

# TRANSPORTATION IMPACT ASSESSMENT STEP 2 – SCOPING REPORT



Project No.: CCO-22-2933

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## TABLE OF CONTENTS

1.0	SCREENING FORM .....	1
1.1	Trip Generation Triggers.....	1
1.2	Location Trigger.....	1
1.3	Safety Trigger .....	1
2.0	DESCRIPTION OF PROPOSED DEVELOPMENT.....	1
3.0	EXISTING CONDITIONS.....	2
3.1	Roadways.....	2
3.2	Intersections.....	3
3.2.1	Strandherd Drive at Dealership Drive/ Kennevale Drive.....	3
3.2.2	Strandherd Drive at Maravista Drive .....	4
3.3	Existing Driveways.....	5
3.4	Existing Multi-Use Pathways.....	7
3.5	Existing Transit Network.....	7
3.6	Existing Traffic Management Measures.....	9
3.7	Existing Peak Hour Travel Demand by Mode.....	9
3.8	Existing Collision History .....	10
3.9	Existing Traffic Volumes.....	11
3.10	Existing Traffic Operations.....	12
4.0	PLANNED CONDITIONS.....	14
4.1	Roadway Network Modifications.....	14
4.2	Other Study Area Developments.....	14
5.0	STUDY AREA AND TIME PERIODS.....	15
5.1	Study Area .....	15
5.2	Time Periods.....	15
5.3	Horizon Years.....	15
6.0	EXEMPTION REVIEW .....	15
7.0	SUMMARY.....	16

## 1.0 SCREENING FORM

The following section describes the initial assessment of the proposed development with respect to the Transportation Impact Assessment (TIA) Screening Form and will provide reasoning for potential triggers. The TIA screening form is attached in [Appendix A](#).

### 1.1 Trip Generation Triggers

The development's land use types include two separate buildings dedicated to Automobile Sales, with a GFA of 2,011 m<sup>2</sup> (Myers Nissan) and 3,430m<sup>2</sup> (Myers Subaru). The development size is larger than the minimum of 1,000 m<sup>2</sup> for destination retail. As such, the criteria for the trip generation trigger is met.

### 1.2 Location Trigger

The proposed development is neither located within a Design Priority Area (DPA) or a Transit-oriented Development (TOD) zone. The site will have a driveway that accesses Strandherd Drive, which is designated as part of the City's Spine Bicycle Network. As such, the criteria for a location trigger has been met.

### 1.3 Safety Trigger

The proposed development has all existing and proposed driveways within 150 m of a Signalized intersection (Strandherd Drive and Dealership Drive) with two access onto Strandherd Drive and the other three onto Dealership Drive. As such, the criteria for a safety trigger has been met.

## 2.0 DESCRIPTION OF PROPOSED DEVELOPMENT

The proposed development will be located at 4149 Strandherd Drive located in Barrhaven. The proposed development is located in the west quadrant of the intersection on Strandherd Drive and Dealership Drive. The proposed development will include two separate buildings dedicated to Automobile Sales, with a GFA of 2,011 m<sup>2</sup> and 3,430m<sup>2</sup>. The proposed site already has an existing dealership on the lands with a GFA of 2,970 m<sup>2</sup>. The build-out date is expected to be 2022 for phase one (first dealership) and 2023 for the second dealership. [Figure 2.1](#) shows the location of the proposed development, subject lands, and surrounding area. The site plan can be found in [Appendix B](#).



Figure 2.1 Proposed Development Location

The development is located in a Business Park Industrial Zone with a subcode of IP[2635] H18 and IP[2636] H(22) under The City of Ottawa Zoning By-Law. The zone permits a variety of non-residential uses such as Automobile Dealership, emergency services etc.

### 3.0 EXISTING CONDITIONS

The following outlines the existing site characteristics and provides a summary of the expected development transportation conditions.

#### 3.1 Roadways

The following section outlines the existing study area roadways, obtained from the City of Ottawa Official Plan, Annex 1 – Road Classification and Right-of-Way. MP performed a field review on April 19, 2021, to confirm geometries, lane configurations and existing conditions carried forward in the TIA.

Strandherd Drive, within the vicinity of the subject site is a two-lane divided urban arterial roadway, consisting of a 44.5 m right-of-way and a posted speed limit of 80 km/h. Strandherd Drive runs east-west overall, however,

Strandherd Drive runs from north-south within the vicinity of the proposed development, with paved shoulders on both sides of the roadway. However, Strandherd Drive is currently under construction to increase to four-lanes.

Maravista Drive, within the vicinity of the proposed development is a two-lane undivided urban collector roadway, with an unspecified right-of-way, and an unposted speed limit of 50 km/h. Maravista Drive runs east-west, with concrete sidewalks on both sides of the roadway.

Dealership Drive, within the vicinity of the proposed development is a two-lane undivided urban collector roadway, with an unspecified right-of-way and an unposted speed limit of 50 km/h. Dealership Drive runs east-west, with concrete sidewalks on both sides of the roadway.

Kennevale Drive, within the vicinity of the proposed development is a two-lane undivided urban collector, with an unspecified right-of-way and a posted speed limit of 40 km/h. Kennevale Drive runs east-west, with concrete sidewalks on both sides of the roadway.

## 3.2 Intersections

The following section documents the existing study intersections including their control type, lane configurations, turning restrictions, and, any other relevant data. The following three intersections were identified for this study:

- Strandherd Drive at Dealership Drive/Kennevale Drive; and,
- Strandherd Drive at Maravista Drive.

### 3.2.1 Strandherd Drive at Dealership Drive/Kennevale Drive

Strandherd Drive and Dealership Drive/Kennevale Drive is a four leg, signalized intersection, located to the east of the proposed development.

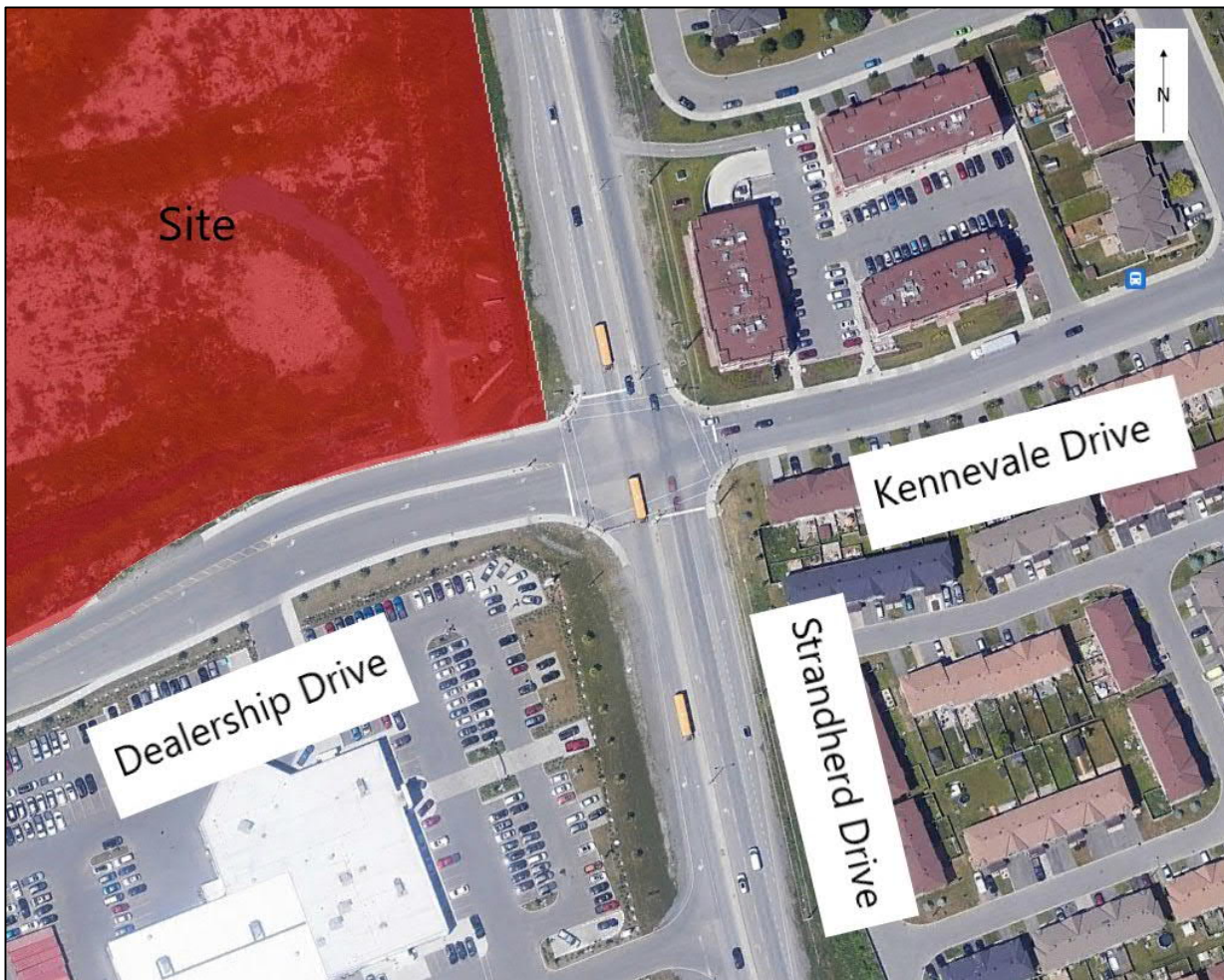


Figure 3.1 Strandherd Drive at Dealership Drive/ Kennevale Drive

- Strandherd Drive – Northbound: one left turn lane with a storage of 100 m, one through lane and one right turn lane with a storage of 50 m.
- Strandherd Drive – Southbound: one left turn lane with a storage of 100 m, one through lane and one right turn lane with a storage of 50 m.
- Dealership Drive – Eastbound: one left-turn lane with a storage length of 75 m, one through lane, one right turn lane with a storage length of 75 m.
- Kennevale Drive – Westbound: one left-turn lane with a storage lane of 50 m, one shared through-right turn lane.

### 3.2.2 Strandherd Drive at Maravista Drive

Strandherd Drive at Maravista Drive is a four leg, signalized intersection, located to the north of the proposed development.



Figure 3.2 Strandherd Drive at Maravista Drive

- Strandherd Drive – Northbound: two left-turn lane with a storage lane of 125 m, one through lane, one shared through-right turn lane.
- Strandherd Drive – Southbound: one left-turn lane with a storage lane of 150 m, two through lanes, one right-turn lane.
- Maravista Drive – Eastbound: two left-turn lanes with storage lengths of 85 m, and one shared through-right-turn lane.
- Maravista Drive – Westbound: one left-turn lane with a storage length of 35 m, and one shared through-right turn lane.

### 3.3 Existing Driveways

The following section documents the existing driveway entrance within a 200m of the proposed site access. Figure 3.3 illustrates the driveways within the vicinity of the proposed site.



Figure 3.3 Existing Driveways

As shown in Figure 3.4 there are a total of 6 existing access within 200 m of the proposed development. The majority of the entrances belong to other dealerships within the area off of Dealership Drive, Strandherd Drive and Philsar Street. There is also one entrance on the northbound lane of Strandherd Drive that allows access to the shopping plaza adjacent to the proposed site.



### 3.4 Existing Multi-Use Pathways

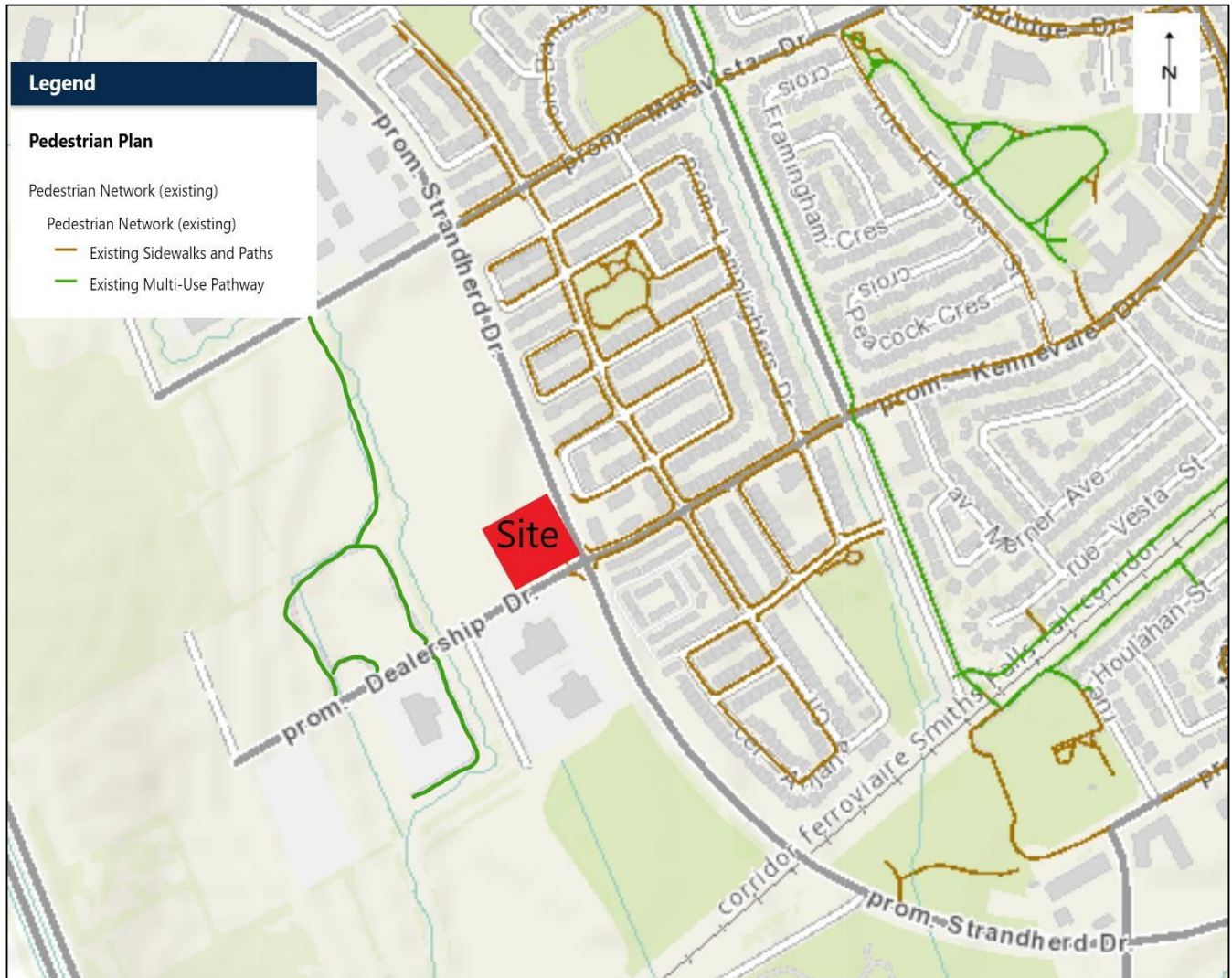


Figure 3.4 Existing Multi-use Pathways

As shown in the Figure 3.4 there are is an existing multi use pathways within the vicinity of the proposed development to the west, and a large network of sidewalks to the east.

### 3.5 Existing Transit Network

The following section documents the existing transit networks within the surrounding area. Figure 3.5 illustrates the existing bus routes within the study area of the proposed site.



Figure 3.5 Existing Transit Routes

Currently there are two (2) transit routes that service the proposed development including:

- Route 99: Provides service from Barrhaven Center to Greenboro/Hurdman Station, operating every 40 minutes;
- Route 170: Provides service from Barrhaven Center to Fallowfield, operating every 30 minutes;

Figure 3.6 Illustrates the location of the transit stops within the vicinity of the proposed development.



Figure 3.6 Transit Stop Locations

### 3.6 Existing Traffic Management Measures

No area traffic calming measures were identified within a 250 m vicinity of the subject site. Additionally, no traffic calming measures were identified along the Strandherd Drive within the study area.

### 3.7 Existing Peak Hour Travel Demand by Mode

The proposed site is located in Ottawa's outer suburbs area South Nepean (Barrhaven). Transit mode shares based on the City of Ottawa Transportation Master Plan (TMP) leaving the area to other areas of Ottawa account for 20% of morning peak period trips as of 2011, where the 2031 target for transit mode shares leaving is 26%. The 2011 transit mode shares of the morning peak trips arriving to the area is 6% where the target 2031 rate is 11%.

The observed 2011, 24 hour mode shares from the 2011 O-D Tran Survey for the South Nepean area, where the development is located, is summarized in Table 3.1. O-D survey information can be found in [Appendix C](#).

Table 3.1 O-D Survey Transportation Mode Shares

Mode	From District (%)	To District (%)	Average (%)
Auto Drive	66	66	66
Auto Passenger	15	16	15
Transit	16	15	15
bicycle	0	1	1
Walk	0	0	0
Other	3	2	3

Based on this survey the South Nepean area was shown to have the following mode shares; 15 % of auto passenger, 15% transit, 1 % bicycle, 0 % walking and 3 % other. It should be noted that the other category accounts for trips such as taxis, school buses, motorcycle and scooters. As such, for the purposes of modelling traffic conditions and projections of future conditions, the percentages of “other” trips will be distributed to auto driver, resulting in 69% auto driver trips.

### 3.8 Existing Collision History

Collision data was provided by the city for the years 2016-2020. The data was reviewed for boundary roads within the study area, as identified in [Section 3.0](#). The data was divided into 4 sections, Table 3.1 illustrates the data.

- Strandherd Drive and Dealership Drive/Kennevale Drive;
- Strandherd Drive and Maravista Drive;
- Strandherd Drive Between Dealership Drive/Kennevale Drive and Maravista Drive, and;
- Dealership Drive Between Strandherd Drive and end.

Table 3.1 Collision data

Location	Collisions								
	2016	2017	2018	2019	2020	Total	Cyclist	Pedestrian	Fatalities
Strandherd Drive and Dealership Drive/ Kennevale Drive	4	10	8	12	4	38	0	0	0
Strandherd Drive and Maravista Drive	1	7	8	10	10	36	0	0	0
Strandherd Drive Between Dealership Drive/ Kennevale Drive and Maravista Drive	2	2	1	5	2	12	0	0	0
Dealership Drive Between Strandherd Drive and end	0	0	0	0	1	1	0	0	0

As seen from table 3.1 there were 38 total collisions at the intersection of Strandherd Drive and Dealership Drive/ Kennevale Drive, 36 at the intersection of Strandherd Drive and Maravista Drive, 12 on Strandherd Drive Between Dealership Drive/ Kennevale Drive and Maravista Drive, and 1 on Dealership Drive Between Strandherd Drive and end from the years 2016-2020. Throughout these 5 years there were no collision that involved cyclists, pedestrians or resulted in a Fatality.

### 3.9 Existing Traffic Volumes

MP obtained TMC data from the City of Ottawa for the following Intersections:

- Strandherd Drive at Dealership Dr / Kennevale Dr (01-18-2018 and 01-20-2018); and,
- Strandherd Drive at Maravista Drive (01-18-2018 and 01-20-2018).

MP used a growth factor of 1.5% annually, non-compounding to adjust volumes to 2022 (existing conditions). This factor was determined based on the City of Ottawa Transportation Master Plan, which states that the City of Ottawa is expected to increase its population from 922,00 to 1.14 Million residents from 2011 to 2031, this results in an annual growth rate of 1.1%. Other TIA's completed in the area suggest a 1.5% annual growth rate such as the 3288 and 3300 Borrisokane Road, 4205, 4345 and 4375 McKenna Casey Drive Transportation Impact Assessment. Since traffic growth is a function of both population and employment growth, a growth rate of 1.5% was used to ensure that both background growths are taken into account. Figure 3.8 illustrates the existing conditions volumes. TMC and signal timing data can be found in Appendix C.

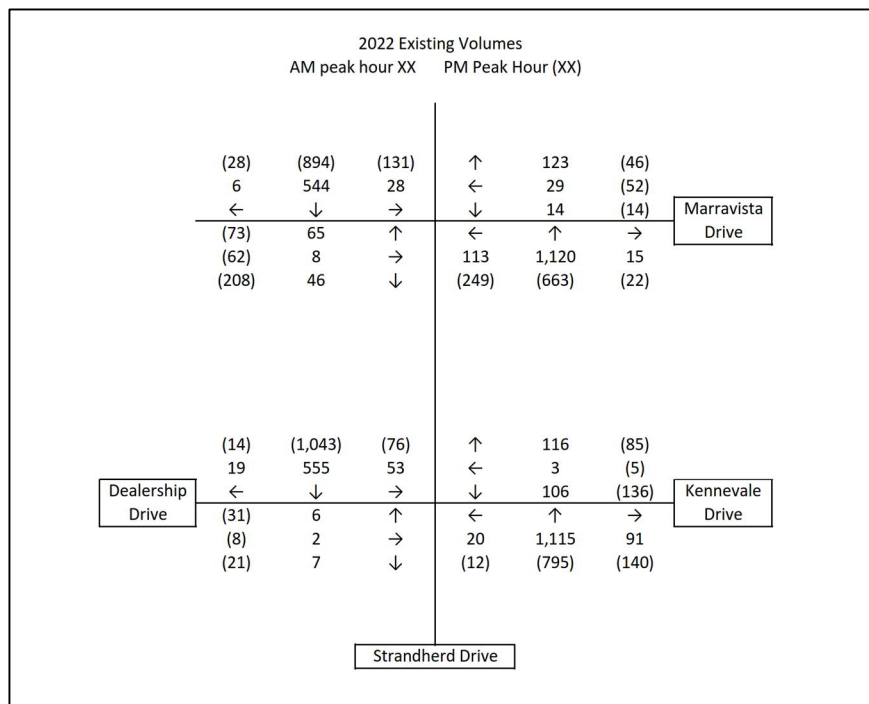


Figure 3.6 Existing Conditions Traffic Movement Volumes

### 3.10 Existing Traffic Operations

Level of Service (LOS) is a qualitative measure of the operating conditions, based on lane configuration, signal operation/phasing. LOS criteria for signalized and unsignalized intersection based on the Multi Modal Level of Service (MMLOS) Guidelines, are illustrated in Table 3.2.

Table 3.2 Definition of LOS for Intersections

Level of Service	v/c Ratio
A	0 to 0.60
B	0.61 to 0.70
C	0.71 to 0.80
D	0.81 to 0.90
E	0.91 to 1.00
F	> 1.00

Existing traffic operations analysis was performed using Synchro 10 software. Signal timing information was provided by the city. Table 3.3 summarizes the existing conditions.

Table 3.3 Existing Conditions

Movement	AM Peak Hour			PM Peak Hour		
	LOS	V/C	Delay	LOS	V/C	Delay
Strandherd Drive and Dealership Drive/ Kennevale Drive						
EBL	A	0.06	44	A	0.18	51
EBT	A	0.01	43	A	0.03	47
EBR	A	0.03	0	A	0.08	1
WBL	B	0.65	66	C	0.75	79
WBTR	A	0.42	13	A	0.32	13
NBL	A	0.04	10	A	0.07	13
NBT	E	0.98	43	C	0.73	23
NBR	A	0.09	4	A	0.14	6
SBL	A	0.44	44	A	0.59	79
SBT	A	0.44	16	D	0.80	20
SBR	A	0.02	4	A	0.01	1
Strandherd Drive and Maravista Drive						
EBL	A	0.32	57	A	0.38	60
EBTR	A	0.19	14	B	0.66	27
WBL	A	0.15	57	A	0.17	58
WBTR	A	0.54	18	A	0.41	31
NBL	A	0.57	66	B	0.69	61
NBTR	B	0.60	11	A	0.49	27
SBL	A	0.29	60	B	0.68	68
SBT	A	0.34	21	A	0.58	28
SBR	A	0.01	0	A	0.03	0
Note: NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound, L = Left-turn, T = Through, R = Right-turn						

The intersection of Strandherd Drive and Dealership Drive/kennevale Drive is expected to operate well with all movements operating at an LOS of D and a v/c of 0.80 or less during both the AM and PM peak hour with the exception of the northbound through lane during the AM peak hour which operates at an LOS of E with a v/c of 0.98 due to the large number of vehicles going towards Hwy 416 during the morning peak hour towards the downtown core. This shows that the roadway is approaching capacity.

The intersection of Strandherd Drive and Maravista Drive is expected to operate well with all movements operating at an LOS of B or better with a v/c of 0.69 or less.

All movements are anticipated to improve with the planned expansion of Strandherd drive from two-lanes to four-lanes reducing the capacity of the northbound and southbound movements at each intersection.

Synchro 10 reports can be found in [Appendix D](#).

## 4.0 PLANNED CONDITIONS

### 4.1 Roadway Network Modifications

According to the City of Ottawa Transportation Master Plan, currently Strandherd drive is in the process of being widened from a two-lane roadway to a four-lane roadway. As such all future conditions scenarios shall be modelled with Strandherd Drive acting as a four-lane roadway from Fallowfield Road to Maravista Drive (Phase 1 2014-2019) and Maravasta to Jockvale Road (Phase 2 202002025).

