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Windsor 7 – Multi -Unit Development

9222 – 9244 116 Street NW
LDA25 - 0389

Mobility Assessment

FINAL Report, Version 3.5

Prepared for

Westrich Pacific Corp.

Date

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Project No.

25-262

Corporate Authorization

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TABLE OF CONTENTS

1. INTRODUCTION	1
1.1 Preamble	1
1.2 Study Scope	2
1.3 Report Organization	2
2. PRE-DEVELOPMENT CONDITIONS	3
2.1 Existing and Future Adjacent Land Use	3
2.2 Roadway Network	3
2.3 On-Street Parking	4
2.4 Pedestrian Accommodation and Observations	4
2.5 Bicycle Facilities and Observations	5
2.6 Transit	6
3. PROPOSED DEVELOPMENT	7
3.1 Site Location and Zoning	7
3.2 Description of Proposed Development	7
3.3 Site Access and Parking	8
3.4 Waste Management	8
3.5 Transportation Demand Management	8
4. SITE AND ADJACENT DEVELOPMENT GENERATED TRAFFIC	9
4.1 Site Trip Generation	9
4.2 Trip Distribution and Assignment	10
4.3 Anticipated and Potential Development in Windsor Park	11
4.4 Future Background Traffic	12
5. TRAFFIC REVIEW	14
5.1 Analysis Assumptions	14
5.2 Future Background (2028) Operations	14
5.3 Opening Day (2028) Operations	16
5.4 Future Alley Operations	17
5.5 Pedestrian Crossing	17
6. SUMMARY	19
6.1 Findings and Recommendations	19
APPENDIX A TRAFFIC COUNTS	2
APPENDIX B SYNCHRO SUMMARIES	4

EXHIBITS

Exhibit 1.1: Site Context.....	1
Exhibit 3.1: Example Site Plan (Ground Floor)	7
Exhibit 4.1: Site Traffic Assignment – Peak Hour	10
Exhibit 4.2: Anticipated Development in Southeast Windsor Park.....	12
Exhibit 5.1: Decision Support Tool for Pedestrian Crossings.....	18

TABLES

Table 2.1: Existing Roadway Characteristics Adjacent to Site	3
Table 2.2: Existing AM and PM Peak Hour Pedestrian Crossing Counts	5
Table 4.1: Vehicle Trip Generation Rates	9
Table 4.2: Gross Vehicle Trip Generation.....	9
Table 4.3: Net Trip Generation	10
Table 4.4: Historic AAWDT Volumes	12
Table 4.5: Peak Hour Background Traffic (2028).....	13
Table 5.1: Saskatchewan Drive/Emily Murphy Drive and 116 Street – Future Background Conditions	15
Table 5.2: Edinboro Road and 116 Street – Future Background Conditions	15
Table 5.3: Saskatchewan Drive/Emily Murphy Drive and 116 Street – Opening Day Conditions	16
Table 5.4: Edinboro Road and 116 Street – Opening Day Conditions	16

1. INTRODUCTION

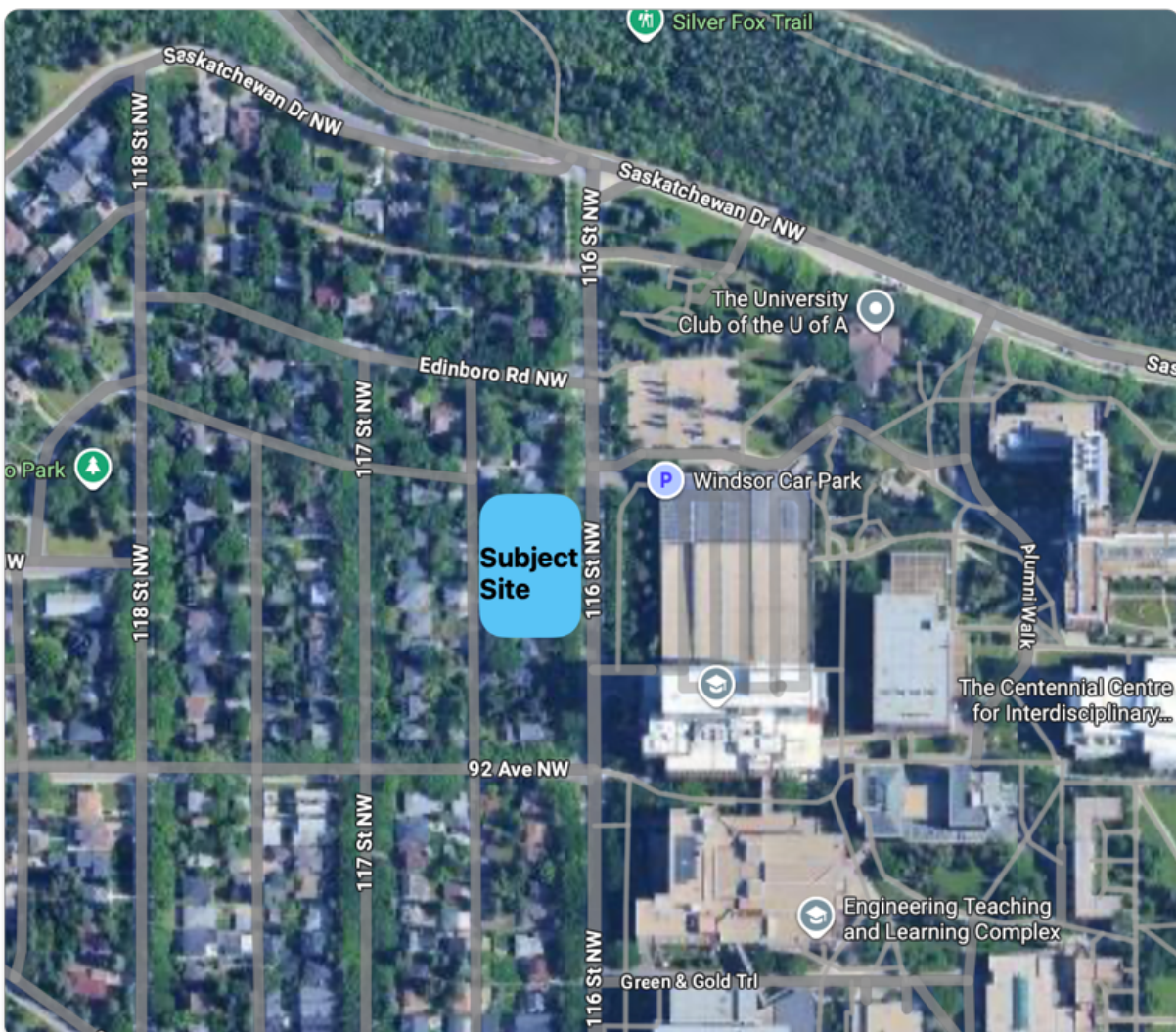
1.1 Preamble

On behalf of Westrich Pacific Corp. (Westrich), Green Space Alliance is in the process of advancing an application (LDA25-0389) to rezone four residential lots located in the east-central sector of the Windsor Park neighbourhood. The proposed rezoning is located midblock on 116 Street, between 91 Street and Edinboro Road, generally across the street from the Windsor Car Park located in the University of Alberta's North Campus.

Rezoning approval will allow Westrich to proceed with the development of a multi-unit residential building, with approximately 150 units (per current conceptual plans for the site). A previous iteration of this application included five residential lots with a plan for approximately 200 units, however, only four lots are being considered for rezoning at this time.

The site context and adjacent roadway network are illustrated in **Exhibit 1.1**.

Exhibit 1.1: Site Context



1.2 Study Scope

The City of Edmonton requested a review of the transportation-related aspects of the rezoning application to better understand the potential development impacts on both the neighbourhood and the surrounding transportation network, and to assess the cumulative traffic impacts associated with the proposed and anticipated developments in the area.

Based on a review of the Pre-Application Meeting Minutes and City comments received based on their review of a Scoping Document, the Mobility Assessment includes information on the following:

- Existing and future area transportation networks, including alternative modes networks;
- A qualitative and quantitative commentary on existing traffic volumes and operations on the study area roadways, including the following intersections:
 - Saskatchewan Drive/Emily Murphy Drive and 116 Street (operational);
 - Edinboro Road and 116 Street (operational);
 - 92 Avenue and 116 Street (qualitative);
 - 87 Avenue and 116 Street (qualitative); and
 - Local Alley Network (qualitative)
- Current vehicular, pedestrian, or bicycle operational challenges on study roadways;
- A review of pedestrian and cyclist infrastructure in the area;
- Multi-modal (i.e., walking, cycling, transit, and driving) trip generation for the proposed development during the AM and PM peak hours based on City trip generation rates and industry best practices in consideration of the development's location;
- Cumulative traffic impacts of the subject development and recent development in southeast Windsor Park, as considered in the traffic impact assessments, including:
 - Windsor Manor – *Windsor Park II Multi-Family Development, 8728-8734 116 Street NW, Mobility Assessment, Huberman Transportation Consultant, 2024* (referred to as the 'Windsor Manor TIA'); and
 - Windsor Heights – *Mixed-use Development 11630-11638 87 Avenue NW, Mobility Assessment, Huberman Transportation Consultants, 2025* (referred to as the 'Windsor Heights TIA'); and
- Recommendations for any required improvements to support the subject development.

1.3 Report Organization

In addition to this introductory section, this report contains five sections. A summary of existing and future area conditions, including a review of roadway, parking, transit, bicycle facilities, and pedestrian movements is included in **Section Two**. This background information helped inform the preparation of the mobility assessment.

Section Three reviews the key land use and mobility characteristics associated with the development parcel and preliminary information regarding the multi-unit building being considered upon rezoning approval.

Section Four includes commentary on the projected traffic characteristics associated with the development parcels, while **Section Five** includes the traffic assessment. Finally, **Section Six** presents a summary of the report findings.

2. PRE-DEVELOPMENT CONDITIONS

2.1 Existing and Future Adjacent Land Use

Land use in the mature Windsor Park neighbourhood is predominantly comprised of single and semi-detached dwellings, with most properties governed by an (RS) Small Scale Residential Zone, including the four (4) development parcels.

Windsor Park, like many established neighbourhoods in Edmonton, is undergoing redevelopment, especially in the southeastern corner of the neighbourhood. More intense types of development, including multi-unit housing ranging from four to 11 stories, are in various stages of planning and construction, as discussed in **Sections Four and Five** of this report.

The University of Alberta's North Campus is located east of the Windsor Park neighbourhood (east of 116 Street) and includes major destinations such as the Northern Alberta Jubilee Auditorium and the University of Alberta Hospital Campus. Across 116 Street from the development site is a mix of surface and multi-story vehicle parking (Windsor Car Park), as well as the Donadeo Innovation Centre for Engineering (9211 - 116 Street) immediately to the south. The North Saskatchewan River valley is located to the north and west of Windsor Park.

2.2 Roadway Network

The development parcel is situated adjacent to 116 Street and is strategically positioned relative to the collector and arterial roadway network. The transportation context of the study area (in the Windsor Park Neighbourhood) is generally represented by a series of grid-like and curvilinear streets with pedestrian facilities typically provided on both sides of the roadway.

A field reconnaissance of the site and its surroundings was conducted to establish a database of the existing conditions. Several roadways and alleys are likely to be used as vehicular routes to the development parcel.

Table 2.1 summarizes the general operating characteristics of each street.

