

210 Clearview Avenue

Transportation Impact Assessment

Step 1 Screening Report

Step 2 Scoping Report

Step 3 Strategy Report (Rev #2)

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1 Screening

This study has been prepared according to the City of Ottawa's 2017 Transportation Impact Assessment (TIA) Guidelines, incorporating the 2023 Revision to Transportation Impact Assessment Guidelines. Accordingly, a Step 1 Screening Form has been prepared and is included as Appendix A, along with the Certification Form for the TIA Study PM. As shown in the Screening Form, a TIA is required, and this study has been prepared to support site plan application.

2 Existing and Planned Conditions

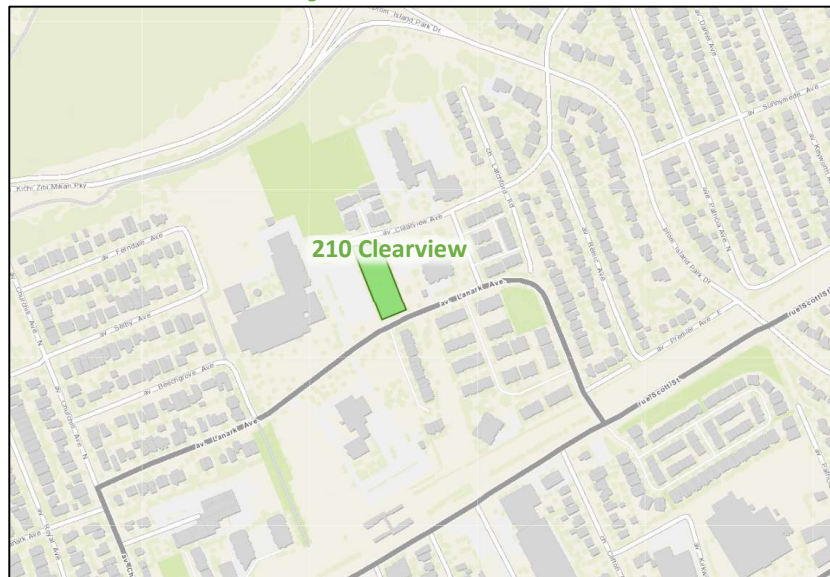
2.1 Proposed Development

The planned redevelopment of 210 Clearview Avenue, located on the existing parking lot adjacent to 200 Clearview Avenue, will consist of a 25-storey tower with a four-storey podium, and a total of 187 apartment units. The two existing accesses to the surface parking lot will be converted to an access to the underground parking from Clearview Avenue and the Lanark Avenue access will be to the loading area. A new loop will be created from the existing drive aisle from 200 Clearview Avenue from Ellendale Crescent to connect to Lanark Avenue at a new access. A total of 228 residential vehicle parking spaces, 18 visitor parking spaces, and 190 bike parking spaces are proposed for the new building. Among these parking spaces, a total of ten vehicle parking spaces and six bicycle parking spaces are proposed to be located on the surface, while the remaining spaces are planned for the underground levels. The anticipated full build-out and occupancy horizon is 2027 with construction occurring in a single phase. The site is zoned as Residential Fifth Density Zone (R5C[2909]S216) and located within the Richmond Road/Westboro secondary plan and Richmond Road/Westboro community design plan areas.

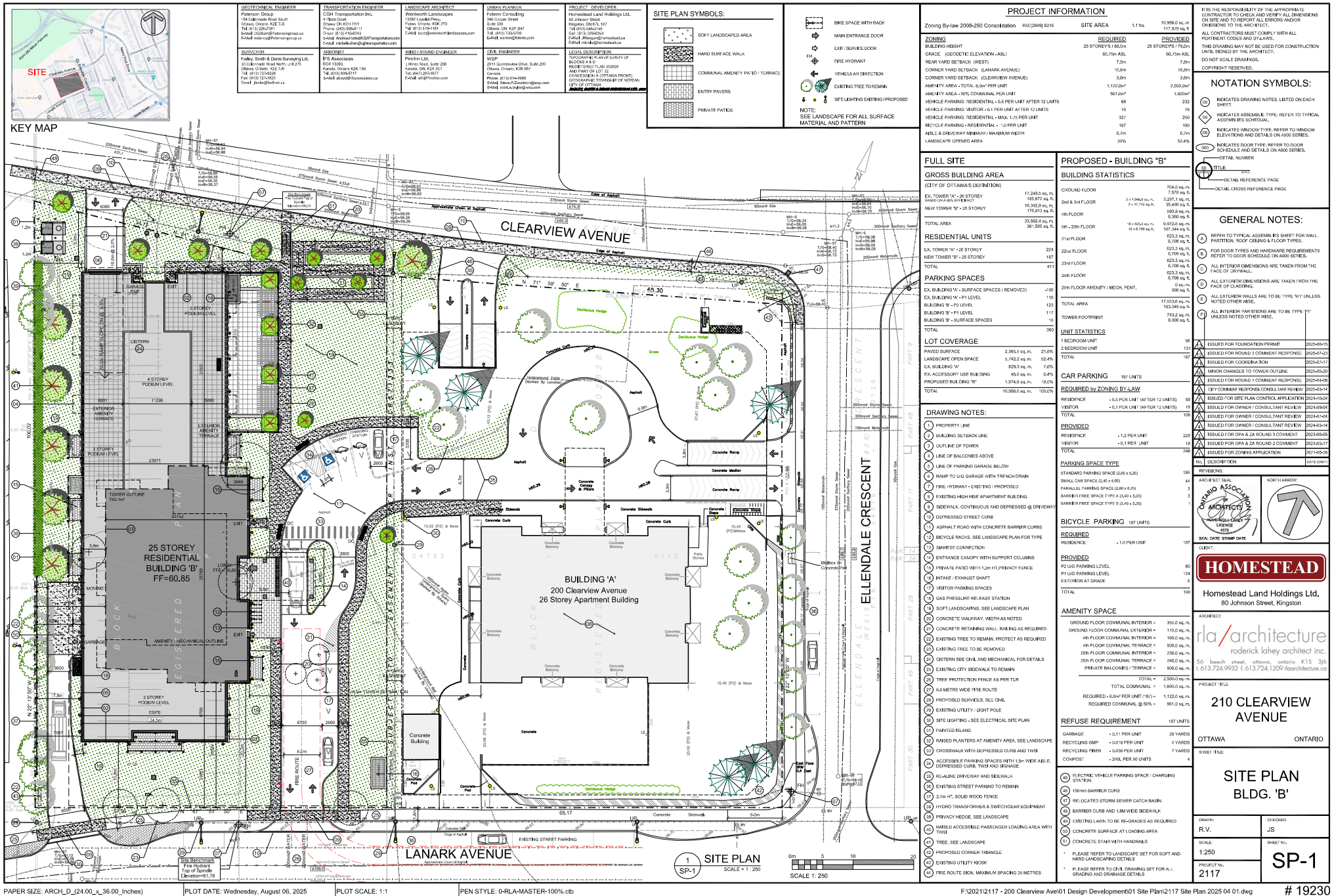
There is an existing 26-storey apartment building consists of a total of 224 residential units and currently provides with 210 parking spaces and may share parking within the new building. As part of the redevelopment, all 100 of the existing surface parking spaces will be removed, with only the 110 parking spaces on P1 level remaining.

Figure 1 illustrates the study area context. Figure 2 illustrates the proposed concept plan.

Figure 1: Area Context Plan



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: August 14, 2024



PAPER SIZE: ARCH_D (24.00 x 36.00 inches)

PLOT DATE: Wednesday, August 06, 2025

PLOT SCALE: 1:1

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1 SITE PLAN
SCALE: 1:250

SCALE: 1:250

F:\2021\2117 - 200 Clearview Ave\01 Design Development\01 Site Plan\2117 Site Plan 2025 04 01.dwg

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2.2 Existing Conditions

2.2.1 Area Road Network

Island Park Drive: Island Park Drive is a federally owned arterial road with a two-lane urban cross-section. Bike lanes and pathways are provided on both sides of the road. The posted speed limit is 40 km/h, and the existing right-of-way within the study area is 30.5 metres. Commercial trucks are prohibited on Island Park Drive.

Kichi Zibi Mikan Parkway (Previous Sir John A. Macdonald Parkway): Kichi Zibi Mikan Parkway is a federally owned arterial road with a divided, four-lane urban cross-section. A pathway is provided on the south side of the roadway within the study area. The posted speed limit is 60km/h east of Island Park Drive and 50 km/h west of Island Park Drive. The existing right-of-way throughout the study area varies along adjacent properties.

Churchill Avenue: Churchill Avenue is a City of Ottawa arterial road with a two-lane urban cross-section south of Scott Street, a collector road between Scott Street and Lanark Avenue, and a local road north of Lanark Avenue. Sidewalks are provided on both sides of the roadway south of Lanark Avenue. The unposted speed limit is 50 km/h. Parking is permitted on the east side of the road north of Scott Street and for a maximum of one hour on both sides of the road south of Scott Street from 7 AM to 7 PM. The existing right-of-way within the study area is 21.0 metres. Churchill Avenue south of Scott Street is designated as a truck route.

Scott Street: Scott Street is a City of Ottawa arterial road with a three-lane urban cross-section, with an eastbound transit lane to the west of Island Park Drive and a continuous left-turn lane to the east of Island Park Drive. An asphalt path marked as a sidewalk and unidirectional cycle track are provided on both sides of the road between Churchill Avenue and Goldenrod Driveway. The posted speed limit is 50 km/h, and the City-protected right-of-way is 26.0 metres. Scott Street is designated as a truck route.

Lanark Avenue: Lanark Avenue is a City of Ottawa collector road with a two-lane urban cross-section. Sidewalks are located on both sides of the roadway. The posted speed limit is 40km/h on school days between 7:00 AM to 9:00 AM and 2:00 PM to 5:00 PM. The existing right-of-way within the study area is 20.5 metres.

Clearview Avenue: Clearview Avenue is a City of Ottawa local road with a two-lane urban cross-section east of Ellendale Crescent and a two-lane rural cross-section west of Ellendale Crescent. Sidewalks are present on both sides of the roadway between Ellendale Crescent and Latchford Road, on the north side of the road between Latchford Road and Island Park Drive, and on both sides east of Island Park Drive. The posted speed limit is 40 km/h, and parking is permitted on the south side of the road west of Ellendale Crescent. The existing right-of-way is 20.0 metres.

2.2.2 Existing Intersections

The existing signalized area key intersections within 400 metres of the site have been summarized below:

<i>Island Park Drive at Kichi Zibi Mikan Parkway</i>	The intersection of Island Park Drive at Kichi Zibi Mikan Parkway is a signalized intersection. Island Park Drive will be considered the north-south roadway. The northbound approach has a through lane, a bike lane, and an auxiliary channelized right-turn lane, and the southbound approach has an auxiliary left-turn lane, a left-turn lane, a through lane, a bike lane, and an auxiliary channelized right-turn lane. The eastbound and the westbound approaches each consist of an auxiliary left-turn lane, two through lanes, and an auxiliary channelized right-turn lane. Northbound left turns are prohibited, and
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an additional westbound right-turn prohibition is included between the channelized right-turn and the intersection.

Island Park Drive at Clearview Avenue

The intersection of Island Park Drive and Clearview Avenue is a stop-controlled intersection on the minor approaches of Clearview Avenue. Island Park Drive will be considered the north-south roadway. The northbound and southbound approaches each consists of a shared all-movement lane and a bike lane. The eastbound and westbound approaches each consists of a shared all-movement lane. The vehicles are prohibited from making westbound right-turn and eastbound left-turn movements during weekdays between 3:30 – 6:00 PM. Bicycles are permitted to make these movements, and authorized vehicles are permitted to make eastbound left-turn movement. Trucks are restricted from accessing the east leg. A pedestrian cross-over is provided across Island Park Drive on the north side of the intersection.

Island Park Drive at Scott Street

The intersection of Island Park Drive at Scott Street is a signalized intersection. The northbound approach consists of a shared all-movement lane, and the southbound approach consists of an auxiliary left-turn lane and a shared through/right-turn lane. The eastbound approach consists of an auxiliary left-turn lane, a through lane, and a shared bus lane/right-turn lane, and the westbound approach consists of an auxiliary left-turn lane, a through lane, and an auxiliary right-turn lane. A bus stop is located in the eastbound auxiliary right-turn lane and a queue-jump style receiving lane is provided on the east side of the intersection to merge transit into the general travel lane. Bike crossrides are provided for all directions.

Lanark Avenue at Scott Street

The intersection of Lanark Avenue at Scott Street is a signalized intersection. The northbound, southbound, and westbound approaches each consists of an auxiliary left-turn lane and a shared through/right-turn lane. The eastbound approach consists of an auxiliary left-turn lane, a through, and a shared bus lane/right-turn lane. No turn restrictions were noted. Bike cross rides are provided for all directions.

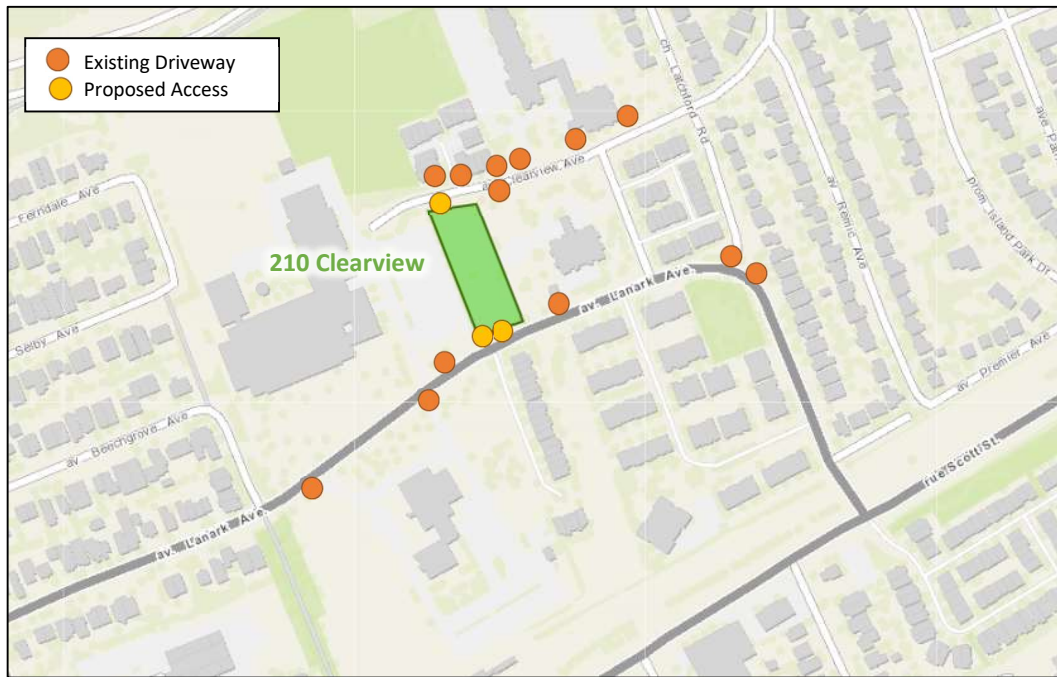
Lanark Avenue at Churchill Avenue

The intersection of Lanark Avenue at Churchill Avenue is an all-way stop-controlled T-intersection. The northbound approach consists of a shared through/right-turn land, and the southbound approach consists of a shared left-turn/through lane. The westbound approach consists of a shared left-turn/right-turn lane. No turn restrictions were noted.

2.2.3 Existing Driveways

Within 200 metres of the site accesses, one driveway to a school, two driveways to an office, one driveway to a high-rise building, and two driveways to two dwelling units are located on Lanark Avenue. Four driveways to three high-rise buildings and three driveways to six townhouses are on Clearview Avenue. Figure 3 illustrates the existing driveways.

Figure 3: Existing Driveways



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: August 16, 2024

2.2.4 Cycling and Pedestrian Facilities

Figure 4 illustrates the pedestrian facilities in the study area and Figure 5 illustrates the cycling facilities.

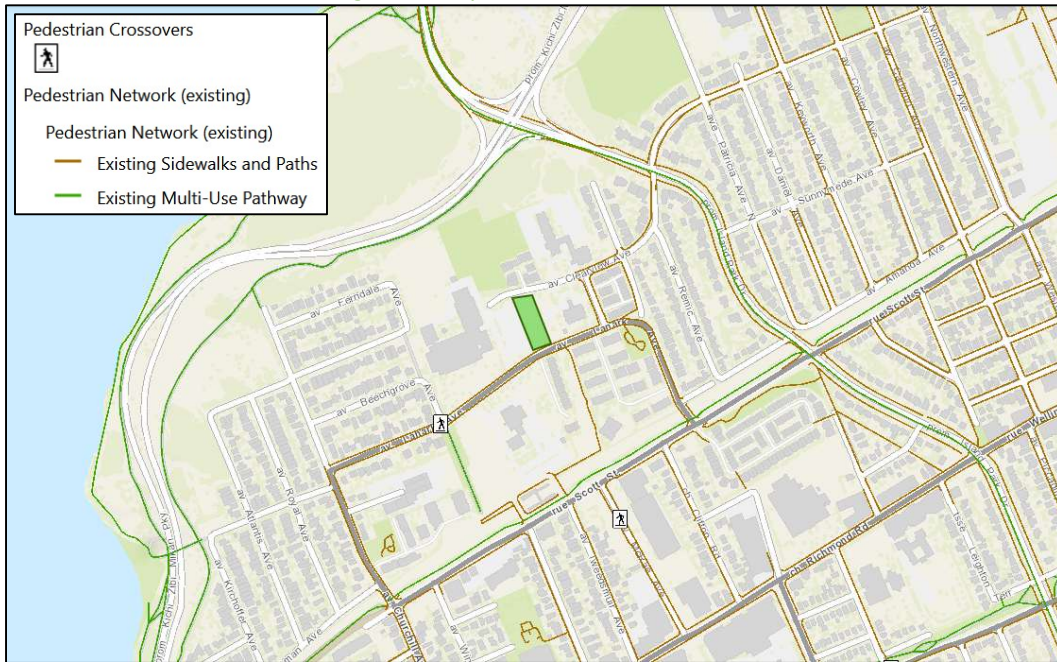
Sidewalks are provided on both sides along Lanark Avenue, Churchill Avenue south of Lanark Avenue, and on the south side along Scott Street. Along Clearview Avenue, sidewalks are presented on both sides between Ellendale Crescent and Latchford Road, on the north side of the road between Latchford Road and Island Park Drive, and on both sides east of Island Park Drive. A pedestrian pathway extends south of Lanark Avenue between the 200 Lanark Avenue and 38 Metropole Private properties, and loops to Westboro Station. Multi use pathways are present on the north side of Scott Street and another connects Lanark Avenue from the Beechgrove Avenue intersection to the Westboro Station.

Pedestrian crossovers are present at the intersections of Beechgrove Avenue at Lanark Avenue and Island Park Drive at Clearview Avenue.

Bike lanes are provided on both sides along Island Park Drive, and Scott Street has a multi-use pathway on the north side and an eastbound cycle track on the south side.

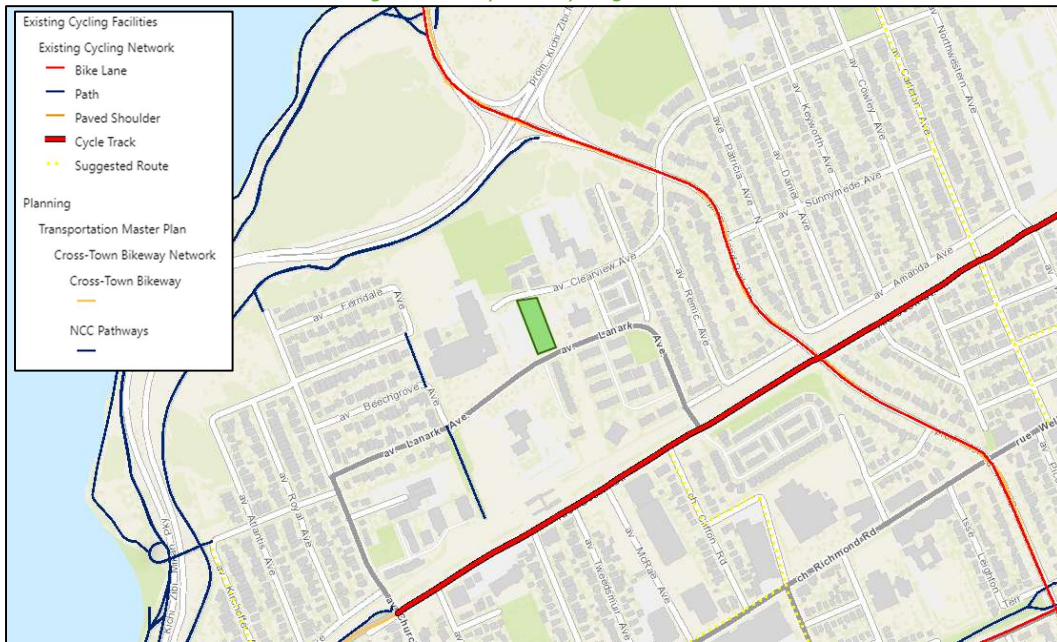
The Transportation Master Plan – Part 1 (2023) identified Island Park Drive and Scott Street as cross-town bikeways and Kichi Zibi Mikan Parkway east of Island Park Drive as NCC Pathway.

Figure 4: Study Area Pedestrian Facilities



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: August 16, 2024

Figure 5: Study Area Cycling Facilities



Source: <http://maps.ottawa.ca/geoOttawa/> Accessed: August 16, 2024

Pedestrian and cyclist volumes included in study area intersection counts, presented in Section 2.2.7, have been compiled and are illustrated in Figure 6 and Figure 7, respectively.

Figure 6: Existing Pedestrian Volumes

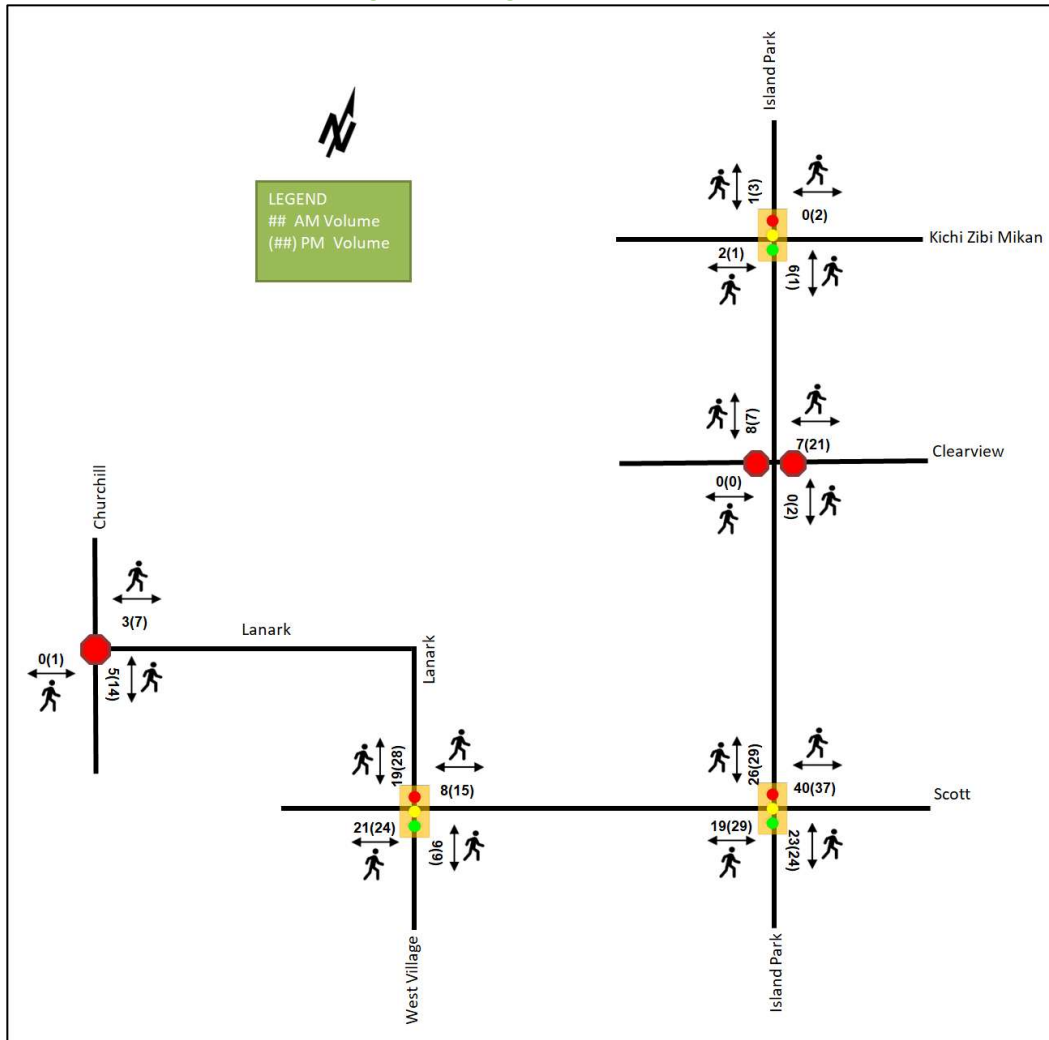
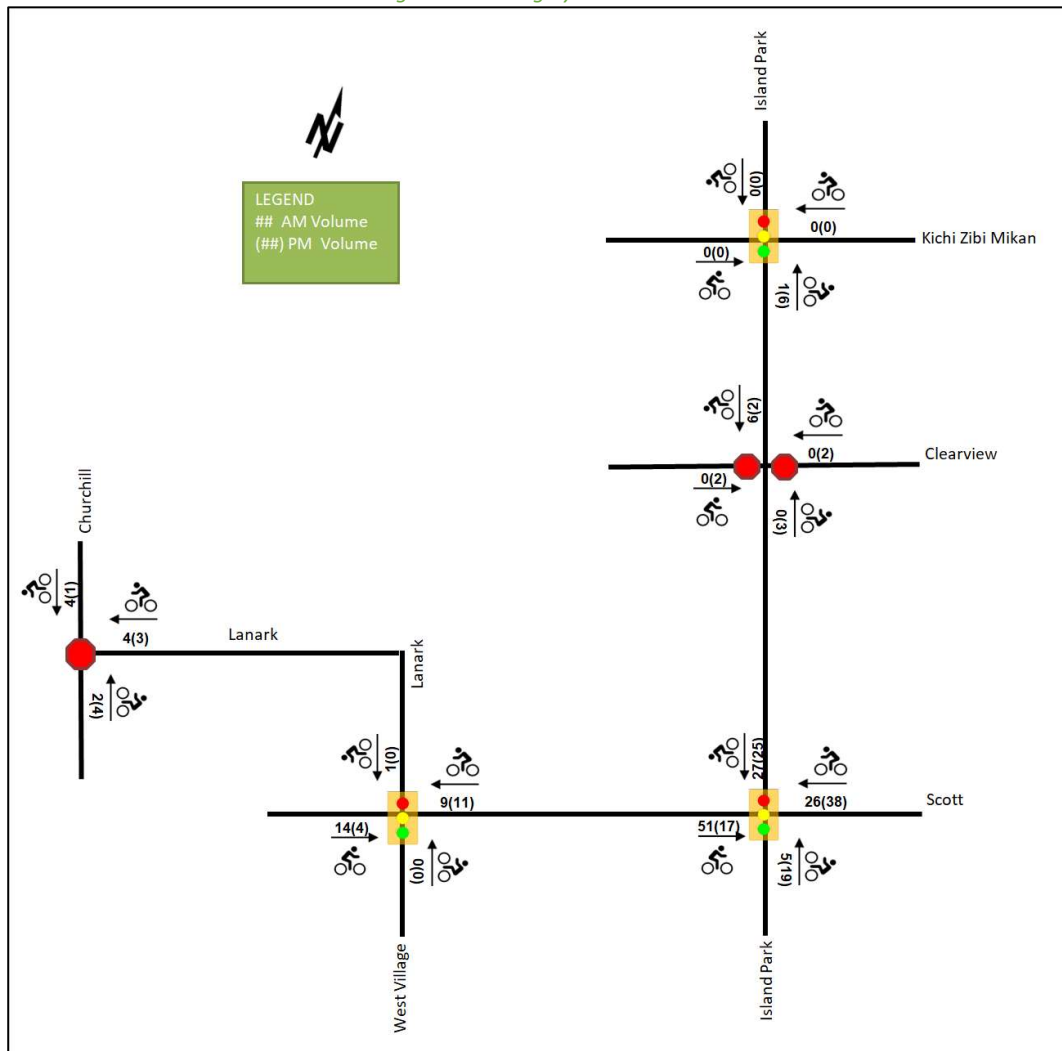


Figure 7: Existing Cyclist Volumes



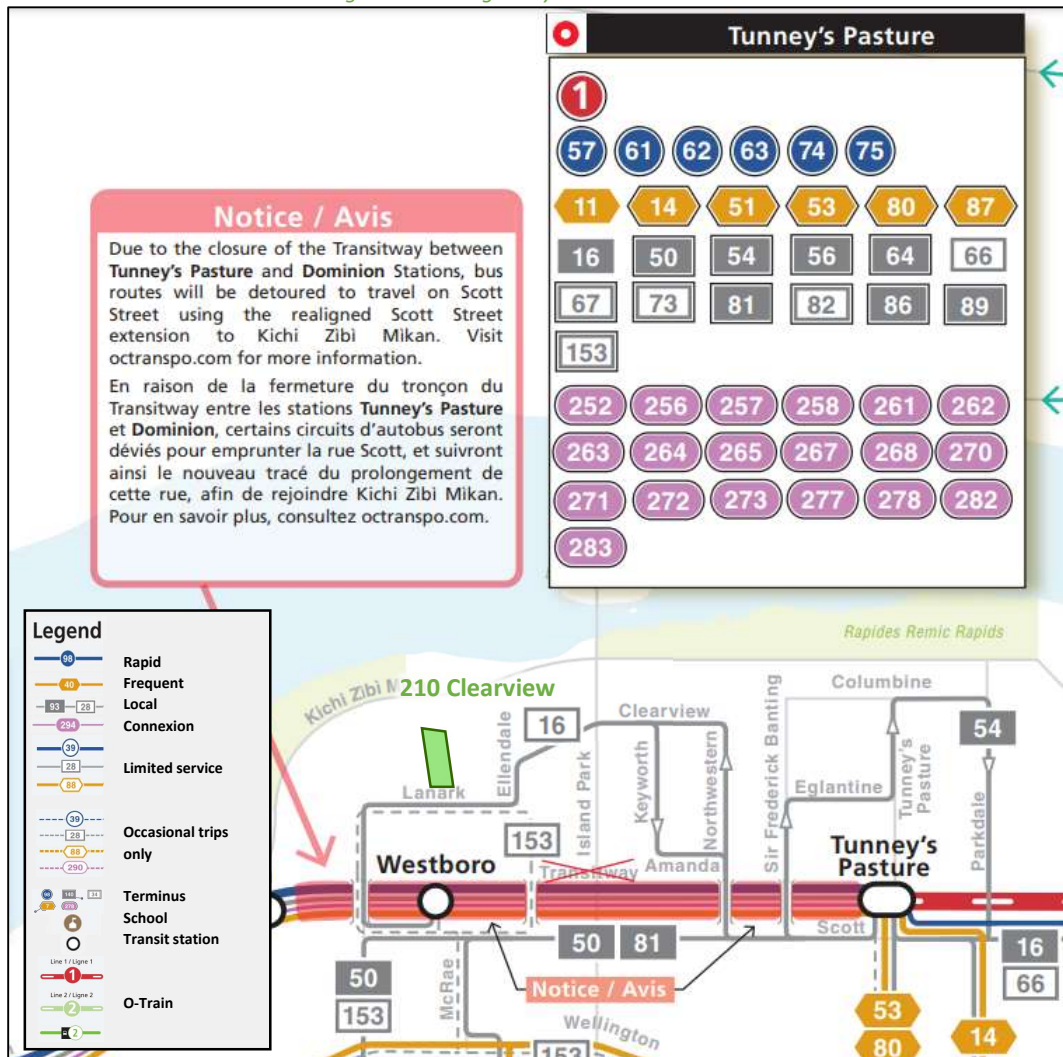
2.2.5 Existing Transit

Figure 8 illustrates the transit system map in the study area and Figure 9 illustrates transit stops within 400-metre radius of the site and transit stations within 800-metre radius of the site. All transit information is from August 16, 2024 and is included for general information purposes and context to the surrounding area.

Within the study area, routes #16 and #153 travel along Lanark Avenue. Nearest stops are located at the intersections of Lanark Avenue at Briarway Private and Lanark Avenue at Champlain. The frequency of these routes within proximity of the proposed site based on August 16, 2024 service levels are:

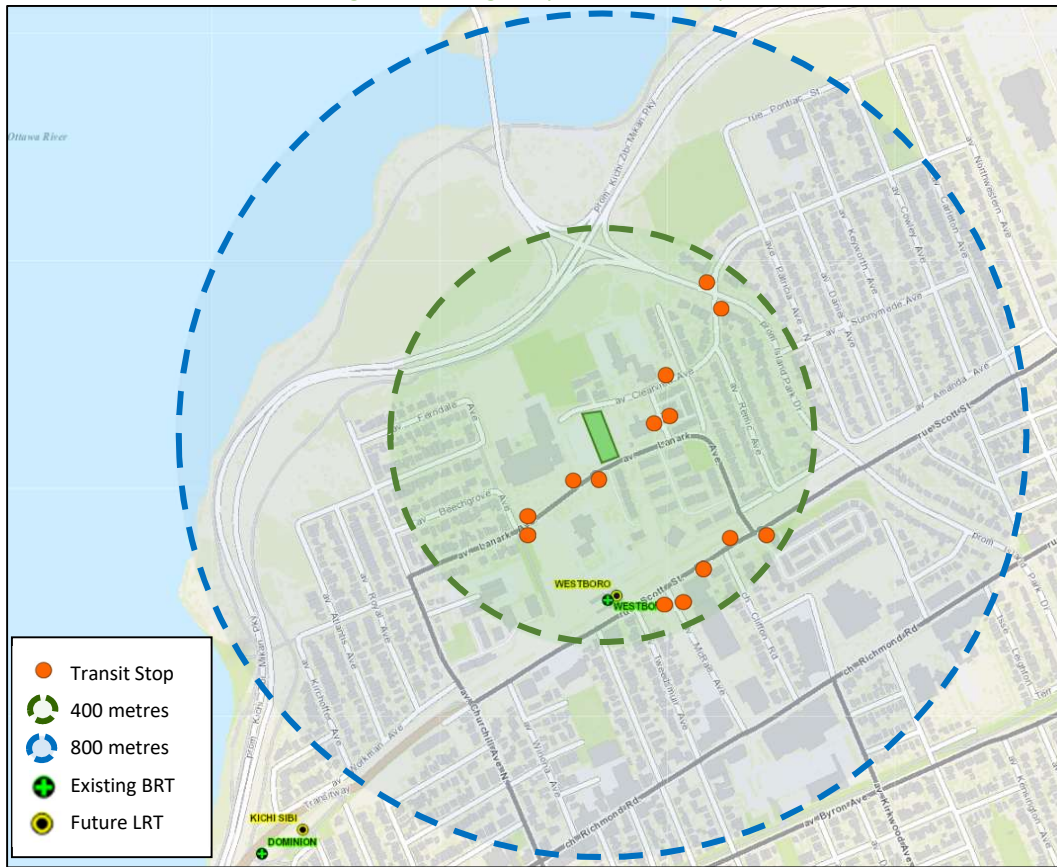
- Route # 16 – 30-minute service all day
- Route # 153 – 2-hour service from 11:00 AM to 7:00 PM

Figure 8: Existing Study Area Transit Service



Source: <http://www.octranspo.com/> Accessed: August 16, 2024

Figure 9: Existing Study Area Transit Stops



Source: <http://www.octranspo.com/> Accessed: August 16, 2024

2.2.6 Existing Area Traffic Management Measures

Bulb-outs are provided along Lanark Avenue, along Churchill Avenue south of Lanark Avenue, and at 1950 Scott Street only along Scott Street.

At the Island Park Drive and Clearview Avenue intersection, the vehicles are prohibited from making westbound right-turn and eastbound left-turn movements during weekdays between 3:30 – 6:00 PM. Bicycles are permitted to make these movements, and authorized vehicles are permitted to make eastbound left-turn movements.

Two speed humps are located along Lanark Avenue north of Scott Street.

2.2.7 Existing Peak Hour Travel Demand

Existing turning movement counts were acquired from the City of Ottawa for the existing study area intersections. Table 1 summarizes the intersection count dates. As City's request, the existing traffic counts are unbalanced in the existing condition, and discrepancies have been noted along Island Park Drive.