### 4.2 Other Study Area Developments

Within 1 km to the south of the proposed development there are currently 5 different development applications. All 5 applications are for a planned subdivisions located throughout 3288, 3300 Borrisokane Road, 4205, 4345, and 4375 McKenna Casey Drive. This subdivision is planned to add 313 Am and 348 PM new peak hour two-way trips to the network to be completed and full build out by the year 2030.

Figure 4.1 illustrates the location of the other area development relative to the proposed site.



Figure 4.1 Other Study Area Developments



## 5.0 STUDY AREA AND TIME PERIODS

### 5.1 Study Area

The proposed study area is limited to the following intersection:

- Strandherd Drive at Dealership Drive/ Kennevale Drive; and,
- Strandherd Drive at Maravista Drive.

### 5.2 Time Periods

The proposed time periods for the analysis are:

- AM Peak (8:00-9:00) hour of adjacent roadways, and;
- PM Peak (16:00-17:00) hour of adjacent roadways.

### 5.3 Horizon Years

The proposed horizon years for analysis are:

- Existing Conditions (2022);
- Total Future Traffic phase 1 (2022) Conditions; No background condition for 2022 as the existing 2022 conditions will serve as the background as phase 1 is anticipated to be completed during 2022.
- Background Future phase 2 (2023) and Total Future phase 2(2023) conditions and,
- Horizon Background (2028) and Total Horizon Traffic (2028) Conditions.

## 6.0 EXEMPTION REVIEW

Table 6.1 summarizes the exemptions review in accordance with the City of Ottawa TIA Guidelines.

Table 6.1 Exemptions Review

Module	Element	Exempted	Reasoning
<b>Design Review Component</b>			
4.1 Development Design	4.1.2 Circulation and Access	No	Not exempted due to being a Site Plan
	4.1.3 New Street Networks	Yes	The development is not a subdivision
4.2 Parking	4.2.1 Parking Supply	No	Not exempted due to being a Site Plan
	4.2.2 Spillover Parking	Yes	The development has more parking spots than needed with 368 spaces provided
<b>Network Impact Component</b>			
4.5 Transportation Demand Management	All elements	No	The development is expected to have more than 60 employees
4.6 Neighbourhood Traffic Management	4.6.1 Adjacent Neighbours	Yes	The development uses a collector roadway as a boundary street
4.8 Network Concept		Yes	It is assumed that the Dealership will not generate more than 200 new person trips during peak hour

## 7.0 SUMMARY

After the scoping report the following are the conclusions pulled.

- Two automobile dealerships are anticipated to be developed located at 4149 Strandherd Drive in Barrhaven, with GFA of 2,011 m<sup>2</sup> (Myers Nissan) and 3,430m<sup>2</sup> (Myers Subaru);
- The development is planned to be done in two phases, 2022 and 2023 with each phase consisting of one building;
- Based on this survey the South Nepean area was shown to have the following mode shares; 15 % of auto passenger, 15% transit, 1 % bicycle, 0 % walking and 3 % other, resulting in 66% automobile drivers;

- 38 total collisions at the intersection of Strandherd Drive and Dealership Drive/Kennevale Drive, 36 at the intersection of Strandherd Drive and Maravista Drive, 12 on Strandherd Drive Between Dealership Drive/Kennevale Drive and Maravista, and 1 on Dealership Drive Between Strandherd Drive and end from the years 2016-2020;
- All movements operate well with the exceptions of the northbound through lane at the intersection of Strandherd Drive and Dealership Drive/Kennevale Drive which operated at an LOS of E with a v/c of 0.98;
- It is anticipated that the roadway improvements will aid with these failures;
- The study years include the existing conditions (2022), and the background and total conditions for: phase one buildout (2022), phase 2 buildout (2023) and 5-year Horizon (2028).

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## APPENDIX A – TIA STEP 1 SCREENING FORM

## City of Ottawa 2017 TIA Guidelines Screening Form

### 1. Description of Proposed Development

Municipal Address	4149 Strandherd Drive
Description of Location	Development of a Myers Nissan and another Future Myers Automobile Dealership
Land Use Classification	Automobile Sales (840)
Development Size (units)	N/a
Development Size (m <sup>2</sup> )	Myers Nissan (2,011m <sup>2</sup> ) Future Myers (3,430m <sup>2</sup> )
Number of Accesses and Locations	5 Accesses Total; 2 new Accesses onto Strandherd Drive, <b>1 Existing Access onto Dealership Drive</b> , 2 new Accesses onto Dealership Drive
Phase of Development	Planning
Buildout Year	TBD

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

### 2. Trip Generation Trigger

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

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

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

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

### 3. Location Triggers

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

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

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

### 4. Safety Triggers

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

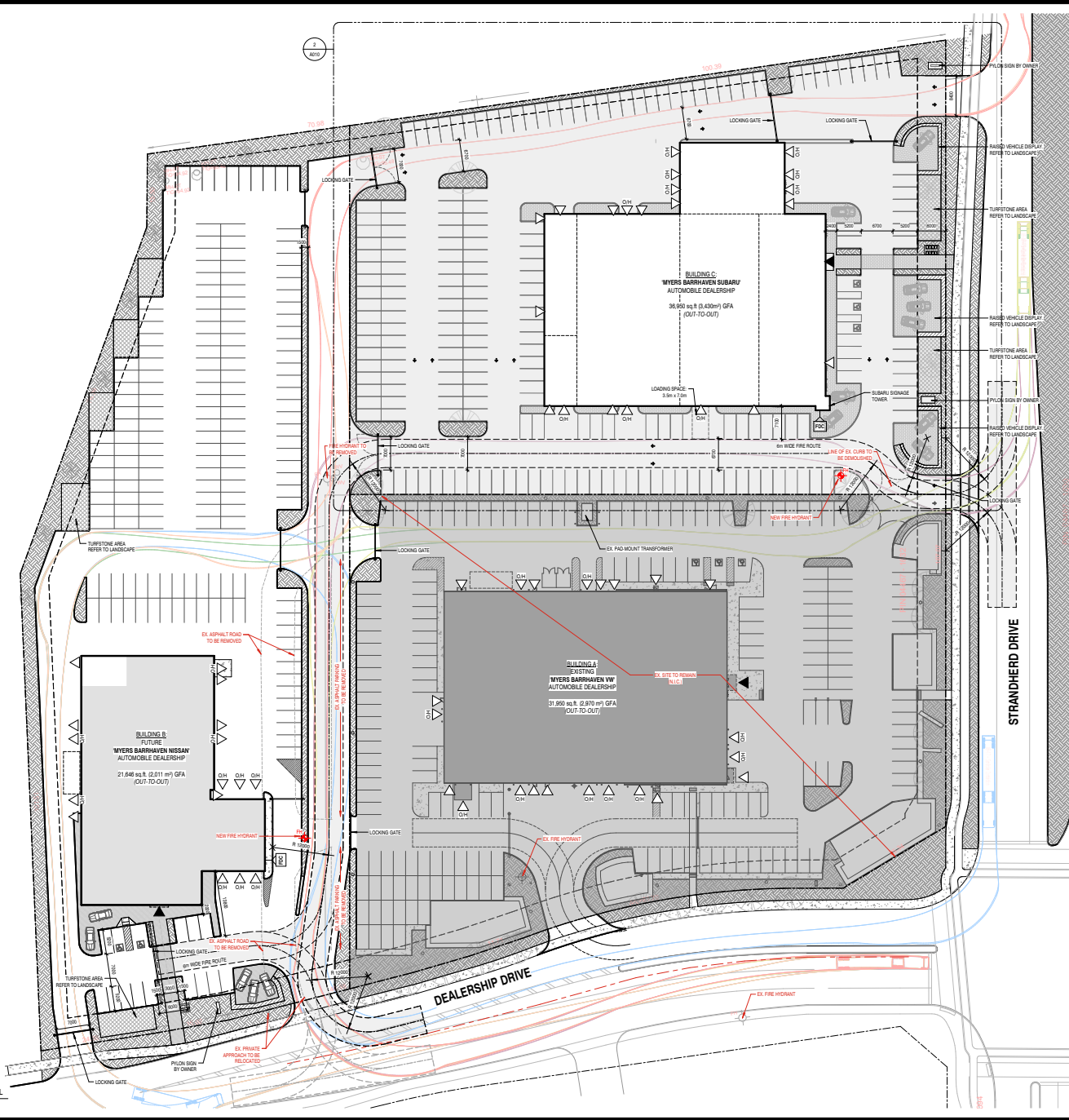
**If any of the above questions were answered with 'Yes,' the Safety Trigger is satisfied.**

### 5. Summary

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

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

## APPENDIX B – SITE PLAN



**SITE / BUILDING / PARKING SUMMARY:**

**TOTAL SITE AREA = 33,784 m<sup>2</sup> (8.35 acres)**

WW SITE = 11,259 m<sup>2</sup> (2.78 acres)  
 SUBARU SITE = 11,071 m<sup>2</sup> (2.74 acres)  
 NISSAN SITE = 11,454 m<sup>2</sup> (2.63 acres)  
**= 33,784 m<sup>2</sup> (8.35 acres)**

**BUILDING AREAS: (OUT-TO-OUT)**

WW SITE = 2,970 m<sup>2</sup>  
 SUBARU SITE = 3,430 m<sup>2</sup>  
 NISSAN SITE = 2,011 m<sup>2</sup>  
**= 8,411 m<sup>2</sup>**

**OVERALL FLOOR SPACE INDEX = 0.25**

**LOT COVERAGE:**

WW SITE = 2,448 m<sup>2</sup>  
 SUBARU SITE = 2,781 m<sup>2</sup>  
 NISSAN SITE = 6,754 m<sup>2</sup>

**TOTAL LOT COVERAGE = 20.0%**

**MINIMUM WIDTH OF LANDSCAPING:**

ABUTTING STRANDHERD DR. = 6.0m  
 ABUTTING STREET = 3.0m  
 ABUTTING OKEEFE DRAINAGE CORRIDOR = 3.0m  
 OTHER CASES = 0.0m

**TOTAL LANDSCAPE AREA:**

WW SITE = 9,105 m<sup>2</sup>  
 SUBARU SITE = 1,128 m<sup>2</sup>  
 NISSAN SITE = 1,743 m<sup>2</sup>  
**= 11,976 m<sup>2</sup>**

**% LANDSCAPE AREA = 35.4%**

**PARKING ON SITE:**

	REQ'D	PROVD
WW SITE	59 spaces	183 spaces
SUBARU SITE	xx	203 spaces
NISSAN SITE	30 spaces	185 spaces
	= xx	571 spaces

**BARRIER-FREE PARKING:**

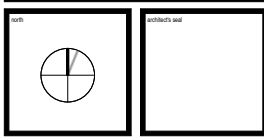
	REQ'D	PROVD
WW SITE	1x 'A', 2x 'B'	3x 'A', 2x 'A', 1x 'B'
SUBARU SITE	xx	2x 'A', 1x 'B'
NISSAN SITE	1x 'A', 1x 'B'	1x 'A', 1x 'B'

'A' = 3.4m x 5.2m  
 'B' = 2.8m x 5.2m

**REVISIONS**

NO.	DATE	DESCRIPTION
11	11-09-2022	ISSUE FOR CONSTRUCTION

It is the responsibility of the appropriate contractor to check and verify all dimensions on site and report all errors and/or omissions to the Architect.  
 All construction must comply with all pertinent codes and by-laws.  
 On-site stake drawings.  
 This drawing may not be used for construction until signed by KWC Architects Inc. and shall not be used without the Architect's consent.



**KWC ARCHITECTS INC.**  
 183 Parkdale Avenue, Suite 201  
 Ottawa, Ontario, Canada, K1Z 6K4  
 Phone: 613 238-2217  
 Fax: 613 238-6595  
 E-Mail: kwc@kwc-arch.com

**BBS**  
 BUILDING A REPUTATION ON EXCELLENCE  
 BBS CONSTRUCTION (ONTARIO) LTD.  
 1805 WOODWARD DRIVE,  
 OTTAWA, ON. K2C 0P9 CANADA  
 TEL: (613) 226-8930 FAX: (613) 226-7709  
 www.bbsconstruction.ca

**ZENA INVESTMENT CORPORATION**

**MYERS BARRHAVEN SUBARU AUTOMOBILE DEALERSHIP**  
 4149 Strandherd Drive

**SITE PLAN - OVERALL COMPOSITE PLAN**

project no: **kwc 2174**  
 drawing no: **A010A**  
 title: **As indicated**  
 scale: **CM / AK**  
 date: **11 JANUARY 2022**

**SITE PLAN SYMBOLS**

ICON	DESCRIPTION
[Symbol]	Existing Building
[Symbol]	Proposed Building
[Symbol]	Property Lines
[Symbol]	Setback Lines
[Symbol]	Fence
[Symbol]	Plant Lines
[Symbol]	Existing Concrete Curb
[Symbol]	Proposed Concrete Curb
[Symbol]	Overlaid Concrete Curb
[Symbol]	Concrete Sidewalk
[Symbol]	Proposed Concrete Pavers
[Symbol]	Bituminous Asphalt
[Symbol]	Existing Landscaping Area
[Symbol]	Proposed Landscaping Area
[Symbol]	Proposed Turfstone Area
[Symbol]	Barrier Free Parking Space
[Symbol]	Exterior Bicycle Parking Foot with Bollard (Blue Blue Block)
[Symbol]	Two Way Vehicle Circulation
[Symbol]	Principal Entrance Door
[Symbol]	Exterior Door (DDH indicates Overhead Door)
[Symbol]	Exterior Six Wide Fire Roads (Six consecutive lapses on all four, TOP)
[Symbol]	Fire Department Connection
[Symbol]	Fire Hydrant

**TOPOGRAPHICAL SKETCH OF ELEVATIONS OVER PART OF BLOCK 4 REGISTERED PLAN 4M-1538 CITY OF OTTAWA**  
 ANNEX, O'SULLIVAN, VOLLEBERG INC.  
 4149 Strandherd Drive  
 Field Work Completed: Sept. 2019

**SITE PLAN OVERALL**  
 1:400



## APPENDIX C – TRAFFIC DATA

# South Nepean

## Demographic Characteristics

Population	72,750	Actively Travelled	57,830
Employed Population	35,540	Number of Vehicles	44,130
Households	26,260	Area (km <sup>2</sup> )	54.8

Occupation Status (age 5+)	Male	Female	Total
Full Time Employed	17,630	14,730	32,350
Part Time Employed	620	2,570	3,190
Student	9,910	9,420	19,340
Retiree	3,420	4,200	7,620
Unemployed	720	500	1,220
Homemaker	180	2,390	2,570
Other	270	540	810
<b>Total:</b>	<b>32,750</b>	<b>34,350</b>	<b>67,100</b>

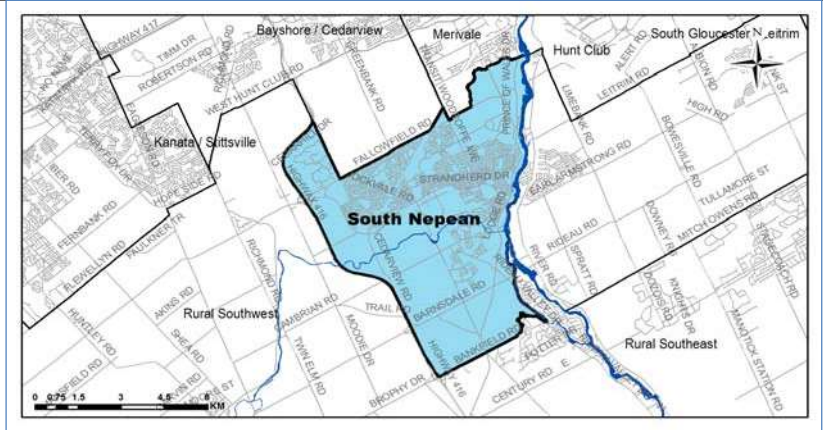
Traveller Characteristics	Male	Female	Total
Transit Pass Holders	5,590	6,100	11,700

Licensed Drivers	24,480	25,260	49,740
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Telecommuters	60	310	370
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Trips made by residents	88,180	97,380	185,550
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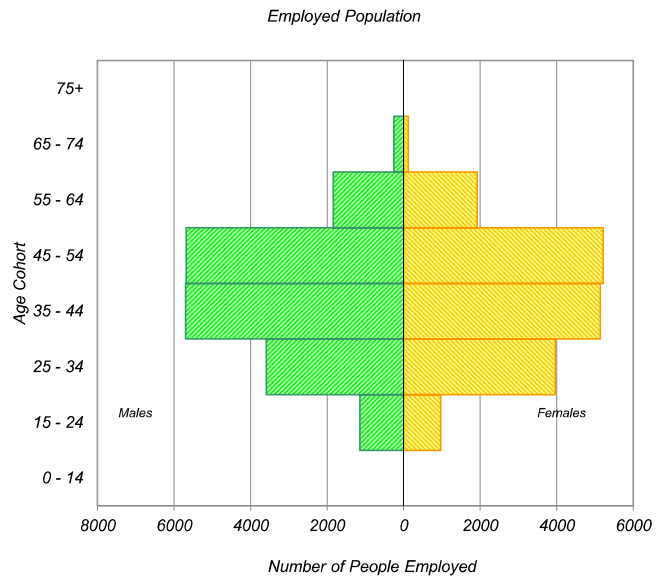
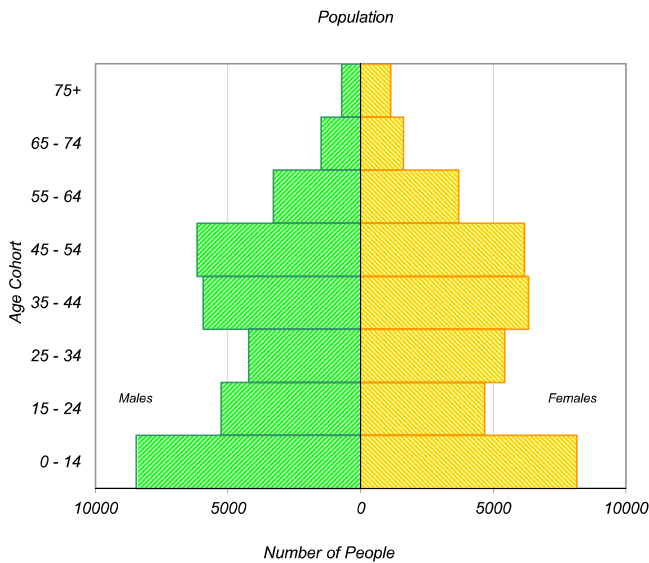
Selected Indicators	
Daily Trips per Person (age 5+)	2.77
Vehicles per Person	0.61
Number of Persons per Household	2.77
Daily Trips per Household	7.07
Vehicles per Household	1.68
Workers per Household	1.35
Population Density (Pop/km <sup>2</sup> )	1330



Household Size		
1 person	3,560	14%
2 persons	7,300	28%
3 persons	5,500	21%
4 persons	6,320	24%
5+ persons	3,590	14%
<b>Total:</b>	<b>26,260</b>	<b>100%</b>

Households by Vehicle Availability		
0 vehicles	810	3%
1 vehicle	9,500	36%
2 vehicles	13,800	53%
3 vehicles	1,730	7%
4+ vehicles	410	2%
<b>Total:</b>	<b>26,260</b>	<b>100%</b>

Households by Dwelling Type		
Single-detached	14,530	55%
Semi-detached	3,090	12%
Townhouse	7,770	30%
Apartment/Condo	870	3%
<b>Total:</b>	<b>26,260</b>	<b>100%</b>

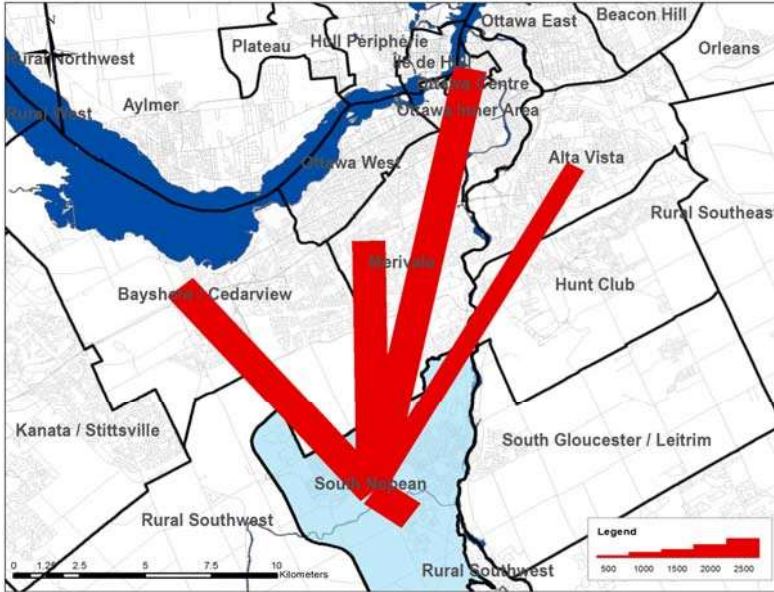


\* In 2005 data was only collected for household members aged 11+ therefore these results cannot be compared to the 2011 data.

## Travel Patterns

### Top Five Destinations of Trips from South Nepean

#### AM Peak Period



### Summary of Trips to and from South Nepean

Districts	Destinations of Trips From		Origins of Trips To	
	District	% Total	District	% Total
Ottawa Centre	3,820	9%	30	0%
Ottawa Inner Area	2,270	5%	340	1%
Ottawa East	630	2%	50	0%
Beacon Hill	370	1%	50	0%
Alta Vista	2,360	6%	460	2%
Hunt Club	920	2%	440	2%
Merivale	4,310	10%	790	3%
Ottawa West	1,830	4%	160	1%
Bayshore / Cedarview	3,230	8%	700	3%
Orléans	330	1%	200	1%
Rural East	20	0%	60	0%
Rural Southeast	250	1%	580	2%
South Gloucester / Leitrim	100	0%	310	1%
South Nepean	17,260	42%	17,260	74%
Rural Southwest	580	1%	970	4%
Kanata / Stittsville	1,800	4%	690	3%
Rural West	80	0%	30	0%
Île de Hull	840	2%	50	0%
Hull Périphérie	260	1%	40	0%
Plateau	0	0%	40	0%
Aylmer	60	0%	40	0%
Rural Northwest	40	0%	40	0%
Pointe Gatineau	0	0%	0	0%
Gatineau Est	0	0%	20	0%
Rural Northeast	10	0%	20	0%
Buckingham / Masson-Angers	20	0%	0	0%
Ontario Sub-Total:	40,160	97%	23,120	99%
Québec Sub-Total:	1,230	3%	250	1%
Total:	41,390	100%	23,370	100%

### Trips by Trip Purpose

24 Hours	From District		To District		Within District	
Work or related	25,640	41%	5,290	8%	4,680	6%
School	5,310	8%	1,430	2%	10,610	13%
Shopping	4,940	8%	4,220	7%	12,840	16%
Leisure	6,960	11%	4,020	6%	5,760	7%
Medical	1,720	3%	900	1%	840	1%
Pick-up / drive passenger	4,040	6%	3,920	6%	7,530	9%
Return Home	11,460	18%	40,960	65%	34,630	43%
Other	2,640	4%	2,090	3%	3,020	4%
Total:	62,710	100%	62,830	100%	79,910	100%

AM Peak (06:30 - 08:59)	From District		To District		Within District	
Work or related	18,160	75%	2,890	47%	2,120	12%
School	3,280	14%	1,170	19%	9,180	53%
Shopping	180	1%	70	1%	720	4%
Leisure	350	1%	230	4%	220	1%
Medical	400	2%	60	1%	100	1%
Pick-up / drive passenger	1,060	4%	770	13%	2,860	17%
Return Home	210	1%	640	10%	1,070	6%
Other	520	2%	290	5%	990	6%
Total:	24,160	100%	6,120	100%	17,260	100%

PM Peak (15:30 - 17:59)	From District		To District		Within District	
Work or related	410	5%	290	1%	410	2%
School	250	3%	0	0%	50	0%
Shopping	900	11%	1,090	5%	2,090	11%
Leisure	1,420	17%	790	3%	1,840	10%
Medical	190	2%	230	1%	90	0%
Pick-up / drive passenger	820	10%	1,700	7%	1,610	9%
Return Home	3,800	47%	18,990	81%	11,810	64%
Other	360	4%	490	2%	540	3%
Total:	8,150	100%	23,580	100%	18,440	100%

Peak Period (%)	Total:	% of 24 Hours	Within District (%)
24 Hours	205,450		39%
AM Peak Period	47,540	23%	36%
PM Peak Period	50,170	24%	37%

### Trips by Primary Travel Mode

24 Hours	From District		To District		Within District	
Auto Driver	41,340	66%	41,280	66%	39,110	49%
Auto Passenger	9,400	15%	10,030	16%	15,320	19%
Transit	9,990	16%	9,520	15%	2,260	3%
Bicycle	310	0%	320	1%	960	1%
Walk	80	0%	170	0%	13,060	16%
Other	1,600	3%	1,520	2%	9,210	12%
Total:	62,720	100%	62,840	100%	79,920	100%

