



1770 Heatherington Road

Transportation Impact Assessment Strategy Report

DRAFT

May 2024

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Transportation Impact Assessment Strategy Report

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STRATEGY REPORT

Parsons has been retained by the City of Ottawa to prepare a TIA in support of a Zoning Bylaw Amendment and Plan of Subdivision for a proposed residential subdivision that will contain a mix of low and medium density housing. This document follows the TIA process as outlined in the City of Ottawa Transportation Impact Assessment (TIA) Guidelines (2017). The following report represents Step 3 – Strategy Report.

1.0 SCREENING FORM

The Screening Form has been provided in **Appendix A**, along with responses to City comments. The Screening Form confirmed the need for a TIA Report based on the Trip Generation Trigger and the Safety trigger. The Trip Generation Trigger was met as the development is anticipated to generate more than 60 person trips during peak hours and the Safety Trigger was met as the development is located with 150 m of a signalized intersection.

2.0 SCOPING REPORT

2.1. Existing and Planned Conditions

2.1.1. Proposed Development

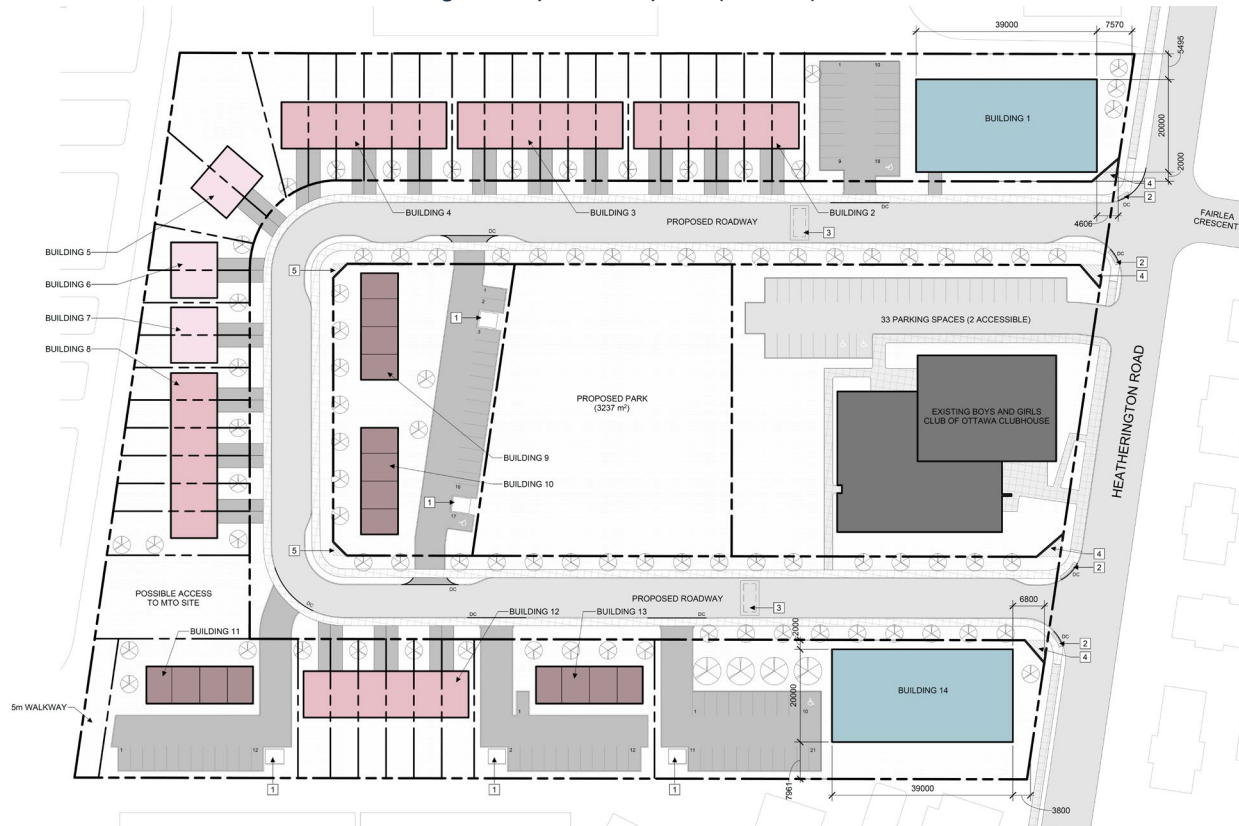
The proposed development is located at the municipal address of 1770 Heatherington Road, bounded by commercial developments to the north and west, Heatherington Road to the east, and residential homes to the south. The site is located within the Outer Urban Transect and within an Evolving Neighbourhood as per Schedule B3 of the City of Ottawa Official Plan. The site is currently zoned as General Industrial Zone (IG1[2663]) and the local context is illustrated in **Figure 1**.

The proposed development will include a new park directly west of the existing Boys and Girls Club and 14 new residential buildings that will consist of 90 apartment units, 62 townhomes, and 6 semi-detached housing units. The development will provide a total of 158 new residential units that will be accessible via a proposed internal municipal local road that will provide two new unsignalized intersections along Heatherington Road. Five parking lots with a total of 80 parking spaces are provided to serve each apartment and stacked townhouse building, while townhouses and semi-detached house will have their own driveways. **Figure 2** illustrates the latest proposed Concept Plan.

Figure 1: Local Context



Figure 2: Proposed Concept Plan (Mar 2024)



2.1.2. Existing Conditions

Area Road Network

The following roads were included in the TIA. Description for each road within the study area has been provided below.

Walkley Road is an east-west municipal arterial road that extends from Ramsayville Road in the east to Riverside Drive in the west. Within the study area, the roadway consists of a two-way four-lane urban cross-section with a posted speed limit of 50 km/h and a protected right-of-way (ROW) of 37.5 m. Auxiliary turn lanes are available at major intersections.

Heatherington Road is a municipal collector roadway that extends from Walkley Road in the North to Albion Road in the west. Within the study area, the roadway typically operates as a two-way two-lane undivided urban cross-section with a posted speed limit of 40 km/h and an existing ROW of 20 m. On-street parking is permitted within parking bays on the east/south side of the road.

Fairlea Crescent is a crescent shaped municipal local roadway that intersects Heatherington Road at two different locations, providing access to residential housing in a circuitous manner. The roadway operates as a two-way two-lane undivided urban cross-section with an assumed speed limit of 40 km/h. and has an existing ROW of 20 m. On-street parking is permitted at different locations on both sides of the road.

Existing Study Area Intersections

Walkley/Heatherington

The Walkley/Heatherington intersection is a four-legged signalized intersection. The northbound and southbound approaches consist of one left-turn lane and one through/right-turn lane. The westbound approach consists of one left-turn lane, two through lanes, and one channelized right-turn lane. The eastbound approaches consist of one left-turn lane, one through lane, and one shared through/right-turn lane. Pedestrian crossing facilities are provided on all approaches. There are no restricted movements at this intersection.



Heatherington/Fairlea N

The Heatherington/Fairlea intersection is a three-legged unsignalized intersection, with an all-way stop-control. All approaches consist of one all-movement lane. Pedestrian crossing facilities are provided on the east leg only. A bike lane crosses the intersection on the west side only. There are no restricted movements at this intersection.



Heatherington/Fairlea S/Angela

The Heatherington/Fairlea & Angela intersection is a four-legged unsignalized intersection, with all-way stop-control. All approaches consist of one all-movement lane. Pedestrian crossing facilities are provided on all approaches and a bike crossing on the west side only. There are no restricted movements at this intersection.



Existing Driveways to Adjacent Developments

There are approximately 5 adjacent driveways within 200m of the proposed development accesses along Heatherington Road. Two accesses are located on the east side of Heatherington Rd for private driveways that lead to townhome parking lots, while two other accesses that lead to commercial buildings are located north of the site on the west side of Heatherington Rd, and one access that leads to the Boys and Girls Club is located on the west side of Heatherington Rd between the two proposed site accesses.

Figure 3: Adjacent Driveways within 200m of Site Access



Existing Area Traffic Management Measures

Existing area traffic management measures within the study area include school zone signs at various points down Heatherington Road and 40 km/h reduced speed areas. Curb extensions are also provided throughout Heatherington Rd and Fairlea Cres (at the two intersections), resulting in narrower roads to ensure reduced speeds and creating on-street parking areas in some locations. On Heatherington Rd, sidewalks are depressed and continuous through different driveways and accesses. A Pedestrian Crossover is provided on Heatherington Rd, approximately 95 m south of the Fairlea/Angela intersection. Zebra crosswalks are also provided on the south, east and west legs of the Walkley/Heatherington intersection.

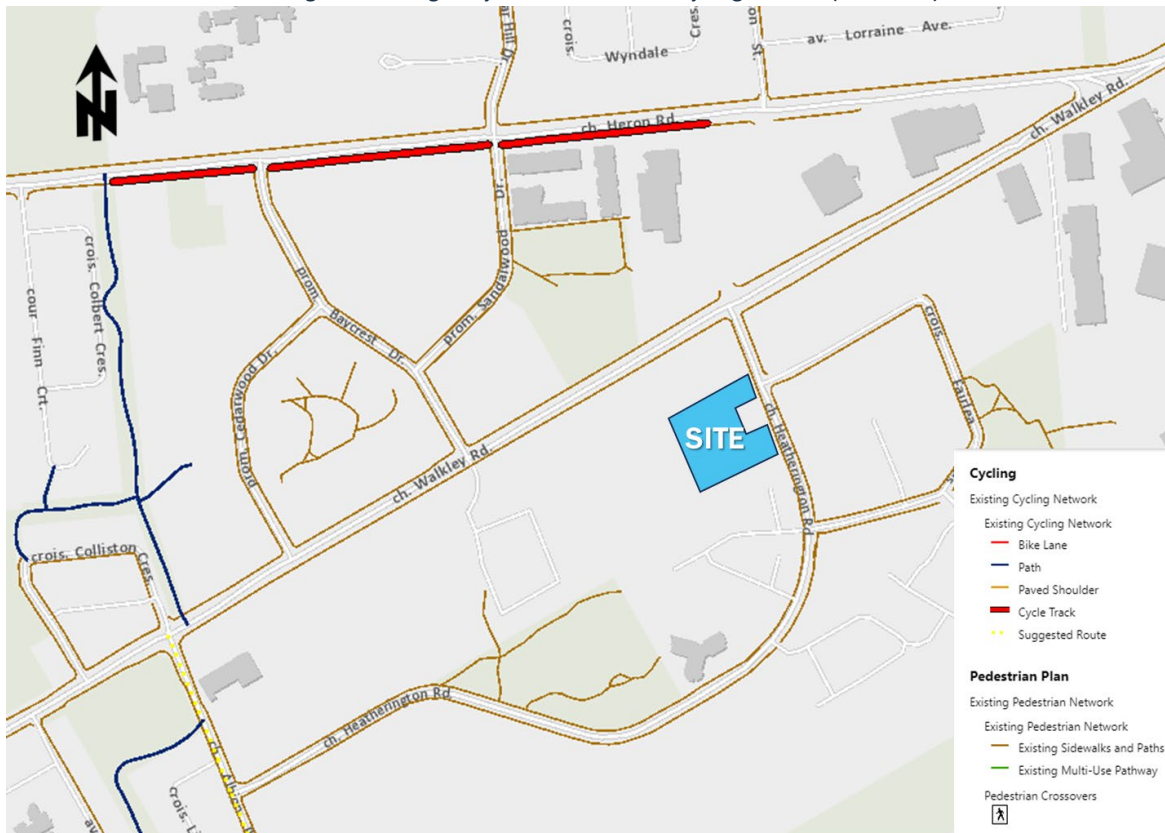
Existing Pedestrian/Cycling Network

The following pedestrian/cycling facilities exist within the study area:

- 2.0 m sidewalk on both sides of Heatherington Road with a 1.5 m bike lane on the west/north side of the road. The bike lane varies between an at-grade curbside bike lane and a raised bike lane.
- 1.5 m sidewalks down Walkley Road, with 1.5 m asphalt boulevard down each side of the road (except for north side of Walkley Road, east of Heatherington Ave). South side sidewalk is separated by a brick boulevard from Heatherington Road to approximately 150 m east.
- 3.25 m multi-use pathway located through the Heron-Walkley Park, connecting to the two roadways, Ridgemont Highschool and Charles H. Hulse elementary school.
- 2.0 m asphalt sidewalks are provided on both sides of Fairlea Cres, along most of the road.

Figure 4 represents an illustration of the study area facilities based on the latest information available from GeoOttawa. However, some previously mentioned facilities are not shown such as the bike lanes along the west/north side of Heatherington Road.

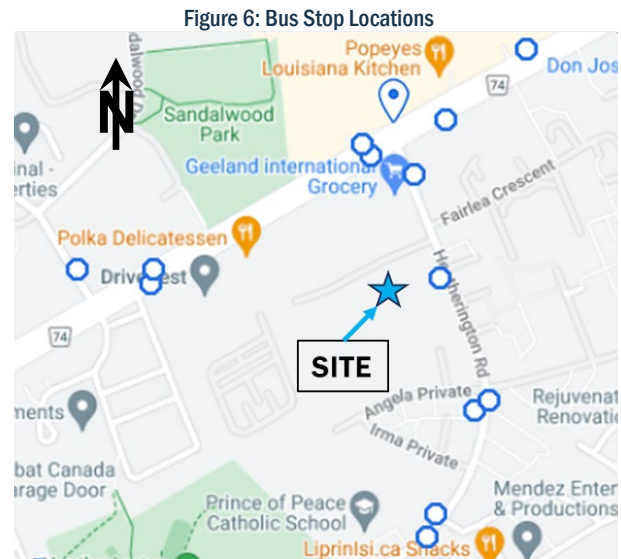
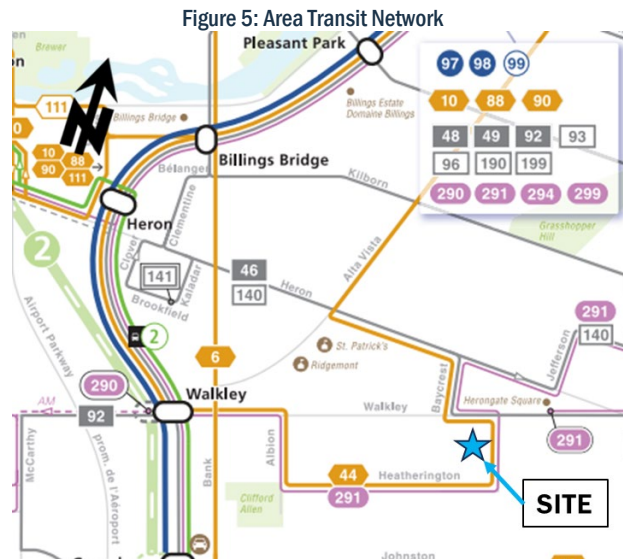
Figure 4: Existing Study Area Pedestrian and Cycling Facilities (GeoOttawa)



Transit Network

The transit network for the study area is illustrated in **Figure 5** and the transit route maps are provided in **Appendix B**. **Figure 6** illustrates the bus stop locations. The following description of OC Transpo routes within the study area reflect the current bus operations:

- **Route #44 (Billings Bridge <-> Hurdman):** identified by OC Transpo as a “Frequent Route”, this route operates every 15 minutes all day, 7 days a week in all time periods. This route provides connectivity to Heron Station, Walkley Station, and Confederation LRT Line at Hurdman. The nearest bus stop is located on the eastern site boundary on Heatherington Road between the two future accesses.
- **Route #46 (Hurdman <-> Billings Bridge):** identified by OC Transpo as a “Local Route”, this route operates 7 days a week with a custom routing to local destinations. The nearest bus stop is located along the south side of Walkley Road, an approximate 150 m walking distance to/from the site.
- **Route #140 (Herongate <-> Billings Bridge):** identified by OC Transpo as a “Local Route”, this route operates Monday to Saturday with a custom routing to local destinations. The nearest bus stop is located along the north side of Walkley Rd, an approximate 170 m walking distance to/from the site.
- **Route #291 (Hurdman <-> Herongate):** identified by OC Transpo as a “Connexion Route”, this route operates Monday to Friday during peak periods only and operates along the transitway providing connection to the Riverside Hospital, Billings Bridge Station, and the Future LRT Line 2 Station at Walkley. The nearest bus stop is located on the eastern site boundary between the two future accesses.
- **Route #689 (Omer-Deslauriers <-> Billings Bridge):** identified by OC Transpo as a “School Route”, this route operates with a custom routing to Omer-Deslauriers High School. The nearest bus stop is located on the eastern site boundary on Heatherington Road between the two future accesses.



Peak Hour Travel Demands

The existing peak hour traffic and pedestrian volumes within the study area were obtained for the following intersections:

- Walkley Road/Heatherington Road – two counts were obtained from the City of Ottawa for comparison, which were conducted on Thursday, February 24th, 2022, and Wednesday, November 16th, 2016, respectively.
- Heatherington Road/Fairlea Crescent – Conducted by the City of Ottawa on Thursday, December 1st, 2022.
- Heatherington Road/Fairlea Crescent & Angela Priv - Conducted by the City of Ottawa on Wednesday April 17th, 2019.

Due to the Walkley Road/Heatherington Road 2022 count being conducted during the COVID-19 pandemic, volumes were shown to have decreased by approximately 10% along Heatherington Road and 15% along Walkley Road in comparison to the 2016 traffic count. Since the pandemic, traffic volumes have continued to increase and reach levels closer to pre-pandemic volume. However, with new work from home standards and hybrid work schedules in place, traffic patterns and volumes may remain curtailed to some degree as a result. Nonetheless, for the purpose of this study, the 2016 counts will be referenced to represent a worst-case scenario.

The traffic volumes at study area intersections are illustrated in **Figure 7**, with raw traffic count data provided in **Appendix C**. Existing active transportations volumes have been provided in **Figure 8**, however, volumes at the intersections of Fairlea Crescent/Heatherington Road and Walkley Road/Heatherington Road may be lower than expected due to counts being conducted near or during winter months.

Figure 7: Existing Peak Hour Traffic Volumes

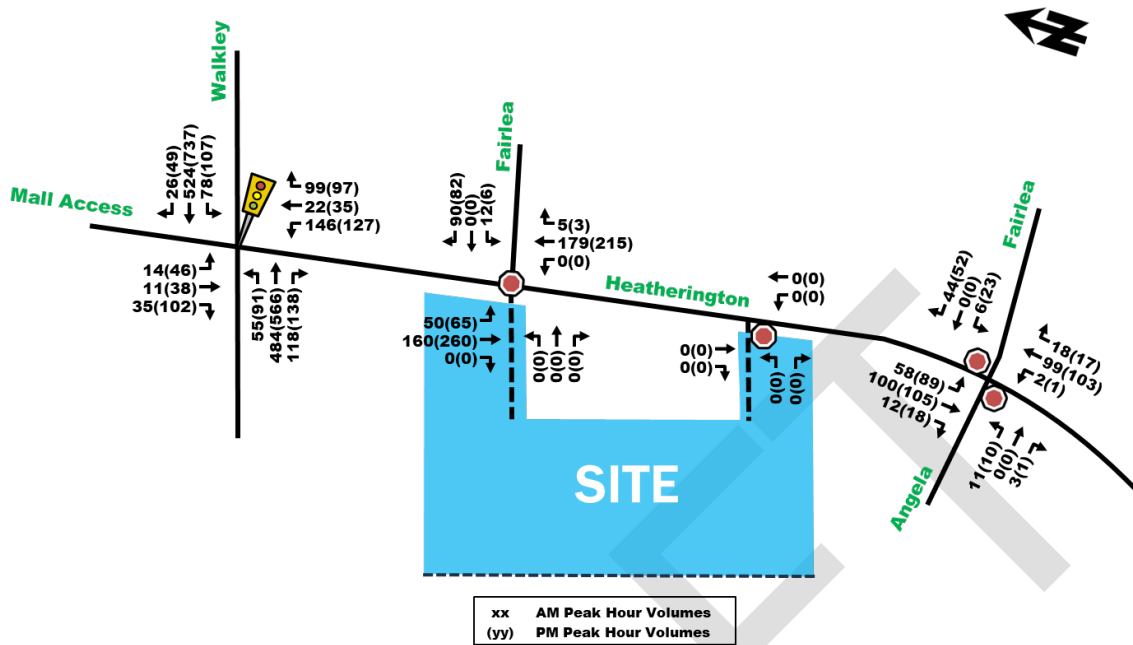
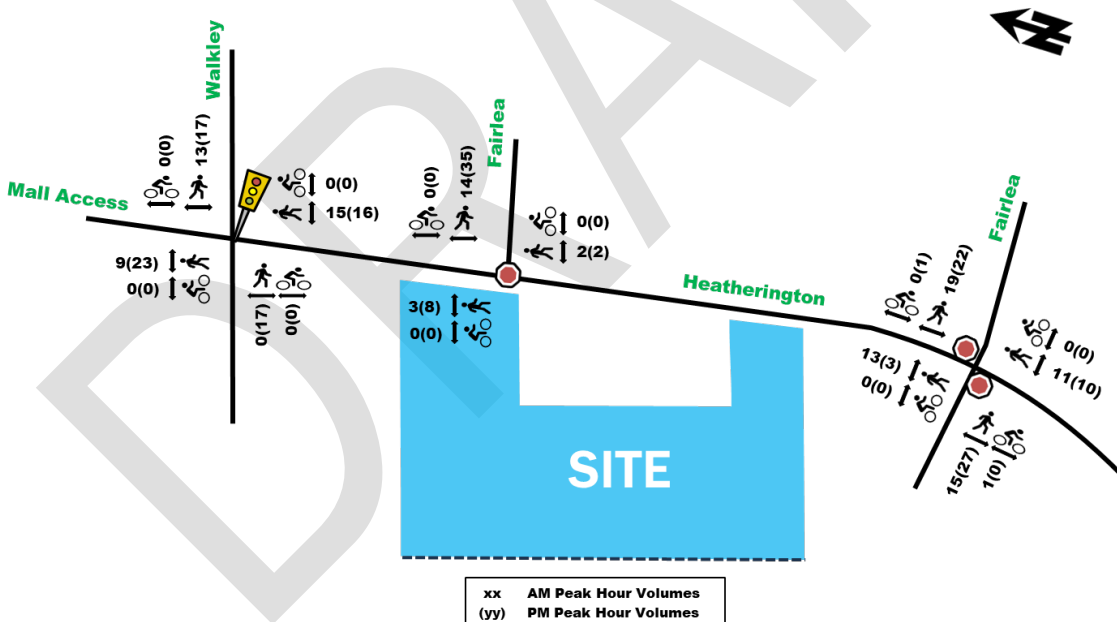


Figure 8: Existing Pedestrian and Cyclists Peak Hour Volumes



Existing Road Safety Conditions

A five-year collision history data (2017-2021, inclusive) was obtained from the City of Ottawa for all intersections and road segments within the study area. Upon review of the collision data, it was determined that a total of 40 collisions have occurred within the five-year period. Of the reported collisions, 10 (25%) were from rear ends, 9 (23%) single vehicle (other), 7 (17%) from turning movements, 5 (13%) from sideswipes, 4 (10%) from angled, 2 (5%) from approaching, 2 (5%) from SMV unattended, and 1 (2%) from other. Furthermore, 30 (75%) collisions resulted in property damage, 9 (23%) resulted in non-fatal injuries, and 1 (2%) resulted in non-reportable.

As per the City of Ottawa TIA Guidelines, a collision pattern exists at a given location when more than 6 collisions occur for any one type of impact, travel direction, maneuver, or driver action. Within the study area, the quantity of collisions and/or distance of mid-block at each location are as follows:

- Walkley Road/Heatherington Road: 26
- Fairlea Crescent/Heatherington Road: 3
- Heatherington Road/Fairlea Crescent/Angela Private: 4
- Mid-block Heatherington Road, Angela Private to Fairlea Crescent: 3, (100 m)
- Mid-block Heatherington Road, Fairlea Crescent to Walkley Road: 4, (56 m)

The higher collision number at the intersection of Walkley/Heatherington is indicative of the significantly higher traffic volumes at that intersection (mainly on Walkley Road), compared to other locations in the study area. The Walkley Road/Heatherington Road intersection had 9 (35%) that were rear ends and was the highest reported accident type at the intersection. Of the 9 collisions, there were no identifiable patterns based on either vehicle direction, vehicle maneuver, or driver actions. This result is likely associated with higher traffic volumes, congestion, and stop and go driving patterns. Of the total collisions, 30 (75%) resulted in property damage only, suggesting lower speed collisions.

With regards to active transportation, there were 5 collisions that involved pedestrians and none that involved cyclists. Out of the collisions that involved pedestrians, 4 occurred at the Walkley Road/Heatherington Road intersection while the other occurred at the Heatherington Road/Fairlea Crescent/Angela Private intersection. All the collisions resulted in non-fatal injuries.

Based on the collision data, there are no identifiable safety concerns at any of the intersections or road segments within the study area. The source collision data provided by the City of Ottawa and the detailed analysis results are provided in **Appendix D**.

2.1.3. Planned Conditions

Future Transportation Network Changes

City of Ottawa Transportation Master Plan (TMP)

Within the Updated Active Transportation Projects Lists released as part of the new Transportation Master Plan Update (2023), pedestrian crossings are being considered at the intersection of Walkley Road/Heron Road and on Walkley Road in front of Canterbury Highschool. A feasibility study is needed as the project carries a high degree of risk and must be evaluated prior to implementation. The timeline for this project is unknown and the project implementation will be based on city funding availability.

Additionally, Walkley Road is identified within the Transportation Master Plan update as a Crosstown Bikeway as part of the vision to further connect the City's cycling network. Currently there are no dedicated facilities along the roadway, however, there remains potential for improved facilities along the roadway in the long-term future.

Within Schedule C2 Transit Network – Ultimate map of the new Transportation Master Plan, the city has identified Walkley Road as a transit priority corridor and Heron Road east of Bank Street as having future Transitway At-Grade Crossings. Although these corridors have been identified in the TMP, it is still uncertain whether improvements will be approved within the future affordable network.

There are no other planned transportation network changes within the study area outlined in the City of Ottawa's New Official Plan or Transportation Master Plan.

Other Area Developments

The future developments summarized below are planned near the subject site based on the latest information from the City of Ottawa development application tool. The location of the adjacent future developments relative to the subject site are illustrated below in **Figure 9**.

1. 2510 St. Laurent Boulevard

The developer is proposing the construction of 192 back-to-back townhouses, 36 standard townhouses, and 175 retirement homes, for a total of 403 dwelling units. The TIA (prepared by Novatech, 2022) projected the development to generate 69 and 86 veh/h during the morning and afternoon peak hours, respectively. The volumes generated are not expected to result in major impact to the Walkley/Heatherington intersection.

2. 1495 Heron Road

Canada Lands Company is proposing the construction of mixed-use development consisting of 708 High-Rise Multi-Family units, 80 Stacked Townhouse units, 1,496 ft² of a strip retail plaza, 600 student elementary school, and an 87,930 ft² recreational community centre. The TIA (prepared by Stantec, 2023) projected the development to generate 394 and 337 veh/h during the morning and afternoon peak hours, respectively. Based on the distribution of the site generated trips to the surrounding road network, the study area intersections for the 1770 Heatherington Rd site would be negligibly impacted.

Figure 9: Other Area Developments



2.2. Study Area and Time Periods

For the purposes of this report, the proposed development is assumed to be fully constructed by 2029. Only the full buildout scenario (2029) will be evaluated considering the minimal volumes anticipated to be generated by the proposed development (refer to **Section 3.1**). As a result, analysis of the 2034 horizon year (five-years after build-out) is considered redundant at this time and was not considered in this TIA. Considering there is the possibility of the applicant applying for a Site Plan Application in the future, there will be subsequent opportunities to assess the long-term transportation implications of this development, at which time there may also be more clarity on the long-term plans for the City's transportation network beyond the 2034 horizon.

Given the residential uses of the site, the future horizon years' time periods included in this report are the weekday morning and afternoon peak hour time period traffic volumes. Proposed study area intersections are listed below and illustrated in **Figure 10**.

- Walkley Road/Heatherington Road
- Heatherington Road/Fairlea Crescent & Angela Private
- Heatherington Road/Fairlea Crescent
- Site Accesses

Figure 10: Study Area



3.0 FORECASTING

3.1. Development Generated Travel Demand

3.1.1. Trip Generation and Mode shares

Trip Generation Rates

The proposed development will consist of 68 Multi-Use Low Rise units (semi-detached units, townhouses, stacked townhouses) and 90 Multi-Unit High Rise units (apartment buildings), based on land uses from the 2020 TRANS Trip Generation Manual. The Manual provides person-trip rates during the peak AM and PM periods (7am-9:30am and 3:30PM-6PM). The appropriate peak period trip generation rates for each land-use were obtained from the 2020 TRANS Manual and are summarized in **Table 1** below.

Table 1: Proposed Development Vehicle Trip Rates

Land Use	Dwelling Units	Data Source	Trip Rates	
			AM Peak Period (7-9:30am)	PM Peak Period (3:30-6pm)
Multi-Use (Low Rise)	68 units	TRANS	T = 1.35(du);	T = 1.58(du);
Multi-Unit (High Rise)	90 units	TRANS	T = 0.8(du);	T = 0.9(du);

Note: T = Average Vehicle Trip Ends; du = dwelling unit

Using the respective trip rates in **Table 1**, the total number of peak period person trips generated by the proposed land uses are shown below in **Table 2**.

Table 2: Peak Period Person Trip Generation

Land Use	Dwelling Units	AM Peak Period Person Trips	PM Peak Period Person Trips
Multi-Unit (Low Rise)	68	92	107
Multi-Unit (High Rise)	90	72	81
Total	154	164	188

The proposed development is anticipated to generate a total of approximately 164 and 188 person trips during the morning and afternoon peak periods, respectively. The total peak period person trips in **Table 2** are then divided into different travel modes using mode share percentages obtained from the 2020 TRANS Manual for the “Alta Vista” district.

Table 3: Multi-Use (Low Rise) Peak Period Trips Mode Shares Breakdown

Travel Mode	Mode Share	AM Peak Period Person Trip	Mode Share	PM Peak Period Person Trips
Auto Driver	38%	35	38%	41
Auto Passenger	15%	14	19%	20
Transit	35%	32	31%	33
Cycling	2%	1	2%	2
Walking	10%	9	10%	11
Total Person Trips	100%	92	100%	107

Table 4: Multi-Use (High Rise) Peak Period Trips Mode Shares Breakdown

Travel Mode	Mode Share	AM Peak Period Person Trip	Mode Share	PM Peak Period Person Trips
Auto Driver	38%	27	45%	37
Auto Passenger	12%	9	16%	13
Transit	42%	30	28%	23
Cycling	2%	1	2%	2
Walking	7%	5	9%	8
Total Person Trips	100%	72	100%	81

Standard traffic analysis is usually conducted using the morning and afternoon peak hour trips as they represent a worst-case scenario. In the 2020 TRANS Manual, Table 4 provides conversions rates from peak period to peak hours for different mode shares. The conversion rates for both AM and PM are provided in **Table 5** below.