Table 1: Intersection Count Date

Intersection	Count Date
Island Park Drive at Kichi Zibi Mikan Parkway	Wednesday, August 21, 2024
Island Park Drive at Clearview Avenue	Tuesday, March 21, 2023
Island Park Drive at Scott Street	Thursday, October 27, 2022
Lanark Avenue at Scott Street	Thursday, November 30, 2023
Lanark Avenue at Churchill Avenue	Thursday, October 24, 2019

Figure 10 illustrates the existing traffic counts and Table 2 summarizes the existing intersection operations. The level of service for signalized intersections is based on volume to capacity ratio (v/c) calculations for individual lane movements and HCM 2000 v/c calculations for the overall intersection, and average delay for unsignalized intersections. Detailed turning movement count data is included in Appendix B and the Synchro worksheets are provided in Appendix C.

Figure 10: Existing Traffic Counts

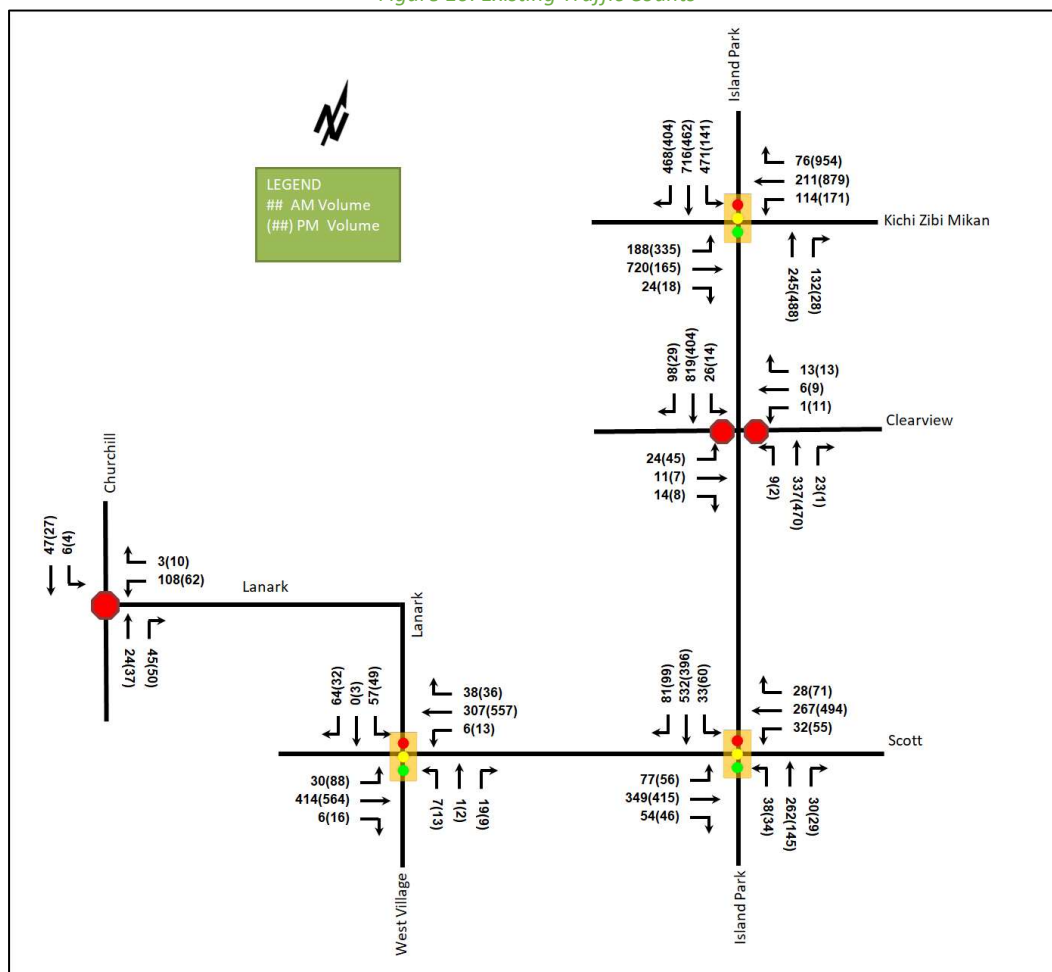


Table 2: Existing Intersection Operations

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Island Park Drive at Kichi Zibi Mikan Parkway Signalized	EBL	F	1.99	511.5	#191.5	F	1.09	138.2	#212.5
	EBT	D	0.82	62.5	#201.4	A	0.16	40.6	33.6
	EBR	A	0.06	0.2	0.0	A	0.04	0.1	0.0
	WBL	F	1.21	213.7	#115.7	A	0.56	69.7	88.4
	WBT	A	0.24	46.9	52.4	D	0.86	62.8	196.9
	WBR	A	0.17	10.1	15.2	F	1.71	355.6	#582.7
	NBT/R	D	0.87	72.1	185.0	F	1.29	194.9	#329.2
	SBL	D	0.81	73.1	120.0	D	0.88	121.4	#50.3
	SBT/R	F	1.50	258.5	#739.1	F	1.65	335.6	#563.6
	Overall	F	1.37	161.7	-	F	1.69	214.5	-

Intersection	Lane	AM Peak Hour				PM Peak Hour			
		LOS	V/C	Delay (s)	Q (95 th)	LOS	V/C	Delay (s)	Q (95 th)
Island Park Drive at Clearview Avenue <i>Unsignalized</i>	EB	F	0.44	55.0	14.3	D	0.33	31.7	10.5
	WB	C	0.10	23.7	2.3	C	0.15	21.7	3.8
	NB	B	0.02	10.4	0.0	A	0.00	8.4	0.0
	SB	A	0.03	8.2	0.8	A	0.02	8.6	0.0
	Overall	A	-	2.5	-	A	-	2.7	-
Island Park Drive at Scott Street <i>Signalized</i>	EBL	A	0.34	24.5	21.1	A	0.34	20.5	m14.0
	EBT	D	0.84	43.2	#114.5	C	0.71	26.3	112.1
	EBR	A	0.12	1.3	0.9	A	0.08	0.5	m0.2
	WBL	A	0.19	26.3	12.5	A	0.25	22.3	17.3
	WBT	B	0.61	33.5	73.0	D	0.86	41.9	#155.2
	WBR	A	0.06	0.2	0.0	A	0.13	4.0	7.3
	NB	A	0.54	18.1	67.0	A	0.42	21.2	48.4
	SBL	A	0.08	11.9	8.2	A	0.15	18.0	16.1
	SBT/R	C	0.76	24.4	139.3	C	0.74	30.1	125.4
	Overall	C	0.79	27.0	-	C	0.80	28.8	-
Lanark Avenue at Scott Street <i>Signalized</i>	EBL	A	0.05	4.1	4.2	A	0.19	5.3	11.1
	EBT/R	A	0.40	5.9	48.8	A	0.52	7.2	75.3
	WBL	A	0.01	1.7	m0.2	A	0.03	4.5	m0.7
	WBT/R	A	0.32	2.2	m13.4	A	0.53	5.2	m38.4
	NBL	A	0.05	35.6	5.3	A	0.09	38.5	8.0
	NBT/R	A	0.11	16.3	6.6	A	0.06	22.2	5.3
	SBL	A	0.40	45.0	22.5	A	0.33	44.3	20.9
	SBT/R	A	0.11	0.4	0.0	A	0.19	16.1	9.6
	Overall	A	0.42	6.9	-	A	0.53	8.1	-
Lanark Avenue at Churchill Avenue <i>Unsignalized</i>	WB	A	0.15	8.2	3.8	A	0.10	7.8	2.3
	NB	A	0.09	7.4	2.3	A	0.10	7.2	2.3
	SB	A	0.07	7.6	1.5	A	0.04	7.4	0.8
	Overall	A	-	7.8	-	A	-	7.5	-

Notes: Saturation flow rate of 1800 veh/h/lane
Queue is measured in metres
Peak Hour Factor = 0.90

Delay = average vehicle delay in seconds
m = metered queue
= volume for the 95th %ile cycle exceeds capacity

During both peak hours, the Island Park Drive at Kichi Zibi Mikan Parkway intersection is over capacity and subject to queuing issues.

At the intersection of Island Park Drive at Kichi Zibi Mikan Parkway, the eastbound through left, westbound left, and southbound shared through/right movements, and overall intersection during the AM peak and eastbound left, westbound right, northbound shared through/right, and southbound shared through/right movements, and overall intersection during the PM peak are over theoretical capacity and may subject to high delays and extended queues. Extended queues may be exhibited on the eastbound through movement during the AM peak and southbound left during the PM peak. High delays are noted on the southbound left during the PM peak.

The delay for eastbound traffic during the AM peak at the intersection of Island Park Drive and Clearview Avenue is noted to be over 50 seconds.

At the intersection of Island Park Drive and Scott Street, extended queues may be exhibited on the eastbound through during the AM peak and westbound share through/right-turn movements during the PM peak. These queues are in the peak direction of travel for these peak hours.

2.2.8 Collision Analysis

Collision data have been acquired from the City of Ottawa open data website (data.ottawa.ca) for five years prior to the commencement of this TIA for the surrounding study area road network. Table 3 summarizes the collision types and conditions in the study area, Figure 11 illustrates the intersections and segments analyzed, and Table 4 summarizes the total collisions for each of these locations. Collision data are included in Appendix D.

Table 3: Study Area Collision Summary, 2018-2022

Total Collisions		Number	%
		4	100%
Classification	Fatality	0	0%
	Non-Fatal Injury	2	50%
	Property Damage Only	2	50%
Initial Impact Type	SMV Unattended	3	75%
	Other	1	25%
Road Surface Condition	Dry	4	100%
Pedestrian Involved		0	0%
Cyclists Involved		0	0%

Figure 11: Study Area Collision Records

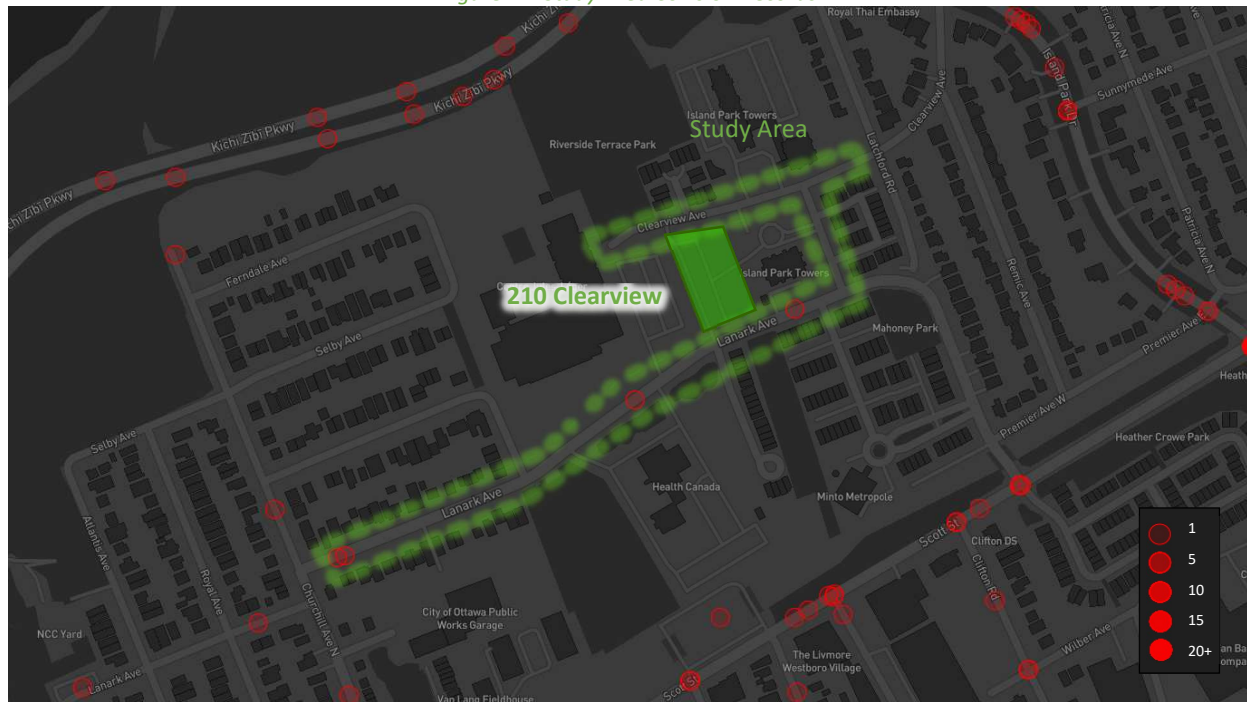


Table 4: Summary of Collision Locations, 2018-2022

Intersections / Segments	Number	%
	4	100%
Lanark Ave btwn Beechgrove Ave & Churchill Ave N	2	50%
Lanark Ave btwn Beechgrove Ave & Briarway Priv	1	25%
Lanark Ave btwn Briarway Priv & Metropole Priv	1	25%

Within the study area, the intersection and segments have a total of four collisions during the 2018-2022 time period with two involving property damage only and two having non-fatal injuries. There are three SMV

Unattended collisions and one other collision type. Due to the low number of collisions in the vicinity of the site, no further collision analysis is required within this study.

2.3 Planned Conditions

2.3.1 Changes to the Area Transportation Network

2.3.1.1 *Richmond Road/Westboro Community Design Plan (CDP)*

The subject development is within the Richmond Road/Westboro Community Design Plan (CDP) Area. The CDP illustrates green street, two-metre sidewalk and dedicated on-road cycle-lanes or signed cycle route on key local streets and informal pedestrian/cycling links connected to transitway station, local parks, community, and Ottawa River to be incorporated into the development as it redevelops or undergoes rehabilitation. The planned multi-use pathway runs through the Jules-Léger Centre property adjacent to the site. A multi-use pathway connection is provided between Westboro Station and the Kichi Zibi Mikan.

2.3.1.2 *Confederation Line West Extension - Westboro Station*

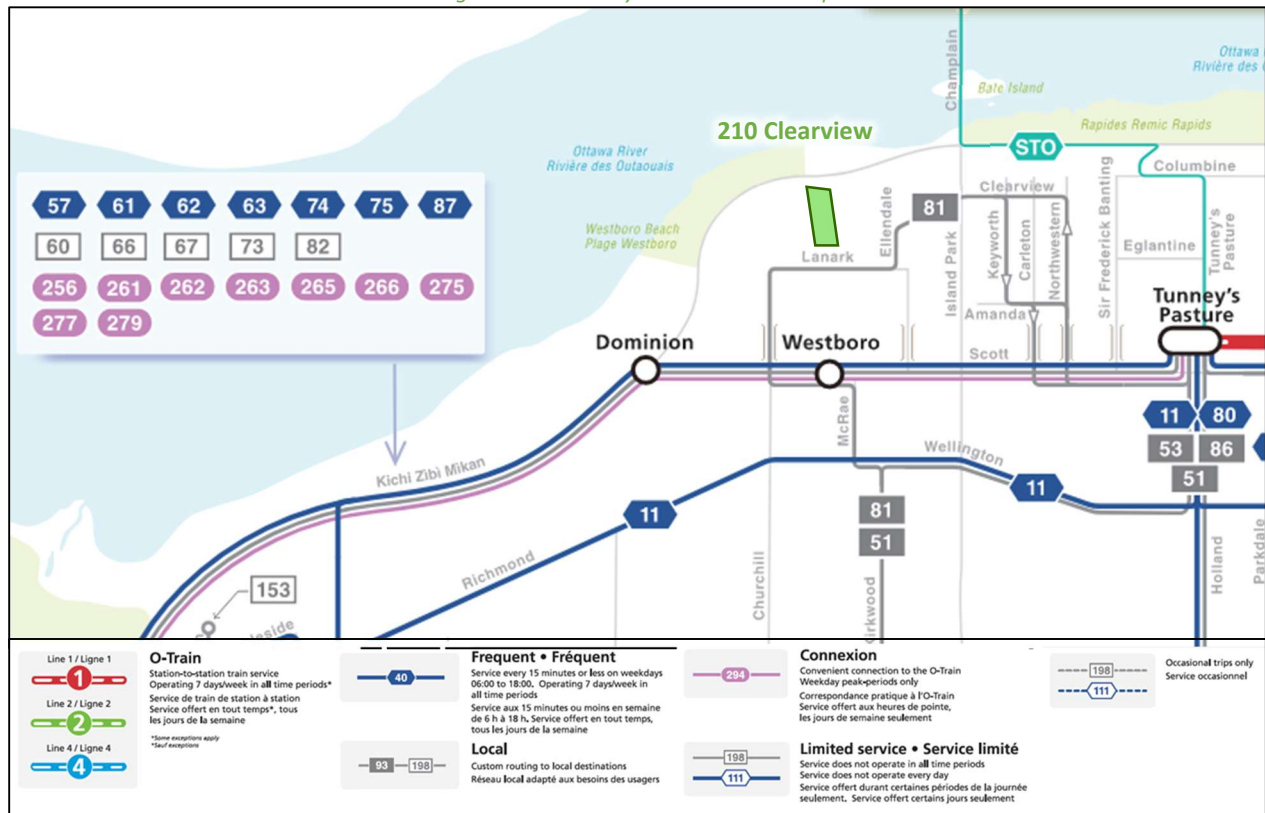
Westboro station is identified as one of the Confederation Line West extension new stations in the Stage 2 Light Rail Transit (LRT) project and will be converted to accommodate LRT. Additional pedestrian connectivity, bicycle facilities, and a bus staging area will be provided. The anticipated build-out year of the project is 2026.

Additionally, as stated by the City of Ottawa, Scott Street between Churchill Avenue and Tunney's Pasture has been used as a Transitway detour during the construction of the Stage 2 Confederation Line West extension. The bus only eastbound lane on Scott Street from Clifton Road to Island Park Drive, and the westbound right-turn lane at Island Park Drive were part of detour plan. It is noted that the westbound right-turn lane at Island Park Drive is to alleviate westbound queues at the intersection. It has been confirmed that the Transitway detour will be removed prior to 2026, including the eastbound bus / right-turn lane and bus receiving lane at the Scott Street / Lanark Avenue intersection as well as the westbound-right turn lane and eastbound bus receiving lane at the Scott Street / Island Park Drive intersection. The proposed detour plan can be found in Appendix E.

2.3.1.3 *OC Transpo New Ways to Bus*

Responding to recent ridership trends and anticipating the upcoming completion of the Stage 2 expansion of LRT service within the City, the OC Transpo bus service is planned to be recalibrated to focus on frequency, local service in neighbourhoods, and connections to key destinations. Route 16 will be replaced by new Route 81 and Route 153 will be shifted off Lanark Avenue. Figure 12 illustrates the new service map.

Figure 12: New Ways to Bus Service Map



Source: www.octranspo.com Accessed: March 19, 2025

2.3.2 Other Study Area Developments

234 Atlantis Avenue and 745 Kichi Zibi Mikan Parkway

The proposed development includes a zoning by-law amendment, which consists of a parking lot, a lookout parking area, modifications to the SJAM Parkway at the Kitchissippi lookout, and an expansion of the existing Westboro Beach Café pavilion into new 14,000 m² Pavilion building facility. Due to the small change in the number of parking spots provided and decrease in the size of the proposed building, it is expected not to have any significant impact on the overall network. (exp Services Inc., 2020)

316-322 Clifton Road

The proposed development application includes a site plan application for the construction of 31 dwelling units. The development is anticipated to be built out in 2025. The Screening Form did not identify the need for a full TIA.

70 Richmond Road and 376 Island Park Drive

The proposed development includes a site plan application for the construction of a nine-storey mixed-use building, including 96 residential units and 1,455 ft² of ground floor retail. The anticipated built out year was 2023, and it is assumed to be 2025. The trip generation trigger does not meet. (CGH Transportation, 2023)

175 Richmond Road

The proposed development application includes a zoning by-law amendment consist of a six-storey mixed-use building with 104 residential units and 7,525 ft² of retail. The development is anticipated to be built out in 2025. Only TIA scoping report is available at this time. (Novatech, 2020)

295, 299, 301 Ashton Avenue and 2046, 2050 Scott Street

The proposed development application includes a site plan application for the construction of a 30-storey mixed use residential tower with 353 units and 233 m² of ground commercial/office. The anticipated built out year was 2021, and it is assumed to be 2025. The development is anticipated to generate 35 new AM and 35 PM peak hour two-way auto trips. (Parsons, 2021)

315 Tweedsmuir Avenue and 320 McRae Avenue

The proposed development includes a zoning by-law amendment and site plan control application to construct a 26-storey mixed-use development containing 325 apartment units, 11 townhouse units, and 820 m² (8,826 ft²) of commercial space. The anticipated full build-out and occupancy horizon is 2022 and is anticipated to generate 34 new AM and 41 PM peak hour two-way auto trips. (CGH Transportation, 2020)

2070 Scott Street

The proposed development includes a zoning by-law amendment and site plan control application to construct a 25-storey mixed-use building with 264 residential units and 5,554 ft² of ground floor retail. The anticipated full build-out and occupancy horizon is 2022 and it is anticipated to generate 38 new AM and 35 PM peak hour two-way auto trips. (Stantec, 2019)

319-327 Richmond Road, 380 Winona Avenue, and 381 Churchill Avenue

The proposed development application includes a site plan application for the construction of a nine-storey building with 180 apartment units, 18,675 sq. ft. of retail space. The anticipated built out year was 2021, and it is assumed to be 2024. The development is anticipated to generate 21 new AM and 30 PM peak hour two-way auto trips. (CGH Transportation, 2021)

2006, 2020, and 2026 Scott Street, 314 and 318 Athlone Avenue

The proposed development application includes a site plan application consist of two 40-storey towers with a total of 856 dwelling units and approximately 3,207 ft² of ground-floor commercial space. Phase One includes 392 dwellings and 1,287 ft² of commercial space, and Phase Two includes 464 dwellings and 1,920 ft² of commercial space. The anticipated buildout of Phase One is 2026 and the buildout of Phase Two is 2029, and the net additional auto trips are anticipated to be 20 AM and -4 PM peak hour two-way auto trips. (Novatech, 2024)

3 Study Area and Time Periods

3.1 Study Area

The study area will include the intersections of:

- Island Park Drive at:
 - Kichi Zibi Mikan Parkway
 - Clearview Avenue
 - Scott Street
- Lanark Avenue:
 - Scott Street
 - Churchill Avenue

The boundary road will be Clearview Avenue and Lanark Avenue, and no screenlines are present within proximity to the site.

3.2 Time Periods

As the proposed development is composed entirely of residential units the AM and PM peak hours will be examined.

3.3 Horizon Years

The anticipated build-out year is 2027. As a result, the full build-out plus five years horizon year is 2032.

4 Development-Generated Travel Demand

4.1 Mode Shares

Examining the mode shares recommended in the TRANS Trip Generation Manual (2020) for the subject district, derived from the most recent National Capital Region Origin-Destination survey (OD Survey), the existing average district mode shares by land use for Ottawa West have been summarized in Table 5.

Table 5: TRANS Trip Generation Manual Recommended Mode Shares – Ottawa West

Travel Mode	Multi-Unit (High-Rise)		TOD Area
	AM	PM	AM & PM
Auto Driver	28%	33%	15%
Auto Passenger	11%	11%	5%
Transit	41%	26%	65%
Cycling	3%	7%	15%
Walking	16%	23%	
Total	100%	100%	100%

Since the future Westboro LRT station, which is located within a 300-metre linear distance (500-metre walking distance) from the site, is planned to be completed by 2026, a higher transit mode is considered achievable at this location. A 15% shift to transit mode taken from the auto mode is proposed for both peak hours. The proposed modified mode share targets for the development and are summarized in Table 6.

Table 6: Proposed Development Mode Shares

Travel Mode	Multi-Unit (High-Rise)	
	AM	PM
Auto Driver	17%	21%
Auto Passenger	8%	8%
Transit	56%	41%
Cycling	3%	7%
Walking	16%	23%
Total	100%	100%

4.2 Trip Generation

This TIA has been prepared using the vehicle and person trip rates for the residential dwellings using the TRANS Trip Generation Manual (2020). Table 7 summarizes the person trip rates for the proposed residential land uses for each peak period.

Table 7: Trip Generation Person Trip Rates by Peak Period

Land Use	Land Use Code	Peak Period	Person Trip Rates
Multi-Unit (High-Rise)	221 & 222 (TRANS)	AM	0.80
		PM	0.90

Using the above person trip rates, the total person trip generation has been estimated. Table 8 summarizes the total person trip generation for the residential land uses.

Table 8: Total Person Trip Generation by Peak Period

Land Use	Units	AM Peak Period			PM Peak Period		
		In	Out	Total	In	Out	Total
Multi-Unit (High-Rise)	187	47	104	150	97	71	168

Using the above mode share targets for a LRT area and the person trip rates, the person trips by mode have been projected. Trip generation by peak hour has been forecasted using the prescribed peak period conversion factors presented in the TRANS Trip Generation Manual (2020) for the residential component. Table 9 summarizes the residential trip generation by mode and peak hour.

Table 9: Trip Generation by Mode

Travel Mode		AM Peak Hour				PM Peak Hour			
		Mode Share	In	Out	Total	Mode Share	In	Out	Total
Multi-Unit (High-Rise)	Auto Driver	17%	4	8	12	21%	9	6	15
	Auto Passenger	8%	2	4	6	8%	3	3	6
	Transit	56%	14	32	46	41%	19	13	32
	Cycling	3%	1	2	3	7%	3	3	6
	Walking	16%	4	10	14	23%	12	8	20
	Total	100%	25	56	81	100%	46	33	79

As shown above, a total of 12 AM and 15 PM new peak hour two-way vehicle trips are projected as a result of the proposed development.

4.3 Trip Distribution

To understand the travel patterns of the subject development, the OD Survey has been reviewed to determine the travel for the residential component, and these patterns were applied based on the build-out of Ottawa West. Table 10 below summarizes the distributions.

Table 10: OD Survey Distribution – Ottawa West

To/From	Residential % of Trips
North	5%
South	50%
East	40%
West	5%
Total	100%

4.4 Trip Assignment

Using the distribution outlined above, turning movement splits, and access to major transportation infrastructure, the trips generated by the site have been assigned to the study area road network. It is noted that traffic cannot be assigned to the eastbound left-turn movement from Clearview Avenue to Island Park Drive during the PM peak hour, as it is a prohibited movement. As a result, the trip assignment will differ between the AM and PM peak hours. Table 11 and Table 12 summarize the proportional assignment to the study area roadways during the AM peak hour and the PM peak hour, and Figure 13 illustrates the new site generated volumes.

Table 11: Trip Assignment – AM Peak Hour

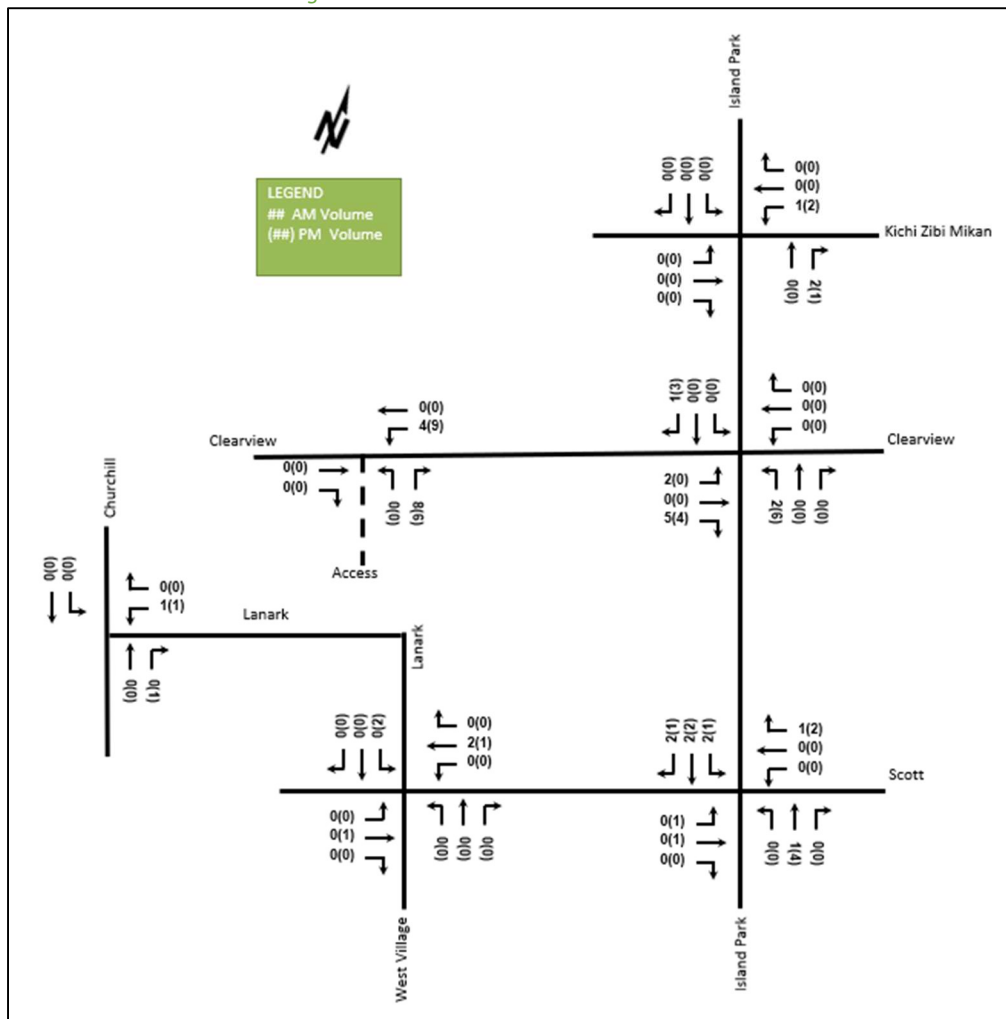
To/From	Via
North	3% Kichi Zibi Mikan Parkway (E) 2% Island Park Drive (N)
South	30% Island Park Drive (S) 20% Churchill Avenue (S)

To/From	Via
East	20% Kichi Zibi Mikan Parkway (E) 20% Scott Street (E)
West	2% Churchill Avenue (S) 2% Kichi Zibi Mikan Parkway (W) 1% Island Park Drive (N)
Total	100%

Table 12: Trip Assignment – PM Peak Hour

To/From	Inbound Via	Outbound Via
North	3% Kichi Zibi Mikan Parkway (E) 2% Island Park Drive (N)	3% Kichi Zibi Mikan Parkway (E) 2% Island Park Drive (N)
South	30% Island Park Drive (S) 20% Churchill Avenue (S)	30% Island Park Drive (S) 20% Churchill Avenue (S)
East	20% Kichi Zibi Mikan Parkway (E) 20% Scott Street (E)	40% Scott Street (E)
West	2% Churchill Avenue (S) 2% Kichi Zibi Mikan Parkway (W) 1% Island Park Drive (N)	2% Churchill Avenue (S) 2% Kichi Zibi Mikan Parkway (W) 1% Island Park Drive (N)
Total	100%	100%

Figure 13: New Site Generation Auto Volumes



5 Exemption Review

Table 13 summarizes the exemptions for this TIA.

Table 13: Exemption Review

Module	Element	Explanation	Exempt/Required
Site Design and TDM			
4.1 Development Design	4.1.2 Circulation and Access	Only required for site plan and zoning by-law applications	Required
	4.1.3 New Street Networks	Only required for plans of subdivision	Exempt
4.2 Parking	4.2.1 Parking Supply	Only required for site plan and zoning by-law applications	Required
4.3 Boundary Street Design		All applications	Required
4.5 Transportation Demand Management	All Elements	Only required when the development generates more than 60 person-trips	Required
Network Impact			
3.2 Background Network Travel Demand	All Elements	Only required when one or more other Network Impact Modules are triggered	Exempt
3.3 Demand Rationalization		Only required when one or more other Network Impact Modules are triggered	Exempt
4.6 Neighbourhood Traffic Calming	4.6.1 Adjacent Neighbourhoods	If the development meets all of the following criteria along the route(s) site generated traffic is expected to utilize between an arterial road and the site's access: 1. Access to Collector or Local; 2. "Significant sensitive land use presence" exists, where there is at least two of the following adjacent to the subject street segment: • School (within 250m walking distance); • Park; • Retirement / Older Adult Facility (i.e. long-term care and retirement homes); • Licenced Child Care Centre; • Community Centre; or • 50%, or greater, of adjacent property along the route(s) is occupied by residential lands and a minimum of 10 occupied residential units are present on the route. 3. Application is for Zoning By-Law Amendment or Draft Plan of Subdivision;	Exempt

Module	Element	Explanation	Exempt/Required
		4. At least 75 site-generated auto trips; 5. Site Trip Infiltration is expected. Site traffic will increase peak hour vehicle volumes along the route by 50% or more.	
4.7 Transit	4.7.1 Transit Route Capacity	Only required when the development generates more than 75 transit trips	Exempt
	4.7.2 Transit Priority Requirements	Only required when the development generates more than 75 auto trips	Exempt
4.8 Network Concept		Only required when proposed development generates more than 200 person-trips during the peak hour in excess of equivalent volume permitted by established zoning	Exempt
4.9 Intersection Design	4.9.1 Intersection Control	Only required when the development generates more than 75 auto trips	Exempt
	4.9.2 Intersection Design	Only required when the development generates more than 75 auto trips	Exempt

6 Development Design

6.1 Design for Sustainable Modes

The proposed development is a residential building with a total of 190 bicycle parking spaces including six exterior bike spaces at grade and 184 underground bike parking spaces. A 1.8-metre sidewalk is proposed along both sides of the internal drive aisle to connect to the hard surface around the buildings and existing sidewalks along Lanark Avenue, and to the adjacent building pedestrian connection to Ellendale Crescent. Additionally, the internal sidewalks connect to Clearview Avenue via a 2.0-metre concrete sidewalk. Cyclists will access the underground bicycle parking via the garage ramp or internal elevators.

The existing and proposed sidewalks provide connections from the site to the nearby transit stops and the future Westboro LRT station.

The infrastructure TDM Checklist is provided in Appendix F.

6.2 Circulation and Access

Vehicle access to the underground parking is provided via the access on Clearview Avenue. Garbage facilities are located on the west side of the building and move-in trucks and garbage collection are expected to access the site via the western access on Lanark Avenue. Additionally, an access is proposed on Lanark Avenue to access the surface parking and provide the internal connection between Lanark Avenue and Ellendale Crescent.

The fire route is proposed from the access on Lanark Avenue to the island in front of the proposed building.

The garbage truck, move-in truck, and fire truck turning movements can be accommodated on site. The turning templates are provided in Appendix G.

7 Parking

7.1 Parking Supply

A total of 246 parking spaces are proposed to serve 210 Clearview Avenue, including 228 residential parking spaces and 18 visitor parking spaces. Among these parking spaces, a total of ten vehicle parking spaces are proposed to be located on the surface, 113 spaces on P1, and the remaining 123 spaces on P2.

While the site is located within Area X on Schedule 1A of the parking zoning bylaw, Staff have indicated that the proximity to Westboro Station applies and Section 103 will be discussed. According to the parking zoning by-law, No minimum parking requirement is noted for the site and a maximum parking ratio of 1.75 spaces per unit is permitted. The proposed residential vehicle parking ratio of 1.2 spaces per unit is below the ratio and meets the bylaw requirements.

The site provides 190 bicycle spaces, including six exterior and 184 underground. According to the site-specific zoning by-law requirement, the minimum bicycle requirement is 1.0 spaces per unit, totaling 187 spaces. The proposed bicycle parking exceeds the minimum bicycle parking requirement.

The existing building at 200 Clearview Avenue will reduce to 110 below grade parking spaces and a parking ratio of 0.49 spaces per unit. If additional parking is required, it may be shared with the proposed site.

8 Boundary Street Design

Table 14 summarizes the MMLOS analysis for the boundary streets of Lanark Avenue and Clearview Avenue. The existing and future conditions for both streets will be the same and are considered in one row. The boundary street analysis is based on the land-use designation of “within 300m of a school” due to the proximity of the Jules-Léger Centre. The MMLOS worksheets have been provided in Appendix H.

Table 14: Boundary Street MMLOS Analysis

Segment		Pedestrian LOS		Bicycle LOS		Transit LOS		Truck LOS	
		PLOS	Target	BLOS	Target	TLOS	Target	TrLOS	Target
Lanark Avenue	Ex/Fu	B	A	B	D	D	D	N/A	N/A
Clearview Avenue	Ex	F	A	B	D	N/A	N/A	N/A	N/A
	Fu	B	A						

Clearview Avenue does not meet the pedestrian LOS targets due to the lack of a sidewalk along the existing roadway. The additional of the sidewalk along the frontage, linking the internal site connections to Ellendale Crescent will improve the pedestrian LOS to B. If the roadway consistently operates under 30km/h, it would meet the target of A.

