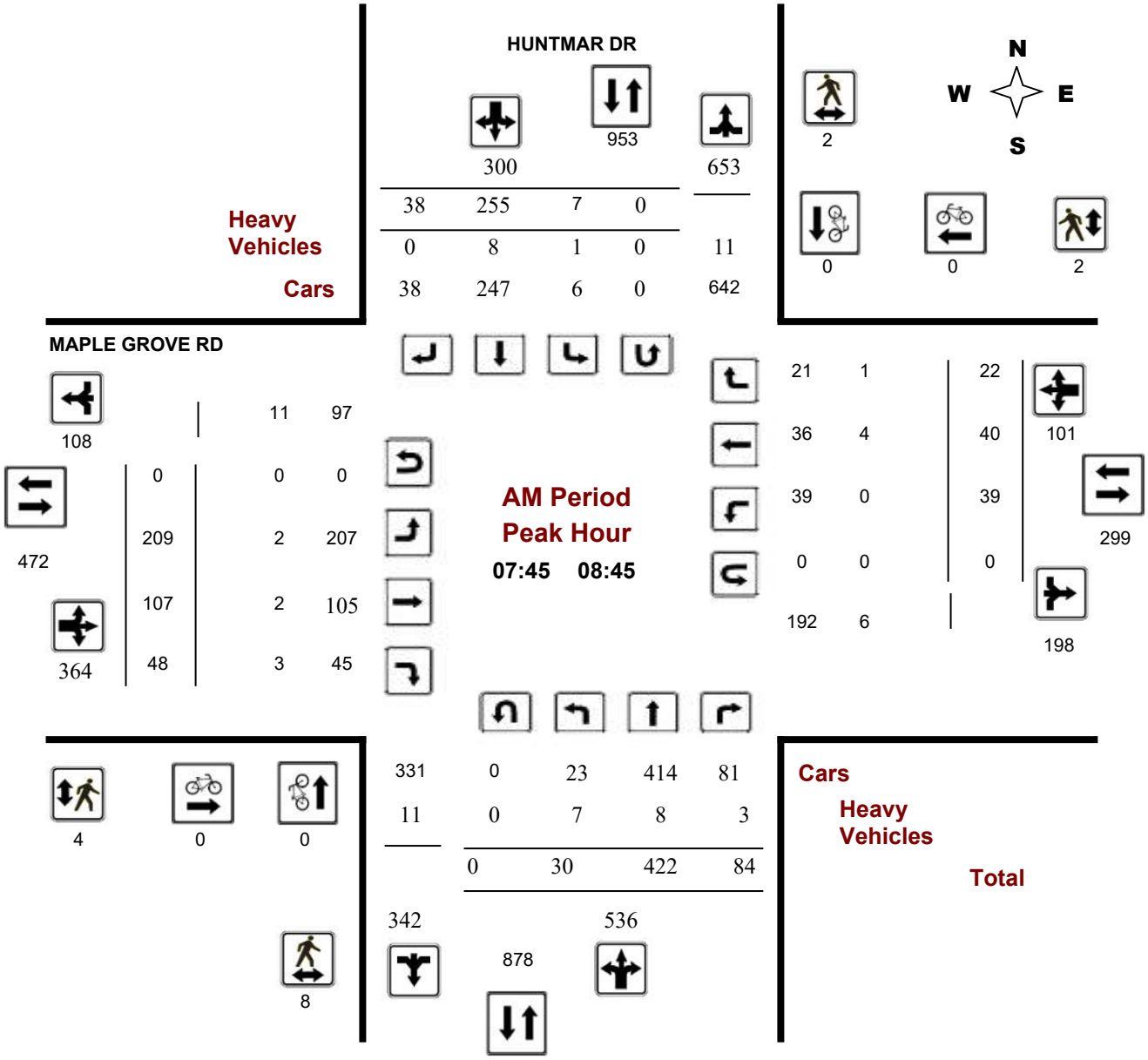
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