Table 5: Peak Period to Peak Hour Conversion Factors (2020 TRANS Manual)

Travel Mode	Peak Period to Peak Hour Conversion Factors	
	AM	PM
Auto Driver & Auto Passenger	0.48	0.44
Transit	0.55	0.47
Cycling	0.58	0.48
Walking	0.58	0.52

Using the conversion rates in **Table 5** and the peak period person trips for different travel modes in **Table 3** and **Table 4**, the peak hour trips for different travel modes can be calculated for each land use as shown below in **Table 6** and **Table 7**. The total site generated trips are shown in **Table 8**.

Table 6: Multi-Unit (Low Rise) Peak Hour Trips Generated

Travel Mode	Mode Share	AM Peak (Person Trips/hr)			Mode Share	PM Peak (Person Trips/hr)		
		In	Out	Total		In	Out	Total
Auto Driver	38%	5	12	17	38%	10	8	18
Auto Passenger	15%	2	5	7	19%	5	4	9
Transit	35%	5	12	18	31%	9	7	16
Cycling	2%	0	1	1	2%	1	0	1
Walking	10%	2	4	5	10%	3	2	6
Total Person Trips	100%	14	34	48	100%	28	21	50

Table 7: Multi-Unit (High Rise) Peak Hour Trips Generated

Travel Mode	Mode Share	AM Peak (Person Trips/hr)			Mode Share	PM Peak (Person Trips/hr)		
		In	Out	Total		In	Out	Total
Auto Driver	38%	4	9	13	45%	9	7	16
Auto Passenger	12%	1	3	4	16%	3	2	6
Transit	42%	5	11	17	28%	6	4	11
Cycling	2%	0	1	1	2%	0	0	1
Walking	7%	1	2	3	9%	2	2	4
Total Person Trips	100%	11	26	38	100%	20	15	38

Table 8: Total Site Generated Trips

Travel Mode	AM Peak (Person Trips/hr)			PM Peak (Person Trips/hr)		
	In	Out	Total	In	Out	Total
Auto Driver	9	21	30	19	15	34
Auto Passenger	3	8	11	8	6	15
Transit	10	23	35	15	11	27
Cycling	0	2	2	1	0	2
Walking	3	6	8	5	4	10
Total Person Trips	25	60	86	48	36	88

As shown in **Table 8**, the proposed development is anticipated to generate a total of approximately 86 and 88 person trips during the morning and afternoon peak hours. Vehicle trips are anticipated to be approximately 30 and 34 vehicles during the morning and afternoon peak hours, respectively. Active transportation mode shares (cycling and walking) generate 10 and 12 trips per hour while the transit mode share is expected to generate 35 and 27 trips. The trips expected to be generated by the proposed development are very minimal and will have low impacts on the study area.

3.1.2. Trip Distribution and Assignment

Based on the 2011 OD Survey (Alta Vista district) and the location of adjacent arterial roadways and neighbourhoods, the distribution of site-generated traffic volumes was estimated as shown in **Figure 11**. The site generated trips were then assigned to the road network as shown in **Figure 12**.

Figure 11: Site Generated Traffic Percent Distribution

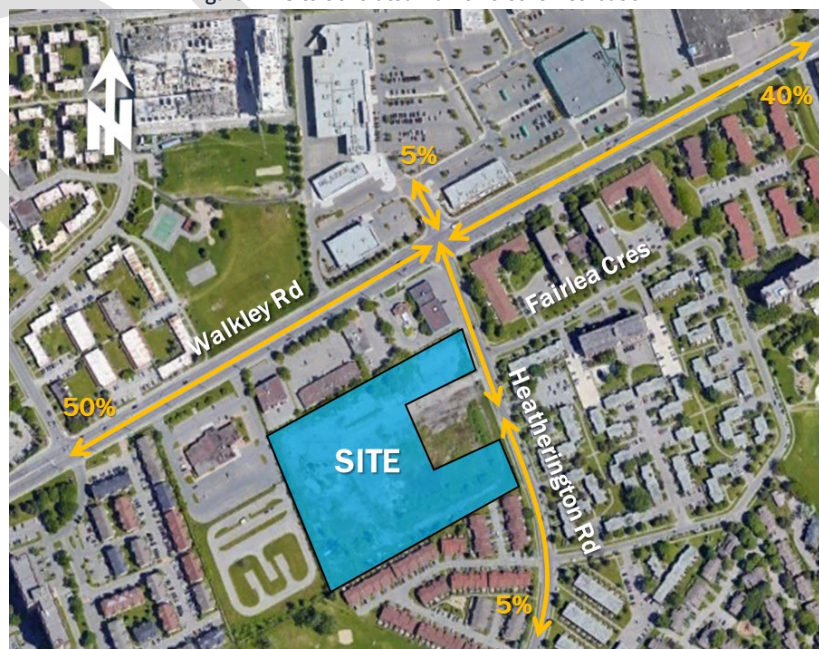
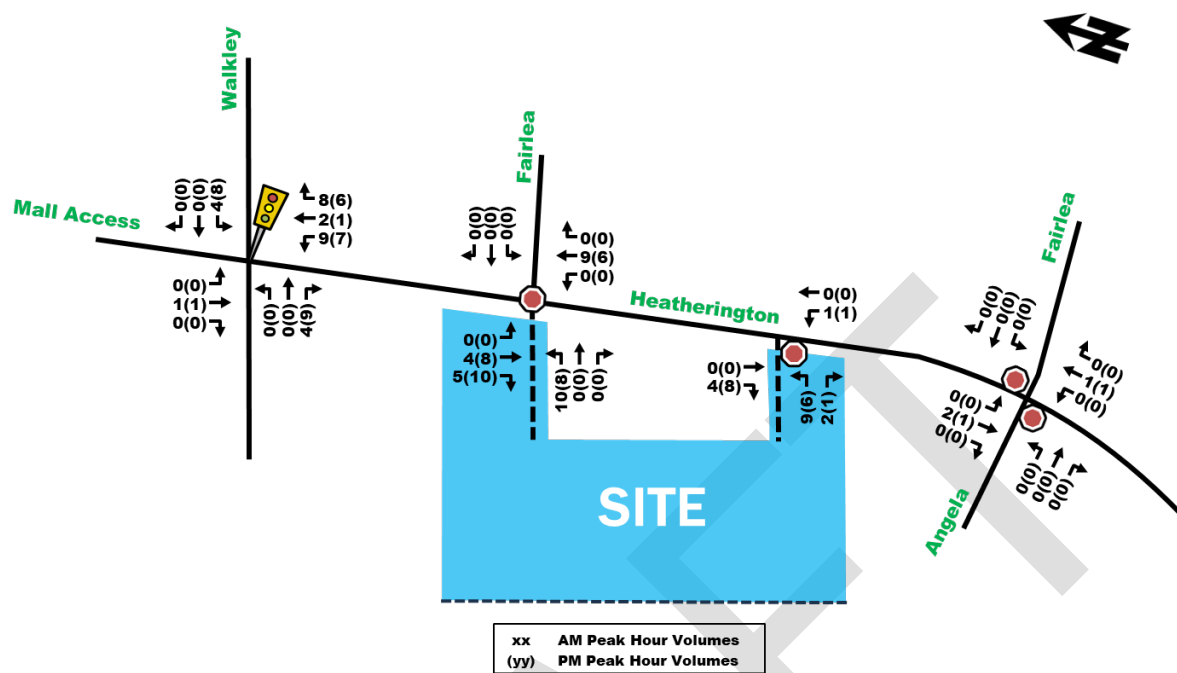


Figure 12: Site-Generated Traffic



3.2. Background Network Traffic

Exempt – See Table 9.

3.3. Demand Rationalization

Exempt – See Table 9.

3.4. Exemption Review

The following modules/elements of the TIA process provided in **Table 9** are recommended to be exempt in the subsequent steps of the TIA process, based on the City’s TIA guidelines and the subject site:

Table 9: Exemptions Review Summary

Module	Element	Exemption Consideration
3.2 Background Network Traffic	All	Only required if one or more of modules 4.6 to 4.9 are triggered, as per 2023 TIA Guidelines update.
3.3 Demand Rationalization	All	Only required if one or more of modules 4.6 to 4.9 are triggered, as per 2023 TIA Guidelines update.
4.3 Boundary Street Design	All elements	MMLOS analysis to be conducted at future SPA.
4.4 Access Intersections Design	All elements	As per 2023 TIA Guidelines update, this section is removed and combined with Section 4.9.
4.6 Neighbourhood Traffic Calming	All elements	Development generates less than 75 site generated auto trips. This section is exempt as per TIA Guidelines 2023 update.
4.7 Transit	4.7.1 Transit Route Capacity	Development generates less than 75 site generated transit trips. This section is exempt as per TIA Guidelines 2023 update.

4.8 Network Concept	All	Development generates less than 200 site generated person trips.
4.9 Intersection Design	All	Development generates less than 75 site generated auto trips. This section is exempt as per TIA Guidelines 2023 update.

4.0 ANALYSIS

4.1. Development Design

4.1.1. Design for Sustainable Modes

The new local roadway will include private driveways to townhouse and semi-detached units, as well as access to five parking lots ranging from 12 – 21 spaces via the six access points as follows:

- 55 m and 135 m west of the northern site access along the north and south sides of the roadway, respectively.
- 80 m, 115 m and 160 m west of the southern site access along the south side.
- 135 m west of the southern site access along the north side.

Parking lot accesses will be 6.7 m wide, with the exception of the middle parking lot connecting the north and south sections of the road, which will provide approximately 6.4 m wide accesses. Sidewalks will be provided on both sides of the new local road and will be 1.8 m wide, depressed and continuous through any accesses. TWSIs will be provided at the access intersection corners along Heatherington Rd. Detailed description of the internal roadway design is provided in **Section 4.1.3**.

It should be noted that there will be no transit service on the new local roadway; all existing transit routes and facilities in the surrounding road network are expected to be maintained.

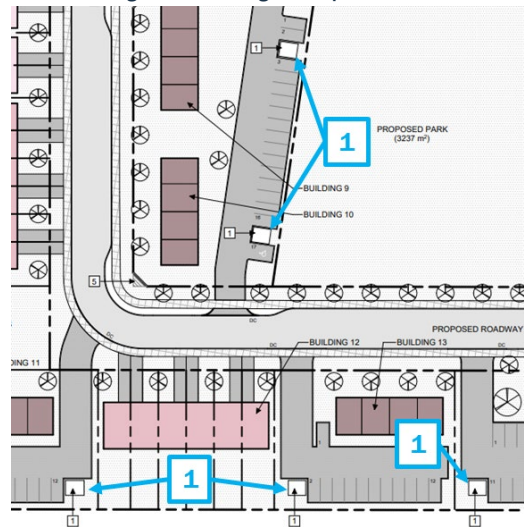
A portion of the southwest corner of the site is proposed as a potential connection opportunity to the MTO site, which may be facilitated as part of any future redevelopment opportunity for the MTO site.

4.1.2. Circulation and Access

The site will be accessible through two new accesses along the westside of Heatherington Rd, where the northern site access will serve as the new west leg of the Heatherington/Fairlea intersection, while the other access will be located approximately 60 m south of the northern access. Both accesses will operate with a STOP control for vehicles exiting the site.

To ensure the site's ability to accommodate municipal services, such as garbage and fire trucks as well as other commercial vehicles, turning movements were completed for the in/out maneuvers of the site and parking lot accesses. Garbage trucks may enter through either site access along Heatherington Rd, then proceed to the garbage pick-up areas located within the parking lots (labelled "1") as illustrated below in **Figure 13**. All truck turning templates have been provided in **Appendix E**.

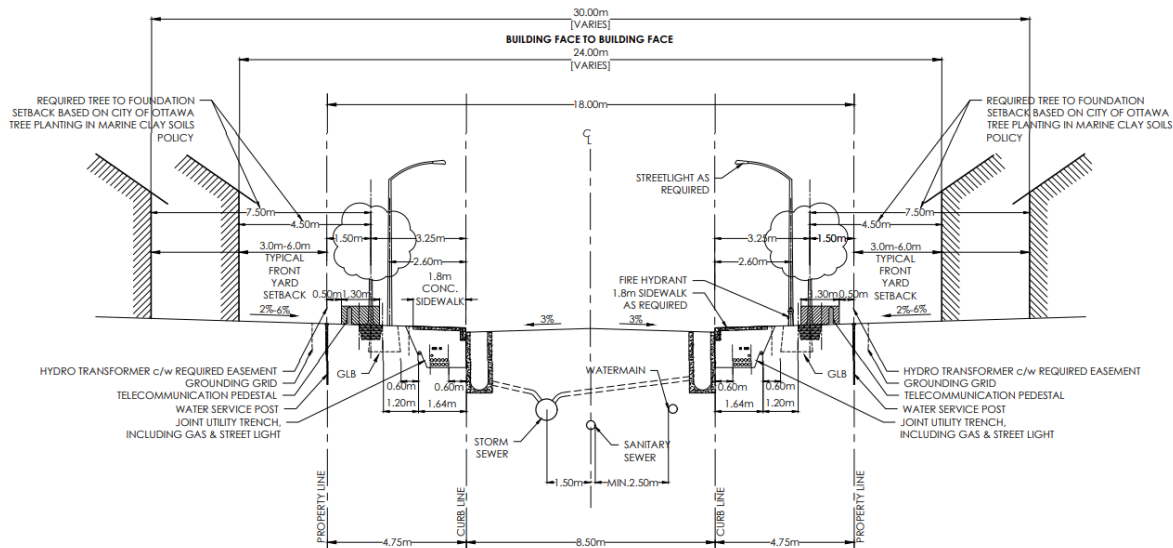
Figure 13: Garbage Pickup Locations



4.1.3. New Street Networks

The proposed internal site roadway is expected to be constructed as per City of Ottawa’s standard 18.0 m ROW Cross-Section illustrated in Figure 14. The roadway cross section provides an 18 m right-of-way that consists of an 8.5 m pavement width, 1.8 m concrete sidewalks on both sides of the road, and space for utilities. Given the proposed local street’s configuration and the existing pedestrian and cycling facilities along Heatherington Rd, the proposed sidewalks and road design will continue to facilitate the needs of active road users and provide additional connectivity to the adjacent road network.

Figure 14: 18m ROW Cross-Section



The proposed municipal local street will be approximately 420 m in length, in a crescent shape that will be accessible via two intersections along Heatherington Rd. The new roadway will strictly serve as an access route to the development’s residential units and is expected to have a low annual average daily traffic. The proposed roadway design and traffic calming measures are detailed in Appendix E.

The new roadway will include a variety of efficient traffic calming features, as per the City of Ottawa’s 30 km/h Design Toolbox for Local Residential Streets (September 2021). The traffic calming measures proposed are as follows:

- Reduced speed limit of 30 km/h.
- Two 1.5 m curb extensions located on the south side of the northern access and the north side of the southern access along Heatherington Rd, narrowing the 8.5 m road to 7 m.
- Four 1.5 m mid-block curb extensions located along the inside curb of the roadway, beginning at the center parking lot accesses and ending just after the curb return.
- Two 4 m wide speed humps, both located approximately 70 m west of each site access along Heatherington Rd.
- On-street parking along the inside curb between curb extensions.

As noted by the City comments in **Appendix A**, City staff had previously requested that an 8.5 m wide lane connection be provided on the north side of the site, to facilitate access to the three adjacent parcels north of the development property and eliminate the need for future access of those parcels to Walkley Rd if they are redeveloped.

As noted in the comment response, potential opportunities were discussed with City staff with the outcome being that the road is no longer being considered due to impact to site unit yield and already provided site opportunity for connectivity in the southwest portion between the development site and the MTO site.

City staff had also requested that 5.0 m x 5.0 m corner triangles be provided on each corner of the two site accesses and 3.0 m x 3.0 m corner triangles at the inside 90-degree bends within the proposed roadway, which have all been implemented on the Concept Plan.

4.2. Parking

4.2.1. Parking Supply

Based on the City of Ottawa Parking Provisions, the proposed development is located in “Area C”, where off-street motor vehicle, visitor, and bicycle parking must be provided. The development is proposing 6 semi-detached units, 30 townhouse units, 32 stacked townhouse units and 90 low-rise apartment units. It should be noted that the semi-detached and townhouse units will have their own driveways. Therefore, they have been excluded from the table as they are not required to meet the minimum tenant and visitor vehicle parking and bicycle parking requirements.

The proponent has proposed alternate tenant vehicle parking rates, which are reduced from the minimum City of Ottawa requirements. **Table 10** below provides the applicable parking rates for vehicles and bicycles. The City parking rates for tenants have also been detailed for comparison purposes. It should be noted that the proposed visitor and bicycle parking rates are both proposed to adhere to the minimum City requirements. The reduced tenant rates are considered appropriate given the development context and land use (affordable housing units).

Table 10: Minimum City of Ottawa Parking Rates

Land Use	Vehicle Parking Rates			Bicycle Parking Rate
	Tenant		Visitor	
	City	Proposed	City and Proposed	City and Proposed
Stacked Townhouse	1.2/unit	0.5/unit	0.2/unit	0.5/unit
Low-rise Apartment	1.2/unit	0.25/unit	0.2/unit	0.5/unit
Note:	Section 102 (4) – No visitor parking required for townhouses or stacked dwellings with a driveway accessing a garage or carport			

Based on the proposed new minimum parking rates, the minimum parking space requirements for the site have been estimated in **Table 11** below. Therefore, a total of 62 (38+24) vehicle parking spaces and 61 bicycle parking spaces are required to be provided as minimum.

Table 11: Minimum Parking Requirements (Proposed Rates)

Land Use	Unit	Proposed Minimum Vehicle Parking Spaces		Proposed Minimum Bicycle Spaces
		Tenant	Visitor	
Stacked Townhouse	32	16	6	16
Low-rise Apartment	90	22	18	45
	Total	38	24	61
Note: Section 102 (4) – No visitor parking required for townhouses or stacked dwellings with a driveway accessing a garage or carport				

As per the latest Concept Plan (See **Figure 2**), the development is proposing to provide five parking lots with access to the future internal public road to serve the stacked townhouse and low-rise apartment buildings. The parking lots will have a total of 80 parking spaces, therefore meeting the proposed minimum parking requirements. The required number of bicycle parking spaces are also anticipated to be met.

In addition to the off-street parking provided, on-street parking is proposed to be permitted along the inside curb of the internal road, between the curb extensions provided for traffic calming measures. The total length of permitted on-street parking areas is approximately 275 m. Assuming the minimum length of a parallel parking space is 6.7 m (based on the City of Ottawa Parking Provisions), on-street parking would result in an approximate 41 additional parking spaces made available, for a total of 121 on-site parking spaces.

4.3. Boundary Street Design

Exempt – See **Table 9**

4.4. Access Intersection Design

Exempt – See **Table 9**

4.5. Transportation Demand Management

4.5.1. Context for TDM

The proposed development is not located within a Design Priority Area (DPA) or Protected Major Transit Station Areas (PMTSAs). The property is owned by The City of Ottawa.

Considering the proposed land-use of the development are for residential units, it is expected the morning peak hour trips will be residents leaving the site to work and returning to the site from work during the afternoon peak hour. **Sections 3.1.1** and **3.1.2** describe the anticipated site generated trips per travel mode and predicts the destinations of travelers based on the 2011 OD-Survey for Ottawa.

The development is proposing 158 residential units consisting of semi-detached dwellings, stacked townhouses, townhouses, and apartments. The concept plan indicates there will be 6 semi-detached houses (4%), 32 stacked townhouses (20%), 30 townhouses (19%), 28 two-bedroom units (18%), 48 one-bedroom units (30%), and 14 studio units (9%).

4.5.2. Need and Opportunity

The proposed development is expected to generate minimal traffic volumes that will have low impact on the study area intersections and roadways. The proposed development is also expected to be providing affordable housing units. Therefore, rigorous TDM measures are not considered required in this context. Nonetheless, required and some basic measures are expected to be provided as detailed in the next section.

4.5.3. TDM Program

Both the TDM Supportive Design and Infrastructure Checklist and the TDM Measures Checklist has been provided in **Appendix F**. The proposed measures are as follows:

TDM Supportive Development Design and Infrastructure Checklist

- All ten (10) required measures related to Walking and Cycling (facilities and bicycle parking) and Vehicle Parking have been satisfied.
- Nine (9) of the fourteen (14) basic measures related to Walking and Cycling, Parking and Ridesharing have been satisfied, namely:
 - Locating building close to street with no parking areas between entrance and street.
 - Locating building entrances to minimize walk distance to sidewalks and transit.
 - Locating building doors and windows to ensure visibility of pedestrians.
 - Providing safe, direct, and attractive walking routes to transit.
 - Ensuring walking routes are secure, visible, and lighted.
 - Design roads used for access or circulation by cyclists using a target operating speed of 30 km/h
 - Providing lighting, landscaping and benches along walking and cycling routes.
 - Provide wayfinding signage for site accesses.
 - Provide parking for long-term and short-term users that is consistent with mode share targets.

TDM Measures Checklist

- Three (3) of the seven (7) basic measures related to the Walking and Cycling, Transit, and TDM Marketing & Communications have been recommended and are as follows:
 - Display local area maps with walking/cycling access routes.
 - Display relevant transit schedules and route maps at entrances.
 - Provide a multimodal travel option information package to new residents.

It should be noted that TDM Measures checklist indicates potential measures to be provided and will be confirmed in full during the future SPC Application.

4.6. Neighbourhood Traffic Calming

Exempt – See Table 9.

4.7. Transit

4.7.1. Transit Route Capacity

Exempt – See Table 9.

4.7.2. Transit Priority Requirements

The quantity of vehicle trips anticipated to be generated by the proposed development are expected to have a negligible impact on the transit delay times along Heatherington Road. The proposed site accesses and minimal increase in transit users (up to 35 trips during peak hours) is expected to result in no discernible impacts on transit travel times or passenger demands.

4.8. Network Concept

Exempt – See Table 9.

4.9. Intersection Design

Exempt – See Table 9.

5.0 FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

Based on the results summarized herein the following findings and recommendations are provided:

Existing Conditions

- The proposed development is located in a well-established area and shares lot boundaries with commercial units to the north and west, Heatherington Rd to the east, and residential units in the south.
- There are currently several bus routes operating along Heatherington Rd and within the study area, with the one bus stop serving 3 routes along the eastern site boundary.
- Historic five-year collision data indicated no collision patterns exist for the study area roads and intersections. The highest number of collisions occurred at the Walkley/Heatherington intersection, which is expected given Walkley Road is an arterial with high traffic volumes.

Proposed Development

- City of Ottawa is proposing a new residential subdivision located at the municipal address of 1770 Heatherington Rd that will consist of 90 apartment units, 62 townhomes, and 6 semi-detached housing units.
- The development is assumed to be fully constructed by the year 2029.
- The TRANS Trip Generation Manual mode shares and trip rates for the 'Alta Vista' district were used to estimate site trip generation, which forecasted approximately 30 to 34 'new' two-way vehicle trips, 27 to 35 'new' two-way transit trips and 10 to 12 'new' two-way non-motorized trips.
- The development is proposing new vehicle parking rates, where the total number of spaces required for the site is 62 spaces. The development is providing five parking lots with 80 total spaces, plus on-street parking on the new local road that can accommodate an additional 41 spaces. All parking requirements are expected to be met.
- The site will provide two new access points along the east side of Heatherington, where the northern access will serve as the new west leg for the Heatherington/Fairlea intersection while the southern access will be located approximately 60 m south of the northern one.
- The development will have several garbage pickup areas located within 4 of the 5 parking lots, each accessible through their respective connection to the new local road. Truck turning movements in and out of each access were completed and demonstrated no issues with the latest concept plan configuration.
- The development proposes a public internal local street with 18 m ROW that includes: adequate pedestrian accessibility with concrete sidewalks along both sides of the new roadway; traffic calming measures such as a 30 km/h speed limit, speed humps, and curb extensions; and access for 5 parking lots and on-street parking that provide a total of 121 parking spaces.

Future Conditions

- The City of Ottawa's 2013 Transportation Master Plan (TMP) highlights Walkley Rd as a future transit priority corridor, with minimal planned transit or active transportation infrastructure projects within the study area.
- Given the low trip generation of the proposed development, impact on the study area road network is expected to be very minimal.

Based on the preceding report, the proposed development located at 1770 Heatherington Rd is recommended from a transportation perspective.

Prepared By:

Reviewed By:

Jordan Terada, E.I.T.
Transportation Analyst

Austin Shih, M.Sc., P.Eng.
Senior Transportation Engineer

DRAFT

DRAFT

Appendix A:

TIA Screening Form and City Comment Responses

City of Ottawa 2017 TIA Guidelines

Date

1-Sep-23

TIA Screening Form

Project 1770 Heatherington (City of Ottawa)

Project Number

478675-01000

Results of Screening	Yes/No
Development Satisfies the Trip Generation Trigger	Yes
Development Satisfies the Location Trigger	No
Development Satisfies the Safety Trigger	Yes

Module 1.1 - Description of Proposed Development

Municipal Address	1770 Heatherington Rd, Ottawa, ON K1V 8T8
Description of location	Vacant lands on the west side of Heatherington Rd
Land Use	14 residential buildings mix of apartment, townhome and semi
Development Size	153 total residential units, 32,320 m ² development size
Number of Accesses and Locations	Two accesses along Hetherington Rd (one is existing)
Development Phasing	Single Phase
Buildout Year	2027
Sketch Plan / Site Plan	See attached

Module 1.2 - Trip Generation Trigger

Land Use Type	Townhomes or Apartments	
Development Size	153	Units
Trip Generation Trigger Met?	Yes	

Module 1.3 - Location Triggers

Development Proposes a new driveway to a boundary street that is designated as part of the City's Transit Priority, Rapid Transit, or Spine Bicycle Networks (See Sheet 3)	No
Development is in a Design Priority Area (DPA) or Transit-oriented Development (TOD) zone. (See Sheet 3)	No
Location Trigger Met?	No

Module 1.4 - Safety Triggers

Posted Speed Limit on any boundary road	<80	km/h
Horizontal / Vertical Curvature on a boundary street limits sight lines at a proposed driveway	No	
A proposed driveway is 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) or within auxiliary lanes of an intersection;	Yes	The north site access is within 150m of Walkley/Hetherington intersection
A proposed driveway makes use of an existing median break that serves an existing site	No	
There is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development	No	
The development includes a drive-thru facility	No	
Safety Trigger Met?	Yes	

15 May 2024

City of Ottawa
Development Review Services
110 Laurier Avenue West
Ottawa, ON K1P 1J1

Attention: Mike Giampa

Dear Mike:

Re: 1770 Heatherington Rd TIA Step 2 – Response to City Comments

The following response has been prepared in response to City of Ottawa Step 2 - TIA Scoping & Forecasting Report comments received on November 20, 2023. City comments are presented in black with the corresponding responses from Parsons in **Green**.

Transportation Engineering Services

Section 2.1.2 Existing Conditions – Area Road Network:

The description of Walkley Road states that “*the roadway consists of a two-way two-lane undivided urban cross-section*”. Walkley Road in the study area generally has a four-lane divided urban cross-section with additional auxiliary turn lanes. Please correct.

TIA updated.

Add ROW protection for all described roads.

TIA updated.

Section 2.1.2 Existing Conditions

The description of the Walkley Road and Heatherington Road intersection does not describe the dedicated westbound right-turn lane and westbound right-turn channel. Please correct.

TIA updated.

Illustrate the existing access to the existing Boys and Girls Club of Ottawa clubhouse.

TIA updated.

Update the caption for Figure 4 to indicate that the map also illustrates existing study area pedestrian facilities.

TIA updated.

The description of Route 291 indicates that the route connects Greenboro/Hurdman and Merivale. This is incorrect. Route 291 connects Hurdman and Herongate.

TIA updated.

The description of Route 291 also indicates that it provides connection to “*the Future LRT line 2 Station at Mooney’s Bay*”. This is also incorrect. Route 291 would provide connection to the Line 2 at Walkley Station.

TIA updated.

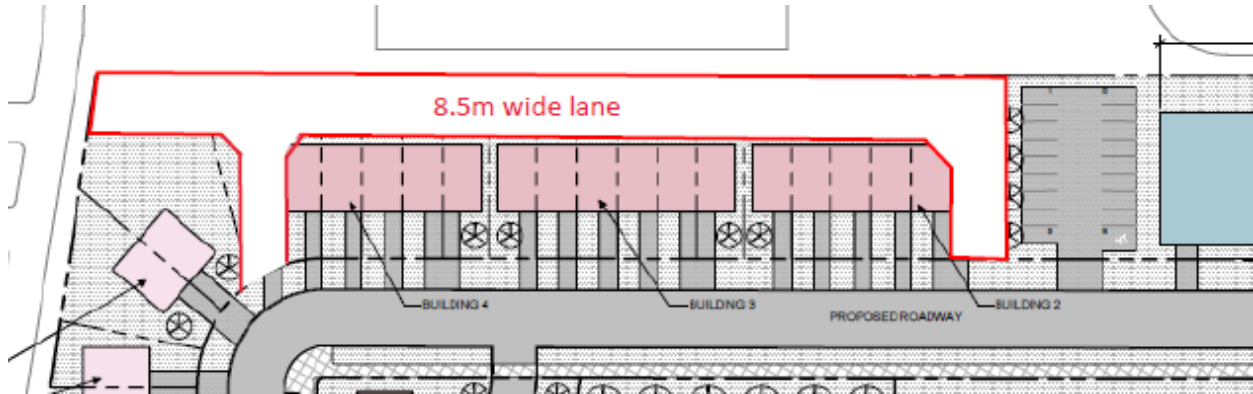
Section 3.1.2 Trip Distribution and Assignment:

The text of Section 3.1.2 incorrectly references the Merivale district. Please correct.

TIA updated.