Lanark Avenue does not meet the pedestrian LOS target of A due to the boulevard not exceeding 2 metres in width. The target is set particularly high due to the proximity to the school; however, the available right-of-way is limited to support a widening of the boulevard. With the existing on-street parking, the buffer provided to the sidewalk is technically wider than the provided boulevard width, and no improvements are required.

9 Transportation Demand Management

9.1 Context for TDM

The mode shares used within the TIA represent a shift from auto modes to transit ridership with the future LRT station. Overall, the modal shares are likely to be achieved and supporting TDM measures should be provided.

The subject site is within the Richmond Road/ Westboro Secondary Plan and Richmond Road/ Westboro community design plan areas. The total bedroom count within the development is subject to the final unit breakdown and layout selections by purchasers. No age restrictions are noted.

9.2 Need and Opportunity

The subject site has been assumed to rely predominantly on transit ridership with proximity to the future LRT station, and those assumptions have been carried through the analysis. The increase in transit ridership is achievable.

9.3 TDM Program

The “suite of post occupancy TDM measures” has been summarized in the TDM checklists for the residential land uses. The checklist is provided in Appendix F. The key TDM measures recommended include:

- Display local area maps with walking and cycling routes, and transit route information and schedules at major entrances
- Provide lighting and landscaping along walking routes between building entrances and streets
- Provide a multimodal travel option information package to new residents
- Contract with providers to install on-site bikeshare (or other micromobility alternatives) and carshare spaces
- Unbundle parking cost from purchase or rental costs

10 Access Intersection Design

10.1 Location and Design of Access

The two existing accesses to the surface parking lot will be converted to an access to the underground parking from Clearview Avenue and the Lanark Avenue access will be to the loading area. A new loop will be created from the existing drive aisle from Ellendale Crescent to connect to Lanark Avenue at a new access. All accesses are proposed as two-way access. It is noted that two proposed accesses and one existing access for the adjacent building will be on Lanark Avenue. Although total accesses on Lanark Avenue will exceed the private approach by-law maximum number of private approaches permitted, the western proposed access is only for loading purposes, therefore the additional proposed access for loading is considered acceptable.

The access to underground parking on Clearview Avenue is 6.1 metres wide at the property line, and it meets the private approach by-law requirements of a minimum width of 2.4 metres and a maximum width of 9.0 metres. The access to the loading area on Lanark Avenue is 5.9 metres wide at the property line and 9.1 meters wide at the curb line. The general vehicle access on Lanark Avenue is 6.9 meters wide at the property line and 14.3 meters wide at the curb line. The widths of proposed accesses on Lanark Avenue comply with the private approach by-law maximum width requirement at the property line; however, it does not comply at the curb line due to the larger radii required to accommodate larger truck movements.

The distance between two accesses on Lanark Avenue at the curb line is 25.9 metres, and the distance between the general vehicle access on Lanark Avenue and the existing access for the adjacent building is 15.7 metres at the curb line. The distance between two accesses on Clearview Avenue at the curb line is 51.0 metres. All distances meet the private approach by-law minimum distance between a private approach and any other private approach.

The access to underground parking on Clearview Avenue is approximately 110 metres from the intersection with Ellendale Crescent, and the existing access to underground parking in the adjacent building is approximately 45 metres from the same intersection. The existing drive aisle on Ellendale Crescent for the adjacent building is

approximately 20 metres from the intersection with Clearview Avenue. On Lanark Avenue, the general vehicle access is approximately 75 metres from the intersection of Ellendale Crescent, and the existing access for the adjacent building is approximately 50 metres from the same intersection. All accesses exceed the minimum corner clearance of 20 meters for collector roads and 15 meters for local roads as indicated in the TAC.

According to Table 8.9.3 of the TAC Geometric Design Guidelines, for the apartment units between 100 and 200, the minimum throat length requirement is 15 metres for the collector road, and no requirement for the local road. The throat length for the access to underground parking on Clearview Avenue is 13 metres, and it is considered to be sufficient. The throat length for access to the loading area on Lanark Avenue is approximately 28.2 metres, and it meets the TAC requirement. The throat length for the general vehicle access on Lanark Avenue is 5.3 metres, and it does not meet the TAC requirement. As this access is provided for drop-off/pick-up purposes, low volumes are expected for the loop as the primary vehicle accesses are through the underground ramps on Clearview Avenue, the throat length for the access on Lanark Avenue is considered acceptable.

Accesses on Lanark Avenue will comply with the City of Ottawa standard drawing SC7.1.

As noted above, the existing parking lot access on Lanark Avenue will be converted to the access for the garbage and loading operations. The access is currently within the 3-metre buffer space from the adjacent property line as outlined within the Section 25(1)(p) of the Private Approach Bylaw. The existing bulb outs, that will be retained, will maintain a separation of over 12-metres from a possible new access on the adjacent property. This exceeds the 6-metre separation that would be provided through Section 25(i)(p) and is acceptable.

Additionally, the primary access to Lanark Avenue is 6.7m wide and complies with Zoning By-law Aisle and Driveway Provisions Section 107.

Overall the access are supported and the City should approve as proposed.

11 Summary of Improvements Indicated and Modifications Options

The following summarizes the analysis and results presented in this TIA report:

Proposed Site

- The proposed site includes 187 apartment units and a total of 228 residential vehicle parking spaces, 18 visitor parking spaces, and 190 bike parking spaces are proposed
- The existing surface parking lot of 100 parking spaces will be removed
- The two existing accesses to the surface parking lot will be converted to an access to the underground parking from Clearview Avenue and the Lanark Avenue access will be to the loading area
- A new loop will be created from the existing drive aisle from Ellendale Crescent to connect to Lanark Avenue at a new access
- The development is proposed to be completed as a single phase by 2027

TIA Screening and Exemptions

- The TIA Screening form indicated a full TIA was required due to trip generation
- The exemption review for the TIA did not require new street networks, background network travel demand, demand rationalization, neighbourhood traffic calming, transit review, network concept review, intersection control review or intersection design review

Existing Conditions

- Island Park Drive and Kichi Zibi Mikan Parkway are federally owned arterial roads, and Churchill Avenue south of Scott Street and Scott Street are City of Ottawa arterial roads within the study area
- Churchill Avenue between Scott Street and Lanark Avenue and Lanark Avenue are City of Ottawa collector roads, and Clearview Avenue is a local road within the study area
- Sidewalks are provided on both sides along Lanark Avenue, Churchill Avenue south of Lanark Avenue, Clearview Avenue between Ellendale Crescent and Latchford Road, and east of Island Park Drive, on the north side of Clearview Avenue between Latchford Road and Island Park Drive, and on the south side of Scott Street
- A pedestrian pathway extends south of Lanark Avenue between the 200 Lanark Avenue and 38 Metropole Private properties, and loops to Westboro Station
- Multi use pathways are present on the north side of Scott Street and another connects Lanark Avenue from the Beechgrove Avenue intersection to the Westboro Station
- Bike lanes are provided on both sides along Island Park Drive, and a cycle track is present on the south side of Scott Street
- Island Park Drive and Scott Street are cross-town bikeways and Kichi Zibi Mikan Parkway east of Island Park Drive is a NCC Pathway in the Transportation Master Plan – Part 1 (2023)
- Within the study area, the intersection and segments have a total of four collisions during the 2018-2022 time period
- No further collision analysis is required within this study due to the low number of collisions in the vicinity of the site
- The Island Park Drive at Kichi Zibi Mikan Parkway intersection is over capacity and subject to queuing issues at the existing condition

Planned Conditions

- Westboro station, which is identified as one of the Confederation Line West extension new stations in the Stage 2 Light Rail Transit project, will be converted to accommodate LRT in 2026
- The bus-only eastbound lane on Scott Street from Clifton Road to Island Park Drive, and the westbound right-turn lane at Island Park Drive are part of the detour plan will be removed

Development Generated Travel Demand

- The proposed development is forecasted to produce 81 AM and 79 PM two-way people trips
- Of the forecasted people trips, 12 AM and 15 PM two-way trips will be vehicle trips based on 17% and 21% modal share target
- Of the forecasted trips, 5% are anticipated to travel to the north and west, 50% to the south, and 40% to the east

Development Design

- The proposed development is a residential building with a total of 190 bicycle parking spaces including six exterior bike spaces at grade and 184 underground bike parking spaces
- A 1.8-metre sidewalk is proposed along both sides of the internal drive aisle to connect to the hard surface around the buildings and existing sidewalks along Lanark Avenue, and to the adjacent building pedestrian connection to Ellendale Crescent

- The existing and proposed sidewalks provide connections from the site to the nearby transit stops and the Westboro station
- The fire route is proposed from the access on Lanark Avenue to the island in front of the proposed building
- The garbage truck, move-in truck, and fire truck turning movements can be accommodated on site

Parking

- A total of 246 parking spaces are proposed including 228 residential parking spaces and 18 visitor parking spaces as part of the new development
- The proposed residential and visitor vehicle parking spaces are in compliance with the maximum zoning by-law requirements
- The site provides 190 bicycle spaces, including six exterior and 184 underground
- The proposed bicycle parking exceeds the minimum site-specific zoning by-law requirement for bicycle
- The existing parking spaces retained are seven spaces less than the parking zoning by-law requirement

Boundary Street Design

- Clearview Avenue does not meet the pedestrian LOS targets in the existing conditions due to the lack of a sidewalk
- A sidewalk will be provided between the internal pedestrian connections and Ellendale Crescent and will increase the pedestrian LOS from F to B
- A consistent operating speed of 30 km/h or lower would meet the pedestrian LOS A
- Lanark Avenue does not meet the pedestrian MMLOS targets due to the boulevard width not exceeding 2 metres, and limited right-of-way prevents a boulevard to be constructed
- The existing on-street parking adjacent to the boulevard does provide additional buffer and no improvements are proposed

TDM

- Supportive TDM measures to be included within the proposed development should include:
 - Display local area maps with walking and cycling routes, and transit route information and schedules at major entrances
 - Provide lighting and landscaping along walking routes between building entrances and streets
 - Provide a multimodal travel option information package to new residents
 - Contract with providers to install on-site bikeshare (or other micromobility alternatives) and carshare spaces
 - Unbundle parking cost from purchase or rental costs

Access Intersection Design

- The two existing accesses to the surface parking lot will be converted to an access to the underground parking from Clearview Avenue and the Lanark Avenue access will be to the loading area
- A new loop will be created from the existing drive aisle from Ellendale Crescent to connect to Lanark Avenue at a new access
- Although total accesses on Lanark Avenue will exceed the private approach by-law maximum number of private approaches permitted, the western proposed access is only for loading purpose, therefore, the additional proposed access for loading is considered acceptable

- The access to underground parking on Clearview Avenue is 6.1 metres wide measured at the property line, and it meets the private approach by-law minimum and maximum width requirements
- The widths of proposed accesses on Lanark Avenue comply with the private approach by-law maximum width requirement at the property line; however, it does not comply at the curb line due to the larger radii required to accommodate larger truck movements
- All distances meet the private approach by-law minimum distance between a private approach and any other private approach
- All accesses exceed the minimum corner clearance indicated in the TAC
- Although the throat length for the general vehicle access on Lanark Avenue does not meet the TAC requirement, the throat length for the access on Lanark Avenue is considered acceptable given lower volumes are expected
- Accesses on Lanark Avenue will comply with the City of Ottawa standard drawing SC7.1
- The Lanark Avenue bulb-outs will provided greater clearance between the existing and future adjacent parcel accesses subject to the Private Approach Bylaw and the use of the existing access should be approved
- The accesses are compliant with Zoning By-law Aisle and Driveway Provisions Section 107

12 Conclusion

It is recommended that, from a transportation perspective, the proposed development applications proceed.

Prepared By:



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Appendix A

TIA Screening Form and PM Certification Form

City of Ottawa 2023 Revisions to 2017 TIA Guidelines
Step 1 - Screening Form

Date: 10-Sep-24
Project Number: 2024-030
Project Reference: 210 Clearview Avenue

1.1 Description of Proposed Development	
Municipal Address	210 Clearview Avenue
Description of Location	Ward 15. Rectangular parcel fronting Clearview Avenue and Lanark Avenue
Land Use Classification	Residential Fifth Density Zone (R5C[2909]S216)
Development Size	184 Residential Units
Accesses	One onto Clearview Avenue and two onto Lanark Avenue
Phase of Development	Single phase
Buildout Year	2027
TIA Requirement	Full TIA Required

1.2 Trip Generation Trigger	
Land Use Type	Multi-Family (High-Rise)
Development Size	184 Units
Trip Generation Trigger	Yes

1.3 Location Triggers	
Does the development propose a new driveway to a boundary street that is designated as part of the Transit Priority Network, Rapid Transit network or Cross-Town Bikeways?	No
Is the development in a Hub, a Protected Major Transit Station Area (PMTSA), or a Design Priority Area (DPA)?	No
Location Trigger	No

1.4. Safety Triggers	
Are posted speed limits on a boundary street 80 km/hr or greater?	No
Are there any horizontal/vertical curvatures on a boundary street limits sight lines at a proposed driveway?	No
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)?	No
Is the proposed driveway within auxiliary lanes of an intersection?	No
Does the proposed driveway make use of an existing median break that serves an existing site?	No
Is there is a documented history of traffic operations or safety concerns on the boundary streets within 500 m of the development?	No
Does the development include a drive-thru facility?	No
Safety Trigger	No



Certification Form for TIA Study PM

TIA Plan Reports

On April 14, 2022, the Province's Bill 109 received Royal Assent providing legislative direction to implement the More Homes for Everyone Act, 2022 aiming to increase the supply of a range of housing options to make housing more affordable. Revisions have been made to the TIA guidelines to comply with Bill 109 and streamline the process for applicants and staff.

Individuals submitting TIA reports will be responsible for all aspects of development-related transportation assessment and reporting, and undertaking such work, in accordance and compliance with the City of Ottawa's Official Plan, the Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines.

By submitting the attached TIA report (and any associated documents) and signing this document, the individual acknowledges that they meet the four criteria listed below.

CERTIFICATION



I have reviewed and have a sound understanding of the objectives, needs and requirements of the City of Ottawa's Official Plan, Transportation Master Plan and the Transportation Impact Assessment (2017) Guidelines; (Update effective July 2023)



I have a sound knowledge of industry standard practice with respect to the preparation of transportation impact assessment reports, including multi modal level of service review;



I have substantial experience (more than 5 years) in undertaking and delivering transportation impact studies (analysis, reporting and geometric design) with strong background knowledge in transportation planning, engineering or traffic operations; and



I am either a licensed or registered¹ professional in good standing, whose field of expertise



is either transportation engineering



or transportation planning.

¹ License of registration body that oversees the profession is required to have a code of conduct and ethics guidelines that will ensure appropriate conduct and representation for transportation planning and/or transportation engineering works.

Dated at Ottawa this 17 day of August, 20 23.
(City)

Name : Andrew Harte

Professional title: Senior Transportation Engineer / Vice-President Ottawa



Signature of individual certifier that s/he/they meet the above criteria

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Stamp



Revision Date: June 2023

Appendix B

Turning Movement Counts



Project #24-348 - CGH Transportation

Intersection Count Report

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Municipality: Ottawa
Count Date: Wednesday, Aug 21, 2024
Site Code: 2434800001
Count Categories: Cars, Trucks, Bicycles, Pedestrians
Count Period: 06:30-09:30, 15:00-18:00
Weather: Clear
Comments:



Traffic Count Summary

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Municipality: Ottawa
Count Date: Aug 21, 2024

Island Park Dr - Traffic Summary

Hour	North Approach Totals						South Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
06:30 - 07:00	241	379	260	0	880	1	0	86	20	0	106	0	986
07:00 - 08:00	480	767	472	0	1719	0	0	219	87	0	306	1	2025
08:00 - 09:00	410	678	437	0	1525	0	1	272	154	0	427	1	1952
09:00 - 09:30	150	333	183	0	666	0	0	145	56	0	201	0	867
BREAK													
15:00 - 16:00	149	419	393	0	961	3	0	561	52	0	613	4	1574
16:00 - 17:00	133	448	403	0	984	1	0	496	28	0	524	0	1508
17:00 - 18:00	137	481	401	0	1019	3	0	526	21	0	547	2	1566
GRAND TOTAL	1700	3505	2549	0	7754	8	1	2305	418	0	2724	8	10478



Traffic Count Summary

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Municipality: Ottawa
Count Date: Aug 21, 2024

Kichi Zibi Mikan Pkwy - Traffic Summary

Hour	East Approach Totals						West Approach Totals						Total
	Includes Cars, Trucks, Bicycles						Includes Cars, Trucks, Bicycles						
	Left	Thru	Right	U-Turn	Total	Peds	Left	Thru	Right	U-Turn	Total	Peds	
06:30 - 07:00	41	79	19	0	139	2	69	154	3	0	226	2	365
07:00 - 08:00	92	183	68	0	343	5	204	564	16	0	784	6	1127
08:00 - 09:00	138	213	84	0	435	3	187	697	30	0	914	0	1349
09:00 - 09:30	51	85	32	1	169	0	77	217	22	0	316	2	485
BREAK													
15:00 - 16:00	130	841	773	0	1744	5	346	230	20	0	596	4	2340
16:00 - 17:00	159	892	922	0	1973	0	332	172	17	0	521	2	2494
17:00 - 18:00	168	774	844	0	1786	4	352	212	19	0	583	1	2369
GRAND TOTAL	779	3067	2742	1	6589	19	1567	2246	127	0	3940	17	10529



Traffic Count Data

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Municipality: Ottawa
Count Date: Aug 21, 2024

North Approach - Island Park Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
06:30	116	193	151	0	460	2	0	0	0	2	0	0	0	0	0	1
06:45	123	186	108	0	417	0	0	1	0	1	0	0	0	0	0	0
07:00	115	186	115	0	416	1	1	0	0	2	0	0	0	0	0	0
07:15	102	190	118	0	410	2	0	0	0	2	0	0	0	0	0	0
07:30	117	207	127	0	451	1	0	0	0	1	0	0	0	0	0	0
07:45	139	183	111	0	433	3	0	1	0	4	0	0	0	0	0	0
08:00	103	174	110	0	387	1	0	0	0	1	0	0	0	0	0	0
08:15	126	185	120	0	431	0	0	0	0	0	0	0	0	0	0	0
08:30	98	173	126	0	397	1	1	0	0	2	0	0	0	0	0	0
08:45	80	145	81	0	306	1	0	0	0	1	0	0	0	0	0	0
09:00	73	165	99	0	337	0	0	0	0	0	0	0	0	0	0	0
09:15	77	168	84	0	329	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	1269	2155	1350	0	4774	12	2	2	0	16	0	0	0	0	0	1



Traffic Count Data

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Municipality: Ottawa
Count Date: Aug 21, 2024

North Approach - Island Park Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	24	111	81	0	216	1	0	1	0	2	0	0	0	0	0	1
15:15	41	103	108	0	252	3	1	0	0	4	0	0	0	0	0	1
15:30	32	106	109	0	247	0	2	0	0	2	0	0	0	0	0	1
15:45	48	95	94	0	237	0	1	0	0	1	0	0	0	0	0	0
16:00	28	97	97	0	222	0	2	0	0	2	0	0	0	0	0	0
16:15	37	125	90	0	252	2	0	1	0	3	0	0	0	0	0	0
16:30	38	107	105	0	250	1	1	0	0	2	0	0	0	0	0	0
16:45	26	116	109	0	251	1	0	1	0	2	0	0	0	0	0	1
17:00	35	113	97	0	245	1	0	1	0	2	0	0	0	0	0	1
17:15	25	112	90	0	227	0	0	0	0	0	0	0	0	0	0	0
17:30	38	121	104	0	263	1	0	0	0	1	0	0	0	0	0	0
17:45	37	135	109	0	281	0	0	0	0	0	0	0	0	0	0	2
SUBTOTAL	409	1341	1193	0	2943	10	7	4	0	21	0	0	0	0	0	7
GRAND TOTAL	1678	3496	2543	0	7717	22	9	6	0	37	0	0	0	0	0	8



Traffic Count Data

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Municipality: Ottawa
Count Date: Aug 21, 2024

South Approach - Island Park Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
06:30	0	47	7	0	54	0	0	0	0	0	0	1	0	0	1	0
06:45	0	38	13	0	51	0	0	0	0	0	0	0	0	0	0	0
07:00	0	50	17	0	67	0	1	0	0	1	0	0	0	0	0	0
07:15	0	56	24	0	80	0	1	0	0	1	0	0	0	0	0	0
07:30	0	59	18	0	77	0	0	0	0	0	0	1	0	0	1	0
07:45	0	51	28	0	79	0	0	0	0	0	0	0	0	0	0	1
08:00	1	65	32	0	98	0	1	0	0	1	0	0	0	0	0	0
08:15	0	60	35	0	95	0	0	0	0	0	0	1	0	0	1	1
08:30	0	67	37	0	104	0	0	0	0	0	0	0	0	0	0	0
08:45	0	77	50	0	127	0	1	0	0	1	0	0	0	0	0	0
09:00	0	80	29	0	109	0	1	0	0	1	0	0	0	0	0	0
09:15	0	64	27	0	91	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL	1	714	317	0	1032	0	5	0	0	5	0	3	0	0	3	2



Traffic Count Data

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Municipality: Ottawa
Count Date: Aug 21, 2024

South Approach - Island Park Dr

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	0	150	13	0	163	0	0	1	0	1	0	4	0	0	4	0
15:15	0	136	14	0	150	0	0	0	0	0	0	1	0	0	1	0
15:30	0	140	11	0	151	0	0	0	0	0	0	0	0	0	0	3
15:45	0	128	13	0	141	0	0	0	0	0	0	2	0	0	2	1
16:00	0	126	5	0	131	0	0	0	0	0	0	2	0	0	2	0
16:15	0	124	9	0	133	0	0	0	0	0	0	0	0	0	0	0
16:30	0	117	7	0	124	0	0	0	0	0	0	2	0	0	2	0
16:45	0	122	7	0	129	0	0	0	0	0	0	3	0	0	3	0
17:00	0	125	5	0	130	0	0	0	0	0	0	1	0	0	1	1
17:15	0	130	6	0	136	0	0	0	0	0	0	2	0	0	2	0
17:30	0	128	5	0	133	0	0	0	0	0	0	0	0	0	0	1
17:45	0	138	5	0	143	0	1	0	0	1	0	1	0	0	1	0
SUBTOTAL	0	1564	100	0	1664	0	1	1	0	2	0	18	0	0	18	6
GRAND TOTAL	1	2278	417	0	2696	0	6	1	0	7	0	21	0	0	21	8



Traffic Count Data

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Municipality: Ottawa
Count Date: Aug 21, 2024

East Approach - Kichi Zibi Mikan Pkwy

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
06:30	21	41	8	0	70	0	0	1	0	1	0	0	0	0	0	2
06:45	20	38	8	0	66	0	0	2	0	2	0	0	0	0	0	0
07:00	18	30	15	0	63	0	1	0	0	1	0	0	0	0	0	1
07:15	35	54	21	0	110	0	1	2	0	3	0	0	0	0	0	0
07:30	21	43	16	0	80	0	1	1	0	2	0	0	0	0	0	1
07:45	18	51	12	0	81	0	2	1	0	3	0	0	0	0	0	3
08:00	24	48	15	0	87	0	0	1	0	1	0	0	0	0	0	0
08:15	32	51	22	0	105	0	0	1	0	1	0	0	0	0	0	2
08:30	40	59	23	0	122	0	0	1	0	1	0	0	0	0	0	1
08:45	40	55	20	0	115	2	0	1	0	3	0	0	0	0	0	0
09:00	24	51	19	0	94	0	0	1	0	1	0	0	0	0	0	0
09:15	27	33	12	1	73	0	1	0	0	1	0	0	0	0	0	0
SUBTOTAL	320	554	191	1	1066	2	6	12	0	20	0	0	0	0	0	10



Traffic Count Data

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Municipality: Ottawa
Count Date: Aug 21, 2024

East Approach - Kichi Zibi Mikan Pkwy

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
15:00	26	179	142	0	347	0	0	3	0	3	0	0	0	0	0	0
15:15	37	187	196	0	420	1	0	1	0	2	0	0	0	0	0	2
15:30	33	248	227	0	508	2	0	1	0	3	0	0	0	0	0	3
15:45	31	225	203	0	459	0	2	0	0	2	0	0	0	0	0	0
16:00	33	220	223	0	476	0	0	0	0	0	0	0	0	0	0	0
16:15	41	235	236	0	512	0	0	1	0	1	0	0	0	0	0	0
16:30	41	208	201	0	450	0	1	2	0	3	0	0	0	0	0	0
16:45	44	228	258	0	530	0	0	1	0	1	0	0	0	0	0	0
17:00	45	207	254	0	506	0	0	1	0	1	0	0	0	0	0	1
17:15	35	209	214	0	458	0	1	2	0	3	0	0	0	0	0	2
17:30	47	225	205	0	477	0	0	1	0	1	0	0	0	0	0	1
17:45	41	132	166	0	339	0	0	1	0	1	0	0	0	0	0	0
SUBTOTAL	454	2503	2525	0	5482	3	4	14	0	21	0	0	0	0	0	9
GRAND TOTAL	774	3057	2716	1	6548	5	10	26	0	41	0	0	0	0	0	19



Traffic Count Data

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Municipality: Ottawa
Count Date: Aug 21, 2024

West Approach - Kichi Zibi Mikan Pkwy

Start Time	Cars					Trucks					Bicycles					Total Peds
	←	↑	→	↺	Total	←	↑	→	↺	Total	←	↑	→	↺	Total	
06:30	28	53	0	0	81	0	0	0	0	0	0	0	0	0	0	2
06:45	41	101	3	0	145	0	0	0	0	0	0	0	0	0	0	0
07:00	35	94	1	0	130	0	0	0	0	0	0	0	0	0	0	2
07:15	53	141	3	0	197	0	0	0	0	0	0	0	0	0	0	2
07:30	69	128	5	0	202	0	2	0	0	2	0	0	0	0	0	1
07:45	47	199	7	0	253	0	0	0	0	0	0	0	0	0	0	1
08:00	41	197	4	0	242	0	0	0	0	0	0	0	0	0	0	0
08:15	48	152	5	0	205	0	1	0	0	1	0	0	0	0	0	0
08:30	51	171	8	0	230	1	0	0	0	1	0	0	0	0	0	0
08:45	46	175	13	0	234	0	1	0	0	1	0	0	0	0	0	0
09:00	41	125	12	0	178	2	1	0	0	3	0	0	0	0	0	1
09:15	33	90	10	0	133	1	1	0	0	2	0	0	0	0	0	1
SUBTOTAL	533	1626	71	0	2230	4	6	0	0	10	0	0	0	0	0	10

Traffic Count Data

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
 Site Code: 2434800001
 Municipality: Ottawa
 Count Date: Aug 21, 2024

West Approach - Kichi Zibi Mikan Pkwy

Start Time	Cars				Trucks				Bicycles				Total Peds
	←	↑	→	↻	←	↑	→	↻	←	↑	→	↻	
15:00	86	73	4	0	163	0	1	0	0	0	0	0	2
15:15	91	53	6	0	150	1	0	0	0	0	1	0	1
15:30	85	54	5	0	144	2	0	0	0	0	2	0	1
15:45	81	49	5	0	135	0	0	0	0	0	0	0	0
16:00	86	40	5	0	131	1	1	0	0	2	0	0	0
16:15	78	43	4	0	125	1	0	0	0	0	1	0	1
16:30	87	49	4	0	140	0	1	0	0	0	1	0	0
16:45	79	38	4	0	121	0	0	0	0	0	0	0	1
17:00	90	34	6	0	130	0	0	0	0	0	0	0	1
17:15	93	65	7	0	165	0	0	0	0	0	0	0	0
17:30	77	51	2	0	130	0	0	0	0	0	0	0	0
17:45	92	62	4	0	158	0	0	0	0	0	0	0	0
SUBTOTAL	1025	611	56	0	1692	5	3	0	0	8	0	0	7
GRAND TOTAL	1558	2237	127	0	3922	9	9	0	0	18	0	0	17

Peak Hour Diagram

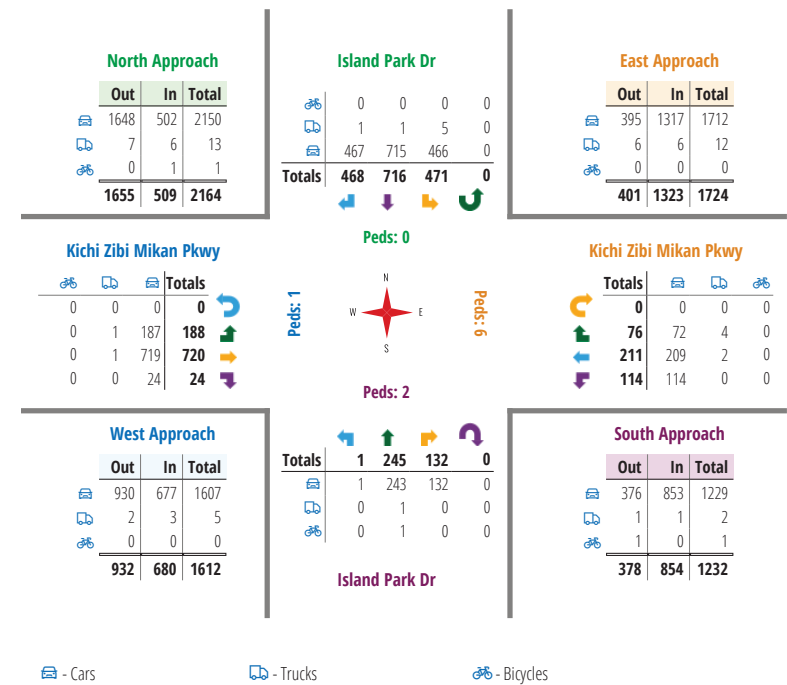
Specified Period
 From: 06:30:00
 To: 09:30:00
One Hour Peak
 From: 07:45:00
 To: 08:45:00

Weather conditions: Clear

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Count Date: Aug 21, 2024

** Signalized Intersection **

Major Road: Kichi Zibi Mikan Pkwy runs E/W



Comments

Peak Hour Summary

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Count Date: Aug 21, 2024
Period: 06:30 - 09:30

Peak Hour Data (07:45 - 08:45)

	North Approach Island Park Dr				South Approach Island Park Dr				East Approach Kichi Zibi Mikan Pkwy				West Approach Kichi Zibi Mikan Pkwy				Total Vehicles								
Start Time																									
07:45	142	183	112	0	0	437	0	51	28	0	1	79	18	53	13	0	3	84	47	199	7	0	1	253	853
08:00	104	174	110	0	0	388	1	66	32	0	0	99	24	48	16	0	0	88	41	197	4	0	0	242	817
08:15	126	185	120	0	0	431	0	61	35	0	1	96	32	51	23	0	2	106	48	153	5	0	0	206	839
08:30	99	174	126	0	0	399	0	67	37	0	0	104	40	59	24	0	1	123	52	171	8	0	0	231	857
Grand Total	471	716	468	0	0	1655	1	245	132	0	2	378	114	211	76	0	6	401	188	720	24	0	1	932	3366
Approach %	28.5	43.3	28.3	0	-	0.3	64.8	34.9	0	-	28.4	52.6	19	0	-	20.2	77.3	2.6	0	-	5.6	21.4	0.7	0	37.7
Totals %	14	21.3	13.9	0	49.2	0	7.3	3.9	0	11.2	3.4	6.3	2.3	0	11.9	5.6	21.4	0.7	0	37.7	5.6	21.4	0.7	0	37.7
PHF	0.83	0.97	0.93	0	0.95	0.25	0.91	0.89	0	0.91	0.71	0.89	0.79	0	0.82	0.9	0.9	0.75	0	0.92	0.9	0.75	0	0.92	0.98
Cars	466	715	467	0	1648	1	243	132	0	376	114	209	72	0	395	187	719	24	0	930	3349	7	0	1	3349
% Cars	98.9	99.9	99.8	0	99.6	100	99.2	100	0	99.5	100	99.1	94.7	0	98.5	99.5	99.9	100	0	99.8	99.5	99.9	0	99.8	99.5
Trucks	5	1	1	0	7	0	1	0	0	1	0	2	4	0	6	1	1	0	0	2	16	0	0	0	16
% Trucks	1.1	0.1	0.2	0	0.4	0	0.4	0	0	0.3	0	0.9	5.3	0	1.5	0.5	0.1	0	0	0.2	0.5	0	0	0	0.5
Bicycles	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
% Bicycles	0	0	0	0	0	0	0.4	0	0	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peds	0	-	-	-	-	2	-	-	-	6	-	-	-	-	1	-	-	-	-	1	-	-	-	-	9
% Peds	0	-	-	-	-	22.2	-	-	-	66.7	-	-	-	-	11.1	-	-	-	-	11.1	-	-	-	-	9

Peak Hour Diagram

Specified Period
From: 15:00:00
To: 18:00:00

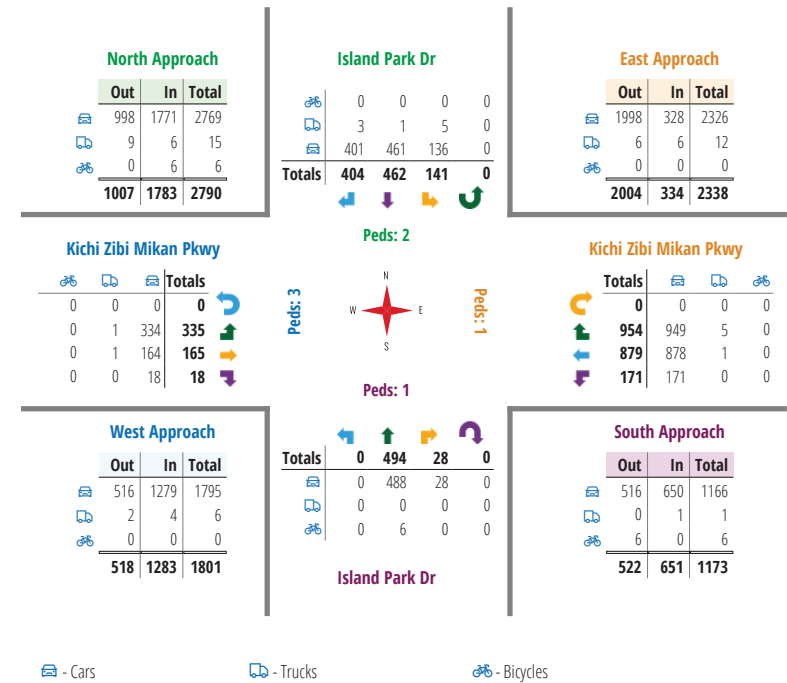
One Hour Peak
From: 16:15:00
To: 17:15:00

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Count Date: Aug 21, 2024

Weather conditions: Clear

** Signalized Intersection **

Major Road: Kichi Zibi Mikan Pkwy runs E/W



Comments

Peak Hour Summary

Intersection: Island Park Dr & Kichi Zibi Mikan Pkwy
Site Code: 2434800001
Count Date: Aug 21, 2024
Period: 15:00 - 18:00

Peak Hour Data (16:15 - 17:15)

	North Approach Island Park Dr						South Approach Island Park Dr						East Approach Kichi Zibi Mikan Pkwy						West Approach Kichi Zibi Mikan Pkwy						Total Vehicles		
Start Time					Peds	Total					Peds	Total					Peds	Total					Peds	Total			
16:15	39	125	91	0	0	255	0	124	9	0	0	133	41	235	237	0	0	513	79	43	4	0	1	126	1027		
16:30	39	108	105	0	0	252	0	119	7	0	0	126	41	209	203	0	0	453	87	50	4	0	0	141	972		
16:45	27	116	110	0	1	253	0	125	7	0	0	132	44	228	259	0	0	531	79	38	4	0	1	121	1037		
17:00	36	113	98	0	1	247	0	126	5	0	1	131	45	207	255	0	1	507	90	34	6	0	1	130	1015		
Grand Total	141	462	404	0	2	1007	0	494	28	0	1	522	171	879	954	0	1	2004	335	165	18	0	3	518	4051		
Approach %	14	45.9	40.1	0	-	-	0	94.6	5.4	0	-	-	8.5	43.9	47.6	0	-	-	64.7	31.9	3.5	0	-	-	-	-	
Totals %	3.5	11.4	10	0	24.9	0	12.2	0.7	0	12.9	4.2	21.7	23.5	0	49.5	8.3	4.1	0.4	0	12.8							
PHF	0.9	0.92	0.92	0	0.99	0	0.98	0.78	0	0.98	0.95	0.94	0.92	0	0.94	0.93	0.83	0.75	0	0.92	0.98						
Cars	136	461	401	0	998	0	488	28	0	516	171	878	949	0	1998	334	164	18	0	516						4028	
% Cars	96.5	99.8	99.3	0	99.1	0	98.8	100	0	98.9	100	100	99.9	99.5	0	99.7	99.7	99.4	100	0	99.6						99.4
Trucks	5	1	3	0	9	0	0	0	0	0	0	1	5	0	6	1	1	0	0	2						17	
% Trucks	3.5	0.2	0.7	0	0.9	0	0	0	0	0	0	0	0.1	0.5	0	0.3	0.3	0.6	0	0						0.4	
Bicycles	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	0	0	0	0						6	
% Bicycles	0	0	0	0	0	0	1.2	0	0	1.1	0	0	0	0	0	0	0	0	0	0						0.1	
Peds					2	-				1	-					1	-			3						7	
% Peds					28.6	-				14.3	-					14.3	-			42.9						-	

