

Transportation Impact Assessment

245-267 Rochester Street



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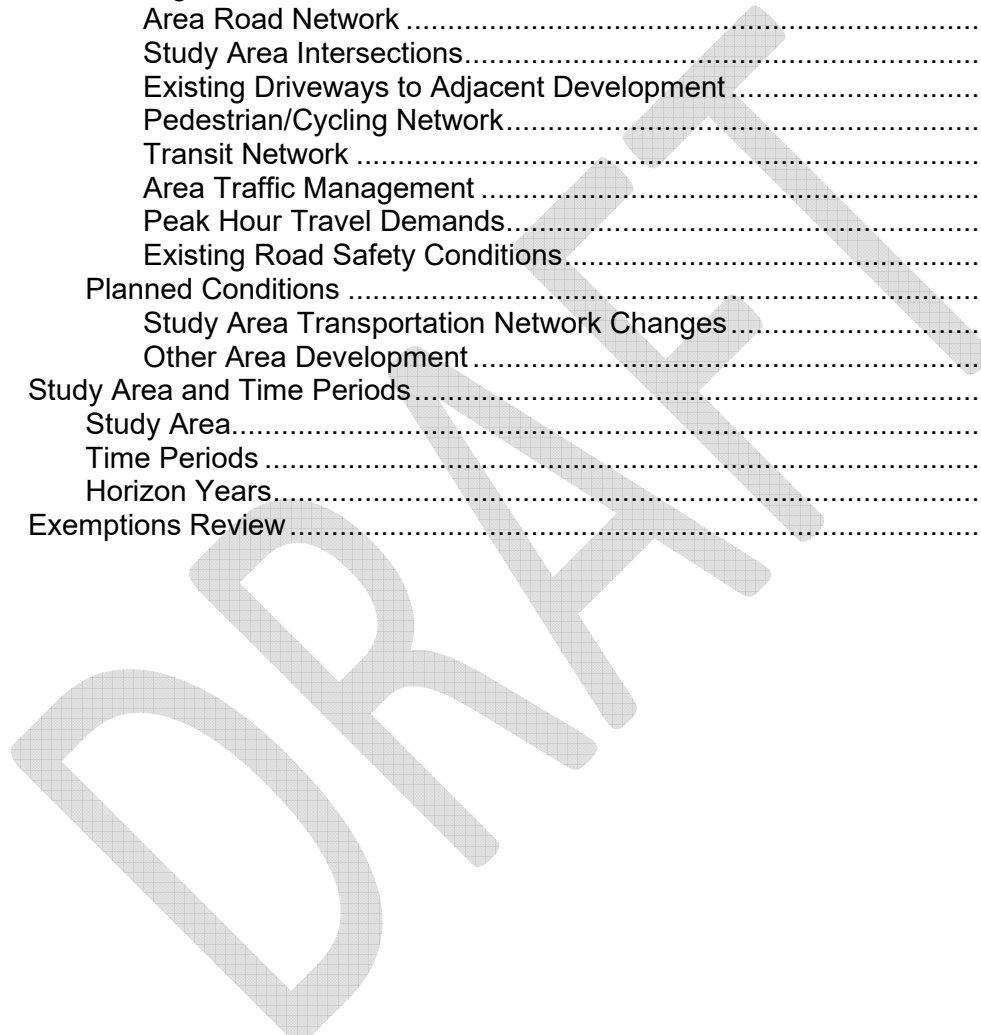
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Introduction

With respect to the City of Ottawa's 2017 Transportation Impact Assessment (TIA) Guidelines, a total of five separate submissions are required for City review/approval. Each submission is a component/section of a formal TIA, which includes:

- *Step 1 – Screening*
- *Step 2 – Scoping*
- *Step 3 – Forecasting*
- *Step 4 – Analysis*
- *Step 5 – TIA Submission* (i.e., Findings and Recommendations)

This report has been structured with these above noted *Steps 1-5* as numbered sections, accordingly, as outlined in the City's TIA Guidelines.

1.0 Screening

With regard to *Step 1 – Screening*, this is a form that contains a list of triggers to determine if the proposed size, type and location of a proposed development will require a formal TIA, as part of the City's development application approval process (e.g., not all new developments require a TIA).

With respect to the City of Ottawa's 2017 Transportation Impact Assessment (TIA) Guidelines, the proposed development (described below in Section 2.1) triggered the trip generation and the safety criteria outlined in the City's TIA *Step 1 – Screening* form. Given these triggers were met, a formal TIA (i.e., completed Steps 1-5) must accompany the subject development application.

2.0 Scoping

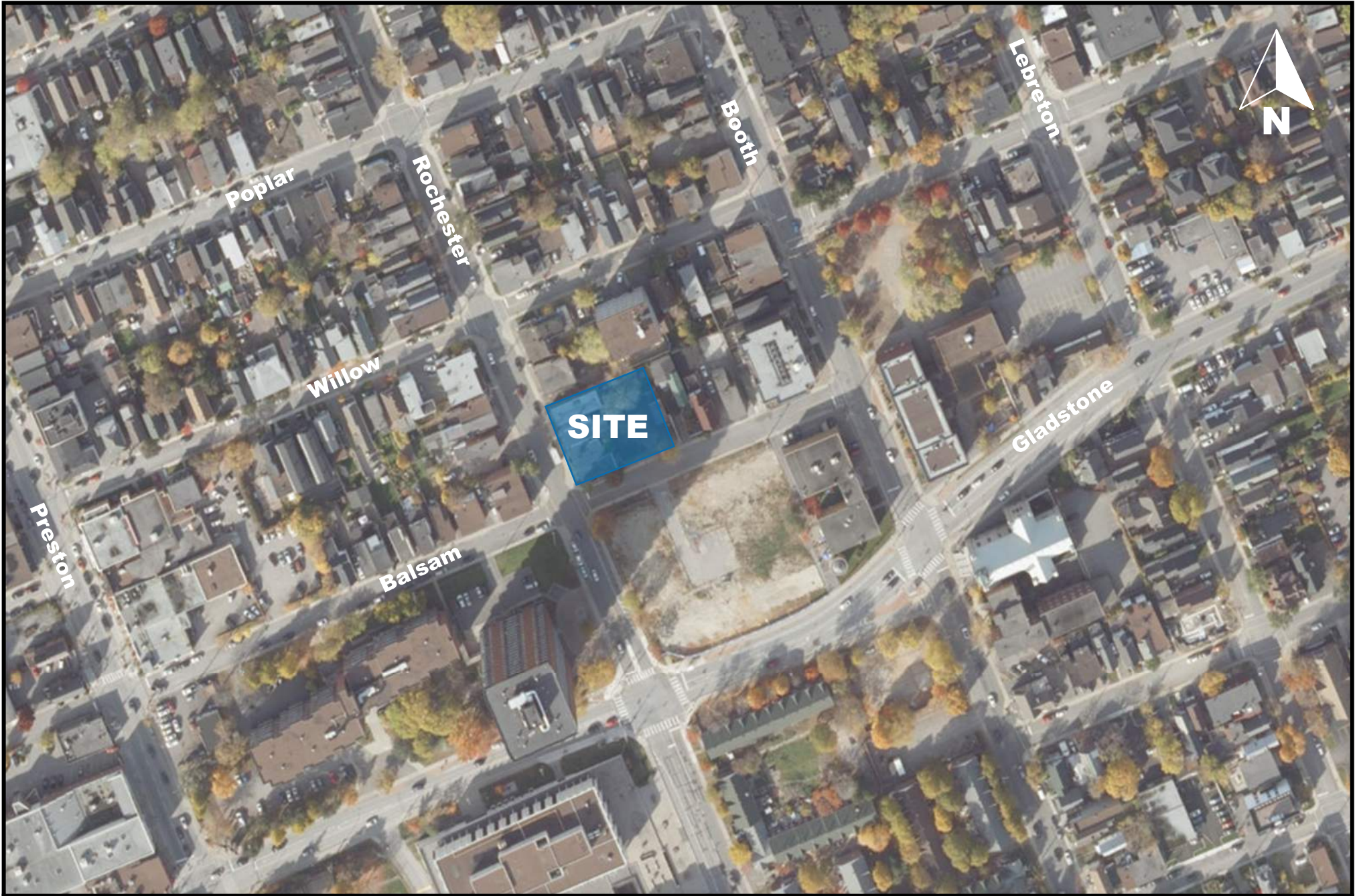
2.1 Existing and Planned Conditions

Description of Proposed Development

Based on the information provided, it is our understanding that the proponent is seeking City approval for the development of approximately 0.45 acres of land municipally known as 245-267 Rochester Street, within Ottawa's West Centretown community. The subject site is currently vacant (existing buildings were demolished in 2021) and is located within the northeast quadrant of the Rochester/Balsam intersection. The subject development will be constructed in a single phase, with an estimated build-out year of 2025.

The latest Site Plan illustrates that the proposed development will be a nine-storey building, which will include approximately 130 dwelling units and ground floor commercial. Below grade parking will be provided and access/egress to approximately 31 vehicle parking spaces will consist of a single full-movement driveway connection to Balsam Street.

The local context surrounding the subject development site is depicted in the following **Figure 1**, and the proposed Site Plan is depicted in the subsequent **Figure 2**.



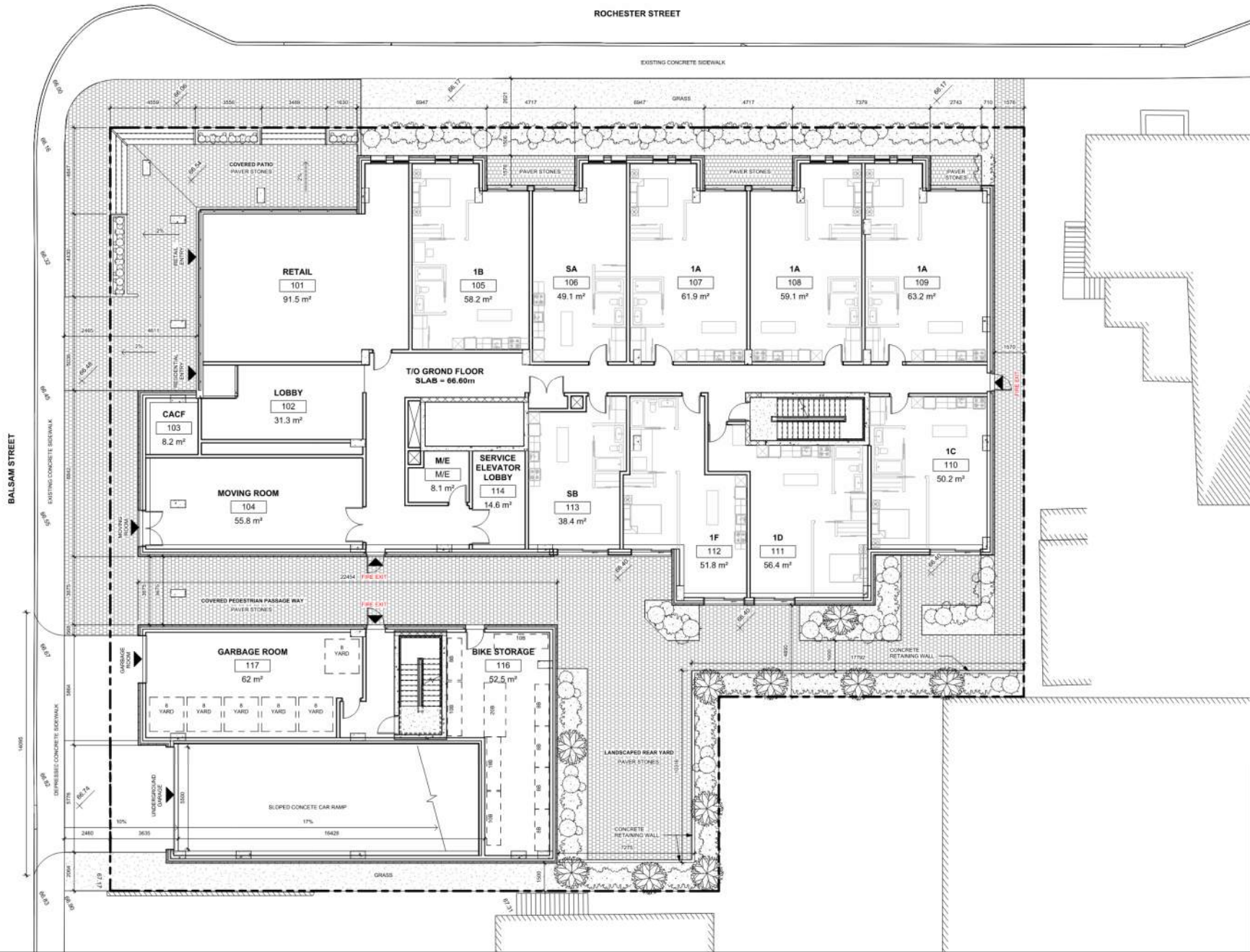


Figure 2: Proposed Site Plan

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Existing Conditions

Area Road Network

Gladstone Avenue is an east-west two-lane major collector roadway (i.e., one travel lane per direction) along the subject site's frontage. It extends between Parkdale Avenue in the west to Cartier Street in the east. Within the vicinity of the subject development site, the posted speed limit is 40 km/h and on-street parking is provided on the north side of the roadway.