AM Peak (06:30 - 08:59)	From District		To District		Within District	
Auto Driver	14,570	60%	4,360	71%	5,800	34%
Auto Passenger	1,930	8%	780	13%	3,210	19%
Transit	6,610	27%	330	5%	730	4%
Bicycle	80	0%	50	1%	320	2%
Walk	20	0%	10	0%	3,000	17%
Other	930	4%	590	10%	4,200	24%
Total:	24,140	100%	6,120	100%	17,260	100%

PM Peak (15:30 - 17:59)	From District		To District		Within District	
Auto Driver	5,840	72%	14,640	62%	8,420	46%
Auto Passenger	1,730	21%	2,680	11%	3,930	21%
Transit	350	4%	5,770	24%	650	4%
Bicycle	80	1%	110	0%	150	1%
Walk	30	0%	0	0%	3,680	20%
Other	100	1%	380	2%	1,590	9%
Total:	8,130	100%	23,580	100%	18,420	100%

Avg Vehicle Occupancy	From District		To District		Within District	
24 Hours	1.23		1.24		1.39	
AM Peak Period	1.13		1.18		1.55	
PM Peak Period	1.30		1.18		1.47	

Transit Modal Split	From District		To District		Within District	
24 Hours	16%		16%		4%	
AM Peak Period	29%		6%		7%	
PM Peak Period	4%		25%		5%	

# Traffic Signal Timing

City of Ottawa, Public Works & Environmental Services Department

## Traffic Signal Operations Unit

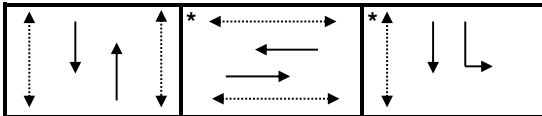
<b>Intersection:</b>	<i>Main:</i> Strandherd	<i>Side:</i> Kennevale
<b>Controller:</b>	<b>ATC3</b>	<b>TSD:</b> 6715
<b>Author:</b>	Ruben Bonzele	<b>Date:</b> 07-Feb-2022

### Existing Timing Plans†

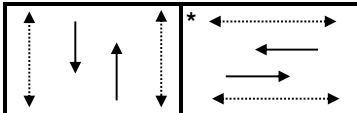
	Plan							Ped Minimum Time		
	AM Peak 1	Off Peak 2	PM Lite 3	Night 4	Weekend 5	Evening 12	PM Peak 13	Walk	DW	A+R
<b>Cycle</b>	120	110	120	80	110	95	140			
<b>Offset</b>	29	93	57	X	93	X	57			
<b>NB Thru</b>	70	60	67	42	60	42	87	7	22	3.7+2.4
<b>SB Thru</b>	70	60	67	42	60	42	87	7	22	3.7+2.4
<b>EB Thru</b>	38	38	38	38	38	38	38	7	24	3.3+3.3
<b>WB Thru</b>	38	38	38	38	38	38	38	7	24	3.3+3.3
<b>SB Left</b>	12	12	15	-	12	15	15	-	-	3.7+2.1

### Phasing Sequence‡

**Plan: 1,2,3,5,12,13**



**Plan: 4**



### Schedule

Weekday		Weekend	
Time	Plan	Time	Plan
0:15	4	0:15	4
6:00	1	8:30	12
9:30	2	10:00	5
15:00	3	18:00	12
15:30	13	22:30	4
18:00	3		
18:30	2		
20:00	12		
22:30	4		

### Notes

- †: Time for each direction includes amber and all red intervals
- ‡: Start of first phase should be used as reference point for offset
- Asterisk (\*) Indicates actuated phase
- (fp): Fully Protected Left Turn
- ◄.....► Pedestrian signal

Cost is \$61.16 (\$54.12 + HST)

# Traffic Signal Timing

City of Ottawa, Public Works & Environmental Services Department

## Traffic Signal Operations Unit

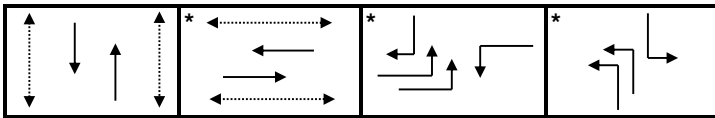
<b>Intersection:</b>	<u>Main:</u> Strandherd	<b>Side:</b>	<u>Maravista</u>
<b>Controller:</b>	<u>ATC3</u>	<b>TSD:</b>	<u>6728</u>
<b>Author:</b>	<u>Ruben Bonzele</u>	<b>Date:</b>	<u>07-Feb-2022</u>

### Existing Timing Plans<sup>†</sup>

Plan	Plan						Ped Minimum Time		
	AM Peak	Off Peak	PM Peak	Night	Weekend	Evening	Walk	DW	A+R
	1	2	3	4	5	12			
<b>Cycle</b>	120	110	120	110	110	120			
<b>Offset</b>	83	0	82	X	0	X			
NB Thru	38	37	40	33	35	33	7	17	3.7+2.8
SB Thru	38	37	40	33	35	33	7	17	3.7+2.8
EB Thru	47	47	47	47	47	47	7	32	3.3+4.3
WB Thru	47	47	47	47	47	47	7	32	3.3+4.3
EB Left (fp)	20	13	15	15	13	20	-	-	3.3+4.3
WB Left (fp)	20	13	15	15	13	20	-	-	3.3+4.3
SB Right	20	13	15	15	13	20	-	-	3.3+4.3
NB Left (fp)	15	13	18	15	15	20	-	-	3.7+2.7
SB Left (fp)	15	13	18	15	15	20	-	-	3.7+2.7

### Phasing Sequence<sup>‡</sup>

Plan: All



- Notes:**
- 1) For plan 1, if the EW pedestrian phase is not actuated, the EW thru will be forced off 19s early
  - 2) For plan 3,4,12 if the EW pedestrian phase is not actuated, the EW thru will be forced off after 30s

### Schedule

Weekday		Weekend	
Time	Plan	Time	Plan
0:15	4	0:15	4
6:00	1	8:30	12
9:30	2	10:00	5
15:00	3	18:00	12
18:30	2	23:00	4
20:00	12		
22:30	4		

### Notes

- †: Time for each direction includes amber and all red intervals  
‡: Start of first phase should be used as reference point for offset  
Asterisk (\*) Indicates actuated phase  
(fp): Fully Protected Left Turn  
◄.....► Pedestrian signal

Cost is \$61.16 (\$54.12 + HST)

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

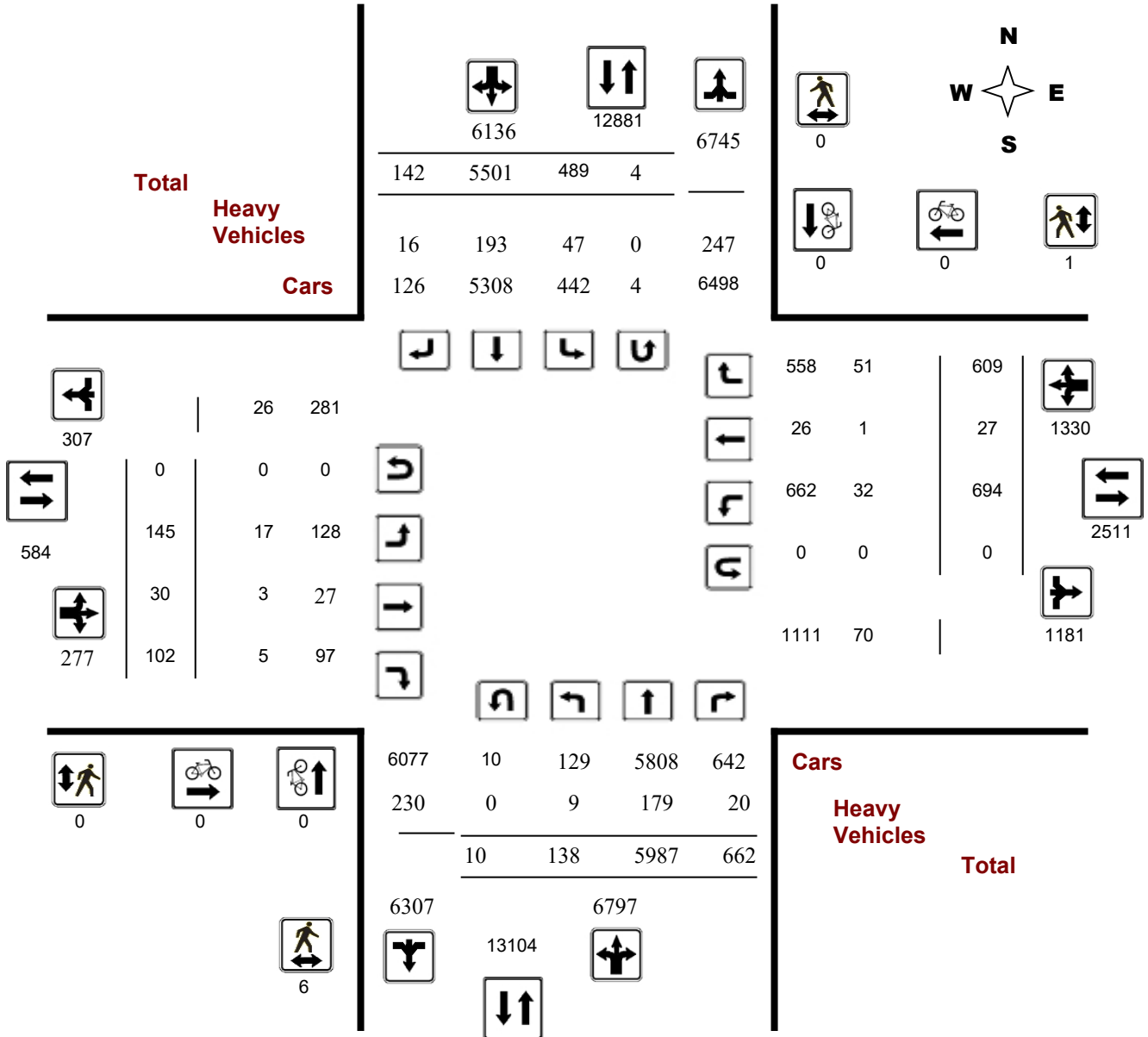
**Survey Date:** Thursday, January 18, 2018

**WO No:** 37427

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

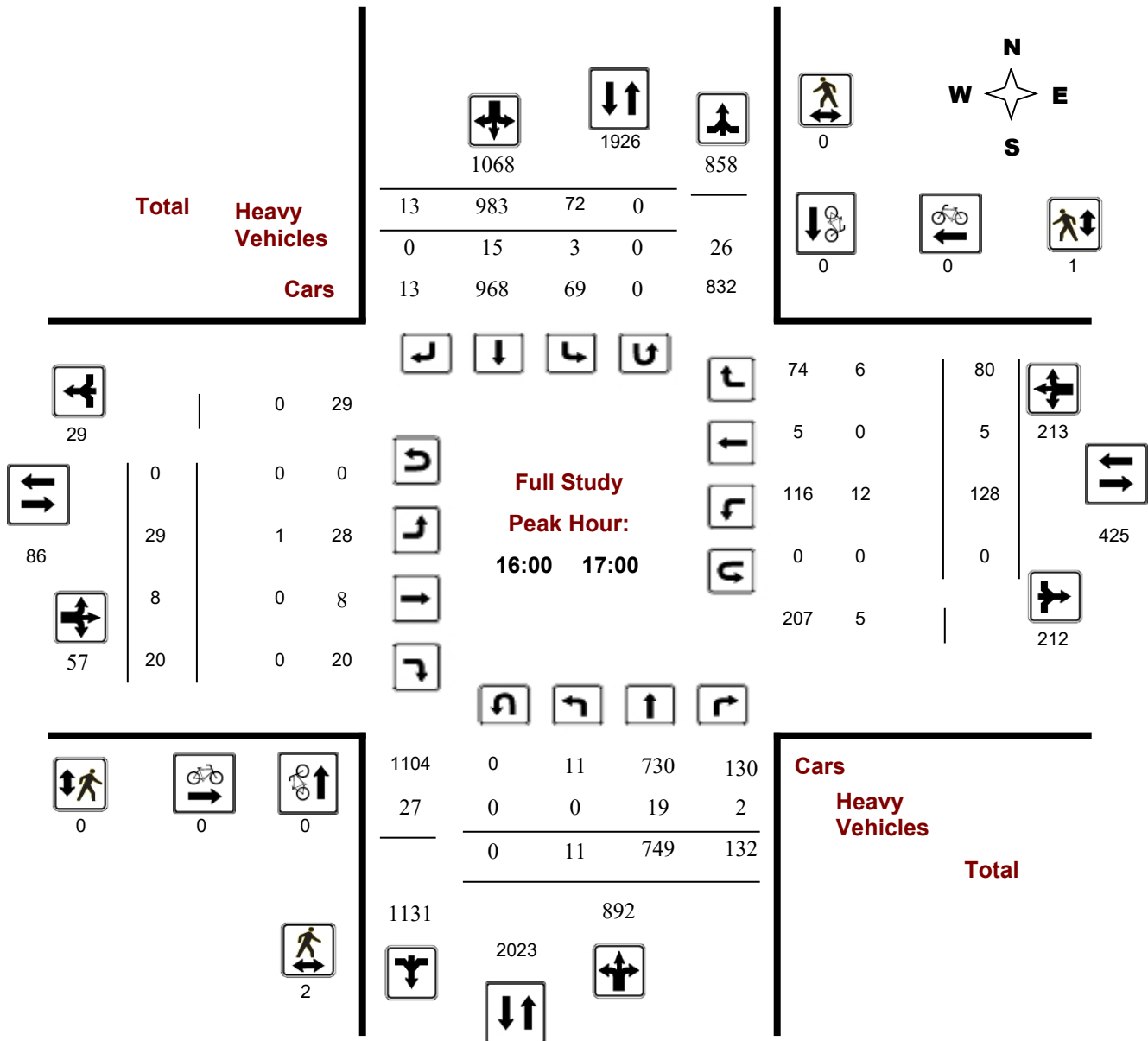
**Survey Date:** Thursday, January 18, 2018

**WO No:** 37427

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram





# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

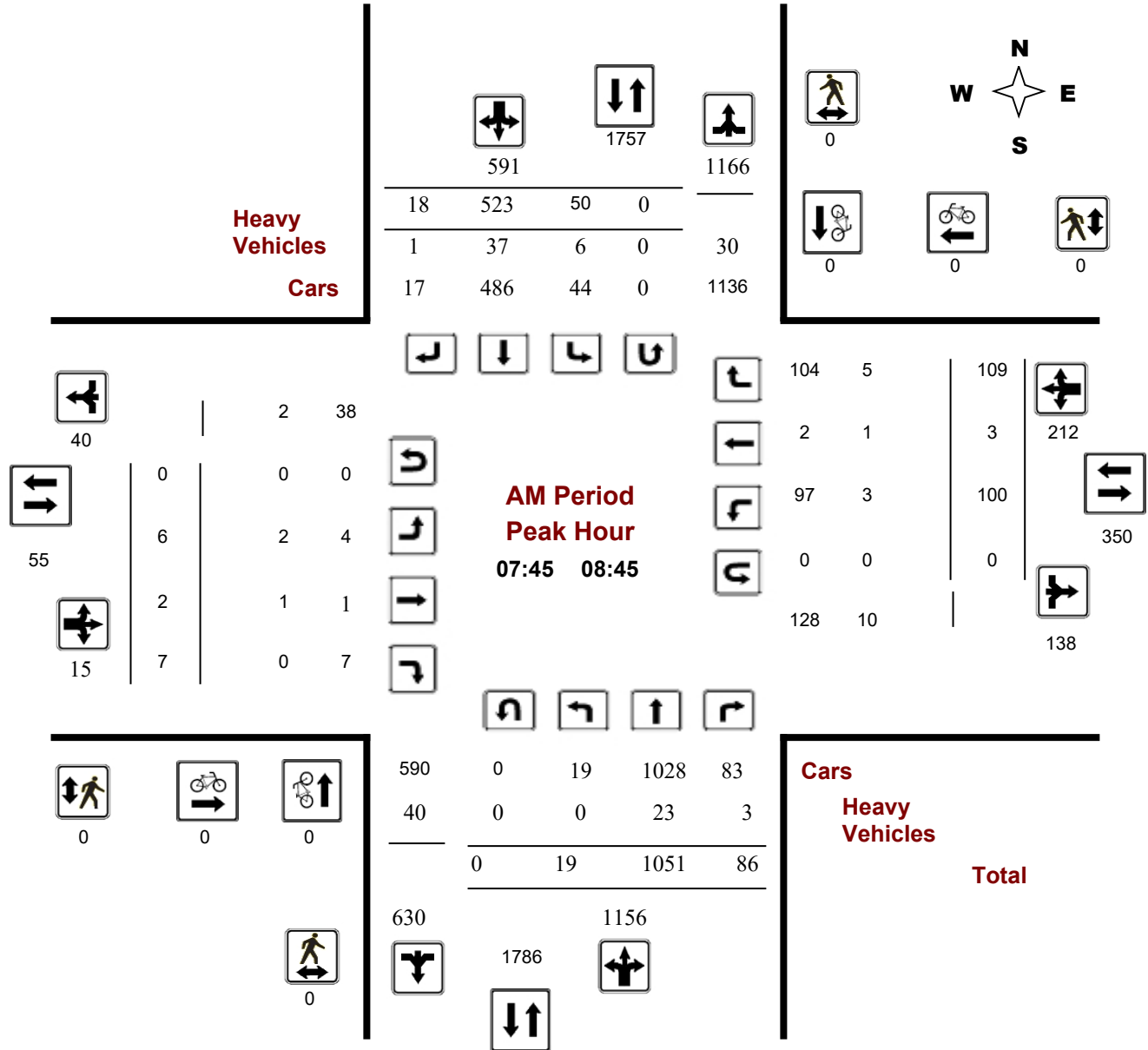
### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**Start Time:** 07:00

**WO No:** 37427

**Device:** Miovision



**Comments**



## Turning Movement Count - Peak Hour Diagram

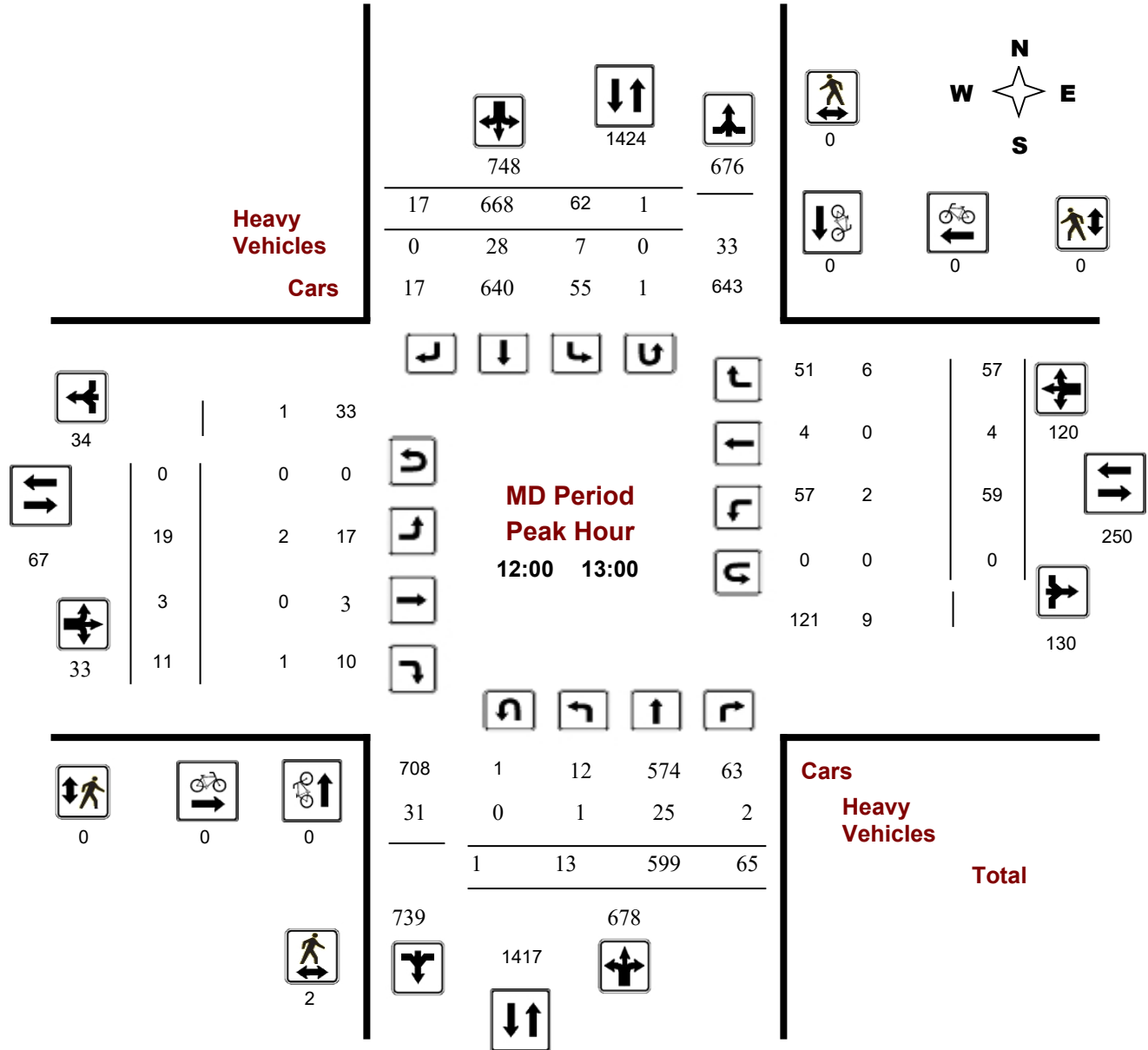
### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**Start Time:** 07:00

**WO No:** 37427

**Device:** Miovision



**Comments**

## Turning Movement Count - Peak Hour Diagram

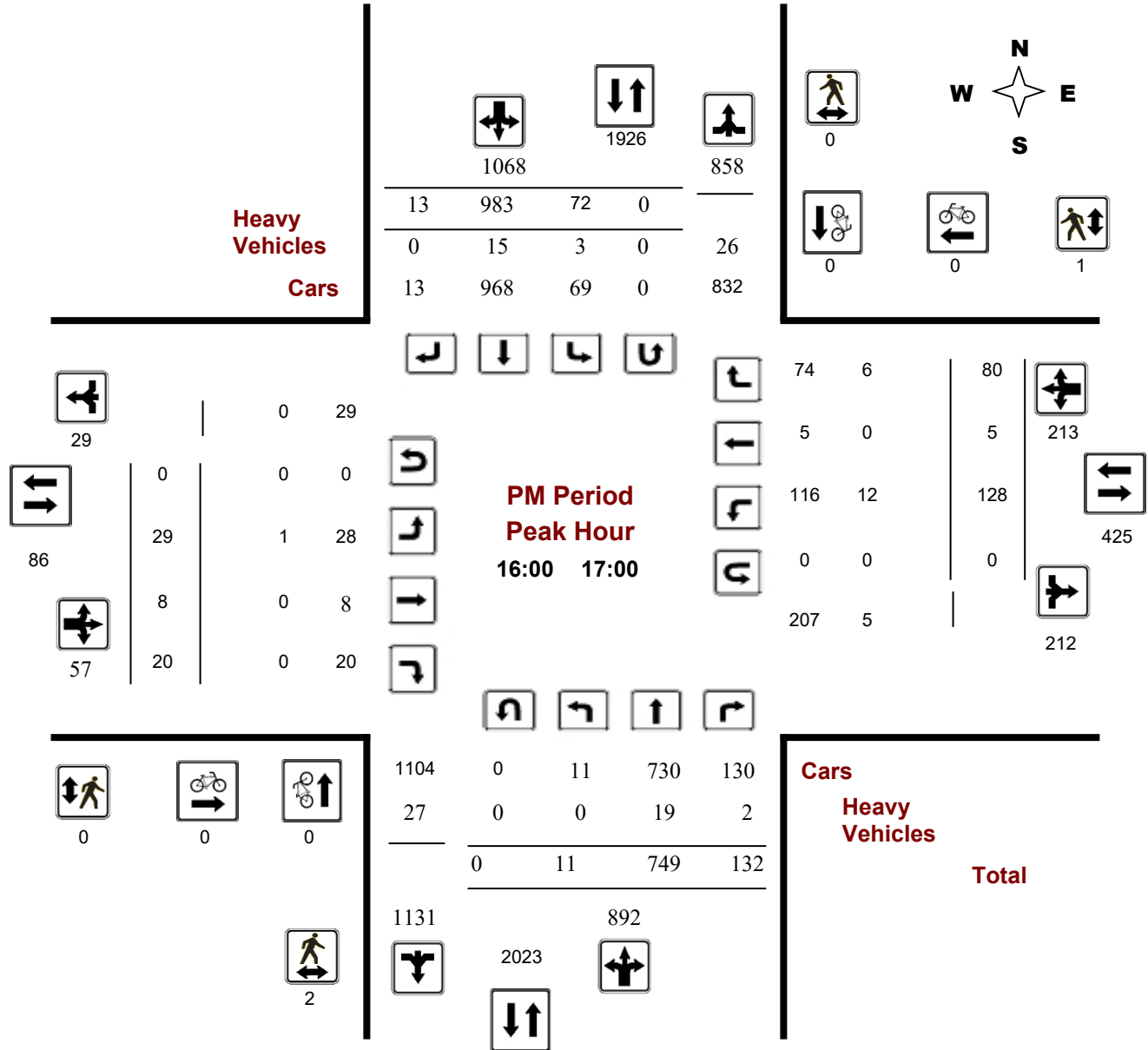
### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**Start Time:** 07:00