Initial Plan of Subdivision Comments:

Transportation Engineering Services requests that the development provide an 8.5m wide lane on the north side of the sit and modify the northern townhomes (building 2-4) to rear lane towns. Refer to below concept markup:



Provision of a lane in this location may not be preferred if considering this plan of subdivision in isolation. However, the lane is highly recommended due to the following transportation planning benefits to the surrounding area:

1. Additional opportunity for active transportation connectivity to the MTO site to the west.
2. Opportunity for active transportation connectivity to the north.
3. Most importantly, opportunity for rear lane access for the sites to the north (1574, 1582, and 1606 Walkley), which allows redevelopment of these sites to comply with policy 4.1.2 4) and policy 6.2.1 4) of the Official Plan, and ultimately will improve the safety and comfort of the designated Walkley Road “Mainstreet Corridor”.

This request was discussed in detail with City staff where different potential opportunities considered for connection to the adjacent Walkley sites. The outcome of the discussion was agreement from City staff to maintain only the single opportunity for future connectivity at the southwest portion of the property to the MTO site. Adding further connections along the north portion of the site will impact the development parcels and unit yield and as such, the developer won't be pursuing these as part of the site design.

Proposed roadway should ideally aligns directly opposite Fairlea Crescent (it is currently slightly off-set to the south of Fairlea Crescent). Proposed roadway (and associated ROW) should also ideally intersect Heatherington Road at a 90-degree angle.

As per proposed roadway design shown in Appendix E, the proposed roadway north access has been adjusted and aligns more closely as an opposing leg to Fairlea Crescent.

5m x 5m corner triangles are required at the two intersection of the proposed roadway and Heatherington Road.

This has been provided as shown in the latest proposed road design in Appendix E.

Provide 3m x 3m corner triangles on the inside of the 90-degree bends in the proposed roadway.

This has been provided as shown in the latest proposed road design in Appendix E.

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Appendix B:
Transit Route Maps



44

BILLINGS BRIDGE HURDMAN

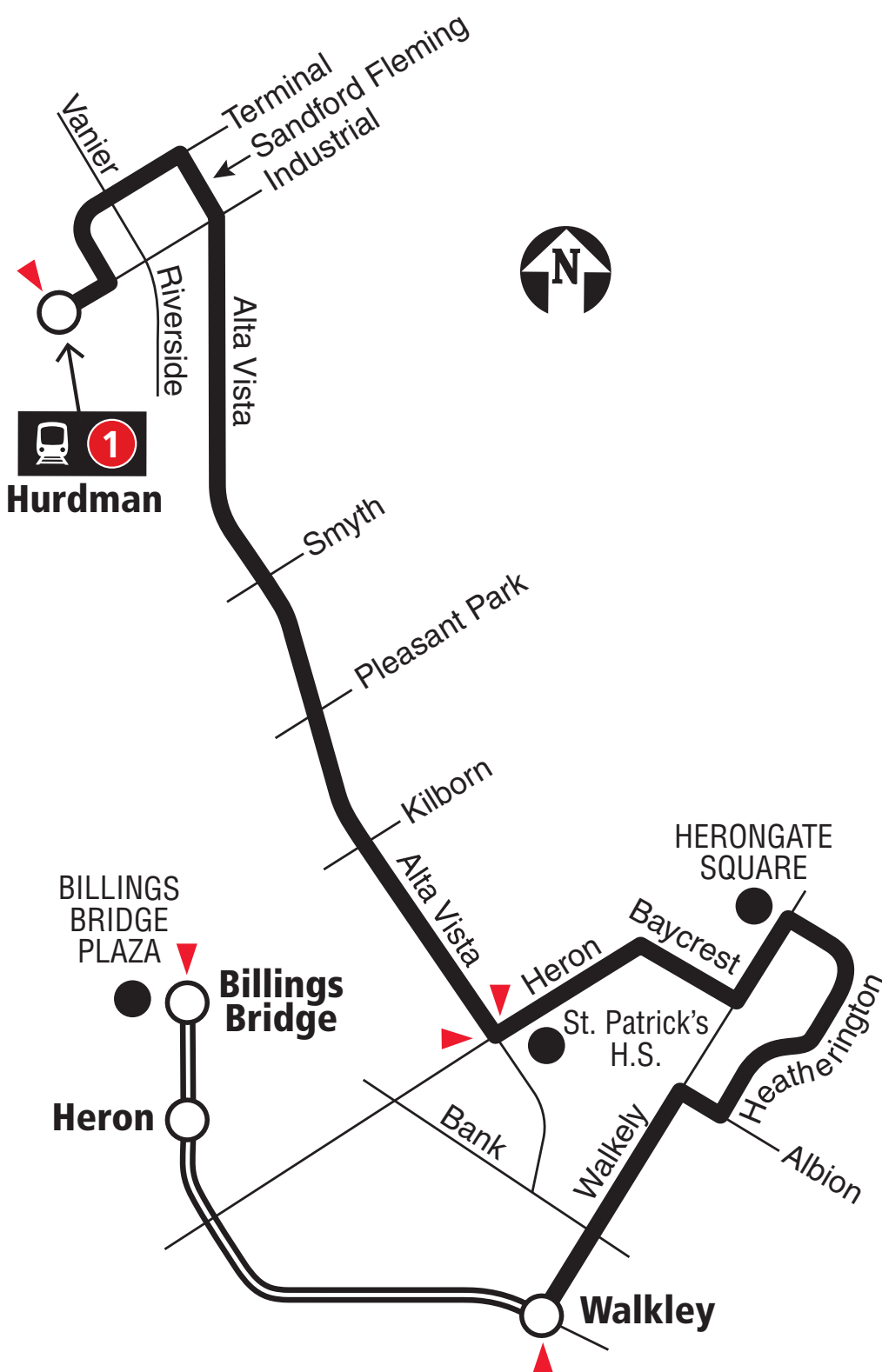
Fréquent

7 days a week / 7 jours par semaine

All day service

Service toute la journée

HURDMAN



BILLINGS BRIDGE



Transitway & Station



Timepoint / Heures de passage

2019.07



1



Future route after O-Train Line 1 is open
Trajet du circuit après l'ouverture
de la Ligne 1 de l'O-Train

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**



INFO 613-741-4390
octranspo.com

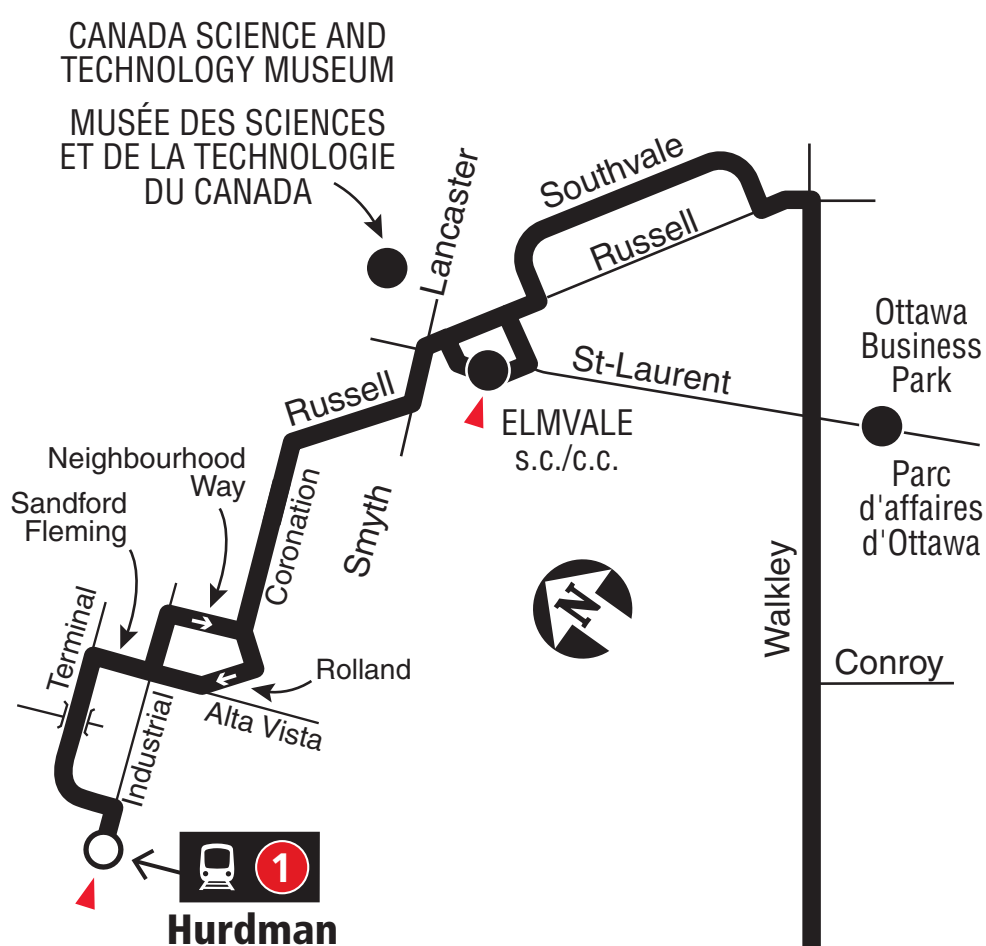


46

BILLINGS BRIDGE HURDMAN

Local

7 days a week / 7 jours par semaine
All day service
Service toute la journée



HURDMAN

BILLINGS BRIDGE



Station



Timepointe / Heures de passage

2019.07



1



Future route after O-Train Line 1 is open
Trajet du circuit après l'ouverture de la Ligne 1 de l'O-Train

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Transpo

INFO 613-741-4390
octranspo.com



140

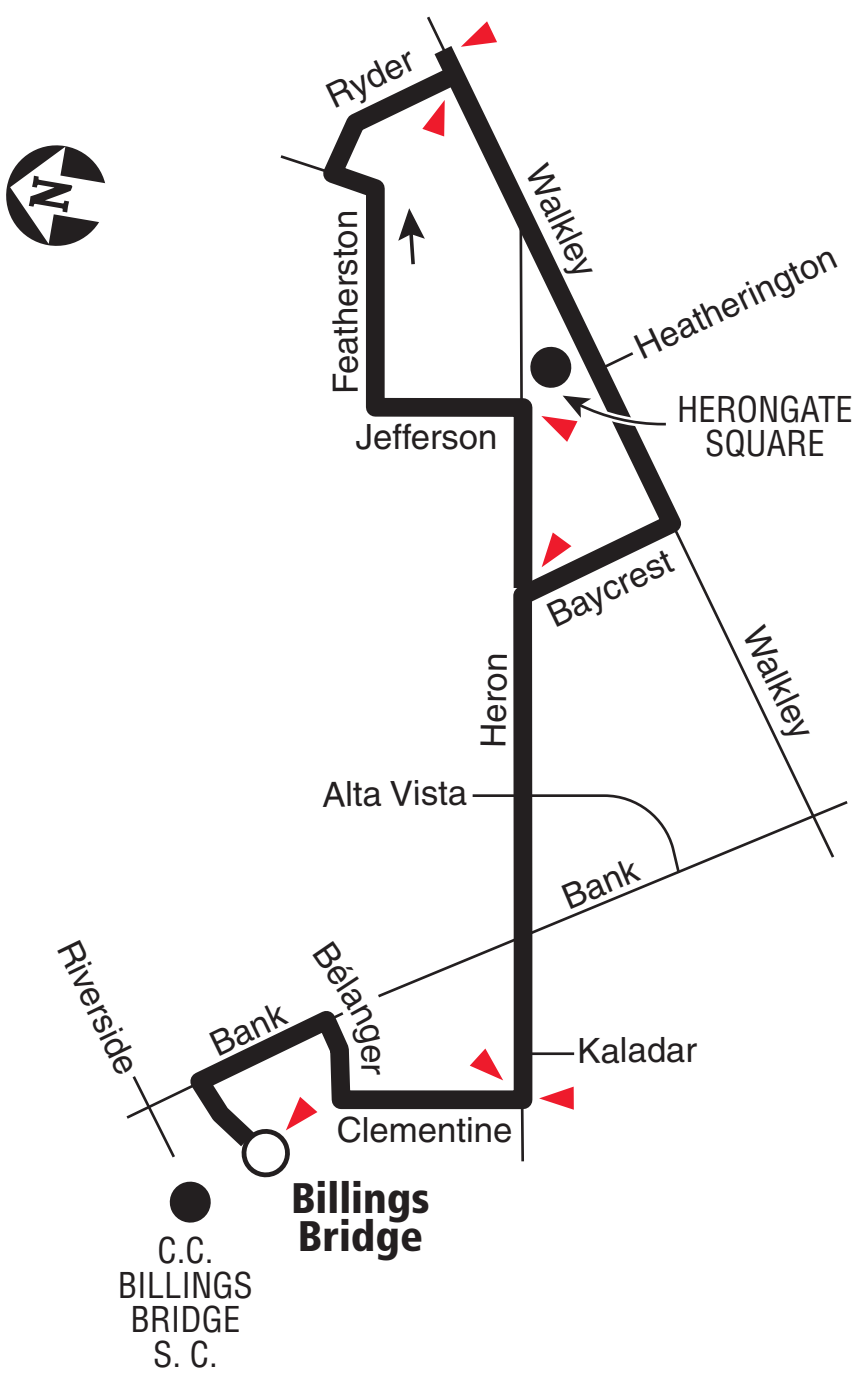
HERONGATE BILLINGS BRIDGE

Local

Monday to Saturday / Lundi au samedi

Limited service during the day
Service limité pendant la journée

HERONGATE



BILLINGS BRIDGE



Station



Timepoint / Heures de passage

2022.09



Schedule / Horaire 613-560-1000

Text / Texto* 560560

plus your four digit bus stop number / plus votre numéro d'arrêt à quatre chiffres

*Standard message rates may apply / Les tarifs réguliers de messagerie texte peuvent s'appliquer

Customer Service

Service à la clientèle **613-560-5000**

Lost and Found / Objets perdus..... **613-563-4011**

Security / Sécurité **613-741-2478**

Effective September 4, 2022

En vigueur 4 septembre 2022



INFO 613-560-5000
octranspo.com

FORMER / ANCIEN 41



291

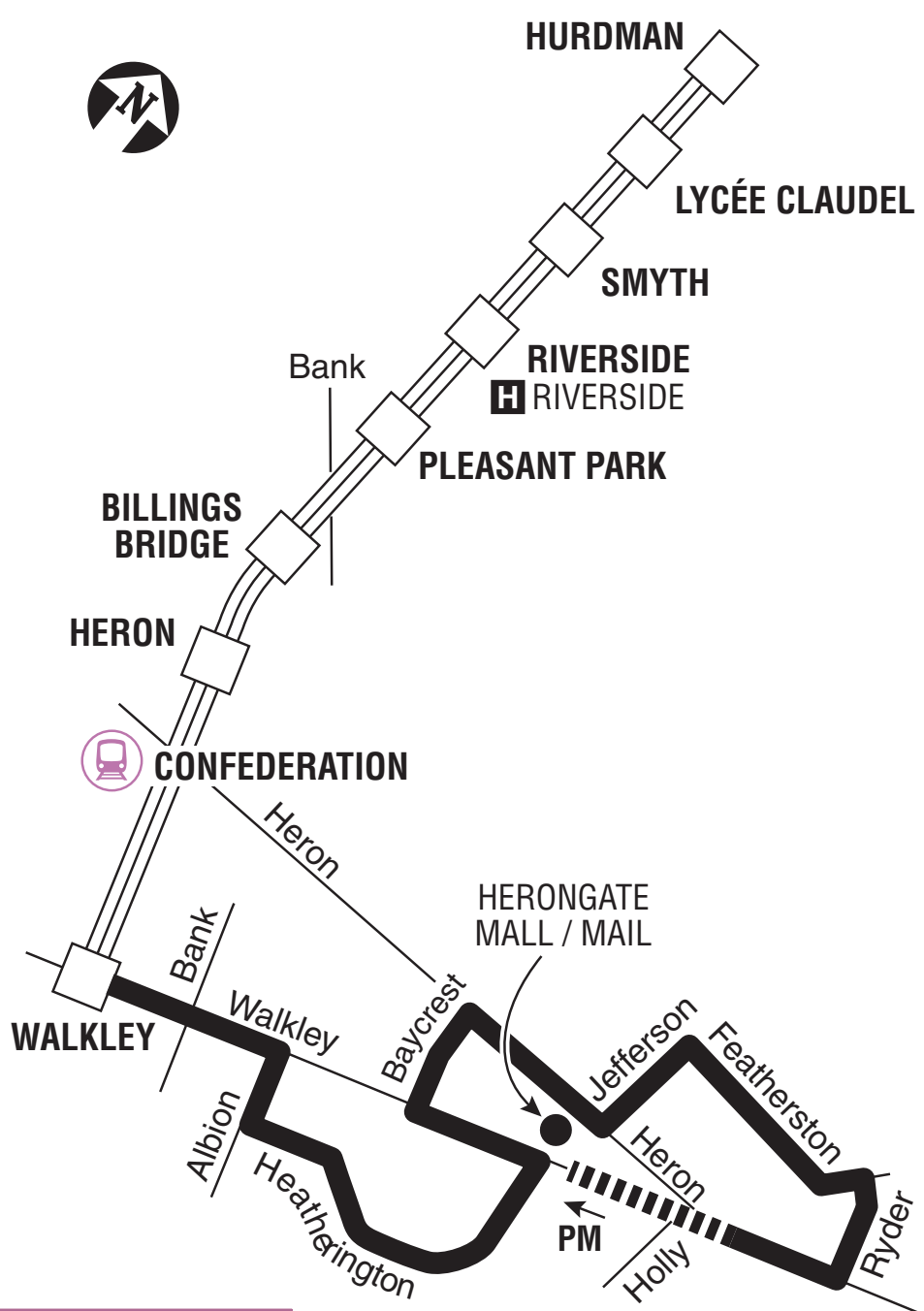
HURDMAN HERONGATE

Connexion

Monday to Friday / Lundi au vendredi

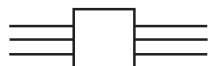
Peak periods only
Périodes de pointe seulement

AM
↑
HURDMAN



PM
↓
HERONGATE

Legend • Légende



Transitway & Station



Line 2 – O-Train Trillium Line
Ligne 2 - O-Train Ligne Trillium



PM only / *PM seulement*

2017.06



Schedule / Horaire.....613-560-1000

Text / Texto560560

plus your four digit bus stop number / plus votre numéro d'arrêt à quatre chiffres

Customer Relations

Service à la clientèle **613-842-3600**

Lost and Found / Objets perdus..... **613-563-4011**

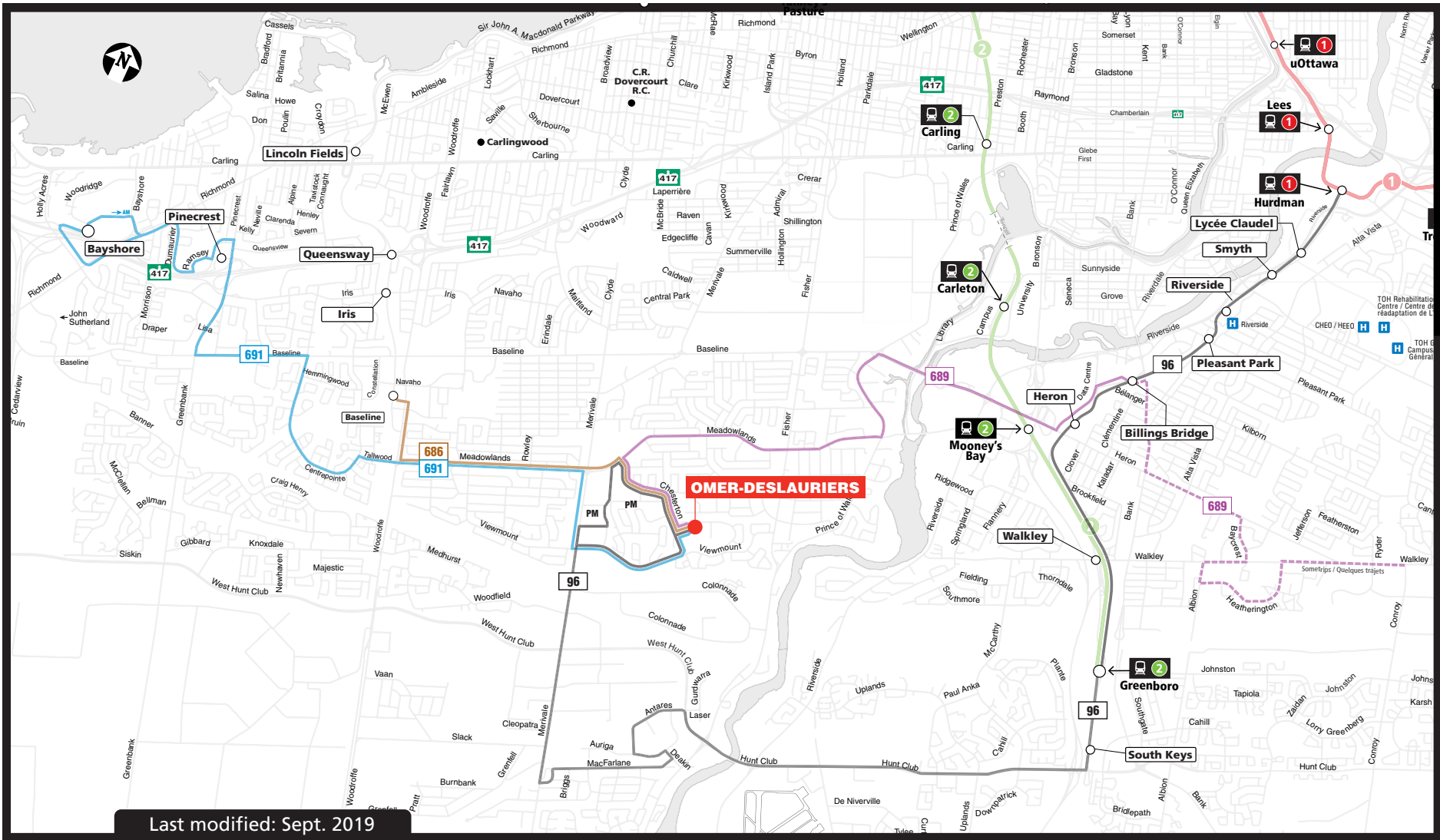
Security / Sécurité **613-741-2478**

Effective June 26, 2017

En vigueur 26 juin 2017



INFO 613-741-4390
octranspo.com



Last modified: Sept. 2019

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Appendix C:

Existing Peak Hour Volumes

Turning Movement Count - Study Results FAIRLEA CRES @ HEATHERINGTON RD N

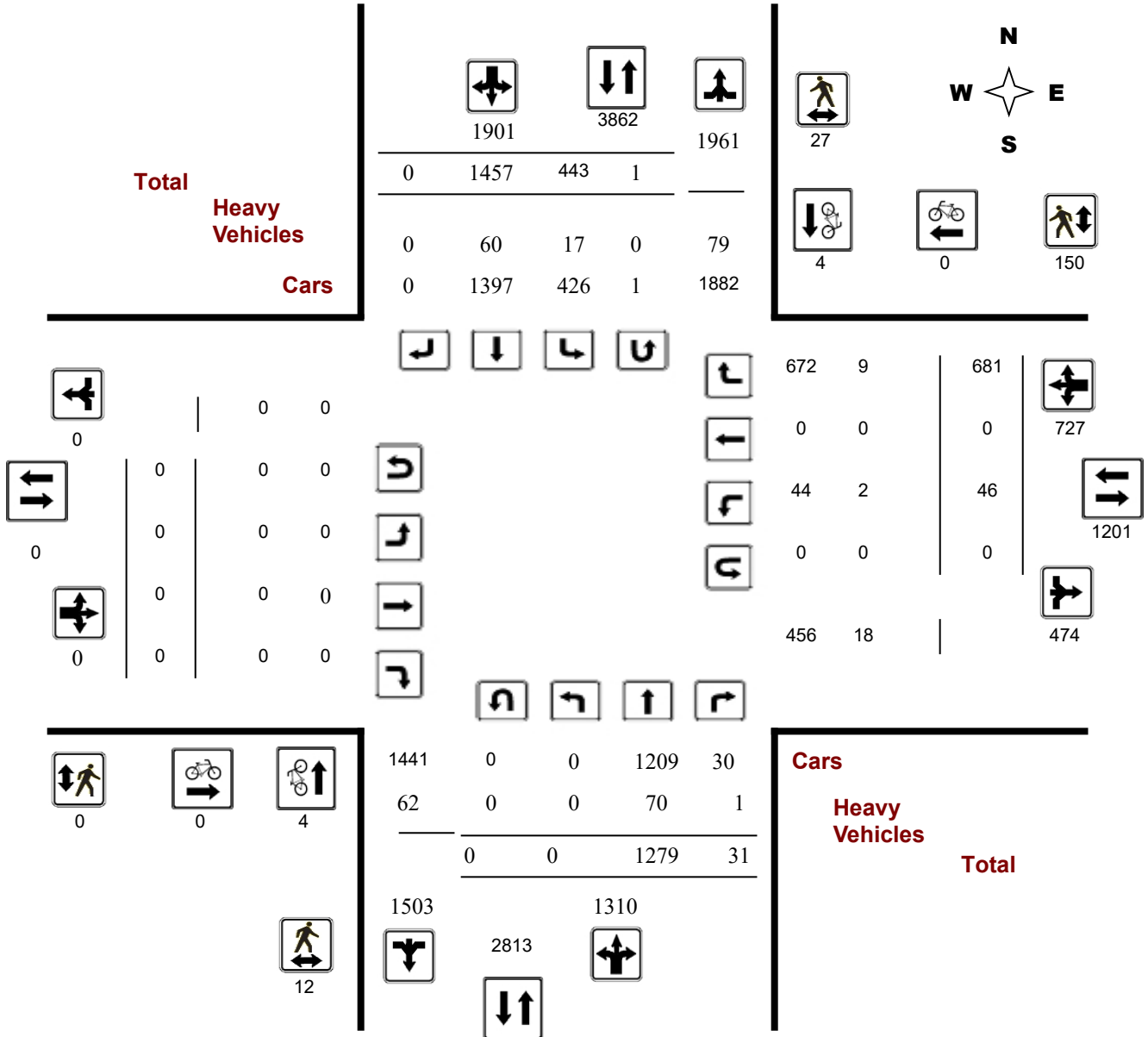
Survey Date: Thursday, December 01, 2022

WO No: 40710

Start Time: 07:00

Device: Miovision

Full Study Diagram



Turning Movement Count - Study Results FAIRLEA CRES @ HEATHERINGTON RD N

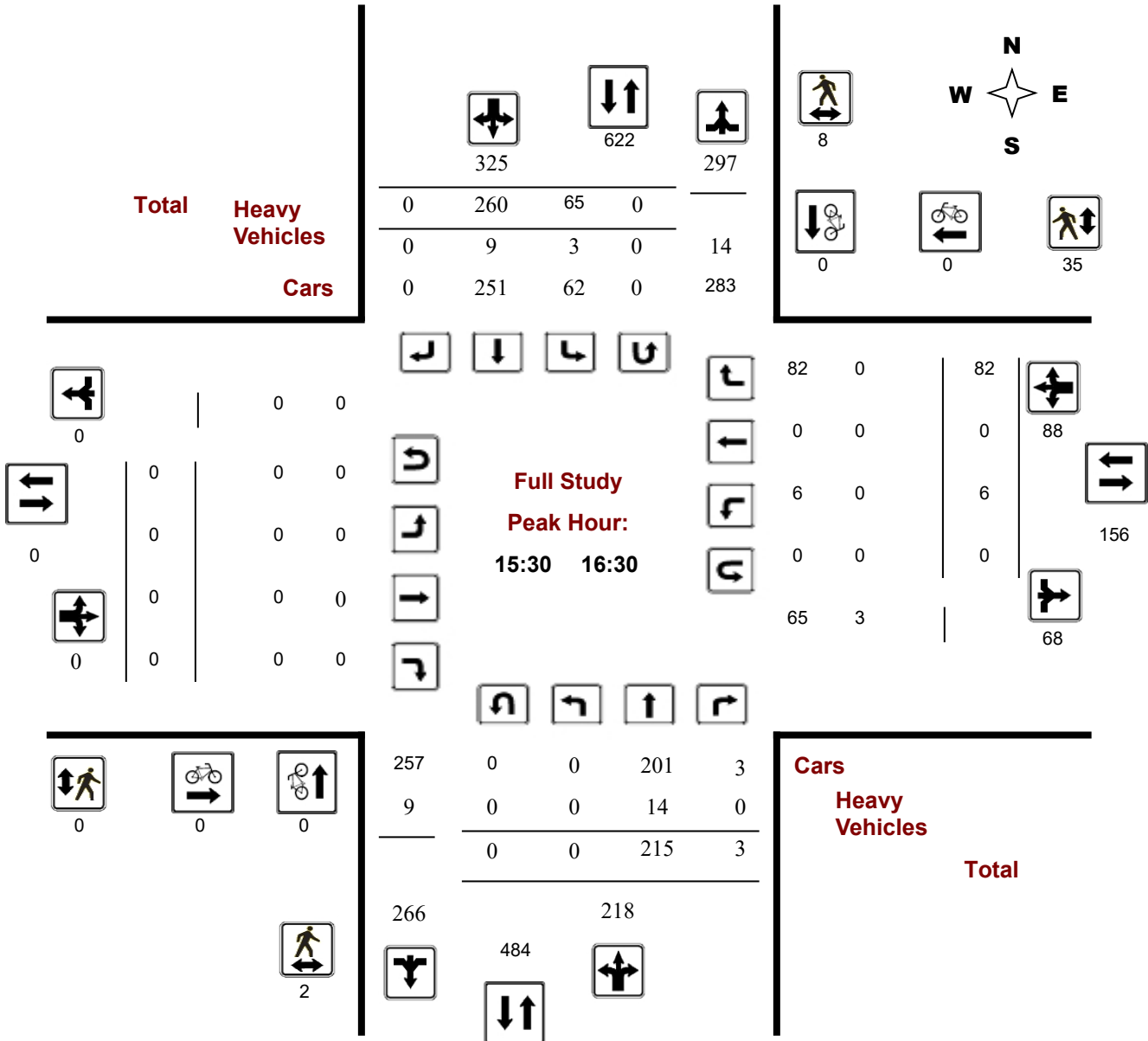
Survey Date: Thursday, December 01, 2022