Booth Street is a north-south two-lane arterial roadway (i.e., one travel lane per direction), which extends between Sir John A. Macdonald Parkway/Wellington Street in the north and Carling Avenue in the south. Within the vicinity of the subject development site, the posted speed limit is 40 km/h and on-street parking is permitted on the west side of the roadway only.

Rochester Street is a north-south two-lane local roadway (i.e., one travel lane per direction) within the study area. South of Gladstone Avenue, the roadway is classified as a major collector. Rochester Street extends between Primrose Avenue in the north and Carling Avenue in the south. Within the vicinity of the subject site, the posted speed limit is 30 km/h and on-street parking bays are provided on both sides of the roadway.

Balsam Street is an east-west two-lane local roadway (i.e., one travel lane per direction), which extends between Preston Street in the west and Booth Street in the east. Within the vicinity of the subject site, the posted speed limit is 30 km/h. On-street parking is permitted on the south side of the roadway for 2 hours between 7:00 am and 5:30 pm Monday to Friday.

Study Area Intersections

Rochester/Balsam

The Rochester/Balsam intersection is a four-legged intersection with STOP control on Balsam Street. All approaches consist of a single lane that accommodates all possible movements. All movements are permitted.



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Booth/Balsam

The Booth/Balsam intersection is a 'T' intersection with STOP control on Balsam Street. All approaches consist of a single lane that accommodates all possible movements. All movements are permitted.



Rochester/Gladstone

The Rochester/Gladstone intersection is a signalized, four-legged intersection. The northbound approach consists of an auxiliary left-turn lane and a shared through/right-turn lane. The southbound approach consists of a single lane that accommodates all movements. The eastbound approach consists of single through/right-turn lane. The westbound approach consists of an auxiliary left-turn lane and a shared through-right turn lane.



Heavy trucks are prohibited on Rochester Street north of Gladstone Avenue and the eastbound left-turn is prohibited. All other movements are permitted.

Booth/Gladstone

The Booth/Gladstone intersection is a signalized, four-legged intersection. The northbound and southbound approaches consist of a single lane that accommodates all-movements. The eastbound approach consists of an auxiliary left-turn lane, a through lane, and a channelized right-turn. The westbound approach consists of an auxiliary left-turn lane and a shared through/right-turn lane. Trucks are not permitted on Booth Street and the eastbound right-turn is prohibited from the eastbound through lane (i.e., the eastbound right-turn must be completed using the channel). All other movements are permitted.



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Existing Driveways to Adjacent Developments

As depicted in the following **Figure 3**, there are approximately 18 driveway connections within a 200 m boundary of all site driveway connections. Approximately 14 of the driveways adjacent to the subject development (illustrated in blue) provide access/egress for private low-rise residential land uses, such as single-family homes, townhomes and apartments. The remainder of the driveways (illustrated in red) provide access/egress to commercial developments.

Figure 3: Existing Driveways to Adjacent Developments



Pedestrian/Cycling Network

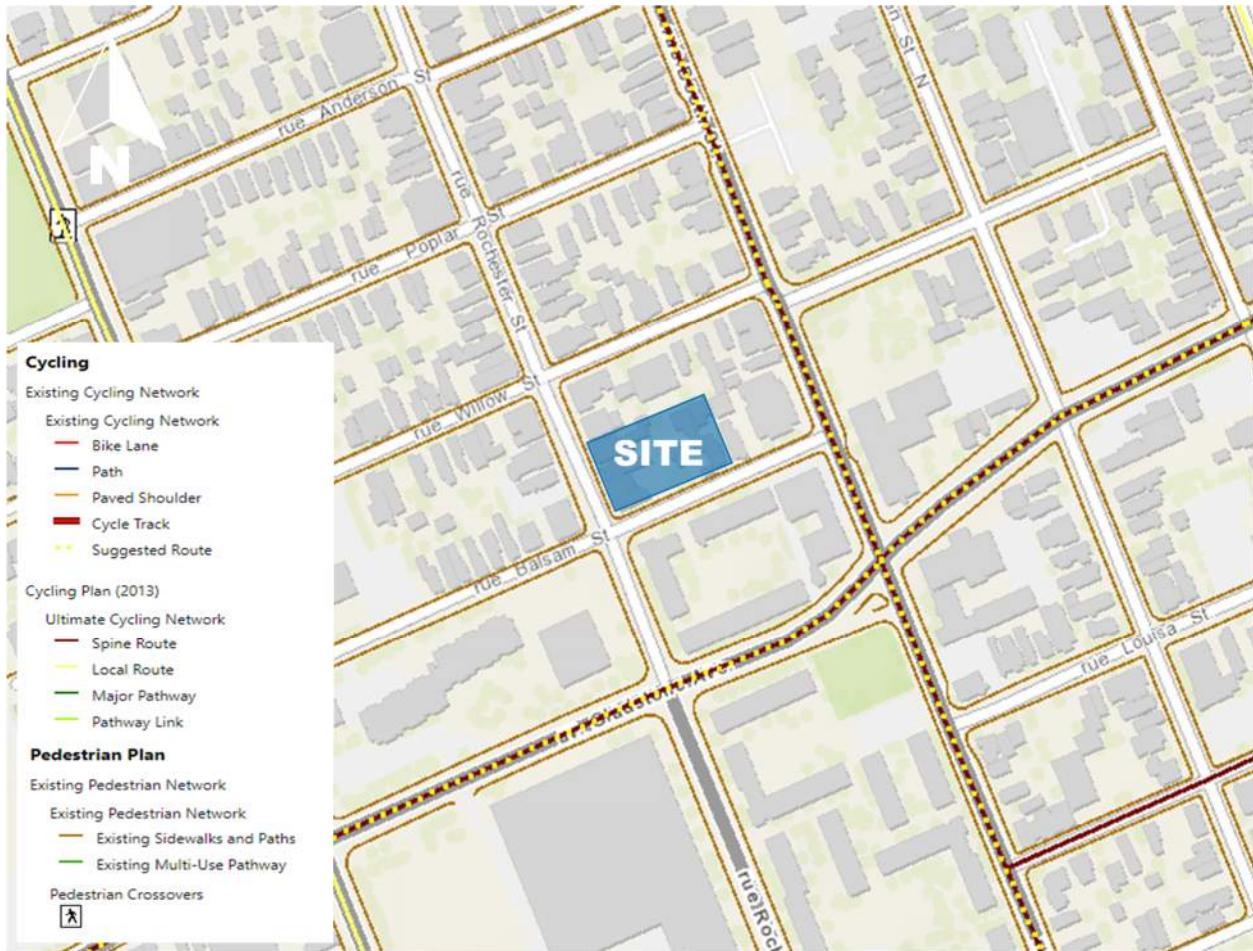
The pedestrian network within the vicinity of the subject site is currently comprised of concrete sidewalks provided on both sides of all study area roadways. With respect to cyclists, Booth Street and Gladstone Avenue are classified as 'Spine Routes' in the 2013 *Ottawa Cycling Plan*. They are also identified as suggested cycling routes within the current existing cycling network. However, it should be noted that no facilities are provided, and cyclists travel in mixed traffic.

A detailed map of the existing study area pedestrian/cycling network, and how it connects to the greater network is depicted in the following **Figure 4**, as sourced from the City's online open data source tool.

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Figure 4: Existing Pedestrian and Cycling Network



Transit Network

There are four OC Transpo bus routes within the vicinity of the site, summarized in **Table 1**. Bus stops for Routes #14 and #114 are located at the Booth/Gladstone and Rochester/Gladstone intersections, and bus stops for Routes #2 and #85 are located at the Preston/Gladstone intersection. All bus stops are approximately 115 m to 325 m walking distance from the site. The following **Figure 5** depicts the OC Transpo routes within the vicinity of the subject development and **Figure 6** depicts transit stop locations within the vicinity of the subject development site.

Table 1: OC Transpo Route Information

Route	Origin/Destination	Service Type	Peak Hour Headway
2	Bayview ↔ South Keys	Line 2 Bus Service	15 mins
44	Billings Bridge ↔ Hurdman	Frequent	15 mins
85	Bayshore ↔ Gatineau	Frequent	15 mins
144	Carlington ↔ Rideau	Local	Twice during the peak period peak direction

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Figure 5: Transit Routes Within Study Area



Figure 6: Transit Stops Within Study Area



Area Traffic Management

Traffic calming within the vicinity of the subject site is fairly abundant and includes measures such as:

- Information signage (e.g., area speed limit 30 km/h designation and caution children crossing)
- Speed display devices
- Pavement markings (e.g., speed limit, stop approaching, school crossing, full lane transverse bars)
- Vertical line treatments to give drivers a lane-narrowing effect (e.g., centreline and curb line flex stakes)
- Speed humps
- Vehicular directional closures (e.g., "No Trucks")
- On-street parking
- Intersection narrowings (e.g., Rochester Street and Booth Street narrowed at intersecting streets).

Peak Hour Travel Demands

For the purpose of this assessment and based on discussions with the City staff, the following study area intersections have been identified for intersection capacity analysis:

- Rochester/Balsam
- Booth/Balsam
- Rochester/Gladstone
- Rochester/Booth

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The following **Figure 7** depicts the observed weekday morning and afternoon peak hour vehicular volumes at study area intersections, and **Figure 8** depicts pedestrian and cyclist movements over the same peak hours. Note that traffic counts for the Rochester/Balsam and Booth/Balsam intersections were completed by JLR staff on September 15, 2022. Detailed traffic volume data is provided as **Appendix A**.

Figure 7: Existing Peak Hour Traffic – Vehicles



Figure 8: Existing Peak Hour Counts – Active Modes



Existing Road Safety Conditions

The most recent collision history for the past five (5) years was obtained from the City (i.e., available collision data for the years of 2015 – 2019, inclusive). The collision data includes all collisions occurring at intersections and roadway segments within the study area surrounding the subject development site.

Based on the most recent available historical collision data, the five-year total number of recorded collisions within the study is 54. Most of the collisions within the study area resulted in property damage only (a total of 39 collisions, or 74%), and the remaining collisions resulted in non-fatal injuries (a total of 14 collisions, or 26%). The most frequent types of collisions, as cited by police, were angle (36%), turning movement (25%) and rear end (15%) type collisions.

It should be noted that within the five (5) years of recorded collision data, there were three (3) collisions involving pedestrians. These reported collisions involving pedestrians were non-fatal;

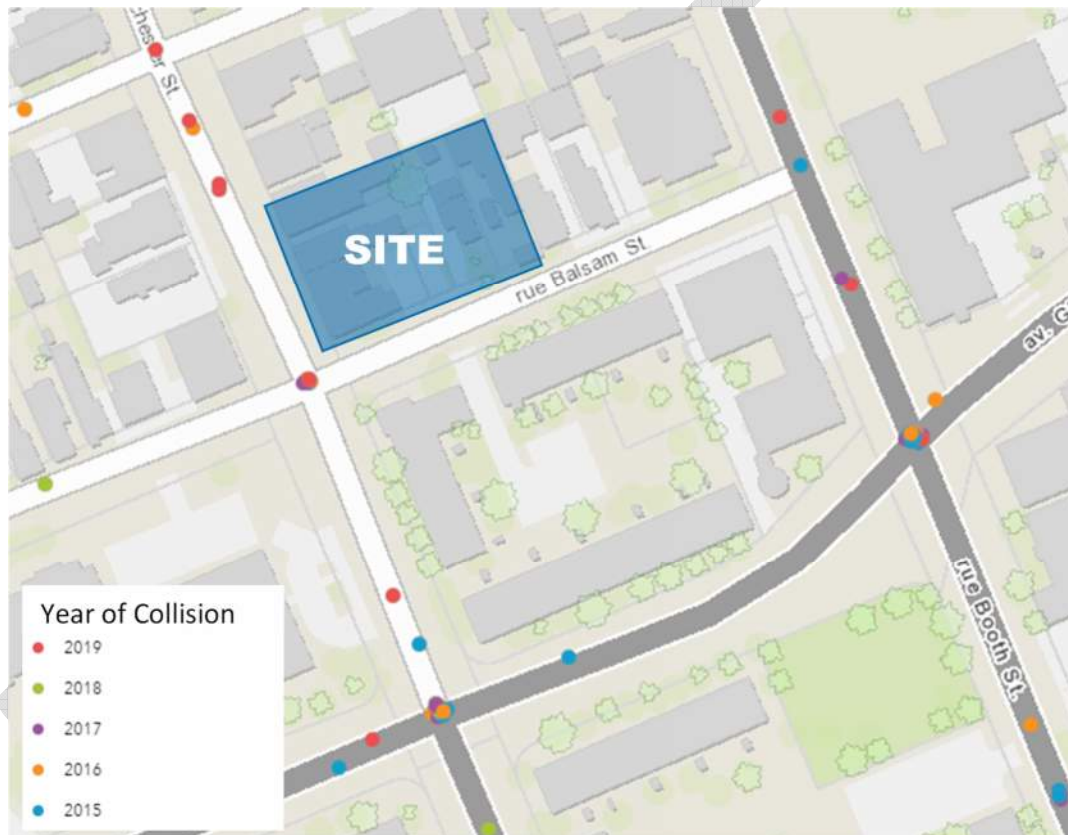
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however, personal injuries were reported and likely required hospitalization. All collisions with pedestrians occurred at the Rochester/Gladstone intersection between 2015 and 2018. In 2018 this intersection received improvements such as removal of the eastbound left-turn lane and a ban on the eastbound left-turn movement. Since these improvements, there have been no recorded collisions with pedestrians at this intersection.