**WO No:** 37427

**Device:** Miovision



**Comments**



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37427

**Start Time:** 07:00

**Device:** Miovision

### Full Study Summary (8 HR Standard)

**Survey Date:** Thursday, January 18, 2018

**Total Observed U-Turns**

**AADT Factor**

Northbound: 10      Southbound: 4  
 Eastbound: 0      Westbound: 0

1.39

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	14	945	57	1016	35	466	19	520	1536	4	1	6	11	80	3	100	183	194	1730
08:00 09:00	23	1039	93	1155	53	477	23	553	1708	8	2	8	18	96	2	105	203	221	1929
09:00 10:00	28	696	65	789	47	448	14	509	1298	17	4	10	31	52	1	56	109	140	1438
11:30 12:30	14	603	57	674	69	589	21	679	1353	22	5	15	42	61	5	60	126	168	1521
12:30 13:30	16	567	60	643	60	683	18	761	1404	23	0	6	29	60	1	63	124	153	1557
15:00 16:00	20	670	100	790	83	866	23	972	1762	25	7	20	52	111	5	74	190	242	2004
16:00 17:00	11	749	132	892	72	983	13	1068	1960	29	8	20	57	128	5	80	213	270	2230
17:00 18:00	12	718	98	828	70	989	11	1070	1898	17	3	17	37	106	5	71	182	219	2117
<b>Sub Total</b>	138	5987	662	6787	489	5501	142	6132	12919	145	30	102	277	694	27	609	1330	1607	14526
<b>U Turns</b>				10				4	14				0				0	0	14
<b>Total</b>	138	5987	662	6797	489	5501	142	6136	12933	145	30	102	277	694	27	609	1330	1607	14540
<b>EQ 12Hr</b>	192	8322	920	9448	680	7646	197	8529	17977	202	42	142	385	965	38	847	1849	2234	20211
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.													<b>1.39</b>						
<b>AVG 12Hr</b>	192	8322	920	9448	680	7646	197	8529	17977	202	42	142	385	965	38	847	1849	2234	20211
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.													<b>1</b>						
<b>AVG 24Hr</b>	251	10902	1205	12377	890	10017	259	11173	23550	264	55	186	504	1264	49	1109	2422	2926	26476
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.													<b>1.31</b>						

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



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37427

**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	1	193	7	201	7	86	3	96	614	1	1	1	3	12	1	24	37	614	337
07:15 07:30	3	231	17	251	6	131	6	143	803	1	0	1	2	27	1	18	46	803	442
07:30 07:45	4	250	15	270	11	96	4	111	780	2	0	2	4	19	0	29	48	780	433
07:45 08:00	6	271	18	295	11	153	6	170	942	0	0	2	2	22	1	29	52	942	519
08:00 08:15	7	240	21	268	23	136	6	165	871	1	0	2	3	29	1	30	60	871	496
08:15 08:30	1	276	23	300	7	130	2	139	895	2	1	3	6	21	1	24	46	895	491
08:30 08:45	5	264	24	293	9	104	4	117	835	3	1	0	4	28	0	26	54	835	468
08:45 09:00	10	259	25	294	14	107	11	132	840	2	0	3	5	18	0	25	43	840	474
09:00 09:15	8	173	17	199	8	92	2	102	605	2	1	5	8	17	1	14	32	605	341
09:15 09:30	6	209	17	234	11	130	5	146	744	4	1	0	5	8	0	11	19	744	404
09:30 09:45	10	164	14	189	15	119	2	136	657	8	2	2	12	18	0	20	38	657	375
09:45 10:00	4	150	17	171	13	107	5	125	579	3	0	3	6	9	0	11	20	579	322
11:30 11:45	3	161	16	181	10	134	4	148	672	7	1	4	12	18	2	18	38	672	379
11:45 12:00	5	128	13	146	20	149	5	174	634	5	1	1	7	14	0	17	31	634	358
12:00 12:15	2	155	12	169	16	160	3	179	696	4	2	6	12	8	0	15	23	696	383
12:15 12:30	4	159	16	180	23	146	9	178	705	6	1	4	11	21	3	10	34	705	403
12:30 12:45	2	140	21	163	12	166	4	182	689	4	0	1	5	17	1	16	34	689	384
12:45 13:00	5	145	16	166	11	196	1	209	751	5	0	0	5	13	0	16	29	751	409
13:00 13:15	5	136	12	153	21	154	6	181	672	7	0	2	9	18	0	21	39	672	382
13:15 13:30	4	146	11	161	16	167	7	190	696	7	0	3	10	12	0	10	22	696	383
15:00 15:15	5	176	18	200	21	202	6	230	859	7	3	5	15	16	2	21	39	859	484
15:15 15:30	3	192	18	215	24	225	8	257	948	4	3	4	11	28	1	21	50	948	533
15:30 15:45	9	154	29	192	18	225	5	248	873	13	0	4	17	24	0	13	37	873	494
15:45 16:00	3	148	35	186	20	214	4	238	856	1	1	7	9	43	2	19	64	856	497
16:00 16:15	1	203	37	241	15	256	1	272	1026	4	1	4	9	24	1	22	47	1026	569
16:15 16:30	5	175	24	204	19	251	4	274	973	5	3	7	15	38	1	19	58	973	551
16:30 16:45	2	187	36	225	19	252	6	277	1001	12	2	3	17	30	2	15	47	1001	566
16:45 17:00	3	184	35	222	19	224	2	245	949	8	2	6	16	36	1	24	61	949	544
17:00 17:15	3	156	29	188	19	248	2	269	920	9	0	7	16	24	1	19	44	920	517
17:15 17:30	1	177	21	199	18	252	2	274	952	2	1	2	5	31	3	13	47	952	525
17:30 17:45	2	196	23	221	21	261	2	284	1017	5	1	6	12	21	0	23	44	1017	561
17:45 18:00	6	189	25	220	12	228	5	245	931	1	1	2	4	30	1	16	47	931	516
<b>Total:</b>	<b>138</b>	<b>5987</b>	<b>662</b>	<b>6797</b>	<b>489</b>	<b>5501</b>	<b>142</b>	<b>6136</b>	<b>25985</b>	<b>145</b>	<b>30</b>	<b>102</b>	<b>277</b>	<b>694</b>	<b>27</b>	<b>609</b>	<b>1330</b>	<b>25985</b>	<b>14,540</b>

Note: U-Turns are included in Totals.



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37427

**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	0	0	0	0	0	0	0
09:15 09:30	0	0	0	0	0	0	0
09:30 09:45	0	0	0	0	0	0	0
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	0	0	0	0	0	0	0
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	0	0	0	0	0	0	0
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	0	0	0	0	0	0	0
12:45 13:00	0	0	0	0	0	0	0
13:00 13:15	0	0	0	0	0	0	0
13:15 13:30	0	0	0	0	0	0	0
15:00 15:15	0	0	0	0	0	0	0
15:15 15:30	0	0	0	0	0	0	0
15:30 15:45	0	0	0	0	0	0	0
15:45 16:00	0	0	0	0	0	0	0
16:00 16:15	0	0	0	0	0	0	0
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	0	0	0	0	0	0	0
17:00 17:15	0	0	0	0	0	0	0
17:15 17:30	0	0	0	0	0	0	0
17:30 17:45	0	0	0	0	0	0	0
17:45 18:00	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37427

**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	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	1	0	1	0	0	0	1
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	2	0	2	0	0	0	2
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	1	0	1	0	0	0	1
16:00 16:15	0	0	0	0	0	0	0
16:15 16:30	1	0	1	0	0	0	1
16:30 16:45	1	0	1	0	1	1	2
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
<b>Total</b> .....	<b>6</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>7</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37427

**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	1	2	1	12	1	8	0	12	24	0	0	0	1	0	0	1	3	4	14	
07:15 07:30	0	4	1	12	2	7	0	14	26	1	0	0	1	0	0	0	3	4	15	
07:30 07:45	2	3	0	11	0	5	0	9	20	1	0	0	3	1	0	0	1	4	12	
07:45 08:00	0	4	0	13	1	9	0	15	28	0	0	0	0	0	0	1	2	2	15	
08:00 08:15	0	6	2	15	4	7	0	20	35	1	0	0	1	0	0	2	8	9	22	
08:15 08:30	0	8	0	19	1	8	0	19	38	0	1	0	2	3	1	2	8	10	24	
08:30 08:45	0	5	1	19	0	13	1	20	39	1	0	0	2	0	0	0	1	3	21	
08:45 09:00	0	10	4	19	3	5	1	24	43	1	0	0	2	0	0	4	11	13	28	
09:00 09:15	1	8	1	18	1	5	2	18	36	0	0	1	4	2	0	2	6	10	23	
09:15 09:30	1	8	0	22	1	13	1	25	47	1	0	0	3	0	0	1	2	5	26	
09:30 09:45	1	7	0	19	2	11	1	27	46	4	1	0	7	0	0	2	5	12	29	
09:45 10:00	0	12	0	16	2	4	1	21	37	0	0	0	1	0	0	2	4	5	21	
11:30 11:45	0	8	1	17	3	7	1	24	41	1	0	1	3	0	0	4	8	11	26	
11:45 12:00	0	6	0	14	3	7	2	22	36	1	1	0	4	1	0	3	8	12	24	
12:00 12:15	1	6	0	16	1	9	0	17	33	1	0	0	2	0	0	0	1	3	18	
12:15 12:30	0	8	1	15	3	4	0	19	34	0	0	1	1	1	0	4	9	10	22	
12:30 12:45	0	7	1	15	1	6	0	15	30	0	0	0	0	1	0	1	4	4	17	
12:45 13:00	0	4	0	13	2	9	0	17	30	1	0	0	1	0	0	1	3	4	17	
13:00 13:15	1	7	1	15	1	5	1	20	35	1	0	0	3	1	0	5	8	11	23	
13:15 13:30	1	2	1	14	3	7	1	14	28	1	0	2	5	1	0	0	5	10	19	
15:00 15:15	0	8	0	18	2	6	1	18	36	0	0	0	1	4	0	1	7	8	22	
15:15 15:30	0	5	0	12	2	4	1	15	27	0	0	0	1	3	0	3	8	9	18	
15:30 15:45	0	7	3	14	0	3	0	10	24	0	0	0	0	1	0	0	4	4	14	
15:45 16:00	0	3	0	11	3	7	2	18	29	0	0	0	2	1	0	3	7	9	19	
16:00 16:15	0	6	1	21	1	7	0	17	38	0	0	0	0	7	0	3	12	12	25	
16:15 16:30	0	5	0	11	0	3	0	10	21	0	0	0	0	3	0	2	5	5	13	
16:30 16:45	0	2	1	6	2	2	0	7	13	1	0	0	1	1	0	0	4	5	9	
16:45 17:00	0	6	0	10	0	3	0	10	20	0	0	0	0	1	0	1	2	2	11	
17:00 17:15	0	3	0	5	1	2	0	6	11	0	0	0	0	0	0	0	1	1	6	
17:15 17:30	0	3	0	6	0	3	0	7	13	0	0	0	0	0	0	1	1	1	7	
17:30 17:45	0	3	0	6	1	3	0	7	13	0	0	0	0	0	0	0	1	1	7	
17:45 18:00	0	3	0	4	0	1	0	6	10	0	0	0	0	0	0	2	2	2	6	
<b>Total:</b>	None	9	179	20	438	47	193	16	503	941	17	3	5	51	32	1	51	154	205	573



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37427

**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	1	0	0	0	1
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	1	0	0	0	1
09:15	09:30	2	0	0	0	2
09:30	09:45	1	0	0	0	1
09:45	10:00	0	0	0	0	0
11:30	11:45	1	0	0	0	1
11:45	12:00	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:15	12:30	1	0	0	0	1
12:30	12:45	0	0	0	0	0
12:45	13:00	0	1	0	0	1
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:00	15:15	1	1	0	0	2
15:15	15:30	2	0	0	0	2
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	2	0	0	2
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		10	4	0	0	14



## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

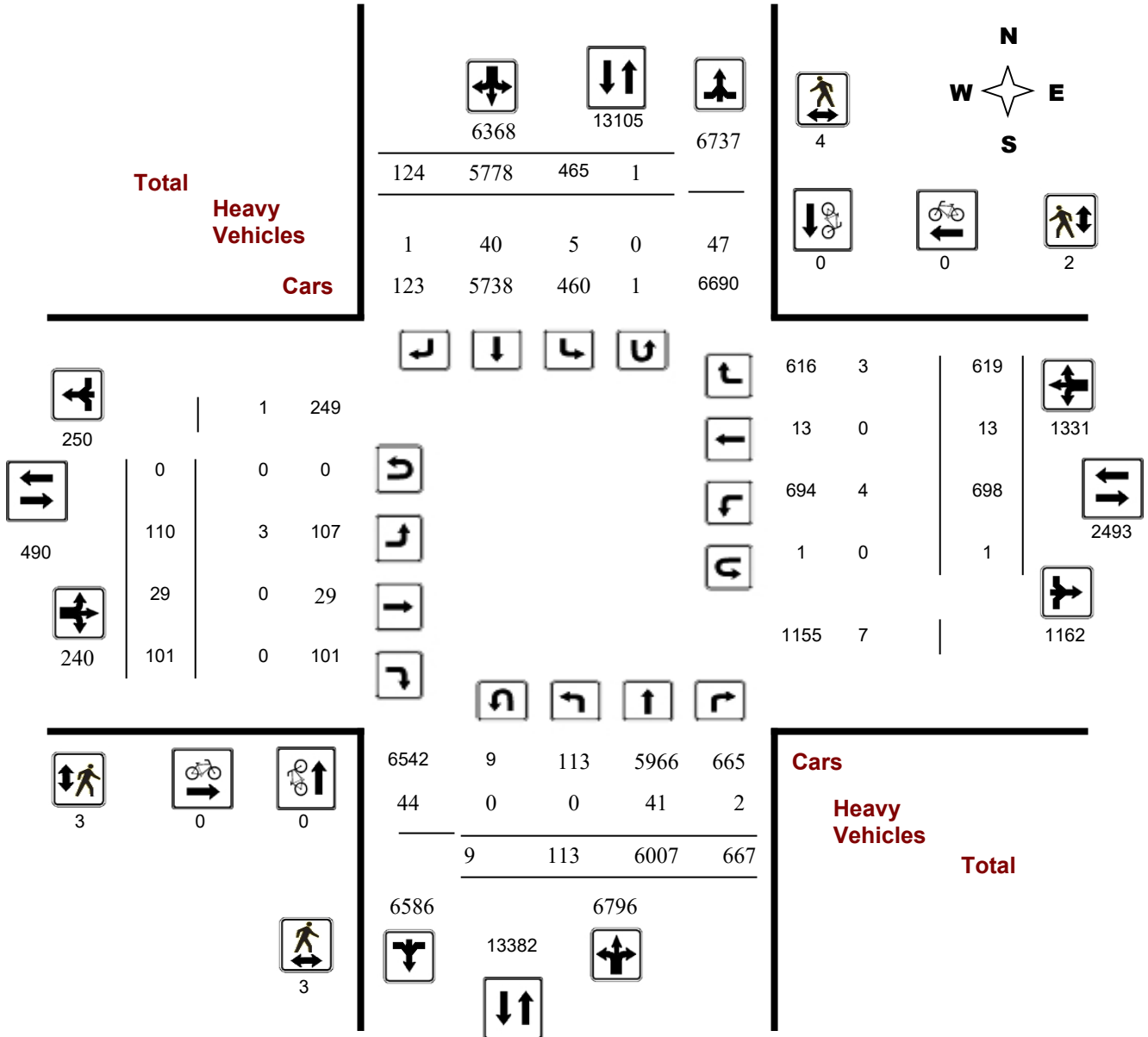
**Survey Date:** Saturday, January 20, 2018

**WO No:** 37464

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

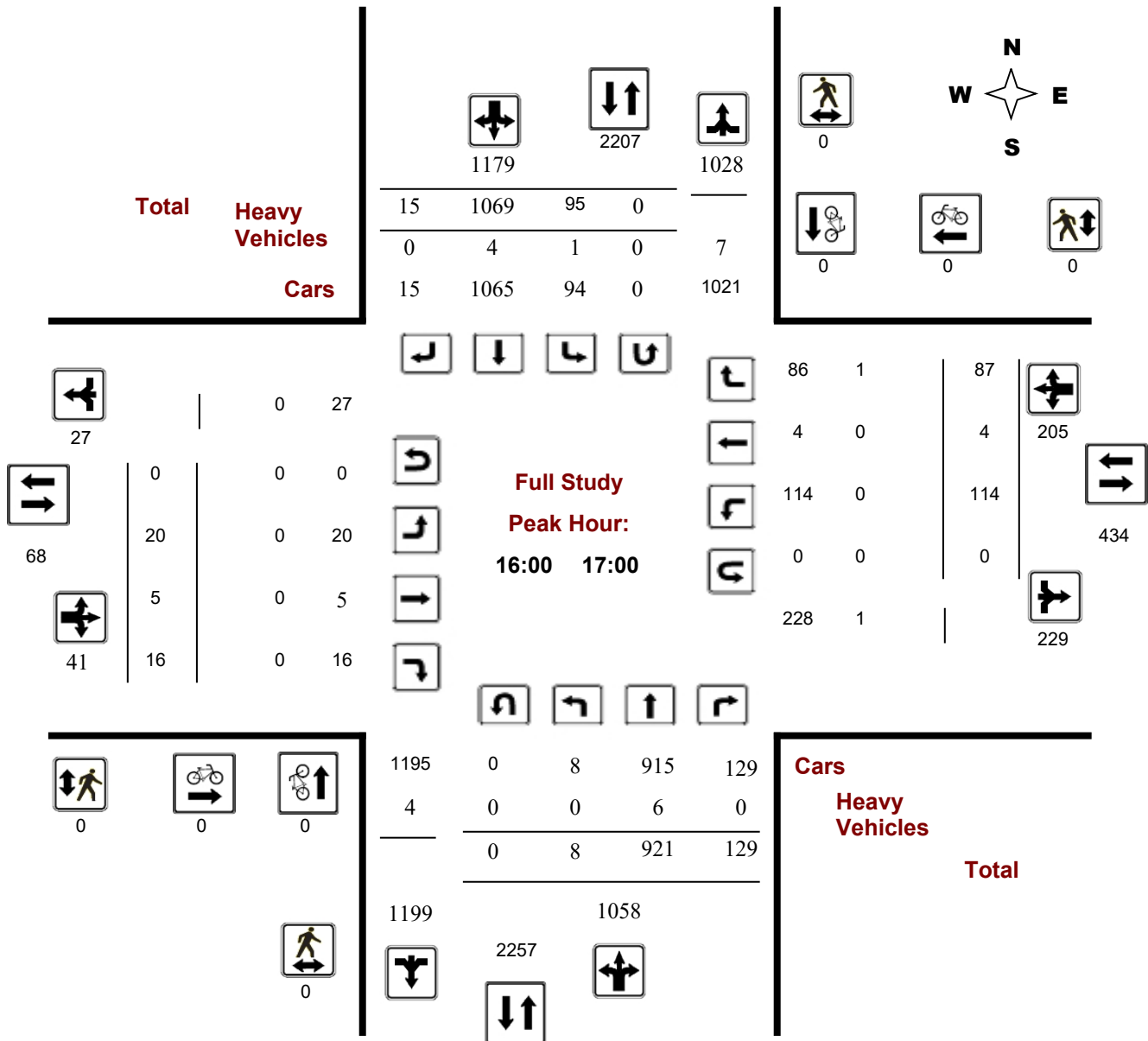
**Survey Date:** Saturday, January 20, 2018

**WO No:** 37464

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram



## Turning Movement Count - Peak Hour Diagram

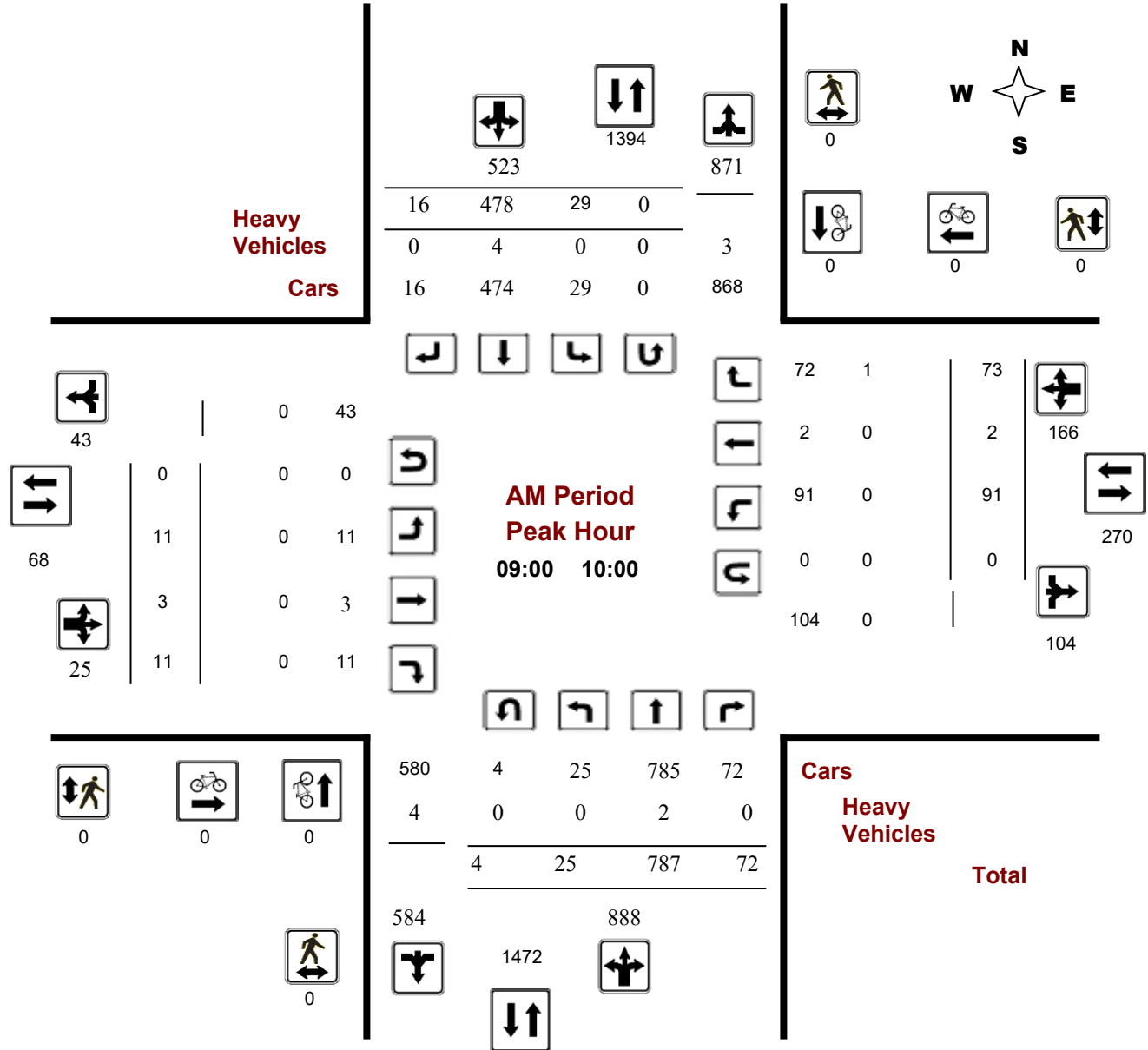
### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**Start Time:** 07:00