HUNTMAR DR @ MAPLE GROVE RD

Survey Date: Thursday, November 23, 2017 **WO No:** 37335

Start Time: 07:00 **Device:** Miovision



Comments

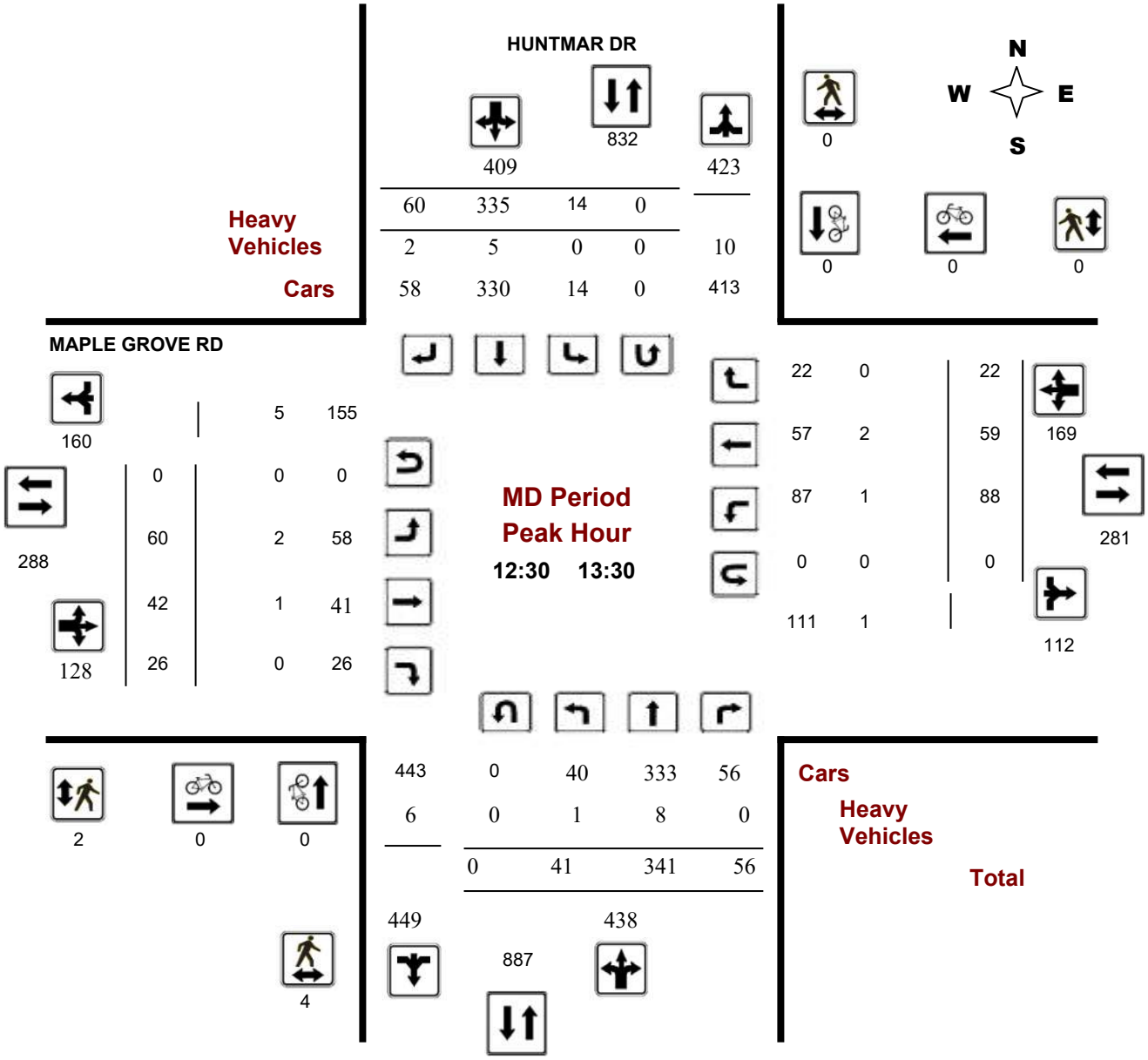
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