The following **Figure 9** is a map that depicts the location and year of collisions within the study area. The source collision data is provided in **Appendix C**, and a more detail collision analysis is included in the subsequent *Step 4 – Analysis* section of this report.

Figure 9: Collision Frequency



Planned Conditions

Study Area Transportation Network Changes

Carling Transit Priority Measures

The *Carling Transit Priority Measures Study* was developed to provide a Recommended Functional Design of transit priority measures along Carling Avenue from Lincoln Fields Drive to Bronson Avenue. Near the study area, from Preston Street to Booth Street along Carling Avenue, identified measures include: a westbound curbside transit lane, a median eastbound transit lane, and segregated east and westbound cycling facilities. The following **Figure 10** illustrates the proposed measures within the vicinity of the site.

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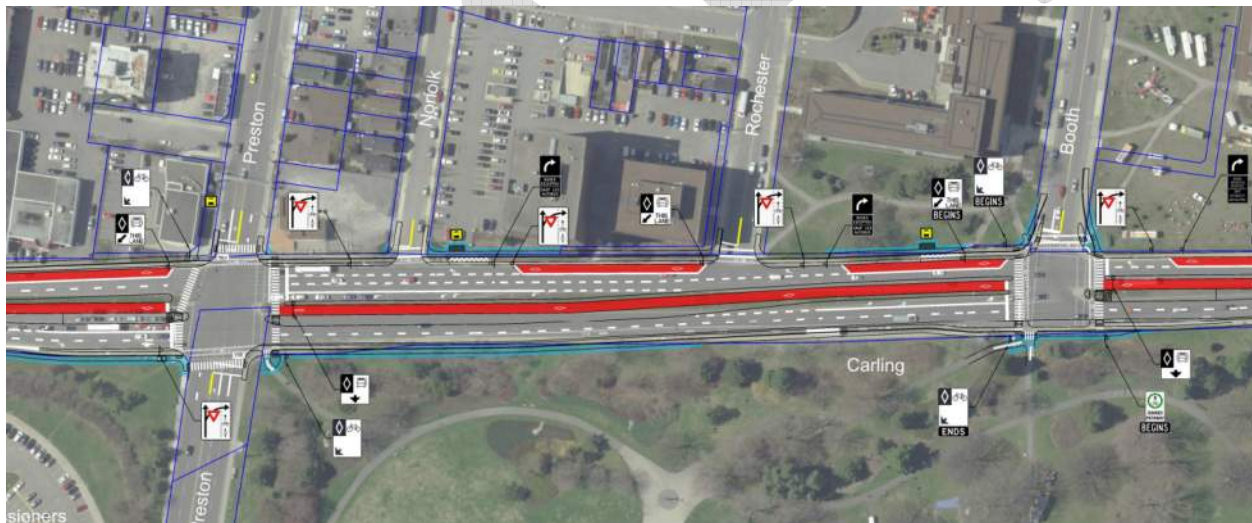
Stage 2 LRT

A notable transportation network change is the Stage 2 Trillium Line South Extension. This O-Train extension will add 16 kilometres of rail and 8 new stations to the network, with the closest new station to the proposed site being located at Gladstone Avenue (i.e., O-Train Station Corso Italia). The following **Figure 11** illustrates the future Stage 2 LRT network, where the proposed development is located approximately 500 m walking distance from the new Corso Italia LRT Station.

Corso Italia Station District Secondary Plan

The Corso Italia Station District Secondary Plan was developed to provide policy direction and to guide the private development and investments over the next 25 years. The goal is to ensure the community is a liveable transit-oriented community that focuses on sustainable transportation throughout the area. The Plan includes the area that is generally bound by Somerset Street to the north, Highway 417 to the south, Breezehill Avenue and Loretta Avenue (south of Gladstone Avenue) to the west, and Preston Street (including properties facing Preston Street on its east side) and Booth Street (south of Balsam Street) to the east. The following **Figure 12** depicts the Plans boundary.

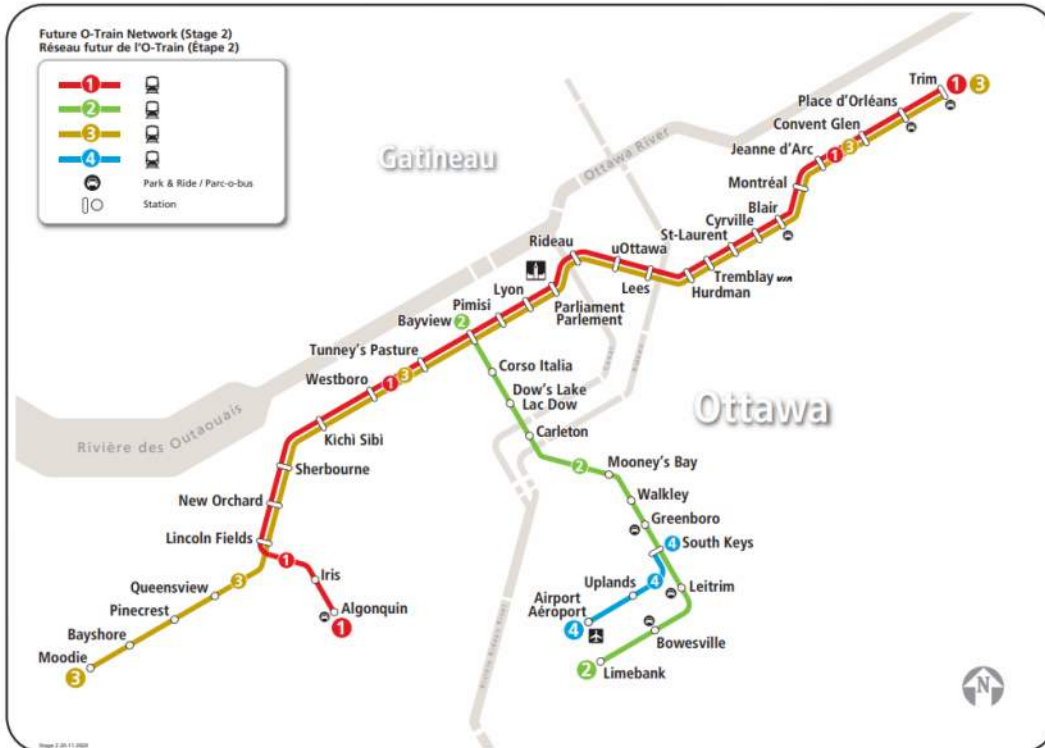
Figure 10: Carling Transit Priority Measures – Preston Street to Booth Street



Source: https://documents.ottawa.ca/sites/documents/files/carling_churchill_bronson_en.pdf, accessed 2022-09-01

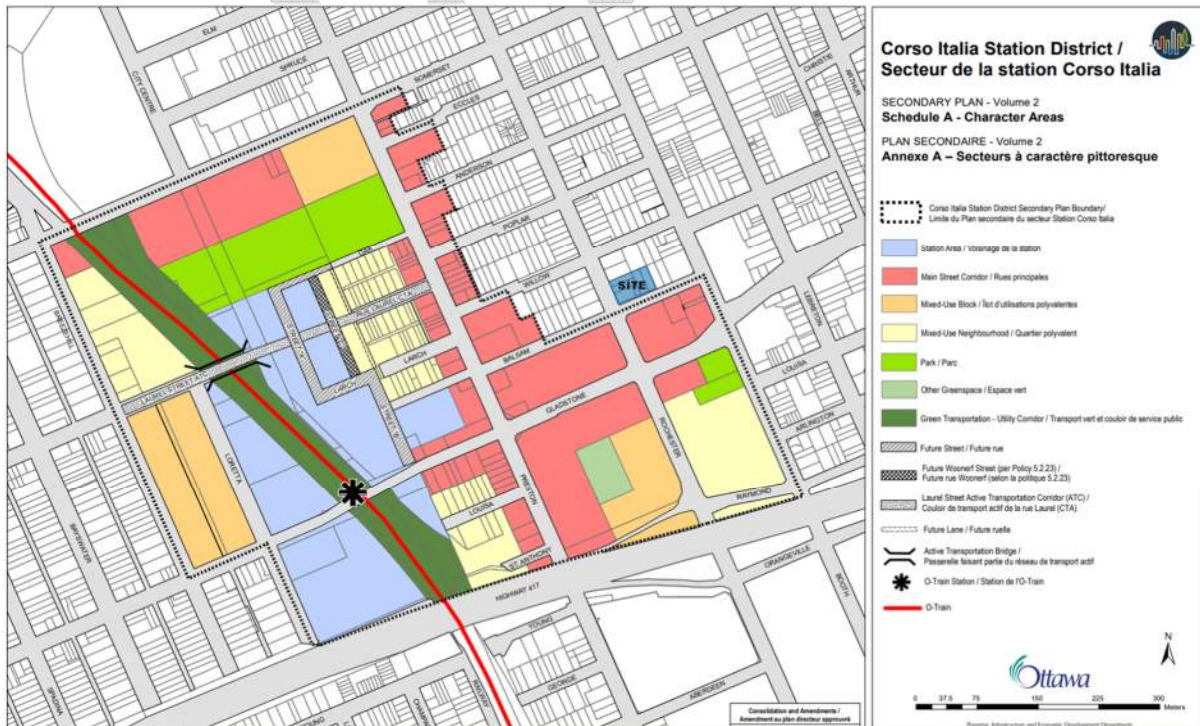
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Figure 11: Stage 2 LRT Network



Source: <https://www.octranspo.com/images/files/stage2/future-otrain-network-map.pdf>, accessed 2022-09-01

Figure 12: Corso Italia Station District Study Area



Source: https://documents.ottawa.ca/sites/documents/files/schedulea_corsoitalia_sp_en.pdf, accessed 2022-09-01

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Road Projects

Referencing the City's Construction and Infrastructure Projects website and the City's 2013 Transportation Master Plan (TMP), there are no planned roadway projects within the vicinity of the site.

Other Area Development

Planned developments within the vicinity of the subject development were identified using the City's online Development Application Tool. The following **Table 2** below summarizes the registered developments within the vicinity of the subject site.

Table 2: Area Development

Location	Anticipated Build-Out Year	Size	Land Use
818 Gladstone Avenue	2024	270 residential units and 5,125 ft ² of commercial space	Mixed Use
933 Gladstone Avenue	2031	1,050 residential units, 77,000 ft ² of commercial space, and 100,000 ft ² of office space	Mixed Use
450 Rochester	2024	540 residential units and 108,100 ft ² of commercial space	Mixed Use

It should be noted that the projected impact of the development summarized in **Table 2** has been accounted for in the subsequent *Step 3 – Forecasting* section of this report.

2.2 Study Area and Time Periods

Study Area

As discussed previously, City staff confirmed the following study area intersections for the purpose of this assessment:

- Rochester/Balsam
- Booth/Balsam
- Rochester/Gladstone
- Rochester/Booth
- Balsam Street between Rochester Street and Booth Street.

Time Periods

Given the surrounding road network (Rochester Street, Booth Street, and Gladstone Avenue) typically experience the heaviest volumes during the weekday morning and afternoon peak hours, this assessment considered weekday morning and afternoon peak hours for analysis purposes only.

Horizon Years

For the purpose of this assessment, the following development timeline was assumed:

- **2025** – Estimated full build-out of the subject development

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- **2030** – 5-years beyond full build-out, required under the City’s TIA Guidelines

2.3 Exemptions Review

Given the size and nature of the proposed subject development site, **Table 3** outlines which elements identified in the City’s 2017 *Transportation Impact Assessment Guidelines* that can be exempt from this analysis.