WO No: 40710

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

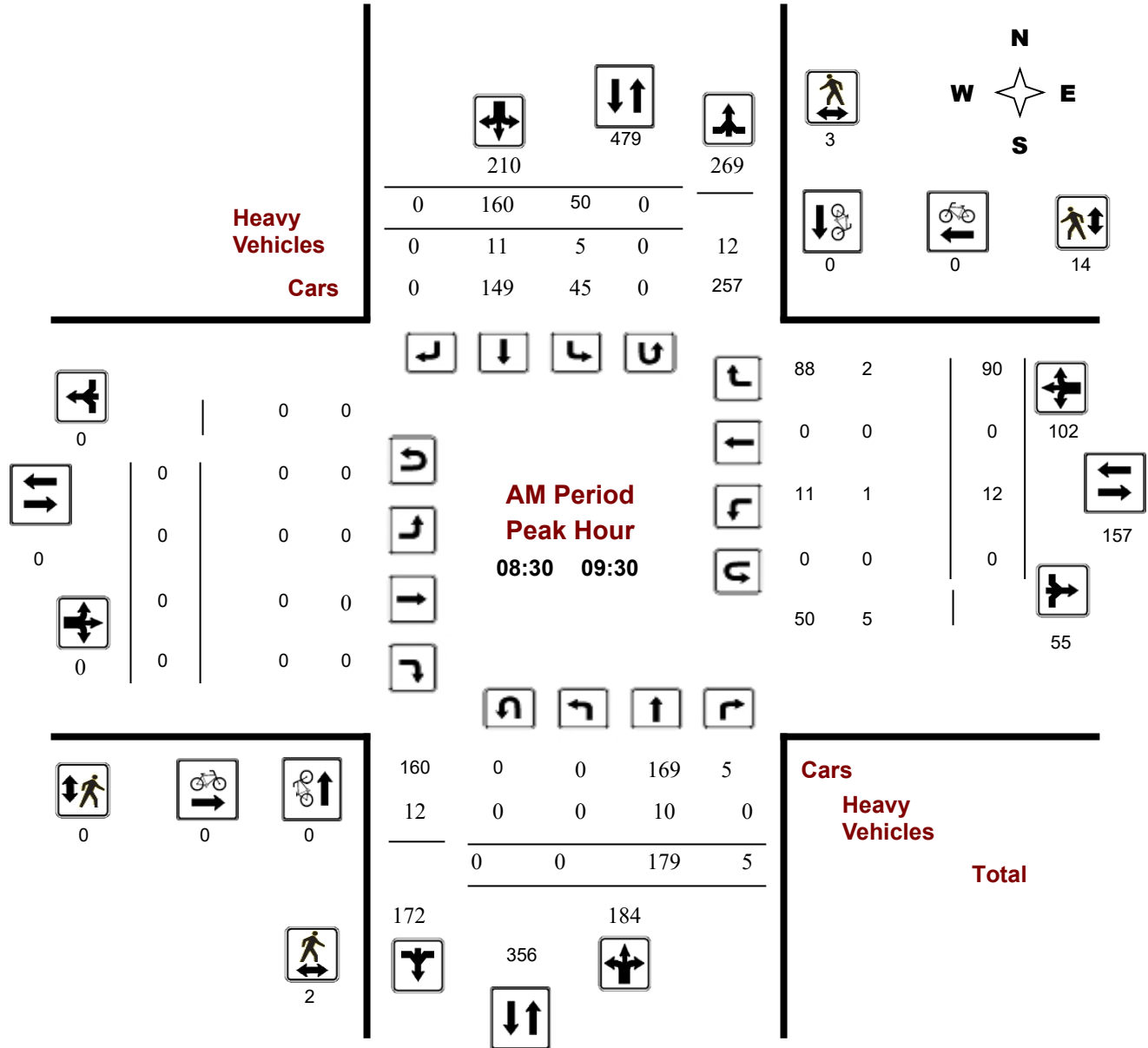
FAIRLEA CRES @ HEATHERINGTON RD N

Survey Date: Thursday, December 01, 2022

Start Time: 07:00

WO No: 40710

Device: Miovision



Comments

Turning Movement Count - Peak Hour Diagram

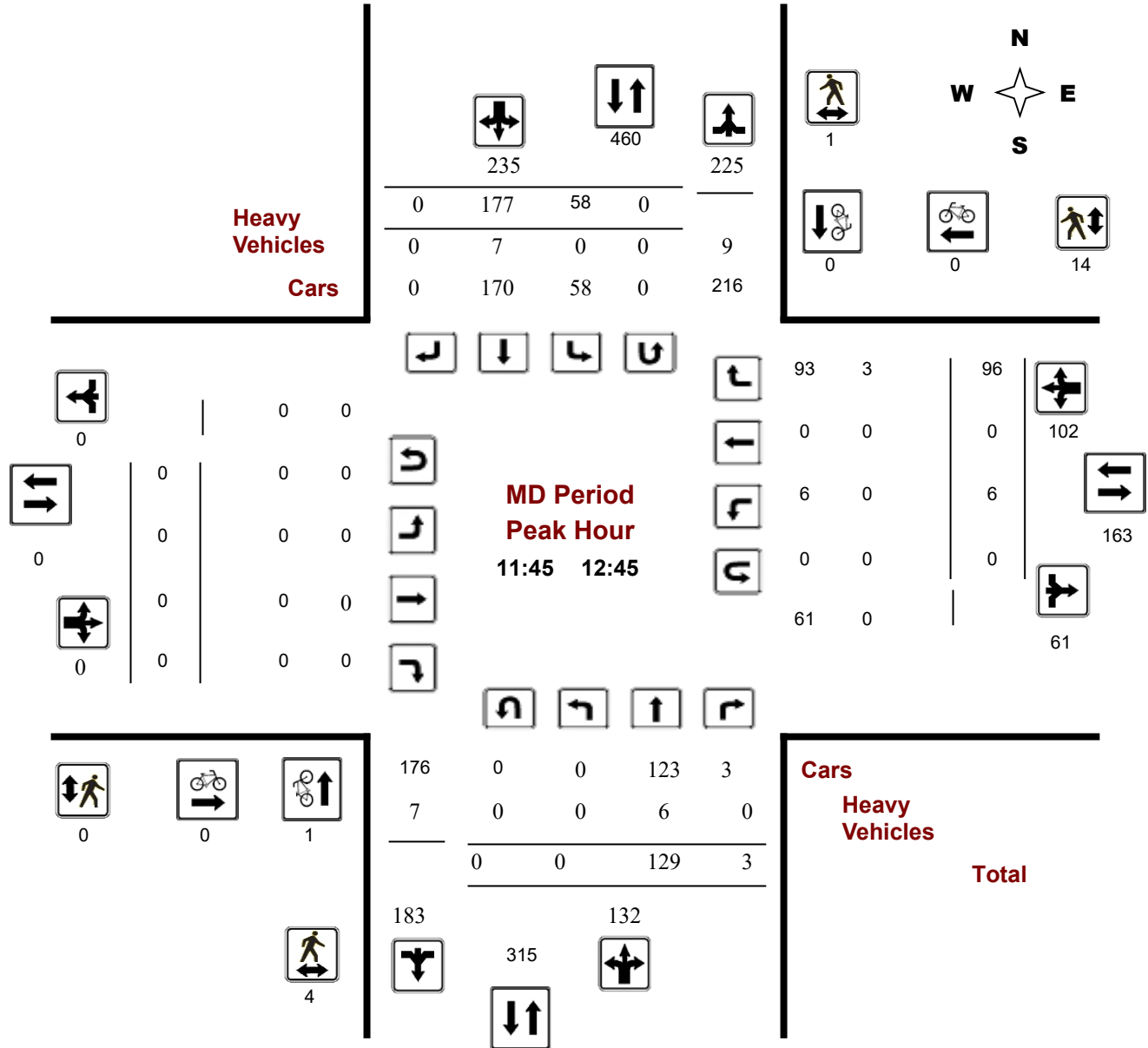
FAIRLEA CRES @ HEATHERINGTON RD N

Survey Date: Thursday, December 01, 2022

Start Time: 07:00

WO No: 40710

Device: Miovision



Turning Movement Count - Peak Hour Diagram

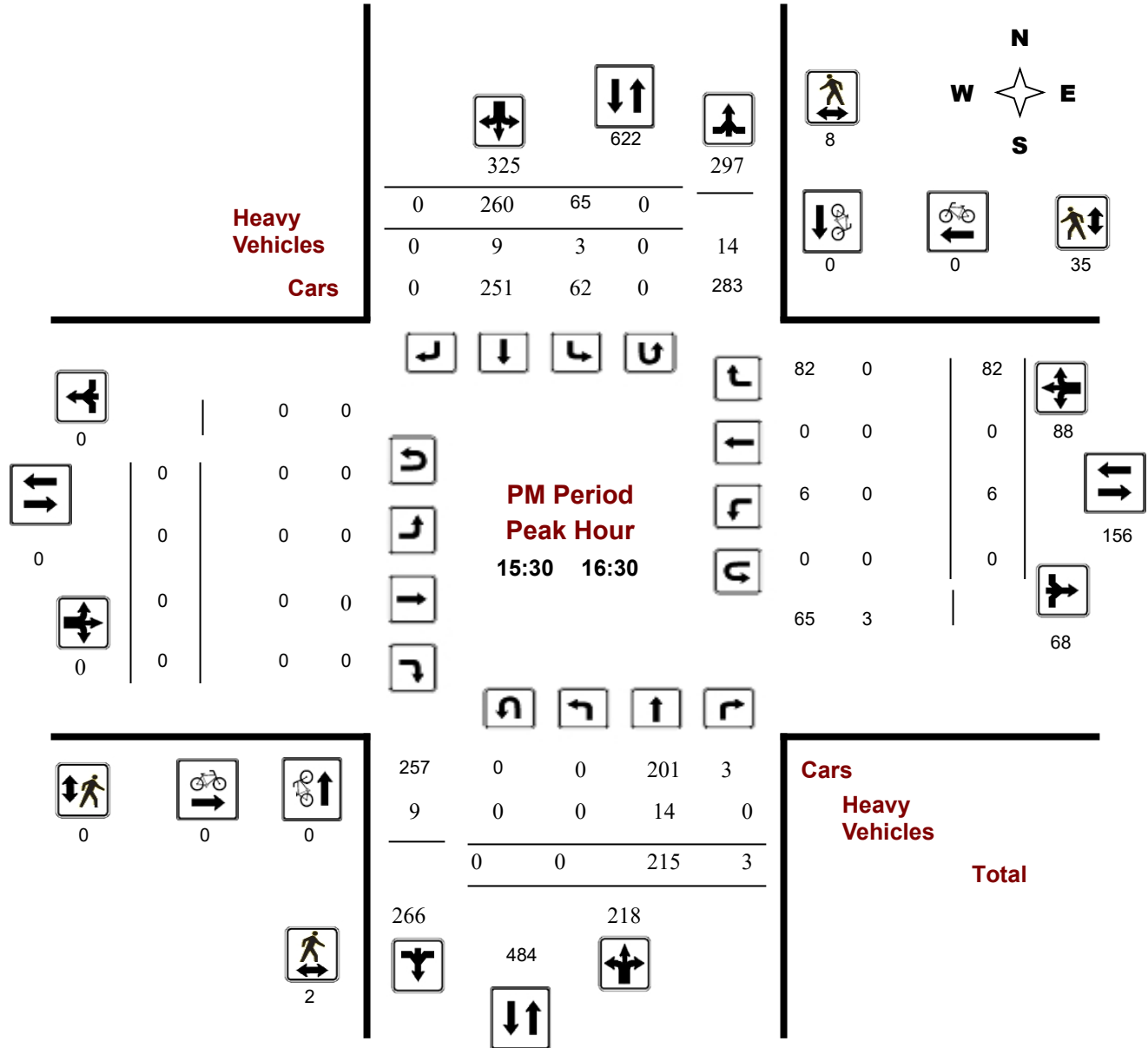
FAIRLEA CRES @ HEATHERINGTON RD N

Survey Date: Thursday, December 01, 2022

Start Time: 07:00

WO No: 40710

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Study Results FAIRLEA CRES @ HEATHERINGTON RD N

Survey Date: Thursday, December 01, 2022

WO No: 40710

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, December 01, 2022

Total Observed U-Turns

AADT Factor

Northbound: 0 Southbound: 1
Eastbound: 0 Westbound: 0

1.00

Period	Northbound				Southbound				STR TOT	Eastbound				Westbound				STR TOT	Grand Total	
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT		LT	ST	RT	EB TOT	LT	ST	RT	WB TOT			
07:00 08:00	0	170	0	170	27	99	0	126	296	0	0	0	0	1	0	68	69	69	365	
08:00 09:00	0	165	3	168	39	163	0	202	370	0	0	0	0	8	0	89	97	97	467	
09:00 10:00	0	162	9	171	39	174	0	213	384	0	0	0	0	6	0	89	95	95	479	
11:30 12:30	0	131	3	134	59	154	0	213	347	0	0	0	0	6	0	80	86	86	433	
12:30 13:30	0	113	5	118	52	170	0	222	340	0	0	0	0	8	0	118	126	126	466	
15:00 16:00	0	165	3	168	65	228	0	293	461	0	0	0	0	4	0	94	98	98	559	
16:00 17:00	0	205	3	208	76	260	0	336	544	0	0	0	0	7	0	71	78	78	622	
17:00 18:00	0	168	5	173	86	209	0	295	468	0	0	0	0	6	0	72	78	78	546	
Sub Total	0	1279	31	1310	443	1457	0	1900	3210	0	0	0	0	46	0	681	727	727	3937	
U Turns	0				1				1	0				0				0	0	1
Total	0	1279	31	1310	443	1457	0	1901	3211	0	0	0	0	46	0	681	727	727	3938	

EQ 12Hr 0 1778 43 1821 616 2025 0 2642 4463 0 0 0 0 64 0 947 1011 1011 5474

Note: These values are calculated by multiplying the totals by the appropriate expansion factor.

1.39

AVG 12Hr 0 1778 43 1821 616 2653 0 2642 4463 0 0 0 0 64 0 947 1011 1011 5474

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.

1.00

AVG 24Hr 0 2329 56 2386 807 3475 0 3461 5847 0 0 0 0 84 0 1241 1324 1324 7171

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 FAIRLEA CRES @ HEATHERINGTON RD N

Survey Date: Thursday, December 01, 2022

WO No: 40710

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

Time Period	Northbound				Southbound				Eastbound				Westbound				Grand Total			
	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT		W TOT	STR TOT	
07:00	07:15	0	32	0	32	1	23	0	24	56	0	0	0	0	0	0	10	10	10	66
07:15	07:30	0	48	0	48	5	31	0	36	84	0	0	0	0	0	0	14	14	14	98
07:30	07:45	0	43	0	43	6	17	0	23	66	0	0	0	0	0	0	15	15	15	81
07:45	08:00	0	47	0	47	15	28	0	43	90	0	0	0	0	1	0	29	30	30	120
08:00	08:15	0	44	1	45	13	51	0	64	109	0	0	0	0	1	0	26	27	27	136
08:15	08:30	0	42	0	42	1	39	0	40	82	0	0	0	0	0	0	14	14	14	96
08:30	08:45	0	38	0	38	10	41	0	51	89	0	0	0	0	6	0	24	30	30	119
08:45	09:00	0	41	2	43	15	32	0	47	90	0	0	0	0	1	0	25	26	26	116
09:00	09:15	0	43	2	45	13	50	0	63	108	0	0	0	0	2	0	25	27	27	135
09:15	09:30	0	57	1	58	12	37	0	49	107	0	0	0	0	3	0	16	19	19	126
09:30	09:45	0	30	3	33	6	44	0	50	83	0	0	0	0	1	0	27	28	28	111
09:45	10:00	0	32	3	35	8	43	0	51	86	0	0	0	0	0	0	21	21	21	107
11:30	11:45	0	29	1	30	13	23	0	36	66	0	0	0	0	3	0	21	24	24	90
11:45	12:00	0	35	0	35	13	45	0	58	93	0	0	0	0	0	0	19	19	19	112
12:00	12:15	0	36	1	37	23	37	0	60	97	0	0	0	0	1	0	20	21	21	118
12:15	12:30	0	31	1	32	10	49	0	59	91	0	0	0	0	2	0	20	22	22	113
12:30	12:45	0	27	1	28	12	46	0	58	86	0	0	0	0	3	0	37	40	40	126
12:45	13:00	0	24	2	26	15	42	0	57	83	0	0	0	0	1	0	19	20	20	103
13:00	13:15	0	32	0	32	12	42	0	54	86	0	0	0	0	4	0	35	39	39	125
13:15	13:30	0	30	2	32	13	40	0	53	85	0	0	0	0	0	0	27	27	27	112
15:00	15:15	0	34	0	34	19	40	0	59	93	0	0	0	0	1	0	18	19	19	112
15:15	15:30	0	34	1	35	17	62	0	79	114	0	0	0	0	0	0	33	33	33	147
15:30	15:45	0	53	1	54	17	59	0	76	130	0	0	0	0	2	0	25	27	27	157
15:45	16:00	0	44	1	45	12	67	0	79	124	0	0	0	0	1	0	18	19	19	143
16:00	16:15	0	61	0	61	16	72	0	88	149	0	0	0	0	1	0	23	24	24	173
16:15	16:30	0	57	1	58	20	62	0	82	140	0	0	0	0	2	0	16	18	18	158
16:30	16:45	0	41	1	42	20	61	0	81	123	0	0	0	0	3	0	17	20	20	143
16:45	17:00	0	46	1	47	20	65	0	85	132	0	0	0	0	1	0	15	16	16	148
17:00	17:15	0	66	2	68	22	49	0	71	139	0	0	0	0	2	0	21	23	23	162
17:15	17:30	0	32	1	33	27	56	0	83	116	0	0	0	0	1	0	18	19	19	135
17:30	17:45	0	34	0	34	18	52	0	71	105	0	0	0	0	0	0	16	16	16	121
17:45	18:00	0	36	2	38	19	52	0	71	109	0	0	0	0	3	0	17	20	20	129
Total:		0	1279	31	1310	443	1457	0	1901	3211	0	0	0	0	46	0	681	727	727	3,938

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results FAIRLEA CRES @ HEATHERINGTON RD N

Survey Date: Thursday, December 01, 2022

WO No: 40710

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

Time Period	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	1	1	0	0	0	1
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	1	0	1	0	0	0	1
11:45 12:00	1	0	1	0	0	0	1
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	2	2	0	0	0	2
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	1	0	1	0	0	0	1
17:15 17:30	0	1	1	0	0	0	1
17:30 17:45	1	0	1	0	0	0	1
17:45 18:00	0	0	0	0	0	0	0
Total	4	4	8	0	0	0	8



Transportation Services - Traffic Services

Turning Movement Count - Study Results FAIRLEA CRES @ HEATHERINGTON RD N

Survey Date: Thursday, December 01, 2022

WO No: 40710

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

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	0	0	0	0	0	0	0
07:15 07:30	0	0	0	0	6	6	6
07:30 07:45	1	0	1	0	1	1	2
07:45 08:00	1	4	5	0	9	9	14
08:00 08:15	0	0	0	0	1	1	1
08:15 08:30	0	1	1	0	6	6	7
08:30 08:45	1	0	1	0	4	4	5
08:45 09:00	1	1	2	0	6	6	8
09:00 09:15	0	0	0	0	1	1	1
09:15 09:30	0	2	2	0	3	3	5
09:30 09:45	0	1	1	0	4	4	5
09:45 10:00	0	0	0	0	3	3	3
11:30 11:45	0	0	0	0	2	2	2
11:45 12:00	1	1	2	0	3	3	5
12:00 12:15	1	0	1	0	1	1	2
12:15 12:30	2	0	2	0	5	5	7
12:30 12:45	0	0	0	0	5	5	5
12:45 13:00	0	0	0	0	8	8	8
13:00 13:15	0	0	0	0	3	3	3
13:15 13:30	0	2	2	0	5	5	7
15:00 15:15	0	0	0	0	6	6	6
15:15 15:30	0	2	2	0	3	3	5
15:30 15:45	2	3	5	0	8	8	13
15:45 16:00	0	0	0	0	8	8	8
16:00 16:15	0	2	2	0	10	10	12
16:15 16:30	0	3	3	0	9	9	12
16:30 16:45	0	1	1	0	6	6	7
16:45 17:00	2	1	3	0	3	3	6
17:00 17:15	0	1	1	0	4	4	5
17:15 17:30	0	0	0	0	7	7	7
17:30 17:45	0	0	0	0	5	5	5
17:45 18:00	0	2	2	0	5	5	7
Total	12	27	39	0	150	150	189



Transportation Services - Traffic Services

Turning Movement Count - Study Results FAIRLEA CRES @ HEATHERINGTON RD N

Survey Date: Thursday, December 01, 2022

WO No: 40710

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

Time Period	Northbound				Southbound				Eastbound				Westbound				Grand Total		
	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT		W TOT	STR TOT
07:00 07:15	0	2	0	5	0	3	0	5	10	0	0	0	0	0	0	0	0	0	5
07:15 07:30	0	5	0	7	0	2	0	7	14	0	0	0	0	0	0	0	0	0	7
07:30 07:45	0	3	0	4	1	1	0	5	9	0	0	0	0	0	0	0	1	1	5
07:45 08:00	0	3	0	5	2	2	0	7	12	0	0	0	0	0	0	0	2	2	7
08:00 08:15	0	4	0	9	0	4	0	8	17	0	0	0	0	1	0	0	1	1	9
08:15 08:30	0	2	0	5	0	3	0	6	11	0	0	0	0	0	0	1	1	1	6
08:30 08:45	0	3	0	5	3	2	0	8	13	0	0	0	0	0	0	0	3	3	8
08:45 09:00	0	4	0	10	1	6	0	13	23	0	0	0	0	0	0	2	3	3	13
09:00 09:15	0	2	0	4	0	2	0	4	8	0	0	0	0	0	0	0	0	0	4
09:15 09:30	0	1	0	3	1	1	0	3	6	0	0	0	0	1	0	0	2	2	4
09:30 09:45	0	1	0	2	0	1	0	2	4	0	0	0	0	0	0	0	0	0	2
09:45 10:00	0	1	0	2	1	1	0	3	5	0	0	0	0	0	0	0	1	1	3
11:30 11:45	0	1	0	2	3	1	0	5	7	0	0	0	0	0	0	0	3	3	5
11:45 12:00	0	3	0	5	0	2	0	6	11	0	0	0	0	0	0	1	1	1	6
12:00 12:15	0	1	0	3	0	2	0	4	7	0	0	0	0	0	0	1	1	1	4
12:15 12:30	0	0	0	2	0	2	0	2	4	0	0	0	0	0	0	0	0	0	2
12:30 12:45	0	2	0	3	0	1	0	4	7	0	0	0	0	0	0	1	1	1	4
12:45 13:00	0	2	0	3	0	1	0	3	6	0	0	0	0	0	0	0	0	0	3
13:00 13:15	0	1	0	2	0	1	0	2	4	0	0	0	0	0	0	0	0	0	2
13:15 13:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:00 15:15	0	3	0	5	1	2	0	7	12	0	0	0	0	0	0	1	2	2	7
15:15 15:30	0	2	1	5	1	2	0	7	12	0	0	0	0	0	0	2	4	4	8
15:30 15:45	0	2	0	4	0	2	0	4	8	0	0	0	0	0	0	0	0	0	4
15:45 16:00	0	2	0	4	2	2	0	6	10	0	0	0	0	0	0	0	2	2	6
16:00 16:15	0	4	0	6	0	2	0	6	12	0	0	0	0	0	0	0	0	0	6
16:15 16:30	0	6	0	9	1	3	0	10	19	0	0	0	0	0	0	0	1	1	10
16:30 16:45	0	1	0	5	0	4	0	5	10	0	0	0	0	0	0	0	0	0	5
16:45 17:00	0	2	0	3	0	1	0	3	6	0	0	0	0	0	0	0	0	0	3
17:00 17:15	0	2	0	3	0	1	0	3	6	0	0	0	0	0	0	0	0	0	3
17:15 17:30	0	2	0	3	0	1	0	3	6	0	0	0	0	0	0	0	0	0	3
17:30 17:45	0	1	0	2	0	1	0	2	4	0	0	0	0	0	0	0	0	0	2
17:45 18:00	0	2	0	3	0	1	0	3	6	0	0	0	0	0	0	0	0	0	3
Total: None	0	70	1	133	17	60	0	156	289	0	0	0	0	2	0	9	29	29	159



Transportation Services - Traffic Services

Turning Movement Count - Study Results FAIRLEA CRES @ HEATHERINGTON RD N

Survey Date: Thursday, December 01, 2022

WO No: 40710

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	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	1	0	0	1
17:45	18:00	0	0	0	0	0
Total		0	1	0	0	1