Transportation Services - Traffic Services

Turning Movement Count - Study Results

CLEARVIEW AVE @ ISLAND PARK DR

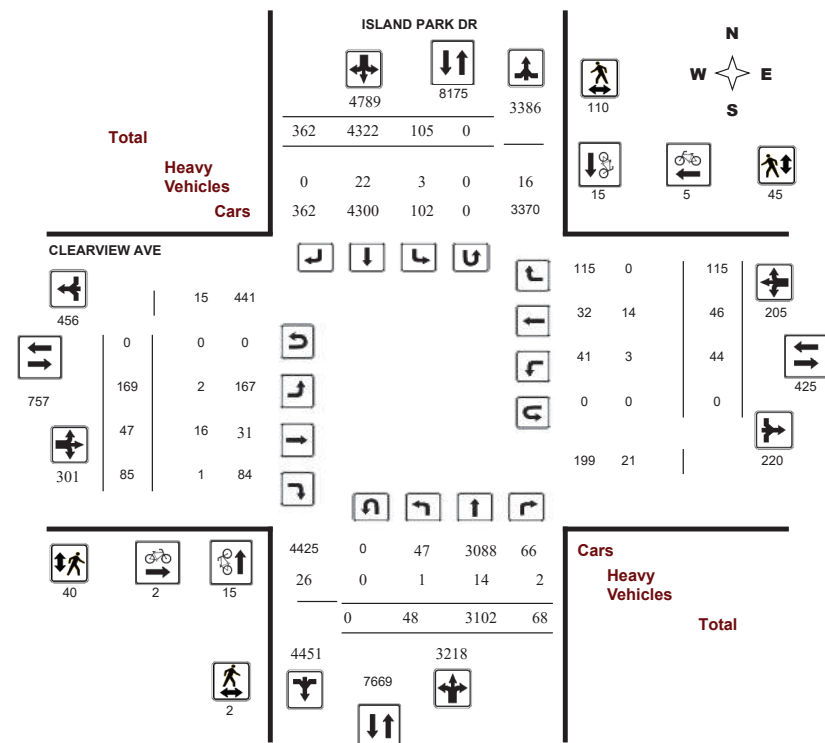
Survey Date: Tuesday, March 21, 2023

WO No: 40857

Start Time: 07:00

Device: Miovision

Full Study Diagram





Transportation Services - Traffic Services

Turning Movement Count - Study Results

CLEARVIEW AVE @ ISLAND PARK DR

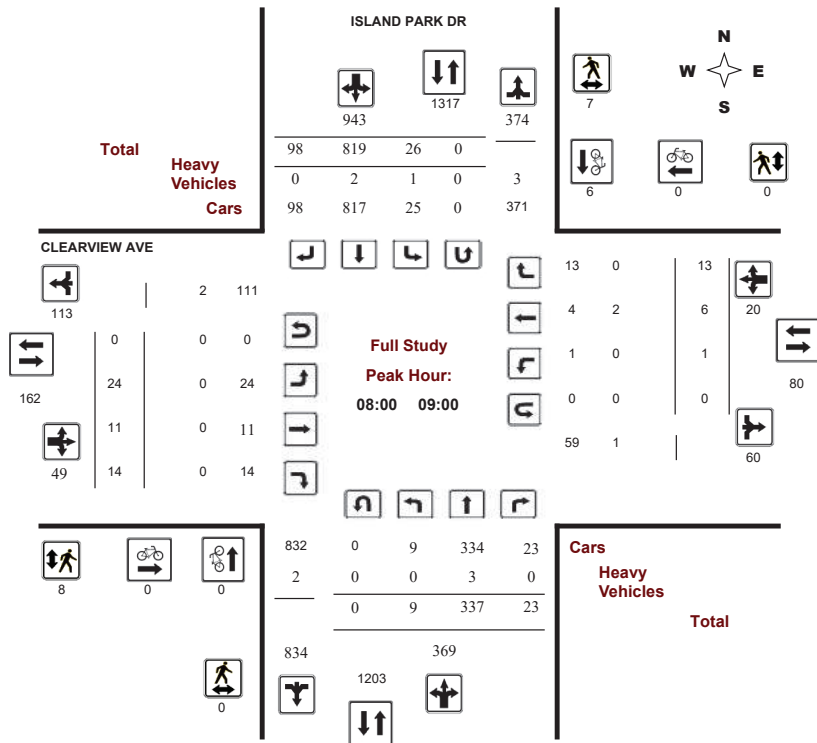
Survey Date: Tuesday, March 21, 2023

WO No: 40857

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

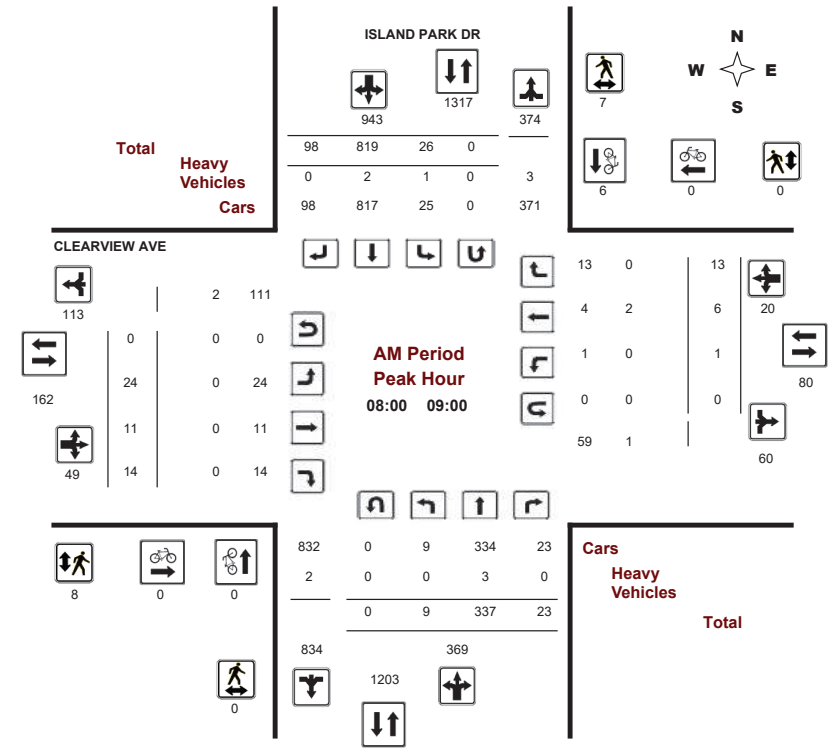
CLEARVIEW AVE @ ISLAND PARK DR

Survey Date: Tuesday, March 21, 2023

WO No: 40857

Start Time: 07:00

Device: Miovision



Comments:



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

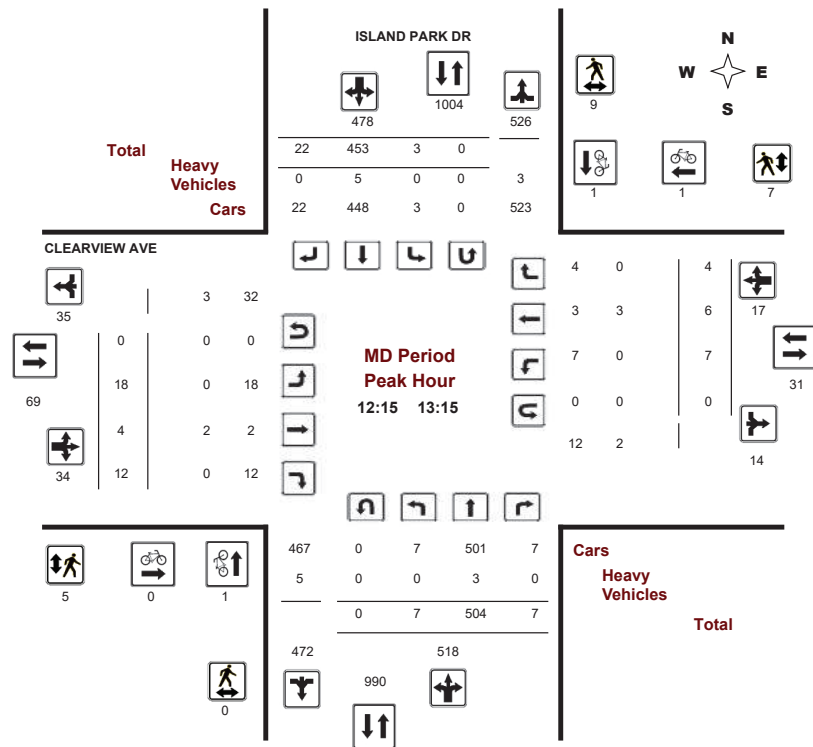
CLEARVIEW AVE @ ISLAND PARK DR

Survey Date: Tuesday, March 21, 2023

Start Time: 07:00

WO No: 40857

Device: Miovision



Comments:



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

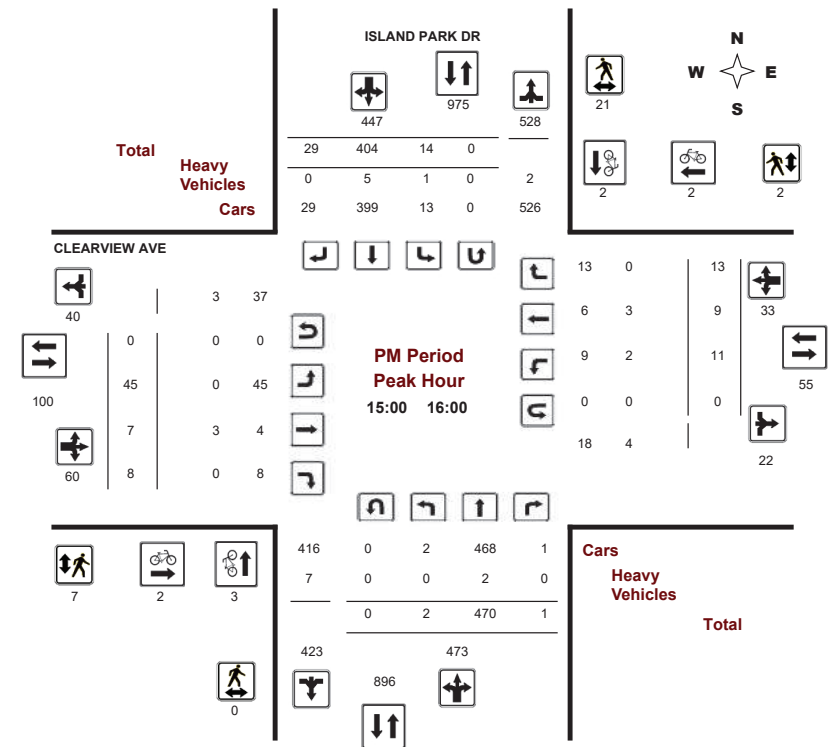
CLEARVIEW AVE @ ISLAND PARK DR

Survey Date: Tuesday, March 21, 2023

Start Time: 07:00

WO No: 40857

Device: Miovision



Comments:



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CLEARVIEW AVE @ ISLAND PARK DR

Survey Date: Tuesday, March 21, 2023

WO No: 40857

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Tuesday, March 21, 2023

Total Observed U-Turns

AADT Factor

Northbound: 0 Southbound: 0

1.00

Eastbound: 0 Westbound: 0

ISLAND PARK DR										CLEARVIEW AVE									
Northbound					Southbound					Eastbound					Westbound				
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
07:00 08:00	6	283	3	292	8	758	58	824	1116	12	3	7	22	1	1	4	6	28	1144
08:00 09:00	9	337	23	369	26	819	98	943	1312	24	11	14	49	1	6	13	20	69	1381
09:00 10:00	10	336	26	372	11	554	50	615	987	18	9	10	37	9	10	13	32	69	1056
11:30 12:30	7	478	10	495	7	427	26	460	955	16	3	12	31	9	3	5	17	48	1003
12:30 13:30	9	503	4	516	5	429	23	457	973	18	4	10	32	4	4	5	13	45	1018
15:00 16:00	2	470	1	473	14	404	29	447	920	45	7	8	60	11	9	13	33	93	1013
16:00 17:00	3	339	0	342	13	483	31	527	869	22	5	7	34	4	5	19	28	62	931
17:00 18:00	2	356	1	359	21	448	47	516	875	14	5	17	36	5	8	43	56	92	967
Sub Total	48	3102	68	3218	105	4322	362	4789	8007	169	47	85	301	44	46	115	205	506	8513
U Turns	0				0				0	0				0				0	0
Total	48	3102	68	3218	105	4322	362	4789	8007	169	47	85	301	44	46	115	205	506	8513
EQ 12Hr	67	4312	95	4473	146	6008	503	6657	11130	235	65	118	418	61	64	160	285	703	11833
Note: These values are calculated by multiplying the totals by the appropriate expansion factor. 1.39																			
AVG 12Hr	67	4312	95	4473	146	7870	659	6657	11130	235	65	118	418	61	64	160	285	703	11833
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor. 1.00																			
AVG 24Hr	88	5649	124	5860	191	10310	863	8721	14580	308	85	155	548	80	84	210	373	921	15501
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

CLEARVIEW AVE @ ISLAND PARK DR

Survey Date: Tuesday, March 21, 2023

WO No: 40857

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

ISLAND PARK DR										CLEARVIEW 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
15:30 15:45	0	104	0	104	4	98	10	112	216	8	2	2	12	0	0	3	3	15	231
15:45 16:00	0	100	0	100	4	93	5	102	202	4	2	0	6	8	5	6	19	25	227
16:00 16:15	0	84	0	84	2	104	8	114	198	2	1	2	5	0	0	1	1	6	204
16:15 16:30	1	95	0	96	3	128	6	137	233	8	1	2	11	2	3	3	8	19	252
16:30 16:45	1	86	0	87	1	119	10	130	217	7	0	2	9	1	1	6	8	17	234
17:15 17:30	0	82	0	82	8	119	12	139	221	4	0	5	9	1	3	10	14	23	244
17:30 17:45	1	91	0	92	4	122	18	144	236	4	0	2	6	1	1	7	9	15	251
17:45 18:00	1	96	1	98	6	110	8	124	222	5	3	4	12	1	3	13	17	29	251
15:15 15:30	1	113	1	115	4	128	6	138	253	25	1	4	30	0	4	1	5	35	288
09:00 09:15	1	82	17	100	6	154	22	182	282	4	5	1	10	6	4	5	15	25	307
16:45 17:00	1	74	0	75	7	132	7	146	221	5	3	1	9	1	1	9	11	20	241
17:00 17:15	0	87	0	87	3	97	9	109	196	1	2	6	9	2	1	13	16	25	221
07:00 07:15	0	76	0	76	0	176	10	186	262	3	1	3	7	1	0	0	1	8	270
07:15 07:30	3	70	0	73	0	220	19	239	312	4	1	0	5	0	1	1	2	7	319
07:30 07:45	2	66	2	70	2	190	13	205	275	1	0	1	2	0	0	1	1	3	278
07:45 08:00	1	71	1	73	6	172	16	194	267	4	1	3	8	0	0	2	2	10	277
08:00 08:15	3	92	4	99	5	191	20	216	315	6	2	1	9	0	1	1	2	11	326
08:15 08:30	2	88	6	96	6	215	23	244	340	2	3	5	10	1	2	5	8	18	358
08:30 08:45	1	68	5	74	11	207	29	247	321	8	4	4	16	0	3	4	7	23	344
08:45 09:00	3	89	8	100	4	206	26	236	336	8	2	4	14	0	0	3	3	17	353
09:15 09:30	4	88	3	95	2	147	15	164	259	4	3	3	10	2	5	7	14	24	283
11:30 11:45	2	119	2	123	2	106	8	116	239	3	0	0	3	2	1	1	4	7	246
11:45 12:00	1	118	2	121	2	98	6	106	227	5	2	4	11	3	0	1	4	15	242
12:00 12:15	4	108	1	113	2	104	7	113	226	4	0	4	8	1	0	2	3	11	237
12:15 12:30	0	133	5	138	1	119	5	125	263	4	1	4	9	3	2	1	6	15	278
12:30 12:45	1	132	1	134	0	101	9	110	244	7	1	3	11	2	2	1	5	16	260
12:45 13:00	1	114	0	115	1	120	3	124	239	5	2	2	9	1	1	2	4	13	252
13:00 13:15	5	125	1	131	1	113	5	119	250	2	0	3	5	1	1	0	2	7	257
13:15 13:30	2	132	2	136	3	95	6	104	240	4	1	2	7	0	0	2	2	9	249
15:00 15:15	1	153	0	154	2	85	8	95	249	8	2	2	12	3	0	3	6	18	267
09:45 10:00	4	82	2	88	2	131	9	142	230	3	1	4	8	0	0	0	0	8	238
09:30 09:45	1	84	4	89	1	122	4	127	216	7	0	2	9	1	1	1	3	12	228
Total:	48	3102	68	3218	105	4322	362	4789	8007	169	47	85	301	44	46	115	205	506	8,513

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CLEARVIEW AVE @ ISLAND PARK DR

Survey Date: Tuesday, March 21, 2023

WO No: 40857

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

Time Period	ISLAND PARK DR			CLEARVIEW AVE			Grand Total
	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	
15:30 15:45	0	0	0	1	1	2	2
15:45 16:00	2	0	2	0	0	0	2
16:00 16:15	0	0	0	0	1	1	1
16:15 16:30	0	0	0	0	0	0	0
16:30 16:45	2	0	2	0	1	1	3
17:15 17:30	2	0	2	0	0	0	2
17:30 17:45	1	0	1	0	0	0	1
17:45 18:00	2	0	2	0	0	0	2
15:15 15:30	0	1	1	1	1	2	3
09:00 09:15	0	1	1	0	0	0	1
16:45 17:00	1	1	2	0	0	0	2
17:00 17:15	1	0	1	0	0	0	1
07:00 07:15	0	1	1	0	0	0	1
07:15 07:30	0	1	1	0	0	0	1
07:30 07:45	0	2	2	0	0	0	2
07:45 08:00	1	0	1	0	0	0	1
08:00 08:15	0	1	1	0	0	0	1
08:15 08:30	0	1	1	0	0	0	1
08:30 08:45	0	2	2	0	0	0	2
08:45 09:00	0	2	2	0	0	0	2
09:15 09:30	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	1	1	2	0	0	0	2
12:45 13:00	0	0	0	0	1	1	1
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	1	1	2	0	0	0	2
09:45 10:00	0	0	0	0	0	0	0
09:30 09:45	0	0	0	0	0	0	0
Total	15	15	30	2	5	7	37



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CLEARVIEW AVE @ ISLAND PARK DR

Survey Date: Tuesday, March 21, 2023

WO No: 40857

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

Time Period	ISLAND PARK DR			CLEARVIEW AVE			Grand Total
	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	
15:30 15:45	0	5	5	2	0	2	7
15:45 16:00	0	14	14	2	0	2	16
16:00 16:15	1	2	3	0	3	3	6
16:15 16:30	0	6	6	3	4	7	13
16:30 16:45	0	7	7	4	3	7	14
17:15 17:30	1	2	3	0	0	0	3
17:30 17:45	0	3	3	3	4	7	10
17:45 18:00	0	4	4	1	6	7	11
15:15 15:30	0	2	2	1	0	1	3
09:00 09:15	0	18	18	3	0	3	21
16:45 17:00	0	5	5	1	2	3	8
17:00 17:15	0	6	6	0	4	4	10
07:00 07:15	0	0	0	0	2	2	2
07:15 07:30	0	2	2	0	0	0	2
07:30 07:45	0	0	0	1	0	1	1
07:45 08:00	0	3	3	0	2	2	5
08:00 08:15	0	0	0	4	0	4	4
08:15 08:30	0	4	4	2	0	2	6
08:30 08:45	0	3	3	1	0	1	4
08:45 09:00	0	0	0	1	0	1	1
09:15 09:30	0	7	7	1	0	1	8
11:30 11:45	0	0	0	0	1	1	1
11:45 12:00	0	1	1	1	0	1	2
12:00 12:15	0	2	2	0	3	3	5
12:15 12:30	0	4	4	2	1	3	7
12:30 12:45	0	1	1	0	4	4	5
12:45 13:00	0	4	4	0	2	2	6
13:00 13:15	0	0	0	3	0	3	3
13:15 13:30	0	3	3	1	1	2	5
15:00 15:15	0	0	0	2	2	4	4
09:45 10:00	0	1	1	0	0	0	1
09:30 09:45	0	1	1	1	1	2	3
Total	2	110	112	40	45	85	197



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CLEARVIEW AVE @ ISLAND PARK DR

Survey Date: Tuesday, March 21, 2023

WO No: 40857

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

ISLAND PARK DR										CLEARVIEW 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		
15:30	15:45	0	0	0	0	1	3	0	4	4	0	0	0	0	0	0	0	0	4		
15:45	16:00	0	1	0	1	0	0	0	0	1	0	1	0	1	2	2	0	4	5		
16:00	16:15	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1		
16:15	16:30	0	1	0	1	0	1	0	1	2	0	1	0	1	0	1	0	1	2		
16:30	16:45	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1		
17:15	17:30	0	1	0	1	0	0	0	0	1	0	0	0	0	0	1	0	1	1		
17:30	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
17:45	18:00	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2		
15:15	15:30	0	1	0	1	0	1	0	1	2	0	1	0	1	0	1	0	1	2		
09:00	09:15	0	1	1	2	0	1	0	1	3	0	0	0	0	1	0	0	1	1		
16:45	17:00	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2		
17:00	17:15	0	0	0	0	0	2	0	2	2	0	1	0	1	0	0	0	0	1		
07:00	07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
07:15	07:30	1	0	0	1	0	2	0	2	3	0	1	0	1	0	0	0	0	1		
07:30	07:45	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
07:45	08:00	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1		
08:00	08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
08:15	08:30	0	0	0	0	0	1	0	1	1	0	0	0	0	0	2	0	2	2		
08:30	08:45	0	2	0	2	1	1	0	2	4	0	0	0	0	0	0	0	0	0		
08:45	09:00	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
09:15	09:30	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	2		
11:30	11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1		
11:45	12:00	0	2	0	2	1	2	0	3	5	1	1	1	3	0	0	0	0	3		
12:00	12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
12:15	12:30	0	1	0	1	0	0	0	0	1	0	1	0	1	0	1	0	1	2		
12:30	12:45	0	0	0	0	0	3	0	3	3	0	0	0	0	0	1	0	1	1		
12:45	13:00	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1		
13:00	13:15	0	2	0	2	0	2	0	2	4	0	0	0	0	0	1	0	1	1		
13:15	13:30	0	0	0	0	0	2	0	2	2	0	1	0	1	0	0	0	0	1		
15:00	15:15	0	0	0	0	0	1	0	1	1	0	1	0	1	0	0	0	0	1		
09:45	10:00	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1		
09:30	09:45	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0		
Total:	None	1	14	2	17	3	22	0	25	42	2	16	1	19	3	14	0	17	36		



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CLEARVIEW AVE @ ISLAND PARK DR

Survey Date: Tuesday, March 21, 2023

WO No: 40857

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

		ISLAND PARK DR				CLEARVIEW AVE					
		Northbound	Southbound	Eastbound	Westbound	Northbound	Southbound	Eastbound	Westbound		
Time Period		U-Turn Total	U-Turn Total	U-Turn Total	U-Turn Total	U-Turn Total	U-Turn Total	U-Turn Total	U-Turn Total	Total	
15:30	15:45	0	0	0	0	0	0	0	0	0	
15:45	16:00	0	0	0	0	0	0	0	0	0	
16:00	16:15	0	0	0	0	0	0	0	0	0	
16:15	16:30	0	0	0	0	0	0	0	0	0	
16:30	16:45	0	0	0	0	0	0	0	0	0	
17:15	17:30	0	0	0	0	0	0	0	0	0	
17:30	17:45	0	0	0	0	0	0	0	0	0	
17:45	18:00	0	0	0	0	0	0	0	0	0	
15:15	15:30	0	0	0	0	0	0	0	0	0	
09:00	09:15	0	0	0	0	0	0	0	0	0	
16:45	17:00	0	0	0	0	0	0	0	0	0	
17:00	17:15	0	0	0	0	0	0	0	0	0	
07:00	07:15	0	0	0	0	0	0	0	0	0	
07:15	07:30	0	0	0	0	0	0	0	0	0	
07:30	07:45	0	0	0	0	0	0	0	0	0	
07:45	08:00	0	0	0	0	0	0	0	0	0	
08:00	08:15	0	0	0	0	0	0	0	0	0	
08:15	08:30	0	0	0	0	0	0	0	0	0	
08:30	08:45	0	0	0	0	0	0	0	0	0	
08:45	09:00	0	0	0	0	0	0	0	0	0	
09:15	09:30	0	0	0	0	0	0	0	0	0	
11:30	11:45	0	0	0	0	0	0	0	0	0	
11:45	12:00	0	0	0	0	0	0	0	0	0	
12:00	12:15	0	0	0	0	0	0	0	0	0	
12:15	12:30	0	0	0	0	0	0	0	0	0	
12:30	12:45	0	0	0	0	0	0	0	0	0	
12:45	13:00	0	0	0	0	0	0	0	0	0	
13:00	13:15	0	0	0	0	0	0	0	0	0	
13:15	13:30	0	0	0	0	0	0	0	0	0	
15:00	15:15	0	0	0	0	0	0	0	0	0	
09:45	10:00	0	0	0	0	0	0	0	0	0	
09:30	09:45	0	0	0	0	0	0	0	0	0	
Total		0	0	0	0	0	0	0	0	0	



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ISLAND PARK DR @ SCOTT ST

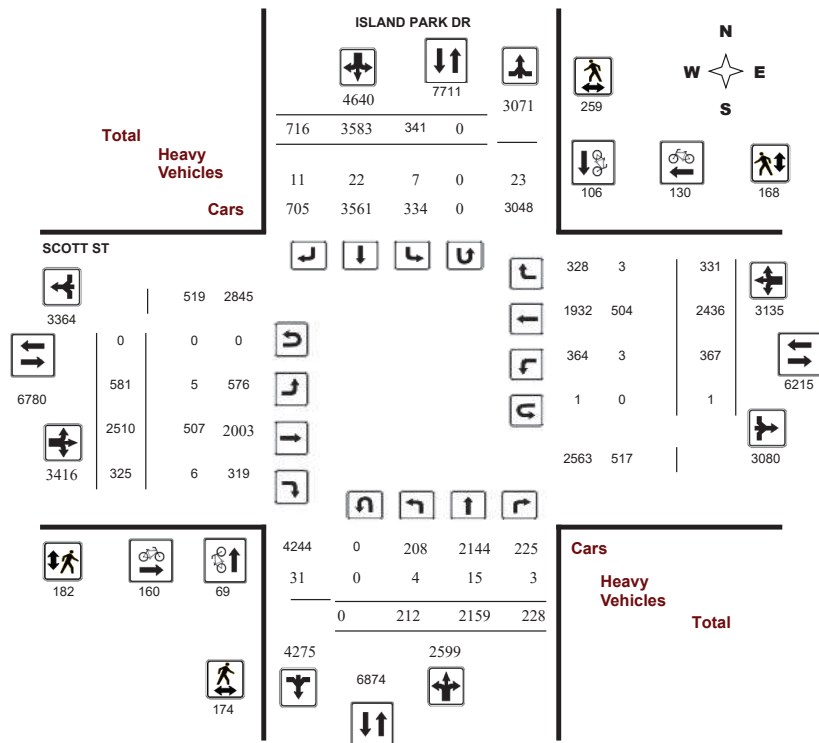
Survey Date: Thursday, October 27, 2022

WO No: 40675

Start Time: 07:00

Device: Miovision

Full Study Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ISLAND PARK DR @ SCOTT ST

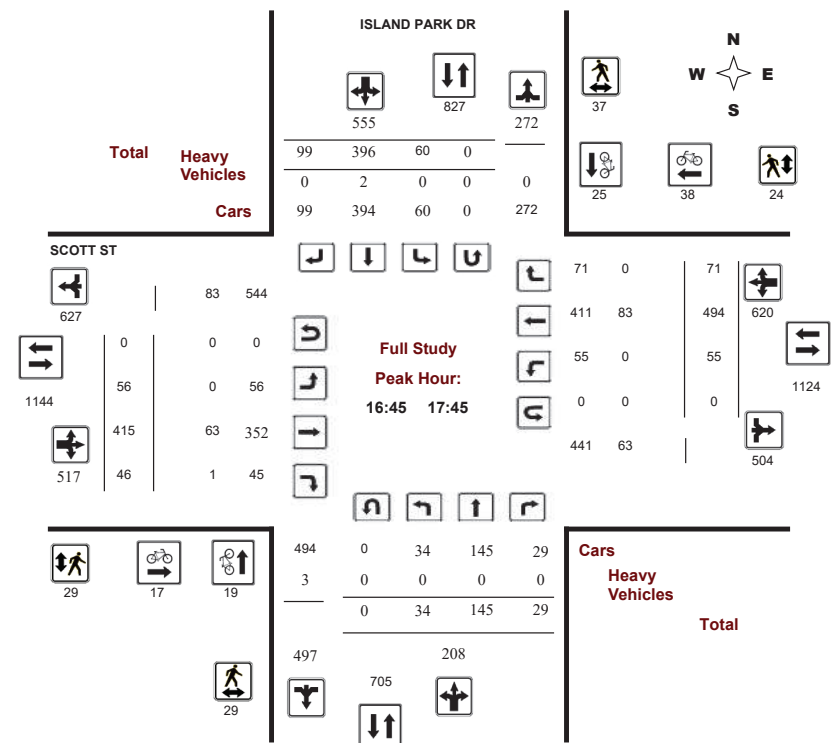
Survey Date: Thursday, October 27, 2022

WO No: 40675

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram





Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

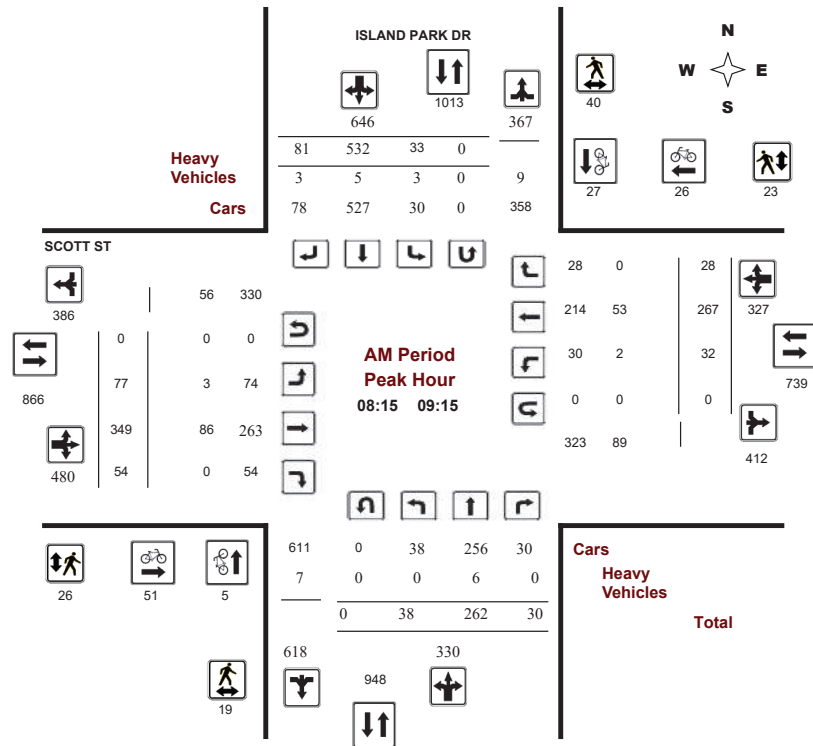
ISLAND PARK DR @ SCOTT ST

Survey Date: Thursday, October 27, 2022

Start Time: 07:00

WO No: 40675

Device: Miovision



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

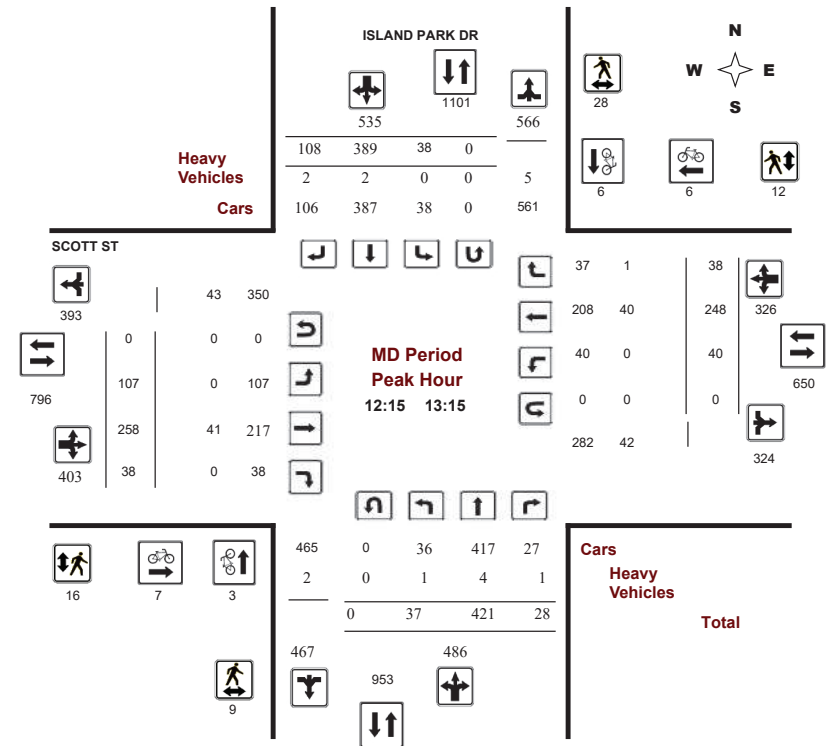
ISLAND PARK DR @ SCOTT ST

Survey Date: Thursday, October 27, 2022

Start Time: 07:00

WO No: 40675

Device: Miovision





Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

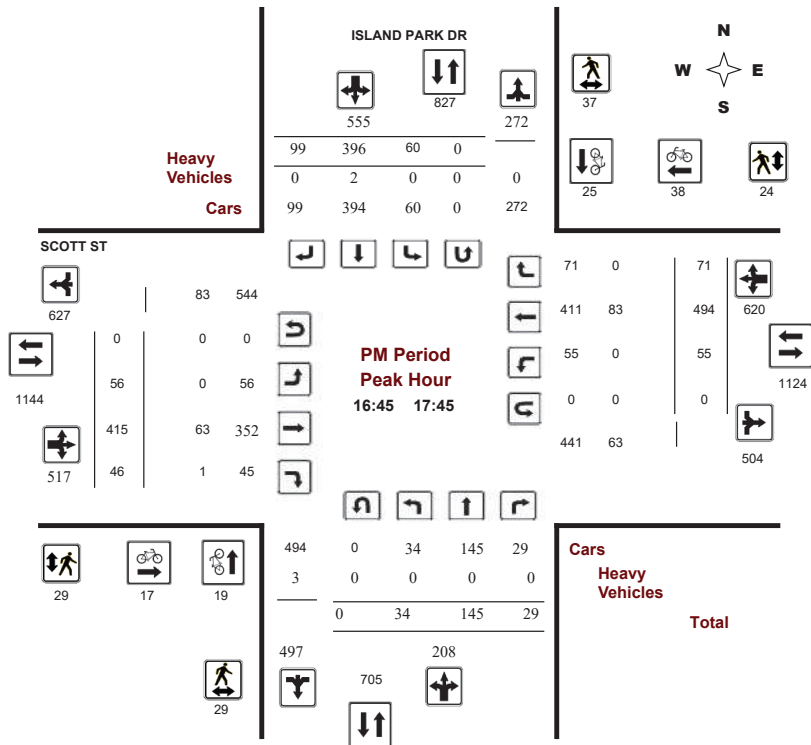
ISLAND PARK DR @ SCOTT ST

Survey Date: Thursday, October 27, 2022

Start Time: 07:00

WO No: 40675

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ISLAND PARK DR @ SCOTT ST

Survey Date: Thursday, October 27, 2022

Start Time: 07:00

WO No: 40675

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, October 27, 2022

Total Observed U-Turns

AADT Factor

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

ISLAND PARK DR										SCOTT ST									
Northbound					Southbound					Eastbound					Westbound				
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	EB TOT	LT	ST	RT	WB TOT	STR TOT
07:00 08:00	20	241	31	292	37	604	77	718	1010	48	248	27	323	32	187	17	236	559	1569
08:00 09:00	35	237	32	304	32	531	76	639	943	76	340	51	467	33	256	26	315	782	1725
09:00 10:00	22	328	22	372	40	508	88	636	1008	75	267	50	392	24	228	39	291	683	1691
11:30 12:30	29	378	19	426	47	406	111	564	990	87	247	41	375	35	257	39	331	706	1696
12:30 13:30	41	406	26	473	35	370	93	498	971	98	245	30	373	41	228	44	313	686	1657
15:00 16:00	15	261	45	321	43	371	71	485	806	76	341	41	458	69	345	43	457	915	1721
16:00 17:00	24	164	28	216	41	409	97	547	763	64	388	34	486	76	448	70	594	1080	1843
17:00 18:00	26	144	25	195	66	384	103	553	748	57	434	51	542	57	487	53	597	1139	1887
Sub Total	212	2159	228	2599	341	3583	716	4640	7239	581	2510	325	3416	367	2436	331	3134	6550	13789
U Turns	0				0				0	0				0	1				1
Total	212	2159	228	2599	341	3583	716	4640	7239	581	2510	325	3416	367	2436	331	3135	6551	13790
EQ 12Hr	295	3001	317	3613	474	4980	995	6450	10062	808	3489	452	4748	510	3386	460	4358	9106	19168
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.										1.39									
AVG 12Hr	266	2701	285	3252	427	5872	1173	5805	9056	727	3140	407	4273	459	3047	414	3922	8195	17251
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.										.90									
AVG 24Hr	348	3538	373	4260	559	7692	1537	7605	11863	952	4113	533	5598	601	3992	542	5138	10735	22599
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