Table 3: Module Exemption Review

Module	Element	Exemption Criteria	Exemption Status
Design Review			
4.1 Development Design	4.1.2 Circulation and Access	Required for Site Plans	Not Exempt
	4.1.3 New Street Network	Required for Plans of Subdivisions	Exempt
4.2 Parking	4.2.1 Parking Supply	Required for Site Plans	Not Exempt
	4.2.2 Spillover Parking	Required for Site Plans where parking supply will be 15% below unconstrained demand	Exempt
Network Impact			
4.5 Transportation Demand Management	All Elements	Not required for Site Plans expected to have fewer than 60 employees and/or students on location at any given time	Not Exempt
4.6 Neighborhood Traffic Management	4.6.1 Adjacent Neighborhoods	Required when the development relies on local or collector streets for access and total volumes exceed ATM capacity thresholds	Not Exempt
4.8 Network Concept	All Elements	Required when development is projected to generate more than 200 person-trips during the peak hour in excess of the equivalent volume permitted by established zoning	Exempt

Transportation Impact Assessment
245-267 Rochester Street

J.L. RICHARDS & ASSOCIATES LIMITED

Prepared by:

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DRAFT

DRAFT

Appendix A

Existing Traffic Counts

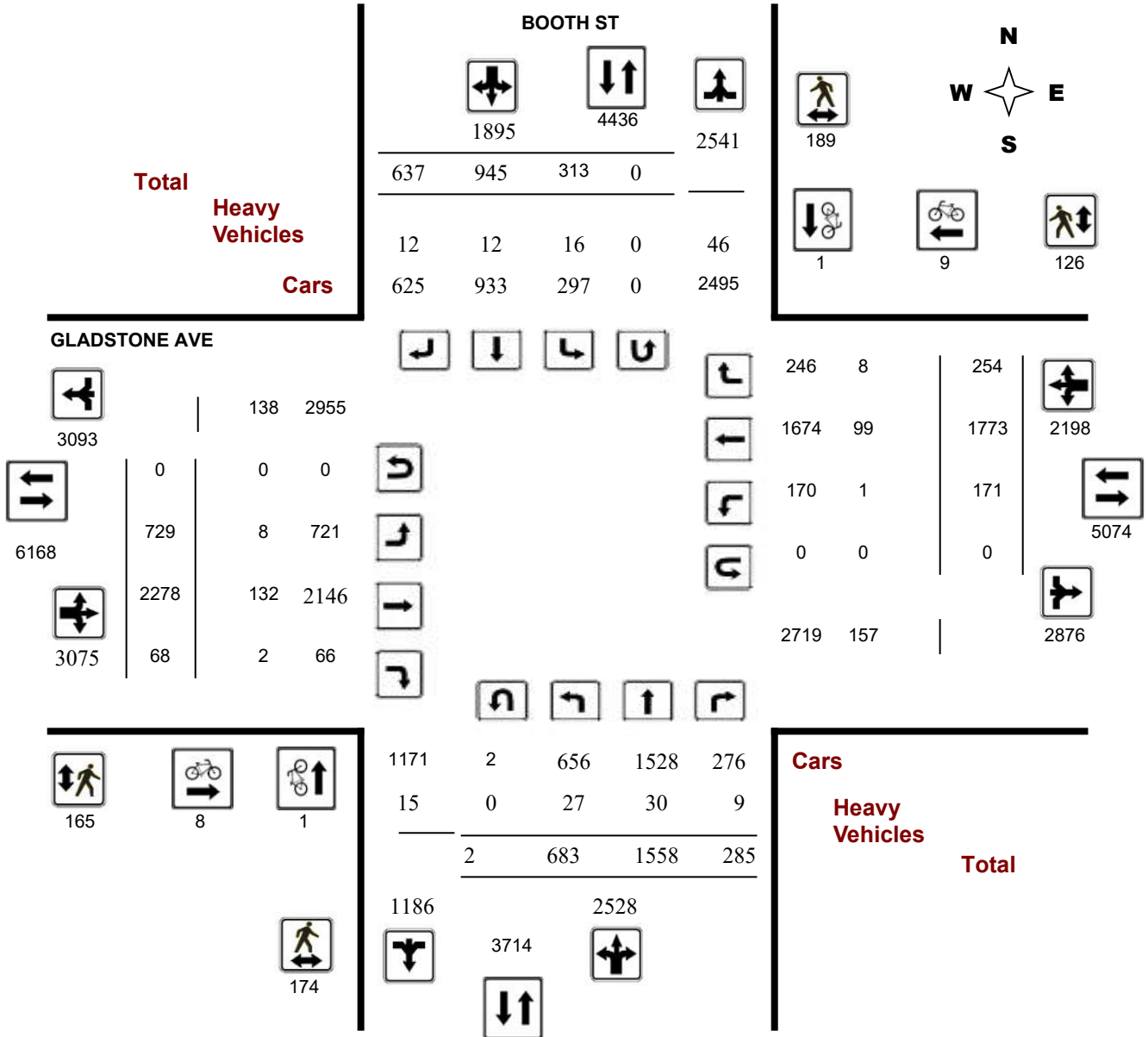
Survey Date: Thursday, March 03, 2022

WO No: 40210

Start Time: 07:00

Device: Miovision

Full Study Diagram



Turning Movement Count - Study Results

BOOTH ST @ GLADSTONE AVE

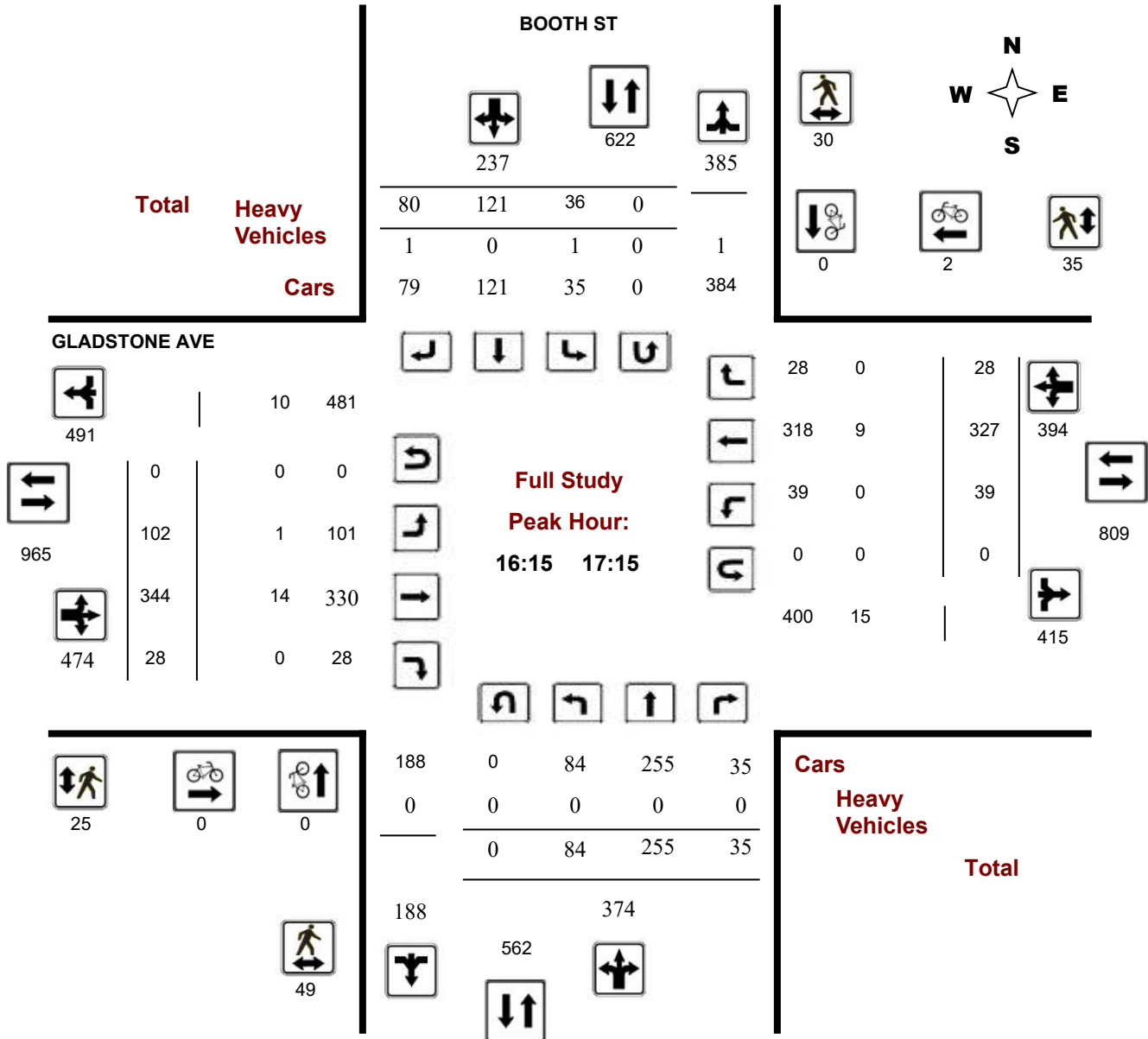
Survey Date: Thursday, March 03, 2022

WO No: 40210

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram





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Turning Movement Count - Peak Hour Diagram