Turning Movement Count - Study Results

HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

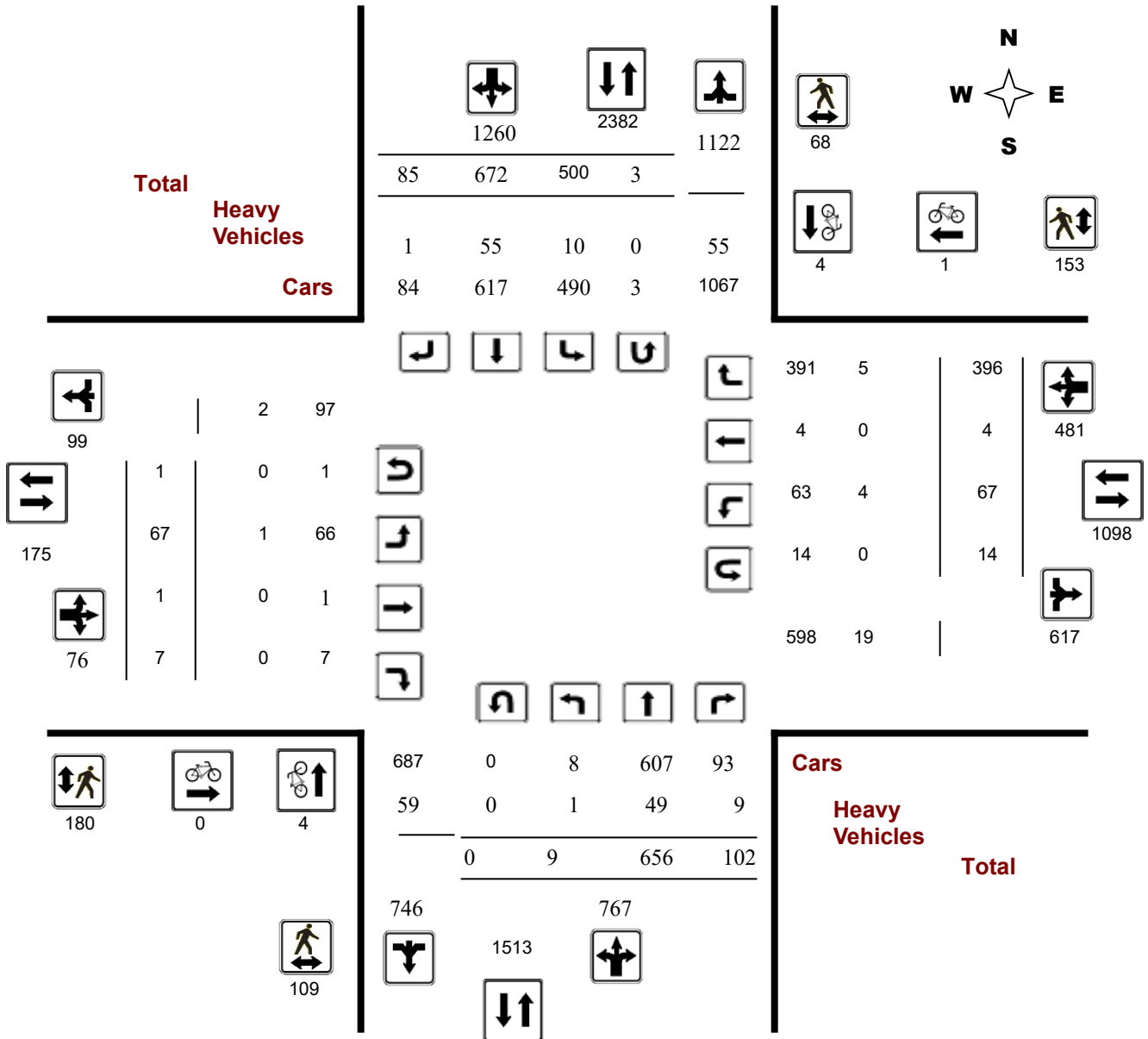
Survey Date: Wednesday, April 17, 2019

WO No: 38562

Start Time: 07:00

Device: Miovision

Full Study Diagram



Turning Movement Count - Study Results

HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

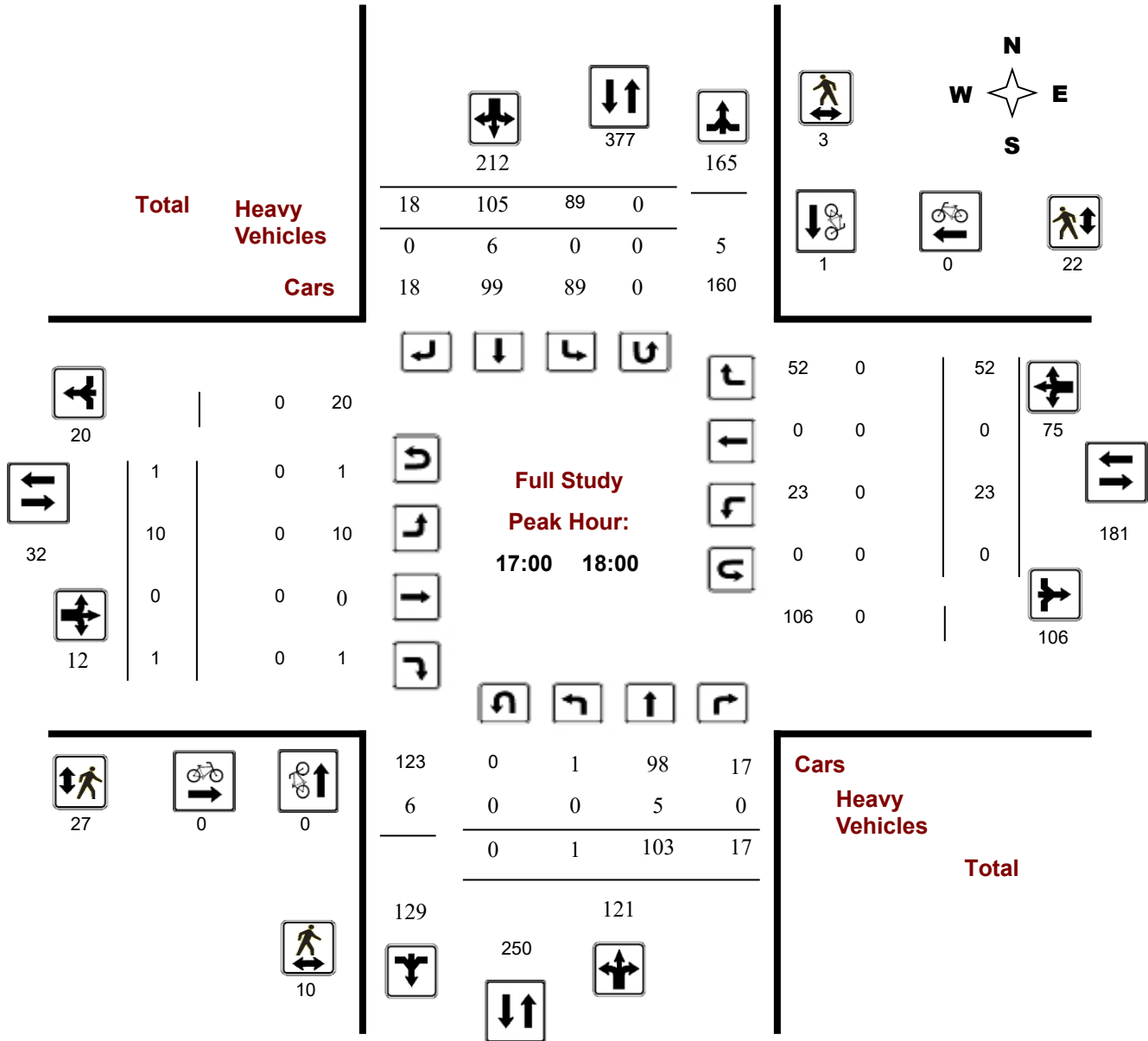
Survey Date: Wednesday, April 17, 2019

WO No: 38562

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



Turning Movement Count - Peak Hour Diagram

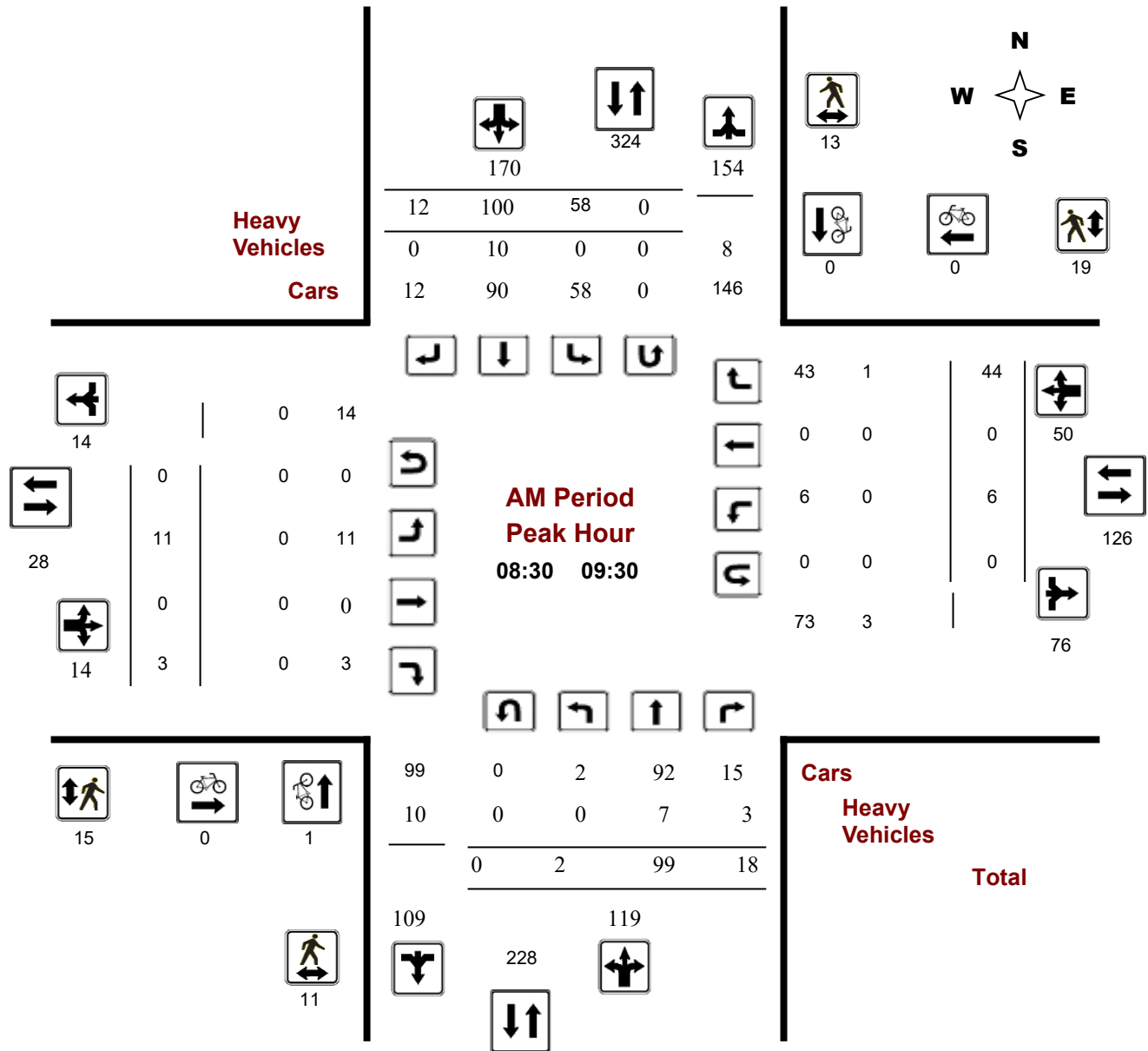
HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

Survey Date: Wednesday, April 17, 2019

Start Time: 07:00

WO No: 38562

Device: Miovision



Comments

Turning Movement Count - Peak Hour Diagram

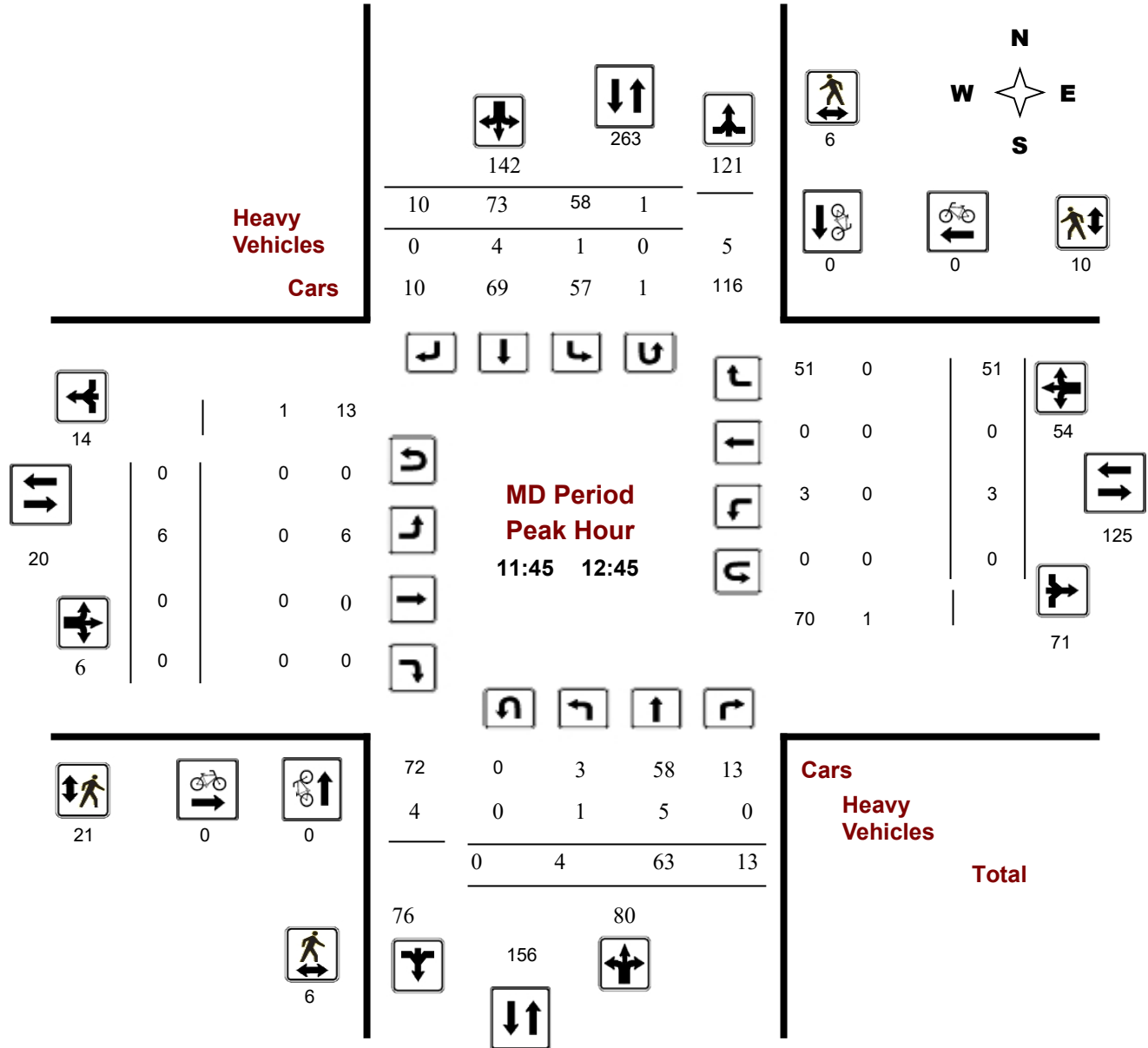
HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

Survey Date: Wednesday, April 17, 2019

Start Time: 07:00

WO No: 38562

Device: Miovision



Comments

Turning Movement Count - Peak Hour Diagram

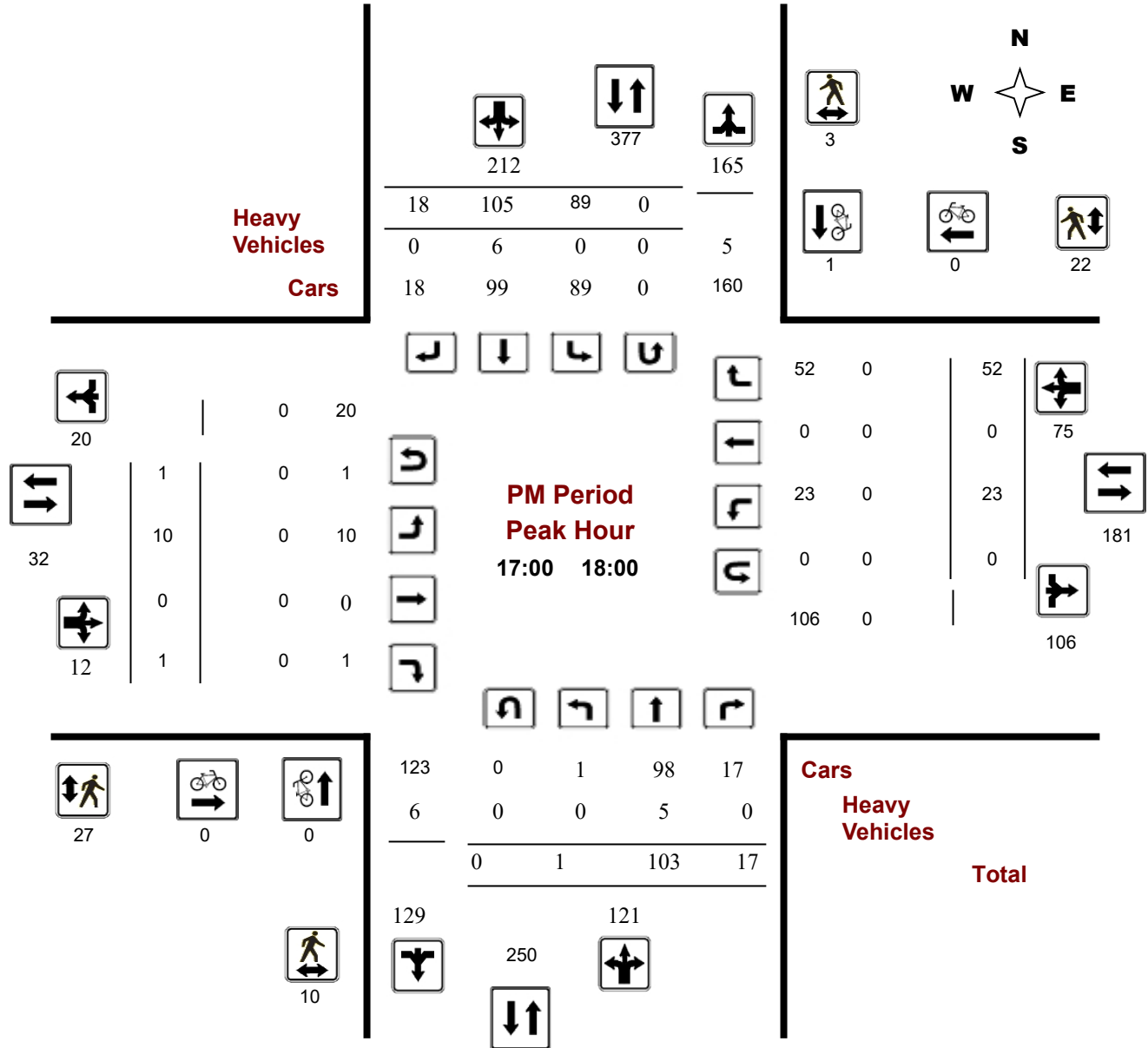
HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

Survey Date: Wednesday, April 17, 2019

Start Time: 07:00

WO No: 38562

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Study Results

HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

Survey Date: Wednesday, April 17, 2019

WO No: 38562

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, April 17, 2019

Total Observed U-Turns

AADT Factor

Northbound: 0 Southbound: 3
 Eastbound: 1 Westbound: 14

.90

Period	Northbound				Southbound				STR TOT	Eastbound				Westbound				STR TOT	Grand Total
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT		LT	ST	RT	EB TOT	LT	ST	RT	WB TOT		
07:00 08:00	0	77	3	80	33	53	6	92	172	12	0	0	12	11	1	75	87	99	271
08:00 09:00	0	86	11	97	50	73	9	132	229	13	1	1	15	0	1	53	54	69	298
09:00 10:00	2	82	13	97	57	95	7	159	256	5	0	3	8	10	0	36	46	54	310
11:30 12:30	3	66	14	83	57	66	7	130	213	5	0	0	5	4	0	49	53	58	271
12:30 13:30	3	63	9	75	56	71	11	138	213	10	0	0	10	3	0	39	42	52	265
15:00 16:00	0	94	18	112	81	105	9	195	307	2	0	2	4	8	1	44	53	57	364
16:00 17:00	0	85	17	102	77	104	18	199	301	10	0	0	10	8	1	48	57	67	368
17:00 18:00	1	103	17	121	89	105	18	212	333	10	0	1	11	23	0	52	75	86	419
Sub Total	9	656	102	767	500	672	85	1257	2024	67	1	7	75	67	4	396	467	542	2566
U Turns				0				3	3				1				14	15	18
Total	9	656	102	767	500	672	85	1260	2027	67	1	7	76	67	4	396	481	557	2584

EQ 12Hr 13 912 142 1066 695 934 118 1751 2818 93 1 10 106 93 6 550 669 774 3592

Note: These values are calculated by multiplying the totals by the appropriate expansion factor.

1.39

AVG 12Hr 12 821 128 959 626 1101 139 1576 2536 84 1 9 95 84 5 495 602 697 3233

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.

.90

AVG 24Hr 16 1076 168 1256 820 1442 182 2065 3322 110 1 12 124 110 7 648 789 913 4235

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

HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

Survey Date: Wednesday, April 17, 2019

WO No: 38562

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

Time Period	Northbound				Southbound				Eastbound				Westbound				Grand Total			
	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT		W TOT	STR TOT	
07:00	07:15	0	14	0	14	4	8	0	12	26	3	0	0	3	0	0	13	13	16	42
07:15	07:30	0	16	1	17	8	12	2	22	39	1	0	0	1	3	0	25	42	43	82
07:30	07:45	0	20	2	22	9	16	2	27	49	4	0	0	4	2	0	17	19	23	72
07:45	08:00	0	27	0	27	12	17	2	31	58	4	0	0	4	6	1	20	27	31	89
08:00	08:15	0	23	3	26	11	13	2	26	52	6	1	1	8	0	1	17	18	26	78
08:15	08:30	0	17	1	18	12	20	1	33	51	0	0	0	0	0	0	10	10	10	61
08:30	08:45	0	19	3	22	15	22	3	40	62	4	0	0	4	0	0	12	12	16	78
08:45	09:00	0	27	4	31	12	18	3	33	64	3	0	0	3	0	0	14	14	17	81
09:00	09:15	1	33	8	42	22	38	4	64	106	1	0	3	4	4	0	10	14	18	124
09:15	09:30	1	20	3	24	9	22	2	33	57	3	0	0	3	2	0	8	10	13	70
09:30	09:45	0	13	1	14	11	20	1	33	47	0	0	0	0	2	0	9	11	11	58
09:45	10:00	0	16	1	17	15	15	0	30	47	1	0	0	1	2	0	9	11	12	59
11:30	11:45	1	18	3	22	13	13	1	28	50	2	0	0	2	1	0	10	11	13	63
11:45	12:00	0	10	1	11	19	22	2	43	54	0	0	0	0	1	0	14	15	15	69
12:00	12:15	1	20	8	29	10	15	2	28	57	3	0	0	3	0	0	16	16	19	76
12:15	12:30	1	18	2	21	15	16	2	33	54	0	0	0	0	2	0	9	11	11	65
12:30	12:45	2	15	2	19	14	20	4	38	57	3	0	0	3	0	0	12	12	15	72
12:45	13:00	1	12	1	14	9	21	3	33	47	0	0	0	0	0	0	9	9	9	56
13:00	13:15	0	12	2	14	15	17	1	33	47	4	0	0	4	0	0	8	8	12	59
13:15	13:30	0	24	4	28	18	13	3	34	62	3	0	0	3	3	0	10	13	16	78
15:00	15:15	0	18	2	20	16	24	1	41	61	0	0	0	0	0	0	10	10	10	71
15:15	15:30	0	15	4	19	24	23	1	48	67	0	0	0	0	0	1	13	14	14	81
15:30	15:45	0	19	7	26	19	36	5	60	86	1	0	2	3	5	0	11	16	19	105
15:45	16:00	0	42	5	47	22	22	2	46	93	1	0	0	1	3	0	10	13	14	107
16:00	16:15	0	17	5	22	23	27	0	50	72	1	0	0	1	2	1	9	12	13	85
16:15	16:30	0	23	3	26	18	30	2	50	76	1	0	0	1	2	0	12	14	15	91
16:30	16:45	0	21	5	26	16	33	9	58	84	4	0	0	4	0	0	12	12	16	100
16:45	17:00	0	24	4	28	20	14	7	41	69	4	0	0	4	4	0	15	19	23	92
17:00	17:15	0	29	6	35	26	25	4	55	90	3	0	0	3	6	0	15	21	24	114
17:15	17:30	0	18	4	22	18	35	4	57	79	3	0	1	5	2	0	16	18	23	102
17:30	17:45	1	17	4	22	21	15	4	40	62	0	0	0	0	6	0	11	17	17	79
17:45	18:00	0	39	3	42	24	30	6	60	102	4	0	0	4	9	0	10	19	23	125
Total:		9	656	102	767	500	672	85	1260	2027	67	1	7	76	67	4	396	481	557	2,584

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

Survey Date: Wednesday, April 17, 2019

WO No: 38562

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

Time Period	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	1	0	1	0	0	0	1
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	1	0	1	0	0	0	1
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	1	0	1	0	0	0	1
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	1	0	1	0	0	0	1
15:30 15:45	0	1	1	0	0	0	1
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	1	1	0	1	1	2
16:45 17:00	0	1	1	0	0	0	1
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	1	1	0	0	0	1
Total	4	4	8	0	1	1	9



Transportation Services - Traffic Services

Turning Movement Count - Study Results

HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

Survey Date: Wednesday, April 17, 2019

WO No: 38562

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

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	4	0	4	0	2	2	6
07:15 07:30	10	12	22	17	11	28	50
07:30 07:45	2	0	2	2	3	5	7
07:45 08:00	3	2	5	6	3	9	14
08:00 08:15	7	0	7	2	0	2	9
08:15 08:30	3	6	9	2	1	3	12
08:30 08:45	3	2	5	1	3	4	9
08:45 09:00	2	6	8	5	3	8	16
09:00 09:15	5	4	9	8	10	18	27
09:15 09:30	1	1	2	1	3	4	6
09:30 09:45	3	1	4	4	7	11	15
09:45 10:00	1	0	1	1	4	5	6
11:30 11:45	0	0	0	0	3	3	3
11:45 12:00	2	1	3	6	3	9	12
12:00 12:15	0	4	4	9	3	12	16
12:15 12:30	3	0	3	3	3	6	9
12:30 12:45	1	1	2	3	1	4	6
12:45 13:00	0	1	1	2	4	6	7
13:00 13:15	1	1	2	8	1	9	11
13:15 13:30	4	0	4	6	1	7	11
15:00 15:15	10	5	15	11	7	18	33
15:15 15:30	1	4	5	8	6	14	19
15:30 15:45	5	5	10	17	7	24	34
15:45 16:00	7	2	9	6	16	22	31
16:00 16:15	12	0	12	7	8	15	27
16:15 16:30	3	5	8	3	6	9	17
16:30 16:45	2	0	2	5	6	11	13
16:45 17:00	4	2	6	10	6	16	22
17:00 17:15	2	1	3	7	5	12	15
17:15 17:30	3	0	3	9	3	12	15
17:30 17:45	1	1	2	4	3	7	9
17:45 18:00	4	1	5	7	11	18	23
Total	109	68	177	180	153	333	510



Transportation Services - Traffic Services

Turning Movement Count - Study Results

HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

Survey Date: Wednesday, April 17, 2019

WO No: 38562

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

Time Period	Northbound				Southbound				Eastbound				Westbound				Grand Total		
	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT		W TOT	STR TOT
07:00 07:15	0	1	0	3	0	2	0	3	6	0	0	0	0	0	0	0	0	0	3
07:15 07:30	0	1	1	7	2	4	0	7	14	0	0	0	0	1	0	0	4	4	9
07:30 07:45	0	2	0	4	0	2	0	4	8	0	0	0	0	0	0	0	0	0	4
07:45 08:00	0	1	0	4	1	2	0	5	9	0	0	0	0	1	0	1	3	3	6
08:00 08:15	0	2	1	7	0	4	0	6	13	0	0	0	0	0	0	0	1	1	7
08:15 08:30	0	1	0	3	0	2	0	3	6	0	0	0	0	0	0	0	0	0	3
08:30 08:45	0	2	1	7	0	4	0	6	13	0	0	0	0	0	0	0	1	1	7
08:45 09:00	0	3	1	4	0	0	0	3	7	0	0	0	0	0	0	0	1	1	4
09:00 09:15	0	1	0	4	0	3	0	5	9	0	0	0	0	0	0	1	1	1	5
09:15 09:30	0	1	1	5	0	3	0	4	9	0	0	0	0	0	0	0	1	1	5
09:30 09:45	0	2	0	5	3	3	0	9	14	0	0	0	0	0	0	1	4	4	9
09:45 10:00	0	1	0	1	0	0	0	2	3	0	0	0	0	0	0	1	1	1	2
11:30 11:45	0	1	1	3	0	1	0	2	5	0	0	0	0	0	0	0	1	1	3
11:45 12:00	0	2	0	3	1	1	0	4	7	0	0	0	0	0	0	0	1	1	4
12:00 12:15	0	0	0	1	0	1	0	1	2	0	0	0	0	0	0	0	0	0	1
12:15 12:30	0	1	0	2	0	1	0	2	4	0	0	0	0	0	0	0	0	0	2
12:30 12:45	1	2	0	4	0	1	0	3	7	0	0	0	1	0	0	0	0	1	4
12:45 13:00	0	1	0	3	0	2	0	3	6	0	0	0	0	0	0	0	0	0	3
13:00 13:15	0	1	0	2	0	1	0	3	5	1	0	0	1	0	0	0	0	1	3
13:15 13:30	0	2	0	3	1	1	1	5	8	0	0	0	1	0	0	0	1	2	5
15:00 15:15	0	2	0	4	1	2	0	5	9	0	0	0	0	0	0	0	1	1	5
15:15 15:30	0	1	1	3	1	1	0	3	6	0	0	0	0	0	0	0	2	2	4
15:30 15:45	0	1	0	3	0	2	0	3	6	0	0	0	0	0	0	0	0	0	3
15:45 16:00	0	4	0	6	0	1	0	5	11	0	0	0	0	1	0	0	1	1	6
16:00 16:15	0	3	1	5	0	1	0	4	9	0	0	0	0	0	0	0	1	1	5
16:15 16:30	0	2	0	5	0	2	0	4	9	0	0	0	0	1	0	0	1	1	5
16:30 16:45	0	1	1	3	0	1	0	2	5	0	0	0	0	0	0	0	1	1	3
16:45 17:00	0	2	0	3	0	1	0	4	7	0	0	0	0	0	0	1	1	1	4
17:00 17:15	0	3	0	5	0	2	0	5	10	0	0	0	0	0	0	0	0	0	5
17:15 17:30	0	0	0	2	0	2	0	2	4	0	0	0	0	0	0	0	0	0	2
17:30 17:45	0	1	0	1	0	0	0	1	2	0	0	0	0	0	0	0	0	0	1
17:45 18:00	0	1	0	3	0	2	0	3	6	0	0	0	0	0	0	0	0	0	3
Total: None	1	49	9	118	10	55	1	121	239	1	0	0	3	4	0	5	28	31	135



Transportation Services - Traffic Services

Turning Movement Count - Study Results

HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

Survey Date: Wednesday, April 17, 2019

WO No: 38562

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	0	14	14
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	1	0	0	1
09:45	10:00	0	0	0	0	0
11:30	11:45	0	1	0	0	1
11:45	12:00	0	0	0	0	0
12:00	12:15	0	1	0	0	1
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	1	0	1
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		0	3	1	14	18

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

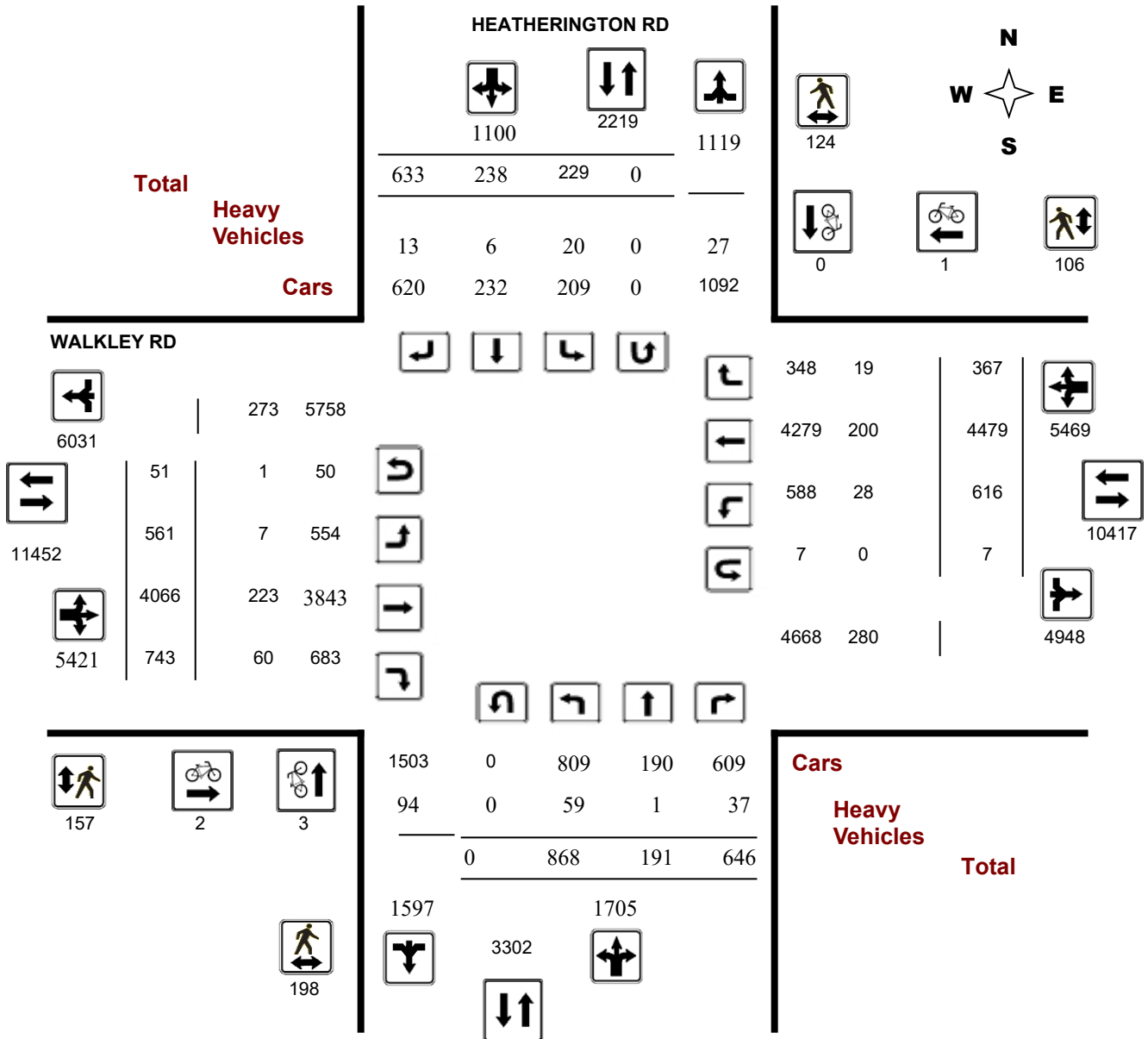
Survey Date: Wednesday, November 16, 2016