ISLAND PARK DR @ SCOTT ST

Survey Date: Thursday, October 27, 2022

WO No: 40675

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

ISLAND PARK DR										SCOTT ST									
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	3	46	4	53	9	163	14	186	239	8	50	3	61	5	39	2	47	108	347
07:15 07:30	4	63	2	69	4	150	19	173	242	9	47	10	66	5	28	4	37	103	345
07:30 07:45	9	63	8	80	9	149	23	181	261	14	52	3	69	10	50	5	65	134	395
07:45 08:00	4	69	17	90	15	142	21	178	268	17	99	11	127	12	70	6	88	215	483
08:00 08:15	6	72	6	84	9	142	16	167	251	17	82	12	111	10	40	8	58	169	420
08:15 08:30	4	61	7	72	4	146	14	164	236	23	90	10	123	7	78	5	90	213	449
08:30 08:45	13	50	13	76	12	124	19	155	231	20	79	14	113	10	63	5	78	191	422
08:45 09:00	12	54	6	72	7	119	27	153	225	16	89	15	120	6	75	8	89	209	434
09:00 09:15	9	97	4	110	10	143	21	174	284	18	91	15	124	9	51	10	70	194	478
09:15 09:30	4	73	7	84	13	122	26	161	245	26	64	10	100	3	59	10	72	172	417
09:30 09:45	4	82	3	89	10	122	22	154	243	20	51	12	83	6	70	11	87	170	413
09:45 10:00	5	76	8	89	7	121	19	147	236	11	61	13	85	6	48	8	62	147	383
11:30 11:45	7	95	2	104	11	126	21	158	262	19	64	10	93	6	48	9	63	156	418
11:45 12:00	12	88	4	104	10	87	24	121	225	24	56	6	86	6	64	15	85	171	396
12:00 12:15	4	94	5	103	13	92	32	137	240	14	53	9	76	11	72	6	89	165	405
12:15 12:30	6	101	8	115	13	101	34	148	263	30	74	16	120	12	73	9	94	214	477
12:30 12:45	13	93	12	118	11	100	21	132	250	27	68	8	103	10	63	14	87	190	440
12:45 13:00	11	126	5	142	4	94	27	125	267	24	62	7	93	9	48	8	65	158	425
13:00 13:15	7	101	3	111	10	94	26	130	241	26	54	7	87	9	64	7	80	167	408
13:15 13:30	10	86	6	102	10	82	19	111	213	21	61	8	90	13	53	15	81	171	384
15:00 15:15	2	110	8	120	7	99	16	122	242	29	66	12	107	14	69	13	96	203	445
15:15 15:30	5	63	15	83	10	98	18	126	209	24	82	14	120	11	81	10	102	222	431
15:30 15:45	2	54	14	70	12	82	15	109	179	15	104	9	128	21	104	11	136	264	443
15:45 16:00	6	34	8	48	14	92	22	128	176	8	89	6	103	23	91	9	123	226	402
16:00 16:15	8	42	8	58	8	93	21	122	180	17	89	8	114	25	114	13	152	266	446
16:15 16:30	1	47	2	50	10	101	23	134	184	18	95	6	119	19	113	17	149	268	452
16:30 16:45	4	40	6	50	12	103	25	140	190	15	111	11	137	19	94	17	130	267	457
16:45 17:00	11	35	12	58	11	112	28	151	209	14	93	9	116	13	127	23	163	279	488
17:00 17:15	2	35	4	41	11	96	25	132	173	14	107	16	137	16	130	14	160	297	470
17:15 17:30	13	36	6	55	20	84	22	126	181	17	106	10	133	13	111	20	144	277	458
17:30 17:45	8	39	7	54	18	104	24	146	200	11	109	11	131	13	126	14	153	284	484
17:45 18:00	3	34	8	45	17	100	32	149	194	15	112	14	141	15	120	5	140	281	475
Total:	212	2159	228	2599	341	3583	716	4640	7239	581	2510	325	3416	367	2436	331	3135	6551	13,790

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ISLAND PARK DR @ SCOTT ST

Survey Date: Thursday, October 27, 2022

WO No: 40675

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

ISLAND PARK DR							SCOTT ST							
Time Period	Northbound		Southbound		Street Total		Eastbound		Westbound		Street Total		Grand Total	
07:00 07:15	2		1		3		1		1		2		5	
07:15 07:30	2		1		3		2		1		3		6	
07:30 07:45	2		2		4		6		1		7		11	
07:45 08:00	4		8		12		11		6		17		29	
08:00 08:15	1		6		7		9		4		13		20	
08:15 08:30	1		9		10		15		1		16		26	
08:30 08:45	1		10		11		15		6		21		32	
08:45 09:00	2		3		5		13		14		27		32	
09:00 09:15	1		5		6		8		5		13		19	
09:15 09:30	0		2		2		7		1		8		10	
09:30 09:45	0		4		4		3		1		4		8	
09:45 10:00	3		1		4		1		2		3		7	
11:30 11:45	0		0		0		1		2		3		3	
11:45 12:00	3		1		4		3		3		6		10	
12:00 12:15	1		2		3		2		2		4		7	
12:15 12:30	2		1		3		3		3		6		9	
12:30 12:45	0		2		2		1		0		1		3	
12:45 13:00	0		2		2		2		1		3		5	
13:00 13:15	1		1		2		1		2		3		5	
13:15 13:30	0		3		3		2		4		6		9	
15:00 15:15	0		2		2		5		0		5		7	
15:15 15:30	2		1		3		5		3		8		11	
15:30 15:45	10		1		11		8		5		13		24	
15:45 16:00	1		0		1		1		4		5		6	
16:00 16:15	1		5		6		7		5		12		18	
16:15 16:30	7		2		9		4		7		11		20	
16:30 16:45	0		4		4		2		6		8		12	
16:45 17:00	4		12		16		3		12		15		31	
17:00 17:15	5		4		9		10		14		24		33	
17:15 17:30	7		7		14		3		8		11		25	
17:30 17:45	3		2		5		1		4		5		10	
17:45 18:00	3		2		5		5		2		7		12	
Total	69		106		175		160		130		290		465	



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ISLAND PARK DR @ SCOTT ST

Survey Date: Thursday, October 27, 2022

WO No: 40675

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

Time Period	ISLAND PARK DR		Total	SCOTT ST		Total	Grand Total
	NB Approach (E or W Crossing)	SB Approach (E or W Crossing)		EB Approach (N or S Crossing)	WB Approach (N or S Crossing)		
07:00 07:15	3	7	10	2	3	5	15
07:15 07:30	2	8	10	4	4	8	18
07:30 07:45	1	4	5	4	1	5	10
07:45 08:00	19	4	23	11	14	25	48
08:00 08:15	7	9	16	12	5	17	33
08:15 08:30	5	15	20	12	5	17	37
08:30 08:45	4	11	15	8	9	17	32
08:45 09:00	8	10	18	1	5	6	24
09:00 09:15	2	4	6	5	4	9	15
09:15 09:30	2	15	17	4	3	7	24
09:30 09:45	1	2	3	2	1	3	6
09:45 10:00	5	6	11	4	6	10	21
11:30 11:45	4	8	12	5	8	13	25
11:45 12:00	3	1	4	1	1	2	6
12:00 12:15	3	4	7	3	2	5	12
12:15 12:30	1	9	10	3	1	4	14
12:30 12:45	3	6	9	6	4	10	19
12:45 13:00	4	5	9	3	3	6	15
13:00 13:15	1	8	9	4	4	8	17
13:15 13:30	7	3	10	6	4	10	20
15:00 15:15	5	7	12	3	7	10	22
15:15 15:30	7	7	14	4	10	14	28
15:30 15:45	6	11	17	4	7	11	28
15:45 16:00	7	11	18	5	9	14	32
16:00 16:15	11	10	21	11	3	14	35
16:15 16:30	11	10	21	7	5	12	33
16:30 16:45	5	19	24	15	3	18	42
16:45 17:00	9	13	22	8	10	18	40
17:00 17:15	8	10	18	7	2	9	27
17:15 17:30	10	8	18	10	9	19	37
17:30 17:45	2	6	8	4	3	7	15
17:45 18:00	8	8	16	4	13	17	33
Total	174	259	433	182	168	350	783



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ISLAND PARK DR @ SCOTT ST

Survey Date: Thursday, October 27, 2022

WO No: 40675

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

ISLAND PARK DR										SCOTT ST										
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	1	0	1	0	1	2	0	25	0	45	0	20	0	45	90	46
07:15	07:30	0	0	0	1	0	0	0	1	2	0	18	1	30	0	11	1	30	60	31
07:30	07:45	0	0	0	0	0	0	1	1	1	0	22	0	43	0	20	0	42	85	43
07:45	08:00	0	0	1	2	1	0	0	1	3	0	22	1	43	0	20	0	44	87	45
08:00	08:15	0	2	0	2	0	0	0	2	4	0	22	0	38	0	16	0	38	76	40
08:15	08:30	0	1	0	3	0	2	1	5	8	1	20	0	39	0	17	0	37	76	42
08:30	08:45	0	2	0	3	1	1	1	6	9	1	19	0	35	0	14	0	34	69	39
08:45	09:00	0	1	0	3	0	1	1	4	7	1	24	0	40	1	14	0	39	79	43
09:00	09:15	0	2	0	4	2	1	0	5	9	0	23	0	31	1	8	0	34	65	37
09:15	09:30	1	0	0	3	0	2	0	2	5	0	16	0	30	0	13	0	29	59	32
09:30	09:45	0	0	0	2	0	1	0	1	3	0	17	1	32	0	14	0	31	63	33
09:45	10:00	0	1	0	1	0	0	1	3	4	0	10	0	24	0	13	1	24	48	26
11:30	11:45	0	1	0	2	0	0	0	1	3	0	8	1	18	0	9	0	17	35	19
11:45	12:00	0	0	0	2	1	1	0	3	5	1	11	1	24	0	11	0	23	47	26
12:00	12:15	0	0	0	0	0	0	1	1	1	0	13	0	26	0	12	0	25	51	26
12:15	12:30	0	0	0	1	0	1	0	1	2	0	10	0	20	0	10	0	20	40	21
12:30	12:45	0	1	1	3	0	1	0	2	5	0	8	0	20	0	12	0	21	41	23
12:45	13:00	0	2	0	2	0	0	2	4	6	0	10	0	21	0	9	0	19	40	23
13:00	13:15	1	1	0	2	0	0	0	2	4	0	13	0	23	0	9	1	23	46	25
13:15	13:30	2	0	0	3	0	1	1	2	5	0	11	0	22	0	8	0	19	41	23
15:00	15:15	0	0	0	1	0	1	1	3	4	1	11	0	34	0	21	0	32	66	35
15:15	15:30	0	0	0	1	0	1	0	1	2	0	10	0	29	0	19	0	29	58	30
15:30	15:45	0	0	1	2	1	0	0	1	3	0	11	0	35	1	24	0	38	73	38
15:45	16:00	0	0	0	1	0	1	0	1	2	0	18	0	30	0	12	0	30	60	31
16:00	16:15	0	0	0	0	0	0	0	0	0	0	17	0	40	0	23	0	40	80	40
16:15	16:30	0	1	0	4	0	3	1	5	9	0	15	0	35	0	19	0	34	69	39
16:30	16:45	0	0	0	1	0	1	0	1	2	0	28	0	52	0	24	0	52	104	53
16:45	17:00	0	0	0	2	0	2	0	2	4	0	18	0	33	0	15	0	33	66	35
17:00	17:15	0	0	0	0	0	0	0	0	0	0	14	0	38	0	24	0	38	76	38
17:15	17:30	0	0	0	0	0	0	0	0	0	0	18	0	44	0	26	0	44	88	44
17:30	17:45	0	0	0	1	0	0	0	0	1	0	13	1	32	0	18	0	31	63	32
17:45	18:00	0	0	0	0	1	0	0	1	1	0	12	0	31	0	19	0	32	63	32
Total:	None	4	15	3	53	7	22	11	63	116	5	507	6	1037	3	504	3	1027	2064	1,090



Transportation Services - Traffic Services

Turning Movement Count - Study Results

ISLAND PARK DR @ SCOTT ST

Survey Date: Thursday, October 27, 2022

WO No: 40675

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

ISLAND PARK DR

SCOTT ST

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



Transportation Services - Traffic Services

Turning Movement Count - Study Results

LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

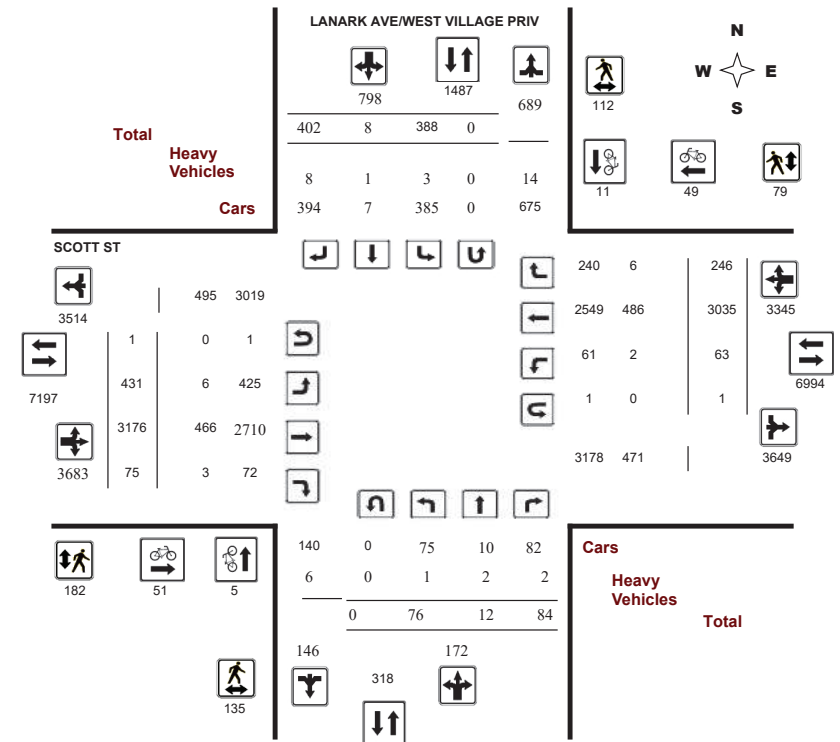
Survey Date: Thursday, November 30, 2023

WO No: 41268

Start Time: 07:00

Device: Miovision

Full Study Diagram





Transportation Services - Traffic Services

Turning Movement Count - Study Results

LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

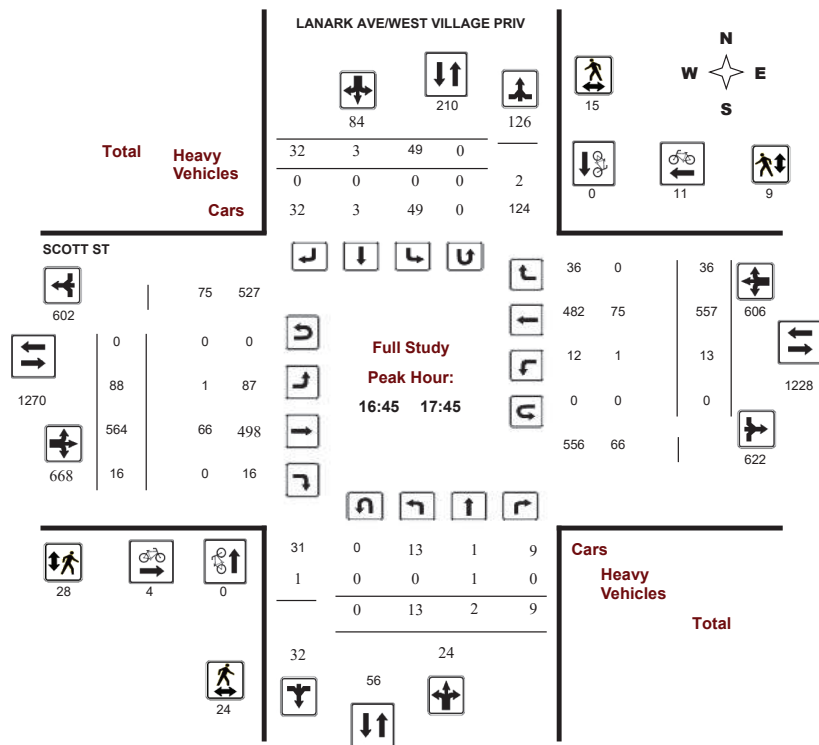
Survey Date: Thursday, November 30, 2023

WO No: 41268

Start Time: 07:00

Device: Miovision

Full Study Peak Hour Diagram



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

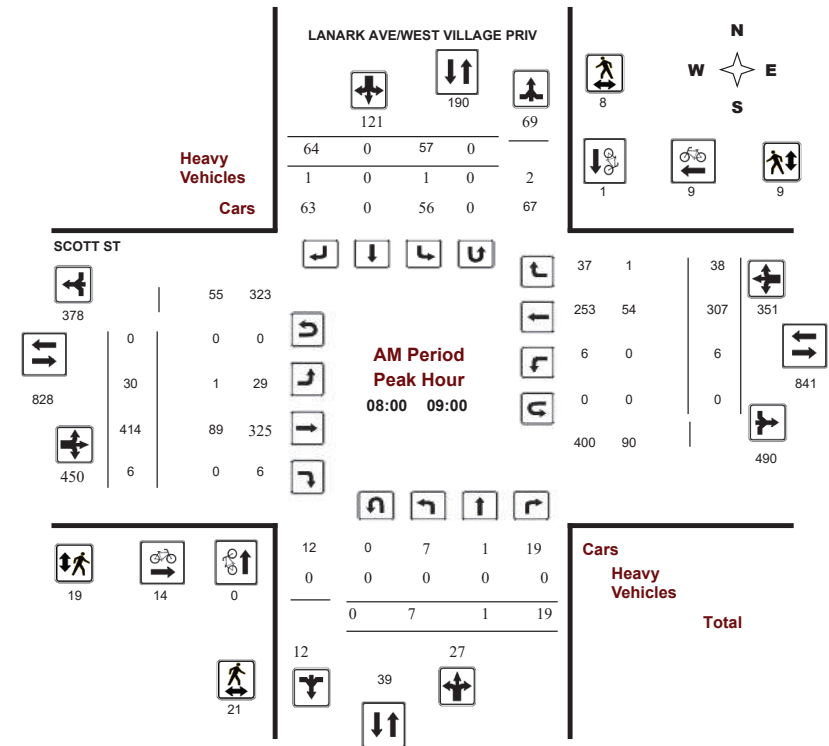
LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

WO No: 41268

Start Time: 07:00

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

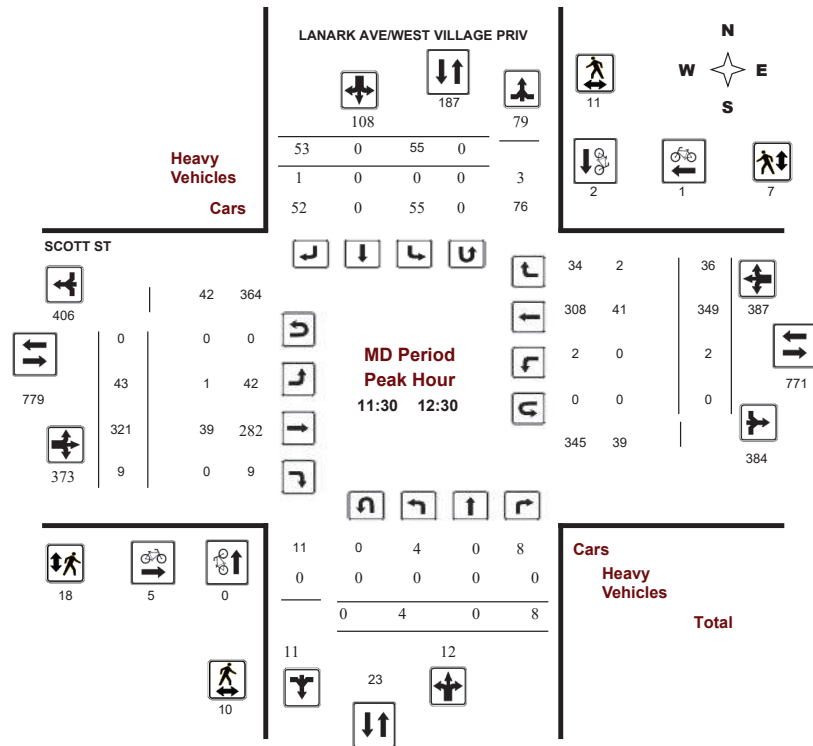
LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

Start Time: 07:00

WO No: 41268

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

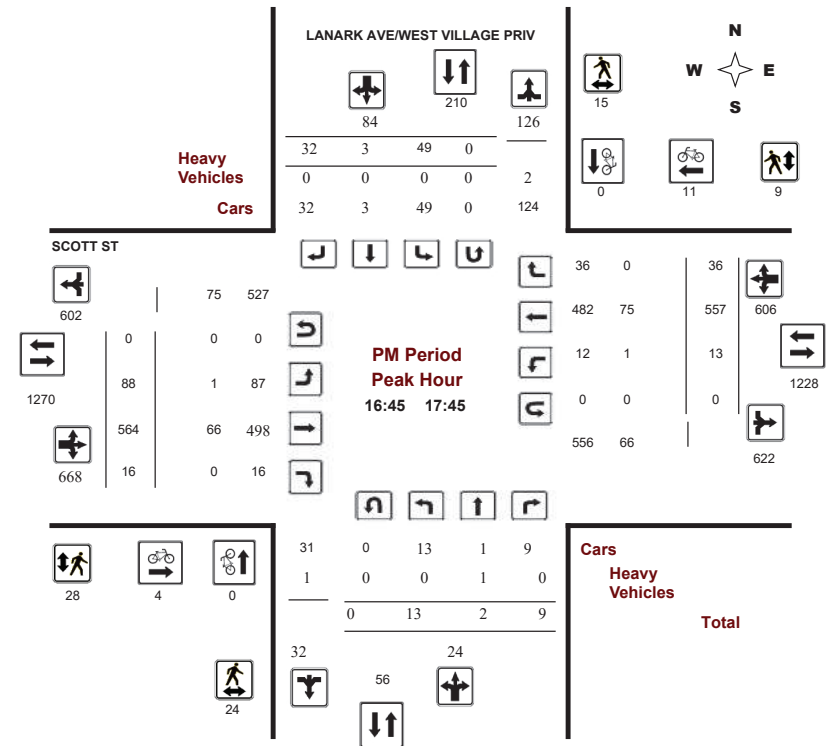
LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

Start Time: 07:00

WO No: 41268

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Study Results

LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

WO No: 41268

Start Time: 07:00

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, November 30, 2023

Total Observed U-Turns

AADT Factor

Northbound: 0 Southbound: 0

Eastbound: 1 Westbound: 1

LANARK AVE/WEST VILLAGE PRIV										SCOTT ST									
Northbound					Southbound					Eastbound					Westbound				
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT	Grand Total
07:00 08:00	11	0	10	21	50	0	71	121	142	17	283	1	301	5	249	12	266	567	709
08:00 09:00	7	1	19	27	57	0	64	121	148	30	414	6	450	6	307	38	351	801	949
09:00 10:00	12	0	8	20	40	0	46	86	106	27	296	5	328	9	297	19	325	653	759
11:30 12:30	4	0	8	12	55	0	53	108	120	43	321	9	373	2	349	36	387	760	880
12:30 13:30	4	1	4	9	36	1	47	84	93	56	329	9	394	6	292	37	335	729	822
15:00 16:00	9	7	18	34	62	2	46	110	144	82	517	11	610	12	476	36	524	1134	1278
16:00 17:00	11	2	11	24	49	3	35	87	111	90	478	13	581	13	540	30	583	1164	1275
17:00 18:00	18	1	6	25	39	2	40	81	106	86	538	21	645	10	525	38	573	1218	1324
Sub Total	76	12	84	172	388	8	402	798	970	431	3176	75	3682	63	3035	246	3344	7026	7996
U Turns	0				0				0	1				1				2	2
Total	76	12	84	172	388	8	402	798	970	431	3176	75	3683	63	3035	246	3345	7028	7998
EQ 12Hr	106	17	117	239	539	11	559	1109	1348	599	4415	104	5119	88	4219	342	4650	9769	11117
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.										1.39									
AVG 12Hr	95	15	105	215	485	13	659	998	1213	539	3974	94	4607	79	3797	308	4185	8792	10005
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.										.90									
AVG 24Hr	124	20	138	282	635	17	863	1307	1589	706	5206	123	6035	103	4974	403	5482	11518	13107
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

LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

WO No: 41268

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

LANARK AVE/WEST VILLAGE PRIV										SCOTT ST									
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	2	0	0	2	9	0	8	17	19	4	66	0	70	0	50	1	51	121	140
07:15 07:30	1	0	3	4	11	0	20	31	35	4	64	1	69	1	49	2	52	121	156
07:30 07:45	5	0	4	9	16	0	16	32	41	5	70	0	75	1	69	7	77	152	193
07:45 08:00	3	0	3	6	14	0	27	41	47	4	83	0	87	3	81	2	86	173	220
08:00 08:15	3	0	5	8	10	0	14	24	32	7	111	1	119	0	68	12	80	199	231
08:15 08:30	0	1	4	5	16	0	17	33	38	9	117	3	129	4	68	8	80	209	247
08:30 08:45	1	0	4	5	9	0	10	19	24	7	102	2	111	0	80	12	92	203	227
08:45 09:00	3	0	6	9	22	0	23	45	54	7	84	0	91	2	91	6	99	190	244
09:00 09:15	1	0	1	2	14	0	12	26	28	12	104	2	118	5	72	7	84	202	230
09:15 09:30	3	0	3	6	9	0	12	21	27	10	74	2	86	2	85	7	94	180	207
09:30 09:45	5	0	0	5	6	0	14	20	25	4	63	1	68	0	72	2	74	142	167
09:45 10:00	3	0	4	7	11	0	8	19	26	1	55	0	56	2	68	3	73	129	155
11:30 11:45	2	0	2	4	14	0	11	25	29	9	85	4	98	0	90	10	100	198	227
11:45 12:00	1	0	3	4	13	0	12	25	29	10	80	1	91	0	105	8	113	204	233
12:00 12:15	0	0	2	2	16	0	14	30	32	11	70	2	83	2	76	8	86	169	201
12:15 12:30	1	0	1	2	12	0	16	28	30	13	86	2	101	0	78	10	88	189	219
12:30 12:45	1	1	1	3	9	1	12	22	25	15	82	2	99	3	82	7	92	191	216
12:45 13:00	1	0	0	1	13	0	10	23	24	21	84	1	106	0	75	15	90	196	220
13:00 13:15	1	0	2	3	10	0	12	22	25	11	83	2	96	2	75	9	86	182	207
13:15 13:30	1	0	1	2	4	0	13	17	19	9	80	4	93	1	60	6	67	160	179
15:00 15:15	3	2	3	8	12	1	8	21	29	19	118	1	138	4	104	9	117	255	284
15:15 15:30	1	3	5	9	19	1	17	37	46	24	121	3	148	3	123	14	141	289	335
15:30 15:45	4	2	5	11	17	0	11	28	39	17	145	3	165	2	115	5	122	287	326
15:45 16:00	1	0	5	6	14	0	10	24	30	22	133	4	159	3	134	8	145	304	334
16:00 16:15	2	0	0	2	10	0	15	25	27	19	113	4	136	3	133	8	144	280	307
16:15 16:30	4	0	3	7	12	0	7	19	26	22	125	4	152	1	128	9	138	290	316
16:30 16:45	4	0	3	7	12	2	9	23	30	29	103	2	134	4	131	5	140	274	304
16:45 17:00	1	2	5	8	15	1	4	20	28	20	137	3	160	5	148	8	161	321	349
17:00 17:15	3	0	2	5	9	0	11	20	25	20	148	1	169	3	153	4	160	329	354
17:15 17:30	6	0	2	8	12	2	10	24	32	26	148	6	180	2	136	16	154	334	366
17:30 17:45	3	0	0	3	13	0	7	20	23	22	131	6	159	3	120	8	131	290	313
17:45 18:00	6	1	2	9	5	0	12	17	26	18	111	8	137	2	116	10	128	265	291
Total:	76	12	84	172	388	8	402	798	970	431	3176	75	3683	63	3035	246	3345	7028	7998

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

WO No: 41268

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

LANARK AVE/WEST VILLAGE PRIV				SCOTT ST			
Time Period	Northbound	Southbound	Street Total	Eastbound	Westbound	Street Total	Grand Total
07:00 07:15	0	0	0	1	0	1	1
07:15 07:30	0	0	0	2	0	2	2
07:30 07:45	0	0	0	1	2	3	3
07:45 08:00	0	2	2	3	0	3	5
08:00 08:15	0	0	0	1	1	2	2
08:15 08:30	0	0	0	4	3	7	7
08:30 08:45	0	0	0	7	4	11	11
08:45 09:00	0	1	1	2	1	3	4
09:00 09:15	0	0	0	1	0	1	1
09:15 09:30	0	0	0	0	1	1	1
09:30 09:45	0	0	0	0	0	0	0
09:45 10:00	0	0	0	2	1	3	3
11:30 11:45	0	1	1	2	0	2	3
11:45 12:00	0	1	1	3	0	3	4
12:00 12:15	0	0	0	0	0	0	0
12:15 12:30	0	0	0	0	1	1	1
12:30 12:45	0	1	1	1	2	3	4
12:45 13:00	0	0	0	0	0	0	0
13:00 13:15	1	0	1	1	2	3	4
13:15 13:30	0	0	0	2	0	2	2
15:00 15:15	0	1	1	4	2	6	7
15:15 15:30	3	0	3	1	1	2	5
15:30 15:45	0	1	1	2	2	4	5
15:45 16:00	0	0	0	2	1	3	3
16:00 16:15	0	0	0	0	3	3	3
16:15 16:30	1	2	3	2	4	6	9
16:30 16:45	0	0	0	2	3	5	5
16:45 17:00	0	0	0	3	1	4	4
17:00 17:15	0	0	0	1	4	5	5
17:15 17:30	0	0	0	0	2	2	2
17:30 17:45	0	0	0	0	4	4	4
17:45 18:00	0	1	1	1	4	5	6
Total	5	11	16	51	49	100	116



Transportation Services - Traffic Services

Turning Movement Count - Study Results

LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

WO No: 41268

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

LANARK AVE/WEST VILLAGE PRIV				SCOTT ST			
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	1	2	0	0	0	2
07:15 07:30	2	4	6	2	1	3	9
07:30 07:45	4	6	10	5	0	5	15
07:45 08:00	6	4	10	7	6	13	23
08:00 08:15	6	2	8	1	6	7	15
08:15 08:30	4	3	7	9	2	11	18
08:30 08:45	4	3	7	2	1	3	10
08:45 09:00	7	0	7	7	0	7	14
09:00 09:15	2	2	4	1	1	2	6
09:15 09:30	5	0	5	3	3	6	11
09:30 09:45	4	1	5	4	2	6	11
09:45 10:00	2	1	3	5	0	5	8
11:30 11:45	1	3	4	4	3	7	11
11:45 12:00	0	3	3	6	0	6	9
12:00 12:15	4	4	8	3	1	4	12
12:15 12:30	5	1	6	5	3	8	14
12:30 12:45	2	4	6	6	3	9	15
12:45 13:00	4	5	9	9	3	12	21
13:00 13:15	3	5	8	7	0	7	15
13:15 13:30	5	5	10	13	1	14	24
15:00 15:15	5	2	7	5	7	12	19
15:15 15:30	3	3	6	5	0	5	11
15:30 15:45	6	4	10	10	8	18	28
15:45 16:00	5	4	9	7	6	13	22
16:00 16:15	3	8	11	5	6	11	22
16:15 16:30	10	3	13	8	3	11	24
16:30 16:45	3	10	13	11	3	14	27
16:45 17:00	6	4	10	14	1	15	25
17:00 17:15	3	3	6	2	2	4	10
17:15 17:30	11	5	16	7	4	11	27
17:30 17:45	4	3	7	5	2	7	14
17:45 18:00	5	6	11	4	1	5	16
Total	135	112	247	182	79	261	508



Transportation Services - Traffic Services

Turning Movement Count - Study Results

LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

WO No: 41268

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

LANARK AVE/WEST VILLAGE PRIV										SCOTT ST												
Northbound					Southbound					Eastbound					Westbound							
Time Period	LT	ST	RT	N TOT	LT	ST	RT	S TOT	STR TOT	LT	ST	RT	E TOT	LT	ST	RT	W TOT	STR TOT	Grand Total			
07:00	07:15	0	0	0	0	0	0	0	1	1	1	26	0	44	0	17	0	43	87	44		
07:15	07:30	0	0	0	0	0	0	0	0	0	0	22	0	34	0	12	0	34	68	34		
07:30	07:45	0	0	0	0	0	0	0	0	0	0	20	0	38	0	18	0	38	76	38		
07:45	08:00	0	0	0	0	0	0	0	0	0	0	17	0	37	0	20	0	37	74	37		
08:00	08:15	0	0	0	0	0	0	0	1	1	0	19	0	32	0	13	1	33	65	33		
08:15	08:30	0	0	0	0	1	0	1	2	2	0	28	0	46	0	17	0	46	92	47		
08:30	08:45	0	0	0	0	0	0	0	1	1	1	19	0	30	0	10	0	29	59	30		
08:45	09:00	0	0	0	0	0	0	0	0	0	0	23	0	37	0	14	0	37	74	37		
09:00	09:15	0	0	0	0	0	0	1	1	1	0	23	0	34	0	10	0	33	67	34		
09:15	09:30	0	0	0	0	0	0	0	0	0	0	13	0	28	0	15	0	28	56	28		
09:30	09:45	0	0	0	0	0	0	0	0	0	0	11	0	26	0	15	0	26	52	26		
09:45	10:00	0	0	0	0	0	0	0	0	0	0	10	0	22	0	12	0	22	44	22		
11:30	11:45	0	0	0	0	0	0	0	1	1	0	11	0	21	0	10	1	22	43	22		
11:45	12:00	0	0	0	0	0	0	0	0	0	0	9	0	25	0	16	0	25	50	25		
12:00	12:15	0	0	0	0	0	0	0	1	1	1	9	0	18	0	8	0	17	35	18		
12:15	12:30	0	0	0	0	0	0	1	2	2	0	10	0	18	0	7	1	18	36	19		
12:30	12:45	0	0	1	2	0	1	1	2	4	0	7	0	17	0	9	0	17	34	19		
12:45	13:00	0	0	0	0	0	0	1	1	1	0	11	0	22	0	10	0	21	43	22		
13:00	13:15	0	0	0	0	0	0	1	3	3	1	8	0	22	0	12	1	21	43	23		
13:15	13:30	0	0	0	0	0	0	0	0	0	0	14	0	19	0	5	0	19	38	19		
15:00	15:15	0	0	0	2	1	0	0	2	4	1	4	1	23	1	17	0	23	46	25		
15:15	15:30	0	1	0	1	1	0	0	2	3	0	2	0	17	0	15	0	18	35	19		
15:30	15:45	0	0	0	0	0	0	0	0	0	0	13	0	39	0	26	0	39	78	39		
15:45	16:00	0	0	0	0	0	0	0	0	0	0	17	0	39	0	22	0	39	78	39		
16:00	16:15	0	0	0	0	0	0	1	2	2	0	17	0	40	0	22	1	40	80	41		
16:15	16:30	1	0	0	2	0	0	0	0	2	0	14	1	31	0	15	0	29	60	31		
16:30	16:45	0	0	0	0	0	0	1	1	1	0	10	0	37	0	26	0	36	73	37		
16:45	17:00	0	1	0	1	0	0	0	1	2	0	17	0	33	0	16	0	33	66	34		
17:00	17:15	0	0	0	0	0	0	0	0	0	0	18	0	39	0	21	0	39	78	39		
17:15	17:30	0	0	0	0	0	0	0	1	1	1	15	0	38	0	22	0	37	75	38		
17:30	17:45	0	0	0	1	0	0	0	0	1	0	16	0	32	1	16	0	33	65	33		
17:45	18:00	0	0	1	2	0	0	0	1	3	0	13	1	32	0	18	1	33	65	34		
Total: None		1	2	2	11	3	1	8	26	37	6	466	3	970	2	486	6	965	1935	986		