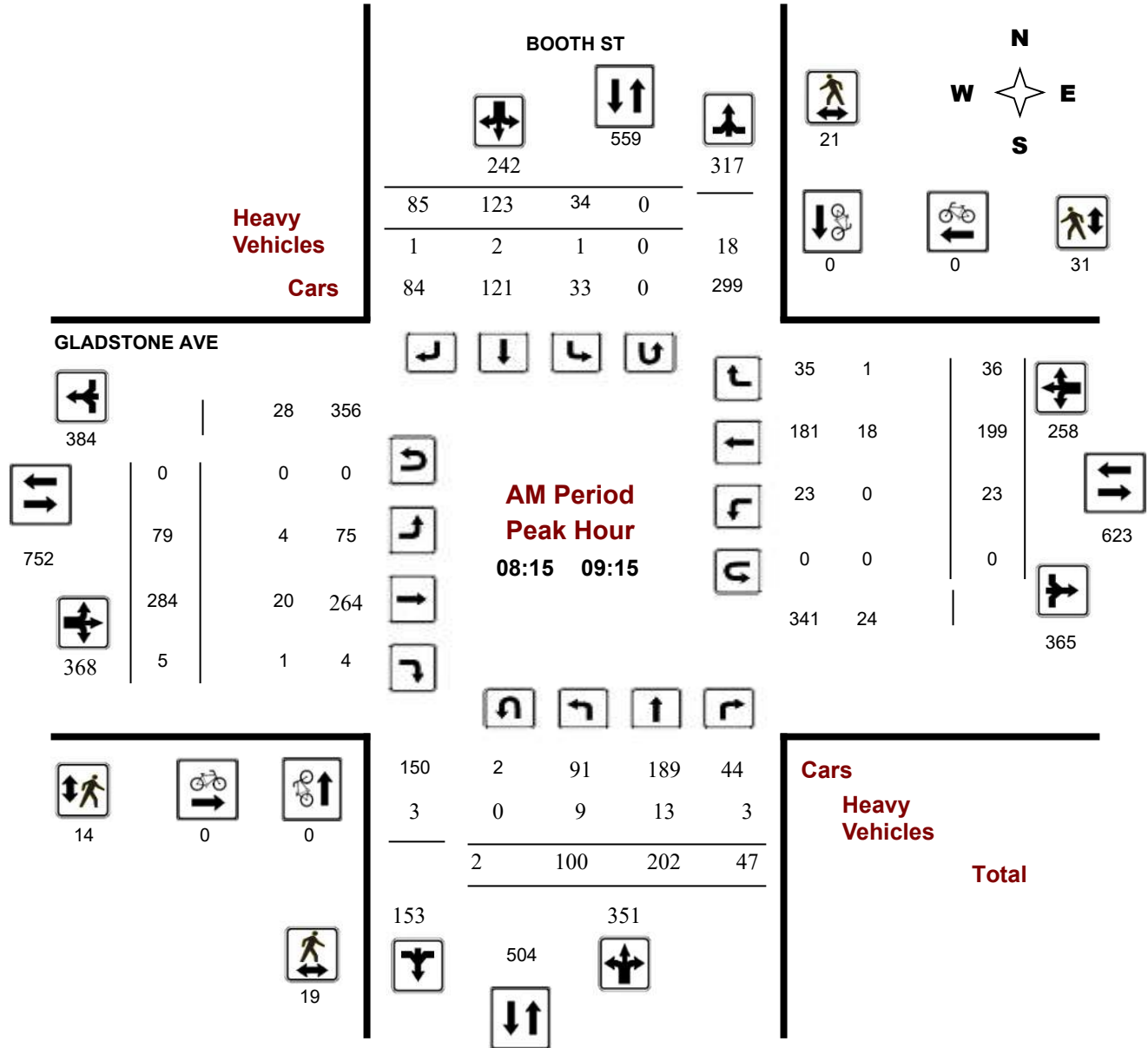
BOOTH ST @ GLADSTONE AVE

Survey Date: Thursday, March 03, 2022

Start Time: 07:00

WO No: 40210

Device: Miovision



Turning Movement Count - Peak Hour Diagram

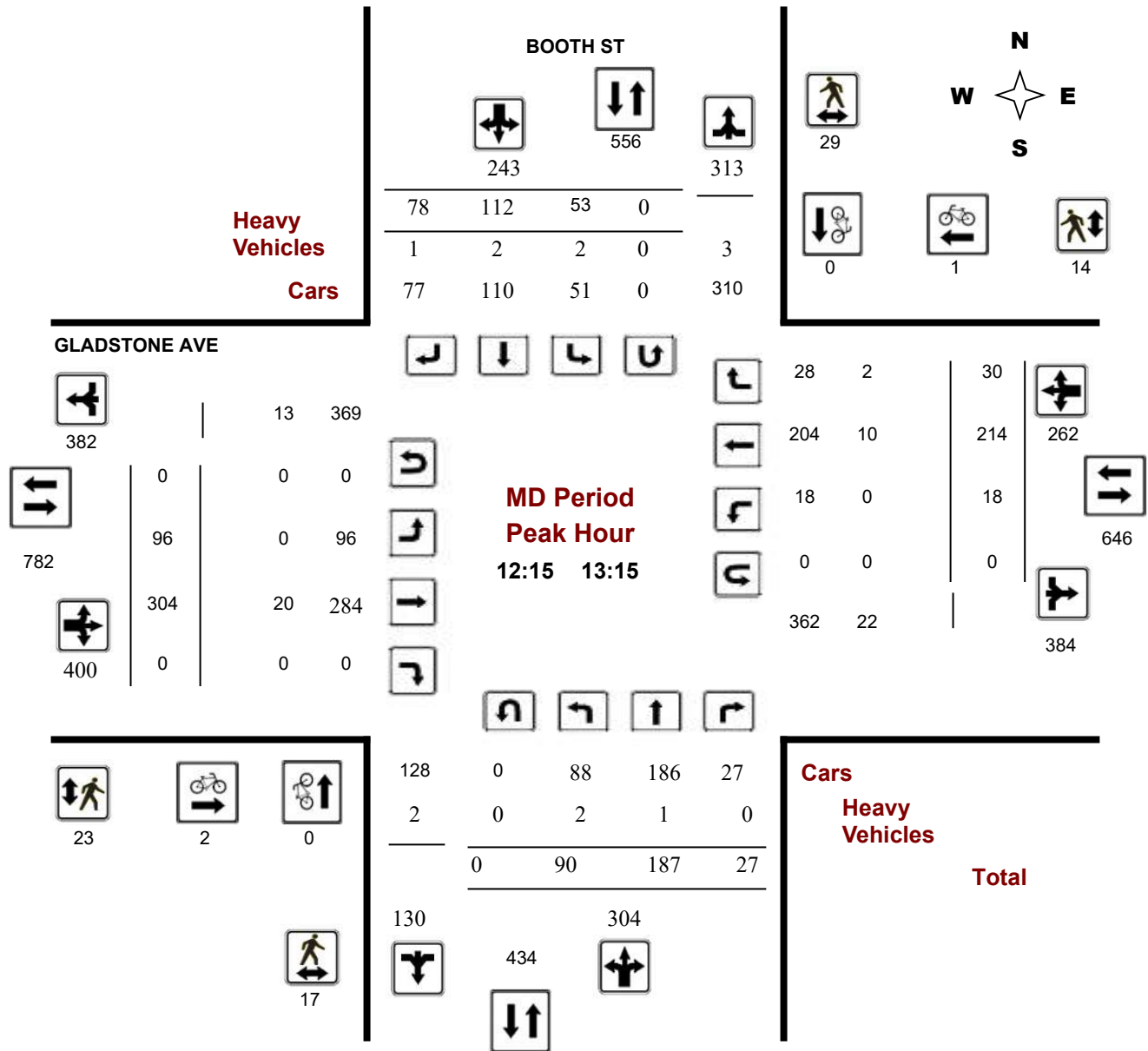
BOOTH ST @ GLADSTONE AVE

Survey Date: Thursday, March 03, 2022

Start Time: 07:00

WO No: 40210

Device: Miovision



Turning Movement Count - Peak Hour Diagram

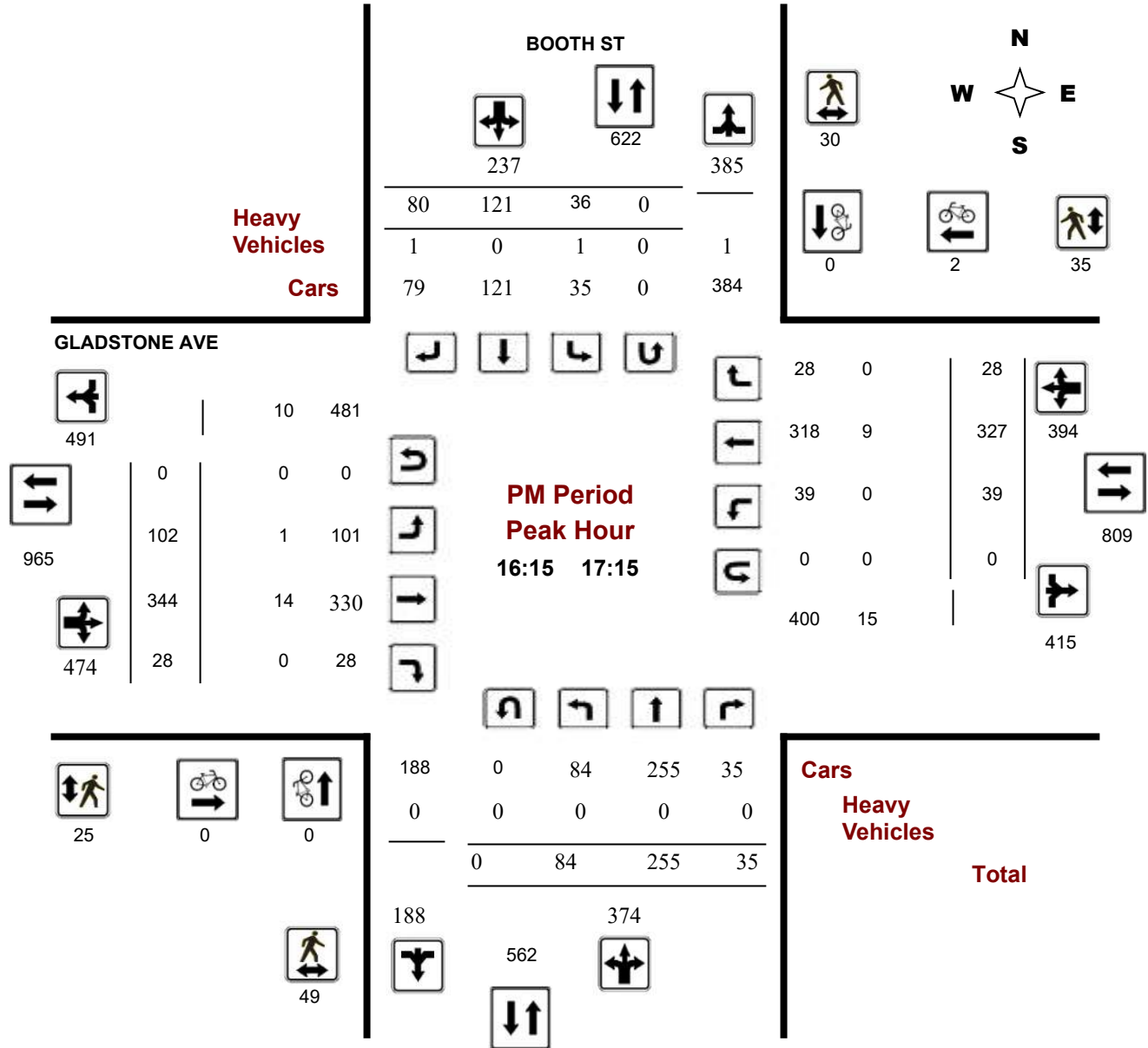
BOOTH ST @ GLADSTONE AVE

Survey Date: Thursday, March 03, 2022

Start Time: 07:00

WO No: 40210

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOOTH ST @ GLADSTONE AVE

Survey Date: Thursday, March 03, 2022

WO No: 40210

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, March 03, 2022

Total Observed U-Turns

AADT Factor

Northbound: 2 Southbound: 0
 Eastbound: 0 Westbound: 0

1.00

Period	BOOTH ST										GLADSTONE AVE										Grand Total	
	Northbound					Southbound					Eastbound					Westbound						
	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	51	135	24	210	492	30	134	118	282	492	105	185	1	291	571	4	108	16	128	419	911	
08:00 09:00	93	190	41	324	571	34	131	82	247	571	78	289	1	368	599	20	168	39	227	595	1166	
09:00 10:00	83	176	41	300	509	38	100	71	209	509	92	254	19	365	584	14	186	19	219	584	1093	
11:30 12:30	91	181	25	297	517	44	102	74	220	517	81	287	0	368	646	18	225	35	278	646	1163	
12:30 13:30	88	175	30	293	513	48	107	65	220	513	87	318	0	405	650	17	203	25	245	650	1163	
15:00 16:00	93	216	39	348	605	43	129	85	257	605	110	289	0	399	721	31	255	36	322	721	1326	
16:00 17:00	81	236	28	345	590	39	120	86	245	590	116	346	24	486	862	38	307	31	376	862	1452	
17:00 18:00	103	249	57	409	624	37	122	56	215	624	60	310	23	393	796	29	321	53	403	796	1420	
Sub Total	683	1558	285	2526	4421	313	945	637	1895	4421	729	2278	68	3075	5273	171	1773	254	2198	5273	9694	
U Turns	2				0		2		0				0		0		0		0		2	
Total	683	1558	285	2528	4423	313	945	637	1895	4423	729	2278	68	3075	5273	171	1773	254	2198	5273	9696	
EQ 12Hr	949	2166	396	3514	6148	435	1314	885	2634	6148	1013	3166	95	4274	7329	238	2464	353	3055	7329	13477	
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														1.39								
AVG 12Hr	949	2166	396	3514	6148	435	1721	1160	2634	6148	1013	3166	95	4274	7329	238	2464	353	3055	7329	13477	
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														1.00								
AVG 24Hr	1243	2837	519	4603	8054	570	2255	1520	3451	8054	1327	4147	124	5599	9601	312	3228	462	4002	9601	17655	
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

BOOTH ST @ GLADSTONE AVE

Survey Date: Thursday, March 03, 2022

WO No: 40210

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

BOOTH ST

GLADSTONE AVE

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	12	27	7	46	12	28	24	64	200	29	38	0	67	1	25	5	31	200	208
07:15 07:30	15	37	4	56	3	24	28	55	192	18	42	0	60	1	28	1	30	192	201
07:30 07:45	13	36	6	55	8	38	31	77	240	26	38	1	65	1	31	6	38	240	235
17:45 18:00	31	65	16	112	9	26	20	55	305	17	74	4	95	4	81	22	107	305	369
07:45 08:00	11	35	7	53	7	44	35	86	255	32	67	0	99	1	24	4	29	255	267
08:00 08:15	19	39	6	64	6	29	24	59	220	17	70	1	88	3	31	8	42	220	253
08:15 08:30	20	40	9	71	5	37	27	69	253	18	62	0	80	5	51	11	67	253	287
08:30 08:45	27	50	7	84	10	38	17	65	277	21	75	0	96	9	48	10	67	277	312
08:45 09:00	27	61	19	107	13	27	14	54	284	22	82	0	104	3	38	10	51	284	316
09:00 09:15	26	51	12	89	6	21	27	54	249	18	65	5	88	6	62	5	73	249	304
09:15 09:30	19	49	10	78	8	21	14	43	236	31	70	6	107	4	37	4	45	236	273
09:30 09:45	16	37	6	59	8	34	16	58	217	17	55	4	76	4	45	4	53	217	246
09:45 10:00	22	39	13	74	16	24	14	54	227	26	64	4	94	0	42	6	48	227	270
11:30 11:45	28	42	8	78	9	28	14	51	231	15	77	0	92	4	55	13	72	231	293
11:45 12:00	24	36	3	63	11	25	19	55	205	14	76	0	90	5	54	7	66	205	274
12:15 12:30	20	57	5	82	12	27	21	60	267	27	64	0	91	5	58	9	72	267	305
12:30 12:45	20	50	11	81	11	30	19	60	253	22	69	0	91	5	55	5	65	253	297
12:45 13:00	21	45	4	70	13	31	17	61	247	27	79	0	106	4	46	9	59	247	296
13:00 13:15	29	35	7	71	17	24	21	62	223	20	92	0	112	4	55	7	66	223	311
13:15 13:30	18	45	8	71	7	22	8	37	201	18	78	0	96	4	47	4	55	201	259
15:45 16:00	24	38	15	77	14	31	20	65	256	31	73	0	104	5	65	9	79	256	325
16:00 16:15	18	41	5	64	9	29	20	58	243	31	85	3	119	7	65	10	82	243	323
16:30 16:45	18	69	11	98	10	32	19	61	308	23	89	10	122	11	85	4	100	308	381
16:45 17:00	28	65	7	100	6	26	23	55	304	36	83	5	124	7	95	10	112	304	391
17:00 17:15	21	60	12	93	6	30	14	50	272	17	83	7	107	8	85	7	100	272	350
17:15 17:30	22	49	12	83	12	36	10	58	269	15	71	6	92	10	80	12	102	269	335
17:30 17:45	29	75	17	121	10	30	12	52	314	11	82	6	99	7	75	12	94	314	366
16:15 16:30	17	61	5	83	14	33	24	71	300	26	89	6	121	13	62	7	82	300	357
12:00 12:15	19	46	9	74	12	22	20	54	231	25	70	0	95	4	58	6	68	231	291
15:30 15:45	25	57	8	90	7	37	19	63	295	25	79	0	104	12	61	11	84	295	341
15:00 15:15	26	54	10	90	14	32	28	74	293	29	52	0	81	6	58	8	72	293	317
15:15 15:30	18	67	6	91	8	29	18	55	283	25	85	0	110	8	71	8	87	283	343
Total:	683	1558	285	2528	313	945	637	1895	8150	729	2278	68	3075	171	1773	254	2198	8150	9,696

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOOTH ST @ GLADSTONE AVE

Survey Date: Thursday, March 03, 2022

WO No: 40210

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

Time Period	BOOTH ST			GLADSTONE AVE			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street 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
17:45 18:00	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	1	1	1
11:30 11:45	0	0	0	2	0	2	2
11:45 12:00	0	0	0	0	1	1	1
12:15 12:30	0	0	0	1	0	1	1
12:30 12:45	0	0	0	0	1	1	1
12:45 13:00	0	0	0	1	0	1	1
13:00 13:15	0	0	0	0	0	0	0
13:15 13:30	0	0	0	1	0	1	1
15:45 16:00	0	0	0	1	0	1	1
16:00 16:15	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	2	2	2
17:15 17:30	0	0	0	0	0	0	0
17:30 17:45	0	0	0	0	0	0	0
16:15 16:30	0	0	0	0	0	0	0
12:00 12:15	1	0	1	0	1	1	2
15:30 15:45	0	0	0	0	0	0	0
15:00 15:15	0	0	0	0	2	2	2
15:15 15:30	0	1	1	2	1	3	4
Total	1	1	2	8	9	17	19