WO No: 36490

Start Time: 07:00

Device: Miovision

Full Study Diagram



Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

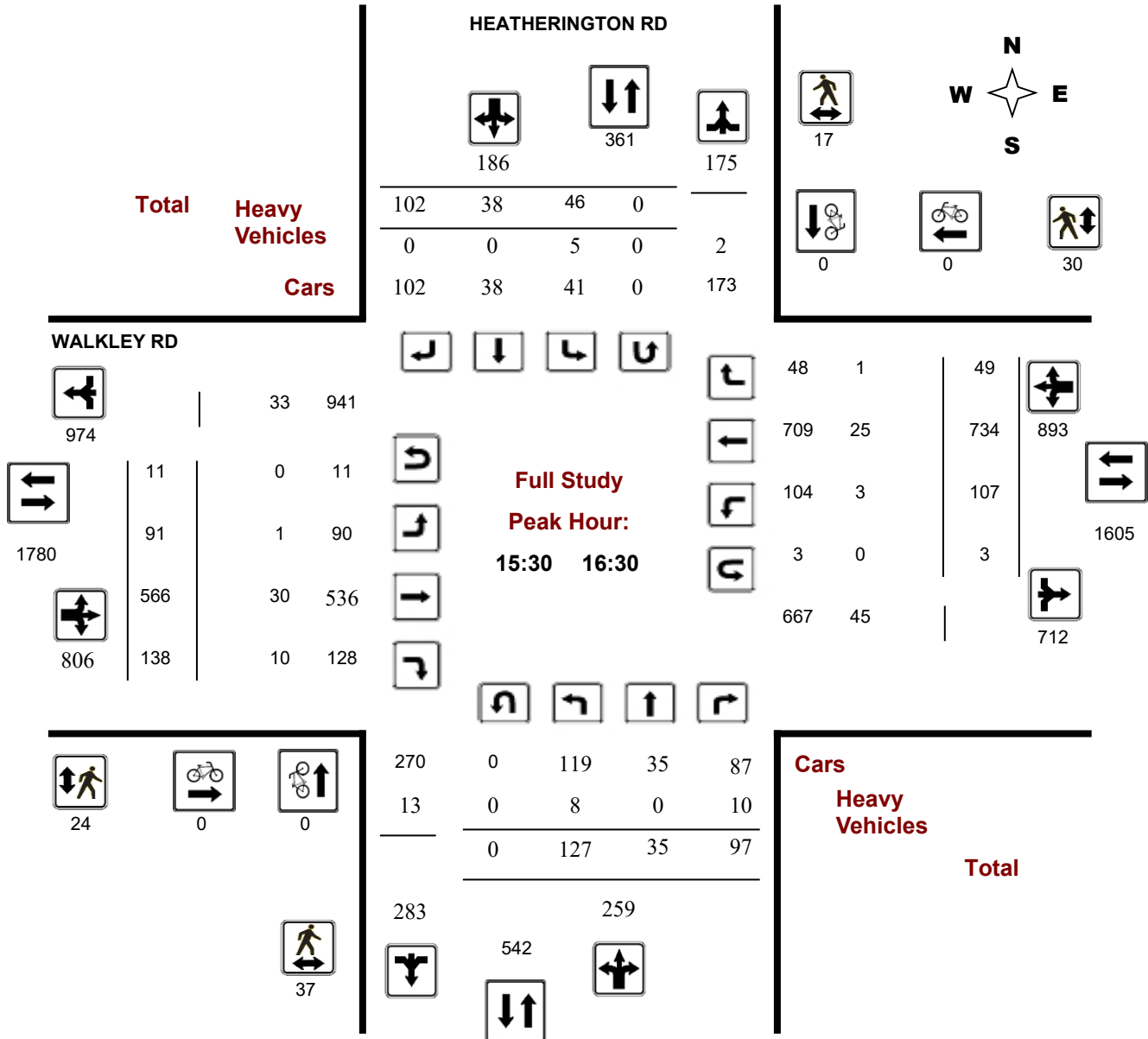
Survey Date: Wednesday, November 16, 2016

WO No: 36490

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



Turning Movement Count - Peak Hour Diagram

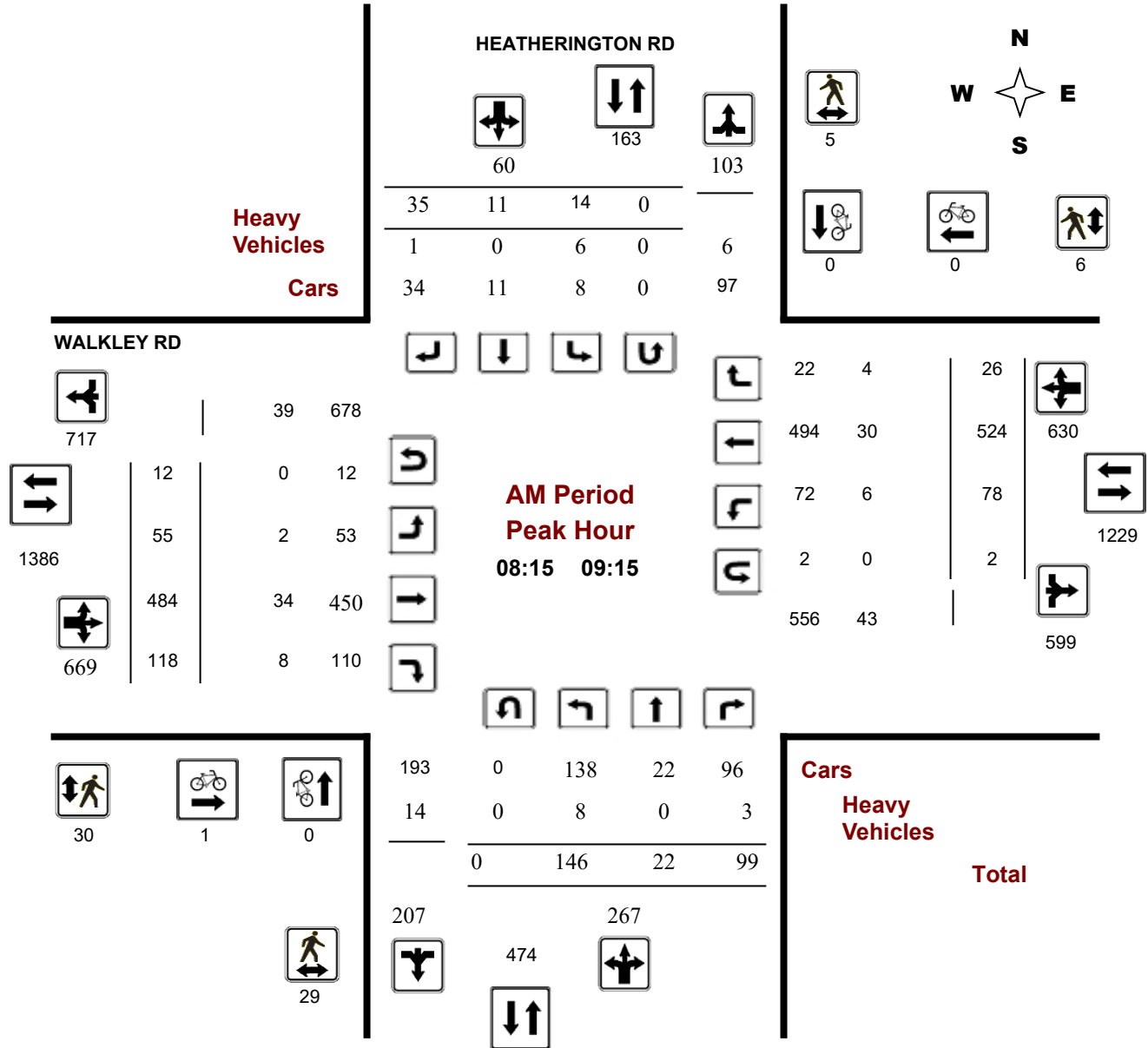
WALKLEY RD @ HEATHERINGTON RD

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36490

Device: Miovision



Comments

Turning Movement Count - Peak Hour Diagram

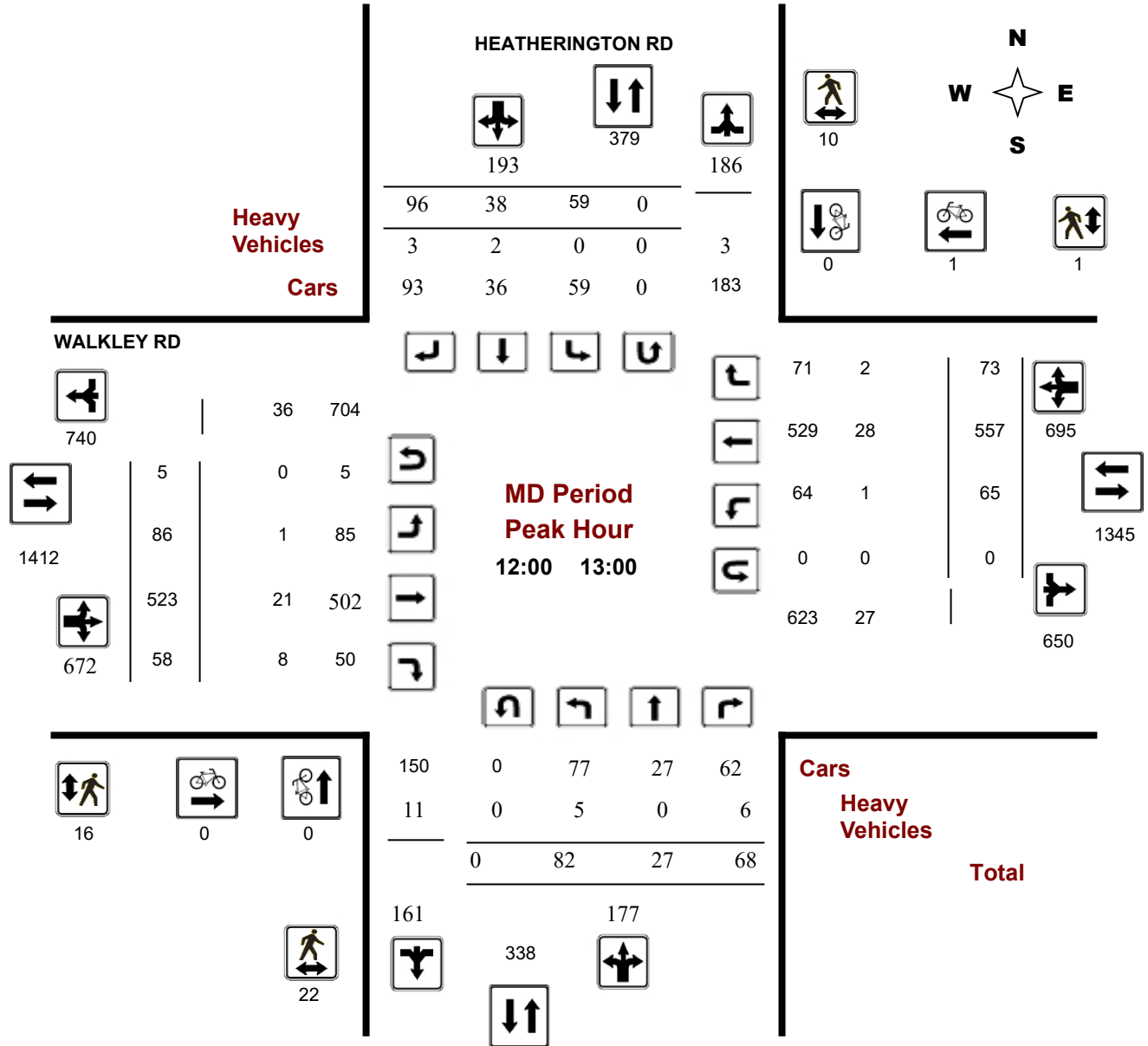
WALKLEY RD @ HEATHERINGTON RD

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36490

Device: Miovision



Turning Movement Count - Peak Hour Diagram

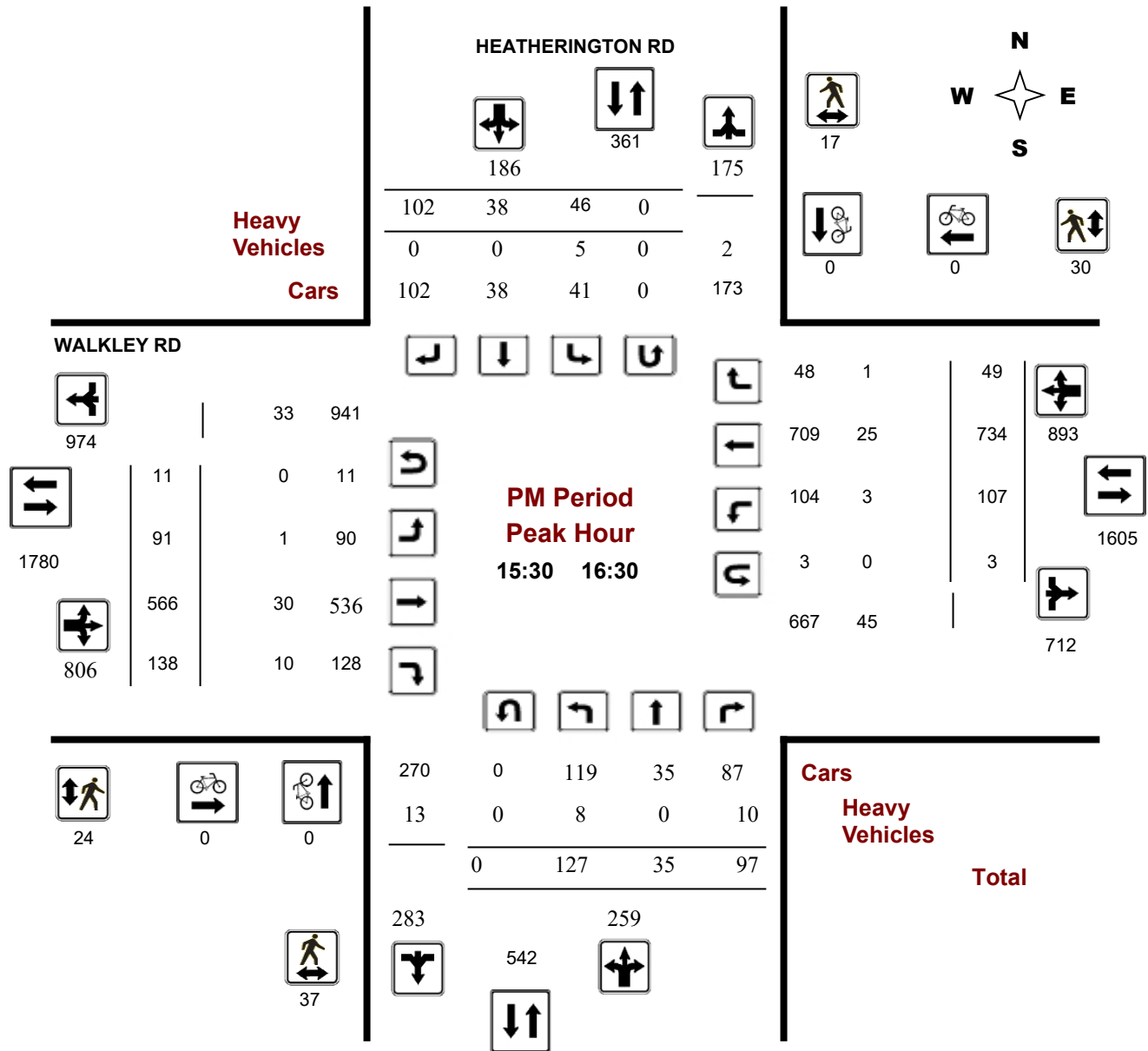
WALKLEY RD @ HEATHERINGTON RD

Survey Date: Wednesday, November 16, 2016

Start Time: 07:00

WO No: 36490

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Wednesday, November 16, 2016

WO No: 36490

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, November 16, 2016

Total Observed U-Turns
 Northbound: 0 Southbound: 0
 Eastbound: 51 Westbound: 7

AADT Factor

.90

HEATHERINGTON RD

WALKLEY RD

Period	Northbound				Southbound				STR TOT	Eastbound			Westbound			WB TOT	STR TOT	Grand Total	
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT		LT	ST	RT	EB TOT	LT	ST				RT
07:00 08:00	122	11	81	214	4	9	19	32	246	30	474	59	563	70	443	17	530	1093	1339
08:00 09:00	146	21	102	269	11	10	35	56	325	45	504	91	640	76	523	22	621	1261	1586
09:00 10:00	112	22	78	212	10	25	44	79	291	59	433	90	582	61	453	29	543	1125	1416
11:30 12:30	91	23	60	174	48	33	114	195	369	89	495	68	652	63	540	77	680	1332	1701
12:30 13:30	82	25	70	177	44	35	90	169	346	74	495	66	635	65	495	58	618	1253	1599
15:00 16:00	129	31	91	251	38	34	119	191	442	96	567	148	811	84	655	52	791	1602	2044
16:00 17:00	101	20	78	199	38	43	111	192	391	77	573	118	768	103	743	46	892	1660	2051
17:00 18:00	85	38	86	209	36	49	101	186	395	91	525	103	719	94	627	66	787	1506	1901
Sub Total	868	191	646	1705	229	238	633	1100	2805	561	4066	743	5370	616	4479	367	5462	10832	13637
U Turns				0				0	0				0				0	0	0
Total	868	191	646	1705	229	238	633	1100	2805	561	4066	743	5370	616	4479	367	5462	10832	13637

EQ 12Hr 1207 265 898 **2370** 318 331 880 **1529** **3899** 780 5652 1033 **7535** 856 6226 510 **7602** **15137** **19036**

Note: These values are calculated by multiplying the totals by the appropriate expansion factor.

1.39

AVG 12Hr 1086 238 808 **2133** 286 390 1037 **1376** **3509** 702 5087 930 **6782** 770 5603 459 **6842** **13623** **17132**

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.

.90

AVG 24Hr 1423 312 1058 **2794** 375 511 1358 **1803** **4597** 920 6664 1218 **8884** 1009 7340 601 **8963** **17846** **22443**

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

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Wednesday, November 16, 2016

WO No: 36490

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

HEATHERINGTON RD

WALKLEY 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	17	0	16	33	0	1	1	2	35	4	100	9	113	11	97	5	114	227	262
07:15-07:30	25	2	25	52	2	0	7	9	61	7	116	13	138	15	93	6	114	252	313
07:30-07:45	42	4	14	60	1	3	4	8	68	9	143	16	168	23	114	3	140	308	376
07:45-08:00	38	5	26	69	1	5	7	13	82	10	115	21	147	21	139	3	163	310	392
08:00-08:15	31	8	26	65	0	2	9	11	76	10	125	13	149	16	121	2	139	288	364
08:15-08:30	43	4	30	77	5	4	10	19	96	5	118	25	150	27	116	14	158	308	404
08:30-08:45	32	2	24	58	2	0	8	10	68	16	117	23	160	17	149	2	168	328	396
08:45-09:00	40	7	22	69	4	4	8	16	85	14	144	30	190	16	137	4	158	348	433
09:00-09:15	31	9	23	63	3	3	9	15	78	20	105	40	169	18	122	6	146	315	393
09:15-09:30	29	3	24	56	2	6	11	19	75	19	124	20	164	17	107	9	133	297	372
09:30-09:45	37	6	17	60	4	7	13	24	84	11	108	15	135	14	120	9	143	278	362
09:45-10:00	15	4	14	33	1	9	11	21	54	9	96	15	120	12	104	5	121	241	295
11:30-11:45	22	3	16	41	12	11	30	53	94	20	114	19	153	9	112	16	137	290	384
11:45-12:00	20	5	9	34	7	5	32	44	78	22	113	15	155	17	125	20	162	317	395
12:00-12:15	20	10	17	47	12	4	21	37	84	21	125	20	168	18	152	14	184	352	436
12:15-12:30	29	5	18	52	17	13	31	61	113	26	143	14	184	19	151	27	197	381	494
12:30-12:45	17	6	15	38	20	8	25	53	91	17	134	9	162	13	123	15	151	313	404
12:45-13:00	16	6	18	40	10	13	19	42	82	22	121	15	158	15	131	17	163	321	403
13:00-13:15	23	7	15	45	9	6	28	43	88	17	117	20	156	22	123	14	159	315	403
13:15-13:30	26	6	22	54	5	8	18	31	85	18	123	22	164	15	118	12	145	309	394
15:00-15:15	34	4	19	57	8	8	30	46	103	21	143	24	190	18	160	14	192	382	485
15:15-15:30	23	6	19	48	9	12	38	59	107	21	152	44	220	16	150	13	179	399	506
15:30-15:45	28	8	21	57	9	4	23	36	93	21	134	46	202	28	171	14	213	415	508
15:45-16:00	44	13	32	89	12	10	28	50	139	33	138	34	211	22	174	11	207	418	557
16:00-16:15	35	5	27	67	15	12	20	47	114	20	145	33	201	24	188	12	227	428	542
16:15-16:30	20	9	17	46	10	12	31	53	99	17	149	25	192	33	201	12	246	438	537
16:30-16:45	22	4	16	42	8	8	31	47	89	15	151	22	188	18	175	11	204	392	481
16:45-17:00	24	2	18	44	5	11	29	45	89	25	128	38	192	28	179	11	218	410	499
17:00-17:15	18	7	25	50	6	12	19	37	87	21	146	28	196	24	168	15	207	403	490
17:15-17:30	27	9	19	55	14	9	29	52	107	19	139	23	181	24	187	22	233	414	521
17:30-17:45	22	10	21	53	7	16	25	48	101	24	122	31	179	26	144	21	191	370	471
17:45-18:00	18	12	21	51	9	12	28	49	100	27	118	21	166	20	128	8	157	323	423
Total:	868	191	646	1705	229	238	633	1100	2805	561	4066	743	5421	616	4479	367	5469	10890	13,695

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Wednesday, November 16, 2016

WO No: 36490

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

HEATHERINGTON RD

WALKLEY RD

Time Period	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	2	0	2	0	0	0	2
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	1	0	1	1
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	1	1	1
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	1	0	1	0	0	0	1
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	1	0	1	1
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	3	0	3	2	1	3	6



Transportation Services - Traffic Services

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Wednesday, November 16, 2016

WO No: 36490

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

HEATHERINGTON RD

WALKLEY 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	2	2	4	1	1	2	6
07:15 07:30	6	0	6	2	1	3	9
07:30 07:45	5	2	7	1	3	4	11
07:45 08:00	5	1	6	0	0	0	6
08:00 08:15	5	4	9	3	0	3	12
08:15 08:30	5	0	5	5	2	7	12
08:30 08:45	10	0	10	8	1	9	19
08:45 09:00	9	3	12	11	0	11	23
09:00 09:15	5	2	7	6	3	9	16
09:15 09:30	11	2	13	0	2	2	15
09:30 09:45	1	3	4	0	4	4	8
09:45 10:00	3	1	4	0	3	3	7
11:30 11:45	0	10	10	0	3	3	13
11:45 12:00	6	5	11	1	2	3	14
12:00 12:15	6	1	7	5	0	5	12
12:15 12:30	2	3	5	6	0	6	11
12:30 12:45	3	4	7	2	0	2	9
12:45 13:00	11	2	13	3	1	4	17
13:00 13:15	8	4	12	3	3	6	18
13:15 13:30	2	1	3	6	2	8	11
15:00 15:15	12	6	18	7	8	15	33
15:15 15:30	3	4	7	14	4	18	25
15:30 15:45	12	7	19	6	10	16	35
15:45 16:00	10	4	14	6	6	12	26
16:00 16:15	4	3	7	4	9	13	20
16:15 16:30	11	3	14	8	5	13	27
16:30 16:45	7	8	15	8	10	18	33
16:45 17:00	7	6	13	11	10	21	34
17:00 17:15	2	14	16	1	6	7	23
17:15 17:30	9	5	14	11	5	16	30
17:30 17:45	6	8	14	9	1	10	24
17:45 18:00	10	6	16	9	1	10	26
Total	198	124	322	157	106	263	585



Transportation Services - Traffic Services

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Wednesday, November 16, 2016

WO No: 36490

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

HEATHERINGTON RD

WALKLEY RD

Northbound

Southbound

Eastbound

Westbound

Time Period	Northbound				Southbound				Eastbound				Westbound				Grand Total			
	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT		W TOT	STR TOT	
07:00-07:15	1	0	1	4	0	0	0	1	5	1	6	2	24	0	14	0	21	45	25	
07:15-07:30	1	0	1	7	1	0	1	3	10	0	15	3	24	2	4	1	24	48	29	
07:30-07:45	3	0	0	10	0	0	1	2	12	0	3	4	21	3	10	1	17	38	25	
07:45-08:00	3	0	1	6	0	0	0	0	6	0	9	2	28	0	14	0	24	52	29	
08:00-08:15	2	0	1	9	0	0	0	0	9	0	10	4	23	2	7	0	20	43	26	
08:15-08:30	1	0	0	5	3	0	0	7	12	0	6	3	19	1	9	4	23	42	27	
08:30-08:45	3	0	1	7	0	0	1	2	9	1	6	1	22	2	10	0	19	41	25	
08:45-09:00	2	0	2	8	2	0	0	2	10	0	9	3	21	1	7	0	21	42	26	
09:00-09:15	2	0	0	5	1	0	0	2	7	1	13	1	21	2	4	0	20	41	24	
09:15-09:30	2	0	1	8	0	0	1	3	11	1	9	1	19	4	5	1	20	39	25	
09:30-09:45	3	0	1	7	0	1	1	2	9	0	7	2	21	0	6	0	14	35	22	
09:45-10:00	2	0	1	7	0	1	1	3	10	0	8	2	18	1	5	1	16	34	22	
11:30-11:45	1	0	2	4	0	0	1	2	6	0	10	1	18	0	5	1	18	36	21	
11:45-12:00	1	0	0	1	3	0	1	5	6	0	3	0	11	0	6	1	13	24	15	
12:00-12:15	1	0	1	4	0	0	2	2	6	0	5	2	16	0	6	0	12	28	17	
12:15-12:30	1	0	1	5	0	1	1	4	9	1	5	2	18	0	8	1	15	33	21	
12:30-12:45	1	0	1	4	0	0	0	1	5	0	5	1	14	1	7	1	15	29	17	
12:45-13:00	2	0	3	9	0	1	0	1	10	0	6	3	18	0	7	0	16	34	22	
13:00-13:15	1	0	1	6	0	0	0	0	6	0	3	1	11	3	6	0	13	24	15	
13:15-13:30	2	0	1	4	1	0	0	2	6	0	5	1	17	0	9	1	17	34	20	
15:00-15:15	2	0	2	8	1	0	0	1	9	0	13	3	23	1	5	0	22	45	27	
15:15-15:30	0	1	1	5	1	1	1	4	9	0	9	2	19	0	7	0	18	37	23	
15:30-15:45	2	0	0	6	0	0	0	0	6	0	9	2	24	2	11	0	22	46	26	
15:45-16:00	3	0	4	12	2	0	0	4	16	1	10	5	26	0	7	1	24	50	33	
16:00-16:15	2	0	5	9	0	0	0	0	9	0	7	1	14	1	4	0	17	31	20	
16:15-16:30	1	0	1	4	3	0	0	3	7	0	4	2	10	0	3	0	11	21	14	
16:30-16:45	4	0	1	6	0	0	0	2	8	0	5	1	11	0	1	2	9	20	14	
16:45-17:00	2	0	1	7	0	0	0	1	8	0	7	3	19	1	7	1	17	36	22	
17:00-17:15	1	0	2	3	1	0	0	3	6	1	8	0	11	0	1	1	13	24	15	
17:15-17:30	3	0	0	5	1	0	0	1	6	0	4	2	11	0	2	0	7	18	12	
17:30-17:45	0	0	0	2	0	1	0	2	4	0	4	0	7	1	3	1	9	16	10	
17:45-18:00	4	0	0	4	0	0	1	1	5	0	0	0	5	0	0	0	0	5	5	
Total:	None	59	1	37	191	20	6	13	66	257	7	223	60	564	28	200	19	527	1091	674



Transportation Services - Traffic Services

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Wednesday, November 16, 2016

WO No: 36490

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

HEATHERINGTON RD

WALKLEY RD

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	1	1
07:15	07:30	0	0	2	0	2
07:30	07:45	0	0	0	0	0
07:45	08:00	0	0	1	0	1
08:00	08:15	0	0	1	0	1
08:15	08:30	0	0	2	1	3
08:30	08:45	0	0	4	0	4
08:45	09:00	0	0	2	1	3
09:00	09:15	0	0	4	0	4
09:15	09:30	0	0	1	0	1
09:30	09:45	0	0	1	0	1
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	5	0	5
12:00	12:15	0	0	2	0	2
12:15	12:30	0	0	1	0	1
12:30	12:45	0	0	2	0	2
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	2	0	2
13:15	13:30	0	0	1	0	1
15:00	15:15	0	0	2	0	2
15:15	15:30	0	0	3	0	3
15:30	15:45	0	0	1	0	1
15:45	16:00	0	0	6	0	6
16:00	16:15	0	0	3	3	6
16:15	16:30	0	0	1	0	1
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	1	0	1
17:00	17:15	0	0	1	0	1
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	2	0	2
17:45	18:00	0	0	0	1	1
Total		0	0	51	7	58

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

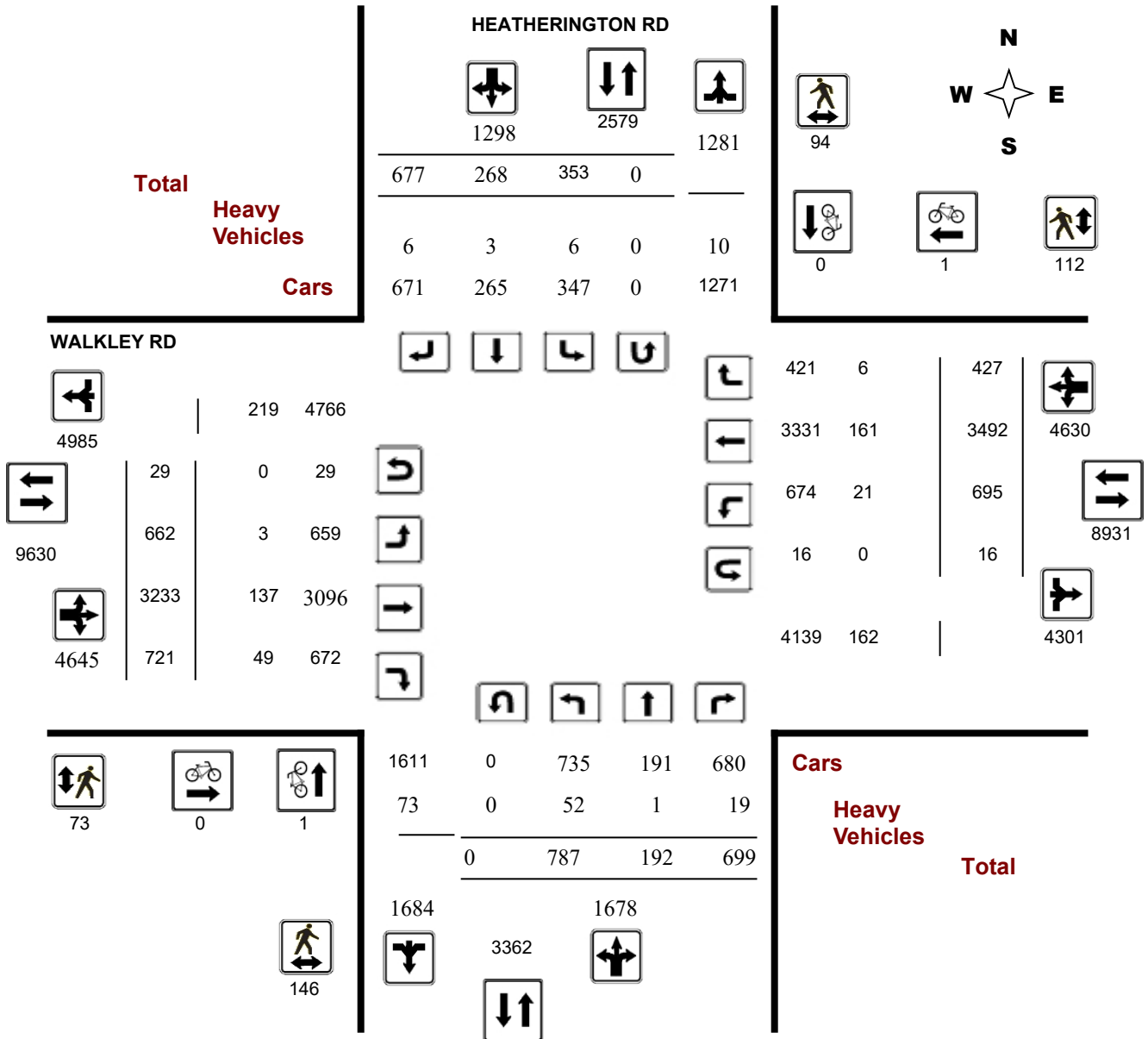
Survey Date: Thursday, February 24, 2022