Transportation Services - Traffic Services

Turning Movement Count - Study Results

LANARK AVE/WEST VILLAGE PRIV @ SCOTT ST

Survey Date: Thursday, November 30, 2023

WO No: 41268

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

LANARK AVE/WEST VILLAGE PRIV						SCOTT ST					
Time Period		Northbound U-Turn Total	Southbound U-Turn Total	Eastbound U-Turn Total	Westbound U-Turn Total	Total					
07:00	07:15	0	0	0	0	0					
07:15	07:30	0	0	0	0	0					
07:30	07:45	0	0	0	0	0					
07:45	08:00	0	0	0	0	0					
08:00	08:15	0	0	0	0	0					
08:15	08:30	0	0	0	0	0					
08:30	08:45	0	0	0	0	0					
08:45	09:00	0	0	0	0	0					
09:00	09:15	0	0	0	0	0					
09:15	09:30	0	0	0	0	0					
09:30	09:45	0	0	0	0	0					
09:45	10:00	0	0	0	0	0					
11:30	11:45	0	0	0	0	0					
11:45	12:00	0	0	0	0	0					
12:00	12:15	0	0	0	0	0					
12:15	12:30	0	0	0	0	0					
12:30	12:45	0	0	0	0	0					
12:45	13:00	0	0	0	0	0					
13:00	13:15	0	0	0	0	0					
13:15	13:30	0	0	0	0	0					
15:00	15:15	0	0	0	0	0					
15:15	15:30	0	0	0	1	1					
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	1	0	1					
16:30	16:45	0	0	0	0	0					
16:45	17:00	0	0	0	0	0					
17:00	17:15	0	0	0	0	0					
17:15	17:30	0	0	0	0	0					
17:30	17:45	0	0	0	0	0					
17:45	18:00	0	0	0	0	0					
Total		0	0	1	1	2					



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CHURCHILL AVE @ LANARK AVE

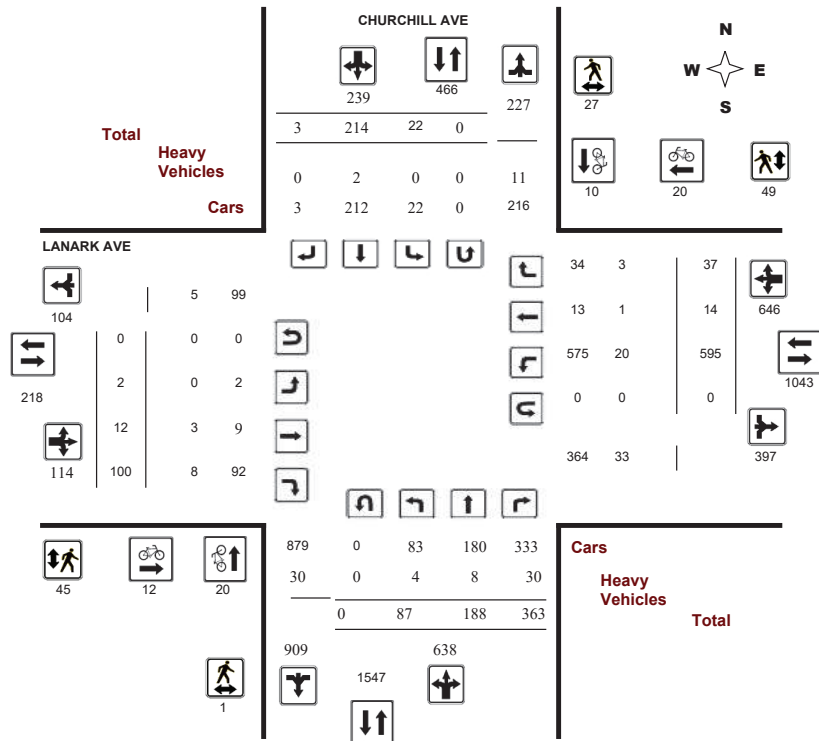
Survey Date: Thursday, October 24, 2019

Start Time: 07:00

WO No: 38900

Device: Miovision

Full Study Diagram



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CHURCHILL AVE @ LANARK AVE

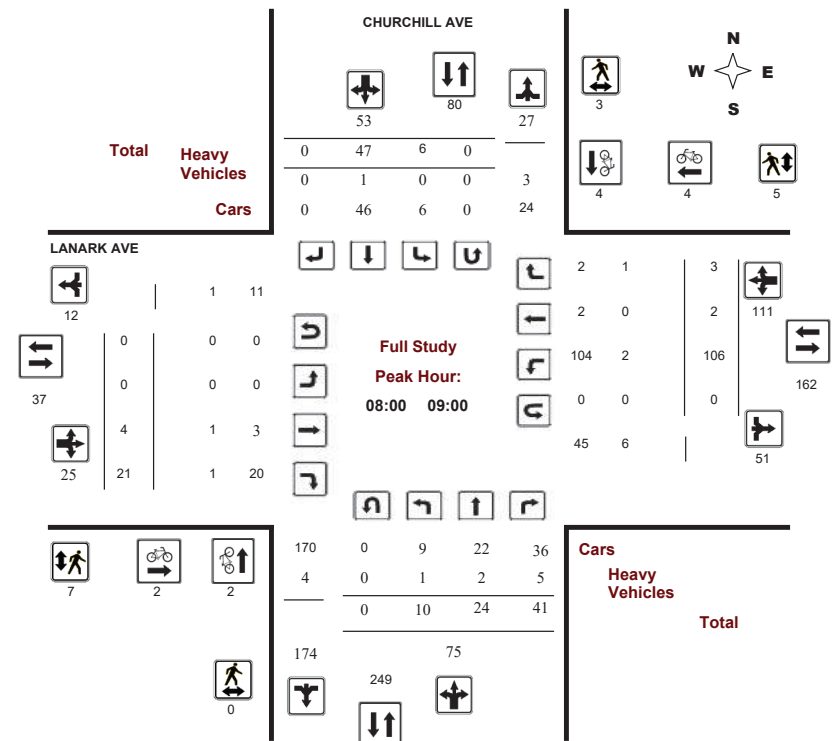
Survey Date: Thursday, October 24, 2019

Start Time: 07:00

WO No: 38900

Device: Miovision

Full Study Peak Hour Diagram





Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

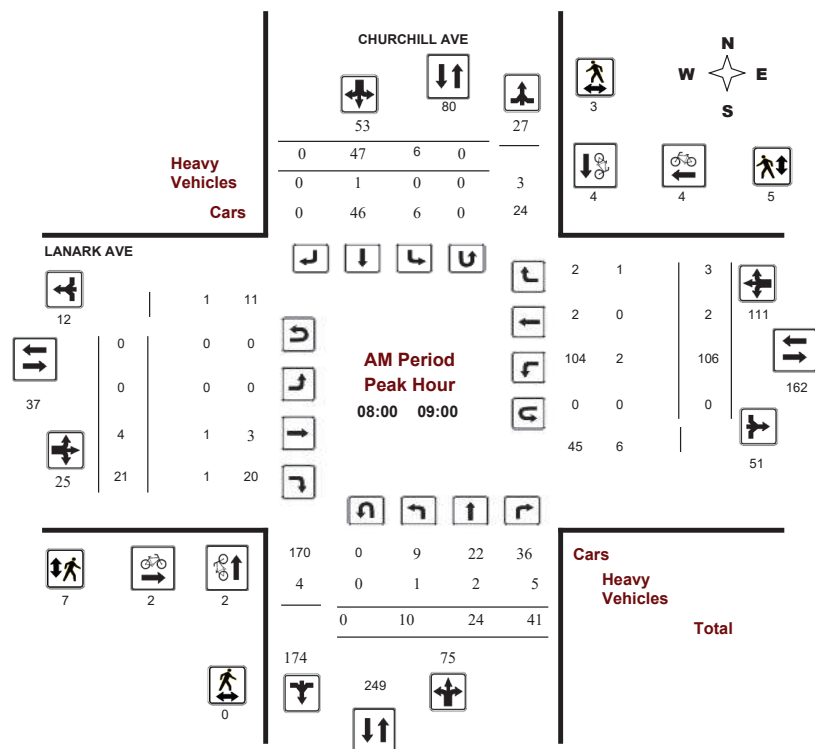
CHURCHILL AVE @ LANARK AVE

Survey Date: Thursday, October 24, 2019

Start Time: 07:00

WO No: 38900

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

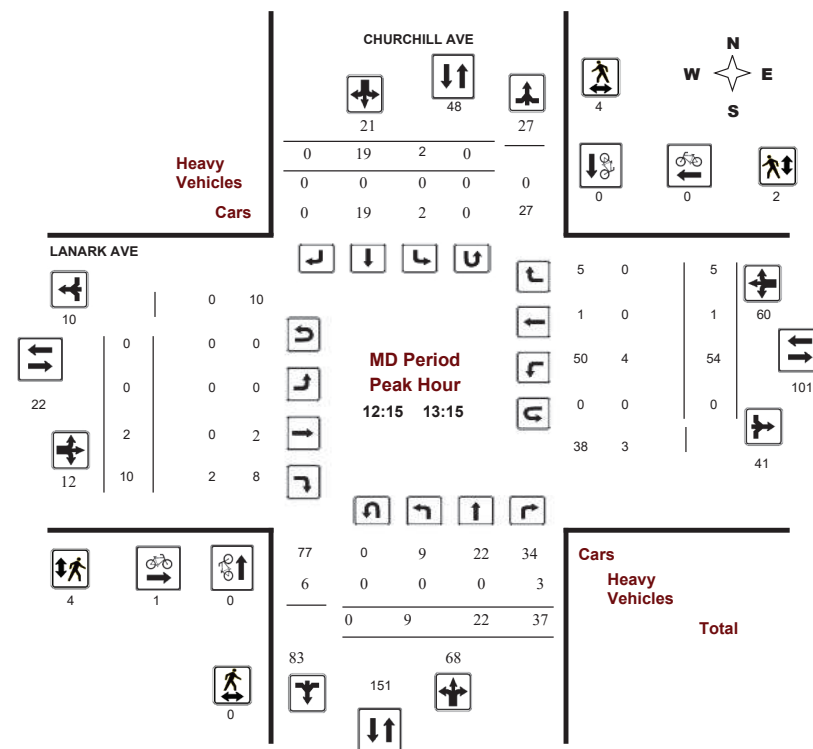
CHURCHILL AVE @ LANARK AVE

Survey Date: Thursday, October 24, 2019

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Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Peak Hour Diagram

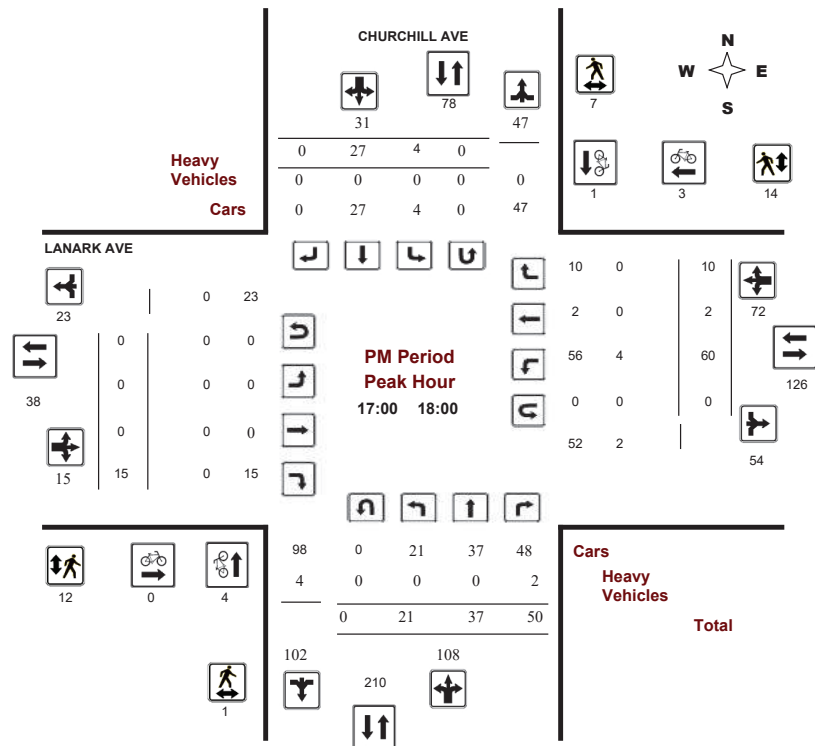
CHURCHILL AVE @ LANARK AVE

Survey Date: Thursday, October 24, 2019

Start Time: 07:00

WO No: 38900

Device: Miovision



Comments



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CHURCHILL AVE @ LANARK AVE

Survey Date: Thursday, October 24, 2019

Start Time: 07:00

WO No: 38900

Device: Miovision

Full Study Summary (8 HR Standard)

Survey Date: Thursday, October 24, 2019

Total Observed U-Turns

AADT Factor

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

.90

CHURCHILL AVE										LANARK AVE										STR TOT	Grand Total
Northbound					Southbound					Eastbound					Westbound						
Period	LT	ST	RT	NB TOT	LT	ST	RT	SB TOT	STR TOT	LT	ST	RT	EB TOT	LT	ST	RT	WB TOT	STR TOT			
07:00 08:00	6	16	42	64	3	24	1	28	92	0	2	10	12	111	0	2	113	125			
08:00 09:00	10	24	41	75	6	47	0	53	128	0	4	21	25	106	2	3	111	136			
09:00 10:00	7	21	44	72	4	22	1	27	99	1	1	12	14	100	0	2	102	116			
11:30 12:30	13	21	29	63	2	19	1	22	85	1	0	7	8	47	3	2	52	60			
12:30 13:30	6	22	37	65	1	15	0	16	81	0	2	12	14	54	1	7	62	76			
15:00 16:00	8	20	64	92	1	26	0	27	119	0	3	13	16	62	3	7	72	88			
16:00 17:00	16	27	56	99	1	34	0	35	134	0	0	10	10	55	3	4	62	72			
17:00 18:00	21	37	50	108	4	27	0	31	139	0	0	15	15	60	2	10	72	87			
Sub Total	87	188	363	638	22	214	3	239	877	2	12	100	114	595	14	37	646	760			
U Turns	0			0	0			0	0	0			0	0			0	0			
Total	87	188	363	638	22	214	3	239	877	2	12	100	114	595	14	37	646	760			
EQ 12Hr	121	261	505	887	31	297	4	332	1219	3	17	139	159	827	19	51	897	1056			
Note: These values are calculated by multiplying the totals by the appropriate expansion factor.														1.39							
AVG 12Hr	109	235	454	798	28	267	4	299	1097	3	15	125	143	744	17	46	807	950			
Note: These volumes are calculated by multiplying the Equivalent 12 hr. totals by the AADT factor.														.90							
AVG 24Hr	143	308	595	1046	37	350	5	392	1438	4	20	164	188	975	22	60	1057	1245			



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CHURCHILL AVE @ LANARK AVE

Survey Date: Thursday, October 24, 2019

WO No: 38900

Start Time: 07:00

Device: Miovision

Full Study 15 Minute Increments

CHURCHILL AVE											LANARK 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	3	2	6	11	1	3	0	4	15	0	0	1	1	22	0	0	22	23	38	
07:15	07:30	0	3	12	15	0	3	0	3	18	0	1	4	5	28	0	1	29	34	52	
07:30	07:45	2	6	12	20	1	12	0	13	33	0	0	2	2	18	0	1	19	21	54	
07:45	08:00	1	5	12	18	1	6	1	8	26	0	1	3	4	43	0	0	43	47	73	
08:00	08:15	5	4	11	20	2	12	0	14	34	0	2	9	11	18	0	1	19	30	64	
08:15	08:30	1	5	11	17	2	7	0	9	26	0	1	3	4	27	2	1	30	34	60	
08:30	08:45	1	8	9	18	2	13	0	15	33	0	0	3	3	23	0	1	24	27	60	
08:45	09:00	3	7	10	20	0	15	0	15	35	0	1	6	7	38	0	0	38	45	80	
09:00	09:15	1	8	12	21	1	7	1	9	30	0	1	2	3	26	0	0	26	29	59	
09:15	09:30	2	4	13	19	1	2	0	3	22	0	0	5	5	30	0	1	31	36	58	
09:30	09:45	3	7	10	20	1	8	0	9	29	1	0	3	4	24	0	1	25	29	58	
09:45	10:00	1	2	9	12	1	5	0	6	18	0	0	2	2	20	0	0	20	22	40	
11:30	11:45	3	6	9	18	1	2	1	4	22	0	0	2	2	7	1	0	8	10	32	
11:45	12:00	1	3	7	11	0	5	0	5	16	1	0	2	3	15	1	1	17	20	36	
12:00	12:15	4	3	4	11	0	4	0	4	15	0	0	3	3	12	1	1	14	17	32	
12:15	12:30	5	9	9	23	1	8	0	9	32	0	0	0	0	13	0	0	13	13	45	
12:30	12:45	1	4	7	12	0	3	0	3	15	0	0	2	2	15	0	1	16	18	33	
12:45	13:00	0	4	11	15	1	3	0	4	19	0	2	5	7	12	0	3	15	22	41	
13:00	13:15	3	5	10	18	0	5	0	5	23	0	0	3	3	14	1	1	16	19	42	
13:15	13:30	2	9	9	20	0	4	0	4	24	0	0	2	2	13	0	2	15	17	41	
15:00	15:15	4	6	18	28	1	4	0	5	33	0	3	5	8	9	1	0	10	18	51	
15:15	15:30	0	4	22	26	0	12	0	12	38	0	0	3	3	20	1	3	24	27	65	
15:30	15:45	2	3	14	19	0	6	0	6	25	0	0	2	2	18	1	1	20	22	47	
15:45	16:00	2	7	10	19	0	4	0	4	23	0	0	3	3	15	0	3	18	21	44	
16:00	16:15	4	9	12	25	0	9	0	9	34	0	0	3	3	9	2	2	13	16	50	
16:15	16:30	3	8	15	26	0	16	0	16	42	0	0	3	3	13	0	0	13	16	58	
16:30	16:45	4	5	15	24	0	8	0	8	32	0	0	2	2	21	1	1	23	25	57	
16:45	17:00	5	5	14	24	1	1	0	2	26	0	0	2	2	12	0	1	13	15	41	
17:00	17:15	5	5	12	22	0	3	0	3	25	0	0	1	1	14	0	1	15	16	41	
17:15	17:30	7	17	11	35	2	8	0	10	45	0	0	6	6	16	0	5	21	27	72	
17:30	17:45	3	7	15	25	0	11	0	11	36	0	0	4	4	12	0	3	15	19	55	
17:45	18:00	6	8	12	26	2	5	0	7	33	0	0	4	4	18	2	1	21	25	58	
Total:		87	188	363	638	22	214	3	239	877	2	12	100	114	595	14	37	646	877	1,637	

Note: U-Turns are included in Totals.



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CHURCHILL AVE @ LANARK AVE

Survey Date: Thursday, October 24, 2019

WO No: 38900

Start Time: 07:00

Device: Miovision

Full Study Cyclist Volume

		CHURCHILL AVE			LANARK AVE				
		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	1	1	0	0	0	1	
07:30	07:45	2	1	3	0	1	1	4	
07:45	08:00	0	1	1	1	3	4	5	
08:00	08:15	0	0	0	0	2	2	2	
08:15	08:30	1	2	3	2	0	2	5	
08:30	08:45	1	0	1	0	2	2	3	
08:45	09:00	0	2	2	0	0	0	2	
09:00	09:15	0	0	0	1	1	2	2	
09:15	09:30	0	0	0	1	0	1	1	
09:30	09:45	1	0	1	0	0	0	1	
09:45	10:00	0	0	0	0	0	0	0	
11:30	11:45	0	0	0	0	1	1	1	
11:45	12:00	0	0	0	0	0	0	0	
12:00	12:15	0	0	0	0	0	0	0	
12:15	12:30	0	0	0	0	0	0	0	
12:30	12:45	0	0	0	0	0	0	0	
12:45	13:00	0	0	0	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	
15:00	15:15	0	0	0	1	1	2	2	
15:15	15:30	4	1	5	0	1	1	6	
15:30	15:45	0	0	0	1	3	4	4	
15:45	16:00	3	0	3	1	0	1	4	
16:00	16:15	2	0	2	0	0	0	2	
16:15	16:30	1	1	2	1	0	1	3	
16:30	16:45	0	0	0	0	0	0	0	
16:45	17:00	1	0	1	1	2	3	4	
17:00	17:15	1	0	1	0	1	1	2	
17:15	17:30	1	0	1	0	0	0	1	
17:30	17:45	0	0	0	0	2	2	2	
17:45	18:00	2	1	3	0	0	0	3	
Total		20	10	30	12	20	32	62	



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CHURCHILL AVE @ LANARK AVE

Survey Date: Thursday, October 24, 2019

WO No: 38900

Start Time: 07:00

Device: Miovision

Full Study Pedestrian Volume

CHURCHILL AVE LANARK 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	0	1	1	0	0	0	1
07:15 07:30	0	0	0	1	1	2	2
07:30 07:45	0	0	0	1	2	3	3
07:45 08:00	0	2	2	5	2	7	9
08:00 08:15	0	0	0	3	1	4	4
08:15 08:30	0	1	1	4	0	4	5
08:30 08:45	0	2	2	0	0	0	2
08:45 09:00	0	0	0	0	4	4	4
09:00 09:15	0	0	0	0	1	1	1
09:15 09:30	0	0	0	1	0	1	1
09:30 09:45	0	2	2	0	1	1	3
09:45 10:00	0	1	1	1	0	1	2
11:30 11:45	0	1	1	0	1	1	2
11:45 12:00	0	0	0	0	0	0	0
12:00 12:15	0	0	0	2	0	2	2
12:15 12:30	0	0	0	0	0	0	0
12:30 12:45	0	1	1	2	0	2	3
12:45 13:00	0	0	0	1	0	1	1
13:00 13:15	0	3	3	1	2	3	6
13:15 13:30	0	0	0	1	1	2	2
15:00 15:15	0	0	0	0	0	0	0
15:15 15:30	0	1	1	0	2	2	3
15:30 15:45	0	1	1	1	2	3	4
15:45 16:00	0	2	2	0	2	2	4
16:00 16:15	0	1	1	1	8	9	10
16:15 16:30	0	1	1	5	1	6	7
16:30 16:45	0	0	0	1	3	4	4
16:45 17:00	0	0	0	2	1	3	3
17:00 17:15	0	2	2	1	1	2	4
17:15 17:30	0	1	1	7	3	10	11
17:30 17:45	1	4	5	1	7	8	13
17:45 18:00	0	0	0	3	3	6	6
Total	1	27	28	45	49	94	122



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CHURCHILL AVE @ LANARK AVE

Survey Date: Thursday, October 24, 2019

WO No: 38900

Start Time: 07:00

Device: Miovision

Full Study Heavy Vehicles

CHURCHILL AVE LANARK 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15	07:30	0	1	2	3	0	0	0	0	3	0	1	0	1	1	0	1	2	3	6
07:30	07:45	1	0	1	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
07:45	08:00	0	0	2	2	0	0	0	0	2	0	0	0	0	1	0	0	1	1	3
08:00	08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1
08:15	08:30	1	0	2	3	0	1	0	1	4	0	0	0	0	1	0	0	1	1	5
08:30	08:45	0	0	1	1	0	0	0	0	1	0	0	0	0	1	0	0	1	1	2
08:45	09:00	0	2	2	4	0	0	0	0	4	0	1	1	2	0	0	0	0	2	6
09:00	09:15	0	2	0	2	0	0	0	0	2	0	0	1	1	0	0	0	0	1	3
09:15	09:30	0	0	2	2	0	0	0	0	2	0	0	0	0	1	0	0	1	1	3
09:30	09:45	1	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
09:45	10:00	0	0	1	1	0	0	0	0	1	0	0	0	0	1	0	0	1	1	2
11:30	11:45	0	2	0	2	0	0	0	0	2	0	0	0	0	0	1	0	1	1	3
11:45	12:00	0	0	2	2	0	0	0	0	2	0	0	0	0	1	0	0	1	1	3
12:00	12:15	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
12:15	12:30	0	0	1	1	0	0	0	0	1	0	0	0	0	2	0	0	2	2	3
12:30	12:45	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
12:45	13:00	0	0	1	1	0	0	0	0	1	0	0	1	1	2	0	0	2	3	4
13:00	13:15	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1
13:15	13:30	0	0	1	1	0	0	0	0	1	0	0	0	0	1	0	0	1	1	2
15:00	15:15	0	0	1	1	0	0	0	0	1	0	1	1	2	1	0	0	1	3	4
15:15	15:30	0	0	1	1	0	1	0	1	2	0	0	0	0	1	0	0	1	1	3
15:30	15:45	0	0	1	1	0	0	0	0	1	0	0	1	1	0	0	0	0	1	2
15:45	16:00	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	1	2	3	3
16:00	16:15	0	1	1	2	0	0	0	0	2	0	0	1	1	0	0	0	0	1	3
16:15	16:30	1	0	2	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
16:30	16:45	0	0	2	2	0	0	0	0	2	0	0	0	0	1	0	0	1	1	3
16:45	17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	17:15	0	0	1	1	0	0	0	0	1	0	0	0	0	1	0	0	1	1	2
17:15	17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	2
17:30	17:45	0	0	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
17:45	18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1
Total: None		4	8	30	42	0	2	0	2	44	0	3	8	11	20	1	3	24	35	79



Transportation Services - Traffic Services

Turning Movement Count - Study Results

CHURCHILL AVE @ LANARK AVE

Survey Date: Thursday, October 24, 2019

WO No: 38900

Start Time: 07:00

Device: Miovision

Full Study 15 Minute U-Turn Total

CHURCHILL AVE

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

Appendix C

Synchro Intersection Worksheets – Existing Conditions

Lanes, Volumes, Timings
1: Island Park & Kichi Zibi Mikan

Existing
AM Peak Hour

	↖	→	↗	↖	←	↖	↖	↖	↖	↖	↖	↖
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖	↖		↖		↖	↖	↖
Traffic Volume (vph)	188	720	24	114	211	76	0	245	132	471	716	468
Future Volume (vph)	188	720	24	114	211	76	0	245	132	471	716	468
Satd. Flow (prot)	1658	3316	1483	1658	3316	1441	0	1647	0	3216	1633	0
Flt Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1658	3316	1441	1653	3316	1441	0	1647	0	3168	1633	0
Satd. Flow (RTOR)			81			84			14		30	
Lane Group Flow (vph)	209	800	27	127	234	84	0	419	0	523	1316	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	NA	NA	Prot	NA	NA	
Protected Phases	9	2		13	6			16		15	12	
Permitted Phases			2			6						
Detector Phase	9	2	2	13	6	6		16		15	12	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0		10.0		5.0	10.0	
Minimum Split (s)	10.6	30.1	30.1	10.6	30.1	30.1		29.1		11.5	29.1	
Total Split (s)	15.6	56.1	56.1	15.6	26.1	26.1		76.1		56.5	26.1	
Total Split (%)	7.6%	27.5%	27.5%	7.6%	12.8%	12.8%		37.2%		27.7%	12.8%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7		3.7		3.7	3.7	
All-Red Time (s)	1.9	2.4	2.4	1.9	2.4	2.4		2.4		2.8	2.4	
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)	5.6	6.1	6.1	5.6	6.1	6.1		6.1		6.5	6.1	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	Min	Min	None	Min	Min		None		None		
Act Effct Green (s)	10.2	47.2	47.2	10.2	47.2	47.2		46.3		32.4	85.4	
Actuated g/C Ratio	0.06	0.29	0.29	0.06	0.29	0.29		0.29		0.20	0.53	
v/c Ratio	1.99	0.82	0.06	1.21	0.24	0.17		0.87		0.81	1.50	
Control Delay	511.5	62.5	0.2	213.7	46.9	10.1		72.1		73.1	258.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	511.5	62.5	0.2	213.7	46.9	10.1		72.1		73.1	258.5	
LOS	F	E	A	F	D	B		E		E	F	
Approach Delay		151.5			87.6			72.1			205.8	
Approach LOS		F			F			E			F	
Queue Length 50th (m)	~105.6	124.5	0.0	~50.8	29.7	0.0		126.4		84.4	~589.7	
Queue Length 95th (m)	#191.5	#201.4	0.0	#115.7	52.4	15.2		185.0		120.0	#739.1	
Internal Link Dist (m)		762.8			208.9			249.0			166.2	
Turn Bay Length (m)	104.5		88.0	89.6						80.0		
Base Capacity (vph)	105	1052	512	105	1052	514		739		1021	1315	
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	1.99	0.76	0.05	1.21	0.22	0.16		0.57		0.51	1.00	

Intersection Summary

Cycle Length: 204.3
Actuated Cycle Length: 161
Natural Cycle: 145
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.99

Scenario 1 210 Clearview Avenue 11:59 pm 09/04/2024 Existing

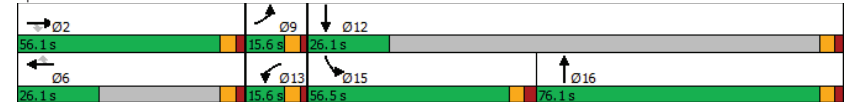
Synchro 11 Report
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Lanes, Volumes, Timings
1: Island Park & Kichi Zibi Mikan

Existing
AM Peak Hour

Intersection Signal Delay: 161.7	Intersection LOS: F
Intersection Capacity Utilization 112.5%	ICU Level of Service H
Analysis Period (min) 15	
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	

Splits and Phases: 1: Island Park & Kichi Zibi Mikan



Scenario 1 210 Clearview Avenue 11:59 pm 09/04/2024 Existing

Synchro 11 Report
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HCM 2010 TWSC
2: Island Park & Clearview

Existing
AM Peak Hour

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	⬅➡											
Traffic Vol, veh/h	24	11	14	1	6	13	9	337	23	26	819	98
Future Vol, veh/h	24	11	14	1	6	13	9	337	23	26	819	98
Conflicting Peds, #/hr	7	0	0	0	0	7	8	0	0	0	0	8
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	33	2	2	2	2	4	2	2
Mvmt Flow	27	12	16	1	7	14	10	374	26	29	910	109
Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1456	1451	973	1444	1492	394	1027	0	0	400	0	0
Stage 1	1031	1031	-	407	407	-	-	-	-	-	-	-
Stage 2	425	420	-	1037	1085	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.83	6.22	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.83	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.83	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.297	3.318	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	108	131	306	110	106	655	676	-	-	1148	-	-
Stage 1	281	310	-	621	547	-	-	-	-	-	-	-
Stage 2	607	589	-	279	258	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	93	120	304	91	97	651	672	-	-	1148	-	-
Mov Cap-2 Maneuver	93	120	-	91	97	-	-	-	-	-	-	-
Stage 1	274	290	-	609	537	-	-	-	-	-	-	-
Stage 2	572	578	-	238	241	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	55			23.7			0.3			0.2		
HCM LOS	F			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	672	-	-	124	215	1148	-	-				
HCM Lane V/C Ratio	0.015	-	-	0.439	0.103	0.025	-	-				
HCM Control Delay (s)	10.4	0	-	55	23.7	8.2	0	-				
HCM Lane LOS	B	A	-	F	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	1.9	0.3	0.1	-	-				

Scenario 1 210 Clearview Avenue 11:59 pm 09/04/2024 Existing

Synchro 11 Report
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Lanes, Volumes, Timings
3: Island Park & Scott

Existing
AM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	77	349	54	32	267	28	38	262	30	33	532	81
Future Volume (vph)	77	349	54	32	267	28	38	262	30	33	532	81
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
Storage Length (m)	58.7		29.5	250.0		36.5	0.0		0.0	36.5		0.0
Storage Lanes	1		1	1		1	0		0	1		0
Taper Length (m)	30.0			30.0			30.0			30.0		
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
Ped Bike Factor	0.95		0.87	0.98		0.86		0.99		0.98		0.99
Frt			0.850			0.850		0.988		0.980		
Flt Protected	0.950			0.950				0.994		0.950		
Satd. Flow (prot)	1626	1424	1483	1595	1483	1483	0	1704	0	1551	1688	0
Flt Permitted	0.473			0.351				0.753		0.527		
Satd. Flow (perm)	770	1424	1292	579	1483	1279	0	1289	0	842	1688	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			92			92		8		12		
Link Speed (k/h)		50			50			50		50		
Link Distance (m)		235.2			290.0			328.9		439.7		
Travel Time (s)		16.9			20.9			23.7		31.7		
Confl. Peds. (#/hr)	40		19	19		40	26		23	23		26
Confl. Bikes (#/hr)			51			26		5				27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	25%	2%	6%	20%	2%	2%	2%	2%	9%	2%	4%
Adj. Flow (vph)	86	388	60	36	297	31	42	291	33	37	591	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	86	388	60	36	297	31	0	366	0	37	681	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.5			3.5			3.5			3.5	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		3.0			3.0			3.0			3.0	
Two way Left Turn Lane												
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	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	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	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	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	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												

Scenario 1 210 Clearview Avenue Existing
MC

Synchro 11 Report
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Lanes, Volumes, Timings
3: Island Park & Scott

Existing
AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2			6		
Detector Phase	4	4	4	8	8	8	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0	
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0	29.0	34.0	34.0		37.0	37.0	
Total Split (s)	32.0	32.0	32.0	32.0	32.0	32.0	57.0	57.0		57.0	57.0	
Total Split (%)	33.7%	33.7%	33.7%	33.7%	33.7%	33.7%	60.0%	60.0%		60.0%	60.0%	
Maximum Green (s)	25.0	25.0	25.0	25.0	25.0	25.0	50.0	50.0		50.0	50.0	
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
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)	7.0	7.0	7.0	7.0	7.0	7.0		7.0		7.0	7.0	
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag						
Lead-Lag Optimize?	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	Max	Max	Max	Max	Max	Max	C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	12.0	12.0		15.0	15.0	
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)	19	19	19	40	40	40	23	23		26	26	
Act Effct Green (s)	31.0	31.0	31.0	31.0	31.0	31.0		50.0		50.0	50.0	
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.33	0.33		0.53		0.53	0.53	
v/c Ratio	0.34	0.84	0.12	0.19	0.61	0.06		0.54		0.08	0.76	
Control Delay	24.5	43.2	1.3	26.3	33.5	0.2		18.1		11.9	24.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	24.5	43.2	1.3	26.3	33.5	0.2		18.1		11.9	24.4	
LOS	C	D	A	C	C	A		B		B	C	
Approach Delay		35.5			30.0			18.1			23.7	
Approach LOS		D			C			B			C	

Intersection Summary

Area Type: Other

Cycle Length: 95

Actuated Cycle Length: 95

Offset: 38 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 27.0

Intersection LOS: C

Intersection Capacity Utilization 96.0%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 3: Island Park & Scott



Scenario 1 210 Clearview Avenue Existing
MC

Synchro 11 Report
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Lanes, Volumes, Timings
3: Island Park & Scott

Existing
AM Peak Hour

Lane Group	Ø3	Ø7
Detector 2 Extend (s)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	5.0	5.0
Total Split (s)	6.0	6.0
Total Split (%)	6%	6%
Maximum Green (s)	2.0	2.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		

Intersection Summary

Scenario 1 210 Clearview Avenue Existing
MC

Synchro 11 Report
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Lanes, Volumes, Timings
4: West Village/Lanark & Scott