HUNTMAR DR @ MAPLE GROVE RD

Survey Date: Thursday, November 23, 2017 **WO No:** 37335

Start Time: 07:00 **Device:** Miovision



Comments

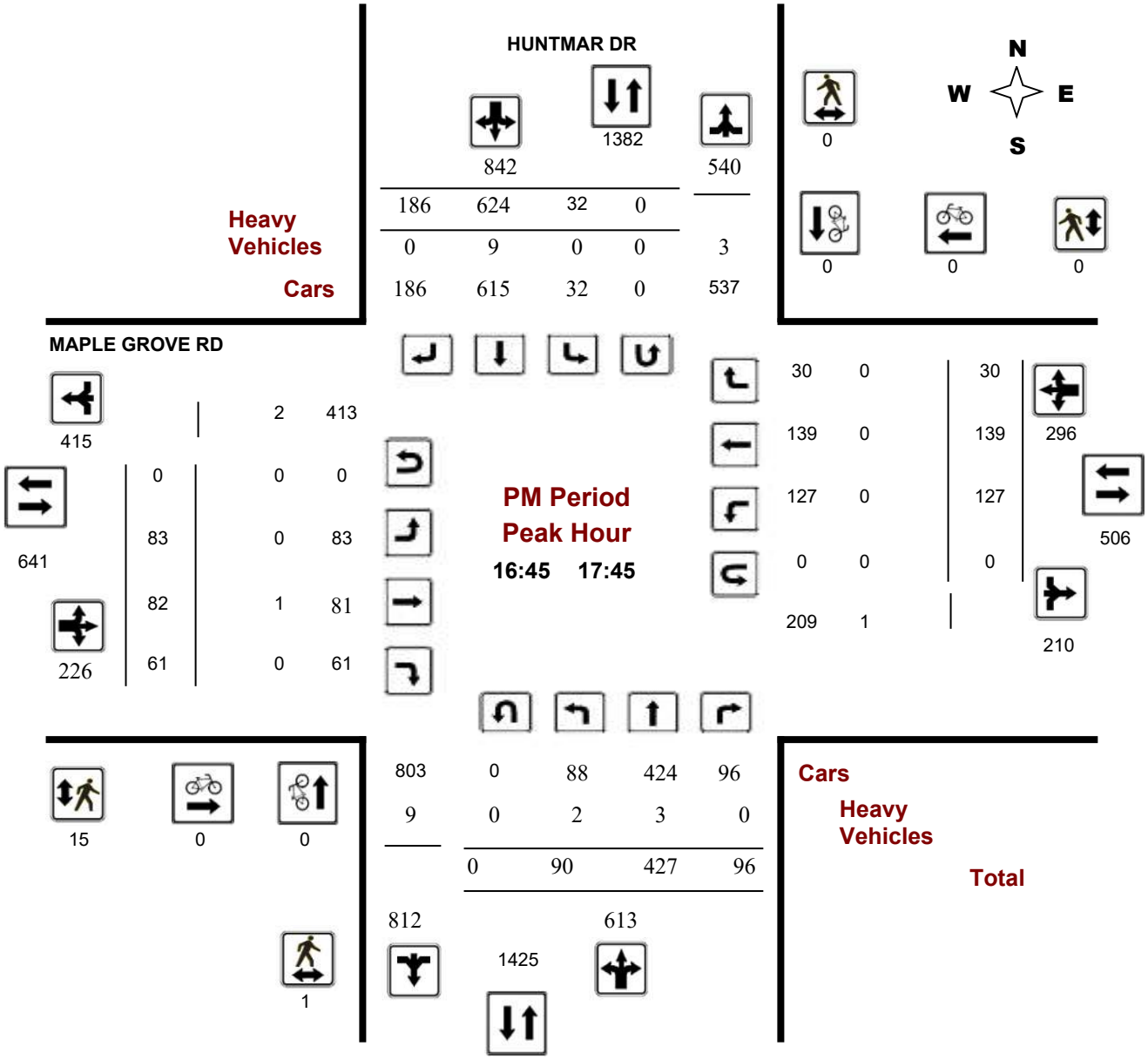
Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

HUNTMAR DR @ MAPLE GROVE RD

Survey Date: Thursday, November 23, 2017 **WO No:** 37335

Start Time: 07:00 **Device:** Miovision



Comments

Transportation Services - Traffic Services

Turning Movement Count - Study Results

HUNTMAR DR @ MAPLE GROVE RD

Survey Date: Thursday, November 23, 2017 **WO No:** 37335

Start Time: 07:00 **Device:** Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, November 23, 2017