Table 2.1: Existing Roadway Characteristics Adjacent to Site

Roadway	Classification	Cross-Section		Posted Speed (Km/h)	Facilities			
		Lanes	Median		Parking	Bike Route	Bike Infra	Bus Stop
116 Street (87 Avenue to 89 Avenue)	Collector	3	No	40	No	Yes	Painted Lanes	No
116 Street (89 Avenue to Saskatchewan Drive)	Collector	2	No	40	No	Yes	Painted Lanes	Yes
Saskatchewan Drive (east of 116 Street)	Collector	2	No	40	On-street	Yes	Shared Pathway	No
Emily Murphy Drive (west of 116 Street)	Collector	2	No	50	No	Yes	Sidewalk	No
87 Avenue	Arterial	4	No	50	No	No	No	Yes
Edinboro Road	Local	2	No	40	On-street	No	No	No
92 Avenue	Collector	2	No	40	On-street	No	No	Yes
Area Alleys	Alley	1	No	20	No	No	No	No

In addition to reviewing historical traffic count information collected to supplement the Windsor Manor and Windsor Heights multi-unit developments, multimodal traffic counts were also undertaken to better understand traffic directly adjacent to the subject site. In line with direction from the City of Edmonton, the two counts were conducted on Thursday, September 11, 2025, at:

- Edinboro Road and 116 Street (morning and afternoon peak hours)
- Saskatchewan Drive/Emily Murphy Drive and 116 Street (24-hour)

Subsequent to the preparation of the initial draft Traffic Impact Assessment report, the City shared a 24-hour traffic count for the Saskatchewan Drive/Emily Murphy Drive and 116 Street intersection that was collected on Thursday, November 23, 2023.

Additionally, the City shared that it undertook an all-way stop control warrant at this same intersection in 2022. At that time, changes to the existing control were not found to be warranted, based on the traffic volumes, operating speeds, and roadway layout. It was determined that a significant increase in volumes would be required to warrant changes, and in such a case, a pedestrian signal would be the appropriate traffic control measure. These improvements to the intersection are included within the City's 2024-2026 Capital Budget cycle. The City will complete another review of this intersection (assessing the need for improvements to the pedestrian crossing and overall intersection operations) sometime in 2026.

Vehicle data is discussed further in **Section 4.3** of this report. Other modal data, including pedestrians and cyclists, is discussed in **Section 2.4** and **Section 2.5**.

2.3 On-Street Parking

Parking on 116 Street is largely restricted between Saskatchewan Drive and 87 Avenue. Resident-only parking (UA-4 Zone) is generally available in the vicinity of the site, including on the north curb of 92 Avenue and the north curb of Edinboro Road (while parking is not permitted on the south curb). There are also several off-street university parking lots in the vicinity of the development parcel, including Windsor Car Park and Stadium Car Park.

2.4 Pedestrian Accommodation and Observations

The street network in this area of Windsor Park provides for high pedestrian connectivity. The network includes a high number of intersections and shorter links between intersections, including pedestrian connections. The proposed development site is well located to take advantage of pedestrian corridors located in the vicinity of the development parcel. Sidewalks are generally provided on both sides of streets and avenues near the development parcel.

- Sidewalks are provided along the north and south curbs of Edinboro Road;
- Sidewalks are only provided along the north curb of 92 Avenue;
- The intersection of Edinboro Road is yield-controlled at 116 Street;
- The intersection of 92 Avenue is yield-controlled at 116 Street;
- A painted crosswalk is located on the north approach of the 116 Street and 92 Avenue intersection, and on the north approach of the 116 Street and Edinboro Road intersection; and
- A painted crosswalk is located on the east approach of the Saskatchewan Drive/Emily Murphy Drive and 116 intersection.

The development site is located within proximity to an array of everyday amenities and employment opportunities, particularly the University of Alberta, which makes walking an attractive and realistic travel mode for future residents. This is borne out in the multimodal traffic data collected in the study area, which shows significant pedestrian volumes. **Table 2.2** for peak hour pedestrian volumes. The full datasets are included in **Appendix A**.

Table 2.2: Existing AM and PM Peak Hour Pedestrian Crossing Counts

AM Peak Hour	N	S	E	W
Edinboro Road / 116 Street	4	0	14	4
Saskatchewan Drive / 116 Street	0	7	39	2
PM Peak Hour	N	S	E	W
Edinboro Road / 116 Street	9	0	24	7
Saskatchewan Drive / 116 Street	0	9	38	8

At the intersection of Edinboro Road and 116 Street, the largest number of pedestrian crossings occur along the east side of 116 Street, reflective of the proximity of the University of Alberta campus. Pedestrians are seen to exclusively use the marked crossing on the north leg of the intersection, which is supported with a marked crossing. Further discussion of this crossing is included in **Section 5.5**.

At the intersection of Saskatchewan Drive/Emily Murphy Drive and 116 Street, the south leg (116 Street) and east leg (Saskatchewan Road) have the highest activity, again reflective of the university context. The west leg, which represents the one-way westbound continuation of Saskatchewan Drive west of 116 Street, includes some pedestrian activity, though upon review of MioVision video between 4:00 PM and 5:00 PM, it appears that some of these crossings were cyclists crossing 116 Street and then accessing the westbound cycle lane. The MioVision video will be submitted to the City as part of this report.

2.5 Bicycle Facilities and Observations

The City of Edmonton is planning to implement a network of bicycle infrastructure around the city, a key part of City Plan and Bike Plan. The study area is generally well-connected for cyclists. Based on a review of the City of Edmonton Bicycle Route Map, several existing bicycle routes in the area include:

- 116 Street north of 87 Avenue has painted on-street bike lanes;
- 87 Avenue is a marked on-street bike route between 116 Street and the access to Lister Hall Residences;
- Saskatchewan Drive has a shared pathway east of 116 Street and Emily Murphy Drive has a sidewalk/shared pathway west of 116 Street; and
- Eastbound and westbound bicycle lanes are located on 89 Avenue.

The existing painted bike lanes on 116 Street are not in complete alignment with City of Edmonton *Complete Streets Design and Construction Standards*, which suggest separated facilities when daily traffic volumes exceed 6,000 vehicles. Similarly, the existing sidewalk on the north side of Emily Murphy Drive (west of 116 Street) is not optimal for the level of pedestrian, cycling, and scooters use observed from the data collection. It is recognized that the City continues to invest in active modes facilities across the City. Although there are currently no ongoing or anticipated projects associated with bike facilities in this area, improvements to the bike network can be explored as part of any potential future renewal projects.

The multimodal traffic counts at the two intersections included cyclist activity. The intersection of Edinboro Road and 116 Street was observed to see cyclist activity during the peak hour counts. A total of 39 cyclists were observed over the six-hour count period. The dominant movement is the east leg (which does not have vehicles) with 34 cyclists, while 4 cyclists were seen on the north leg (crossing 116 Street on the marked crossing).

On-street, 23 cyclists were observed travelling south on 116 Street, while 40 cyclists were observed travelling north. Approximately 8 cyclists were observed on Edinboro Road west of 116 Street.

For the intersection of Saskatchewan Drive/Emily Murphy Drive and 116 Street, most of the daily cycling activity (228 of 277, 82.3%) occurred on the east leg (crossing Saskatchewan Drive). The next highest crossing is the south leg (116 Street) with 38 crossings (13.7%). However, the data collection did not explicitly capture the number of bicycles and e-scooters using the sidewalk on the north side of the intersection. A significant number of cyclists use this to travel both east and west, rather than riding on the road. This is expected, as Emily Murphy Drive is not a comfortable on-street cycling environment for most cyclists.

2.6 Transit

Transit service is an available mode of travel for Windsor Park residents. Based on a review of the City of Edmonton Transit Network several proximate routes include:

- 654 Strathcona – Belgravia
- 51 Castle Down – University (stops on 87 Avenue)
- 203 University of Alberta via Westmount (stops on 87 Avenue)
- 414 Bethel – University of Alberta
- 902 NAIT – University (stops on 87 Avenue)

The project site is approximately 70m walking distance from a bus stop on 116 Street and approximately 600 m walking distance to bus stops on 87 Avenue NW and 116 Street. The site is approximately 800 m walking distance to the University LRT Station/Transit Centre. A range of ETS transit services are available from the LRT Station and Transit Centre.

Mass transit bus routes are anticipated to operate from the University Transit Centre as part of the future mass transit network associated with the 1.25 million population scenario of The City Plan. The proposed alignment and routing of mass transit bus routes is under review and yet to be finalized at this time. It is anticipated that the mode split to transit will increase over time with the expansion of the City's Mass Transit Network.

3. PROPOSED DEVELOPMENT

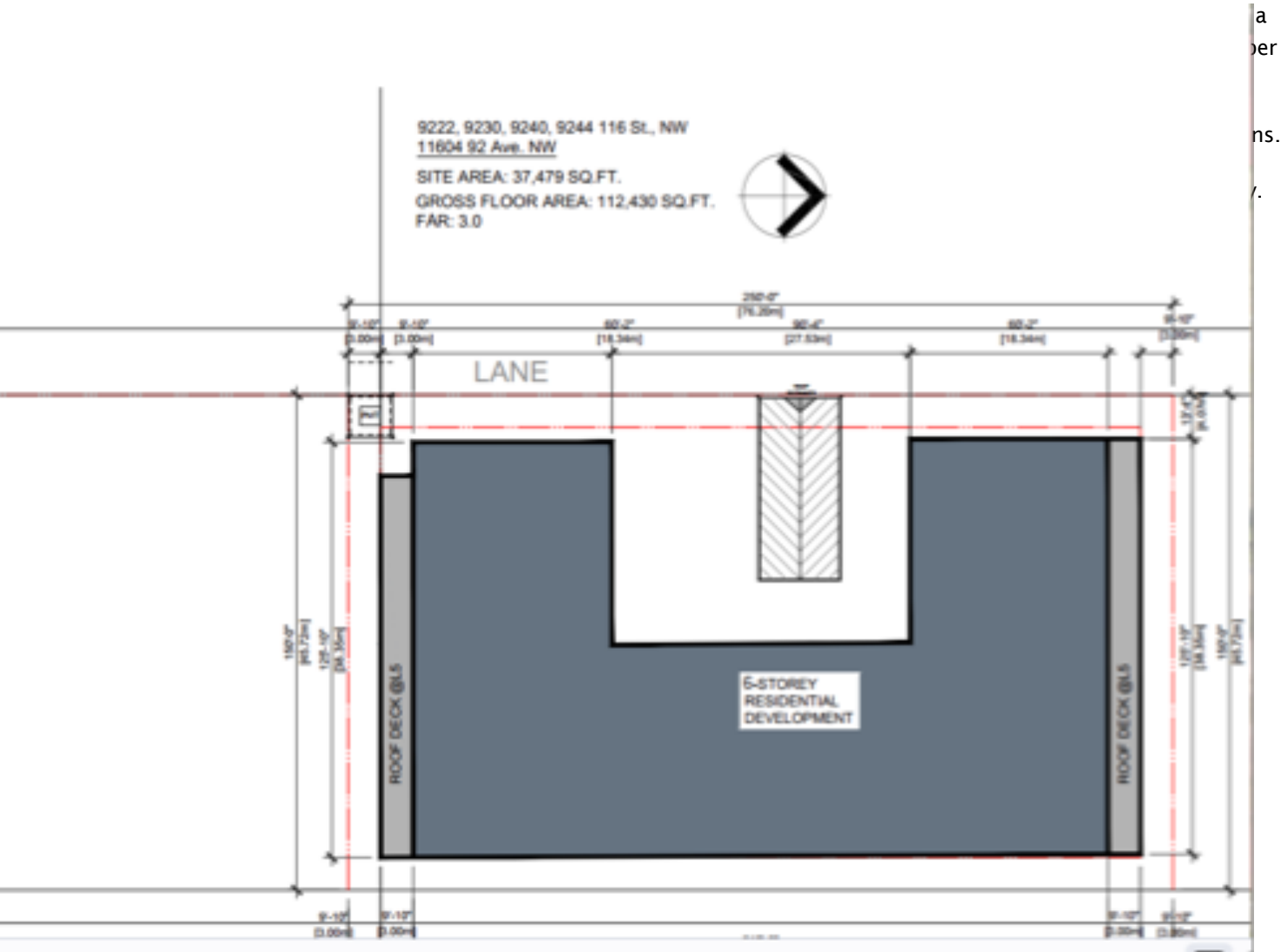
3.1 Site Location and Zoning

The subject site is located midblock between Edinboro Road and 92 Avenue on the west side of 116 Street in the Windsor Park neighbourhood, immediately west of the University of Alberta's North Campus. The municipal addresses of the four parcels that are proposed to be rezoned include 9222 - 9244 116 Street. Current zoning of these parcels is RS.