Existing
AM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	←	←	←	←	←	←	←	←	←	←	←
Traffic Volume (vph)	30	414	6	6	307	38	7	1	19	57	0	64
Future Volume (vph)	30	414	6	6	307	38	7	1	19	57	0	64
Satd. Flow (prot)	1642	1470	0	1658	1498	0	1658	1427	0	1658	1364	0
Flt Permitted	0.535			0.485			0.711			0.743		
Satd. Flow (perm)	916	1470	0	829	1498	0	1173	1427	0	1261	1364	0
Satd. Flow (RTOR)		2			12			21			523	
Lane Group Flow (vph)	33	467	0	7	383	0	8	22	0	63	71	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	28.6	28.6		28.6	28.6		22.2	22.2		22.2	22.2	
Total Split (s)	66.0	66.0		66.0	66.0		29.0	29.0		29.0	29.0	
Total Split (%)	69.5%	69.5%		69.5%	69.5%		30.5%	30.5%		30.5%	30.5%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.3	3.3		3.3	3.3		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.6	6.6		6.6	6.6		6.2	6.2		6.2	6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	74.7	74.7		74.7	74.7		12.0	12.0		12.0	12.0	
Actuated g/C Ratio	0.79	0.79		0.79	0.79		0.13	0.13		0.13	0.13	
v/c Ratio	0.05	0.40		0.01	0.32		0.05	0.11		0.40	0.11	
Control Delay	4.1	5.9		1.7	2.2		35.6	16.3		45.0	0.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	4.1	5.9		1.7	2.2		35.6	16.3		45.0	0.4	
LOS	A	A		A	A		D	B		D	A	
Approach Delay		5.8			2.2			21.4			21.3	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	1.2	24.3		0.1	8.7		1.4	0.2		11.1	0.0	
Queue Length 95th (m)	4.2	48.8		m0.2	m13.4		5.3	6.6		22.5	0.0	
Internal Link Dist (m)		332.8			211.2			80.9			82.5	
Turn Bay Length (m)	36.5			42.0			18.0			18.0		
Base Capacity (vph)	720	1157		652	1181		281	358		302	724	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.40		0.01	0.32		0.03	0.06		0.21	0.10	
Intersection Summary												
Cycle Length: 95												
Actuated Cycle Length: 95												
Offset: 83 (87%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 55												
Control Type: Actuated-Coordinated												

Scenario 1 210 Clearview Avenue 11:59 pm 09/04/2024 Existing

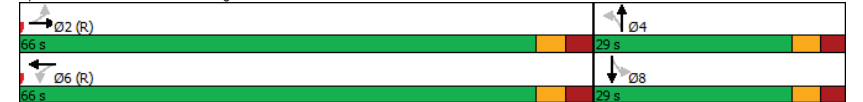
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Lanes, Volumes, Timings
4: West Village/Lanark & Scott

Existing
AM Peak Hour

Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 6.9	Intersection LOS: A
Intersection Capacity Utilization 48.2%	ICU Level of Service A
Analysis Period (min) 15	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 4: West Village/Lanark & Scott



Scenario 1 210 Clearview Avenue 11:59 pm 09/04/2024 Existing

Synchro 11 Report
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HCM 2010 AWSC
5: Churchill & Lanark

Existing
AM Peak Hour

Intersection						
Intersection Delay, s/veh	7.8					
Intersection LOS	A					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T		T	W
Traffic Vol, veh/h	108	3	24	45	6	47
Future Vol, veh/h	108	3	24	45	6	47
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	33	8	13	2	2
Mvmt Flow	120	3	27	50	7	52
Number of Lanes	1	0	1	0	0	1
Approach	WB	NB		SB		
Opposing Approach		SB		NB		
Opposing Lanes	0	1		1		
Conflicting Approach Left	NB			WB		
Conflicting Lanes Left	1	0		1		
Conflicting Approach Right	SB	WB				
Conflicting Lanes Right	1	1		0		
HCM Control Delay	8.2	7.4		7.6		
HCM LOS	A	A		A		

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	97%	11%
Vol Thru, %	35%	0%	89%
Vol Right, %	65%	3%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	69	111	53
LT Vol	0	108	6
Through Vol	24	0	47
RT Vol	45	3	0
Lane Flow Rate	77	123	59
Geometry Grp	1	1	1
Degree of Util (X)	0.083	0.149	0.069
Departure Headway (Hd)	3.907	4.345	4.234
Convergence, Y/N	Yes	Yes	Yes
Cap	902	819	833
Service Time	1.999	2.406	2.325
HCM Lane V/C Ratio	0.085	0.15	0.071
HCM Control Delay	7.4	8.2	7.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0.5	0.2

Lanes, Volumes, Timings
1: Island Park & Kichi Zibi Mikan

Existing
PM Peak Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←	↑↑	→	←	↑↑	→		↑		←	↑	→
Traffic Volume (vph)	335	165	18	171	879	954	0	488	28	141	462	404
Future Volume (vph)	335	165	18	171	879	954	0	488	28	141	462	404
Satd. Flow (prot)	1658	3316	1483	1658	3316	1483	0	1731	0	3154	1609	0
Fit Permitted	0.950			0.950						0.950		
Satd. Flow (perm)	1655	3316	1448	1653	3316	1443	0	1731	0	3149	1609	0
Satd. Flow (RTOR)			95			191		2			28	
Lane Group Flow (vph)	372	183	20	190	977	1060	0	573	0	157	962	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm		NA		Prot	NA	
Protected Phases	9	2	2	13	6	6		16		15	12	
Permitted Phases			2			6						
Detector Phase	9	2	2	13	6	6		16		15	12	
Switch Phase												
Minimum Initial (s)	5.0	15.0	15.0	5.0	15.0	15.0		10.0		5.0	10.0	
Minimum Split (s)	20.6	30.1	30.1	20.6	30.1	30.1		29.1		11.5	29.1	
Total Split (s)	41.6	51.1	51.1	41.6	66.1	66.1		51.1		16.5	66.1	
Total Split (%)	23.7%	29.2%	29.2%	23.7%	37.7%	37.7%		29.2%		9.4%	37.7%	
Yellow Time (s)	3.7	3.7	3.7	3.7	3.7	3.7		3.7		3.7	3.7	
All-Red Time (s)	1.9	2.4	2.4	1.9	2.4	2.4		2.4		2.8	2.4	
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)	5.6	6.1	6.1	5.6	6.1	6.1		6.1		6.5	6.1	
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?								Yes		Yes		
Recall Mode	None	None	None	None	None	None		None		None	None	
Act Effct Green (s)	36.0	60.0	60.0	36.0	60.0	60.0		45.0		10.0	61.5	
Actuated g/C Ratio	0.21	0.34	0.34	0.21	0.34	0.34		0.26		0.06	0.35	
v/c Ratio	1.09	0.16	0.04	0.56	0.86	1.71		1.29		0.88	1.65	
Control Delay	138.2	40.6	0.1	69.7	62.8	355.6		194.9		121.4	335.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	138.2	40.6	0.1	69.7	62.8	355.6		194.9		121.4	335.6	
LOS	F	D	A	E	E	F		F		F	F	
Approach Delay		102.4			202.8			194.9			305.5	
Approach LOS		F			F			F			F	
Queue Length 50th (m)	~146.0	23.5	0.0	60.4	168.2	~500.0		~253.8		28.6	~481.7	
Queue Length 95th (m)	#212.5	33.6	0.0	88.4	196.9	#582.7		#329.2		#50.3	#563.6	
Internal Link Dist (m)		750.5			213.6			249.0			157.2	
Turn Bay Length (m)	104.5		88.0	89.6						80.0		
Base Capacity (vph)	340	1134	558	340	1134	619		445		179	582	
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	1.09	0.16	0.04	0.56	0.86	1.71		1.29		0.88	1.65	

Intersection Summary	
Cycle Length:	175.3
Actuated Cycle Length:	175.3
Natural Cycle:	145
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.71

Lanes, Volumes, Timings
1: Island Park & Kichi Zibi Mikan

Existing
PM Peak Hour

Intersection Signal Delay: 214.5	Intersection LOS: F
Intersection Capacity Utilization 125.9%	ICU Level of Service H
Analysis Period (min) 15	
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 1: Island Park & Kichi Zibi Mikan

→ Ø2	↘ Ø9	↓ Ø12
51.1 s	41.6 s	66.1 s
← Ø6	↙ Ø13	↘ Ø15
66.1 s	41.6 s	16.5 s
		↑ Ø16
		51.1 s

HCM 2010 TWSC
2: Island Park & Clearview

Existing
PM Peak Hour

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	45	7	8	11	9	13	2	470	1	14	404	29
Future Vol, veh/h	45	7	8	11	9	13	2	470	1	14	404	29
Conflicting Peds, #/hr	21	0	0	0	0	21	7	0	2	2	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	43	2	18	33	2	2	2	2	7	2	2
Mvmt Flow	50	8	9	12	10	14	2	522	1	16	449	32

Major/Minor	Minor2		Minor1		Major1		Major2			
Conflicting Flow All	1064	1033	472	1035	1049	546	488	0	0	525
Stage 1	504	504	-	529	529	-	-	-	-	-
Stage 2	560	529	-	506	520	-	-	-	-	-
Critical Hdwy	7.12	6.93	6.22	7.28	6.83	6.22	4.12	-	-	4.17
Critical Hdwy Stg 1	6.12	5.93	-	6.28	5.83	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.93	-	6.28	5.83	-	-	-	-	-
Follow-up Hdwy	3.518	4.387	3.318	3.662	4.297	3.318	2.218	-	-	2.263
Pot Cap-1 Maneuver	201	198	592	196	201	538	1075	-	-	1017
Stage 1	550	479	-	505	480	-	-	-	-	-
Stage 2	513	466	-	520	484	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	180	192	589	183	195	528	1069	-	-	1015
Mov Cap-2 Maneuver	180	192	-	183	195	-	-	-	-	-
Stage 1	546	466	-	502	478	-	-	-	-	-
Stage 2	479	464	-	493	471	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	31.7		21.7		0		0.3	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1069	-	-	200	252	1015	-	-
HCM Lane V/C Ratio	0.002	-	-	0.333	0.146	0.015	-	-
HCM Control Delay (s)	8.4	0	-	31.7	21.7	8.6	0	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.4	0.5	0	-	-

Lanes, Volumes, Timings
3: Island Park & Scott

Existing
PM Peak Hour

	←	→	↙	↘	←	↙	↘	↗	↖	↗	↖	↘	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↙	↗	↘	↙	↗	↘		↗	↖	↙	↗	↘	
Traffic Volume (vph)	56	415	46	55	494	71	34	145	29	60	396	99	
Future Volume (vph)	56	415	46	55	494	71	34	145	29	60	396	99	
Ideal Flow (vphpl)	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	
Storage Length (m)	58.7		29.5	250.0		36.5	0.0		0.0	36.5		0.0	
Storage Lanes	1		1	1		1	0		0	1		0	
Taper Length (m)	15.0			15.0			15.0			15.0			
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	
Ped Bike Factor	0.98		0.90	0.98		0.86		0.99		0.97	0.98		
Frt			0.850			0.850		0.981			0.970		
Flt Protected	0.950			0.950				0.992		0.950			
Satd. Flow (prot)	1658	1548	1483	1658	1521	1483	0	1680	0	1658	1661	0	
Flt Permitted	0.257			0.344				0.738		0.608			
Satd. Flow (perm)	439	1548	1334	587	1521	1278	0	1246	0	1029	1661	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)			87			87		10			16		
Link Speed (k/h)		50			50			50			50		
Link Distance (m)		241.8			297.2			328.9			441.3		
Travel Time (s)		17.4			21.4			23.7			31.8		
Confl. Peds. (#/hr)	37		29	29		37	29		24	24		29	
Confl. Bikes (#/hr)			17			38			19			25	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	2%	15%	2%	2%	17%	2%	2%	2%	2%	2%	2%	2%	
Adj. Flow (vph)	62	461	51	61	549	79	38	161	32	67	440	110	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	62	461	51	61	549	79	0	231	0	67	550	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right	
Median Width(m)		3.5			3.5			3.5			3.5		
Link Offset(m)		0.0			0.0			0.0			0.0		
Crosswalk Width(m)		3.0			3.0			3.0			3.0		
Two way Left Turn Lane													
Headway Factor	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	
Turning Speed (k/h)	25		15	25		15	25		15	25		15	
Number of Detectors	1	2	1	1	2	1	1	2		1	2		
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru		
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0		
Trailing Detector (m)	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		
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6		
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	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		CI+Ex			CI+Ex			CI+Ex			CI+Ex		
Detector 2 Channel													

Scenario 1 210 Clearview Avenue Existing
MC

Synchro 11 Report
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Lanes, Volumes, Timings
3: Island Park & Scott

Existing
PM Peak Hour

	←	→	↙	↘	←	↙	↘	↗	↖	↗	↖	↘	↗
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Detector 2 Extend (s)		0.0			0.0			0.0				0.0	
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA		
Protected Phases		4			8			2			2	6	
Permitted Phases	4		4	8		8	2			6			
Detector Phase	4	4	4	8	8	8	2	2		6	6		
Switch Phase													
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0		10.0	10.0		
Minimum Split (s)	29.0	29.0	29.0	29.0	29.0	29.0	34.0	34.0		34.0	34.0		
Total Split (s)	43.0	43.0	43.0	43.0	43.0	43.0	51.0	51.0		51.0	51.0		
Total Split (%)	43.0%	43.0%	43.0%	43.0%	43.0%	43.0%	51.0%	51.0%		51.0%	51.0%		
Maximum Green (s)	36.0	36.0	36.0	36.0	36.0	36.0	44.0	44.0		44.0	44.0		
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
All-Red Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0		
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0		7.0		7.0	7.0		
Lead/Lag	Lag	Lag	Lag	Lag	Lag	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		Yes					
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Recall Mode	Max	Max	Max	Max	Max	Max	C-Max	C-Max		C-Max	C-Max		
Walk Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	12.0	12.0		12.0	12.0		
Flash Dont Walk (s)	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0		15.0	15.0		
Pedestrian Calls (#/hr)	29	29	29	37	37	37	24	24		29	29		
Act Effct Green (s)	42.0	42.0	42.0	42.0	42.0	42.0		44.0		44.0	44.0		
Actuated g/C Ratio	0.42	0.42	0.42	0.42	0.42	0.42		0.44		0.44	0.44		
v/c Ratio	0.34	0.71	0.08	0.25	0.86	0.13		0.42		0.15	0.74		
Control Delay	20.5	26.3	0.5	22.3	41.9	4.0		21.2		18.0	30.1		
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0		
Total Delay	20.5	26.3	0.5	22.3	41.9	4.0		21.2		18.0	30.1		
LOS	C	C	A	C	D	A		C		B	C		
Approach Delay		23.3			35.8			21.2			28.8		
Approach LOS		C			D			C			C		
Queue Length 50th (m)	5.2	75.1	0.2	7.5	94.4	0.0		28.5		7.6	84.1		
Queue Length 95th (m)	m14.0	112.1	m0.2	17.3	#155.2	7.3		48.4		16.1	125.4		
Internal Link Dist (m)		217.8			273.2			304.9			417.3		
Turn Bay Length (m)	58.7		29.5	250.0		36.5				36.5			
Base Capacity (vph)	184	650	610	246	638	587		553		452	739		
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	0.34	0.71	0.08	0.25	0.86	0.13		0.42		0.15	0.74		

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 2 (2%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Scenario 1 210 Clearview Avenue Existing
MC

Synchro 11 Report
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Lanes, Volumes, Timings
3: Island Park & Scott

Existing
PM Peak Hour

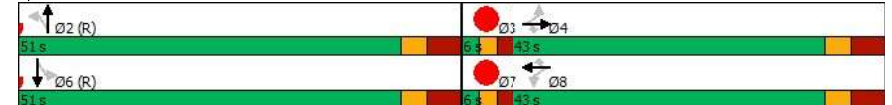
Lane Group	Ø3	Ø7
Detector 2 Extend (s)		
Turn Type		
Protected Phases	3	7
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	1.0	1.0
Minimum Split (s)	5.0	5.0
Total Split (s)	6.0	6.0
Total Split (%)	6%	6%
Maximum Green (s)	2.0	2.0
Yellow Time (s)	2.0	2.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lead
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	None
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (m)		
Queue Length 95th (m)		
Internal Link Dist (m)		
Turn Bay Length (m)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Lanes, Volumes, Timings
3: Island Park & Scott

Existing
PM Peak Hour

Intersection Signal Delay: 28.8	Intersection LOS: C
Intersection Capacity Utilization 94.8%	ICU Level of Service F
Analysis Period (min) 15	
# 95th percentile volume exceeds capacity, queue may be longer.	
Queue shown is maximum after two cycles.	
m Volume for 95th percentile queue is metered by upstream signal.	

Splits and Phases: 3: Island Park & Scott



Lanes, Volumes, Timings

4: West Village/Lanark & Scott

Existing

PM Peak Hour

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	564	16	13	557	36	13	2	9	49	3	32
Future Volume (vph)	88	564	16	13	557	36	13	2	9	49	3	32
Satd. Flow (prot)	1658	1584	0	1566	1565	0	1658	1358	0	1658	1349	0
Flt Permitted	0.376			0.383			0.732			0.750		
Satd. Flow (perm)	650	1584	0	621	1565	0	1164	1358	0	1270	1349	0
Satd. Flow (RTOR)		3			7			10			36	
Lane Group Flow (vph)	98	645	0	14	659	0	14	12	0	54	39	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Detector Phase	2	2		6	6		4	4		8	8	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	28.6	28.6		28.6	28.6		21.2	21.2		21.2	21.2	
Total Split (s)	71.0	71.0		71.0	71.0		29.0	29.0		29.0	29.0	
Total Split (%)	71.0%	71.0%		71.0%	71.0%		29.0%	29.0%		29.0%	29.0%	
Yellow Time (s)	3.3	3.3		3.3	3.3		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.3	3.3		3.3	3.3		2.9	2.9		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.6	6.6		6.6	6.6		6.2	6.2		6.2	6.2	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None	None	
Act Effct Green (s)	78.8	78.8		78.8	78.8		13.0	13.0		13.0	13.0	
Actuated g/C Ratio	0.79	0.79		0.79	0.79		0.13	0.13		0.13	0.13	
v/c Ratio	0.19	0.52		0.03	0.53		0.09	0.06		0.33	0.19	
Control Delay	5.3	7.2		4.5	5.2		38.5	22.2		44.3	16.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	5.3	7.2		4.5	5.2		38.5	22.2		44.3	16.1	
LOS	A	A		A	A		D	C		D	B	
Approach Delay		7.0			5.2			30.9			32.5	
Approach LOS		A			A			C			C	
Queue Length 50th (m)	5.3	49.9		0.6	38.1		2.4	0.3		9.4	0.5	
Queue Length 95th (m)	11.1	75.3		m0.7	m38.4		8.0	5.3		20.9	9.6	
Internal Link Dist (m)		332.8			217.8			81.9			75.1	
Turn Bay Length (m)	36.5			42.0			18.0			18.0		
Base Capacity (vph)	512	1248		489	1233		265	317		289	335	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.19	0.52		0.03	0.53		0.05	0.04		0.19	0.12	
Intersection Summary												
Cycle Length: 100												
Actuated Cycle Length: 100												
Offset: 40 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green												
Natural Cycle: 60												
Control Type: Actuated-Coordinated												

Scenario 1 210 Clearview Avenue 11:59 pm 09/04/2024 Existing

Synchro 11 Report
Page 8

Lanes, Volumes, Timings

4: West Village/Lanark & Scott

Existing

PM Peak Hour

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 8.1

Intersection LOS: A

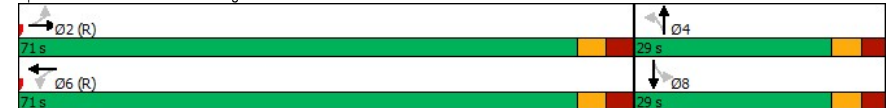
Intersection Capacity Utilization 69.2%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: West Village/Lanark & Scott



Scenario 1 210 Clearview Avenue 11:59 pm 09/04/2024 Existing

Synchro 11 Report
Page 9

HCM 2010 AWSC
5: Churchill & Lanark

Existing
PM Peak Hour

Intersection						
Intersection Delay, s/veh	7.5					
Intersection LOS	A					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	62	10	37	50	4	27
Future Vol, veh/h	62	10	37	50	4	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	6	2	2	4	2	2
Mvmt Flow	69	11	41	56	4	30
Number of Lanes	1	0	1	0	0	1
Approach	WB		NB		SB	
Opposing Approach			SB		NB	
Opposing Lanes	0		1		1	
Conflicting Approach Left	NB				WB	
Conflicting Lanes Left	1		0		1	
Conflicting Approach Right	SB		WB			
Conflicting Lanes Right	1		1		0	
HCM Control Delay	7.8		7.2		7.4	
HCM LOS	A		A		A	
Lane	NBLn1	WBLn1	SBLn1			
Vol Left, %	0%	86%	13%			
Vol Thru, %	43%	0%	87%			
Vol Right, %	57%	14%	0%			
Sign Control	Stop	Stop	Stop			
Traffic Vol by Lane	87	72	31			
LT Vol	0	62	4			
Through Vol	37	0	27			
RT Vol	50	10	0			
Lane Flow Rate	97	80	34			
Geometry Grp	1	1	1			
Degree of Util (X)	0.101	0.096	0.04			
Departure Headway (Hd)	3.755	4.318	4.174			
Convergence, Y/N	Yes	Yes	Yes			
Cap	945	826	850			
Service Time	1.813	2.364	2.238			
HCM Lane V/C Ratio	0.103	0.097	0.04			
HCM Control Delay	7.2	7.8	7.4			
HCM Lane LOS	A	A	A			
HCM 95th-tile Q	0.3	0.3	0.1			

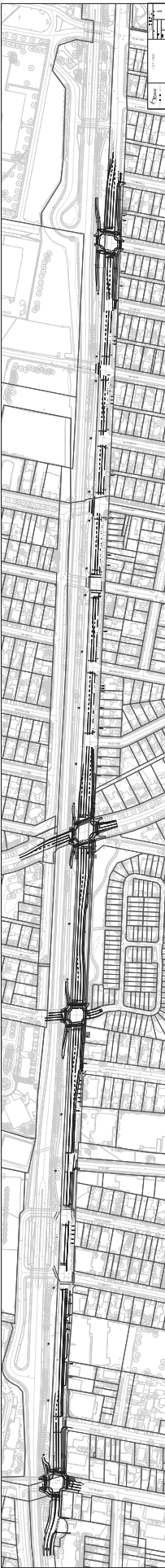
Appendix D

Collision Data

Accident Date	Accident Year	Accident Time	Location	Environment Condition	Light	Traffic Control	Traffic Control Condition	Classification Of Accident	Initial Impact Type	Road Surface Condition	# Vehicles	# Motorcycles	# Bicycles	# Pedestrians
1/14/2019	2019	10:53	LANARK AVE btwn BEECHGROVE AVE & BRIARWAY PRIV (_4TZ067)	01 - Clear	01 - Daylight	10 - No control	0	03 - P.D. only	06 - SMV unattended vehicle	01 - Dry	0	0	0	0
11/29/2021	2021	18:20	LANARK AVE btwn BEECHGROVE AVE & CHURCHILL AVE N (_3ZA025)	01 - Clear	07 - Dark	10 - No control	0	03 - P.D. only	06 - SMV unattended vehicle	01 - Dry	0	0	0	0
6/2/2022	2022	12:38	LANARK AVE btwn BEECHGROVE AVE & CHURCHILL AVE N (_3ZA025)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	99 - Other	01 - Dry	0	0	0	0
7/28/2019	2019	19:11	LANARK AVE btwn BRIARWAY PRIV & METROPOLE PRIV (_4TZ09Y)	01 - Clear	01 - Daylight	10 - No control	0	02 - Non-fatal injury	06 - SMV unattended vehicle	01 - Dry	0	0	0	0

Appendix E

Scott Street Bus Detour and Cycling Concept



Appendix F

TDM Checklist

TDM Measures Checklist:

Residential Developments (multi-family, condominium or subdivision)

Legend	
BASIC	The measure is generally feasible and effective, and in most cases would benefit the development and its users
BETTER	The measure could maximize support for users of sustainable modes, and optimize development performance
★	The measure is one of the most dependably effective tools to encourage the use of sustainable modes

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

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

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

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

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

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

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

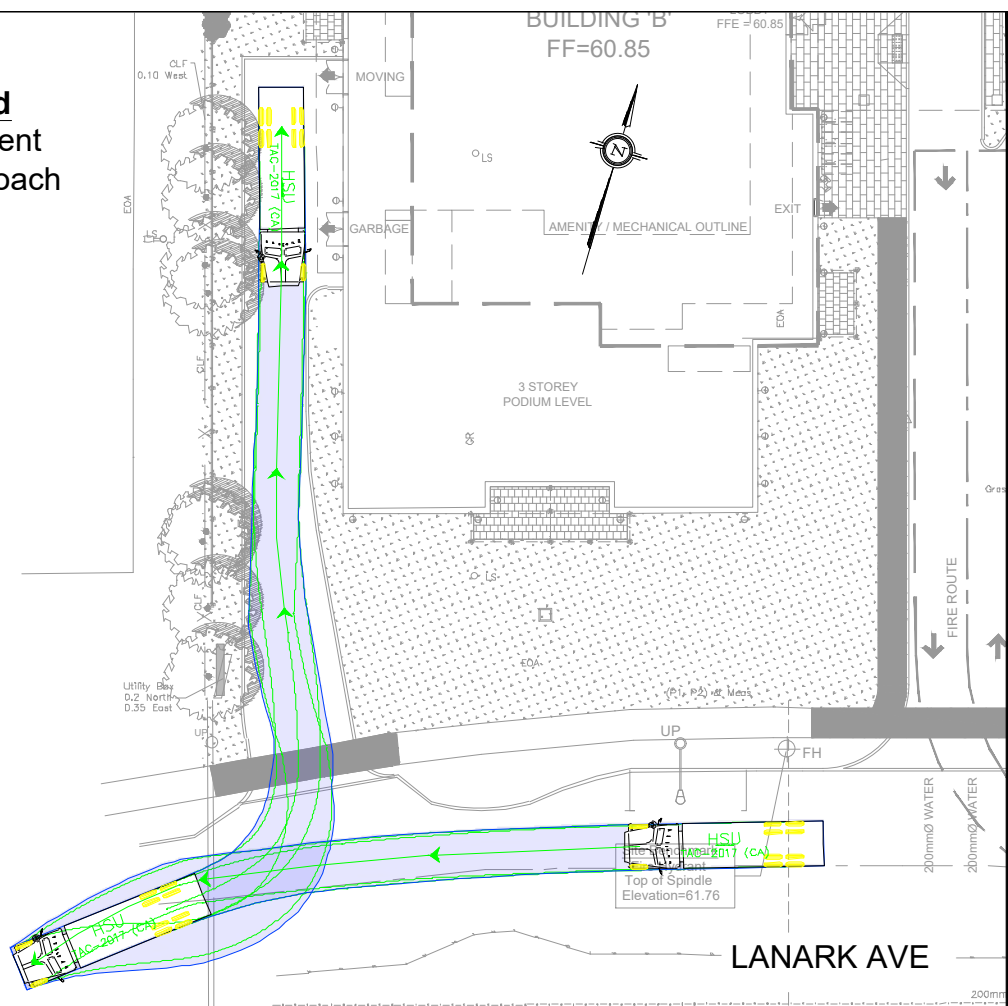
TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
2. WALKING & CYCLING: END-OF-TRIP FACILITIES		
2.1 Bicycle parking		
REQUIRED	2.1.1 Provide bicycle parking in highly visible and lighted areas, sheltered from the weather wherever possible (see <i>Official Plan policy 4.3.6</i>)	☒
REQUIRED	2.1.2 Provide the number of bicycle parking spaces specified for various land uses in different parts of Ottawa; provide convenient access to main entrances or well-used areas (see <i>Zoning By-law Section 111</i>)	☒
REQUIRED	2.1.3 Ensure that bicycle parking spaces and access aisles meet minimum dimensions; that no more than 50% of spaces are vertical spaces; and that parking racks are securely anchored (see <i>Zoning By-law Section 111</i>)	☒
BASIC	2.1.4 Provide bicycle parking spaces equivalent to the expected number of resident-owned bicycles, plus the expected peak number of visitor cyclists	☐
2.2 Secure bicycle parking		
REQUIRED	2.2.1 Where more than 50 bicycle parking spaces are provided for a single residential building, locate at least 25% of spaces within a building/structure, a secure area (e.g. supervised parking lot or enclosure) or bicycle lockers (see <i>Zoning By-law Section 111</i>)	☒
BETTER	2.2.2 Provide secure bicycle parking spaces equivalent to at least the number of units at condominiums or multi-family residential developments	☐
2.3 Bicycle repair station		
BETTER	2.3.1 Provide a permanent bike repair station, with commonly used tools and an air pump, adjacent to the main bicycle parking area (or secure bicycle parking area, if provided)	☐
3. TRANSIT		
3.1 Customer amenities		
BASIC	3.1.1 Provide shelters, lighting and benches at any on-site transit stops	☐
BASIC	3.1.2 Where the site abuts an off-site transit stop and insufficient space exists for a transit shelter in the public right-of-way, protect land for a shelter and/or install a shelter	☐
BETTER	3.1.3 Provide a secure and comfortable interior waiting area by integrating any on-site transit stops into the building	☐

TDM-supportive design & infrastructure measures: <i>Residential developments</i>		Check if completed & add descriptions, explanations or plan/drawing references
4. RIDESHARING		
4.1 Pick-up & drop-off facilities		
BASIC	4.1.1 Provide a designated area for carpool drivers (plus taxis and ride-hailing services) to drop off or pick up passengers without using fire lanes or other no-stopping zones	☒
5. CARSHARING & BIKESHARING		
5.1 Carshare parking spaces		
BETTER	5.1.1 Provide up to three carshare parking spaces in an R3, R4 or R5 Zone for specified residential uses (<i>see Zoning By-law Section 94</i>)	☐
5.2 Bikeshare station location		
BETTER	5.2.1 Provide a designated bikeshare station area near a major building entrance, preferably lighted and sheltered with a direct walkway connection	☐
6. PARKING		
6.1 Number of parking spaces		
REQUIRED	6.1.1 Do not provide more parking than permitted by zoning, nor less than required by zoning, unless a variance is being applied for	☒
BASIC	6.1.2 Provide parking for long-term and short-term users that is consistent with mode share targets, considering the potential for visitors to use off-site public parking	☐
BASIC	6.1.3 Where a site features more than one use, provide shared parking and reduce the cumulative number of parking spaces accordingly (<i>see Zoning By-law Section 104</i>)	☐
BETTER	6.1.4 Reduce the minimum number of parking spaces required by zoning by one space for each 13 square metres of gross floor area provided as shower rooms, change rooms, locker rooms and other facilities for cyclists in conjunction with bicycle parking (<i>see Zoning By-law Section 111</i>)	☐
6.2 Separate long-term & short-term parking areas		
BETTER	6.2.1 Provide separate areas for short-term and long-term parking (using signage or physical barriers) to permit access controls and simplify enforcement (i.e. to discourage residents from parking in visitor spaces, and vice versa)	☐

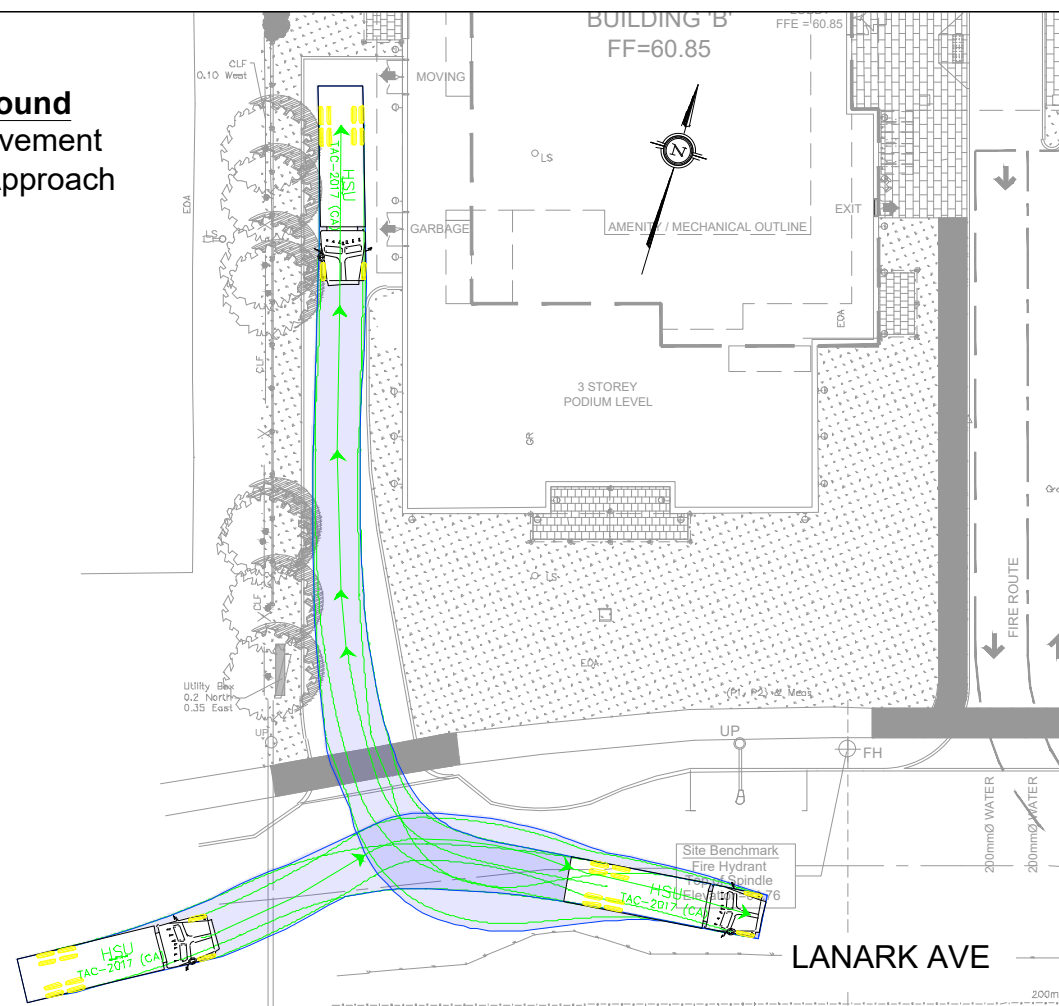
Appendix G

Turning Templates

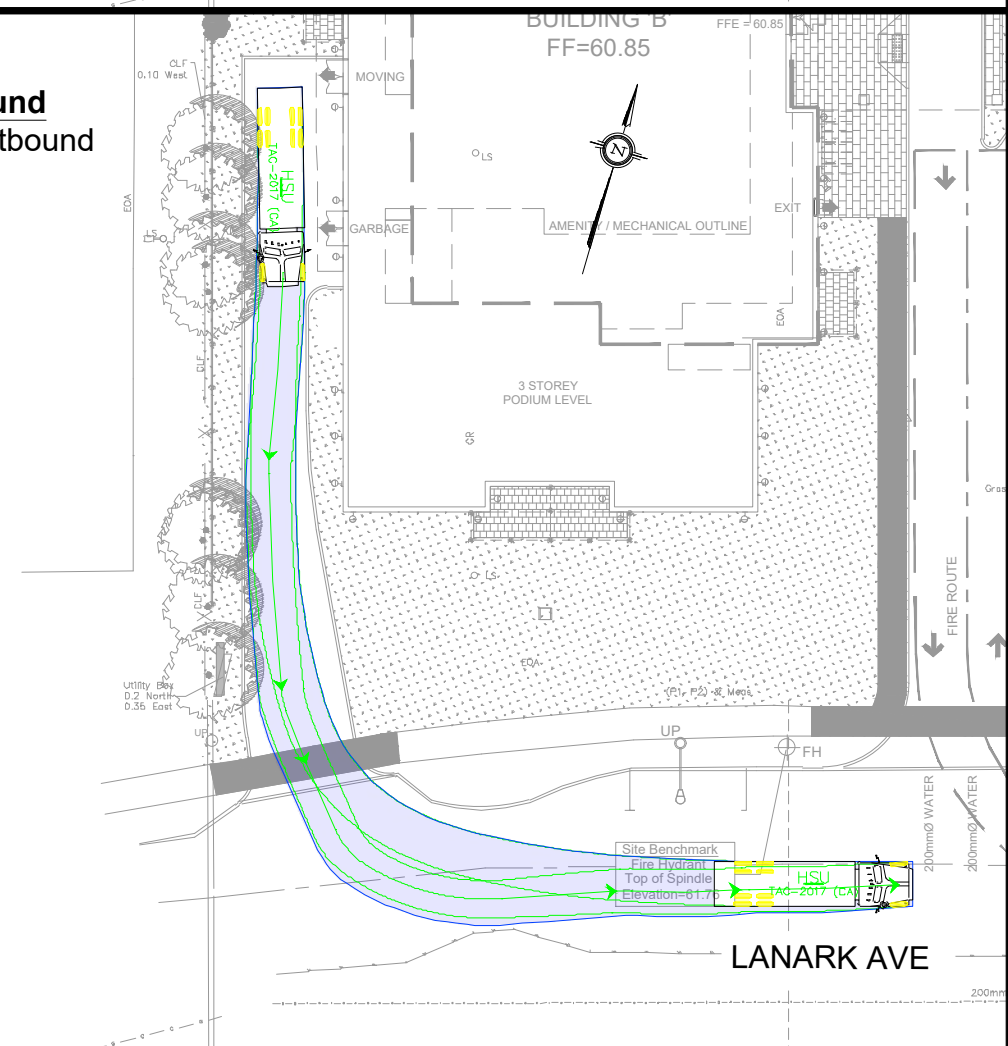
HSU Inbound
Loading Movement
Westbound Approach