Total Observed U-Turns

Northbound: 0 Southbound: 0

Eastbound: 0 Westbound: 0

AADT Factor

.90

	HUNTMAR DR								MAPLE GROVE RD									
	Northbound				Southbound				Eastbound				Westbound					
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
07:00 08:00	14	385	52	**451**	15	238	54	**307**	**758**	224	93	45	**362**	11	38	14	**63**	**425**	**1183**
08:00 09:00	32	385	80	**497**	5	251	33	**289**	**786**	186	93	58	**337**	45	37	23	**105**	**442**	**1228**
09:00 10:00	27	359	57	**443**	18	265	46	**329**	**772**	108	56	48	**212**	33	24	17	**74**	**286**	**1058**
11:30 12:30	36	286	76	**398**	16	324	61	**401**	**799**	63	64	37	**164**	77	50	21	**148**	**312**	**1111**
12:30 13:30	41	341	56	**438**	14	335	60	**409**	**847**	60	42	26	**128**	88	59	22	**169**	**297**	**1144**
15:00 16:00	44	411	83	**538**	19	566	142	**727**	**1265**	68	48	49	**165**	103	79	22	**204**	**369**	**1634**
16:00 17:00	66	366	75	**507**	23	623	192	**838**	**1345**	67	75	72	**214**	118	125	29	**272**	**486**	**1831**
17:00 18:00	88	412	94	**594**	31	551	185	**767**	**1361**	88	81	62	**231**	114	125	28	**267**	**498**	**1859**
Sub Total	348	2945	573	**3866**	141	3153	773	**4067**	**7933**	864	552	397	**1813**	589	537	176	**1302**	**3115**	**11048**
U Turns				**0**				**0**	**0**				**0**				**0**	**0**	**0**
Total	348	2945	573	**3866**	141	3153	773	**4067**	**7933**	864	552	397	**1813**	589	537	176	**1302**	**3115**	**11048**
EQ 12Hr	484	4094	796	**5374**	196	4383	1074	**5653**	**11027**	1201	767	552	**2520**	819	746	245	**1810**	**4330**	**15357**
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														**1.39**					
AVG 12Hr	410	3472	676	**4558**	166	3717	911	**4795**	**9924**	1019	651	468	**2138**	694	633	208	**1535**	**3897**	**13821**
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														**0.9**					
AVG 24Hr	537	4549	885	**5971**	218	4870	1194	**6281**	**12252**	1334	853	613	**2800**	910	829	272	**2011**	**4811**	**17063**
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.														**1.31**					

Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

HUNTMAR DR @ MAPLE GROVE RD

Survey Date: Thursday, November 23, 2017 **WO No:** 37335

Start Time: 07:00 **Device:** Miovision

Full Study 15 Minute Increments

		HUNTMAR DR									MAPLE GROVE RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	1	76	8	85	7	49	14	70	8	56	24	12	92	1	10	4	15	8	262
07:15	07:30	5	80	10	95	3	55	14	72	8	66	22	13	101	5	7	2	14	8	282
07:30	07:45	1	111	12	124	3	55	13	71	8	39	17	13	69	2	9	4	15	8	279
07:45	08:00	7	118	22	147	2	79	13	94	10	63	30	7	100	3	12	4	19	10	360
08:00	08:15	8	93	20	121	4	65	9	78	8	56	25	11	92	17	5	3	25	8	316
08:15	08:30	7	101	23	131	1	50	6	57	5	44	26	24	94	9	11	4	24	5	306
08:30	08:45	8	110	19	137	0	61	10	71	4	46	26	6	78	10	12	11	33	4	319
08:45	09:00	9	81	18	108	0	75	8	83	8	40	16	17	73	9	9	5	23	8	287
09:00	09:15	8	115	13	136	5	58	15	78	7	28	12	16	56	12	5	4	21	7	291
09:15	09:30	7	78	17	102	3	80	13	96	5	33	8	11	52	7	8	2	17	5	267
09:30	09:45	5	86	8	99	2	61	10	73	4	22	10	11	43	11	6	6	23	4	238
09:45	10:00	7	80	19	106	8	66	8	82	8	25	26	10	61	3	5	5	13	8	262
11:30	11:45	10	80	24	114	6	118	10	134	9	17	14	7	38	20	11	5	36	9	322
11:45	12:00	12	59	12	83	4	72	17	93	5	9	20	11	40	27	7	7	41	5	257
12:00	12:15	7	74	14	95	3	74	17	94	3	22	16	10	48	15	16	3	34	3	271
12:15	12:30	7	73	26	106	3	60	17	80	5	15	14	9	38	15	16	6	37	5	261
12:30	12:45	12	85	14	111	3	83	18	104	4	15	10	6	31	20	19	8	47	4	293
12:45	13:00	7	92	7	106	1	96	14	111	4	22	12	8	42	18	11	2	31	4	290
13:00	13:15	6	82	18	106	5	91	18	114	5	10	9	9	28	26	19	6	51	5	299
13:15	13:30	16	82	17	115	5	65	10	80	3	13	11	3	27	24	10	6	40	3	262
15:00	15:15	6	99	19	124	5	122	39	166	8	13	7	13	33	21	10	2	33	8	356
15:15	15:30	9	81	26	116	6	127	30	163	10	25	16	19	60	22	21	7	50	10	389
15:30	15:45	10	131	20	161	5	154	34	193	4	8	12	6	26	27	21	10	58	4	438
15:45	16:00	19	100	18	137	3	163	39	205	9	22	13	11	46	33	27	3	63	9	451
16:00	16:15	13	84	14	111	3	156	45	204	1	18	17	12	47	25	27	8	60	1	422
16:15	16:30	12	97	14	123	6	152	55	213	6	20	23	24	67	25	31	6	62	6	465
16:30	16:45	20	88	20	128	7	132	46	185	3	17	13	20	50	33	38	10	81	3	444
16:45	17:00	21	97	27	145	7	183	46	236	3	12	22	16	50	35	29	5	69	3	500
17:00	17:15	14	140	26	180	8	151	41	200	2	24	13	18	55	37	37	12	86	2	521
17:15	17:30	23	95	21	139	13	146	46	205	6	20	22	13	55	27	41	5	73	6	472
17:30	17:45	32	95	22	149	4	144	53	201	3	27	25	14	66	28	32	8	68	3	484
17:45	18:00	19	82	25	126	6	110	45	161	3	17	21	17	55	22	15	3	40	3	382
Total:		348	2945	573	3866	141	3153	773	4067	179	864	552	397	1813	589	537	176	1302	179	11,048