3.2 Description of Proposed Development

The proposed development is a medium-scale multi-unit residential development which will be developed under a RMh23 zone. No commercial uses are proposed. The development is anticipated to be entirely residential. Timing for the construction of the development is assumed to be in the next three to four years, with 2028 considered as the open day horizon in this study.

At this stage, Westrich is considering a building with approximately 150 units. This corresponds with a density of approximately 431 units per hectare (for a 0.348-hectare site). For analysis purposes, a unit count



3.3 Site Access and Parking

As shown in the Preliminary Site Plan in **Exhibit 3.1**, a single site access located on the west side of the residential building will connect to an underground parking garage. Existing alley volumes are anticipated to be low given the number of adjacent lots and their built-form (predominantly single-detached housing), the presence of front driveways on some alley-adjacent lots, neighbourhood mode split, and a third alley-roadway connection dispersing traffic. There are about 20 residential homes that share the north-south alley between Edinboro Road and 92 Avenue.

A final parking supply has not been determined at this time. However, consistent with other Westrich developments in the area, the supply will be determined by market factors. Providing a minimum but marketable amount of parking will assist in promoting increased transit use and other alternative transportation modes.

The area within which the multi-unit building is located is within a Residential Permit Parking Area (UA-4). Although existing single-family residents are currently eligible for parking passes, multi-unit building residents will not be eligible for on-street parking permits. This restriction limits parking demand for the development, being satisfied by on-street parking. The City's Curbside Management Strategy recognizes curbside space as a valuable public asset. In alignment with the Strategy, the City continues to explore and consider modifications to the existing Residential Permit Parking Program.

Easily accessible and secure bicycle parking will be provided. Secured bicycle facilities will be located on-site. The supply of bicycle parking spaces will be based on the final land use schedule and will achieve or exceed current Zoning Bylaw regulations (a minimum of one bicycle parking space per dwelling, with 85-90% of required spaces being long-term bicycle parking).

3.4 Waste Management

Waste management operations for the development will occur via the adjacent alley network. Though details have yet to be finalized, it is anticipated that an area for waste management will be located at the rear of the building. This area will be appropriately designed and configured at the Development Permit stage of application to ensure acceptance from Waste Management and Transportation.

3.5 Transportation Demand Management

The detailed planning of the proposed development site should consider the merits and benefits of several strategic Transportation Demand Management (TDM) programs to increase the ability for residents to travel to the greatest degree possible without the use of an automobile. This will enhance the ability for residents to have a range of mobility choices and to support lifestyle adjustments to achieve better sustainability and an increased non-auto modal split.

The effective application of TDM measures is considered a cost-effective means to reduce the need for additional roadway and parking infrastructure. TDM strategies and objectives can complement and reinforce other policies, such as the use of alternative modes of transportation and non-auto modal split targets. While it is recognized that the site's location itself plays a favourable role in transportation demand management, several strategies could also be considered by Westrich during the site design stage of planning:

- Provide additional bicycle parking above the minimum City requirements;
- Include a bike wash and maintenance area for bicycles; and
- Implement a resident bike share program.

A municipal review of any of these or other strategies would occur at the development permit stage.

4. SITE AND ADJACENT DEVELOPMENT GENERATED TRAFFIC

4.1 Site Trip Generation

The multi-unit residential development is anticipated to generate person trips by various modes, including auto, bicycle, transit, and pedestrians. Concerning auto trips, AM, PM peak hours, and daily trip generation rates for the development were applied based on the accepted City of Edmonton rates for medium-density residential developments. The trip generation rates applied are summarized in **Table 4.1**.

Table 4.1: Vehicle Trip Generation Rates

Land Use	Source	AM Peak Hour	PM Peak Hour	Daily
Medium-Density Residential	City of Edmonton	0.34 trips/unit 17% in, 83% out	0.40 trips/unit 63% in, 37 % out	5.81 trips/unit 50% in, 50% out

Table 4.2 summarizes the gross trip generation associated with the proposed development based on 200 residential units and no commercial space. It is recognized that the final unit count is likely to be closer to 150 units, as noted in **Section 3.2**. However, 200 units has been identified as an absolute maximum of what could be developed and is therefore used for analysis purposes in this and subsequent sections.

Table 4.2: Gross Vehicle Trip Generation

Land Use	AM Peak Hour			PM Peak Hour			Daily	
	Total	In	Out	Total	In	out	Total	In/Out
Residential	68	12	56	80	52	28	1,162	581

The base trip generation estimates summarized in **Table 4.2** reflect all trips anticipated if there were no significant influence from other factors such as the location of the plan area to downtown Edmonton and the availability of transit and alternative mode accommodation in the vicinity of the plan area. As such, the trip generation totals summarized in **Table 4.2** should be adjusted to reflect an increase in mode split to alternative transportation modes (transit, walking, cycling). The City of Edmonton trip generation rates summarized in **Table 4.1** were collected in primarily suburban areas with limited access to transit. It is anticipated that the rates summarized would reflect areas with a mode split to transit, walking, and cycling in the order of 5% to 10%.

Based on information contained within the 2016 Municipal Census, about 38% of residents within the Windsor Park neighbourhood use transit, walk, ride their bike, or use other non-auto modes to get to work (calculated excluding 'no response', with another 6% carpooling). Additionally, as the site is located on the border of the University and consists of apartment units, it is anticipated that the development will contain a higher proportion of student residents compared to the neighbourhood at large. Students are more likely to forgo car usage in favour of alternative transportation modes; therefore, a higher mode share is anticipated for the development. The Garneau neighbourhood travel profile, where more than half of residents use other non-auto modes also supports this.

For this assessment, a mode split adjustment factor of 50% was applied to the gross trip generation rates to better reflect the 2016 census mode split to alternative modes (estimated to be about 55% for car/truck driver), geographical context, and anticipated resident profiles. **Table 4.3** summarizes the net (adjusted for mode split) vehicle trip generation for the proposed residential development.

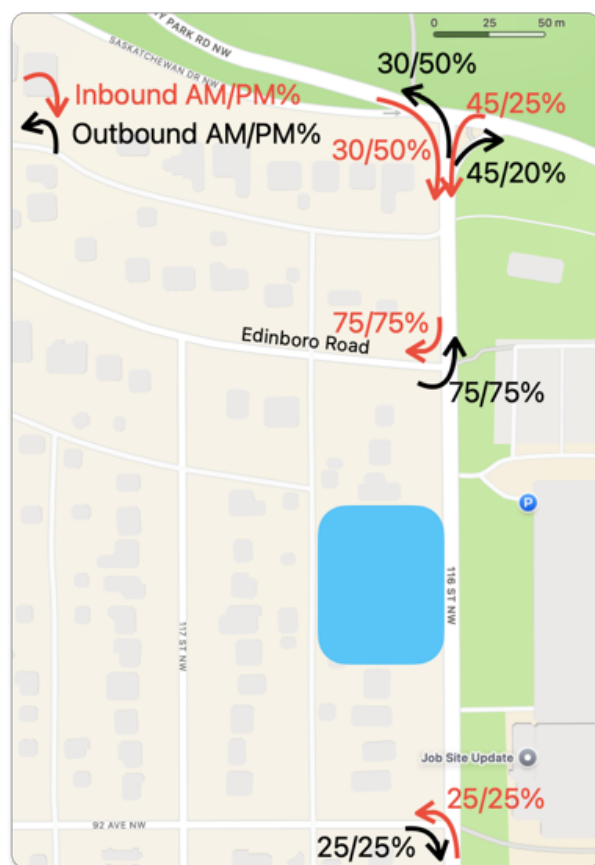
Table 4.3: Net Trip Generation

Land Use	AM Peak Hour			PM Peak Hour			Daily	
	Total	In	Out	Total	In	Out	Total	In/Out
Gross Trips	68	12	56	80	52	28	1162	581
Non-Auto Mode Split	34	6	28	40	26	14	581	291
Net Trips	34	6	28	40	26	14	581	291

Under the build-out scenario, the development could generate in the order of about 34 vehicle trips during the morning peak hour, 40 vehicle trips during the afternoon peak hour, and about 581 daily vehicle trips.

4.2 Trip Distribution and Assignment

The distribution of trips was based on the City's 2030 Origin-Destination spreadsheets and existing traffic patterns at the two study intersections. The net residential trips were assigned to the roadway network based on the location of access and the adjacent roadway network. The AM and PM peak hour site trip assignment to area intersections is illustrated in **Exhibit 4.1**.

Exhibit 4.1: Site Traffic Assignment – Peak Hour

As presented, site-generated trips have been assigned to several routes to/from the development site, including 116 Street, Edinboro Road, and 92 Avenue. Only very minimal site traffic is anticipated to have destinations within the neighbourhood to the west. Accordingly, all traffic is assigned to 116 Street.

Traffic approaching the site from the north on 116 Street is anticipated to use the north access of the north-south alley to access the site. Traffic approaching from the south on 116 Street is anticipated to use the south access of the north-south alley to access the site. Limited site activity is anticipated on the east-west alley that connects the north-south alley to 117 Street.

The morning peak hour count at Edinboro Road shows approximately 75% of outbound traffic to 116 Street turning left. This is likely related to the proximity of Saskatchewan Drive/Emily Murphy Drive, with its connectivity to Groat Road to the west and the campus to the east. A similar pattern was observed at 89 Avenue in *Windsor Heights TIA*, with the dominant outbound movement heading south to 87 Avenue. The afternoon peak period inbound pattern to Edinboro Road is similarly heavily biased towards the north.

Traffic data was not collected at 92 Avenue, though a slightly more even split is likely there, given the relative proximity to both Saskatchewan Drive and 87 Avenue. Ultimately, more site traffic is anticipated to head north in the morning peak period. Traffic leaving the site to travel north on 116 Street is anticipated to primarily use the north-south alley to access Edinboro Road, while traffic leaving the site to travel south on 116 Street will use the north-south alley to access 92 Avenue.

4.3 Anticipated and Potential Development in Windsor Park

As discussed in Section 2.1, over the past several years, the Windsor Park neighbourhood has experienced redevelopment activity in its southeastern area. Several rezonings have been approved by Edmonton City Council in the past several years, with some of these rezonings progressing to the development stage.

The most recent rezoning application went before Edmonton City Council at a Public Hearing in September 2025. The rezoning, LDA24-0200, but commonly referred to as Windsor Heights (Windsor Park 6), was ultimately deferred to a future public hearing, and therefore has not yet been approved. It is not yet known if or when this application may go before City Council again. Notwithstanding this, the Traffic Impact Assessment prepared for this application, the previously introduced *Windsor Heights TIA*, was ultimately accepted by the City of Edmonton staff in support of the application (which was further recommended for approval).