**WO No:** 37464

**Device:** Miovision



**Comments**

## Turning Movement Count - Peak Hour Diagram

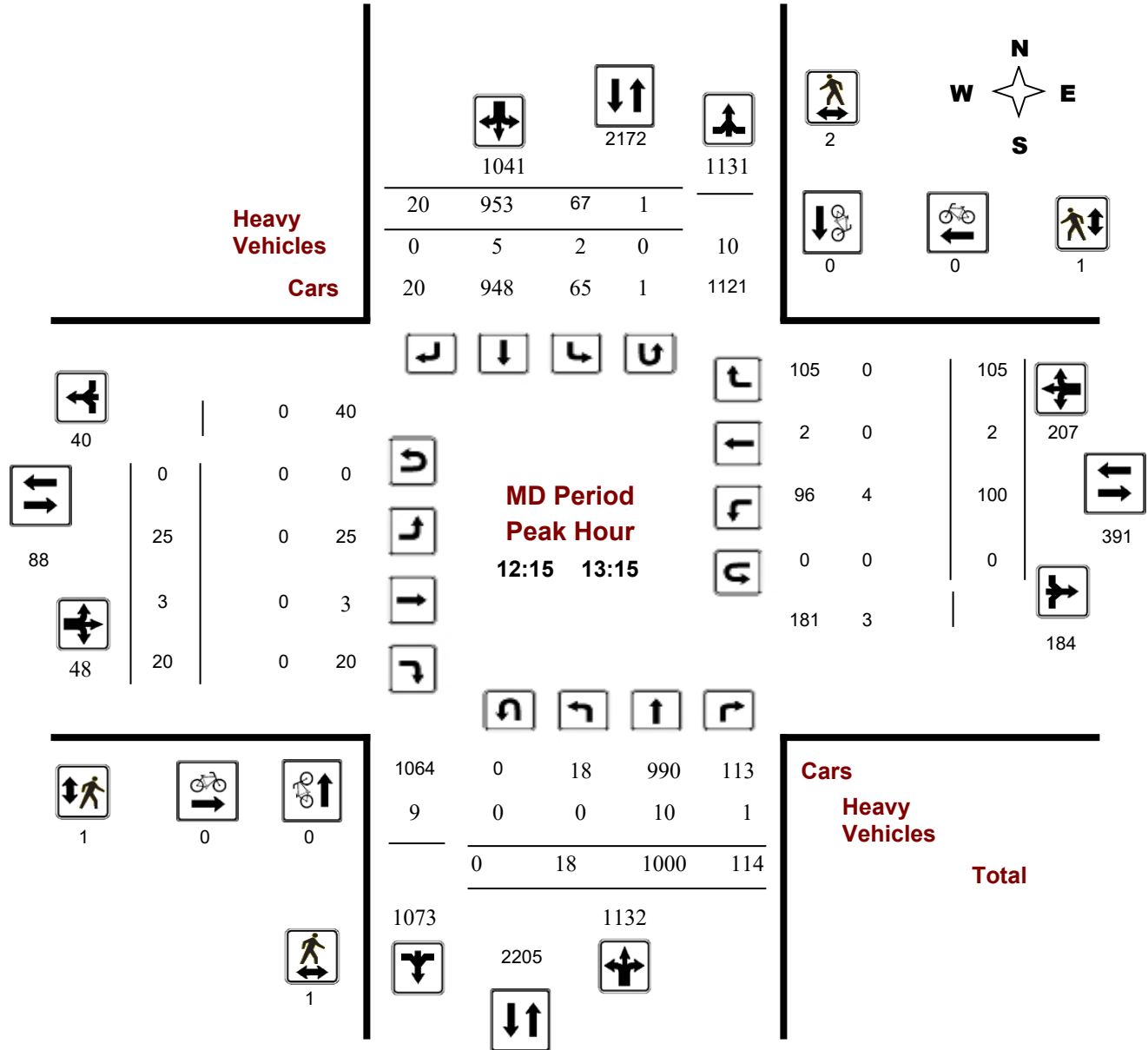
### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**Start Time:** 07:00

**WO No:** 37464

**Device:** Miovision



**Comments**



# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

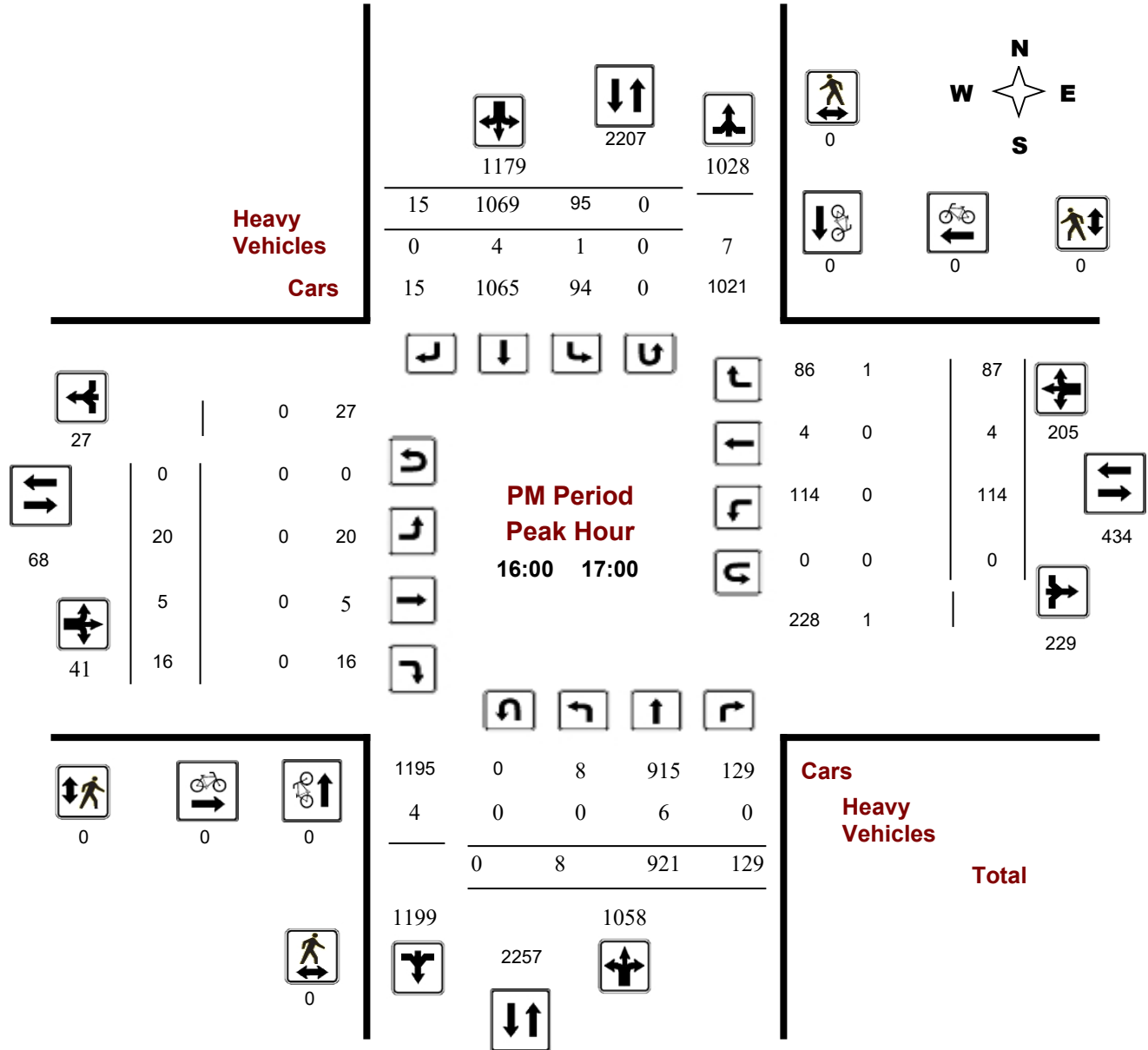
### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**Start Time:** 07:00

**WO No:** 37464

**Device:** Miovision



**Comments**



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37464

**Start Time:** 07:00

**Device:** Miovision

### Full Study Summary (8 HR Standard)

**Survey Date:** Saturday, January 20, 2018

**Total Observed U-Turns**

**AADT Factor**

Northbound: 9      Southbound: 1  
 Eastbound: 0      Westbound: 1

1.20

Period	Northbound				Southbound				Eastbound				Westbound				STR TOT	Grand Total	
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT			WB TOT
07:00 08:00	5	213	17	235	13	129	8	150	385	2	1	0	3	26	1	24	51	54	439
08:00 09:00	15	458	46	519	25	261	17	303	822	4	1	2	7	60	0	56	116	123	945
09:00 10:00	25	787	72	884	29	478	16	523	1407	11	3	11	25	91	2	73	166	191	1598
11:30 12:30	22	927	113	1062	77	890	21	988	2050	22	6	24	52	106	2	105	213	265	2315
12:30 13:30	19	996	107	1122	74	961	15	1050	2172	21	3	13	37	110	2	95	207	244	2416
15:00 16:00	14	949	100	1063	64	1058	22	1144	2207	13	7	17	37	111	1	81	193	230	2437
16:00 17:00	8	921	129	1058	95	1069	15	1179	2237	20	5	16	41	114	4	87	205	246	2483
17:00 18:00	5	756	83	844	88	932	10	1030	1874	17	3	18	38	80	1	98	179	217	2091
<b>Sub Total</b>	113	6007	667	6787	465	5778	124	6367	13154	110	29	101	240	698	13	619	1330	1570	14724
<b>U Turns</b>	9			9	1			1	10	0			0	1			1	1	11
<b>Total</b>	122	6007	667	6796	466	5778	124	6368	13164	110	29	101	240	699	13	619	1331	1571	14735
<b>EQ 12Hr</b>	170	8350	927	9447	648	8031	172	8851	18298	153	40	140	333	972	18	860	1850	2183	20481
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.																<b>1.39</b>			
<b>AVG 12Hr</b>	204	10020	1112	11336	778	9637	206	10621	21957	184	48	168	400	1166	22	1032	2220	2620	24577
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.																<b>1.20</b>			
<b>AVG 24Hr</b>	267	13126	1457	14850	1019	12624	270	13913	28763	241	63	220	524	1527	29	1352	2908	3432	32195
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.																<b>1.31</b>			

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



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37464

**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	38	2	40	0	21	2	23	63	1	0	0	1	4	1	6	11	12	75
07:15 07:30	0	42	8	50	5	28	4	37	87	0	1	0	1	5	0	9	14	15	102
07:30 07:45	3	49	1	53	4	39	2	45	98	0	0	0	0	4	0	6	10	10	108
07:45 08:00	3	84	6	93	4	41	0	45	138	1	0	0	1	13	0	3	16	17	155
08:00 08:15	1	79	6	86	5	47	4	56	142	2	0	1	3	11	0	2	13	16	158
08:15 08:30	4	104	10	118	4	65	2	71	189	0	1	0	1	18	0	10	28	29	218
08:30 08:45	3	123	13	139	6	70	5	81	220	1	0	0	1	18	0	22	40	41	261
08:45 09:00	8	152	17	177	10	79	6	95	272	1	0	1	2	13	0	22	35	37	309
09:00 09:15	7	154	10	171	4	83	4	91	262	1	0	3	4	12	2	18	32	36	298
09:15 09:30	6	184	21	211	8	113	2	123	334	3	1	1	5	25	0	17	42	47	381
09:30 09:45	6	221	18	245	4	140	2	146	391	1	1	2	4	21	0	19	40	44	435
09:45 10:00	10	228	23	261	13	142	8	163	424	6	1	5	12	33	0	19	52	64	488
11:30 11:45	10	231	28	269	21	212	4	237	506	4	1	4	9	32	2	27	61	70	576
11:45 12:00	4	215	32	251	19	227	4	250	501	4	3	4	11	24	0	22	46	57	558
12:00 12:15	6	228	19	253	22	220	5	247	500	2	2	9	13	29	0	28	57	70	570
12:15 12:30	3	253	34	290	15	231	8	254	544	12	0	7	19	21	0	28	49	68	612
12:30 12:45	8	256	28	292	17	244	4	265	557	7	2	3	12	27	0	24	51	63	620
12:45 13:00	4	244	28	276	16	244	6	266	542	3	0	2	5	26	2	29	57	62	604
13:00 13:15	3	247	24	274	20	234	2	256	530	3	1	8	12	26	0	24	50	62	592
13:15 13:30	6	249	27	282	22	239	3	264	546	8	0	0	8	31	0	18	49	57	603
15:00 15:15	3	236	23	262	15	236	8	259	521	2	2	7	11	24	0	19	43	54	575
15:15 15:30	5	267	29	301	16	298	6	320	621	2	2	4	8	31	0	23	54	62	683
15:30 15:45	2	227	26	255	17	262	4	283	538	6	2	1	9	29	1	17	47	56	594
15:45 16:00	4	219	22	245	16	262	4	282	527	3	1	5	9	27	0	22	49	58	585
16:00 16:15	4	217	24	245	17	264	5	286	531	4	1	6	11	28	1	21	50	61	592
16:15 16:30	2	226	27	255	27	261	6	294	549	8	2	4	14	26	1	18	45	59	608
16:30 16:45	1	242	42	285	29	282	1	312	597	5	2	4	11	31	2	20	53	64	661
16:45 17:00	1	236	36	273	22	262	3	287	560	3	0	2	5	29	0	28	57	62	622
17:00 17:15	3	175	23	201	26	238	6	270	471	11	2	6	19	18	1	29	48	67	538
17:15 17:30	1	231	17	249	24	235	1	260	509	5	1	8	14	20	0	20	40	54	563
17:30 17:45	0	178	20	198	18	248	3	269	467	1	0	3	4	22	0	25	47	51	518
17:45 18:00	1	172	23	196	20	211	0	231	427	0	0	1	1	21	0	24	45	46	473
<b>Total:</b>	<b>122</b>	<b>6007</b>	<b>667</b>	<b>6796</b>	<b>466</b>	<b>5778</b>	<b>124</b>	<b>6368</b>	<b>13164</b>	<b>110</b>	<b>29</b>	<b>101</b>	<b>240</b>	<b>699</b>	<b>13</b>	<b>619</b>	<b>1331</b>	<b>13164</b>	<b>14,735</b>

Note: U-Turns are included in Totals.



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37464

**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	0	0	0	0	0	0	0
09:15 09:30	0	0	0	0	0	0	0
09:30 09:45	0	0	0	0	0	0	0
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	0	0	0	0	0	0	0
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	0	0	0	0	0	0	0
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	0	0	0	0	0	0	0
12:45 13:00	0	0	0	0	0	0	0
13:00 13:15	0	0	0	0	0	0	0
13:15 13:30	0	0	0	0	0	0	0
15:00 15:15	0	0	0	0	0	0	0
15:15 15:30	0	0	0	0	0	0	0
15:30 15:45	0	0	0	0	0	0	0
15:45 16:00	0	0	0	0	0	0	0
16:00 16:15	0	0	0	0	0	0	0
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	0	0	0	0	0	0	0
17:00 17:15	0	0	0	0	0	0	0
17:15 17:30	0	0	0	0	0	0	0
17:30 17:45	0	0	0	0	0	0	0
17:45 18:00	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0





# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37464

**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	0	0	0
07:30 07:45	1	0	1	0	0	0	1
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	2	2	2	0	2	4
12:00 12:15	0	0	0	0	1	1	1
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	0	1	1	0	0	0	1
12:45 13:00	0	0	0	0	0	0	0
13:00 13:15	1	1	2	1	1	2	4
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	0	0	0	0	0	0
15:45 16:00	0	0	0	0	0	0	0
16:00 16:15	0	0	0	0	0	0	0
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	0	0	0	0	0	0	0
17:00 17:15	0	0	0	0	0	0	0
17:15 17:30	0	0	0	0	0	0	0
17:30 17:45	0	0	0	0	0	0	0
17:45 18:00	0	0	0	0	0	0	0
<b>Total</b> .....	<b>3</b>	<b>4</b>	<b>7</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>12</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37464

**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	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1	1
07:15 07:30	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1
07:30 07:45	0	2	0	2	0	4	0	4	6	0	0	0	0	0	0	0	0	0	6
07:45 08:00	0	4	0	4	0	1	0	1	5	0	0	0	0	0	0	0	0	0	5
08:00 08:15	0	2	0	2	0	0	1	1	3	1	0	0	1	0	0	0	0	1	4
08:15 08:30	0	1	0	1	0	2	0	2	3	0	0	0	0	0	0	0	0	0	3
08:30 08:45	0	0	0	0	0	3	0	3	3	1	0	0	1	0	0	0	0	1	4
08:45 09:00	0	4	0	4	1	1	0	2	6	0	0	0	0	0	0	0	0	0	6
09:00 09:15	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
09:15 09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
09:30 09:45	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1
09:45 10:00	0	1	0	1	0	3	0	3	4	0	0	0	0	0	0	0	0	0	4
11:30 11:45	0	1	0	1	0	2	0	2	3	0	0	0	0	0	0	0	0	0	3
11:45 12:00	0	1	0	1	0	1	0	1	2	0	0	0	0	0	0	0	0	0	2
12:00 12:15	0	1	0	1	0	5	0	5	6	0	0	0	0	0	0	0	0	0	6
12:15 12:30	0	2	0	2	0	2	0	2	4	0	0	0	0	0	0	0	0	0	4
12:30 12:45	0	4	0	4	0	2	0	2	6	0	0	0	0	0	0	0	0	0	6
12:45 13:00	0	4	0	4	0	1	0	1	5	0	0	0	0	2	0	0	2	2	7
13:00 13:15	0	0	1	1	2	0	0	2	3	0	0	0	0	2	0	0	2	2	5
13:15 13:30	0	2	0	2	0	1	0	1	3	0	0	0	0	0	0	0	0	0	3
15:00 15:15	0	0	0	0	0	3	0	3	3	0	0	0	0	0	0	0	0	0	3
15:15 15:30	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
15:30 15:45	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1
15:45 16:00	0	1	1	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
16:00 16:15	0	0	0	0	0	3	0	3	3	0	0	0	0	0	0	1	1	1	4
16:15 16:30	0	3	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
16:30 16:45	0	0	0	0	1	1	0	2	2	0	0	0	0	0	0	0	0	0	2
16:45 17:00	0	3	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
17:00 17:15	0	1	0	1	0	1	0	1	2	0	0	0	0	0	0	0	0	0	2
17:15 17:30	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
17:30 17:45	0	0	0	0	1	1	0	2	2	0	0	0	0	0	0	0	0	0	2
17:45 18:00	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	1	1	1	2
Total: None	0	41	2	43	5	40	1	46	89	3	0	0	3	4	0	3	7	10	99



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### KENNEVALE DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37464

**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	1	0	0	0	1
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	1	0	0	0	1
09:00	09:15	1	0	0	0	1
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	3	0	0	0	3
11:30	11:45	1	0	0	0	1
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	1	0	0	1
13:00	13:15	0	0	0	0	0
13:15	13:30	2	0	0	0	2
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	1	1
17:30	17:45	0	0	0	0	0
17:45	18:00	0	0	0	0	0
Total		9	1	0	1	11

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

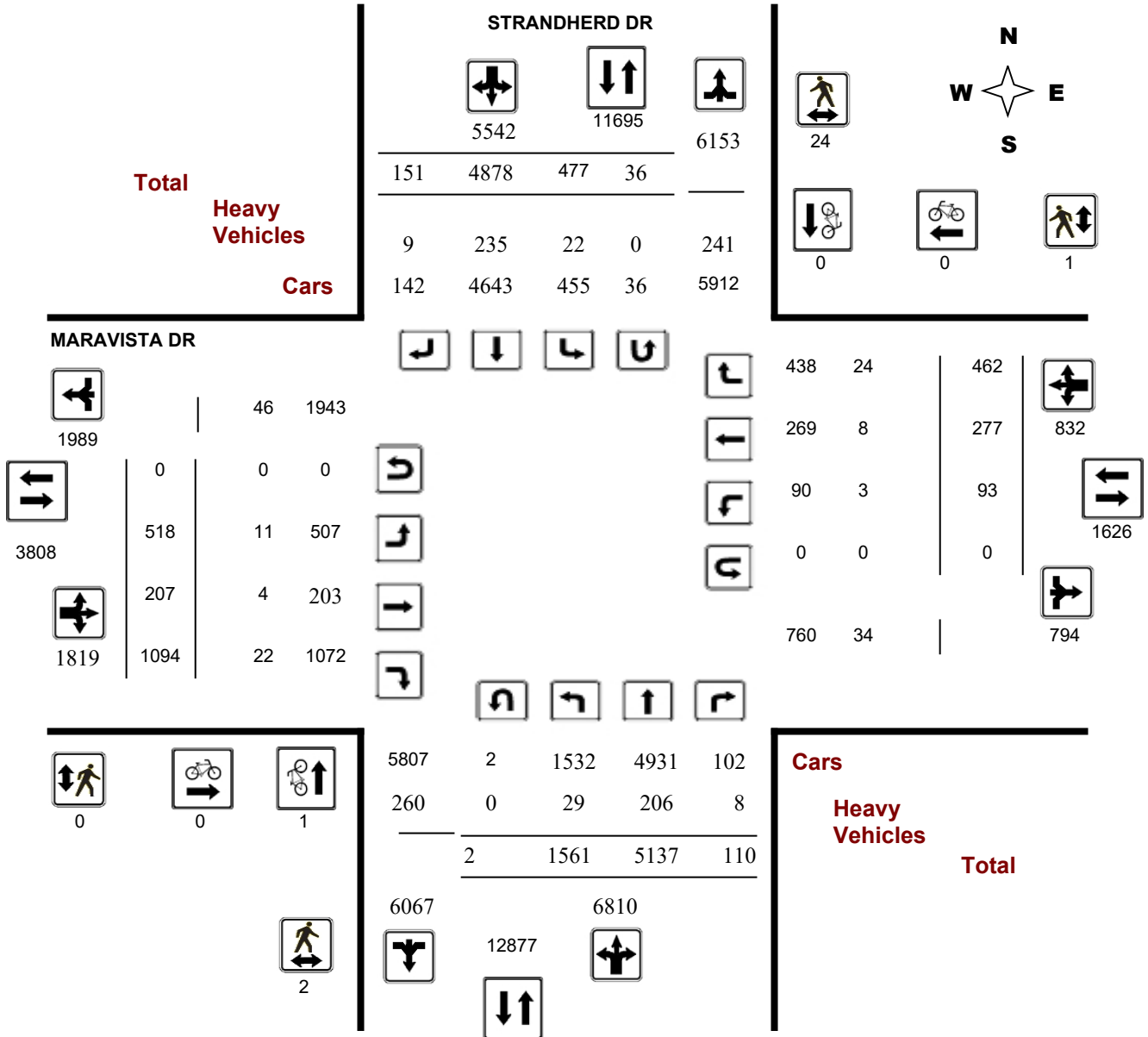
**Survey Date:** Thursday, January 18, 2018

**WO No:** 37426

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

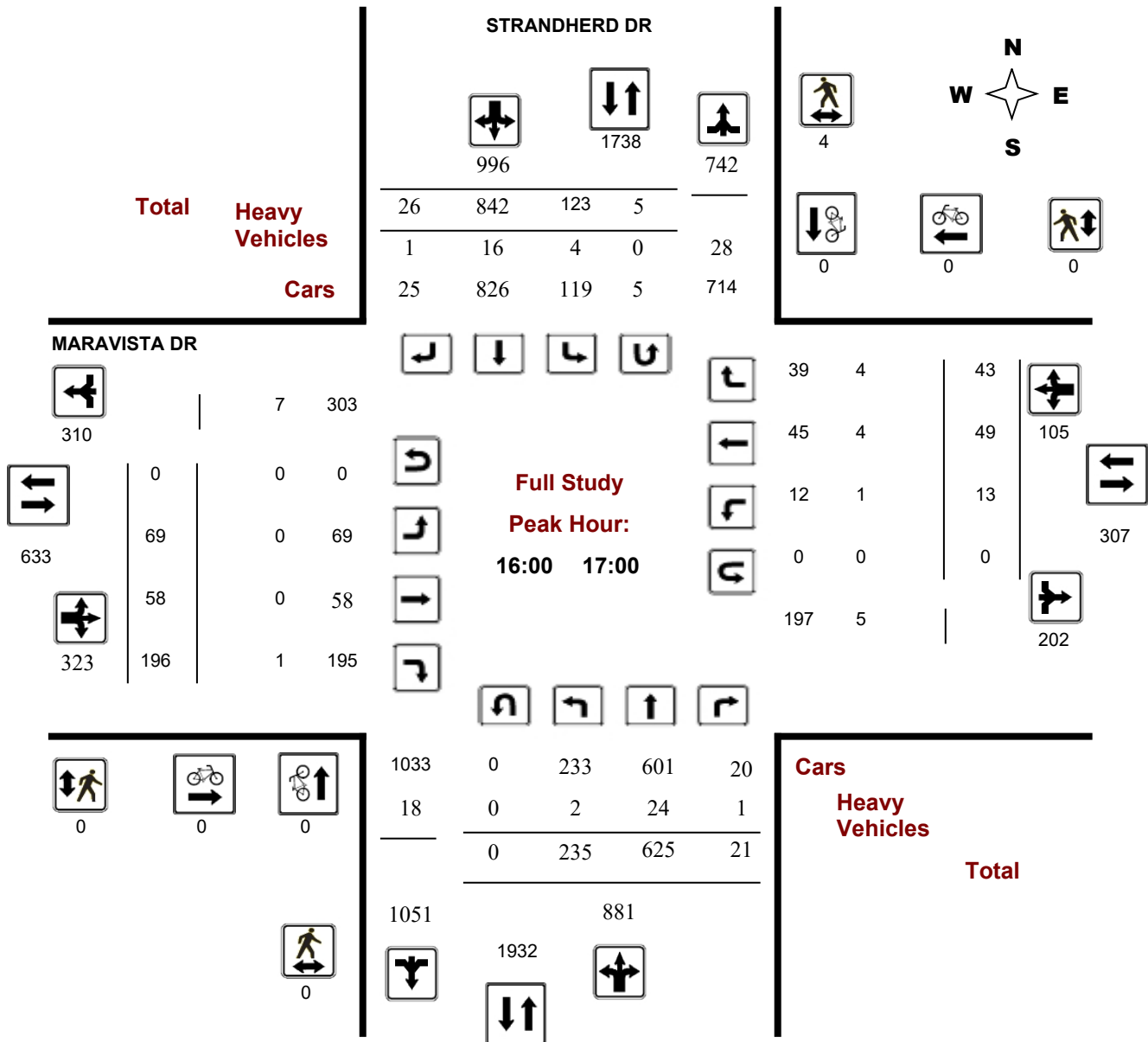
**Survey Date:** Thursday, January 18, 2018