WO No: 40182

Start Time: 07:00

Device: Miovision

Full Study Diagram



Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

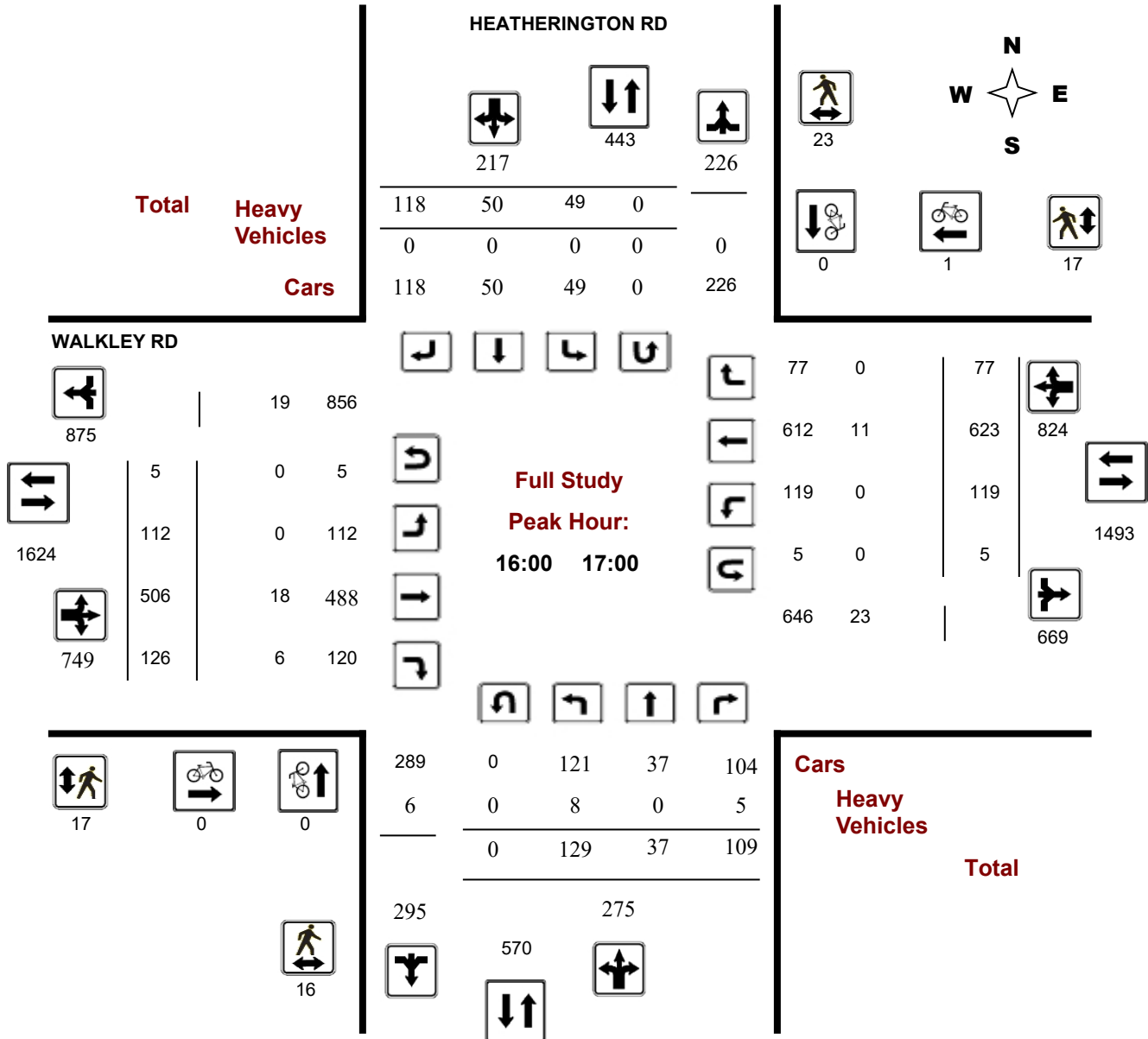
Survey Date: Thursday, February 24, 2022

WO No: 40182

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



Turning Movement Count - Peak Hour Diagram

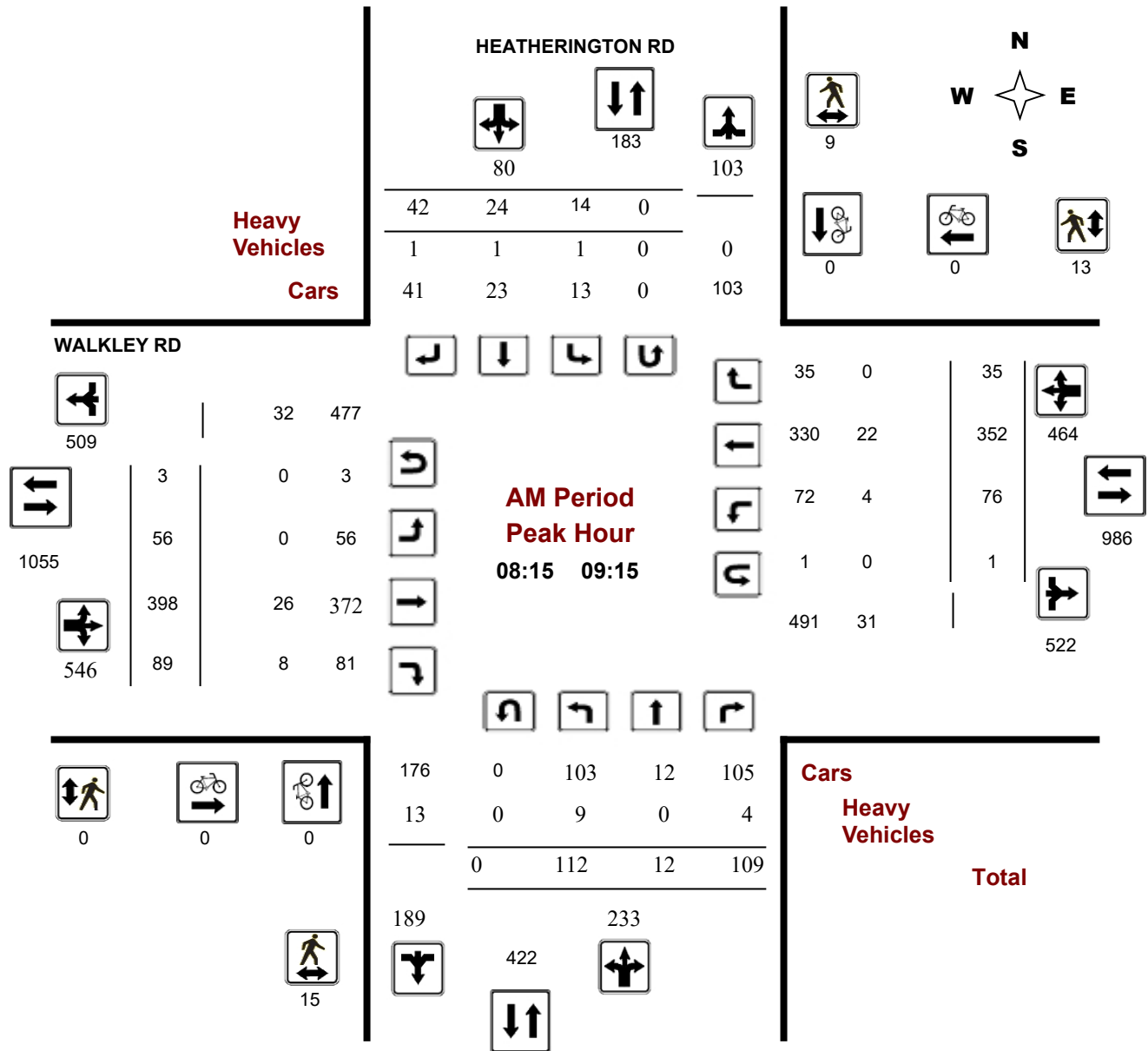
WALKLEY RD @ HEATHERINGTON RD

Survey Date: Thursday, February 24, 2022

Start Time: 07:00

WO No: 40182

Device: Miovision



Turning Movement Count - Peak Hour Diagram

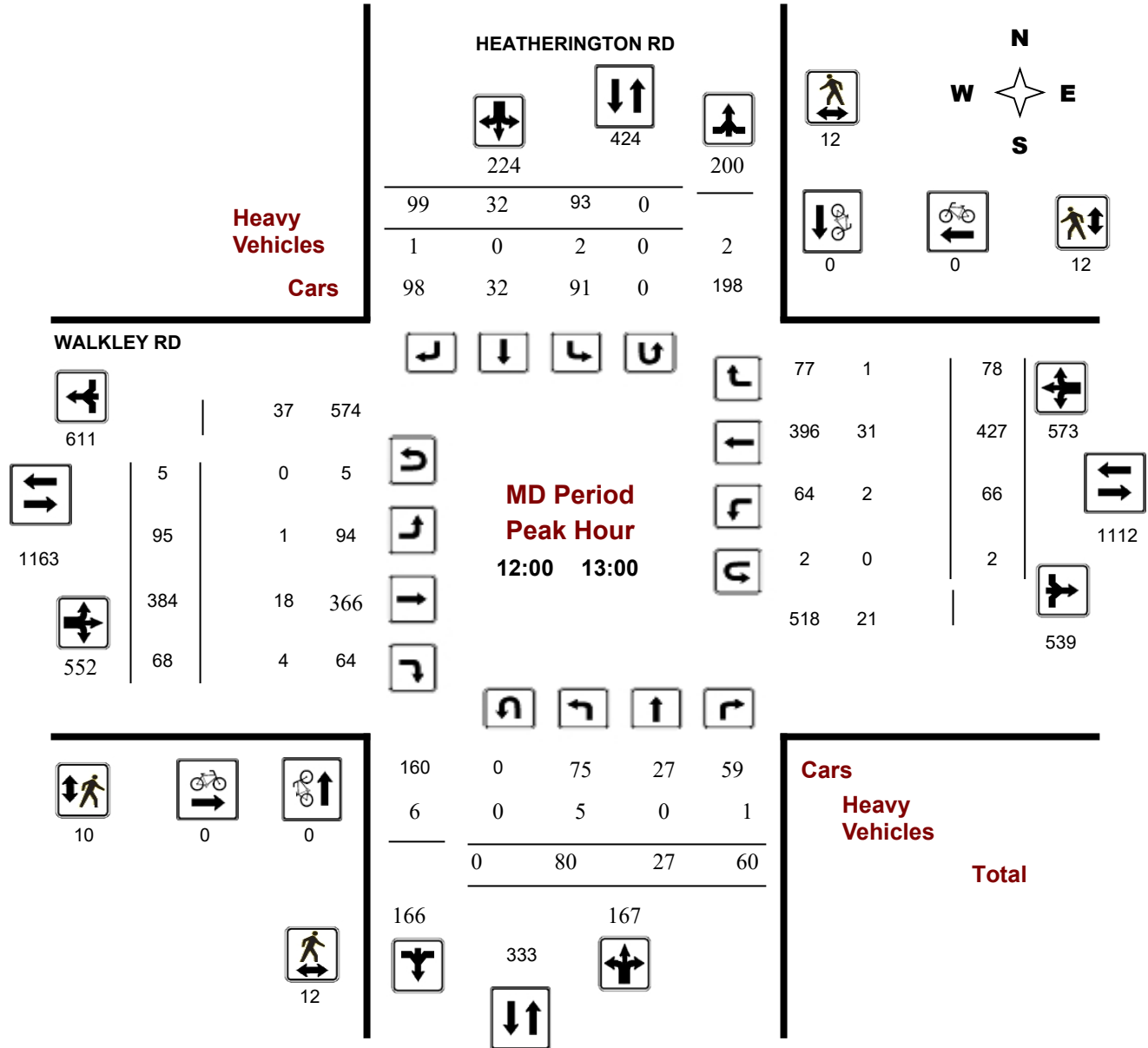
WALKLEY RD @ HEATHERINGTON RD

Survey Date: Thursday, February 24, 2022

Start Time: 07:00

WO No: 40182

Device: Miovision



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

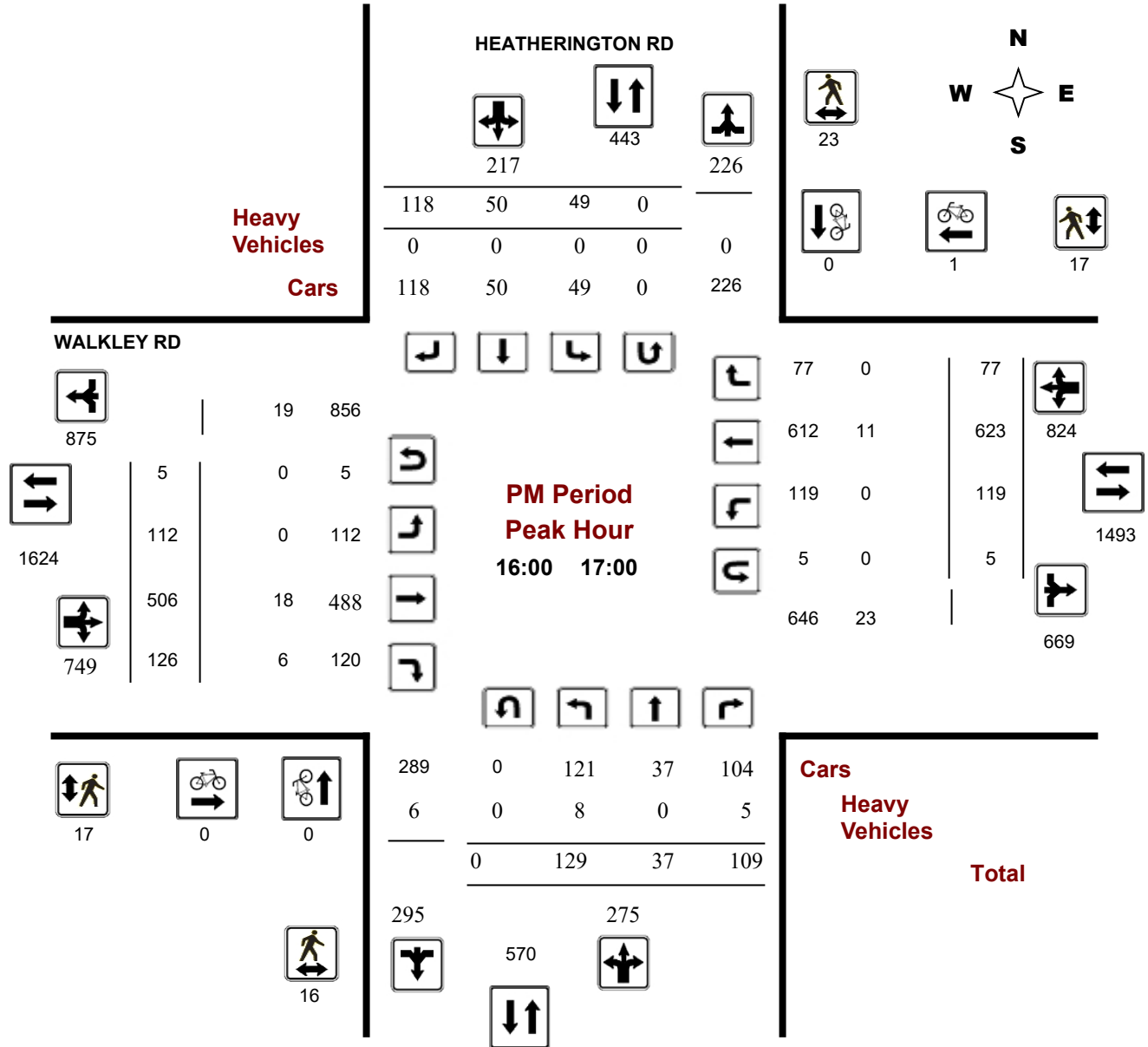
WALKLEY RD @ HEATHERINGTON RD

Survey Date: Thursday, February 24, 2022

Start Time: 07:00

WO No: 40182

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Thursday, February 24, 2022

WO No: 40182

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, February 24, 2022

Total Observed U-Turns
 Northbound: 0 Southbound: 0
 Eastbound: 29 Westbound: 16

AADT Factor
 .90

HEATHERINGTON RD

WALKLEY RD

Period	Northbound					Southbound					Eastbound					Westbound					Grand Total
	LT	ST	RT	NB TOT	STR TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	STR TOT	LT	ST	RT	WB TOT	STR TOT	
07:00 08:00	88	8	80	176	219	10	8	25	43	219	30	312	44	386	775	64	307	18	389	775	994
08:00 09:00	113	12	108	233	292	11	16	32	59	292	46	417	80	543	1002	72	358	29	459	1002	1294
09:00 10:00	77	20	84	181	311	25	38	67	130	311	77	320	82	479	955	73	370	33	476	955	1266
11:30 12:30	77	22	69	168	346	66	20	92	178	346	98	359	71	528	1078	65	403	82	550	1078	1424
12:30 13:30	84	29	66	179	390	73	31	107	211	390	94	377	77	548	1092	74	415	55	544	1092	1482
15:00 16:00	109	36	93	238	458	66	47	107	220	458	100	483	147	730	1399	113	489	67	669	1399	1857
16:00 17:00	129	37	109	275	492	49	50	118	217	492	112	506	126	744	1563	119	623	77	819	1563	2055
17:00 18:00	110	28	90	228	468	53	58	129	240	468	105	459	94	658	1366	115	527	66	708	1366	1834
Sub Total	787	192	699	1678	2976	353	268	677	1298	2976	662	3233	721	4616	9230	695	3492	427	4614	9230	12206
U Turns				0	0				0	0				29	45				16	45	45
Total	787	192	699	1678	2976	353	268	677	1298	2976	662	3233	721	4645	9275	695	3492	427	4630	9275	12251

EQ 12Hr 1094 267 972 2332 4137 491 373 941 1804 4137 920 4494 1002 6457 12892 966 4854 594 6436 12892 17029

Note: These values are calculated by multiplying the totals by the appropriate expansion factor. **1.39**

AVG 12Hr 985 240 875 2099 3723 442 439 1109 1624 3723 828 4045 902 5811 11603 869 4369 535 5792 11603 15326

Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. **.90**

AVG 24Hr 1290 314 1146 2750 4877 579 575 1453 2127 4877 1085 5299 1182 7612 15200 1138 5723 701 7588 15200 20077

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

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Thursday, February 24, 2022

WO No: 40182

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

HEATHERINGTON RD

WALKLEY 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	23	3	18	44	2	1	6	9	53	6	59	10	75	9	69	2	80	155	208
07:15 07:30	19	0	15	34	3	3	4	10	44	6	67	11	85	15	73	5	94	179	223
07:30 07:45	25	1	17	43	2	3	10	15	58	10	94	13	120	20	75	3	98	218	276
07:45 08:00	21	4	30	55	3	1	5	9	64	8	92	10	112	20	90	8	118	230	294
08:00 08:15	26	4	22	52	4	3	5	12	64	5	105	19	130	17	92	3	112	242	306
08:15 08:30	32	4	29	65	3	6	8	17	82	11	118	21	152	15	96	9	121	273	355
08:30 08:45	28	0	33	61	2	2	6	10	71	12	88	18	118	16	84	8	108	226	297
08:45 09:00	27	4	24	55	2	5	13	20	75	18	106	22	147	24	86	9	119	266	341
09:00 09:15	25	4	23	52	7	11	15	33	85	15	86	28	129	21	86	9	116	245	330
09:15 09:30	20	5	26	51	7	10	19	36	87	27	88	19	134	17	81	5	103	237	324
09:30 09:45	17	6	14	37	5	5	12	22	59	19	60	20	100	17	87	9	113	213	272
09:45 10:00	15	5	21	41	6	12	21	39	80	16	86	15	118	18	116	10	144	262	342
11:30 11:45	17	9	22	48	10	4	17	31	79	22	92	13	127	16	80	11	108	235	314
11:45 12:00	25	3	16	44	10	6	25	41	85	21	77	20	118	18	94	21	135	253	338
12:00 12:15	17	6	16	39	22	4	19	45	84	29	97	18	145	21	118	28	169	314	398
12:15 12:30	18	4	15	37	24	6	31	61	98	26	93	20	141	10	111	22	143	284	382
12:30 12:45	16	5	13	34	26	13	19	58	92	18	94	16	129	18	108	12	138	267	359
12:45 13:00	29	12	16	57	21	9	30	60	117	22	100	14	137	17	90	16	123	260	377
13:00 13:15	21	7	22	50	15	4	29	48	98	27	84	18	129	23	110	10	143	272	370
13:15 13:30	18	5	15	38	11	5	29	45	83	27	99	29	155	16	107	17	140	295	378
15:00 15:15	32	4	18	54	17	12	27	56	110	23	121	33	177	25	101	17	144	321	431
15:15 15:30	18	8	24	50	15	13	17	45	95	27	129	45	202	23	114	12	149	351	446
15:30 15:45	29	13	25	67	20	13	29	62	129	29	116	37	183	33	130	14	177	360	489
15:45 16:00	30	11	26	67	14	9	34	57	124	21	117	32	171	32	144	24	200	371	495
16:00 16:15	39	8	31	78	17	14	33	64	142	26	126	28	181	31	168	13	213	394	536
16:15 16:30	22	9	26	57	10	9	35	54	111	32	113	24	171	27	169	23	221	392	503
16:30 16:45	35	13	25	73	10	13	27	50	123	27	144	37	210	31	125	22	180	390	513
16:45 17:00	33	7	27	67	12	14	23	49	116	27	123	37	187	30	161	19	210	397	513
17:00 17:15	28	7	20	55	12	14	32	58	113	28	127	24	181	20	157	21	199	380	493
17:15 17:30	30	6	24	60	20	22	30	72	132	25	106	21	152	30	134	17	182	334	466
17:30 17:45	27	9	21	57	12	15	40	67	124	30	122	27	181	35	122	14	172	353	477
17:45 18:00	25	6	25	56	9	7	27	43	99	22	104	22	148	30	114	14	158	306	405
Total:	787	192	699	1678	353	268	677	1298	2976	662	3233	721	4645	695	3492	427	4630	9275	12,251

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Thursday, February 24, 2022

WO No: 40182

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

HEATHERINGTON RD

WALKLEY RD

Time Period	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	1	1	1
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	1	0	1	0	0	0	1
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	1	0	1	0	1	1	2



Transportation Services - Traffic Services

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Thursday, February 24, 2022

WO No: 40182

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

HEATHERINGTON RD

WALKLEY 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	0	2	2	0	0	0	2
07:15 07:30	1	0	1	0	0	0	1
07:30 07:45	3	0	3	0	0	0	3
07:45 08:00	2	1	3	0	3	3	6
08:00 08:15	5	1	6	0	2	2	8
08:15 08:30	2	2	4	0	2	2	6
08:30 08:45	2	0	2	0	1	1	3
08:45 09:00	4	2	6	0	6	6	12
09:00 09:15	7	5	12	0	4	4	16
09:15 09:30	3	2	5	0	0	0	5
09:30 09:45	7	1	8	0	6	6	14
09:45 10:00	7	1	8	0	1	1	9
11:30 11:45	4	3	7	3	2	5	12
11:45 12:00	4	3	7	2	4	6	13
12:00 12:15	3	2	5	4	2	6	11
12:15 12:30	4	3	7	2	4	6	13
12:30 12:45	3	2	5	1	2	3	8
12:45 13:00	2	5	7	3	4	7	14
13:00 13:15	10	1	11	5	3	8	19
13:15 13:30	5	2	7	3	5	8	15
15:00 15:15	10	6	16	11	6	17	33
15:15 15:30	4	4	8	7	7	14	22
15:30 15:45	10	9	19	5	9	14	33
15:45 16:00	8	2	10	5	7	12	22
16:00 16:15	3	5	8	8	3	11	19
16:15 16:30	4	6	10	2	4	6	16
16:30 16:45	5	3	8	4	7	11	19
16:45 17:00	4	9	13	3	3	6	19
17:00 17:15	7	5	12	1	7	8	20
17:15 17:30	4	0	4	1	1	2	6
17:30 17:45	5	3	8	2	5	7	15
17:45 18:00	4	4	8	1	2	3	11
Total	146	94	240	73	112	185	425



Transportation Services - Traffic Services

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Thursday, February 24, 2022

WO No: 40182

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

HEATHERINGTON RD

WALKLEY RD

Northbound

Southbound

Eastbound

Westbound

Time Period	Northbound				Southbound				Eastbound				Westbound				Grand Total		
	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT		W TOT	STR TOT
07:00 07:15	1	1	2	8	0	0	1	2	10	0	2	2	12	2	6	0	12	24	17
07:15 07:30	2	0	0	7	0	0	0	0	7	0	1	3	13	2	7	0	10	23	15
07:30 07:45	3	0	0	7	0	1	1	2	9	0	6	1	18	2	7	0	15	33	21
07:45 08:00	1	0	1	4	0	0	0	0	4	0	5	2	13	0	5	0	11	24	14
08:00 08:15	2	0	0	5	0	0	0	0	5	0	3	2	17	1	10	0	14	31	18
08:15 08:30	3	0	1	8	1	1	0	2	10	0	2	2	11	1	4	0	9	20	15
08:30 08:45	2	0	1	7	0	0	0	0	7	0	12	2	25	2	9	0	24	49	28
08:45 09:00	2	0	2	4	0	0	1	1	5	0	5	0	12	0	4	0	11	23	14
09:00 09:15	2	0	0	7	0	0	0	0	7	0	7	4	18	1	5	0	13	31	19
09:15 09:30	0	0	1	3	0	0	0	1	4	1	9	2	20	0	8	0	18	38	21
09:30 09:45	1	0	0	4	0	0	0	0	4	0	4	2	7	1	0	0	5	12	8
09:45 10:00	1	0	0	3	0	1	0	1	4	0	3	1	17	0	12	0	15	32	18
11:30 11:45	1	0	0	3	0	0	0	1	4	0	5	2	12	0	4	1	10	22	13
11:45 12:00	1	0	1	4	0	0	0	0	4	0	4	0	9	2	4	0	11	20	12
12:00 12:15	1	0	1	4	0	0	0	2	6	1	2	2	15	0	9	1	13	28	17
12:15 12:30	2	0	0	4	1	0	0	1	5	0	7	1	18	1	8	0	17	35	20
12:30 12:45	1	0	0	3	1	0	1	2	5	0	2	1	12	1	7	0	11	23	14
12:45 13:00	1	0	0	1	0	0	0	0	1	0	7	0	15	0	7	0	14	29	15
13:00 13:15	1	0	0	1	2	0	0	3	4	1	4	0	12	0	6	0	12	24	14
13:15 13:30	1	0	0	3	0	0	0	1	4	0	2	2	10	0	5	1	8	18	11
15:00 15:15	4	0	1	7	0	0	0	0	7	0	6	2	14	0	2	0	9	23	15
15:15 15:30	1	0	0	5	0	0	0	1	6	0	7	3	17	1	6	1	15	32	19
15:30 15:45	1	0	1	5	1	0	1	3	8	0	6	2	15	1	5	1	15	30	19
15:45 16:00	3	0	2	7	0	0	1	1	8	0	1	1	7	1	1	0	5	12	10
16:00 16:15	2	0	4	8	0	0	0	0	8	0	7	2	14	0	3	0	14	28	18
16:15 16:30	2	0	1	5	0	0	0	0	5	0	4	2	12	0	4	0	9	21	13
16:30 16:45	2	0	0	3	0	0	0	0	3	0	2	1	7	0	2	0	4	11	7
16:45 17:00	2	0	0	3	0	0	0	0	3	0	5	1	10	0	2	0	7	17	10
17:00 17:15	1	0	0	2	0	0	0	1	3	0	2	1	6	0	2	1	5	11	7
17:15 17:30	2	0	0	5	0	0	0	0	5	0	1	2	7	1	2	0	4	11	8
17:30 17:45	2	0	0	3	0	0	0	0	3	0	2	1	8	0	3	0	5	13	8
17:45 18:00	1	0	0	2	0	0	0	0	2	0	2	0	5	1	2	0	5	10	6
Total: None	52	1	19	145	6	3	6	25	170	3	137	49	408	21	161	6	350	758	464