The *Windsor Heights TIA* accounts for the potential of pending and approved redevelopment opportunities, including the subject (and not yet approved) Windsor Heights. These developments are shown below in **Exhibit 4.2** and include:

- West Windsor (Windsor Park 1) – 172 Units (currently under construction)
- Windsor Manor (Windsor Park 4) – 105 units (zoning approved, not yet under construction)
- Windsor House – 78 units and commercial space (occupied)
- The Bentley – 40 units (occupied)
- Windsor Heights (Windsor Park 6) – 285 units and commercial space (zoning not yet approved)

In reviewing the *Windsor Heights TIA*, the future (2028) background and total traffic scenario include the above-noted anticipated developments, recognizing that only the total traffic scenario includes traffic related to the yet-approved Windsor Heights. Respecting that this development is not approved, its inclusion provides a reasonable approach to examining anticipated traffic pattern changes on 116 Street.

Ultimately, the *Windsor Heights TIA* forecasts that approximately 120 daily trips are added to both northbound and southbound 116 Street, north of 89 Avenue, because of these developments. These trips need to be accounted in the future background traffic, which is reviewed in the following section.

Exhibit 4.2: Anticipated Development in Southeast Windsor Park**4.4 Future Background Traffic**

Background traffic is the component of traffic on the adjacent streets that would be present regardless of any development of the subject site. A general growth rate is normally applied to the existing traffic to reflect the ongoing growth caused by new developments and general population increases in the area. However, the proposed redevelopment site is in a mature neighbourhood. As there is not a significant number of vacant parcels in the area, future development is anticipated to be the result of redevelopment activities.

The City of Edmonton's Average Annual Weekday Traffic Report was reviewed to identify whether significant growth has been experienced along 116 Street and Saskatchewan Drive in recent years. As shown in **Table 4.4**, the historical data suggest that no significant, consistent increase in traffic has been observed on either of these corridors.

Table 4.4: Historic AAWDT Volumes

Roadway Link	2017	2018	2019	2020	2021	2022	2023
116 Street North of 91 Avenue	5,700	5,700	5,600	4,800	5,200	5,500	5,913
116 Street North of 87 Avenue	8,700	-	8,600	7,400	8,000	8,400	9,030
Saskatchewan Drive East of 116 Street	4,900	4,900	4,900	4,200	4,500	4,700	5,053

2023 traffic data collected at the intersection of Saskatchewan Drive/Emily Murphy Drive and 116 Street shows higher daily traffic east of 116 Street, approximately 6,100 vehicles daily. This is seen again in the 2025 data, with volumes rising to approximately 7,300 daily vehicles. Some amount of this increase is comparing the average annual traffic (in **Table 4.4**) with an in-school count. There may also be some increase in traffic related to ongoing construction on the City's west side. Ultimately, the data collected at the intersection is seen as valid, but not necessarily representative of a long-term growth trend.

The 2023 daily traffic volume on 116 Street south of Saskatchewan Drive is approximately 7,000 vehicles. This is in line with volumes from the 2025 count, which observed approximately 6,900 vehicles. While there is no historic comparison for this location, the volume is higher than 116 Street volumes north of 91 Avenue (which is roughly midblock between 87 Avenue and Saskatchewan Drive) but lower than 116 Street north of 87 Avenue (which is intuitive based on adjacent land-use and the larger capacity of 87 Avenue).

As discussed in **Section 2.2**, the City conducted an all-way stop control assessment at this intersection in 2022. Traffic volumes from that assessment (or 2022 generally) are not available, so it's not known whether traffic in 2023 and 2025 increased from 2022. Given that traffic volumes in the 2023 and 2025 data, particularly east of 116 Street, are higher than the historic link volumes summarized in **Table 4.4**, the City's planned 2026 assessment is prudent.

The *Windsor Heights TIA* establishes that approximately 120 daily trips are added to both northbound and southbound 116 Street north of 89 Avenue in its total 2028 traffic scenario. Assuming this traffic continues north to Saskatchewan Drive, this represents approximately 1.7 percent of total traffic on 116 Street south of Saskatchewan Drive (6900). Accordingly, a one percent yearly increase in traffic on 116 Street and Saskatchewan Drive/Emily Murphy Drive is applied to the existing 2025 traffic to account for this and other area growth. This results in approximately three percent background growth for the 2028 development horizon for Windsor Park 7.

It is recognized that with this three percent growth, traffic on Saskatchewan Drive is approximately 50 percent higher than the City's 2023 AAWDT volumes. This growth is anticipated to provide a reasonable baseline condition for assessment. **Table 4.5** presents the AM and PM Peak Hour 2028 background traffic estimates.

Table 4.5: Peak Hour Background Traffic (2028)

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
116 Street & Saskatchewan Drive												
AM		301	406	162	145		54		75			
PM		274	149	72	265		303		73			
116 Street & Edinboro Road												
AM	15		4				2	109			486	12
PM	12		6				1	416			178	14

The *Windsor Heights TIA* also includes background growth on 87 Avenue. The total traffic volumes at that intersection are considered representative for future background traffic at the intersection of 87 Avenue and 116 Street.

5. TRAFFIC REVIEW

5.1 Analysis Assumptions

The capacity analysis was completed using Synchro 11.0 analysis software. Intersection operations are typically rated by two measures. The volume-to-capacity (v/c) ratio describes the extent to which the traffic volumes can be accommodated by the physical capacity of the road configuration and traffic control. A value (measured during the peak hour) less than 0.90 indicates that, generally, there is sufficient capacity and the projected traffic volumes can be accommodated at the intersection. A value between 0.90 and 1.0 suggests unstable operations may occur, and volumes are nearing capacity conditions. A calculated value over 1.0 indicates that traffic volumes are theoretically exceeding capacity. The second measure of performance, Level of Service (LOS), is based on the estimated average delay per vehicle among all traffic passing through the intersection. A low average delay merits a LOS A rating, while a large delay merits a LOS F (a LOS F is reached when vehicles experience an average delay greater than 50 seconds at an unsignalized intersection and a delay greater than 80 seconds at a signalized intersection).

As per the HCM 2010 methodology, assessment results for the unsignalized intersection assessed are reported for critical movements only. The following assumptions were used in the analysis:

- Saturation Flow Rate – 1,900 vehicles per hour (vph)
- Peak Hour Factor and %HV – as per existing count information

Existing intersection geometry has been assumed for the study intersections as follows:

- Saskatchewan Drive/Emily Murphy Drive and 116 Street:
 - West Approach – one shared through / right lane
 - East Approach – one shared left / through lane
 - South Approach – one left-turn lane, one right-turn channel
- Edinboro Road and 116 Street:
 - West Approach – one shared left / through / right lane
 - North Approach – one shared left / through lane
 - South Approach – one shared through / right lane

In line with the scoping exercise, qualitative assessments are made at two other intersections. The existing intersection geometry has also been assumed as follows:

- 92 Avenue and 116 Street:
 - West Approach – one shared left / through / right lane
 - North Approach – one shared left / through
 - South Approach – one shared through / right lane
- 87 Avenue and 116 Street:
 - West Approach – one shared left / through lane and one through lane
 - East Approach – one shared through / right lane and one through lane
 - North Approach – one left lane and one shared left/right lane

5.2 Future Background (2028) Operations

Future background (2028) AM and PM traffic volumes (see **Table 4.5**) were analyzed in Synchro to determine the baseline conditions at the study intersections. As noted in **Section 4.4**, a growth factor of approximately three percent was applied to the 2025 traffic counts. Accordingly, the future background conditions are considered broadly representative of existing 2025 conditions (as observed from the data collection).

Table 5.1 and **Table 5.2** summarizes the intersection operations under AM and PM peak hour 2028 background traffic conditions.

Table 5.1: Saskatchewan Drive/Emily Murphy Drive and 116 Street – Future Background Conditions

Movement	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour - Future Background Conditions - Unsignalized												
Geometry	TR			LT			L/R					
Volume (vph)	301		406	162	145		54		75			
v/c	0.00				0.21		0.33		0.15			
Delay (s)	0				6		35		13			
LOS	A				A		D		B			
95th Queue (m)	0				6		9		4			
INTERSECTION DELAY (s): 4												
INTERSECTION LOS: A												
PM Peak Hour - Future Background Conditions - Unsignalized												
Geometry	TR			LT			L/R					
Volume (vph)	274		149	72	265		303		73			
v/c	0.00				0.07		1.15		0.12			
Delay (s)	0				2		140		11			
LOS	A				A		F		B			
95th Queue (m)	0				1		99		3			
INTERSECTION DELAY (s): 39												
INTERSECTION LOS: E												

The Saskatchewan Drive/Emily Murphy Drive and 116 Street intersection operates well during the morning peak period. During the afternoon peak period, demand for the northbound left-turn exceeds its capacity. Overall intersection operations are a LOS E. As discussed earlier, traffic volumes recorded at the intersection are higher than link volumes in the area, as shown in **Table 4.4**.

Notwithstanding the potential for future improvements, reviewing the data collected for the intersection, peak demand for the left-turn movement occurred between 3:15 PM and 5:30 PM. The MioVision data shows the movement operating slowly but consistently (i.e. long gaps between a vehicle completing the movement were rare). The City's next review of this intersection will occur in the spring of 2026.

Table 5.2: Edinboro Road and 116 Street – Future Background Conditions

Movement	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
	L	T	R	L	T	R	L	T	R	L	T	R
AM Peak Hour - Future Background Conditions - Unsignalized												
Geometry	LR			LT			TR					
Volume (vph)	15		4				2	109			486	12
v/c	0.05							0.00			0.00	
Delay (s)	14							0			0	
LOS	B							A			A	
95th Queue (m)	1							0			0	
INTERSECTION DELAY (s): 0												
INTERSECTION LOS: A												
PM Peak Hour - Future Background Conditions - Unsignalized												
Geometry	LR			LT			TR					
Volume (vph)	12		6				1	416			178	14
v/c	0.04							0.00			0.00	
Delay (s)	13							0			0	
LOS	B							A			A	
95th Queue (m)	1							0			0	
INTERSECTION DELAY (s): 0												
INTERSECTION LOS: A												

The stop-controlled Edinboro Road and 116 Street intersection operates very well under existing conditions, with all movements at LOS A/B during both peak hours.

Though data was not collected at the 92 Avenue and 116 Street intersection, it is anticipated that it would operate similarly to the Edinboro Road and 116 Street intersection. Even with higher movements to and from 92 Avenue (recognizing its broader catchment), the results in **Table 5.2** suggest there is capacity to accommodate these movements.

The total traffic (2028) conditions from the 87 Avenue and 116 Street intersection analysis in the *Windsor Heights TIA* (which captures the future background growth discussed in **Section 4.3**) identified a LOS A during the morning peak period and a LOS B during the afternoon peak, with no individual movements operating below a LOS B.

5.3 Opening Day (2028) Operations

The 2028 total traffic AM and PM traffic volumes were analyzed in Synchro to determine the opening post-development conditions at study intersections to assess the impact of site traffic on study intersections.

Table 5.3 and **Table 5.4** summarize the intersection operations under AM and PM peak hour 2028 total traffic conditions.