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOOTH ST @ GLADSTONE AVE

Survey Date: Thursday, March 03, 2022

WO No: 40210

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

BOOTH ST

GLADSTONE AVE

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	1	6	7	6	1	7	14
07:15 07:30	4	2	6	3	2	5	11
07:30 07:45	3	3	6	3	3	6	12
17:45 18:00	10	7	17	4	3	7	24
07:45 08:00	5	4	9	8	3	11	20
08:00 08:15	0	4	4	3	4	7	11
08:15 08:30	6	7	13	5	13	18	31
08:30 08:45	6	4	10	4	11	15	25
08:45 09:00	6	4	10	3	2	5	15
09:00 09:15	1	6	7	2	5	7	14
09:15 09:30	6	4	10	6	1	7	17
09:30 09:45	3	2	5	7	0	7	12
09:45 10:00	2	3	5	11	0	11	16
11:30 11:45	6	2	8	6	1	7	15
11:45 12:00	1	2	3	1	1	2	5
12:15 12:30	6	7	13	7	6	13	26
12:30 12:45	6	5	11	7	2	9	20
12:45 13:00	2	11	13	3	3	6	19
13:00 13:15	3	6	9	6	3	9	18
13:15 13:30	3	4	7	2	3	5	12
15:45 16:00	5	8	13	3	3	6	19
16:00 16:15	7	7	14	6	9	15	29
16:30 16:45	14	5	19	8	9	17	36
16:45 17:00	14	10	24	1	10	11	35
17:00 17:15	6	8	14	8	9	17	31
17:15 17:30	8	7	15	12	3	15	30
17:30 17:45	4	6	10	2	2	4	14
16:15 16:30	15	7	22	8	7	15	37
12:00 12:15	2	8	10	2	3	5	15
15:30 15:45	6	7	13	5	0	5	18
15:00 15:15	3	14	17	4	2	6	23
15:15 15:30	10	9	19	9	2	11	30
Total	174	189	363	165	126	291	654



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOOTH ST @ GLADSTONE AVE

Survey Date: Thursday, March 03, 2022

WO No: 40210

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

BOOTH ST

GLADSTONE AVE

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	1	1	0	2	1	0	0	2	4	0	1	0	5	0	3	0	5	10	7
07:15 07:30	2	1	1	5	0	1	0	2	7	0	5	0	10	0	3	0	9	19	13
07:30 07:45	0	1	0	1	1	0	2	6	7	0	4	0	9	0	3	2	10	19	13
17:45 18:00	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	0	2	4	2
07:45 08:00	0	1	0	1	0	0	0	2	3	0	7	0	9	0	2	1	10	19	11
08:00 08:15	0	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	3	6	3
08:15 08:30	0	3	1	5	0	1	0	6	11	1	4	0	12	0	7	1	13	25	18
08:30 08:45	5	2	0	7	1	0	0	6	13	3	6	0	16	0	2	0	9	25	19
08:45 09:00	1	3	2	6	0	0	0	3	9	0	5	0	9	0	3	0	10	19	14
09:00 09:15	3	5	0	10	0	1	1	7	17	0	5	1	16	0	6	0	11	27	22
09:15 09:30	1	3	1	7	0	1	1	6	13	1	4	1	10	0	2	0	7	17	15
09:30 09:45	3	1	1	5	3	0	0	5	10	1	5	0	12	0	3	0	12	24	17
09:45 10:00	2	3	1	7	1	1	0	5	12	0	7	0	14	0	5	0	14	28	20
11:30 11:45	3	0	0	3	0	0	1	1	4	0	5	0	16	0	7	0	12	28	16
11:45 12:00	0	0	0	0	0	0	3	4	4	1	3	0	11	0	4	0	7	18	11
12:15 12:30	0	0	0	0	1	0	0	2	2	0	6	0	8	0	2	1	10	18	10
12:30 12:45	0	0	0	2	1	2	0	3	5	0	5	0	10	0	5	0	11	21	13
12:45 13:00	1	0	0	1	0	0	1	1	2	0	1	0	5	0	2	0	3	8	5
13:00 13:15	1	1	0	2	0	0	0	2	4	0	8	0	10	0	1	1	10	20	12
13:15 13:30	0	1	0	2	0	1	0	2	4	0	6	0	12	0	6	0	12	24	14
15:45 16:00	1	1	1	3	1	0	0	2	5	0	3	0	5	0	1	0	6	11	8
16:00 16:15	1	0	0	1	2	0	0	4	5	0	4	0	7	0	2	2	10	17	11
16:30 16:45	0	0	0	0	0	0	0	0	0	0	4	0	6	0	2	0	6	12	6
16:45 17:00	0	0	0	0	1	0	1	2	2	0	5	0	8	0	2	0	8	16	9
17:00 17:15	0	0	0	0	0	0	0	0	0	0	1	0	4	0	3	0	4	8	4
17:15 17:30	0	0	0	0	0	0	1	1	1	0	3	0	7	0	3	0	6	13	7
17:30 17:45	1	1	1	3	0	0	0	1	4	0	9	0	13	0	3	0	13	26	15
16:15 16:30	0	0	0	0	0	0	0	1	1	1	4	0	7	0	2	0	6	13	7
12:00 12:15	0	1	0	1	1	0	0	2	3	0	0	0	3	0	3	0	4	7	5
15:30 15:45	0	0	0	1	1	1	1	3	4	0	1	0	7	0	5	0	7	14	9
15:00 15:15	1	1	0	3	0	0	0	1	4	0	2	0	5	1	2	0	5	10	7
15:15 15:30	0	0	0	3	1	3	0	4	7	0	5	0	9	0	4	0	10	19	13
Total: None	27	30	9	81	16	12	12	86	167	8	132	2	280	1	99	8	265	545	356



Transportation Services - Traffic Services

Turning Movement Count - Study Results

BOOTH ST @ GLADSTONE AVE

Survey Date: Thursday, March 03, 2022

WO No: 40210

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

BOOTH ST

GLADSTONE AVE

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
17:45	18:00	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	2	0	0	0	2
08:30	08:45	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:00	09:15	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
09:45	10:00	0	0	0	0	0
11:30	11:45	0	0	0	0	0
11:45	12:00	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:30	16:45	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
17:30	17:45	0	0	0	0	0
16:15	16:30	0	0	0	0	0
12:00	12:15	0	0	0	0	0
15:30	15:45	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
Total		2	0	0	0	2

Turning Movement Count - Study Results

GLADSTONE AVE @ ROCHESTER ST

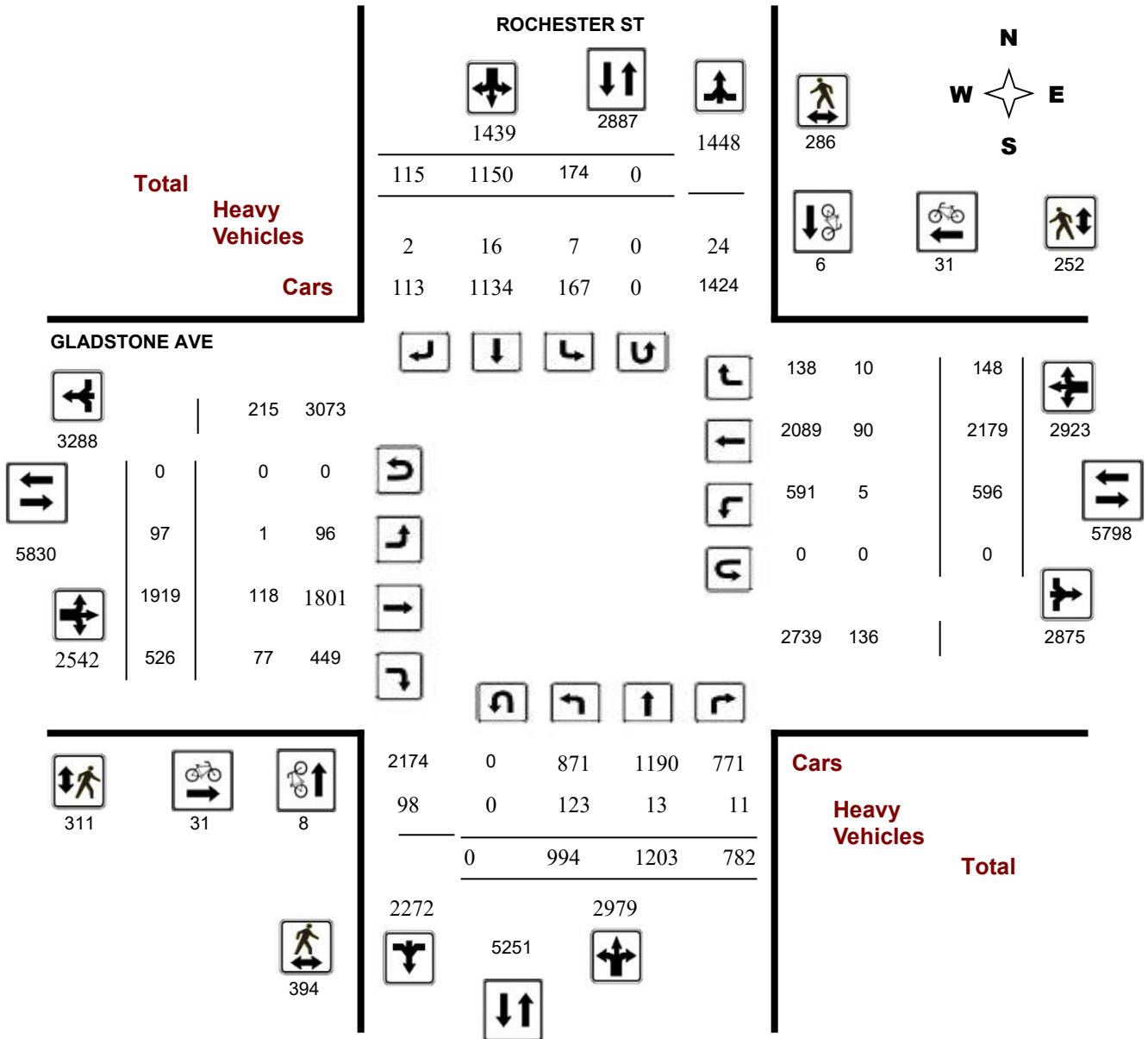
Survey Date: Wednesday, November 23, 2016

WO No: 36537

Start Time: 07:00

Device: Miovision

Full Study Diagram



Turning Movement Count - Study Results

GLADSTONE AVE @ ROCHESTER ST

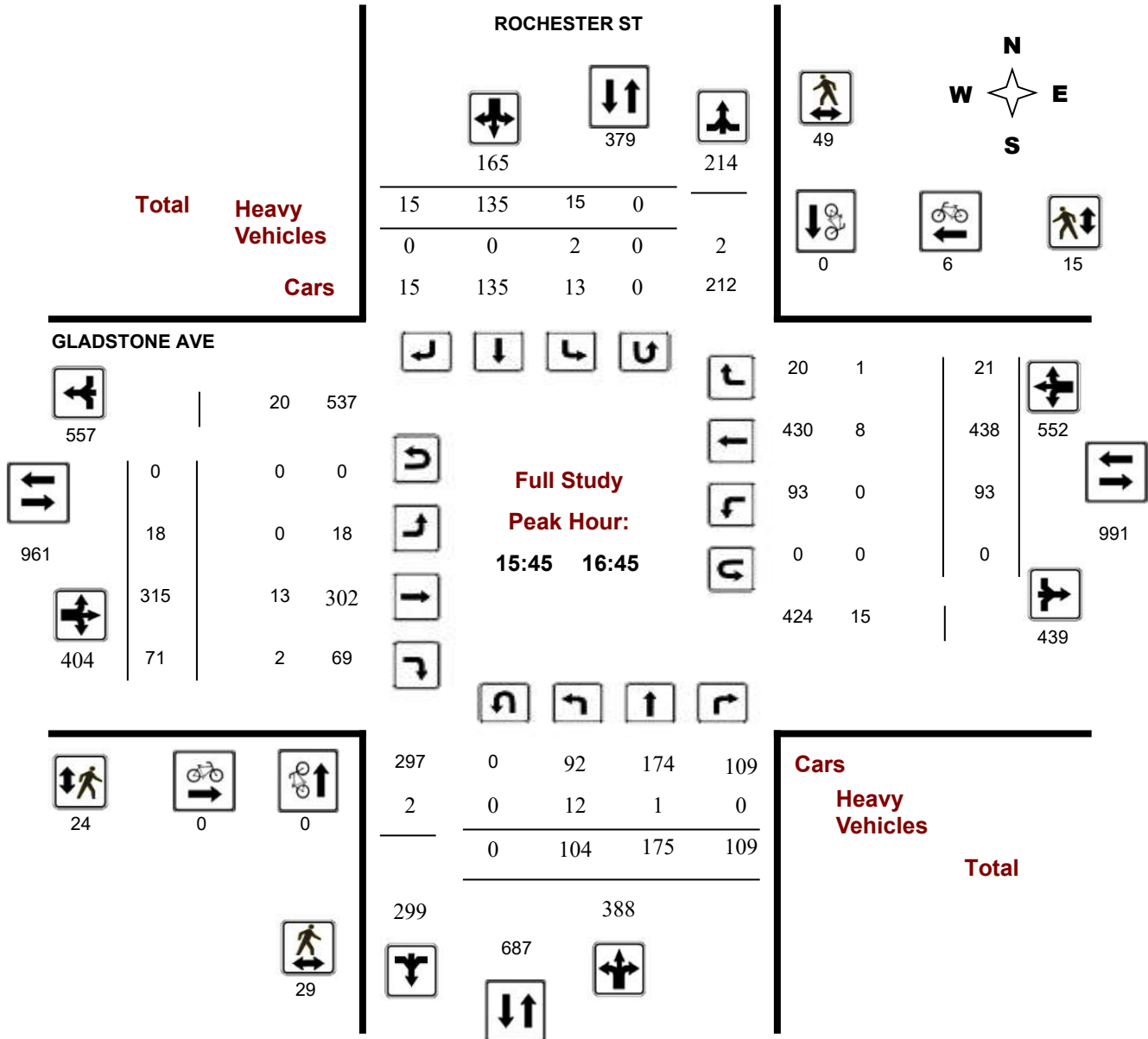
Survey Date: Wednesday, November 23, 2016