**WO No:** 37426

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram



## Turning Movement Count - Peak Hour Diagram

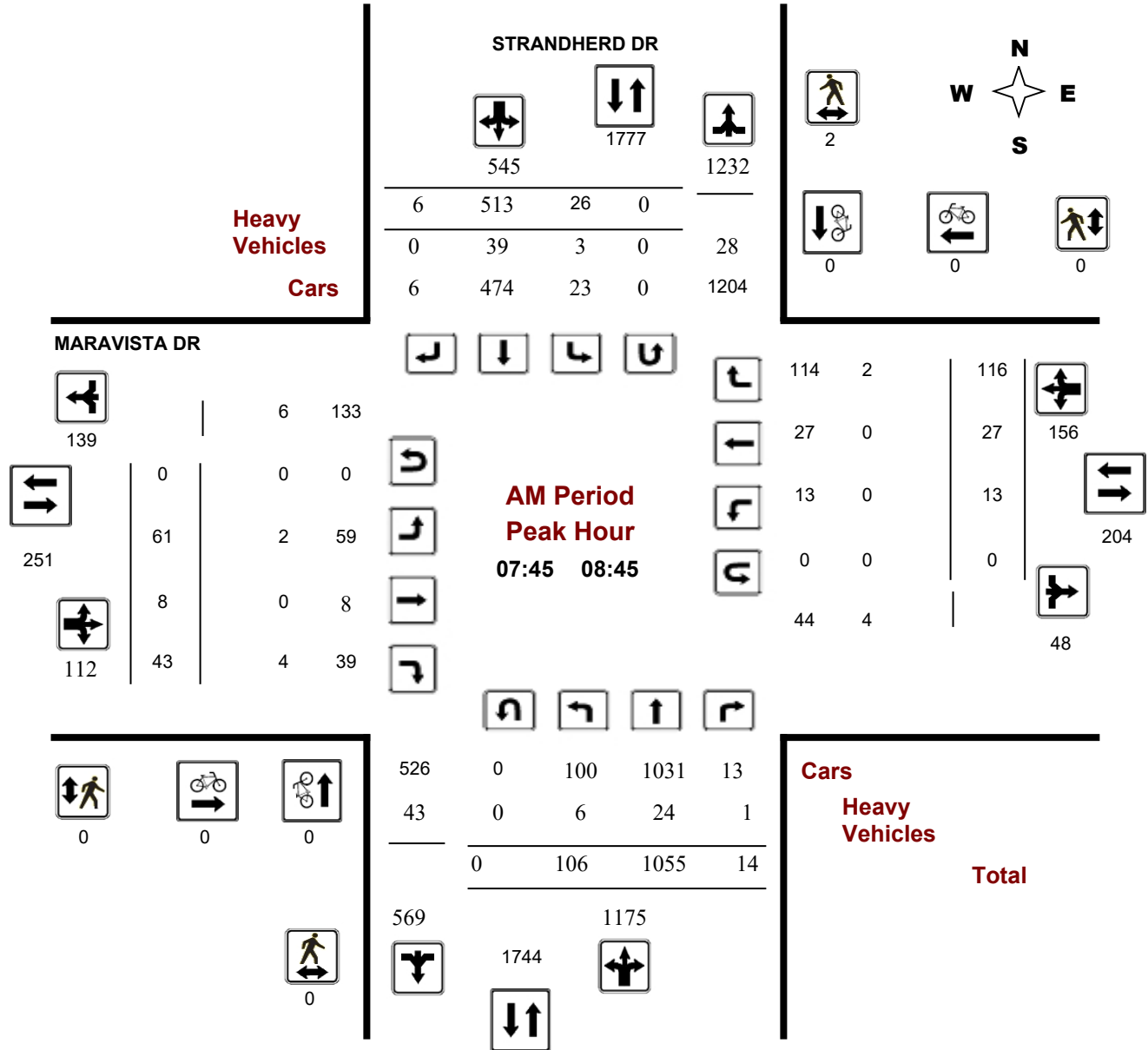
### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**Start Time:** 07:00

**WO No:** 37426

**Device:** Miovision





# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

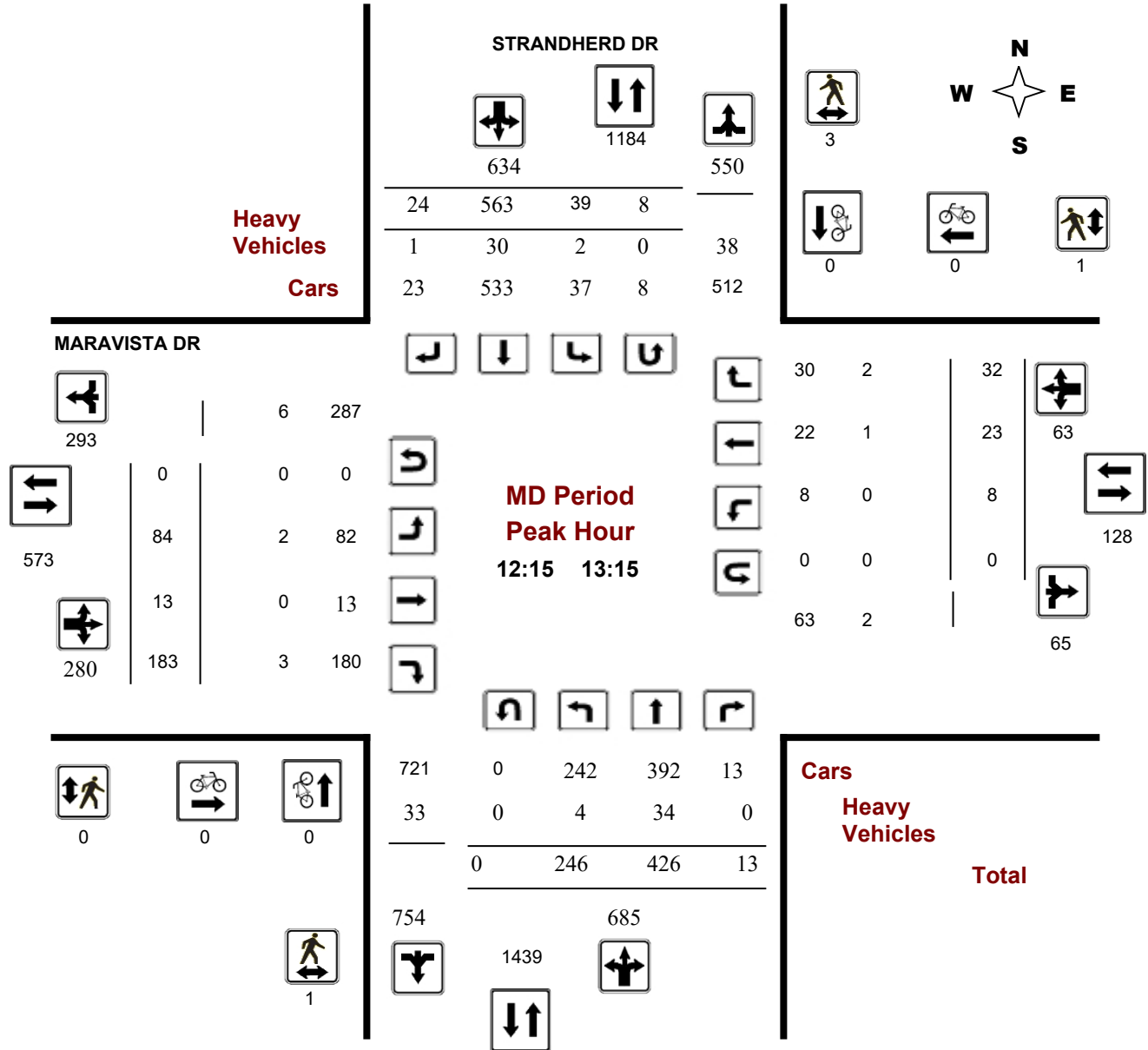
### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**Start Time:** 07:00

**WO No:** 37426

**Device:** Miovision



**Comments**

## Turning Movement Count - Peak Hour Diagram

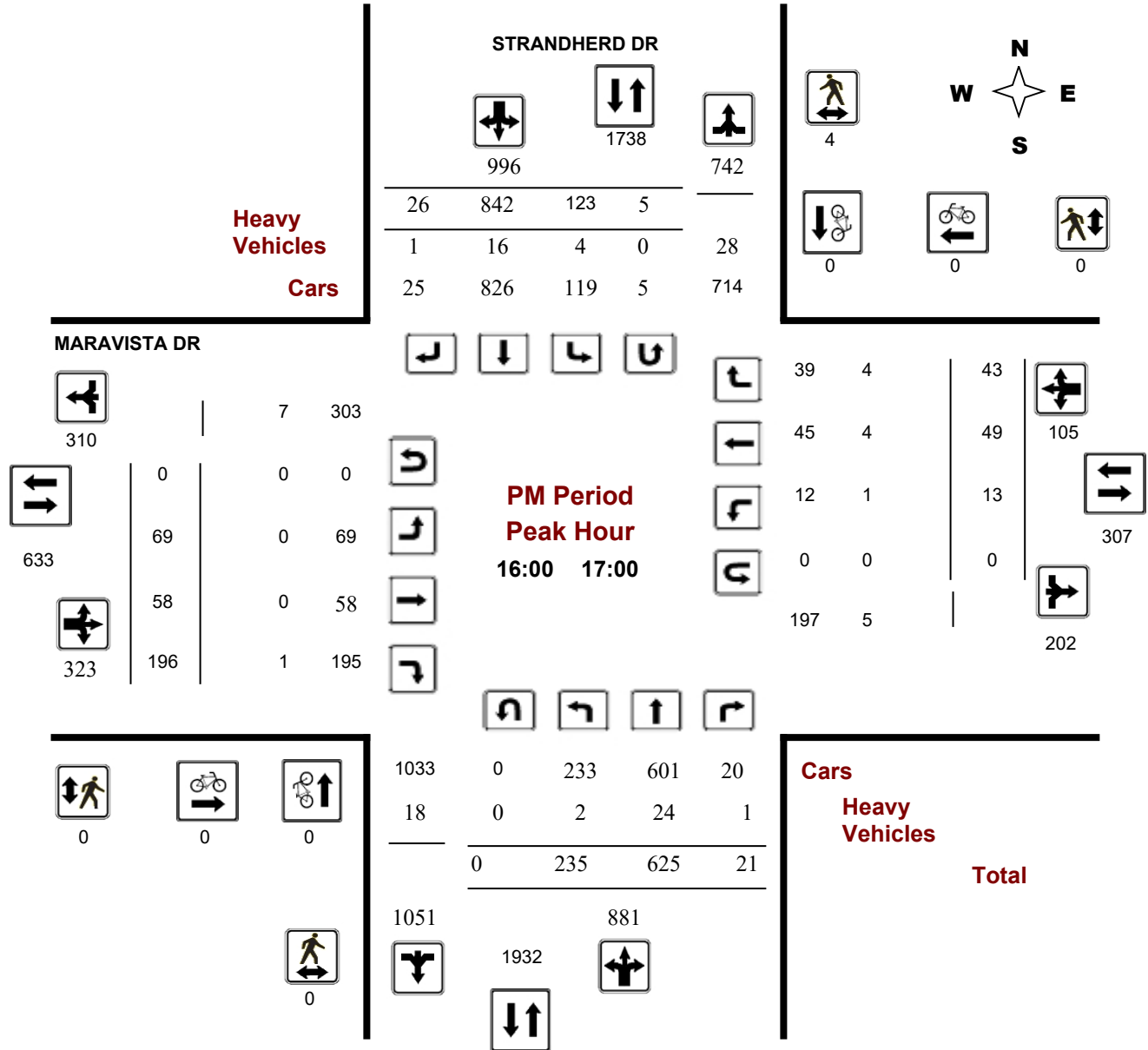
### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**Start Time:** 07:00

**WO No:** 37426

**Device:** Miovision







# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37426

**Start Time:** 07:00

**Device:** Miovision

### Full Study Summary (8 HR Standard)

**Survey Date:** Thursday, January 18, 2018

**Total Observed U-Turns**

**AADT Factor**

Northbound: 2      Southbound: 36

1.39

Eastbound: 0      Westbound: 0

#### STRANDHERD DR

#### MARAVISTA DR

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	95	937	9	1041	1533	18	465	9	492	1533	52	7	28	87	1110	7	22	110	139	226	1759
08:00 09:00	104	1034	15	1153	1666	26	482	5	513	1666	59	9	49	117	1258	11	26	104	141	258	1924
09:00 10:00	159	630	12	801	1294	29	444	20	493	1294	52	7	59	118	1294	9	31	72	112	230	1524
11:30 12:30	258	431	15	704	1252	37	480	31	548	1252	83	18	165	266	1252	17	29	35	81	347	1599
12:30 13:30	233	418	12	663	1298	38	578	19	635	1298	72	12	183	267	1298	8	24	28	60	327	1625
15:00 16:00	234	506	19	759	1586	72	739	16	827	1586	68	40	216	324	1586	18	40	30	88	412	1998
16:00 17:00	235	625	21	881	1872	123	842	26	991	1872	69	58	196	323	1872	13	49	43	105	428	2300
17:00 18:00	243	556	7	806	1813	134	848	25	1007	1813	63	56	198	317	1813	10	56	40	106	423	2236
<b>Sub Total</b>	1561	5137	110	6808	12314	477	4878	151	5506	12314	518	207	1094	1819	12314	93	277	462	832	2651	14965
<b>U Turns</b>				2					36	38				0					0	0	38
<b>Total</b>	1561	5137	110	6810	12352	477	4878	151	5542	12352	518	207	1094	1819	12352	93	277	462	832	2651	15003
<b>EQ 12Hr</b>	2170	7140	153	9466	17169	663	6780	210	7703	17169	720	288	1521	2528	17169	129	385	642	1156	3685	20854
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.															<b>1.39</b>						
<b>AVG 12Hr</b>	2170	7140	153	9466	17169	663	6780	210	7703	17169	720	288	1521	2528	17169	129	385	642	1156	3685	20854
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.															<b>1</b>						
<b>AVG 24Hr</b>	2842	9354	200	12400	22491	869	8882	275	10091	22491	943	377	1992	3312	22491	169	504	841	1515	4827	27318

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

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37426

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute Increments

#### STRANDHERD DR

#### MARAVISTA DR

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	13	188	4	205	5	78	4	87	611	14	3	6	23	2	5	31	38	611	353
07:15 07:30	29	228	2	259	3	140	1	144	816	8	1	8	17	1	4	28	33	816	453
07:30 07:45	20	245	1	266	2	101	3	106	757	13	0	3	16	1	6	22	29	757	417
07:45 08:00	33	276	2	311	8	146	1	155	948	17	3	11	31	3	7	29	39	948	536
08:00 08:15	28	229	5	262	2	150	2	154	847	11	0	10	21	1	7	30	38	847	475
08:15 08:30	19	273	5	297	9	123	1	133	891	15	3	9	27	8	7	33	48	891	505
08:30 08:45	26	277	2	305	7	94	2	103	835	18	2	13	33	1	6	24	31	835	472
08:45 09:00	31	255	3	290	8	115	0	124	836	15	4	17	36	1	6	17	24	836	474
09:00 09:15	23	186	5	214	7	83	3	94	629	13	3	12	28	4	9	22	35	629	371
09:15 09:30	38	176	3	217	9	126	6	142	714	13	1	18	32	3	5	18	26	714	417
09:30 09:45	55	142	0	197	2	117	4	124	630	9	0	16	25	1	7	23	31	630	377
09:45 10:00	43	126	4	173	11	118	7	138	597	17	3	13	33	1	10	9	20	597	364
11:30 11:45	56	113	5	174	12	95	7	114	564	15	4	42	61	2	8	9	19	564	368
11:45 12:00	72	100	3	176	9	136	8	155	638	16	1	41	58	1	2	10	13	638	402
12:00 12:15	57	114	2	173	6	119	8	135	620	21	9	40	70	9	10	7	26	620	404
12:15 12:30	73	104	5	182	10	130	8	151	657	31	4	42	77	5	9	9	23	657	433
12:30 12:45	58	100	3	161	9	121	6	138	596	18	2	49	69	1	5	6	12	596	380
12:45 13:00	55	112	3	170	10	168	5	185	719	22	5	50	77	1	1	9	11	719	443
13:00 13:15	60	110	2	172	10	144	5	160	651	13	2	42	57	1	8	8	17	651	406
13:15 13:30	60	96	4	160	9	145	3	159	633	19	3	42	64	5	10	5	20	633	403
15:00 15:15	66	125	1	192	10	167	6	183	747	14	9	55	78	6	9	5	20	747	473
15:15 15:30	71	148	6	225	14	185	5	204	845	17	14	54	85	2	11	10	23	845	537
15:30 15:45	55	126	10	191	23	196	2	223	821	18	7	53	78	5	10	7	22	821	514
15:45 16:00	42	107	2	151	25	191	3	221	758	19	10	54	83	5	10	8	23	758	478
16:00 16:15	60	173	5	238	22	199	7	229	923	12	16	54	82	7	13	10	30	923	579
16:15 16:30	58	152	2	212	35	229	6	271	943	22	11	44	77	2	13	10	25	943	585
16:30 16:45	47	155	3	205	33	223	4	261	922	19	18	49	86	0	12	9	21	922	573
16:45 17:00	70	145	11	226	33	191	9	235	882	16	13	49	78	4	11	14	29	882	568
17:00 17:15	64	120	5	189	28	224	5	261	874	12	15	52	79	2	17	10	29	874	558
17:15 17:30	51	146	0	197	38	223	5	268	905	15	13	44	72	4	8	6	18	905	555
17:30 17:45	51	168	1	220	33	222	9	265	959	15	17	55	87	1	20	12	33	959	605
17:45 18:00	77	122	1	200	35	179	6	220	804	21	11	47	79	3	11	12	26	804	525
<b>Total:</b>	<b>1561</b>	<b>5137</b>	<b>110</b>	<b>6810</b>	<b>477</b>	<b>4878</b>	<b>151</b>	<b>5542</b>	<b>24572</b>	<b>518</b>	<b>207</b>	<b>1094</b>	<b>1819</b>	<b>93</b>	<b>277</b>	<b>462</b>	<b>832</b>	<b>24572</b>	<b>15,003</b>

Note: U-Turns are included in Totals.



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37426

**Start Time:** 07:00

**Device:** Miovision

### Full Study Cyclist Volume

#### STRANDHERD DR

#### MARAVISTA DR

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	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	0	0	0	0	0	0
15:00 15:15	0	0	0	0	0	0	0
15:15 15:30	0	0	0	0	0	0	0
15:30 15:45	0	0	0	0	0	0	0
15:45 16:00	0	0	0	0	0	0	0
16:00 16:15	0	0	0	0	0	0	0
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	0	0	0	0	0	0	0
17:00 17:15	0	0	0	0	0	0	0
17:15 17:30	0	0	0	0	0	0	0
17:30 17:45	0	0	0	0	0	0	0
17:45 18:00	0	0	0	0	0	0	0
Total	1	0	1	0	0	0	1



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37426

**Start Time:** 07:00

**Device:** Miovision

### Full Study Pedestrian Volume

#### STRANDHERD DR

#### MARAVISTA DR

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	0	0	0
07:30 07:45	0	0	0	0	0	0	0
07:45 08:00	0	1	1	0	0	0	1
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	1	1	0	0	0	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	1	1	0	0	0	1
09:45 10:00	0	0	0	0	0	0	0
11:30 11:45	0	0	0	0	0	0	0
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	0	2	2	0	0	0	2
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	3	4	0	1	1	5
13:15 13:30	0	1	1	0	0	0	1
15:00 15:15	1	2	3	0	0	0	3
15:15 15:30	0	0	0	0	0	0	0
15:30 15:45	0	1	1	0	0	0	1
15:45 16:00	0	4	4	0	0	0	4
16:00 16:15	0	0	0	0	0	0	0
16:15 16:30	0	2	2	0	0	0	2
16:30 16:45	0	1	1	0	0	0	1
16:45 17:00	0	1	1	0	0	0	1
17:00 17:15	0	3	3	0	0	0	3
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
<b>Total .....</b>	<b>2</b>	<b>24</b>	<b>26</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>27</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37426

**Start Time:** 07:00

**Device:** Miovision

### Full Study Heavy Vehicles

#### STRANDHERD DR

#### MARAVISTA DR

Northbound

Southbound

Eastbound

Westbound

Time Period	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total	
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT				
07:00	07:15	0	1	0	6	2	5	1	9	15	0	2	0	3	0	0	0	4	7	11
07:15	07:30	2	2	1	15	1	9	0	13	28	0	1	1	4	0	0	1	4	8	18
07:30	07:45	0	3	0	10	0	7	0	11	21	1	0	0	1	0	0	0	0	1	11
07:45	08:00	2	2	0	12	2	7	0	13	25	1	0	1	4	0	0	1	3	7	16
08:00	08:15	1	5	1	18	0	11	0	17	35	1	0	0	2	0	0	0	1	3	19
08:15	08:30	1	13	0	22	1	7	0	22	44	0	0	1	2	0	0	1	2	4	24
08:30	08:45	2	4	0	22	0	14	0	18	40	0	0	2	4	0	0	0	0	4	22
08:45	09:00	1	13	0	21	1	6	0	24	45	2	0	1	4	0	0	2	3	7	26
09:00	09:15	1	11	1	25	0	12	0	24	49	1	0	0	2	0	0	0	1	3	26
09:15	09:30	1	9	0	28	1	16	0	26	54	0	0	1	2	1	0	0	2	4	29
09:30	09:45	0	11	0	28	0	16	0	27	55	0	0	1	1	0	0	0	0	1	28
09:45	10:00	2	11	1	22	1	7	0	20	42	0	0	1	3	0	0	1	3	6	24
11:30	11:45	0	10	0	15	0	5	0	17	32	2	0	0	3	0	1	0	1	4	18
11:45	12:00	2	10	0	27	1	11	1	25	52	0	0	3	6	1	0	2	4	10	31
12:00	12:15	0	7	0	18	0	11	0	18	36	0	0	0	0	0	0	0	0	0	18
12:15	12:30	2	10	0	17	1	4	0	16	33	0	0	1	3	0	0	1	2	5	19
12:30	12:45	0	9	0	18	0	8	1	18	36	0	0	1	2	0	0	0	0	2	19
12:45	13:00	2	5	0	19	1	11	0	18	37	0	0	1	3	0	0	1	2	5	21
13:00	13:15	0	10	0	17	0	7	0	19	36	2	0	0	3	0	1	0	1	4	20
13:15	13:30	1	5	0	18	2	11	0	19	37	0	0	1	2	0	0	1	3	5	21
15:00	15:15	1	9	0	18	0	8	0	17	35	0	0	0	1	0	0	0	0	1	18
15:15	15:30	1	7	0	13	1	4	1	16	29	1	0	1	4	0	0	2	3	7	18
15:30	15:45	1	5	2	12	0	4	0	9	21	0	0	0	1	0	0	0	2	3	12
15:45	16:00	1	2	1	15	1	9	1	14	29	0	0	2	5	0	1	1	4	9	19
16:00	16:15	0	9	1	17	1	6	0	16	33	0	0	0	1	1	1	0	4	5	19
16:15	16:30	1	5	0	10	1	4	0	11	21	0	0	0	3	0	2	1	4	7	14
16:30	16:45	0	4	0	8	1	3	0	8	16	0	0	1	2	0	1	0	2	4	10
16:45	17:00	1	6	0	10	1	3	1	14	24	0	0	0	2	0	0	3	4	6	15
17:00	17:15	0	2	0	5	0	2	0	7	12	0	1	1	2	0	0	3	4	6	9
17:15	17:30	1	2	0	6	1	3	1	8	14	0	0	0	2	0	0	1	2	4	9
17:30	17:45	0	2	0	6	0	3	1	7	13	0	0	1	2	0	0	1	1	3	8
17:45	18:00	2	2	0	5	1	1	1	6	11	0	0	0	4	0	1	1	3	7	9
Total:	None	29	206	8	503	22	235	9	507	1010	11	4	22	83	3	8	24	69	152	581