Table 5.3: Saskatchewan Drive/Emily Murphy Drive and 116 Street – Opening Day Conditions

	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
	AM Peak Hour - Total Traffic Conditions - Unsignalized											
Geometry	TR			LT			L / R					
Volume (vph)		301	406	164	145		62		88			
v/c		0.00			0.21		0.38		0.18			
Delay (s)		0			6		37		13			
LOS		A			A		E		B			
95th Queue (m)		0			6		11		5			
				INTERSECTION DELAY (s):			5				INTERSECTION LOS: A	
	PM Peak Hour - Total Traffic Conditions - Unsignalized											
Geometry	TR			LT			L / R					
Volume (vph)		274	149	79	265		310		76			
v/c		0.00			0.08		1.22		0.13			
Delay (s)		0			2		164		11			
LOS		A			A		F		B			
95th Queue (m)		0			2		109		3			
				INTERSECTION DELAY (s):			45				INTERSECTION LOS: E	

The Saskatchewan Drive/Emily Murphy Drive and 116 Street intersection continues to operate well during the morning peak period. During the afternoon peak period, delays for the northbound left-turn marginally worsen. The addition of seven vehicles making this movement represent approximately two percent of total demand (310 vehicles). Operating conditions are overall similar to the future background condition summarized in **Table 5.1**.

Table 5.4: Edinboro Road and 116 Street – Opening Day Conditions

116 St / Edinboro Rd

AM Peak Hour - Total Traffic Conditions - Unsignalized

	EASTBOUND			WESTBOUND			NORTHBOUND			SOUTHBOUND			
Movement	L	T	R	L	T	R	L	T	R	L	T	R	
Geometry	LR						LT			TR			
Volume (vph)	37		4				2	109			486	17	
v/c	0.11							0.00			0.00		
Delay (s)	14							0			0		
LOS	B							A			A		
95th Queue (m)	2							0			0		
INTERSECTION DELAY (s):						1	INTERSECTION LOS:						A

PM Peak Hour - Total Traffic Conditions - Unsignalized

Geometry	LR						LT			TR			
Volume (vph)	23		6				1	416			178	34	
v/c	0.07							0.00			0.00		
Delay (s)	14							0			0		
LOS	B							A			A		
95th Queue (m)	1							0			0		
INTERSECTION DELAY (s):						1	INTERSECTION LOS:						A

The stop-controlled Edinboro Road and 116 Street intersection continues to operate without delays. All movements at LOS A/B during both peak hours.

The additional nine or ten vehicles forecast to be added to the intersection of 92 Avenue and 116 Street are not anticipated to materially change operations there. The results in **Table 5.4** show that additional movements to and from Edinboro Road do not significantly change operations.

Considering the intersection of 87 Avenue and 116 Street, approximately nine to ten vehicles are forecast to travel on 116 Street south of 92 Avenue during the peak periods. Assuming all this traffic travels through the 87 Avenue and 116 Street intersection, this traffic, which represents approximately 0.5 percent of overall activity at the intersection, is not anticipated to materially impact operations.

5.4 Future Alley Operations

The City of Edmonton does not have a prescribed daily volume threshold for alleys and lanes. However, daily volume thresholds of between 1,000 and 1,500 two-way trips have been assumed in previous traffic impact assessment reports.

The north-south alley adjacent to the site is constructed to a residential standard within an assumed six-meter right-of-way. Existing volume on the alley is anticipated to be very low (less than 150 vehicles per day), given the adjacent low-density land use. For comparison, the north end of the north-south alley west of 116 Street and between 87 Avenue and 89 Avenue measured only 18 trips in the *Windsor Manor TIA*. It is noted that 89 Avenue is one-way in this area, and that higher volumes were measured adjacent to 87 Avenue (and where a commercial access to the alley exists).

The site-generated alley trips are highest during the afternoon peak period, with approximately 20 outbound and 11 inbound trips forecast between the site and the alley intersection at Edinboro Road. A few additional background trips may also be present, but these would be very low given the limited number of dwellings. Given that these alley trips are distributed throughout an hour, the number of vehicles passing in opposite directions is not expected to be significant.

Accordingly, the addition of vehicle trips associated with the site will increase traffic on the alley, but volumes are anticipated to remain within generally accepted thresholds. Upgrading the alley to a commercial standard is not recommended unless commercial uses are planned for the site, recognizing that the need for a commercial standard may be required based on projected use of the alley by the City's development permitting review process and may not be based solely on the presence of commercial uses. Similarly, no additional signage for the alley intersections at Edinboro Road and at 92 Avenue is recommended (in line with the overwhelming majority of alleys across the City).

5.5 Pedestrian Crossing

The 116 Street pedestrian crossing on the north leg of the Edinboro Road and 116 Street intersection is currently supported by signage and a marked crossing. A review of the decision support tool within *Pedestrian Crossing Control Guidelines Third Edition* (Transportation Association of Canada), excerpted below in **Exhibit 5.1**, shows that the ground-mounted configuration is an appropriate treatment for a two-lane roadway with average daily traffic between 4,500 and 9,000 vehicles, and a speed limit less than or equal to 50 KPH.

Exhibit 5.1: Decision Support Tool for Pedestrian Crossings**Table 1: Decision Support Tool – Treatment Selection Matrix**

Average Daily Traffic	Speed Limit ² (km/h)	Total Number of Lanes ¹				
		1 or 2 lanes	3 lanes (two-way)	3 lanes (one-way)	2 or 3 lanes/direction w/ raised refuge	2 lanes/direction w/o raised refuge
1,500 < ADT ≤ 4,500	≤ 50	GM	GM	GM	GM	GM+
	60	GM+	GM+	OF	RRFB or OF ³	RRFB
	70	RRFB	RRFB	OF	OF	OF
4,500 < ADT ≤ 9,000	≤ 50	GM	GM	GM	GM	RRFB
	60	GM+	GM+	OF	RRFB or OF ³	OF
	70	RRFB	OF	OF	OF	TS

Source: *Pedestrian Crossing Control Guidelines, Third Edition, Transportation Association of Canada*

The City's Safe Mobility team maintains a practice of converting yield signs to stop signs at marked crosswalks to increase the safety and accessibility of intersections for pedestrians. It is anticipated that the City will convert the yield signs on Edinboro Road at 116 Street and on 92 Avenue at 116 Street as part of this practice. These conversions will be completed before the end of 2026.

6. SUMMARY

6.1 Findings and Recommendations

Green Space Alliance, on behalf of Westrich Pacific Corporation, is in the process of advancing an application to rezone four residential lots located in the Windsor Park neighbourhood. The site is located midblock on 116 Street, between 91 Street and Edinboro Road, generally across the street from the University of Alberta's North Campus.

Rezoning approval will allow Westrich to proceed with the development of a multifamily residential building, with approximately 150 units. No commercial uses within the multifamily building are planned.

Based on the traffic and parking analysis completed, it has been determined that:

- A 200-unit residential development represents the upper bounds of what could be developed on the site. It will generate approximately 34 vehicle trips during the morning peak period and 40 vehicle trips during the afternoon peak, as well as walking and cycling trips on account of its location opposite the University of Alberta, the mix of residential, commercial, institutional, and employment in the area, and the surrounding strong multimodal network.
- The 150-unit concept presently being considered for the site will generate somewhat fewer vehicle peak hours and daily trips than the 200-unit concept previously considered and accordingly will have less of an impact.
- Traffic volumes collected for the study at the intersection of Saskatchewan Drive/Emily Murphy Drive and 116 Street are higher than recent average annual counts posted on the City's website. The northbound left-turn movement sees delays during the afternoon peak period, but is otherwise observed to operate well, with the intersection otherwise having capacity for additional trips. The intersection operates similarly with the additional trips generated by the site.
- The City assessed the intersection of Saskatchewan Drive/Emily Murphy Drive and 116 Street for improvements in 2022. It was determined that a significant increase in volumes would be required to warrant changes, and in such a case, a pedestrian signal would be the appropriate traffic control measure. The City will complete another review of this intersection sometime in 2026.
- Traffic volumes collected for the study at the intersection of Edinboro Road and 116 Street show that the intersection operates within very minimal delay and has capacity to accommodate the additional trips generated by the site.
- Traffic operations at the intersection of 92 Avenue and 116 Street are anticipated to operate similarly to the intersection of Edinboro Road and 116 Street, with the additional trips generated by the site not expected to significantly impact operations.
- The near-term (2028) traffic operations at the intersection of 87 Avenue and 116 Street, highlighted in the *Windsor Heights TIA* (which includes upcoming development in southeastern Windsor Park), are not anticipated to materially change with the additional trips generated by the proposed development.
- The site-generated trips have a limited impact on the operations at the study intersections, which all generally have capacity. Traffic operations would be similar if a reduced mode split to alternative modes and a corresponding increase in the number of site-generated trips were assumed.

- The north-south alley adjacent to the development site is anticipated to currently have low vehicle volume on account of the adjacent low-density land use. The existing residential standard alley can accommodate the additional site traffic. Given the low peak hour trips (on average less than one per minute), widening of the alley surface is not recommended, nor is additional signage.
- Utility poles are located on the west side of the north-south alley adjacent to the site. It is not anticipated that any poles will need to be removed or relocated to accommodate site traffic. This will be reviewed at the development permit stage.
- The City has a practice of converting yield signs to stop at intersections of marked pedestrian crossings. The yield signs on Edinboro Road at 116 Street and on 92 Avenue at 116 Street would qualify for this practice. It is understood that these conversions will be completed before the end of 2026.
- The site is within a Residential Permit Parking Area (UA-4), which restricts multi-unit building residents from obtaining on-street parking permits. This restriction will limit on-street parking demand for the development being filled by on-street parking.
- The existing painted bike lanes on 116 Street are not in complete alignment with Complete Streets Design and Construction Standards, which suggest separated facilities when daily traffic volumes exceed 6000 vehicles. It is recognized that the City continues to invest in active modes facilities across the City. Although there are currently no ongoing or anticipated projects associated with the bike facilities in this area, improvements to the bike network in this area can be explored as part of any future renewal projects.
- The north side of Saskatchewan Drive sees strong active mode (walking, cycling, and scooters) use. Users would benefit from an improved facility over the existing sidewalk that commences at the intersection and continues west. It is recognized that the City continues to invest in active modes facilities across the City, though it is not readily apparent if/when Saskatchewan Drive may see investment.
- The following Transportation Demand Management strategies should be considered by Westrich during the site design stage of planning:
 - Provide additional bicycle parking above the minimum City requirements;
 - Include a bike wash and maintenance area for bicycles; and
 - Implement a resident bike share program.
- The City's Infill Infrastructure Fund (IIF) provides financial support for new market housing developments in Priority Growth Areas (PGAs) or within 800 m of LRT stops. Funding is also available for non-market housing developments within the redeveloping area. This site would be eligible for funding for both market and non-market housing. The fund aims to incentivize housing development by reducing the financial barriers associated with off-site infrastructure upgrades. Eligible mobility-related infrastructure includes sidewalks, shared pathways, alleys, paved roads, traffic control signals, and streetlights. More information on the IIF is available on the City's website.