WO No: 36537

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram





Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

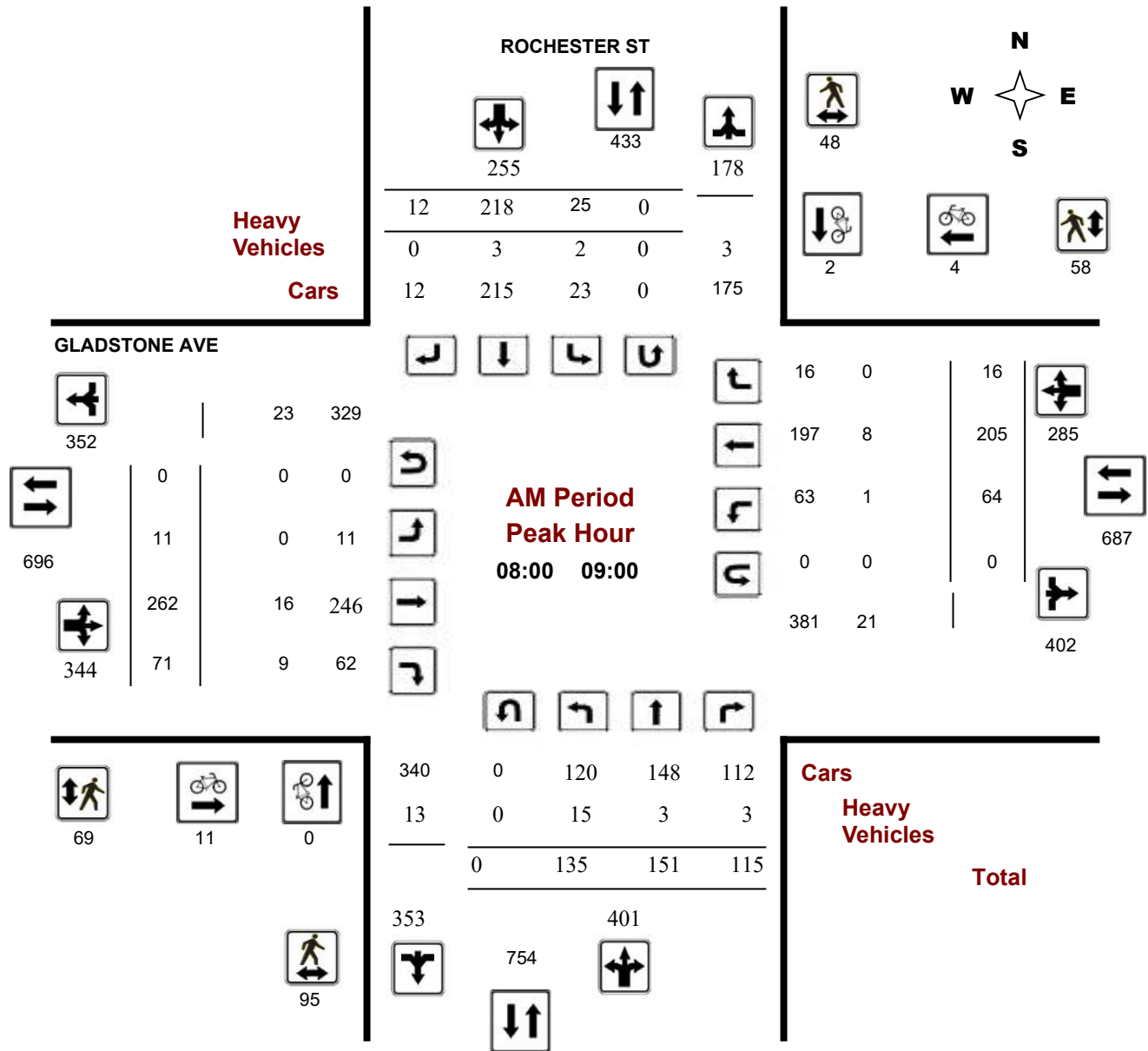
GLADSTONE AVE @ ROCHESTER ST

Survey Date: Wednesday, November 23, 2016

Start Time: 07:00

WO No: 36537

Device: Miovision



Comments

Turning Movement Count - Peak Hour Diagram

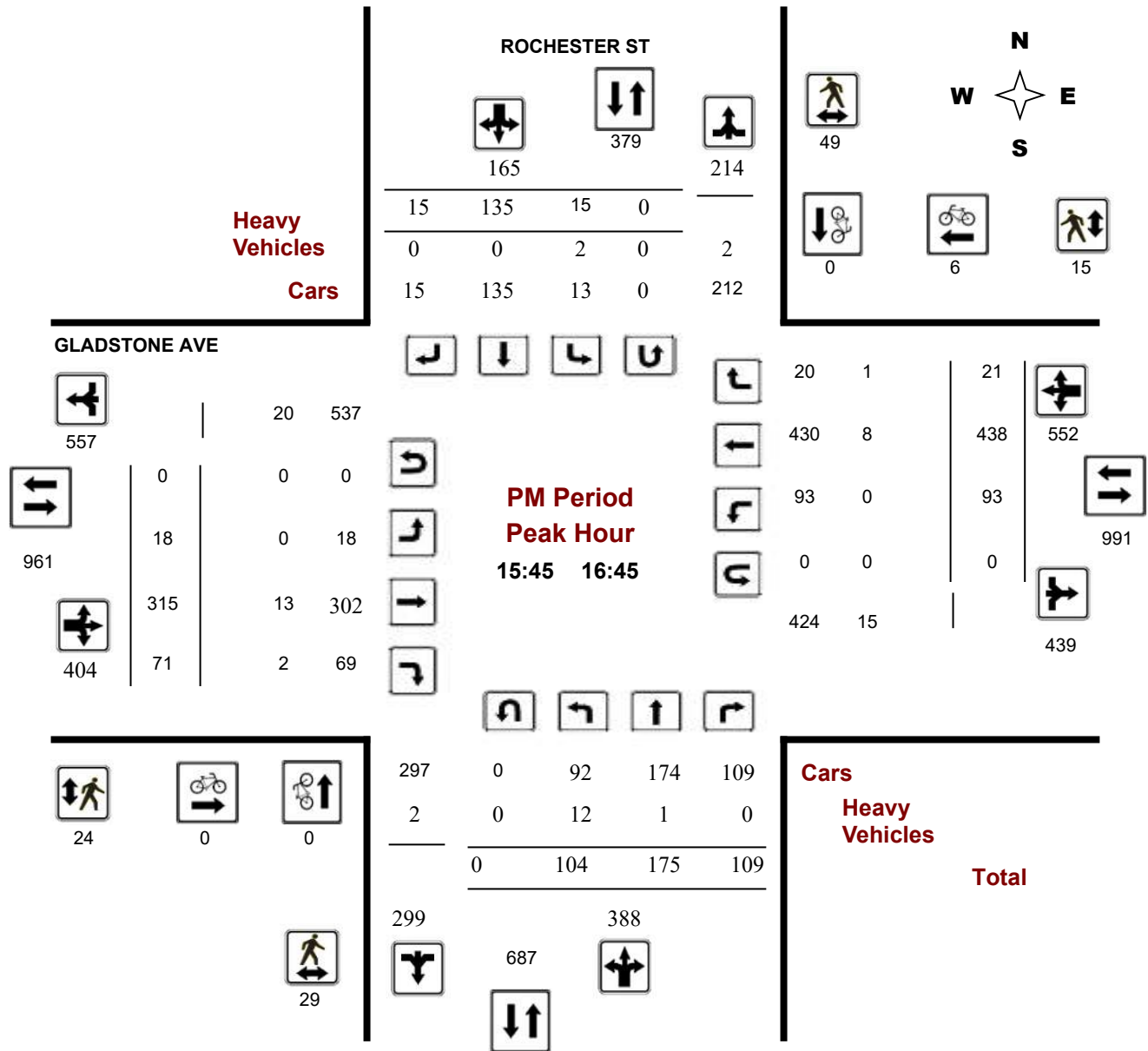
GLADSTONE AVE @ ROCHESTER ST

Survey Date: Wednesday, November 23, 2016

Start Time: 07:00

WO No: 36537

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Study Results

GLADSTONE AVE @ ROCHESTER ST

Survey Date: Wednesday, November 23, 2016

WO No: 36537

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Wednesday, November 23, 2016

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

AADT Factor

.90

ROCHESTER ST

GLADSTONE AVE

Period	Northbound				Southbound				STR TOT	Eastbound				Westbound				WB TOT	STR TOT	Grand Total
	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT		LT	ST	RT	EB TOT	LT	ST	RT	WT TOT			
07:00 08:00	128	91	67	286	16	137	7	160	446	2	189	63	254	59	137	11	207	461	907	
08:00 09:00	135	151	115	401	25	218	12	255	656	11	262	71	344	64	205	16	285	629	1285	
09:00 10:00	121	128	78	327	16	117	14	147	474	20	227	59	306	71	186	16	273	579	1053	
11:30 12:30	138	128	95	361	27	125	21	173	534	11	220	80	311	53	206	25	284	595	1129	
12:30 13:30	103	137	97	337	38	131	12	181	518	16	232	68	316	77	243	20	340	656	1174	
15:00 16:00	132	185	103	420	18	157	14	189	609	10	270	69	349	96	329	20	445	794	1403	
16:00 17:00	108	188	111	407	14	145	17	176	583	17	272	74	363	95	435	17	547	910	1493	
17:00 18:00	129	195	116	440	20	120	18	158	598	10	247	42	299	81	438	23	542	841	1439	
Sub Total	994	1203	782	2979	174	1150	115	1439	4418	97	1919	526	2542	596	2179	148	2923	5465	9883	
U Turns	0				0				0	0				0				0	0	0
Total	994	1203	782	2979	174	1150	115	1439	4418	97	1919	526	2542	596	2179	148	2923	5465	9883	

EQ 12Hr 1382 1672 1087 4141 242 1598 160 2000 6141 135 2667 731 3533 828 3029 206 4063 7596 13737

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

1.39

AVG 12Hr 1244 1505 978 3727 218 1885 188 1800 5527 122 2400 658 3180 745 2726 185 3657 6836 12363

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

.90

AVG 24Hr 1630 1972 1281 4882 286 2469 246 2358 7240 160 3144 862 4166 976 3571 242 4791 8955 16196

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

GLADSTONE AVE @ ROCHESTER ST

Survey Date: Wednesday, November 23, 2016

WO No: 36537

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

ROCHESTER ST

GLADSTONE AVE

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	28	21	12	61	5	38	0	43	196	0	36	17	53	11	24	5	40	196	197
07:15 07:30	26	21	13	60	2	21	2	25	159	0	47	17	64	13	41	2	56	159	205
07:30 07:45	26	19	17	62	1	41	1	43	199	1	38	14	53	17	32	2	51	199	209
11:30 11:45	31	29	27	87	4	34	10	48	250	2	55	26	83	14	55	10	79	250	297
12:15 12:30	30	29	24	83	8	34	2	44	221	2	52	14	68	10	48	5	63	221	258
12:30 12:45	28	25	22	75	6	26	1	33	201	4	52	20	76	11	76	7	94	201	278
07:45 08:00	48	30	25	103	8	37	4	49	255	1	68	15	84	18	40	2	60	255	296
09:00 09:15	42	34	21	97	4	41	2	47	260	6	57	16	79	15	46	4	65	260	288
08:00 08:15	37	30	21	88	7	46	1	54	252	1	63	12	76	20	53	1	74	252	292
08:15 08:30	31	32	24	87	11	53	4	68	267	1	72	9	82	12	49	5	66	267	303
08:30 08:45	31	45	36	112	4	66	4	74	361	5	72	30	107	23	44	6	73	361	366
11:45 12:00	41	42	25	108	2	27	8	37	254	4	54	16	74	15	49	5	69	254	288
08:45 09:00	36	44	34	114	3	53	3	59	307	4	55	20	79	9	59	4	72	307	324
09:45 10:00	21	28	25	74	4	21	4	29	195	4	52	13	69	18	48	8	74	195	246
09:15 09:30	36	38	13	87	2	23	5	30	215	3	67	12	82	22	52	0	74	215	273
09:30 09:45	22	28	19	69	6	32	3	41	215	7	51	18	76	16	40	4	60	215	246
12:00 12:15	36	28	19	83	13	30	1	44	231	3	59	24	86	14	54	5	73	231	286
12:45 13:00	24	37	21	82	13	34	4	51	247	3	60	15	78	21	46	4	71	247	282
13:00 13:15	24	38	28	90	7	44	2	53	274	4	47	15	66	26	60	4	90	274	299
15:00 15:15	30	50	29	109	5	42	3	50	299	3	67	23	93	19	68	3	90	299	342
15:15 15:30	37	52	28	117	4	49	4	57	317	1	50	13	64	25	70	3	98	317	336
16:15 16:30	23	44	23	90	2	34	3	39	249	7	87	10	104	21	102	4	127	249	360
17:00 17:15	28	49	36	113	3	34	4	41	286	4	69	16	89	26	114	3	143	286	386
17:15 17:30	36	60	29	125	4	29	4	37	296	1	67	16	84	21	99	7	127	296	373
16:45 17:00	30	49	26	105	5	39	5	49	289	4	52	18	74	22	104	3	129	289	357
17:45 18:00	36	45	21	102	7	26	4	37	244	1	37	6	44	15	104	12	131	244	314
13:15 13:30	27	37	26	90	12	27	5	44	245	5	73	18	96	19	61	5	85	245	315
15:30 15:45	39	47	22	108	3	37	4	44	294	1	58	18	77	32	84	7	123	294	352
17:30 17:45	29	41	30	100	6	31	6	43	243	4	74	4	82	19	121	1	141	243	366
15:45 16:00	26	36	24	86	6	29	3	38	236	5	95	15	115	20	107	7	134	236	373
16:00 16:15	23	45	32	100	2	41	4	47	301	2	68	27	97	32	120	7	159	301	403
16:30 16:45	32	50	30	112	5	31	5	41	280	4	65	19	88	20	109	3	132	280	373
Total:	994	1203	782	2979	174	1150	115	1439	8138	97	1919	526	2542	596	2179	148	2923	8138	9,883