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Thursday, January 18, 2018

**WO No:** 37426

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute U-Turn Total

STRANDHERD DR

MARAVISTA DR

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	1	1	0	0	2
09:00	09:15	0	1	0	0	1
09:15	09:30	0	1	0	0	1
09:30	09:45	0	1	0	0	1
09:45	10:00	0	2	0	0	2
11:30	11:45	0	0	0	0	0
11:45	12:00	1	2	0	0	3
12:00	12:15	0	2	0	0	2
12:15	12:30	0	3	0	0	3
12:30	12:45	0	2	0	0	2
12:45	13:00	0	2	0	0	2
13:00	13:15	0	1	0	0	1
13:15	13:30	0	2	0	0	2
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
15:30	15:45	0	2	0	0	2
15:45	16:00	0	2	0	0	2
16:00	16:15	0	1	0	0	1
16:15	16:30	0	1	0	0	1
16:30	16:45	0	1	0	0	1
16:45	17:00	0	2	0	0	2
17:00	17:15	0	4	0	0	4
17:15	17:30	0	2	0	0	2
17:30	17:45	0	1	0	0	1
17:45	18:00	0	0	0	0	0
Total		2	36	0	0	38

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

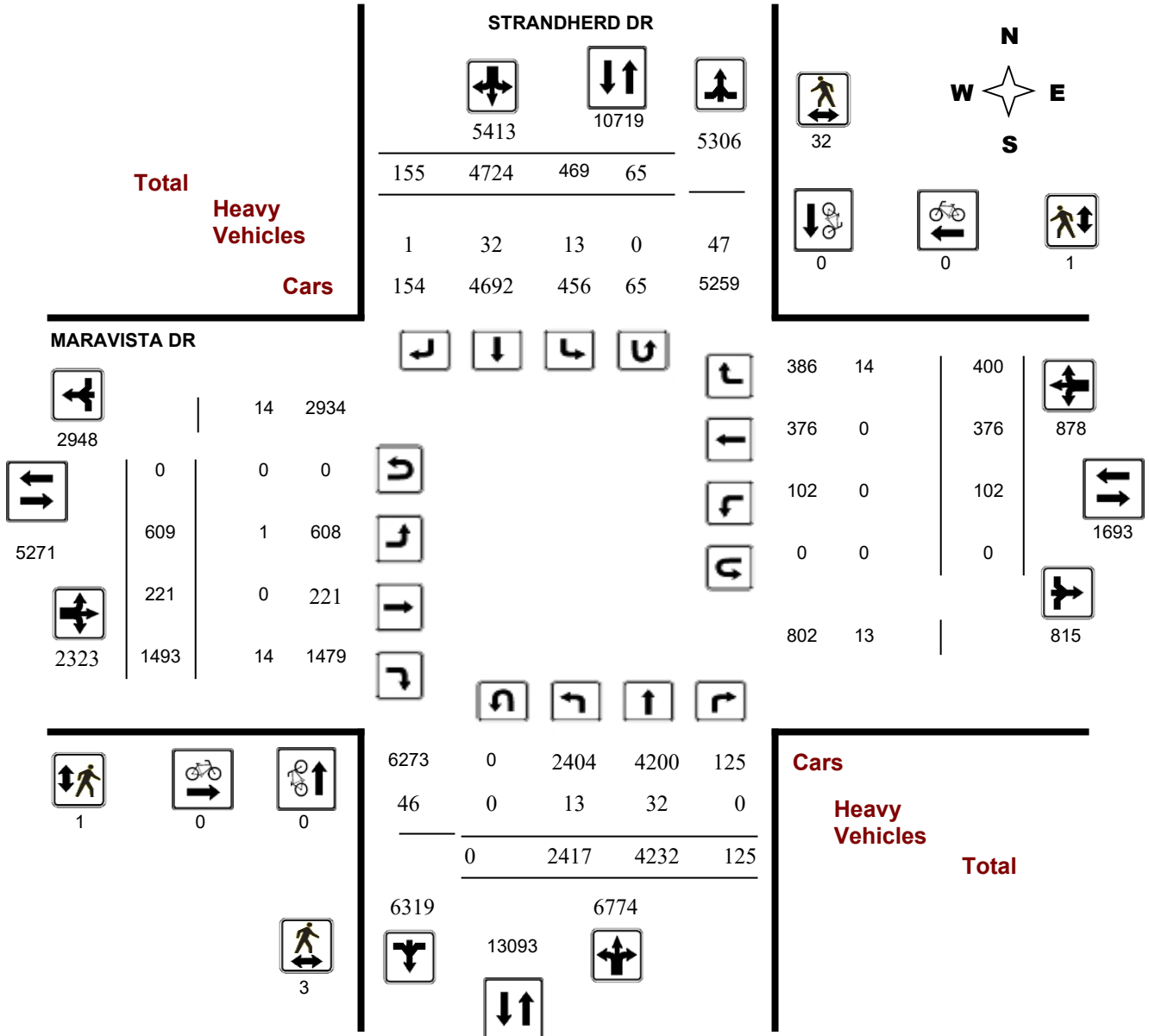
**Survey Date:** Saturday, January 20, 2018

**WO No:** 37462

**Start Time:** 07:00

**Device:** Miovision

### Full Study Diagram



## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

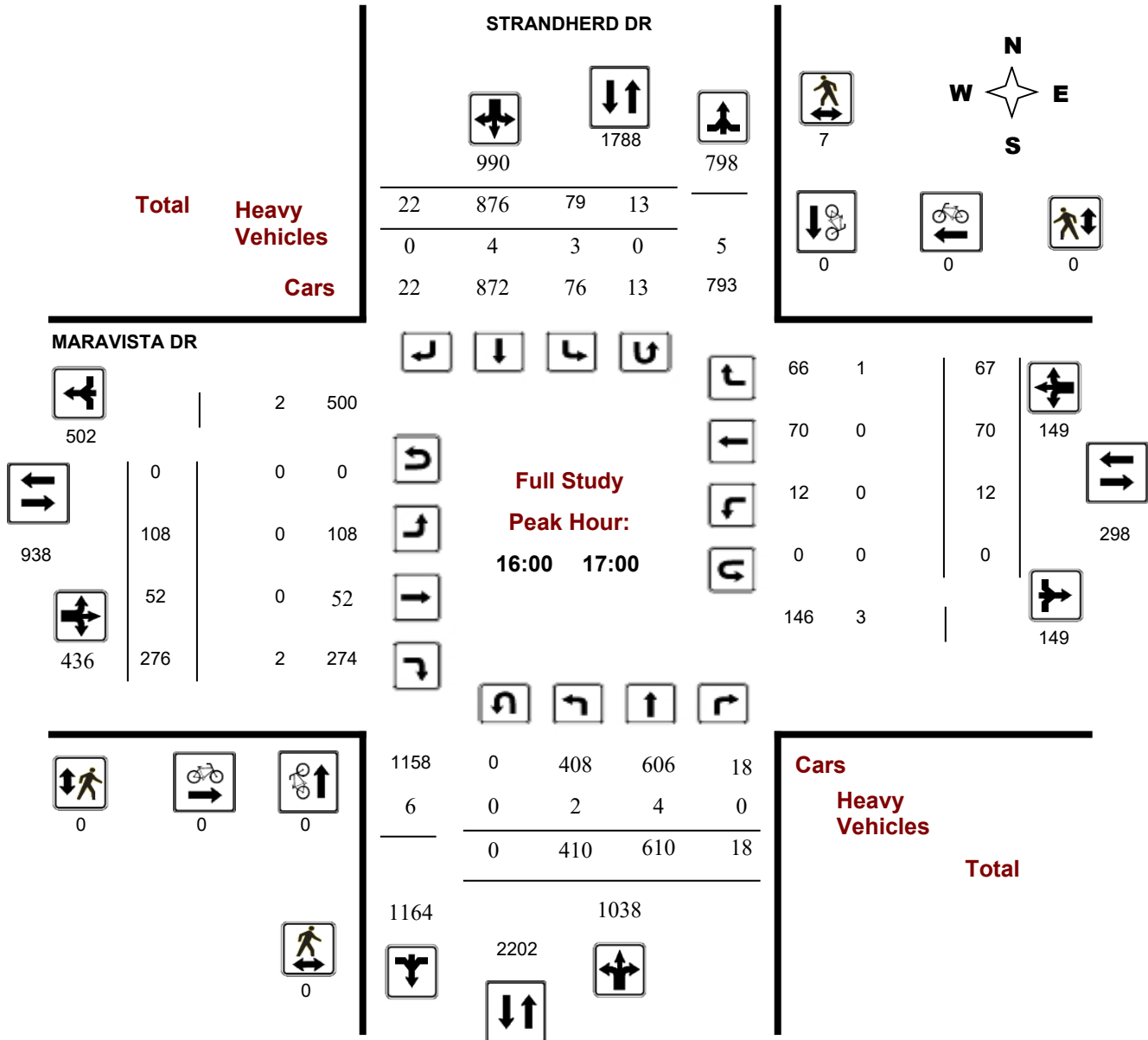
**Survey Date:** Saturday, January 20, 2018

**WO No:** 37462

**Start Time:** 07:00

**Device:** Miovision

### Full Study Peak Hour Diagram







# Transportation Services - Traffic Services

## Turning Movement Count - Peak Hour Diagram

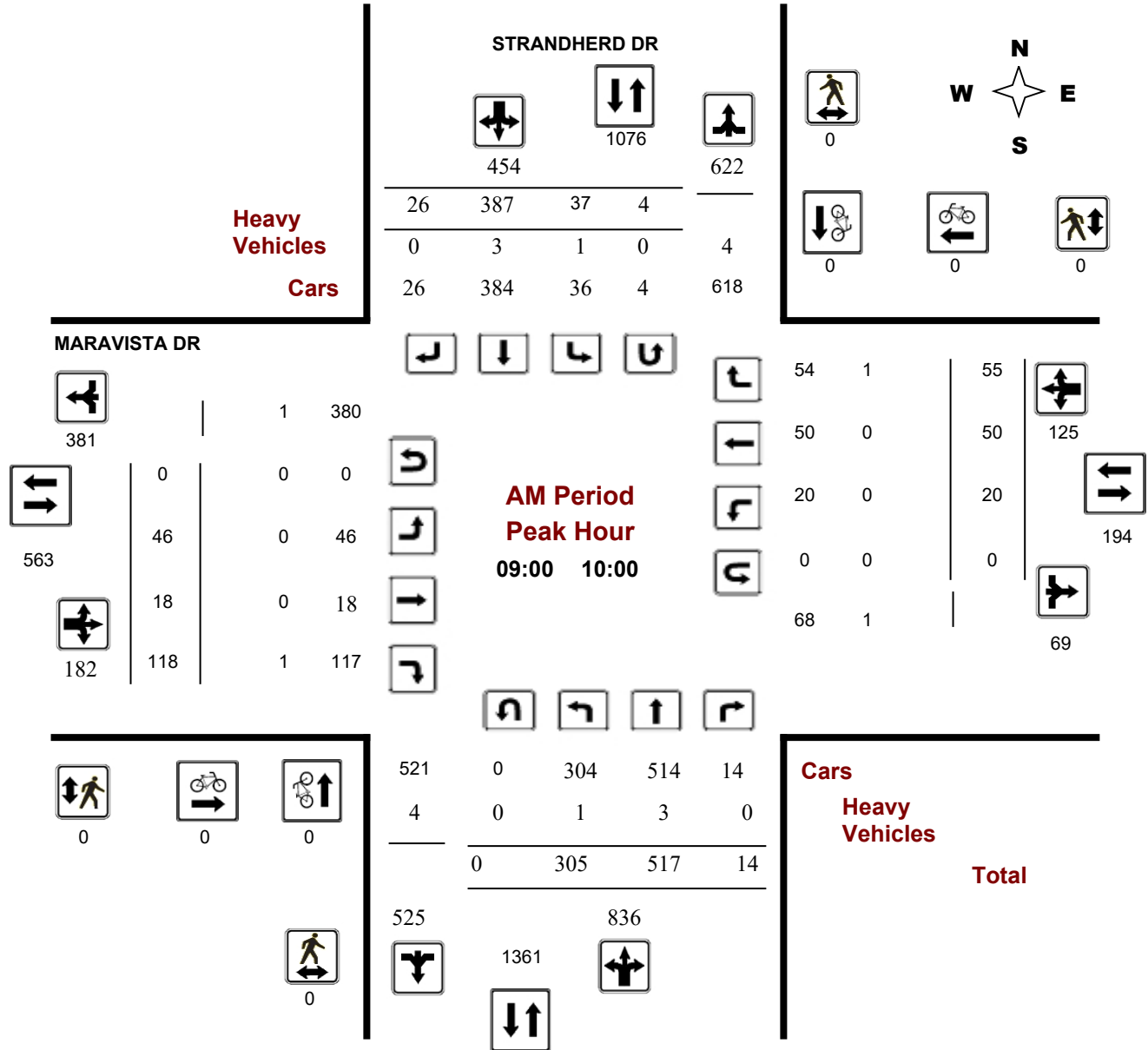
### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**Start Time:** 07:00

**WO No:** 37462

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

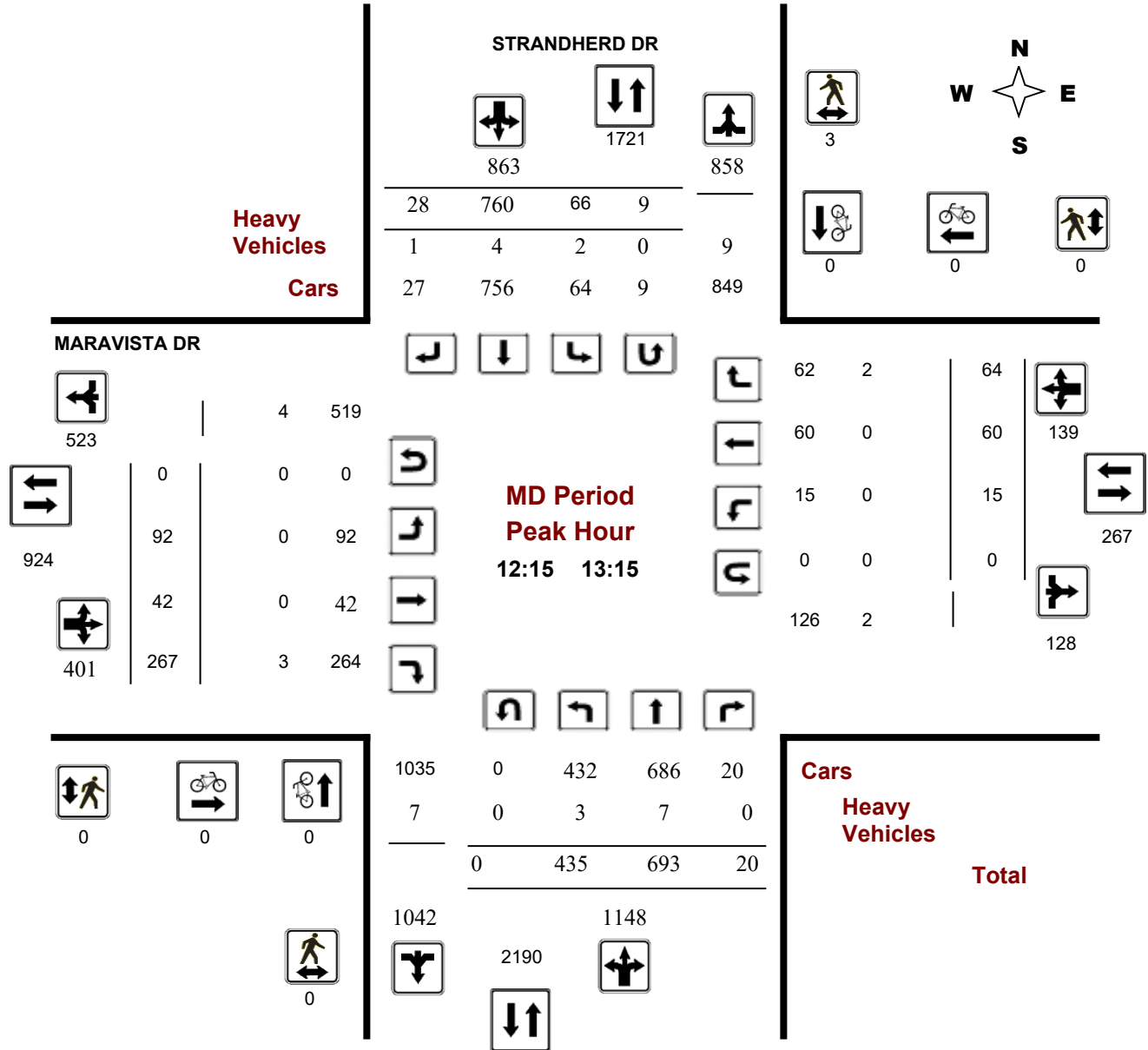
### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**Start Time:** 07:00

**WO No:** 37462

**Device:** Miovision



## Turning Movement Count - Peak Hour Diagram

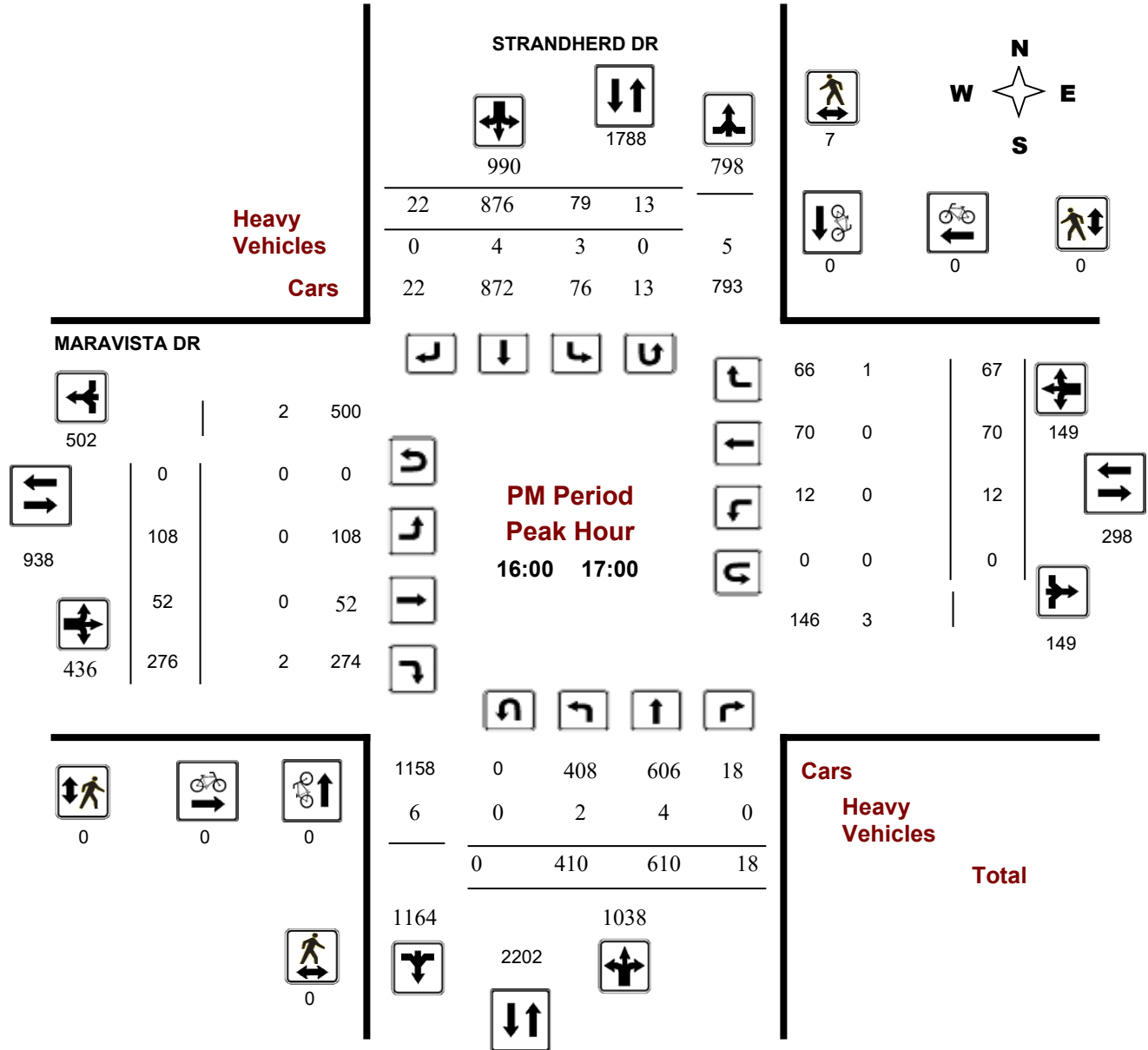
### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**Start Time:** 07:00

**WO No:** 37462

**Device:** Miovision





# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37462

**Start Time:** 07:00

**Device:** Miovision

### Full Study Summary (8 HR Standard)

**Survey Date:** Saturday, January 20, 2018

**Total Observed U-Turns**

**AADT Factor**

Northbound: 0      Southbound: 65

1.20

Eastbound: 0      Westbound: 0

#### STRANDHERD DR

#### MARAVISTA DR

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	47	192	2	241	378	12	123	2	137	378	21	1	23	45	88	2	20	21	43	88	466
08:00 09:00	129	363	4	496	762	12	243	11	266	762	37	11	36	84	169	8	29	48	85	169	931
09:00 10:00	305	517	14	836	1286	37	387	26	450	1286	46	18	118	182	307	20	50	55	125	307	1593
11:30 12:30	422	601	20	1043	1857	62	711	41	814	1857	118	25	254	397	517	12	54	54	120	517	2374
12:30 13:30	429	676	17	1122	1980	70	772	16	858	1980	78	39	263	380	510	15	54	61	130	510	2490
15:00 16:00	401	637	26	1064	2043	108	843	28	979	2043	108	40	254	402	530	21	54	53	128	530	2573
16:00 17:00	410	610	18	1038	2015	79	876	22	977	2015	108	52	276	436	585	12	70	67	149	585	2600
17:00 18:00	274	636	24	934	1801	89	769	9	867	1801	93	35	269	397	495	12	45	41	98	495	2296
<b>Sub Total</b>	2417	4232	125	6774	12122	469	4724	155	5348	12122	609	221	1493	2323	3201	102	376	400	878	3201	15323
<b>U Turns</b>	0			0	65				65	65	0			0	0				0	0	65
<b>Total</b>	2417	4232	125	6774	12187	534	4724	155	5413	12187	609	221	1493	2323	3201	102	376	400	878	3201	15388
<b>EQ 12Hr</b>	3360	5882	174	9416	16939	742	6566	215	7523	16939	847	307	2075	3229	4450	142	523	556	1221	4450	21389
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.																	<b>1.39</b>				
<b>AVG 12Hr</b>	4032	7058	209	11299	20326	890	7879	258	9027	20326	1016	368	2490	3874	5339	170	628	667	1465	5339	25665
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.																	<b>1.20</b>				
<b>AVG 24Hr</b>	5282	9246	274	14802	26627	1166	10321	338	11825	26627	1331	482	3262	5075	6995	223	823	874	1920	6995	33622
Note: These volumes are calculated by multiplying the Average Daily 12 hr. totals by 12 to 24 expansion factor.																	<b>1.31</b>				
Note: U-Turns provided for approach totals. Refer to 'U-Turn' Report for specific breakdown.																					