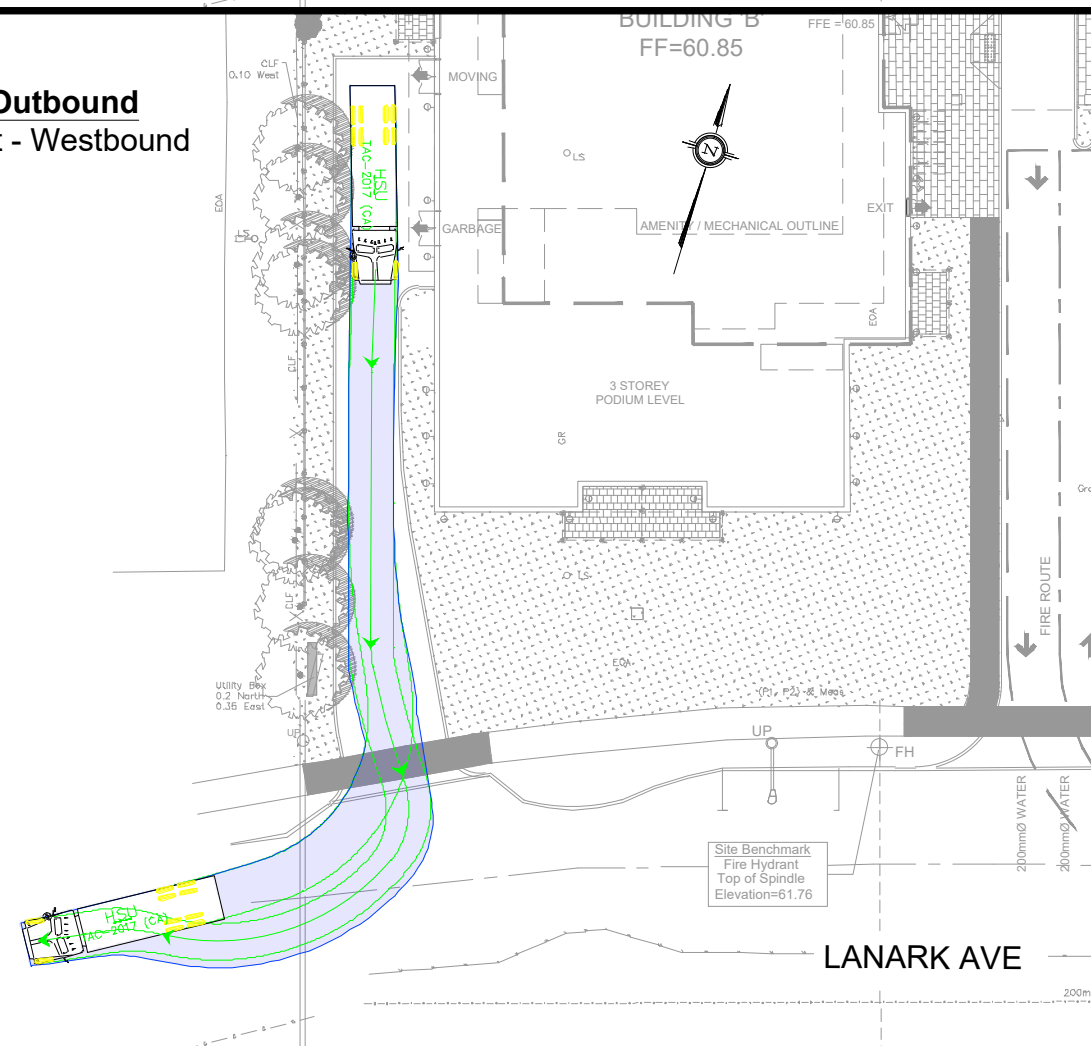
HSU Inbound
Loading Movement
Eastbound Approach



HSU Outbound
Movement - Eastbound

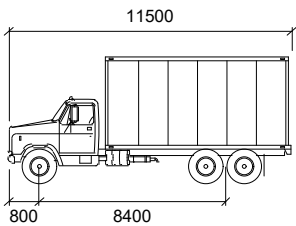
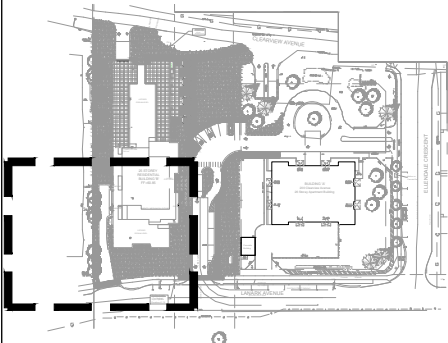


HSU Outbound
Movement - Westbound



Notes:

Key Plan:



HSU

mm
Width : 2600
Track : 2600
Lock to Lock Time : 6.0
Steering Angle : 40.0

02	Issued for Review:	AN	2024-09-13
REV:	DESCRIPTION:	BY:	DATE:
STATUS:			



CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Homestead Land Holdings

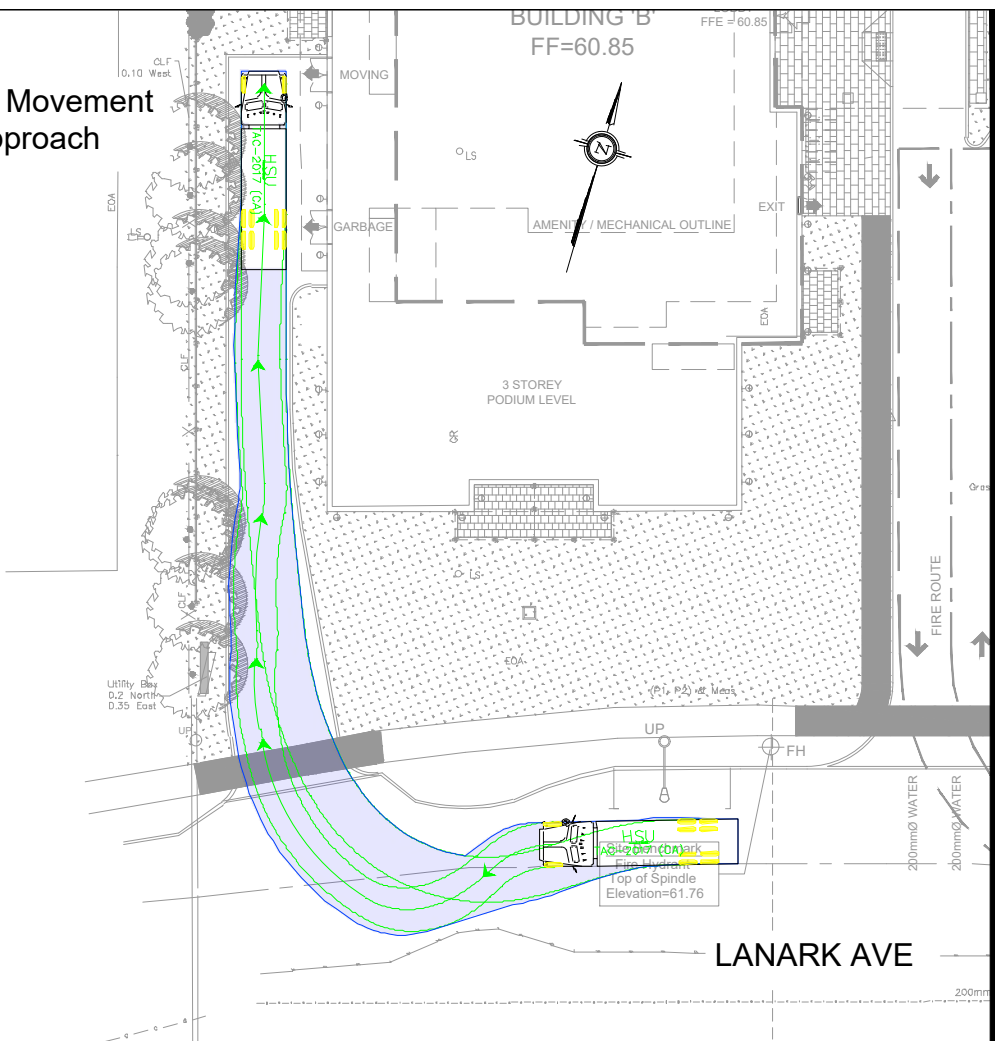
ARCHITECT:

SITE:
210 Clearview Ave

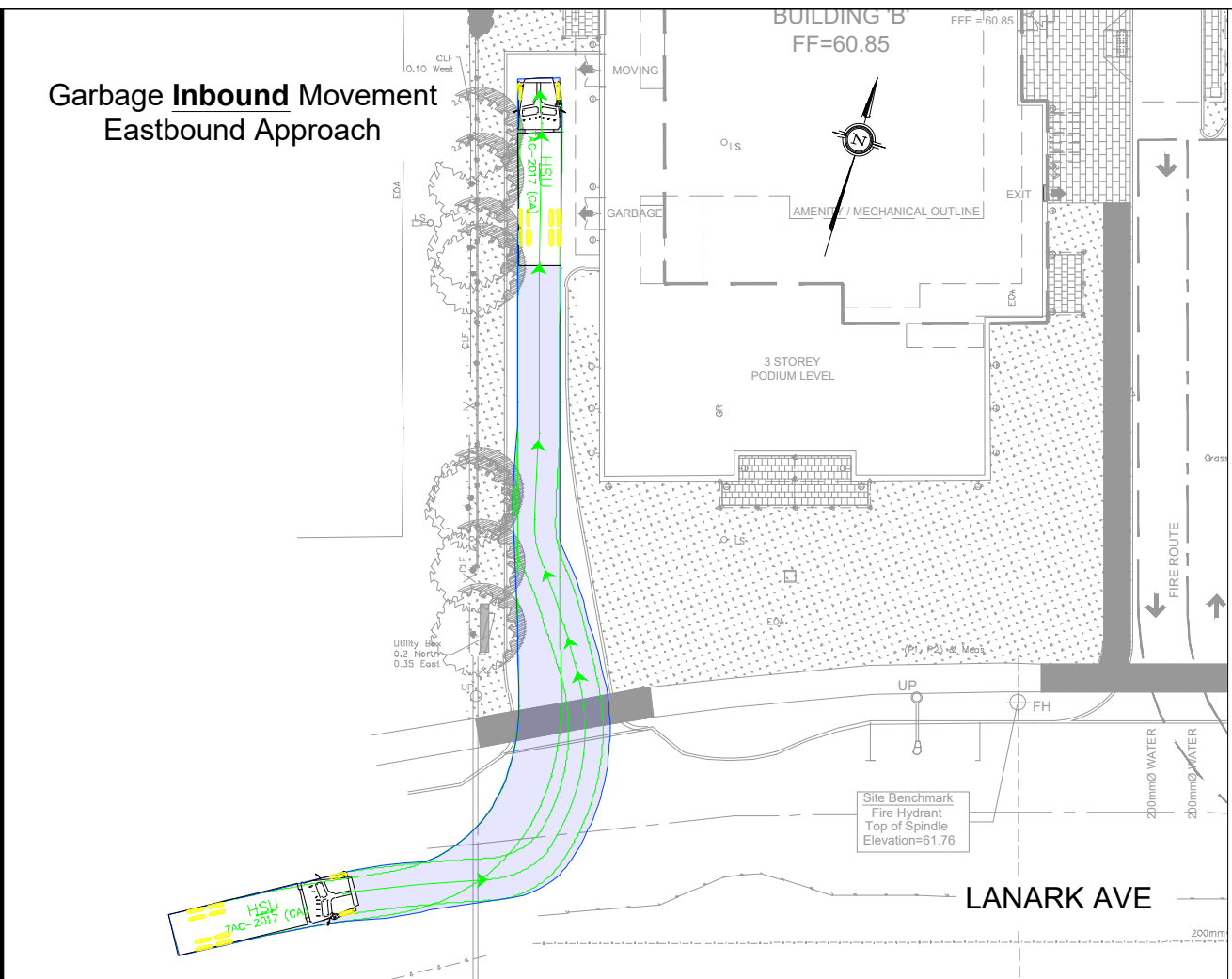
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HSU Turning Movements

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PROJECT NO: 2024-030	DRAWING NO: 001	REVISION: 02	

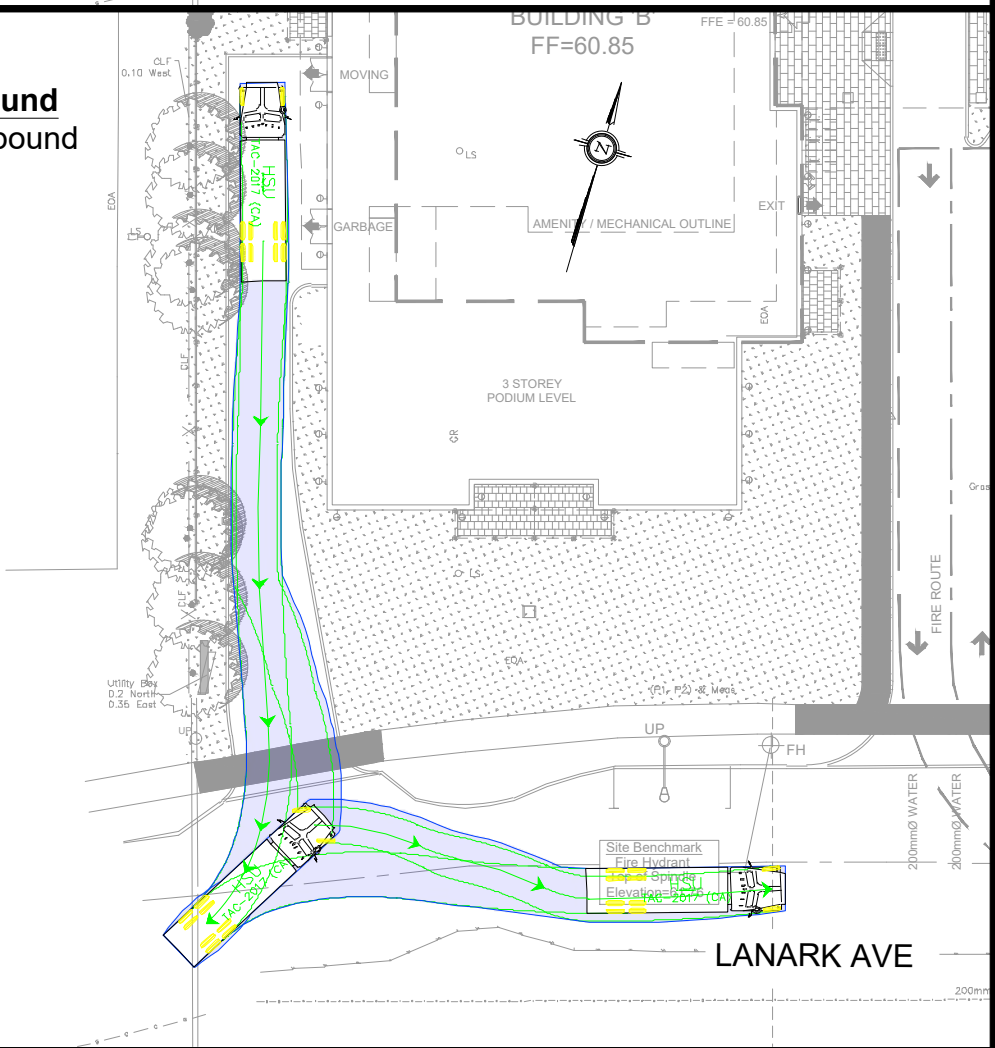
Garbage Inbound Movement
Westbound Approach



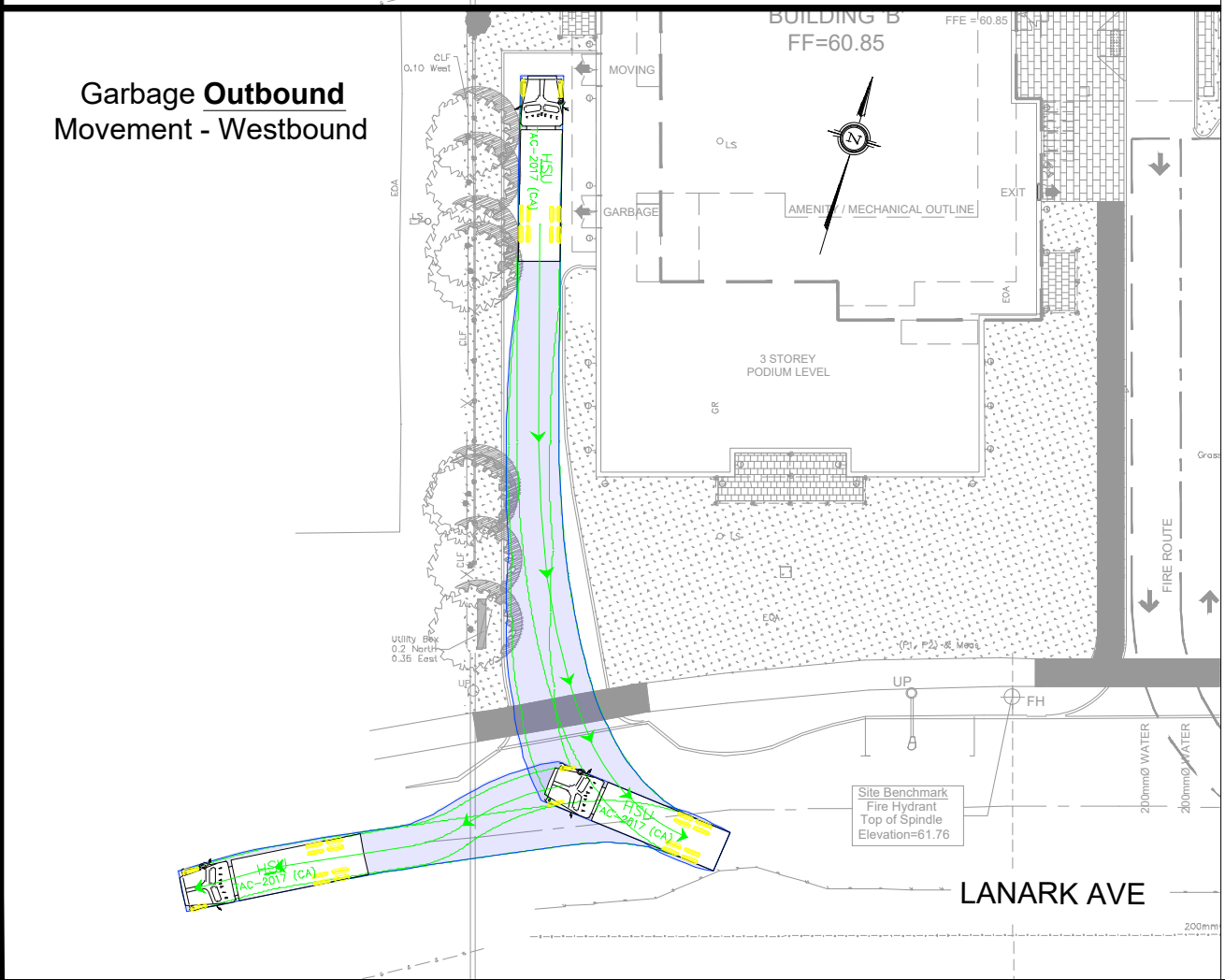
Garbage Inbound Movement
Eastbound Approach



Garbage Outbound
Movement - Eastbound

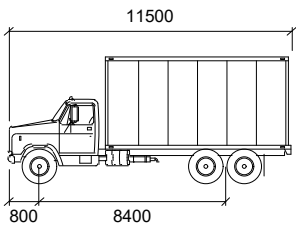
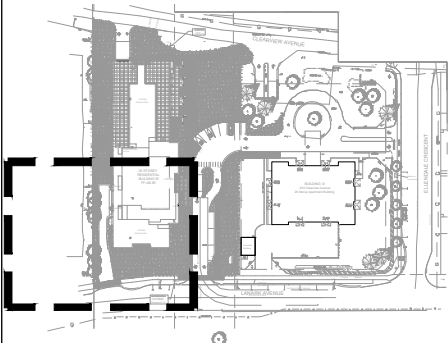


Garbage Outbound
Movement - Westbound



Notes:

Key Plan:



HSU

Width : 2600
Track : 2600
Lock to Lock Time : 6.0
Steering Angle : 40.0

02	Issued for Review:	AN	2024-09-13
REV:	DESCRIPTION:	BY:	DATE:
STATUS:			



CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Homestead Land Holdings

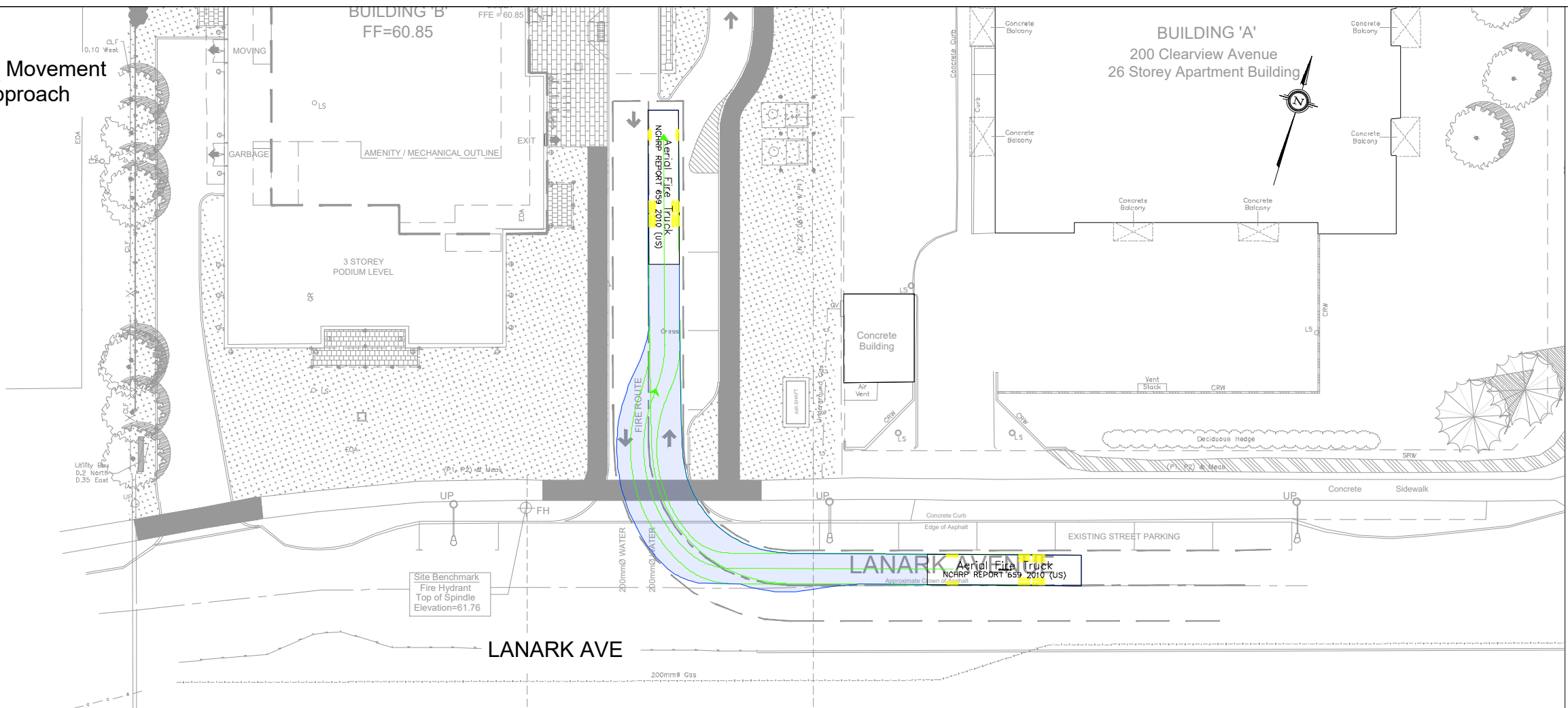
ARCHITECT:

SITE:
210 Clearview Ave

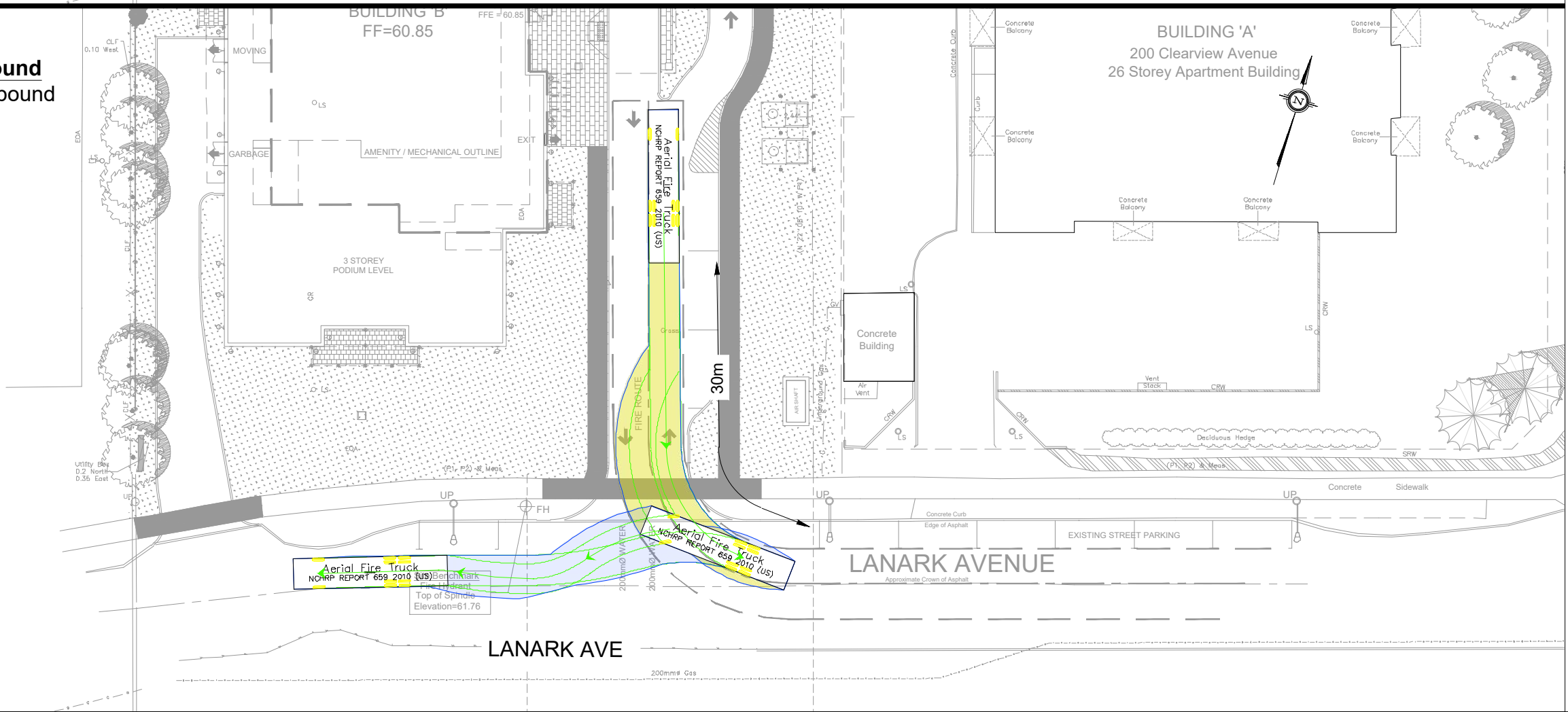
TITLE: Turning Movement Analysis
Garbage Turning Movements

SCALE AT A3: NTS	DATE: 2024-09-13	DRAWN: AN	CHECKED: AH
PROJECT NO: 2024-030	DRAWING NO: 002	REVISION: 02	

Garbage Inbound Movement
Westbound Approach

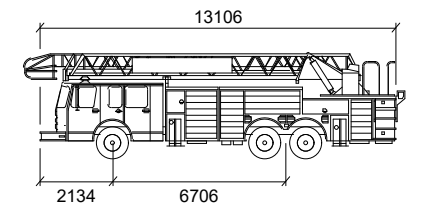
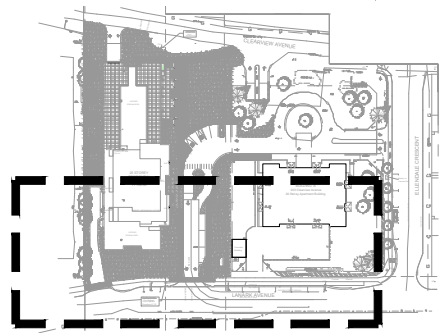


Garbage Outbound
Movement - Eastbound



Notes:

Key Plan:



Aerial Fire Truck

	mm
Width	: 2591
Track	: 2591
Lock to Lock Time	: 6.0
Steering Angle	: 33.3

02	Issued for Review:	AN	2024-09-13
REV:	DESCRIPTION:	BY:	DATE:
STATUS:			

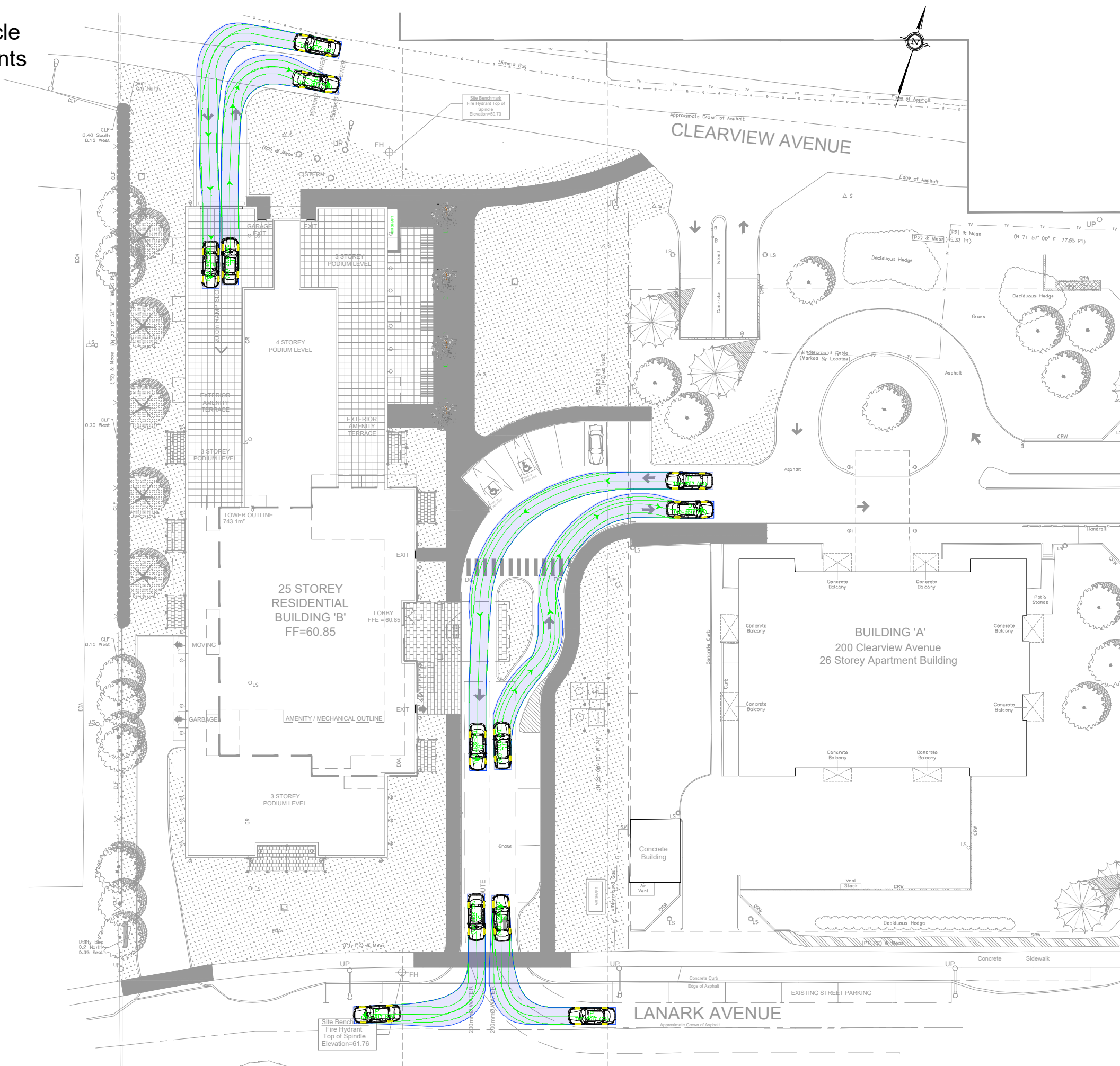
CGH Transportation
6 Plaza Court
Ottawa, ON
K2H 7W1
(343) 999-9117

CLIENT: Homestead Land Holdings

ARCHITECT:

SITE: 210 Clearview Ave			
TITLE: Turning Movement Analysis Fire Turning Movements			
SCALE AT A3: NTS	DATE: 2024-09-13	DRAWN: AN	CHECKED: AH
PROJECT NO: 2024-030	DRAWING NO: 003	REVISION: 02	

Passenger Vehicle
Turning Movements



Notes:

Key Plan:

5600

1100

3200

P

Width

Track

Lock to Lock Time

Steering Angle

mm

: 2000

: 2000

: 6.0

: 35.9

02	Issued for Review:	AN	2024-09-13
REV:	DESCRIPTION:	BY:	DATE:
STATUS:			

G

CGH Transportation

6 Plaza Court

Ottawa, ON

K2H 7W1

(343) 999-9117

CLIENT:

Homestead Land Holdings

ARCHITECT:

SITE:

210 Clearview Ave

TITLE:

Turning Movement Analysis

Tac P Turning Movements

SCALE AT A3:	DATE:	DRAWN:	CHECKED:
NTS	2024-09-13	AN	AH
PROJECT NO:	DRAWING NO:	REVISION:	
2024-030	004	02	

Appendix H

MMLOS Analysis

Multi-Modal Level of Service - Segments Form

Consultant	CGH Transportation Inc	Project	2024-030
Scenario	Existing/Future	Date	2025-03-21
Comments			

SEGMENTS			Lanark Avenue	Clearview Avenue	Section
			Ex/Fu	Ex	Fu
Pedestrian	Sidewalk Width	-	1.8 m	no sidewalk	1.8 m
	Boulevard Width		0.5 - 2 m	n/a	< 0.5 m
	Avg Daily Curb Lane Traffic Volume		≤ 3000	≤ 3000	≤ 3000
	Operating Speed		> 30 to 50 km/h yes	> 30 to 50 km/h yes	> 30 to 50 km/h yes
	On-Street Parking				
	Exposure to Traffic PLoS		B	F	B
	Effective Sidewalk Width				
	Pedestrian Volume				
	Crowding PLoS		-	-	-
	Level of Service		-	-	-
Bicycle	Type of Cycling Facility	-	Mixed Traffic	Mixed Traffic	
	Number of Travel Lanes		≤ 2 (no centreline)	≤ 2 (no centreline)	
	Operating Speed		>40 to <50 km/h	>40 to <50 km/h	
	# of Lanes & Operating Speed LoS		B	B	-
	Bike Lane (+ Parking Lane) Width				
	Bike Lane Width LoS		-	-	-
	Bike Lane Blockages				
	Blockage LoS		-	-	-
	Median Refuge Width (no median = < 1.8 m)				
	No. of Lanes at Unsignalized Crossing				
	Sidestreet Operating Speed				
	Unsignalized Crossing - Lowest LoS		-	-	-
	Level of Service		-	-	-
Transit	Facility Type	D	Mixed Traffic		
	Friction or Ratio Transit:Posted Speed		Vt/Vp ≥ 0.8		
	Level of Service		D	-	-
Truck	Truck Lane Width	-			
	Travel Lanes per Direction				
	Level of Service		-	-	-