APPENDIX A

TRAFFIC COUNTS

DIRECTIONAL CYCLISTS ON CROSSWALK SUMMARY

LOCATION: 116 ST & EDINBORO RD, EDMONTON														DATE: THURSDAY, SEPTEMBER 11, 2025													
														COUNT DURATION: 24 HOURS (MIDNIGHT TO MIDNIGHT)													
PEDESTRIAN CROSSING		INTERVAL																								SUB-TOTAL	
		MIDNIGHT TO 1:00AM	1:00 AM TO 2:00 AM	2:00 AM TO 3:00 AM	3:00 AM TO 4:00 AM	4:00 AM TO 5:00 AM	5:00 AM TO 6:00AM	6:00 AM TO 7:00 AM	7:00 AM TO 8:00 AM	8:00 AM TO 9:00 AM	9:00 AM TO 10:00 AM	10:00 AM TO 11:00 AM	11:00 AM TO NOON	NOON TO 1:00PM	1:00PM TO 2:00 PM	2:00 PM TO 3:00 PM	3:00 PM TO 4:00 PM	4:00 PM TO 5:00 PM	5:00 PM TO 6:00 PM	6:00 PM TO 7:00 PM	7:00 PM TO 8:00 PM	8:00 PM TO 9:00 PM	9:00 PM TO 10:00 PM	10:00 PM TO 11:00 PM	11:00 PM TO MIDNIGHT		
FROM	TO																										
NE CORNER	SE CORNER							2	6	10							3	3	1							25	
	NW CORNER							0	0	0							2	0	1							3	
NW CORNER	SW CORNER							0	0	1							0	0	0							1	
	NE CORNER							0	0	0							0	0	1							1	
SE CORNER	NE CORNER							0	0	0							1	2	6							9	
	SW CORNER							0	0	0							0	0	0							0	
SW CORNER	NW CORNER							0	0	0																0	
	SE CORNER																									0	
																								TOTAL BICYCLES ON SIDEWALK		39	

NW

STR

SW

NE

SE

EDINBORO RD

N

W

E

S

DIRECTIONAL PEDESTRIAN COUNT SUMMARY

LOCATION: 116 ST & EDINBORO RD, EDMONTON														DATE: THURSDAY, SEPTEMBER 11, 2025													
														COUNT DURATION: 24 HOURS (MIDNIGHT TO MIDNIGHT)													
PEDESTRIAN CROSSING		INTERVAL																								SUB-TOTAL	
		MIDNIGHT TO 1:00AM	1:00 AM TO 2:00 AM	2:00 AM TO 3:00 AM	3:00 AM TO 4:00 AM	4:00 AM TO 5:00 AM	5:00 AM TO 6:00AM	6:00 AM TO 7:00 AM	7:00 AM TO 8:00 AM	8:00 AM TO 9:00 AM	9:00 AM TO 10:00 AM	10:00 AM TO 11:00 AM	11:00 AM TO NOON	NOON TO 1:00PM	1:00PM TO 2:00 PM	2:00 PM TO 3:00 PM	3:00 PM TO 4:00 PM	4:00 PM TO 5:00 PM	5:00 PM TO 6:00 PM	6:00 PM TO 7:00 PM	7:00 PM TO 8:00 PM	8:00 PM TO 9:00 PM	9:00 PM TO 10:00 PM	10:00 PM TO 11:00 PM	11:00 PM TO MIDNIGHT		
FROM	TO																										
NE CORNER	SE CORNER							3	13	8							7	8	5							44	
	NW CORNER							0	0	0							2	6	3							11	
NW CORNER	SW CORNER							3	0	2							2	5	4							16	
	NE CORNER							0	4	2							1	3	2							12	
SE CORNER	NE CORNER							4	1	2							12	17	5							41	
	SW CORNER							0	0	0							0	0	0							0	
SW CORNER	NW CORNER							1	4	2							2	2	7							18	
	SE CORNER							0	0	0							0	0	0							0	
TOTAL PEDESTRIANS																								142			

NW

SW

STR

EDINBORO RD

STR

NE

SE

N

W

E

S

TURNING MOVEMENT SUMMARY DIAGRAM

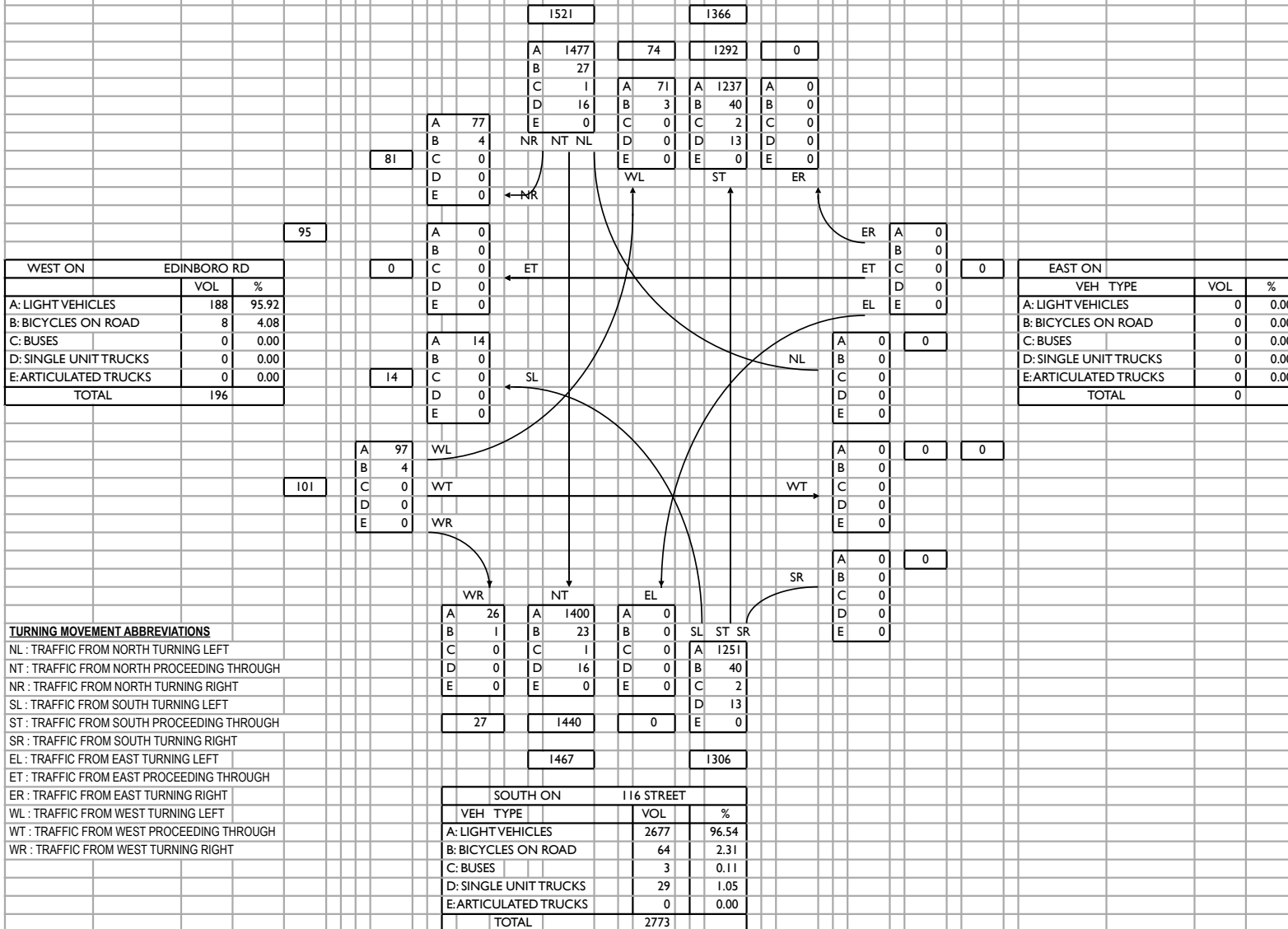
NORTH ON 116 STREET		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	2785	96.47
B: BICYCLES ON ROAD	70	2.42
C: BUSES	3	0.10
D: SINGLE UNIT TRUCKS	29	1.00
E: ARTICULATED TRUCKS	0	0.00
TOTAL	2887	

INTERSECTION OF: 116 ST & EDINBORO RD, EDMONTON

DAY & DATE OF COUNT: THURSDAY, SEPTEMBER 11,

COUNT DURATION: 6 HOURS (6:00 - 9:00 AM & 3:00 - 6:00 PM)

**OBSERVED 6 HOURS TRAFFIC VOLUMES
(6:00 - 9:00 AM & 3:00 - 6:00 PM)**



TURNING MOVEMENT SUMMARY DIAGRAM

NORTH ON 116 STREET		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	587	97.02
B: BICYCLES ON ROAD	8	1.32
C: BUSES	0	0.00
D: SINGLE UNIT TRUCKS	10	1.65
E: ARTICULATED TRUCKS	0	0.00
TOTAL	605	

INTERSECTION OF: 116 ST & EDINBORO RD, EDMONTON

DAY & DATE OF COUNT: THURSDAY, SEPTEMBER 11,

OBSERVED AM PEAK HOUR TRAFFIC VOLUMES (7

484	121
A 472	15
B 7	
C 0	A 14
D 5	B 1
E 0	C 0
	D 0
	E 0

A 11	NR	NT	NL
B 1			
C 0			
D 0			
E 0			

A 0			
B 0			
C 0			
D 0			
E 0			

A 2			
B 0			
C 0			
D 0			
E 0			

A 18	WL		
B 1			
C 0	WT		
D 0			
E 0	WR		

A 4	A 461	A 0	SL	ST	SR
B 0	B 6	B 0			
C 0	C 0	C 0	A 103		
D 0	D 5	D 0	B 0		
E 0	E 0	E 0	C 0		

4	472	0

476	108

SOUTH ON 116 STREET		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	568	97.26
B: BICYCLES ON ROAD	6	1.03
C: BUSES	0	0.00
D: SINGLE UNIT TRUCKS	10	1.71
E: ARTICULATED TRUCKS	0	0.00
TOTAL	584	

WEST ON EDINBORO RD		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	31	93.94
B: BICYCLES ON ROAD	2	6.06
C: BUSES	0	0.00
D: SINGLE UNIT TRUCKS	0	0.00
E: ARTICULATED TRUCKS	0	0.00
TOTAL	33	

EAST ON		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	0	0.00
B: BICYCLES ON ROAD	0	0.00
C: BUSES	0	0.00
D: SINGLE UNIT TRUCKS	0	0.00
E: ARTICULATED TRUCKS	0	0.00
TOTAL	0	

TURNING MOVEMENT ABBREVIATIONS

NL : TRAFFIC FROM NORTH TURNING LEFT
 NT : TRAFFIC FROM NORTH PROCEEDING THROUGH
 NR : TRAFFIC FROM NORTH TURNING RIGHT
 SL : TRAFFIC FROM SOUTH TURNING LEFT
 ST : TRAFFIC FROM SOUTH PROCEEDING THROUGH
 SR : TRAFFIC FROM SOUTH TURNING RIGHT
 EL : TRAFFIC FROM EAST TURNING LEFT
 ET : TRAFFIC FROM EAST PROCEEDING THROUGH
 ER : TRAFFIC FROM EAST TURNING RIGHT
 WL : TRAFFIC FROM WEST TURNING LEFT
 WT : TRAFFIC FROM WEST PROCEEDING THROUGH
 WR : TRAFFIC FROM WEST TURNING RIGHT

TURNING MOVEMENT SUMMARY DIAGRAM

INTERSECTION OF: 116 ST & EDINBORO RD, EDMONTON

DAY & DATE OF COUNT: THURSDAY, SEPTEMBER 11,

OBSERVED PM PEAK HOUR TRAFFIC VOLUMES (3:15 - 4:15)

NORTH ON 116 STREET		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	580	96.19
B: BICYCLES ON ROAD	20	3.32
C: BUSES	1	0.17
D: SINGLE UNIT TRUCKS	2	0.33
E: ARTICULATED TRUCKS	0	0.00
TOTAL	603	