Transportation Services - Traffic Services

Turning Movement Count - Study Results

WALKLEY RD @ HEATHERINGTON RD

Survey Date: Thursday, February 24, 2022

WO No: 40182

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

HEATHERINGTON RD

WALKLEY RD

Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total
07:00	07:15	0	0	0	0	0
07:15	07:30	0	0	1	1	2
07:30	07:45	0	0	3	0	3
07:45	08:00	0	0	2	0	2
08:00	08:15	0	0	1	0	1
08:15	08:30	0	0	2	1	3
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	1	0	1
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	1	0	1
09:45	10:00	0	0	1	0	1
11:30	11:45	0	0	0	1	1
11:45	12:00	0	0	0	2	2
12:00	12:15	0	0	1	2	3
12:15	12:30	0	0	2	0	2
12:30	12:45	0	0	1	0	1
12:45	13:00	0	0	1	0	1
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	1	1
15:15	15:30	0	0	1	0	1
15:30	15:45	0	0	1	0	1
15:45	16:00	0	0	1	0	1
16:00	16:15	0	0	1	1	2
16:15	16:30	0	0	2	2	4
16:30	16:45	0	0	2	2	4
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	2	1	3
17:15	17:30	0	0	0	1	1
17:30	17:45	0	0	2	1	3
17:45	18:00	0	0	0	0	0
Total		0	0	29	16	45

DRAFT

Appendix D:
Historic Collision Data

Total Area

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	7	7	5	3	2	3	2	1	30	75%
Non-fatal injury	3	0	0	1	0	5	0	0	9	23%
Non-reportable	0	0	0	0	0	1	0	0	1	3%
Total	10	7	5	4	2	9	2	1	40	100%
	#1 or 25%	#3 or 18%	#4 or 13%	#5 or 10%	#6 or 5%	#2 or 23%	#6 or 5%	#8 or 3%		

FAIRLEA CRES/HEATHERINGTON RD N

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2017-2021	3	7,171	1825	0.23

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	1	1	0	0	0	1	0	0	3	100%
Non-fatal injury	0	0	0	0	0	0	0	0	0	0%
Non-reportable	0	0	0	0	0	0	0	0	0	0%
Total	1	1	0	0	0	1	0	0	3	100%
	33%	33%	0%	0%	0%	33%	0%	0%		

HEATHERINGTON RD/FAIRLEA CRES S/ANGELA PRIV

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2017-2021	4	4,235	1825	0.52

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	0	0	1	0	0	2	0	0	3	75%
Non-fatal injury	0	0	0	0	0	1	0	0	1	25%
Non-reportable	0	0	0	0	0	0	0	0	0	0%
Total	0	0	1	0	0	3	0	0	4	100%
	0%	0%	25%	0%	0%	75%	0%	0%		

HEATHERINGTON RD, ANGELA PRIV to FAIRLEA CRES

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2017-2021	3	n/a	1825	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	0	0	0	0	2	0	1	0	3	100%
Non-fatal injury	0	0	0	0	0	0	0	0	0	0%
Non-reportable	0	0	0	0	0	0	0	0	0	0%
Total	0	0	0	0	2	0	1	0	3	100%
	0%	0%	0%	0%	67%	0%	33%	0%		

HEATHERINGTON RD, FAIRLEA CRES to WALKLEY RD

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2017-2021	4	n/a	1825	n/a

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	0	0	1	0	0	0	1	1	3	75%
Non-fatal injury	0	0	0	0	0	0	0	0	0	0%
Non-reportable	0	0	0	0	0	1	0	0	1	25%
Total	0	0	1	0	0	1	1	1	4	100%
	0%	0%	25%	0%	0%	25%	25%	25%		

WALKLEY RD/HEATHERINGTON RD

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2017-2021	26	20,077	1825	0.71

Classification of Accident	Rear End	Turning Movement	Sideswipe	Angle	Approaching	SMV other	SMV unattended vehicle	Other	Total	
P.D. only	6	6	3	3	0	0	0	0	18	69%
Non-fatal injury	3	0	0	1	0	4	0	0	8	31%
Non-reportable	0	0	0	0	0	0	0	0	0	0%
Total	9	6	3	4	0	4	0	0	26	100%
	35%	23%	12%	15%	0%	15%	0%	0%		



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 To: December 31, 2021

Location: FAIRLEA CRES @ HEATHERINGTON RD N

Traffic Control: Yield sign

Total Collisions: 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jan-07, Sat,12:27	Clear	Rear end	P.D. only	Ice	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2018-Dec-30, Sun,14:32	Clear	Turning movement	P.D. only	Dry	South	Turning left	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Aug-08, Sun,00:40	Clear	SMV other	P.D. only	Dry	North	Going ahead	Pick-up truck	Curb	0

Location: HEATHERINGTON RD @ FAIRLEA CRES S/ANGELA PRIV

Traffic Control: Stop sign

Total Collisions: 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Nov-09, Thu,22:16	Clear	SMV other	Non-fatal injury	Wet	South	Slowing or stopping	Passenger van	Pedestrian	1
2018-Mar-04, Sun,21:00	Clear	SMV other	P.D. only	Ice	West	Turning left	Automobile, station wagon	Pole (utility, power)	0
2018-May-24, Thu,19:54	Clear	Sideswipe	P.D. only	Dry	West	Unknown	Automobile, station wagon	Other motor vehicle	0
					West	Unknown	Pick-up truck	Other motor vehicle	
2021-Jun-26, Sat,00:42	Rain	SMV other	P.D. only	Wet	West	Turning right	Automobile, station wagon	Ditch	0

Location: HEATHERINGTON RD btwn ANGELA PRIV & FAIRLEA CRES

Traffic Control: No control

Total Collisions: 3

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jan-19, Thu,14:14	Freezing Rain	Approaching	P.D. only	Ice	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					South	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Jul-01, Sun,00:00	Clear	SMV unattended vehicle	P.D. only	Dry	Unknown	Unknown	Unknown	Unattended vehicle	0
2020-Feb-04, Tue,14:03	Clear	Approaching	P.D. only	Dry	South	Going ahead	Unknown	Other motor vehicle	0
					North	Going ahead	Passenger van	Other motor vehicle	

Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 To: December 31, 2021

Location: HEATHERINGTON RD btwn FAIRLEA CRES & WALKLEY RD

Traffic Control: No control

Total Collisions: 4

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-May-07, Sun,18:14	Clear	Other	P.D. only	Wet	North	Reversing	Police vehicle	Other motor vehicle	0
					South	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2017-Sep-08, Fri,02:38	Rain	SMV other	Non-reportable	Wet	North	Reversing	Automobile, station wagon	Other	0
2018-Oct-13, Sat,18:30	Clear	Sideswipe	P.D. only	Dry	North	Pulling away from shoulder or curb	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Oct-18, Sun,09:38	Clear	SMV unattended vehicle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Unattended vehicle	0

Location: WALKLEY RD @ HEATHERINGTON RD

Traffic Control: Traffic signal

Total Collisions: 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuver	Vehicle type	First Event	No. Ped
2017-Jan-07, Sat,08:07	Clear	Rear end	P.D. only	Ice	North	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Feb-11, Sun,14:41	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Mar-30, Fri,14:41	Clear	Angle	P.D. only	Dry	East	Turning right	Automobile, station wagon	Other motor vehicle	0
					North	Stopped	Automobile, station wagon	Other motor vehicle	
2018-Jun-06, Wed,20:16	Clear	Rear end	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Stopped	Passenger van	Other motor vehicle	
2018-Jun-11, Mon,18:44	Clear	SMV other	Non-fatal injury	Dry	North	Turning left	Unknown	Pedestrian	1
2018-Sep-15, Sat,17:15	Clear	Rear end	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Turning left	Automobile, station wagon	Other motor vehicle	
2018-Sep-17, Mon,08:43	Clear	SMV other	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Pedestrian	1



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 To: December 31, 2021

Location: WALKLEY RD @ HEATHERINGTON RD

Traffic Control: Traffic signal

Total Collisions: 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2018-Nov-15, Thu,21:18	Clear	Turning movement	P.D. only	Dry	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2018-Nov-16, Fri,16:02	Snow	Rear end	Non-fatal injury	Loose snow	East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					East	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
2019-Apr-25, Thu,12:11	Clear	Sideswipe	P.D. only	Dry	East	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Truck - closed	Other motor vehicle	
2019-May-29, Wed,16:49	Clear	Turning movement	P.D. only	Dry	East	Turning left	Automobile, station wagon	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2019-Aug-03, Sat,13:34	Clear	Rear end	P.D. only	Dry	West	Overtaking	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Automobile, station wagon	Other motor vehicle	
2020-Jan-17, Fri,15:40	Clear	Sideswipe	P.D. only	Dry	North	Changing lanes	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Passenger van	Other motor vehicle	
2020-Jan-22, Wed,13:46	Clear	Angle	P.D. only	Wet	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Feb-15, Sat,20:42	Clear	Rear end	P.D. only	Dry	East	Turning left	Passenger van	Other motor vehicle	0
					East	Turning left	Automobile, station wagon	Other motor vehicle	
2020-Feb-19, Wed,16:00	Clear	Turning movement	P.D. only	Dry	East	Turning left	Pick-up truck	Other motor vehicle	0
					West	Going ahead	Automobile, station wagon	Other motor vehicle	
2020-Feb-26, Wed,18:29	Snow	Rear end	Non-fatal injury	Wet	West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	0
					West	Stopped	Pick-up truck	Other motor vehicle	
2020-Sep-16, Wed,14:24	Clear	SMV other	Non-fatal injury	Dry	East	Turning right	Pick-up truck	Pedestrian	1
2020-Sep-24, Thu,16:23	Clear	Rear end	P.D. only	Dry	West	Going ahead	Automobile, station wagon	Other motor vehicle	0
					West	Slowing or stopping	Automobile, station wagon	Other motor vehicle	
					West	Stopped	Pick-up truck	Other motor vehicle	



Transportation Services - Traffic Services

Collision Details Report - Public Version

From: January 1, 2017 To: December 31, 2021

Location: WALKLEY RD @ HEATHERINGTON RD

Traffic Control: Traffic signal

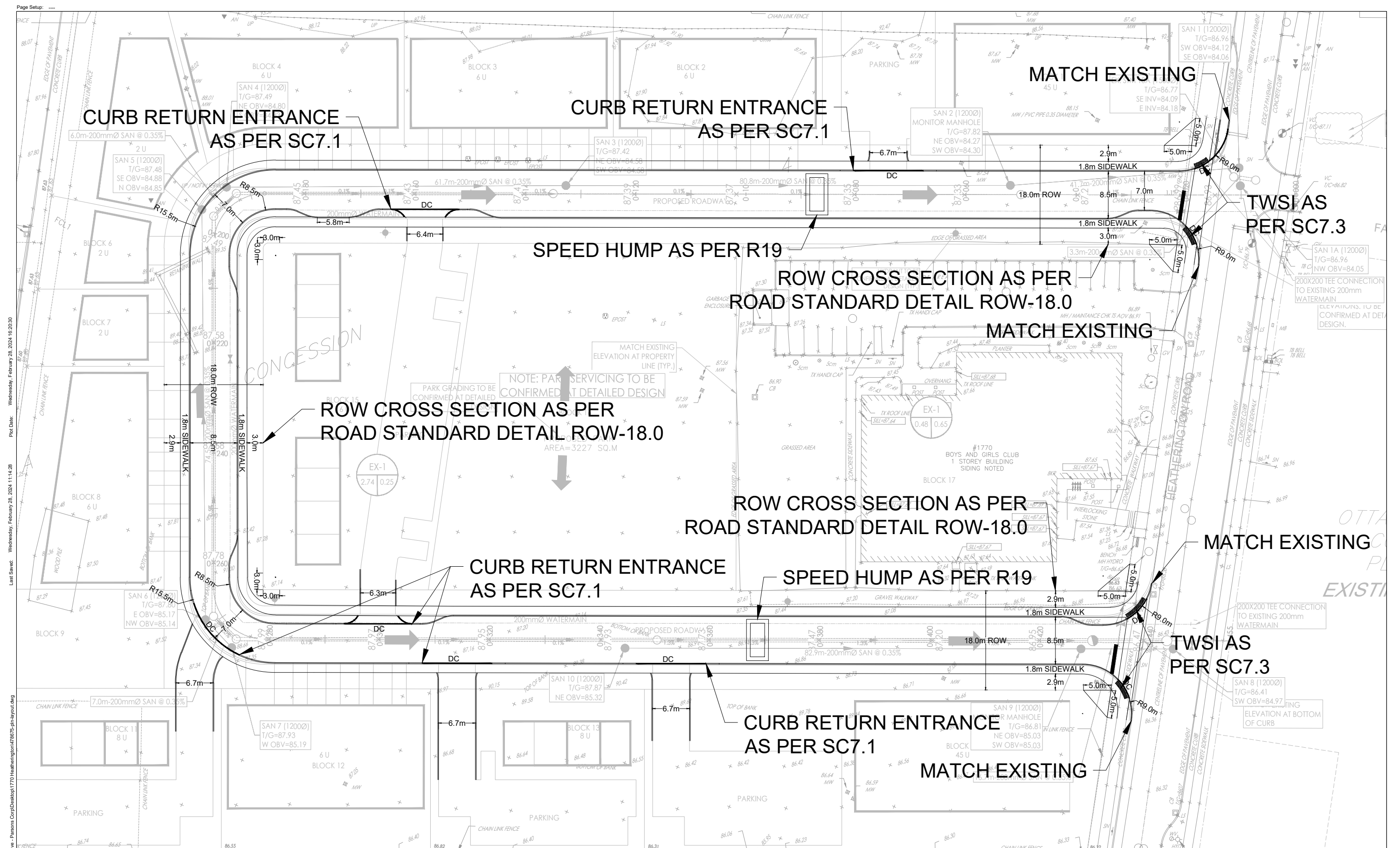
Total Collisions: 26

Date/Day/Time	Environment	Impact Type	Classification	Surface Cond'n	Veh. Dir	Vehicle Manoeuvre	Vehicle type	First Event	No. Ped
2020-Nov-04, Wed,14:49	Clear	SMV other	Non-fatal injury	Dry	South	Turning left	Automobile, station wagon	Pedestrian	1
2020-Dec-17, Thu,08:10	Clear	Angle	P.D. only	Dry	North	Going ahead	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2021-Feb-17, Wed,17:21	Snow	Turning movement	P.D. only	Wet	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Pick-up truck	Other motor vehicle	
2021-Feb-24, Wed,17:40	Snow	Turning movement	P.D. only	Loose snow	West	Turning left	Automobile, station wagon	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	
2021-Apr-15, Thu,15:37	Clear	Angle	Non-fatal injury	Dry	East	Going ahead	Automobile, station wagon	Other motor vehicle	0
					North	Turning left	Automobile, station wagon	Other motor vehicle	
2021-Aug-18, Wed,17:45	Clear	Rear end	P.D. only	Dry	East	Going ahead	Pick-up truck	Other motor vehicle	0
					East	Stopped	Pick-up truck	Other motor vehicle	
					East	Turning right	Pick-up truck	Other motor vehicle	
2021-Oct-22, Fri,17:40	Clear	Sideswipe	P.D. only	Dry	East	Going ahead	Passenger van	Other motor vehicle	0
					East	Going ahead	Automobile, station wagon	Other motor vehicle	

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Appendix E:

Proposed Road Design & Truck Turning Templates



Page Setup: ---
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 Plot Date: Wednesday, February 28, 2024 15:20:30
 Consultant: C:\Users\p42971\OneDrive - Parsons Corp\Desktop\1770 Heatherington\478675-pln-layout.dwg

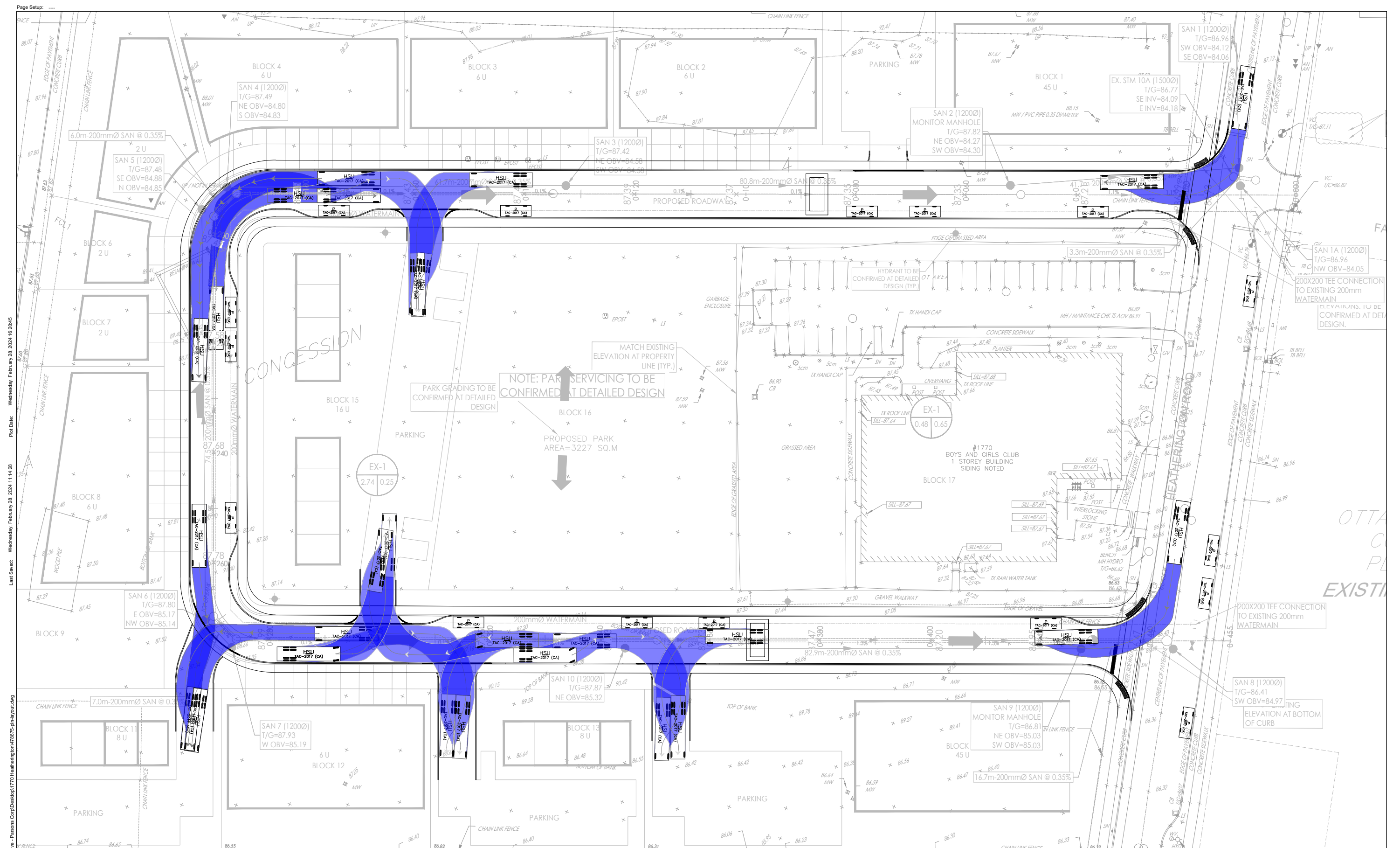


Legend

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

Not to Scale

Drawing Description		Proposed Road Design	
Client		Date	Feb 28, 2024
Project Number	478675	Figure Number	001
		Project Description	1770 Heatherington Development



Page Setup: ---
 Plot Date: Wednesday, February 28, 2024 11:14:28
 Last Saved: Wednesday, February 28, 2024 11:14:28
 Consultant: C:\Users\p42971\OneDrive - Parsons Corp\Desktop\1770 Heatherington\478675-pln-layout.dwg

PARSONS

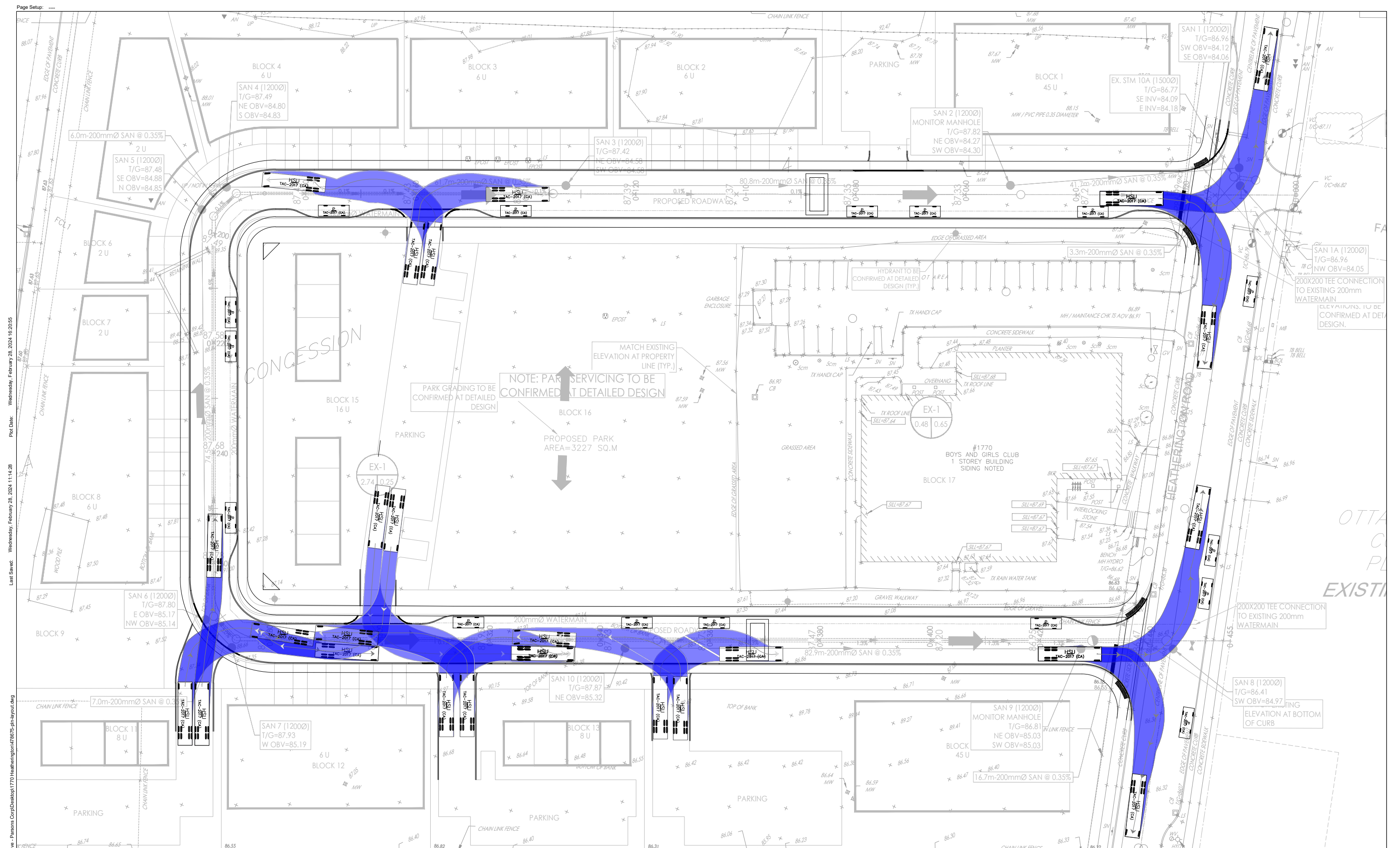
NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

Legend

HSU

Width 2.80
Track 2.80
Lock to Lock Time 4.0
Steering Angle 40.0

Not to Scale	Drawing Description		HSU IN	
	Client	Date	Figure Number	
	Project Number			
	478675	Feb 28, 2024	002	1770 Heatherington Development



Page Setup: ---
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 Consultant: C:\Users\p42971\OneDrive - Parsons Corp\Desktop\1770 Heatherington\478675-pln-layout.dwg

PARSONS

NOTE: The location of utilities is approximate only, the exact location should be determined by consulting the municipal authorities and utility companies concerned. The contractor shall prove the location of utilities and shall be responsible for adequate protection from damage.

Legend

HSU

11.50 meters

Width: 2.80
 Track: 2.80
 Lock to Lock Time: 4.0
 Steering Angle: 40.0

Not to Scale

Drawing Description		HSU OUT	
Client		Date	Feb 28, 2024
Project Number	478675	Figure Number	003
Project Description		1770 Heatherington Development	

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Appendix F:
TDM Checklists

TDM-Supportive Development Design and Infrastructure Checklist: *Residential Developments (multi-family or condominium)*

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-supportive design & infrastructure measures: <i>Residential developments</i>		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	<input checked="" type="checkbox"/>
BASIC	1.1.2 Locate building entrances in order to minimize walking distances to sidewalks and transit stops/stations	<input checked="" type="checkbox"/>
BASIC	1.1.3 Locate building doors and windows to ensure visibility of pedestrians from the building, for their security and comfort	<input checked="" type="checkbox"/>
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 (<i>see Official Plan policy 4.3.3</i>)	<input checked="" type="checkbox"/>
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 (<i>see Official Plan policy 4.3.12</i>)	<input checked="" type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		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 (<i>see Official Plan policy 4.3.10</i>)	<input checked="" type="checkbox"/>
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 (<i>see Official Plan policy 4.3.10</i>)	<input checked="" type="checkbox"/>
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 on-road cycle routes. Where public sidewalks and multi-use pathways intersect with roads, consider providing traffic control devices to give priority to cyclists and pedestrians (<i>see Official Plan policy 4.3.11</i>)	<input checked="" type="checkbox"/>
BASIC	1.2.6 Provide safe, direct and attractive walking routes from building entrances to nearby transit stops	<input checked="" type="checkbox"/>
BASIC	1.2.7 Ensure that walking routes to transit stops are secure, visible, lighted, shaded and wind-protected wherever possible	<input checked="" type="checkbox"/>
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	<input checked="" type="checkbox"/>
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	<input checked="" type="checkbox"/>
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)	<input checked="" type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
2. WALKING & CYCLING: END-OF-TRIP FACILITIES		
2.1 Bicycle parking		
REQUIRED	2.1.1 Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible (see <i>Official Plan policy 4.3.6</i>)	<input checked="" type="checkbox"/>
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 <i>Zoning By-law Section 111</i>)	<input checked="" type="checkbox"/>
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 <i>Zoning By-law Section 111</i>)	<input checked="" type="checkbox"/>
BASIC	2.1.4 Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	<input type="checkbox"/>
2.2 Secure bicycle parking		
REQUIRED	2.2.1 Where more than 50 bicycle parking spaces are provided for a single residential 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 <i>Zoning By-law Section 111</i>)	<input checked="" type="checkbox"/>
BETTER	2.2.2 Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	<input type="checkbox"/>
2.3 Bicycle repair station		
BETTER	2.3.1 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)	<input type="checkbox"/>
3. TRANSIT		
3.1 Customer amenities		
BASIC	3.1.1 Provide shelters, lighting and benches at any on-site transit stops	<input type="checkbox"/>
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	<input type="checkbox"/>
BETTER	3.1.3 Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	<input type="checkbox"/>

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
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	<input type="checkbox"/>
5. CARSHARING & BIKESHARING		
5.1 Carshare parking spaces		
BETTER	5.1.1 Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses (see <i>Zoning By-law Section 94</i>)	<input type="checkbox"/>
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	<input type="checkbox"/>
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	<input checked="" type="checkbox"/> Development is proposing a combination of off-street and on-street parking.
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	<input checked="" type="checkbox"/>
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 <i>Zoning By-law Section 104</i>)	<input type="checkbox"/>
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 <i>Zoning By-law Section 111</i>)	<input type="checkbox"/>
6.2 Separate long-term & short-term parking areas		
BETTER	6.2.1 Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	<input type="checkbox"/>

TDM Measures Checklist:
Residential Developments (multi-family, condominium or subdivision)

Legend	
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
★	The measure is one of the most dependably effective tools to encourage the use of sustainable modes

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
1. TDM PROGRAM MANAGEMENT		
1.1 Program coordinator		
BASIC	★ 1.1.1 Designate an internal coordinator, or contract with an external coordinator	<input type="checkbox"/>
1.2 Travel surveys		
BETTER	1.2.1 Conduct periodic surveys to identify travel-related behaviours, attitudes, challenges and solutions, and to track progress	<input type="checkbox"/>
2. WALKING AND CYCLING		
2.1 Information on walking/cycling routes & destinations		
BASIC	2.1.1 Display local area maps with walking/cycling access routes and key destinations at major entrances (<i>multi-family, condominium</i>)	<input checked="" type="checkbox"/>
2.2 Bicycle skills training		
BETTER	2.2.1 Offer on-site cycling courses for residents, or subsidize off-site courses	<input type="checkbox"/>

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
3. TRANSIT		
3.1 Transit information		
BASIC	3.1.1 Display relevant transit schedules and route maps at entrances (<i>multi-family, condominium</i>)	<input checked="" type="checkbox"/>
BETTER	3.1.2 Provide real-time arrival information display at entrances (<i>multi-family, condominium</i>)	<input type="checkbox"/>
3.2 Transit fare incentives		
BASIC ★	3.2.1 Offer PRESTO cards preloaded with one monthly transit pass on residence purchase/move-in, to encourage residents to use transit	<input type="checkbox"/>
BETTER	3.2.2 Offer at least one year of free monthly transit passes on residence purchase/move-in	<input type="checkbox"/>
3.3 Enhanced public transit service		
BETTER ★	3.3.1 Contract with OC Transpo to provide early transit services until regular services are warranted by occupancy levels (<i>subdivision</i>)	<input type="checkbox"/>
3.4 Private transit service		
BETTER	3.4.1 Provide shuttle service for seniors homes or lifestyle communities (e.g. scheduled mall or supermarket runs)	<input type="checkbox"/>
4. CARSHARING & BIKESHARING		
4.1 Bikeshare stations & memberships		
BETTER	4.1.1 Contract with provider to install on-site bikeshare station (<i>multi-family</i>)	<input type="checkbox"/>
BETTER	4.1.2 Provide residents with bikeshare memberships, either free or subsidized (<i>multi-family</i>)	<input type="checkbox"/>
4.2 Carshare vehicles & memberships		
BETTER	4.2.1 Contract with provider to install on-site carshare vehicles and promote their use by residents	<input type="checkbox"/>
BETTER	4.2.2 Provide residents with carshare memberships, either free or subsidized	<input type="checkbox"/>
5. PARKING		
5.1 Priced parking		
BASIC ★	5.1.1 Unbundle parking cost from purchase price (<i>condominium</i>)	<input type="checkbox"/>
BASIC ★	5.1.2 Unbundle parking cost from monthly rent (<i>multi-family</i>)	<input type="checkbox"/>

TDM measures: <i>Residential developments</i>		Check if proposed & add descriptions
6. TDM MARKETING & COMMUNICATIONS		
6.1 Multimodal travel information		
BASIC	★ 6.1.1 Provide a multimodal travel option information package to new residents	<input checked="" type="checkbox"/>
6.2 Personalized trip planning		
BETTER	★ 6.2.1 Offer personalized trip planning to new residents	<input type="checkbox"/>