Note: U-Turns are included in Totals.

Transportation Services - Traffic Services

Turning Movement Count - Study Results

HUNTMAR DR @ MAPLE GROVE RD

Survey Date: Thursday, November 23, 2017 **WO No:** 37335

Start Time: 07:00 **Device:** Miovision

Full Study Cyclist Volume

Time Period		HUNTMAR DR			MAPLE GROVE RD			
		Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00	07:15	0	0	0	0	0	0	0
07:15	07:30	0	0	0	0	0	0	0
07:30	07:45	0	0	0	0	0	0	0
07:45	08:00	0	0	0	0	0	0	0
08:00	08:15	0	0	0	0	0	0	0
08:15	08:30	0	0	0	0	0	0	0
08:30	08:45	0	0	0	0	0	0	0
08:45	09:00	0	0	0	0	0	0	0
09:00	09:15	0	0	0	0	0	0	0
09:15	09:30	0	0	0	0	0	0	0
09:30	09:45	0	0	0	0	0	0	0
09:45	10:00	0	0	0	0	0	0	0
11:30	11:45	0	0	0	0	0	0	0
11:45	12:00	0	0	0	0	0	0	0
12:00	12:15	0	0	0	0	0	0	0
12:15	12:30	0	0	0	0	0	0	0
12:30	12:45	0	0	0	0	0	0	0
12:45	13:00	0	0	0	0	0	0	0
13:00	13:15	0	0	0	0	0	0	0
13:15	13:30	0	0	0	0	0	0	0
15:00	15:15	0	0	0	0	0	0	0
15:15	15:30	0	0	0	0	0	0	0
15:30	15:45	0	0	0	0	0	0	0
15:45	16:00	0	0	0	0	0	0	0
16:00	16:15	0	0	0	0	0	0	0
16:15	16:30	0	0	0	0	0	0	0
16:30	16:45	0	0	0	0	0	0	0
16:45	17:00	0	0	0	0	0	0	0
17:00	17:15	0	0	0	0	0	0	0
17:15	17:30	0	0	0	0	0	0	0
17:30	17:45	0	0	0	0	0	0	0
17:45	18:00	0	0	0	0	0	0	0
Total		0	0	**0**	0	0	0	0