187			416		
A	178		12	404	0
B	6				
C	1	A	12	A	390
D	2	B	0	B	14
E	0	C	0	C	0
NR	NT	NL	D	0	D
			E	0	E

14	A 12	NR	NT	NL
	B 2			
	C 0			
	D 0			
	E 0			

15	A 0	ET
	B 0	
	C 0	
	D 0	
	E 0	

1	A 1	SL
	B 0	
	C 0	
	D 0	
	E 0	

18	A 17	WL
	B 1	
	C 0	WT
	D 0	
	E 0	WR

6	A 5	WR
	B 1	
	C 0	
	D 0	
	E 0	

173	A 166	NT
	B 4	
	C 1	
	D 2	
	E 0	

0	A 0	EL
	B 0	
	C 0	
	D 0	
	E 0	

405	A 391	SL	ST	SR
	B 14			
	C 0			
	D 0			
	E 0			

179	405
-----	-----

SOUTH ON 116 STREET		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	562	96.23
B: BICYCLES ON ROAD	19	3.25
C: BUSES	1	0.17
D: SINGLE UNIT TRUCKS	2	0.34
E: ARTICULATED TRUCKS	0	0.00
TOTAL	584	

WEST ON EDINBORO RD		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	30	90.91
B: BICYCLES ON ROAD	3	9.09
C: BUSES	0	0.00
D: SINGLE UNIT TRUCKS	0	0.00
E: ARTICULATED TRUCKS	0	0.00
TOTAL	33	

EAST ON		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	0	0.00
B: BICYCLES ON ROAD	0	0.00
C: BUSES	0	0.00
D: SINGLE UNIT TRUCKS	0	0.00
E: ARTICULATED TRUCKS	0	0.00
TOTAL	0	

TURNING MOVEMENT ABBREVIATIONS

NL : TRAFFIC FROM NORTH TURNING LEFT
 NT : TRAFFIC FROM NORTH PROCEEDING THROUGH
 NR : TRAFFIC FROM NORTH TURNING RIGHT
 SL : TRAFFIC FROM SOUTH TURNING LEFT
 ST : TRAFFIC FROM SOUTH PROCEEDING THROUGH
 SR : TRAFFIC FROM SOUTH TURNING RIGHT
 EL : TRAFFIC FROM EAST TURNING LEFT
 ET : TRAFFIC FROM EAST PROCEEDING THROUGH
 ER : TRAFFIC FROM EAST TURNING RIGHT
 WL : TRAFFIC FROM WEST TURNING LEFT
 WT : TRAFFIC FROM WEST PROCEEDING THROUGH
 WR : TRAFFIC FROM WEST TURNING RIGHT

DIRECTIONAL CYCLISTS ON CROSSWALK SUMMARY

LOCATION: 116 ST & SAKATCHEWAN DR, EDMONTON

DATE: THURSDAY, SEPTEMBER 11, 2025

COUNT DURATION: 24 HOURS (MIDNIGHT TO MIDNIGHT)

PEDESTRIAN CROSSING		INTERVAL																								SUB-TOTAL
FROM	TO	MIDNIGHT TO 1:00AM	1:00 AM TO 2:00 AM	2:00 AM TO 3:00 AM	3:00 AM TO 4:00 AM	4:00 AM TO 5:00 AM	5:00 AM TO 6:00AM	6:00 AM TO 7:00 AM	7:00 AM TO 8:00 AM	8:00 AM TO 9:00 AM	9:00 AM TO 10:00 AM	10:00 AM TO 11:00 AM	11:00 AM TO NOON	NOON TO 1:00PM	1:00PM TO 2:00 PM	2:00 PM TO 3:00 PM	3:00 PM TO 4:00 PM	4:00 PM TO 5:00 PM	5:00 PM TO 6:00 PM	6:00 PM TO 7:00 PM	7:00 PM TO 8:00 PM	8:00 PM TO 9:00 PM	9:00 PM TO 10:00 PM	10:00 PM TO 11:00 PM	11:00 PM TO MIDNIGHT	
NE CORNER	SE CORNER	0	0	0	0	1	0	4	10	11	5	10	13	4	11	3	11	9	7	5	7	13	0	0	0	124
	NW CORNER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	4
NW CORNER	SW CORNER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
	NE CORNER	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
SE CORNER	NE CORNER	1	0	0	0	0	0	1	6	3	3	0	3	3	5	10	8	18	11	18	9	2	1	0	2	104
	SW CORNER	0	0	0	0	0	0	0	0	0	2	3	0	5	1	0	0	6	7	1	6	0	0	0	0	31
SW CORNER	NW CORNER	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
	SE CORNER	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	3	0	0	0	0	0	0	7
TOTAL BICYCLES ON SIDEWALK																										277



TURNING MOVEMENT SUMMARY DIAGRAM

NORTH ON E MURPHY PK RD			
VEH	TYPE	VOL	%
A:	LIGHT VEHICLES	9518	98.68
B:	BICYCLES ON ROAD	51	0.53
C:	BUSES	16	0.17
D:	SINGLE UNIT TRUCKS	59	0.61
E:	ARTICULATED TRUCKS	1	0.01
TOTAL		9645	

INTERSECTION OF: 116 ST & SAKATCHEWAN DR, EDM

DAY & DATE OF COUNT: THURSDAY, SEPTEMBER 11,

COUNT DURATION: 24 HOURS (MIDNIGHT TO MIDNIGHT)

OBSERVED 24 HOURS TRAFFIC VOLUMES

4897	4748
------	------

A	4845		3		2299		2446
B	5						
C	8	A	0	A	2274	A	2399
D	39	B	3	B	13	B	30
E	0	C	0	C	5	C	3

A	0
B	0
C	0
D	0
E	0

NR NT NL
NR

WL ST ER

A	0
B	0
C	0
D	0
E	0

ET

A	3522
B	38
C	5
D	40
E	2

ER ET EL

3607

WEST ON SASKATCHEWAN DR		
VEH	TYPE	%
A:	LIGHT VEHICLES	102 57.95
B:	BICYCLES ON ROAD	66 37.50
C:	BUSES	3 1.70
D:	SINGLE UNIT TRUCKS	5 2.84
E:	ARTICULATED TRUCKS	0 0.00
TOTAL		176

A	0
B	0
C	0
D	0
E	0

SL

A	2514
B	3
C	4
D	28
E	0

NL

2549

EAST ON SASKATCHEWAN DR		
VEH	TYPE	%
A:	LIGHT VEHICLES	7070 96.96
B:	BICYCLES ON ROAD	111 1.52
C:	BUSES	12 0.16
D:	SINGLE UNIT TRUCKS	95 1.30
E:	ARTICULATED TRUCKS	4 0.05
TOTAL		7292

A	102
B	66
C	3
D	5
E	0

WL WT WR

WT

A	45
B	59
C	2
D	3
E	0

109

3685

A	57
B	4
C	1
D	2
E	0

WR

A	2331
B	2
C	4
D	11
E	0

NT

A	1123
B	8
C	2
D	27
E	1

EL

A	989
B	11
C	1
D	24
E	2

SR

1027

TURNING MOVEMENT ABBREVIATIONS

- NL : TRAFFIC FROM NORTH TURNING LEFT
- NT : TRAFFIC FROM NORTH PROCEEDING THROUGH
- NR : TRAFFIC FROM NORTH TURNING RIGHT
- SL : TRAFFIC FROM SOUTH TURNING LEFT
- ST : TRAFFIC FROM SOUTH PROCEEDING THROUGH
- SR : TRAFFIC FROM SOUTH TURNING RIGHT
- EL : TRAFFIC FROM EAST TURNING LEFT
- ET : TRAFFIC FROM EAST PROCEEDING THROUGH
- ER : TRAFFIC FROM EAST TURNING RIGHT
- WL : TRAFFIC FROM WEST TURNING LEFT
- WT : TRAFFIC FROM WEST PROCEEDING THROUGH
- WR : TRAFFIC FROM WEST TURNING RIGHT

SOUTH ON 116 STREET			
VEH	TYPE	VOL	%
A:	LIGHT VEHICLES	6774	98.19
B:	BICYCLES ON ROAD	38	0.55
C:	BUSES	13	0.19
D:	SINGLE UNIT TRUCKS	71	1.03
E:	ARTICULATED TRUCKS	3	0.04
TOTAL		6899	

TURNING MOVEMENT SUMMARY DIAGRAM

INTERSECTION OF: 116 ST & SAKATCHEWAN DR, EDM

DAY & DATE OF COUNT: THURSDAY, SEPTEMBER 11,

OBSERVED AM PEAK HOUR TRAFFIC VOLUMES (6

NORTH ON E MURPHY PK RD		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	872	99.20
B: BICYCLES ON ROAD	2	0.23
C: BUSES	0	0.00
D: SINGLE UNIT TRUCKS	5	0.57
E: ARTICULATED TRUCKS	0	0.00
TOTAL	879	

686	193
A 682	0
B 1	52
C 0	141
D 3	A 50
E 0	B 1
	C 0
	D 1
	E 0

A 0	NR
B 0	NT
C 0	NL
D 0	
E 0	

A 0	ET
B 0	
C 0	
D 0	
E 0	

A 0	SL
B 0	
C 0	
D 0	
E 0	

A 4	WL
B 3	WT
C 0	
D 0	
E 0	

A 3	WR
B 0	
C 0	
D 0	
E 0	

A 393	NT
B 1	
C 0	
D 0	
E 0	

A 154	EL
B 0	
C 0	
D 3	
E 0	

SOUTH ON 116 STREET		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	668	98.38
B: BICYCLES ON ROAD	3	0.44
C: BUSES	0	0.00
D: SINGLE UNIT TRUCKS	7	1.03
E: ARTICULATED TRUCKS	1	0.15
TOTAL	679	

A 294	ER
B 0	
C 0	
D 4	
E 0	

A 289	NL
B 0	
C 0	
D 3	
E 0	

A 1	4
B 3	369
C 0	
D 0	
E 0	

A 68	73
B 1	
C 0	
D 3	
E 1	

EAST ON SAKATCHEWAN DR		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	652	97.75
B: BICYCLES ON ROAD	4	0.60
C: BUSES	0	0.00
D: SINGLE UNIT TRUCKS	10	1.50
E: ARTICULATED TRUCKS	1	0.15
TOTAL	667	

TURNING MOVEMENT ABBREVIATIONS

- NL : TRAFFIC FROM NORTH TURNING LEFT
- NT : TRAFFIC FROM NORTH PROCEEDING THROUGH
- NR : TRAFFIC FROM NORTH TURNING RIGHT
- SL : TRAFFIC FROM SOUTH TURNING LEFT
- ST : TRAFFIC FROM SOUTH PROCEEDING THROUGH
- SR : TRAFFIC FROM SOUTH TURNING RIGHT
- EL : TRAFFIC FROM EAST TURNING LEFT
- ET : TRAFFIC FROM EAST PROCEEDING THROUGH
- ER : TRAFFIC FROM EAST TURNING RIGHT
- WL : TRAFFIC FROM WEST TURNING LEFT
- WT : TRAFFIC FROM WEST PROCEEDING THROUGH
- WR : TRAFFIC FROM WEST TURNING RIGHT

TURNING MOVEMENT SUMMARY DIAGRAM

INTERSECTION OF: 116 ST & SAKATCHEWAN DR, EDMONTON

DAY & DATE OF COUNT: THURSDAY, SEPTEMBER 11,

OBSERVED PM PEAK HOUR TRAFFIC VOLUMES (4:30 - 5:30)