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37462

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute Increments

#### STRANDHERD DR

#### MARAVISTA DR

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	7	39	2	48	2	16	0	18	66	4	0	5	9	1	2	4	7	16	82
07:15 07:30	10	36	0	46	2	31	1	34	80	2	0	5	7	0	5	5	10	17	97
07:30 07:45	13	45	0	58	2	39	0	41	99	10	1	7	18	0	7	8	15	33	132
07:45 08:00	17	72	0	89	7	37	1	45	134	5	0	6	11	1	6	4	11	22	156
08:00 08:15	17	56	0	73	2	47	0	49	122	10	1	4	15	1	6	9	16	31	153
08:15 08:30	28	81	1	110	4	62	3	69	179	9	3	6	18	3	9	10	22	40	219
08:30 08:45	34	104	0	138	4	68	5	77	215	11	5	9	25	2	3	19	24	49	264
08:45 09:00	50	122	3	175	4	66	3	73	248	7	2	17	26	2	11	10	23	49	297
09:00 09:15	48	104	3	155	5	64	4	73	228	7	4	22	33	3	12	16	31	64	292
09:15 09:30	63	129	2	194	8	101	7	116	310	10	6	20	36	5	12	12	29	65	375
09:30 09:45	102	126	3	231	12	105	13	130	361	16	5	35	56	2	15	18	35	91	452
09:45 10:00	92	158	6	256	16	117	2	135	391	13	3	41	57	10	11	9	30	87	478
11:30 11:45	108	158	1	267	14	186	9	209	476	26	7	59	92	3	7	17	27	119	595
11:45 12:00	95	148	5	248	22	156	9	187	435	30	3	73	106	4	12	7	23	129	564
12:00 12:15	105	129	6	240	18	182	7	207	447	29	7	53	89	2	16	13	31	120	567
12:15 12:30	114	166	8	288	15	187	16	218	506	33	8	69	110	3	19	17	39	149	655
12:30 12:45	119	159	3	281	20	196	4	220	501	24	10	61	95	4	10	14	28	123	624
12:45 13:00	103	184	4	291	17	187	4	208	499	22	15	69	106	5	17	15	37	143	642
13:00 13:15	99	184	5	288	23	190	4	217	505	13	9	68	90	3	14	18	35	125	630
13:15 13:30	108	149	5	262	22	199	4	225	487	19	5	65	89	3	13	14	30	119	606
15:00 15:15	88	154	7	249	30	190	9	229	478	22	9	51	82	5	14	7	26	108	586
15:15 15:30	101	192	6	299	37	223	6	266	565	37	7	83	127	3	20	18	41	168	733
15:30 15:45	103	163	6	272	30	211	7	248	520	25	14	57	96	8	10	16	34	130	650
15:45 16:00	109	128	7	244	23	219	6	248	492	24	10	63	97	5	10	12	27	124	616
16:00 16:15	101	140	3	244	19	218	5	242	486	21	12	56	89	2	17	10	29	118	604
16:15 16:30	112	149	5	266	25	223	4	252	518	30	11	81	122	1	17	13	31	153	671
16:30 16:45	97	151	6	254	30	229	3	262	516	35	18	77	130	5	11	23	39	169	685
16:45 17:00	100	170	4	274	18	206	10	234	508	22	11	62	95	4	25	21	50	145	653
17:00 17:15	85	145	4	234	26	207	2	235	469	31	10	62	103	1	14	5	20	123	592
17:15 17:30	80	188	9	277	29	218	2	249	526	23	10	73	106	3	7	14	24	130	656
17:30 17:45	54	163	9	226	22	185	1	208	434	23	9	68	100	4	11	10	25	125	559
17:45 18:00	55	140	2	197	26	159	4	189	386	16	6	66	88	4	13	12	29	117	503
<b>Total:</b>	<b>2417</b>	<b>4232</b>	<b>125</b>	<b>6774</b>	<b>534</b>	<b>4724</b>	<b>155</b>	<b>5413</b>	<b>12187</b>	<b>609</b>	<b>221</b>	<b>1493</b>	<b>2323</b>	<b>102</b>	<b>376</b>	<b>400</b>	<b>878</b>	<b>12187</b>	<b>15,388</b>

Note: U-Turns are included in Totals.



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37462

**Start Time:** 07:00

**Device:** Miovision

### Full Study Cyclist Volume

#### STRANDHERD DR

#### MARAVISTA DR

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	0	0	0
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	0	0	0	0	0	0	0
16:45 17:00	0	0	0	0	0	0	0
17:00 17:15	0	0	0	0	0	0	0
17:15 17:30	0	0	0	0	0	0	0
17:30 17:45	0	0	0	0	0	0	0
17:45 18:00	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37462

**Start Time:** 07:00

**Device:** Miovision

### Full Study Pedestrian Volume

#### STRANDHERD DR

#### MARAVISTA DR

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	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	1	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	2	2	0	0	0	2
12:30 12:45	0	0	0	0	0	0	0
12:45 13:00	0	1	1	0	0	0	1
13:00 13:15	0	0	0	0	0	0	0
13:15 13:30	0	1	1	0	0	0	1
15:00 15:15	0	4	4	0	0	0	4
15:15 15:30	0	6	6	0	0	0	6
15:30 15:45	0	3	3	0	0	0	3
15:45 16:00	2	2	4	1	0	1	5
16:00 16:15	0	3	3	0	0	0	3
16:15 16:30	0	1	1	0	0	0	1
16:30 16:45	0	3	3	0	0	0	3
16:45 17:00	0	0	0	0	0	0	0
17:00 17:15	0	2	2	0	1	1	3
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	3	3	0	0	0	3
<b>Total .....</b>	<b>3</b>	<b>32</b>	<b>35</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>37</b>



# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37462

**Start Time:** 07:00

**Device:** Miovision

### Full Study Heavy Vehicles

#### STRANDHERD DR

#### MARAVISTA DR

Northbound

Southbound

Eastbound

Westbound

Time Period	Northbound			N TOT	Southbound			S TOT	STR TOT	Eastbound			E TOT	Westbound			W TOT	STR TOT	Grand Total
	LT	ST	RT		LT	ST	RT			LT	ST	RT		LT	ST	RT			
07:00 07:15	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
07:15 07:30	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1
07:30 07:45	0	2	0	2	0	3	0	3	5	0	0	1	1	0	0	1	1	2	7
07:45 08:00	1	3	0	4	1	1	0	2	6	0	0	0	0	0	0	0	0	0	6
08:00 08:15	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
08:15 08:30	0	2	0	2	0	2	0	2	4	0	0	0	0	0	0	1	1	1	5
08:30 08:45	0	2	0	2	0	1	0	1	3	0	0	1	1	0	0	0	0	1	4
08:45 09:00	1	2	0	3	1	3	0	4	7	0	0	0	0	0	0	0	0	0	7
09:00 09:15	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
09:15 09:30	0	2	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
09:30 09:45	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2	2
09:45 10:00	1	0	0	1	1	3	0	4	5	0	0	0	0	0	0	0	0	0	5
11:30 11:45	0	0	0	0	0	2	0	2	2	0	0	1	1	0	0	1	1	2	4
11:45 12:00	0	1	0	1	1	1	0	2	3	1	0	0	1	0	0	1	1	2	5
12:00 12:15	0	1	0	1	0	2	0	2	3	0	0	1	1	0	0	0	0	1	4
12:15 12:30	1	1	0	2	1	2	0	3	5	0	0	0	0	0	0	0	0	0	5
12:30 12:45	0	3	0	3	0	1	0	1	4	0	0	1	1	0	0	1	1	2	6
12:45 13:00	1	3	0	4	1	0	1	2	6	0	0	1	1	0	0	1	1	2	8
13:00 13:15	1	0	0	1	0	1	0	1	2	0	0	1	1	0	0	0	0	1	3
13:15 13:30	1	0	0	1	0	1	0	1	2	0	0	0	0	0	0	0	0	0	2
15:00 15:15	0	0	0	0	0	2	0	2	2	0	0	1	1	0	0	1	1	2	4
15:15 15:30	1	0	0	1	1	0	0	1	2	0	0	0	0	0	0	0	0	0	2
15:30 15:45	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1	2	2
15:45 16:00	1	0	0	1	1	0	0	1	2	0	0	0	0	0	0	1	1	1	3
16:00 16:15	0	1	0	1	0	2	0	2	3	0	0	1	1	0	0	0	0	1	4
16:15 16:30	1	2	0	3	2	0	0	2	5	0	0	0	0	0	0	1	1	1	6
16:30 16:45	0	0	0	0	0	2	0	2	2	0	0	1	1	0	0	0	0	1	3
16:45 17:00	1	1	0	2	1	0	0	1	3	0	0	0	0	0	0	0	0	0	3
17:00 17:15	0	2	0	2	0	0	0	0	2	0	0	1	1	0	0	1	1	2	4
17:15 17:30	1	0	0	1	1	0	0	1	2	0	0	0	0	0	0	0	0	0	2
17:30 17:45	0	0	0	0	0	1	0	1	1	0	0	1	1	0	0	1	1	2	3
17:45 18:00	1	1	0	2	1	1	0	2	4	0	0	0	0	0	0	1	1	1	5
<b>Total:</b> None	13	32	0	45	13	32	1	46	91	1	0	14	15	0	0	14	14	29	120





# Transportation Services - Traffic Services

## Turning Movement Count - Study Results

### MARAVISTA DR @ STRANDHERD DR

**Survey Date:** Saturday, January 20, 2018

**WO No:** 37462

**Start Time:** 07:00

**Device:** Miovision

### Full Study 15 Minute U-Turn Total

#### STRANDHERD DR
























#### MARAVISTA DR

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	1	0	0	1
08:00	08:15	0	0	0	0	0
08:15	08:30	0	1	0	0	1
08:30	08:45	0	1	0	0	1
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	1	0	0	1
09:30	09:45	0	2	0	0	2
09:45	10:00	0	1	0	0	1
11:30	11:45	0	0	0	0	0
11:45	12:00	0	5	0	0	5
12:00	12:15	0	1	0	0	1
12:15	12:30	0	1	0	0	1
12:30	12:45	0	4	0	0	4
12:45	13:00	0	2	0	0	2
13:00	13:15	0	2	0	0	2
13:15	13:30	0	4	0	0	4
15:00	15:15	0	5	0	0	5
15:15	15:30	0	5	0	0	5
15:30	15:45	0	1	0	0	1
15:45	16:00	0	1	0	0	1
16:00	16:15	0	2	0	0	2
16:15	16:30	0	6	0	0	6
16:30	16:45	0	0	0	0	0
16:45	17:00	0	5	0	0	5
17:00	17:15	0	4	0	0	4
17:15	17:30	0	3	0	0	3
17:30	17:45	0	3	0	0	3
17:45	18:00	0	4	0	0	4
Total		0	65	0	0	65

## APPENDIX D – SYNCHRO OUTPUT REPORTS

Myers Barrhaven Dealership  
 3: Strandherd Drive & Dealership Drive/Kennevale Drive

Existing Conditions  
 PM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	8	21	136	5	85	12	795	140	76	1043	14
Future Volume (vph)	31	8	21	136	5	85	12	795	140	76	1043	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		75.0	50.0		0.0	100.0		50.0	100.0		50.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.858				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1900	1615	1656	1515	0	1805	1845	1583	1736	1863	1615
Flt Permitted	0.689			0.752			0.161			0.950		
Satd. Flow (perm)	1271	1900	1615	1311	1515	0	306	1845	1583	1736	1863	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			59		92				78			28
Link Speed (k/h)		50			40			80			80	
Link Distance (m)		244.2			232.4			273.7			323.3	
Travel Time (s)		17.6			20.9			16.4			19.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	9%	0%	8%	0%	3%	2%	4%	2%	0%
Adj. Flow (vph)	34	9	23	148	5	92	13	864	152	83	1134	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	9	23	148	97	0	13	864	152	83	1134	15
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			7.2			7.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8			2		1		6

Myers Barrhaven Dealership  
3: Strandherd Drive & Dealership Drive/Kennevale Drive

Existing Conditions  
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2		2			6
Detector Phase	4	4	4	8	8		2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	38.0	38.0	38.0	38.0	38.0		87.0	87.0	87.0	15.0	102.0	102.0
Total Split (s)	38.0	38.0	38.0	38.0	38.0		87.0	87.0	87.0	15.0	102.0	102.0
Total Split (%)	27.1%	27.1%	27.1%	27.1%	27.1%		62.1%	62.1%	62.1%	10.7%	72.9%	72.9%
Maximum Green (s)	31.4	31.4	31.4	31.4	31.4		80.9	80.9	80.9	10.5	95.9	95.9
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.7	3.7	3.7	3.5	3.7	3.7
All-Red Time (s)	3.3	3.3	3.3	3.3	3.3		2.4	2.4	2.4	1.0	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.6	6.6	6.6	6.6		6.1	6.1	6.1	4.5	6.1	6.1
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0		0	0
Act Effct Green (s)	21.1	21.1	21.1	21.1	21.1		90.4	90.4	90.4	11.4	106.2	106.2
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15		0.65	0.65	0.65	0.08	0.76	0.76
v/c Ratio	0.18	0.03	0.08	0.75	0.32		0.07	0.73	0.14	0.59	0.80	0.01
Control Delay	51.2	46.9	0.5	79.0	12.9		13.1	22.9	6.1	78.8	17.6	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	2.0	0.0
Total Delay	51.2	46.9	0.5	79.0	12.9		13.1	22.9	6.1	78.8	19.6	0.9
LOS	D	D	A	E	B		B	C	A	E	B	A
Approach Delay		32.9			52.8			20.3			23.3	
Approach LOS		C			D			C			C	
Queue Length 50th (m)	8.8	2.3	0.0	41.9	1.3		1.3	160.8	7.7	23.6	179.3	0.0
Queue Length 95th (m)	18.6	7.3	0.0	62.9	16.8		5.3	256.7	19.8	42.1	322.6	1.1
Internal Link Dist (m)		220.2			208.4			249.7			299.3	
Turn Bay Length (m)	75.0		75.0	50.0			100.0		50.0	100.0		50.0
Base Capacity (vph)	285	426	407	294	411		197	1190	1049	148	1413	1232
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	152	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.02	0.06	0.50	0.24		0.07	0.73	0.14	0.56	0.90	0.01

Intersection Summary

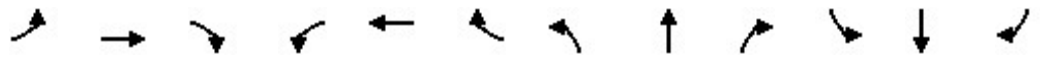
Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	57 (41%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle:	140
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.80
Intersection Signal Delay:	25.2
Intersection LOS:	C
Intersection Capacity Utilization:	87.9%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 3: Strandherd Drive & Dealership Drive/Kennevale Drive



Myers Barrhaven Dealership  
6: Strandherd Drive & Marravista Drive

Existing Conditions  
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	62	208	14	52	46	249	663	22	131	894	28
Future Volume (vph)	73	62	208	14	52	46	249	663	22	131	894	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	35.0		0.0	125.0		0.0	150.0		0.0
Storage Lanes	2		0	1		0	2		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99							
Fr <sub>t</sub>		0.884			0.930			0.995				0.850
Fl <sub>t</sub> Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3502	1667	0	1671	1619	0	3467	3453	0	1752	3539	1553
Fl <sub>t</sub> Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3492	1667	0	1671	1619	0	3467	3453	0	1752	3539	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		151			39			3				100
Link Speed (k/h)		50			50			80				80
Link Distance (m)		119.6			217.5			323.3				149.2
Travel Time (s)		8.6			15.7			19.4				9.0
Confl. Peds. (#/hr)	2						2					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	8%	8%	9%	1%	4%	5%	3%	2%	4%
Adj. Flow (vph)	79	67	226	15	57	50	271	721	24	142	972	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	293	0	15	107	0	271	745	0	142	972	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Myers Barrhaven Dealership  
6: Strandherd Drive & Marravista Drive

Existing Conditions  
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Detector Phase	7	4		3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	15.0	47.0		15.0	47.0		18.0	40.0		18.0	40.0	15.0
Total Split (s)	15.0	47.0		15.0	47.0		18.0	40.0		18.0	40.0	15.0
Total Split (%)	12.5%	39.2%		12.5%	39.2%		15.0%	33.3%		15.0%	33.3%	12.5%
Maximum Green (s)	7.4	39.4		7.4	39.4		11.6	33.5		11.6	33.5	7.4
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	3.3
All-Red Time (s)	4.3	4.3		4.3	4.3		2.7	2.8		2.7	2.8	4.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.6	7.6		7.6	7.6		6.4	6.5		6.4	6.5	7.6
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	None
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		32.0			32.0			17.0			17.0	
Pedestrian Calls (#/hr)		0			2			0			0	
Act Effct Green (s)	7.1	23.1		6.5	17.1		13.6	56.2		14.3	56.8	70.4
Actuated g/C Ratio	0.06	0.19		0.05	0.14		0.11	0.47		0.12	0.47	0.59
v/c Ratio	0.38	0.66		0.17	0.41		0.69	0.46		0.68	0.58	0.03
Control Delay	59.8	27.1		58.0	31.0		60.8	26.5		67.7	28.4	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	59.8	27.1		58.0	31.0		60.8	26.5		67.7	28.4	0.1
LOS	E	C		E	C		E	C		E	C	A
Approach Delay		34.0			34.3			35.7			32.5	
Approach LOS		C			C			D			C	
Queue Length 50th (m)	9.8	31.4		3.6	16.3		33.3	62.3		33.5	86.1	0.0
Queue Length 95th (m)	18.1	52.5		11.0	25.9		#54.1	112.8		#70.4	#172.1	0.0
Internal Link Dist (m)		95.6			193.5			299.3			125.2	
Turn Bay Length (m)	85.0			35.0			125.0			150.0		
Base Capacity (vph)	215	648		103	557		397	1617		210	1675	955
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.37	0.45		0.15	0.19		0.68	0.46		0.68	0.58	0.03

Intersection Summary

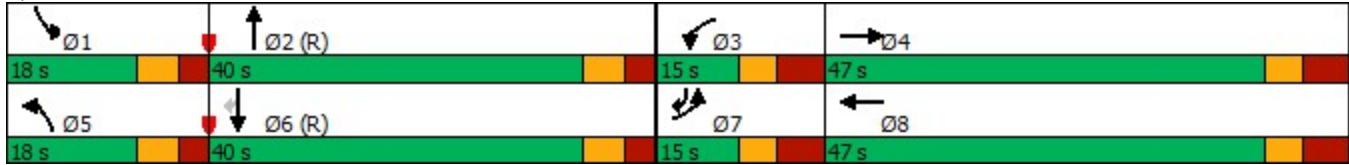
Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 82 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 34.0  
 Intersection LOS: C

Intersection Capacity Utilization 65.0% ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 6: Strandherd Drive & Marravista Drive





Myers Barrhaven Dealership  
 3: Strandherd Drive & Dealership Drive/Kennevale Drive

Existing Conditions  
 PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	8	21	136	5	85	12	795	140	76	1043	14
Future Volume (vph)	31	8	21	136	5	85	12	795	140	76	1043	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	75.0		75.0	50.0		0.0	100.0		50.0	100.0		50.0
Storage Lanes	1		1	1		0	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.858				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	1900	1615	1656	1515	0	1805	1845	1583	1736	1863	1615
Flt Permitted	0.689			0.752			0.161			0.950		
Satd. Flow (perm)	1271	1900	1615	1311	1515	0	306	1845	1583	1736	1863	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			59		92				78			28
Link Speed (k/h)		50			40			80				80
Link Distance (m)		244.2			232.4			273.7				323.3
Travel Time (s)		17.6			20.9			16.4				19.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	0%	0%	9%	0%	8%	0%	3%	2%	4%	2%	0%
Adj. Flow (vph)	34	9	23	148	5	92	13	864	152	83	1134	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	9	23	148	97	0	13	864	152	83	1134	15
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Prot	NA	Perm
Protected Phases		4			8			2		1		6

Myers Barrhaven Dealership  
 3: Strandherd Drive & Dealership Drive/Kennevale Drive

Existing Conditions  
 PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4		4	8			2		2			6
Detector Phase	4	4	4	8	8		2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	38.0	38.0	38.0	38.0	38.0		87.0	87.0	87.0	15.0	102.0	102.0
Total Split (s)	38.0	38.0	38.0	38.0	38.0		87.0	87.0	87.0	15.0	102.0	102.0
Total Split (%)	27.1%	27.1%	27.1%	27.1%	27.1%		62.1%	62.1%	62.1%	10.7%	72.9%	72.9%
Maximum Green (s)	31.4	31.4	31.4	31.4	31.4		80.9	80.9	80.9	10.5	95.9	95.9
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.7	3.7	3.7	3.5	3.7	3.7
All-Red Time (s)	3.3	3.3	3.3	3.3	3.3		2.4	2.4	2.4	1.0	2.4	2.4
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.6	6.6	6.6	6.6	6.6		6.1	6.1	6.1	4.5	6.1	6.1
Lead/Lag							Lag	Lag	Lag	Lead		
Lead-Lag Optimize?							Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None		C-Max	C-Max	C-Max	None	C-Max	C-Max
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0		0	0
Act Effct Green (s)	21.1	21.1	21.1	21.1	21.1		90.4	90.4	90.4	11.4	106.2	106.2
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15		0.65	0.65	0.65	0.08	0.76	0.76
v/c Ratio	0.18	0.03	0.08	0.75	0.32		0.07	0.73	0.14	0.59	0.80	0.01
Control Delay	51.2	46.9	0.5	79.0	12.9		13.1	22.9	6.1	78.8	17.6	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	2.0	0.0
Total Delay	51.2	46.9	0.5	79.0	12.9		13.1	22.9	6.1	78.8	19.6	0.9
LOS	D	D	A	E	B		B	C	A	E	B	A
Approach Delay		32.9			52.8			20.3			23.3	
Approach LOS		C			D			C			C	
Queue Length 50th (m)	8.8	2.3	0.0	41.9	1.3		1.3	160.8	7.7	23.6	179.3	0.0
Queue Length 95th (m)	18.6	7.3	0.0	62.9	16.8		5.3	256.7	19.8	42.1	322.6	1.1
Internal Link Dist (m)		220.2			208.4			249.7			299.3	
Turn Bay Length (m)	75.0		75.0	50.0			100.0		50.0	100.0		50.0
Base Capacity (vph)	285	426	407	294	411		197	1190	1049	148	1413	1232
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	152	0
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.02	0.06	0.50	0.24		0.07	0.73	0.14	0.56	0.90	0.01

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	57 (41%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle:	140
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.80
Intersection Signal Delay:	25.2
Intersection LOS:	C
Intersection Capacity Utilization:	87.9%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 3: Strandherd Drive & Dealership Drive/Kennevale Drive



Myers Barrhaven Dealership  
6: Strandherd Drive & Marravista Drive

Existing Conditions  
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	62	208	14	52	46	249	663	22	131	894	28
Future Volume (vph)	73	62	208	14	52	46	249	663	22	131	894	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	85.0		0.0	35.0		0.0	125.0		0.0	150.0		0.0
Storage Lanes	2		0	1		0	2		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	0.97	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor	1.00				0.99							
Frt		0.884			0.930			0.995				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3502	1667	0	1671	1619	0	3467	3453	0	1752	3539	1553
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3492	1667	0	1671	1619	0	3467	3453	0	1752	3539	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		151			39			3				100
Link Speed (k/h)		50			50			80				80
Link Distance (m)		119.6			217.5			323.3				149.2
Travel Time (s)		8.6			15.7			19.4				9.0
Confl. Peds. (#/hr)	2						2					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	8%	8%	9%	1%	4%	5%	3%	2%	4%
Adj. Flow (vph)	79	67	226	15	57	50	271	721	24	142	972	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	79	293	0	15	107	0	271	745	0	142	972	30
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0

Myers Barrhaven Dealership  
6: Strandherd Drive & Marravista Drive

Existing Conditions  
PM Peak Hour



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Detector Phase	7	4		3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	15.0	47.0		15.0	47.0		18.0	40.0		18.0	40.0	15.0
Total Split (s)	15.0	47.0		15.0	47.0		18.0	40.0		18.0	40.0	15.0
Total Split (%)	12.5%	39.2%		12.5%	39.2%		15.0%	33.3%		15.0%	33.3%	12.5%
Maximum Green (s)	7.4	39.4		7.4	39.4		11.6	33.5		11.6	33.5	7.4
Yellow Time (s)	3.3	3.3		3.3	3.3		3.7	3.7		3.7	3.7	3.3
All-Red Time (s)	4.3	4.3		4.3	4.3		2.7	2.8		2.7	2.8	4.3
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	7.6	7.6		7.6	7.6		6.4	6.5		6.4	6.5	7.6
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	None
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		32.0			32.0			17.0			17.0	
Pedestrian Calls (#/hr)		0			2			0			0	
Act Effct Green (s)	7.1	23.1		6.5	17.1		13.6	56.2		14.3	56.8	70.4
Actuated g/C Ratio	0.06	0.19		0.05	0.14		0.11	0.47		0.12	0.47	0.59
v/c Ratio	0.38	0.66		0.17	0.41		0.69	0.46		0.68	0.58	0.03
Control Delay	59.8	27.1		58.0	31.0		60.8	26.5		67.7	28.4	0.1
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	59.8	27.1		58.0	31.0		60.8	26.5		67.7	28.4	0.1
LOS	E	C		E	C		E	C		E	C	A
Approach Delay		34.0			34.3			35.7			32.5	
Approach LOS		C			C			D			C	
Queue Length 50th (m)	9.8	31.4		3.6	16.3		33.3	62.3		33.5	86.1	0.0
Queue Length 95th (m)	18.1	52.5		11.0	25.9		#54.1	112.8		#70.4	#172.1	0.0
Internal Link Dist (m)		95.6			193.5			299.3			125.2	
Turn Bay Length (m)	85.0			35.0			125.0			150.0		
Base Capacity (vph)	215	648		103	557		397	1617		210	1675	955
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.37	0.45		0.15	0.19		0.68	0.46		0.68	0.58	0.03

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 82 (68%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 120  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.69  
 Intersection Signal Delay: 34.0  
 Intersection LOS: C

Intersection Capacity Utilization 65.0% ICU Level of Service C

Analysis Period (min) 15

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

Splits and Phases: 6: Strandherd Drive & Marravista Drive