Transportation Services - Traffic Services

Turning Movement Count - Study Results

HUNTMAR DR @ MAPLE GROVE RD

Survey Date: Thursday, November 23, 2017 **WO No:** 37335

Start Time: 07:00 **Device:** Miovision

Full Study Pedestrian Volume

	HUNTMAR DR			MAPLE GROVE RD			
Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	**Total**	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	**Total**	**Grand Total**
07:00 07:15	8	0	**8**	3	1	**4**	**12**
07:15 07:30	8	1	**9**	2	1	**3**	**12**
07:30 07:45	4	0	**4**	0	1	**1**	**5**
07:45 08:00	8	1	**9**	4	1	**5**	**14**
08:00 08:15	0	0	**0**	0	0	**0**	**0**
08:15 08:30	0	1	**1**	0	1	**1**	**2**
08:30 08:45	0	0	**0**	0	0	**0**	**0**
08:45 09:00	2	2	**4**	1	1	**2**	**6**
09:00 09:15	0	1	**1**	0	1	**1**	**2**
09:15 09:30	1	1	**2**	0	1	**1**	**3**
09:30 09:45	1	0	**1**	0	0	**0**	**1**
09:45 10:00	0	0	**0**	0	0	**0**	**0**
11:30 11:45	0	0	**0**	0	0	**0**	**0**
11:45 12:00	0	0	**0**	0	0	**0**	**0**
12:00 12:15	3	1	**4**	1	0	**1**	**5**
12:15 12:30	2	0	**2**	1	0	**1**	**3**
12:30 12:45	1	0	**1**	0	0	**0**	**1**
12:45 13:00	0	0	**0**	2	0	**2**	**2**
13:00 13:15	2	0	**2**	0	0	**0**	**2**
13:15 13:30	1	0	**1**	0	0	**0**	**1**
15:00 15:15	3	0	**3**	2	0	**2**	**5**
15:15 15:30	1	0	**1**	0	0	**0**	**1**
15:30 15:45	2	0	**2**	1	2	**3**	**5**
15:45 16:00	2	3	**5**	5	2	**7**	**12**
16:00 16:15	1	0	**1**	5	0	**5**	**6**
16:15 16:30	2	0	**2**	4	0	**4**	**6**
16:30 16:45	0	1	**1**	1	0	**1**	**2**
16:45 17:00	1	0	**1**	5	0	**5**	**6**
17:00 17:15	0	0	**0**	5	0	**5**	**5**
17:15 17:30	0	0	**0**	5	0	**5**	**5**
17:30 17:45	0	0	**0**	0	0	**0**	**0**
17:45 18:00	1	0	**1**	1	0	**1**	**2**
Total	54	12	**66**	48	12	**60**	**126**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