NORTH ON E MURPHY PK RD		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	950	98.75
B: BICYCLES ON ROAD	6	0.62
C: BUSES	1	0.10
D: SINGLE UNIT TRUCKS	5	0.52
E: ARTICULATED TRUCKS	0	0.00
TOTAL	962	

411	551
A 410	0
B 0	294
C 0	257
D 1	A 0
E 0	B 0
	C 0
	D 0
	E 0

A 0	NR
B 0	NT
C 0	NL
D 0	
E 0	

A 0	ET
B 0	
C 0	
D 0	
E 0	

A 0	SL
B 0	
C 0	
D 0	
E 0	

A 10	WL
B 0	
C 0	WT
D 0	
E 0	WR

A 6	WR
B 0	
C 0	
D 0	
E 0	

A 145	NT
B 0	
C 0	
D 0	
E 0	

A 70	EL
B 0	
C 0	
D 0	
E 0	

A 361	SL
B 2	ST
C 1	SR
D 1	
E 0	

6	145	70	221	365
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SOUTH ON 116 STREET		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	582	99.32
B: BICYCLES ON ROAD	2	0.34
C: BUSES	1	0.17
D: SINGLE UNIT TRUCKS	1	0.17
E: ARTICULATED TRUCKS	0	0.00
TOTAL	586	

A 318	ER
B 5	
C 1	
D 3	
E 0	

A 265	NL
B 0	
C 0	
D 1	
E 0	

A 4	4
B 0	
C 0	
D 0	
E 0	

A 69	71
B 1	
C 1	
D 0	
E 0	

EAST ON SASKATCHEWAN DR		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	656	98.20
B: BICYCLES ON ROAD	6	0.90
C: BUSES	2	0.30
D: SINGLE UNIT TRUCKS	4	0.60
E: ARTICULATED TRUCKS	0	0.00
TOTAL	668	

WEST ON SASKATCHEWAN DR		
VEH TYPE	VOL	%
A: LIGHT VEHICLES	10	100.00
B: BICYCLES ON ROAD	0	0.00
C: BUSES	0	0.00
D: SINGLE UNIT TRUCKS	0	0.00
E: ARTICULATED TRUCKS	0	0.00
TOTAL	10	

TURNING MOVEMENT ABBREVIATIONS

- NL : TRAFFIC FROM NORTH TURNING LEFT
- NT : TRAFFIC FROM NORTH PROCEEDING THROUGH
- NR : TRAFFIC FROM NORTH TURNING RIGHT
- SL : TRAFFIC FROM SOUTH TURNING LEFT
- ST : TRAFFIC FROM SOUTH PROCEEDING THROUGH
- SR : TRAFFIC FROM SOUTH TURNING RIGHT
- EL : TRAFFIC FROM EAST TURNING LEFT
- ET : TRAFFIC FROM EAST PROCEEDING THROUGH
- ER : TRAFFIC FROM EAST TURNING RIGHT
- WL : TRAFFIC FROM WEST TURNING LEFT
- WT : TRAFFIC FROM WEST PROCEEDING THROUGH
- WR : TRAFFIC FROM WEST TURNING RIGHT

(South)

DIRECTIONAL PEDESTRIAN COUNT SUMMARY

LOCATION: 116 ST & SAKATCHEWAN DR, EDMONTON

DATE: THURSDAY, SEPTEMBER 11, 2025

COUNT DURATION: 24 HOURS (MIDNIGHT TO MIDNIGHT)

PEDESTRIAN		INTERVAL																								SUB-TOTAL
CROSSING		MIDNIGHT TO 1:00AM	1:00 AM TO 2:00 AM	2:00 AM TO 3:00 AM	3:00 AM TO 4:00 AM	4:00 AM TO 5:00 AM	5:00 AM TO 6:00AM	6:00 AM TO 7:00 AM	7:00 AM TO 8:00 AM	8:00 AM TO 9:00 AM	9:00 AM TO 10:00 AM	10:00 AM TO 11:00 AM	11:00 AM TO NOON	NOON TO 1:00PM	1:00PM TO 2:00 PM	2:00 PM TO 3:00 PM	3:00 PM TO 4:00 PM	4:00 PM TO 5:00 PM	5:00 PM TO 6:00 PM	6:00 PM TO 7:00 PM	7:00 PM TO 8:00 PM	8:00 PM TO 9:00 PM	9:00 PM TO 10:00 PM	10:00 PM TO 11:00 PM	11:00 PM TO MIDNIGHT	
FROM	TO																									
NE CORNER	SE CORNER	1	0	0	0	0	3	9	13	20	34	30	18	21	26	13	14	10	9	10	8	8	4	1	0	252
	NW CORNER	1	1	0	0	0	0	2	0	0	0	0	1	0	1	0	1	0	0	2	0	0	0	0	0	9
NW CORNER	SW CORNER	1	1	0	0	0	0	2	0	0	0	0	1	4	1	0	0	0	2	2	0	0	0	0	0	14
	NE CORNER	1	0	0	0	0	0	0	1	2	0	0	1	0	1	1	0	0	1	2	4	0	1	0	0	15
SE CORNER	NE CORNER	0	0	0	0	0	1	3	1	3	5	6	12	17	17	31	28	28	18	12	13	4	3	0	0	202
	SW CORNER	0	0	0	0	0	0	1	3	2	2	0	4	4	3	5	6	6	3	5	8	11	2	2	0	67
SW CORNER	NW CORNER	1	0	0	0	0	1	0	0	2	2	0	0	3	2	1	1	8	1	3	4	0	1	0	0	30
	SE CORNER	0	0	0	0	0	1	3	4	2	5	3	0	17	6	1	3	3	2	2	5	4	1	0	0	62
TOTAL PEDESTRIANS																								651		



APPENDIX B

SYNCHRO SUMMARIES

Intersection

Int Delay, s/veh 4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	301	406	162	145	54	75
Future Vol, veh/h	301	406	162	145	54	75
Conflicting Peds, #/hr	0	5	5	0	25	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	-	0	15
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	327	441	176	158	59	82

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	773
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	842
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	838
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	5.51	22.11
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	179	530	-	-	765	-
HCM Lane V/C Ratio	0.329	0.154	-	-	0.21	-
HCM Ctrl Dly (s/v)	34.7	13	-	-	10.4	0
HCM Lane LOS	D	B	-	-	B	A
HCM 95th %tile Q(veh)	1.3	0.5	-	-	0.8	-

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	4	2	109	486	12
Future Vol, veh/h	15	4	2	109	486	12
Conflicting Peds, #/hr	5	0	5	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	4	2	118	528	13

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	668	540	546	0	-	0
Stage 1	540	-	-	-	-	-
Stage 2	128	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	424	542	1023	-	-	-
Stage 1	584	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	419	539	1018	-	-	-
Mov Cap-2 Maneuver	419	-	-	-	-	-
Stage 1	580	-	-	-	-	-
Stage 2	894	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.6	0.15	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	32	-	439	-	-
HCM Lane V/C Ratio	0.002	-	0.047	-	-
HCM Ctrl Dly (s/v)	8.5	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	38.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	↑
Traffic Vol, veh/h	274	149	72	265	303	73
Future Vol, veh/h	274	149	72	265	303	73
Conflicting Peds, #/hr	0	10	10	0	30	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	-	0	15
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	298	162	78	288	329	79

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	470
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1092
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1081
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.83	115.14
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	285	653	-	-	385	-
HCM Lane V/C Ratio	1.154	0.122	-	-	0.072	-
HCM Ctrl Dly (s/v)	140.2	11.3	-	-	8.6	0
HCM Lane LOS	F	B	-	-	A	A
HCM 95th %tile Q(veh)	14.2	0.4	-	-	0.2	-

Notes	
~: Volume exceeds capacity	\$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	6	1	416	178	14
Future Vol, veh/h	12	6	1	416	178	14
Conflicting Peds, #/hr	25	0	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	7	1	452	193	15

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	690	211	219
Stage 1	211	-	-
Stage 2	479	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	411	829	1351
Stage 1	824	-	-
Stage 2	623	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	402	821	1338
Mov Cap-2 Maneuver	402	-	-
Stage 1	815	-	-
Stage 2	617	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	12.74	0.02	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	4	-	485	-	-
HCM Lane V/C Ratio	0.001	-	0.04	-	-
HCM Ctrl Dly (s/v)	7.7	0	12.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection						
Int Delay, s/veh	4.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	301	406	164	145	62	88
Future Vol, veh/h	301	406	164	145	62	88
Conflicting Peds, #/hr	0	5	5	0	25	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	-	0	15
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	327	441	178	158	67	96
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	773	0	1092	553
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	539	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	842	-	237	533
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	585	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	838	-	177	530
Mov Cap-2 Maneuver	-	-	-	-	177	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	437	-
Approach	EB		WB		NB	
HCM Ctrl Dly, s/v	0		5.55		23.24	
HCM LOS	C					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	177	530	-	-	765	-
HCM Lane V/C Ratio	0.381	0.18	-	-	0.213	-
HCM Ctrl Dly (s/v)	37.4	13.3	-	-	10.5	0
HCM Lane LOS	E	B	-	-	B	A
HCM 95th %tile Q(veh)	1.6	0.7	-	-	0.8	-

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	4	2	109	486	17
Future Vol, veh/h	37	4	2	109	486	17
Conflicting Peds, #/hr	5	0	5	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	4	2	118	528	18

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	670	543	552
Stage 1	543	-	-
Stage 2	128	-	-
Critical Hdwy	6.42	6.22	4.12
Critical Hdwy Stg 1	5.42	-	-
Critical Hdwy Stg 2	5.42	-	-
Follow-up Hdwy	3.518	3.318	2.218
Pot Cap-1 Maneuver	422	540	1018
Stage 1	583	-	-
Stage 2	898	-	-
Platoon blocked, %			
Mov Cap-1 Maneuver	417	537	1013
Mov Cap-2 Maneuver	417	-	-
Stage 1	578	-	-
Stage 2	894	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	14.43	0.15	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	32	-	426	-	-
HCM Lane V/C Ratio	0.002	-	0.105	-	-
HCM Ctrl Dly (s/v)	8.6	0	14.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection						
Int Delay, s/veh	45.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↱			↱	↱	↱
Traffic Vol, veh/h	274	149	79	265	310	76
Future Vol, veh/h	274	149	79	265	310	76
Conflicting Peds, #/hr	0	10	10	0	30	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	-	0	15
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	298	162	86	288	337	83

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	470
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1092
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1081
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	1.98	133.92
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	277	653	-	-	413	-
HCM Lane V/C Ratio	1.216	0.126	-	-	0.079	-
HCM Ctrl Dly (s/v)	164	11.3	-	-	8.6	0
HCM Lane LOS	F	B	-	-	A	A
HCM 95th %tile Q(veh)	15.6	0.4	-	-	0.3	-

Notes	
~: Volume exceeds capacity	\$: Delay exceeds 300s
+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	23	6	1	416	178	34
Future Vol, veh/h	23	6	1	416	178	34
Conflicting Peds, #/hr	25	0	10	0	0	10
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	7	1	452	193	37

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	701	222	240	0	-	0
Stage 1	222	-	-	-	-	-
Stage 2	479	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	405	818	1326	-	-	-
Stage 1	815	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	397	810	1313	-	-	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	806	-	-	-	-	-
Stage 2	617	-	-	-	-	-

Approach	EB	NB	SB
HCM Ctrl Dly, s/v	13.74	0.02	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	4	-	443	-	-
HCM Lane V/C Ratio	0.001	-	0.071	-	-
HCM Ctrl Dly (s/v)	7.7	0	13.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-