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

GLADSTONE AVE @ ROCHESTER ST

Survey Date: Wednesday, November 23, 2016

WO No: 36537

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

		ROCHESTER ST			GLADSTONE AVE			
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	1	0	1	0	1	1	2
07:30	07:45	0	0	0	2	0	2	2
11:30	11:45	0	0	0	0	0	0	0
12:15	12:30	0	0	0	1	1	2	2
12:30	12:45	2	0	2	1	0	1	3
07:45	08:00	0	1	1	2	1	3	4
09:00	09:15	0	1	1	1	0	1	2
08:00	08:15	0	0	0	3	0	3	3
08:15	08:30	0	0	0	2	1	3	3
08:30	08:45	0	0	0	4	2	6	6
11:45	12:00	0	0	0	1	2	3	3
08:45	09:00	0	2	2	2	1	3	5
09:45	10:00	0	0	0	0	1	1	1
09:15	09:30	1	0	1	2	3	5	6
09:30	09:45	0	0	0	0	0	0	0
12:00	12:15	1	0	1	1	0	1	2
12:45	13:00	1	0	1	1	0	1	2
13:00	13:15	0	1	1	0	1	1	2
15:00	15:15	0	0	0	0	0	0	0
15:15	15:30	0	0	0	0	1	1	1
16:15	16:30	0	0	0	0	2	2	2
17:00	17:15	0	0	0	0	5	5	5
17:15	17:30	1	0	1	1	0	1	2
16:45	17:00	0	1	1	1	1	2	3
17:45	18:00	0	0	0	3	3	6	6
13:15	13:30	0	0	0	3	0	3	3
15:30	15:45	0	0	0	0	1	1	1
17:30	17:45	1	0	1	0	0	0	1
15:45	16:00	0	0	0	0	1	1	1
16:00	16:15	0	0	0	0	1	1	1
16:30	16:45	0	0	0	0	2	2	2
Total		8	6	14	31	31	62	76



Transportation Services - Traffic Services

Turning Movement Count - Study Results

GLADSTONE AVE @ ROCHESTER ST

Survey Date: Wednesday, November 23, 2016

WO No: 36537

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

ROCHESTER ST

GLADSTONE AVE

Time Period	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)	Total	EB Approach (N or S Crossing)	WB Approach (N or S Crossing)	Total	Grand Total
07:00 07:15	4	3	7	1	2	3	10
07:15 07:30	4	5	9	4	6	10	19
07:30 07:45	6	10	16	12	6	18	34
11:30 11:45	11	3	14	7	5	12	26
12:15 12:30	12	14	26	19	8	27	53
12:30 12:45	12	3	15	12	3	15	30
07:45 08:00	6	2	8	6	4	10	18
09:00 09:15	24	8	32	8	11	19	51
08:00 08:15	37	9	46	15	30	45	91
08:15 08:30	13	7	20	14	5	19	39
08:30 08:45	26	26	52	32	14	46	98
11:45 12:00	24	8	32	12	19	31	63
08:45 09:00	19	6	25	8	9	17	42
09:45 10:00	22	10	32	23	16	39	71
09:15 09:30	18	4	22	12	12	24	46
09:30 09:45	6	6	12	14	6	20	32
12:00 12:15	7	8	15	10	3	13	28
12:45 13:00	10	8	18	3	10	13	31
13:00 13:15	14	12	26	11	14	25	51
15:00 15:15	5	8	13	8	4	12	25
15:15 15:30	9	6	15	15	7	22	37
16:15 16:30	12	17	29	6	6	12	41
17:00 17:15	6	8	14	4	2	6	20
17:15 17:30	5	10	15	5	8	13	28
16:45 17:00	12	12	24	4	6	10	34
17:45 18:00	21	8	29	7	7	14	43
13:15 13:30	20	13	33	14	13	27	60
15:30 15:45	4	11	15	4	1	5	20
17:30 17:45	8	9	17	3	6	9	26
15:45 16:00	5	12	17	2	2	4	21
16:00 16:15	8	7	15	6	1	7	22
16:30 16:45	4	13	17	10	6	16	33
Total	394	286	680	311	252	563	1243



Transportation Services - Traffic Services

Turning Movement Count - Study Results

GLADSTONE AVE @ ROCHESTER ST

Survey Date: Wednesday, November 23, 2016

WO No: 36537

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

ROCHESTER ST

GLADSTONE AVE

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	2	0	0	6	1	1	0	3	9	0	4	3	11	0	2	1	8	19	14
07:15 07:30	2	0	0	7	0	1	0	1	8	0	5	4	17	0	6	0	11	28	18
07:30 07:45	1	0	1	6	0	2	0	5	11	1	3	2	9	0	2	2	8	17	14
11:30 11:45	6	0	0	10	0	1	0	1	11	0	5	3	20	0	6	0	11	31	21
12:15 12:30	3	0	0	5	0	0	1	1	6	0	6	2	15	0	3	0	9	24	15
12:30 12:45	4	0	0	9	0	0	0	0	9	0	4	5	17	0	4	0	8	25	17
07:45 08:00	6	2	0	15	0	1	0	3	18	0	4	6	17	0	1	0	5	22	20
09:00 09:15	7	0	0	12	0	0	0	0	12	0	5	5	19	0	2	0	7	26	19
08:00 08:15	1	1	0	9	0	3	0	4	13	0	6	3	14	1	4	0	11	25	19
08:15 08:30	4	2	2	9	2	0	0	4	13	0	6	1	12	0	1	0	11	23	18
08:30 08:45	6	0	0	8	0	0	0	0	8	0	1	2	11	0	2	0	3	14	11
11:45 12:00	3	1	1	10	0	1	0	3	13	0	4	3	11	1	1	1	8	19	16
08:45 09:00	4	0	1	8	0	0	0	0	8	0	3	3	11	0	1	0	5	16	12
09:45 10:00	1	0	0	2	0	0	0	1	3	0	2	1	5	0	1	1	4	9	6
09:15 09:30	7	2	1	15	0	0	0	2	17	0	4	5	21	0	5	0	10	31	24
09:30 09:45	4	0	0	16	0	0	0	0	16	0	6	10	22	2	2	0	10	32	24
12:00 12:15	5	0	1	8	0	1	0	2	10	0	5	1	13	0	2	1	9	22	16
12:45 13:00	1	0	0	2	0	0	0	0	2	0	4	1	11	0	5	0	9	20	11
13:00 13:15	4	2	2	14	0	1	0	4	18	0	5	5	22	0	8	1	16	38	28
15:00 15:15	7	0	0	9	0	0	0	0	9	0	3	2	17	0	5	0	8	25	17
15:15 15:30	6	1	1	9	0	0	0	1	10	0	5	1	15	0	3	0	9	24	17
16:15 16:30	3	1	0	4	1	0	0	2	6	0	2	0	7	0	2	0	5	12	9
17:00 17:15	3	1	0	8	0	0	0	2	10	0	2	4	10	0	1	1	4	14	12
17:15 17:30	3	0	0	4	0	0	0	0	4	0	2	1	12	0	6	0	8	20	12
16:45 17:00	4	0	1	8	1	2	0	3	11	0	2	1	11	0	4	0	8	19	15
17:45 18:00	2	0	0	3	0	1	0	1	4	0	0	0	3	0	1	0	1	4	4
13:15 13:30	7	0	0	9	1	1	0	2	11	0	5	0	14	1	2	0	9	23	17
15:30 15:45	8	0	0	9	0	0	1	2	11	0	2	1	14	0	2	1	5	19	15
17:30 17:45	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	2	4	2
15:45 16:00	3	0	0	5	0	0	0	0	5	0	4	2	12	0	3	0	7	19	12
16:00 16:15	2	0	0	2	1	0	0	2	4	0	2	0	5	0	1	1	5	10	7
16:30 16:45	4	0	0	4	0	0	0	0	4	0	5	0	11	0	2	0	7	18	11
Total: None	123	13	11	245	7	16	2	49	294	1	118	77	411	5	90	10	241	652	473



Transportation Services - Traffic Services

Turning Movement Count - Study Results

GLADSTONE AVE @ ROCHESTER ST

Survey Date: Wednesday, November 23, 2016

WO No: 36537

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

ROCHESTER ST

GLADSTONE AVE

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
11:30	11:45	0	0	0	0	0
12:15	12:30	0	0	0	0	0
12:30	12:45	0	0	0	0	0
07:45	08:00	0	0	0	0	0
09:00	09:15	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
11:45	12:00	0	0	0	0	0
08:45	09:00	0	0	0	0	0
09:45	10:00	0	0	0	0	0
09:15	09:30	0	0	0	0	0
09:30	09:45	0	0	0	0	0
12:00	12:15	0	0	0	0	0
12:45	13:00	0	0	0	0	0
13:00	13:15	0	0	0	0	0
15:00	15:15	0	0	0	0	0
15:15	15:30	0	0	0	0	0
16:15	16:30	0	0	0	0	0
17:00	17:15	0	0	0	0	0
17:15	17:30	0	0	0	0	0
16:45	17:00	0	0	0	0	0
17:45	18:00	0	0	0	0	0
13:15	13:30	0	0	0	0	0
15:30	15:45	0	0	0	0	0
17:30	17:45	0	0	0	0	0
15:45	16:00	0	0	0	0	0
16:00	16:15	0	0	0	0	0
16:30	16:45	0	0	0	0	0
Total		0	0	0	0	0

DRAFT

Appendix B

Collision Data

Total Area

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total
03 - P.D. only	0	14	7	5	9	0	2	2	39
02 - Non-fatal injury	0	5	1	0	4	0	3	1	14
01 - Fatal injury	0	0	0	0	0	0	0	0	0
Total	0	19	8	5	13	0	5	3	53
	#7 or 0%	#1 or 36%	#3 or 15%	#4 or 9%	#2 or 25%	#7 or 0%	#4 or 9%	#6 or 6%	

74%
26%
0%
100%

GLADSTONE AVE @ ROCHESTER ST

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2015-2019	24	n/a	1825	n/a

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total
03 - P.D. only	0	6	3	2	3	0	1	0	15
02 - Non-fatal injury	0	3	0	0	2	0	3	1	9
01 - Fatal injury	0	0	0	0	0	0	0	0	0
Total	0	9	3	2	5	0	4	1	24
	0%	38%	13%	8%	21%	0%	17%	4%	

63%
38%
0%
100%

BOOTH ST @ GLADSTONE AVE

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2015-2019	20	n/a	1825	n/a

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total
03 - P.D. only	0	4	4	2	5	0	0	2	17
02 - Non-fatal injury	0	1	0	0	2	0	0	0	3
01 - Fatal injury	0	0	0	0	0	0	0	0	0
Total	0	5	4	2	7	0	0	2	20
	0%	25%	20%	10%	35%	0%	0%	10%	

86%
15%
0%
100%

BALSAM ST @ ROCHESTER ST

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2015-2019	8	n/a	1825	n/a

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total
03 - P.D. only	0	3	0	1	1	0	1	0	6
02 - Non-fatal injury	0	1	1	0	0	0	0	0	2
01 - Fatal injury	0	0	0	0	0	0	0	0	0
Total	0	4	1	1	1	0	1	0	8
	0%	50%	13%	13%	13%	0%	13%	0%	

75%
25%
0%
100%

BALSAM ST @ BOOTH ST

Years	Total # Collisions	24 Hr AADT Veh Volume	Days	Collisions/MEV
2015-2019	1	n/a	1825	n/a

Classification of Accident	01 - Approaching	02 - Angle	03 - Rear end	04 - Sideswipe	05 - Turning movement	06 - SMV unattended vehicle	07 - SMV other	99 - Other	Total
03 - P.D. only	0	1	0	0	0	0	0	0	1
02 - Non-fatal injury	0	0	0	0	0	0	0	0	0
01 - Fatal injury	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	0	0	0	0	1
	0%	100%	0%	0%	0%	0%	0%	0%	

100%
0%
0%
100%



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