HUNTMAR DR @ MAPLE GROVE RD

Survey Date: Thursday, November 23, 2017 **WO No:** 37335

Start Time: 07:00 **Device:** Miovision

Full Study Heavy Vehicles

		HUNTMAR DR									MAPLE GROVE RD									
		Northbound				Southbound					Eastbound				Westbound					
Time Period		LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total
07:00	07:15	0	4	0	**4**	0	2	2	**4**	**8**	0	2	1	**3**	0	3	1	**4**	**7**	**15**
07:15	07:30	1	4	0	**5**	0	1	2	**3**	**8**	2	0	0	**2**	0	4	1	**5**	**7**	**15**
07:30	07:45	0	6	0	**6**	1	0	1	**2**	**8**	0	1	0	**1**	0	0	0	**0**	**1**	**9**
07:45	08:00	1	7	1	**9**	0	1	0	**1**	**10**	0	0	0	**0**	0	0	0	**0**	**0**	**10**
08:00	08:15	3	0	1	**4**	1	3	0	**4**	**8**	1	0	0	**1**	0	1	0	**1**	**2**	**10**
08:15	08:30	2	1	0	**3**	0	2	0	**2**	**5**	1	2	2	**5**	0	0	0	**0**	**5**	**10**
08:30	08:45	1	0	1	**2**	0	2	0	**2**	**4**	0	0	1	**1**	0	3	1	**4**	**5**	**9**
08:45	09:00	0	3	0	**3**	0	5	0	**5**	**8**	1	0	0	**1**	0	0	0	**0**	**1**	**9**
09:00	09:15	0	3	0	**3**	1	2	1	**4**	**7**	1	0	0	**1**	0	1	0	**1**	**2**	**9**
09:15	09:30	0	1	0	**1**	0	3	1	**4**	**5**	0	0	0	**0**	1	1	0	**2**	**2**	**7**
09:30	09:45	0	2	0	**2**	0	2	0	**2**	**4**	1	0	2	**3**	0	0	0	**0**	**3**	**7**
09:45	10:00	0	4	1	**5**	1	2	0	**3**	**8**	0	0	0	**0**	0	1	0	**1**	**1**	**9**
11:30	11:45	0	3	0	**3**	1	4	1	**6**	**9**	0	1	0	**1**	1	1	1	**3**	**4**	**13**
11:45	12:00	0	1	0	**1**	1	3	0	**4**	**5**	0	2	0	**2**	0	0	2	**2**	**4**	**9**
12:00	12:15	0	1	0	**1**	0	2	0	**2**	**3**	2	1	1	**4**	0	1	0	**1**	**5**	**8**
12:15	12:30	0	1	0	**1**	0	2	2	**4**	**5**	0	0	1	**1**	0	1	0	**1**	**2**	**7**
12:30	12:45	0	3	0	**3**	0	0	1	**1**	**4**	0	0	0	**0**	0	2	0	**2**	**2**	**6**
12:45	13:00	1	1	0	**2**	0	2	0	**2**	**4**	0	1	0	**1**	1	0	0	**1**	**2**	**6**
13:00	13:15	0	1	0	**1**	0	3	1	**4**	**5**	1	0	0	**1**	0	0	0	**0**	**1**	**6**
13:15	13:30	0	3	0	**3**	0	0	0	**0**	**3**	1	0	0	**1**	0	0	0	**0**	**1**	**4**
15:00	15:15	1	1	0	**2**	0	5	1	**6**	**8**	2	0	0	**2**	1	2	0	**3**	**5**	**13**
15:15	15:30	2	3	3	**8**	0	2	0	**2**	**10**	0	2	1	**3**	1	0	0	**1**	**4**	**14**
15:30	15:45	0	1	0	**1**	0	3	0	**3**	**4**	1	1	0	**2**	0	1	0	**1**	**3**	**7**
15:45	16:00	1	5	0	**6**	0	3	0	**3**	**9**	1	0	0	**1**	0	0	1	**1**	**2**	**11**
16:00	16:15	0	0	0	**0**	0	1	0	**1**	**1**	0	1	0	**1**	0	2	0	**2**	**3**	**4**
16:15	16:30	1	3	0	**4**	0	2	0	**2**	**6**	0	2	1	**3**	0	1	0	**1**	**4**	**10**
16:30	16:45	1	1	0	**2**	0	1	0	**1**	**3**	0	0	1	**1**	0	0	0	**0**	**1**	**4**
16:45	17:00	1	0	0	**1**	0	2	0	**2**	**3**	0	1	0	**1**	0	0	0	**0**	**1**	**4**
17:00	17:15	0	0	0	**0**	0	2	0	**2**	**2**	0	0	0	**0**	0	0	0	**0**	**0**	**2**
17:15	17:30	0	3	0	**3**	0	3	0	**3**	**6**	0	0	0	**0**	0	0	0	**0**	**0**	**6**
17:30	17:45	1	0	0	**1**	0	2	0	**2**	**3**	0	0	0	**0**	0	0	0	**0**	**0**	**3**
17:45	18:00	0	0	0	**0**	0	2	1	**3**	**3**	0	1	0	**1**	0	0	0	**0**	**1**	**4**
Total:	None	17	66	7	**90**	6	69	14	**89**	**179**	15	18	11	**44**	5	25	7	**37**	**81**	**260**

Transportation Services - Traffic Services

Turning Movement Count - Study Results

HUNTMAR DR @ MAPLE GROVE RD

Survey Date: Thursday, November 23, 2017 **WO No:** 37335

Start Time: 07:00 **Device:** Miovision

Full Study 15 Minute U-Turn Total

Time Period		HUNTMAR DR Northbound U-Turn Total	HUNTMAR DR Southbound U-Turn Total	MAPLE GROVE RD Eastbound U-Turn Total	MAPLE GROVE RD Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	0	0
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
08:00	08:15	0	0	0	0	0
08:15	08:30	0	0	0	0	0
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:15	16:30	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		0	0	0	0	0

Appendix D - Collision Details Report

City Operations - Transportation Services

Collision Details Report - Public Version

From: January 1, 2014 **To:** December 31, 2018

Location: HUNTMAR DR @ MAPLE GROVE RD

Traffic Control: Stop sign **Total Collisions:** 19

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2015-Jan-29, Thu,22:30	Snow	Rear end	P.D. only	Packed snow	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Automobile, station wagon	Other motor vehicle	
					East	Stopped	Passenger van	Other motor vehicle	
2015-Apr-29, Wed,16:23	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle	
					South	Stopped	Police vehicle	Other motor vehicle	
2015-Feb-24, Tue,18:00	Clear	Rear end	P.D. only	Ice	East	Slowing or stopping	Pick-up truck	Other motor vehicle	
					East	Stopped	Pick-up truck	Other motor vehicle	
2015-Aug-14, Fri,08:48	Clear	Angle	P.D. only	Wet	West	Going ahead	Automobile, station wagon	Other motor vehicle	
					South	Going ahead	Passenger van	Other motor vehicle	
2016-Feb-25, Thu,15:30	Rain	Turning movement	P.D. only	Wet	North	Making "U" turn	Automobile, station wagon	Other motor vehicle	
					North	Going ahead	Pick-up truck	Other motor vehicle	

2016-Oct-19, Wed,13:50	Clear	Rear end	P.D. only	Dry	South	Going ahead	Pick-up truck	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2016-May-11, Wed,16:53	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
2016-Jul-03, Sun,14:52	Clear	Turning movement	Non-fatal injury	Dry	North	Turning left	Automobile, station wagon	Cyclist
					South	Going ahead	Bicycle	Other motor vehicle
2016-Oct-02, Sun,11:05	Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2016-Dec-16, Fri,09:19	Clear	Rear end	P.D. only	Ice	North	Going ahead	Passenger van	Other motor vehicle
					North	Stopped	Pick-up truck	Other motor vehicle
					South	Going ahead	Pick-up truck	Other motor vehicle
2016-Dec-26, Mon,10:17	Freezing Rain	Rear end	P.D. only	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
					West	Stopped	Automobile, station wagon	Other motor vehicle
2016-Dec-30, Fri,16:38	Clear	SMV other	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Curb

2018-Jan-03, Wed,14:09	Snow	SMV other	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Pole (utility, power)
2018-Feb-01, Thu,09:47	Clear	Rear end	P.D. only	Wet	South	Going ahead	Automobile, station wagon	Skidding/sliding
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Jul-07, Sat,12:55	Clear	Rear end	P.D. only	Dry	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Sep-29, Sat,13:00	Rain	Rear end	P.D. only	Wet	South	Slowing or stopping	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle
2018-Nov-06, Tue,16:13	Clear	Angle	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Sep-25, Tue,13:15	Rain	Rear end	P.D. only	Wet	North	Going ahead	Automobile, station wagon	Other motor vehicle
					North	Going ahead	Automobile, station wagon	Other motor vehicle
2018-Aug-10, Fri,13:25	Clear	Rear end	P.D. only	Dry	South	Going ahead	Automobile, station wagon	Other motor vehicle
					South	Stopped	Automobile, station wagon	Other motor vehicle

Appendix E – Signal Timing

Traffic Signal Timing

City of Ottawa, Transportation Services Department

Traffic Signal Operations Unit

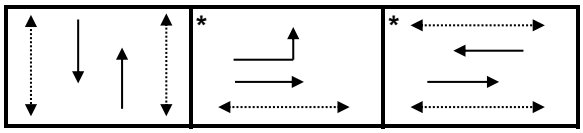
Intersection:	**Main:** Huntmar	**Side:**	Maple Grove
Controller:	**MS-3200**	**TSD:**	**5476**
Author:	R. Doueidar	**Date:**	06-Mar-2020

Existing Timing Plans†

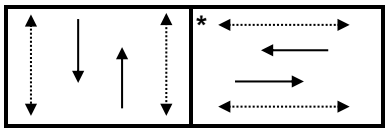
	Plan			**Ped Minimum Time**		
	AM Peak 1	**PM Peak** 3	**Night** 4	***Walk***	***DW***	***A+R***
Cycle	Free	Free	Free			
Offset	X	X	X			
NB Thru	min=51.1	min=81.1	min=51.1	7	8	3.3+2.8
SB Thru	min=51.1	min=81.1	min=51.1	7	8	3.3+2.8
EB Left	max=26.2	-	-	-	-	3.3+2.9
EB Thru	max=61.2	max=51.2	max=61.2	7	16	3.3+2.9
WB Thru	max=61.2	max=51.2	max=61.2	7	16	3.3+2.9

Phasing Sequence‡

Plan: 1



Plan: 3,4



Schedule

Weekday

Time	Plan
00:15	4
06:30	1
09:30	4
15:00	3
18:30	4

Saturday

Time	Plan
00:10	4
22:30	4

Sunday

Time	Plan
00:10	4
23:30	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

Cost is $58.78 ($52.02 + HST)