Public Notice

penticton.ca

October 7, 2021

Subject Property:
955 Timmins Street

Lot 2, District Lots 1, 2 and 4, Group 7, Similkameen Division Yale (Yale-Lytton) District, Plan 36021

Applications:
Official Community Plan Amendment PL2021-9000
Rezone PL2021-9001

The applicants are proposing a multi-family development on the property located at 955 Timmins Street that features a mix of townhouse and apartment units (total 219 units). In order to facilitate the proposed development, the applicants are requesting the following:

1. To amend the Official Community Plan (OCP) future land use designation on the subject property from 'Industrial' and 'Urban Residential' to only 'Urban Residential'.

2. To amend the zoning on the property from M1 (General Industrial) to RM3 (Medium Density Multiple Housing).

Information:
You can find the staff report to Council, Official Community Plan Amendment Bylaw 2021-35 and Zoning Amendment Bylaw 2021-36 on the City's website at www.penticton.ca/publicnotice.

Please contact the Planning Department at planning@penticton.ca or (250) 490-2501 with any questions.

Council Consideration:
A Public Hearing has been scheduled for **6:00 pm, Tuesday, October 19, 2021** at the Penticton Trade and Convention Centre, 273 Power St., Penticton, B.C.

All meetings will be live streamed via the City's website at: www.penticton.ca/city-hall/city-council/council-meetings. Select the 'Watch Live' button.

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Public Comments:

Any person whose interest may be affected by the proposed bylaw:

1. May participate at the Public Hearing via Zoom. Please visit www.penticton.ca for details and the Zoom link.

2. May participate at the Public Hearing via telephone. Please visit www.penticton.ca for details and the telephone number.

3. Submit written comments by mail or email no later than 9:30 am, Tuesday, October 19, 2021 to

   Attention: Corporate Officer, City of Penticton
   171 Main Street, Penticton, B.C. V2A 5A9
   Email: publichearings@penticton.ca

4. May appear in person. (Adapted to comply with Provincial/Interior Health Orders.)

No letter, report or representation from the public will be received by Council after the conclusion of the October 19, 2021 Public Hearing.

Please note that all correspondence submitted to the City of Penticton in response to this Notice must include your name and address and will form part of the public record and will be published in a meeting agenda when this matter is before the Council or a Committee of Council. The City considers the author's name and address relevant to Council's consideration of this matter and will disclose this personal information. The author's phone number and email address is not relevant and should not be included in the correspondence if the author does not wish this personal information disclosed.

Audrey Tanguay
Planning Manager

Council Report

penticton.ca

Date: October 5, 2021 File No: RMS/955 Timmins Street
To: Donny van Dyk, Chief Administrative Officer
From: Nicole Capewell, Planner II
Address: 955 Timmins Street

Subject: **Official Community Plan Amendment Bylaw No. 2021-35**
Zoning Amendment Bylaw No. 2021-36

Staff Recommendation

THAT prior to consideration of "Official Community Plan Amendment Bylaw No. 2021-35", and in accordance with Section 475 of the *Local Government Act*, Council consider whether early and on-going consultation, in addition to the required Public Hearing, is necessary with:

1. One or more persons, organizations or authorities;
2. The Regional District of Okanagan Similkameen;
3. Local First Nations;
4. School District #67;
5. The provincial or federal government and their agencies.

AND THAT it is determined that the community engagement period carried out from July 26, 2021 to August 29, 2021 is sufficient;

AND THAT Council give first reading to "Official Community Plan Amendment Bylaw No. 2021-35", a bylaw that amends Map 1: Future Land Use of Official Community Plan Bylaw No. 2019-08, by amending the future land use designation for Lot 2 District Lots 1, 2 and 4 Group 7 Similkameen Division Yale (Yale-Lytton) District Plan 36021, located at 955 Timmins Street, from 'Industrial' and 'Urban Residential' to 'Urban Residential';

AND THAT Council give first reading to "Zoning Amendment Bylaw No. 2021-36", for Lot 2 District Lots 1, 2 and 4 Group 7 Similkameen Division Yale (Yale-Lytton) District Plan 36021, located at 955 Timmins Street, a bylaw to rezone the subject property from 'M1 (General Industrial)' to 'RM3 (Medium Density Multiple Housing)';

AND THAT Council, prior to adoption of "Zoning Amendment Bylaw No. 2021-36", require the developer to contribute $110,000.00 for traffic calming and increased safety measures on Moosejaw Street and that these works be included into the 2022 Capital Works Plan;

AND THAT Council, subject to adoption of "Zoning Amendment Bylaw No. 2021-36", endorse the removal of 24 City trees, located along the boulevard area on the west side of Timmins Street as shown in the Arborist Report, at the time of Development Permit issuance, and require replacement of these trees at a 1:1 ratio;

AND THAT Council forward "Official Community Plan Amendment Bylaw No. 2021-35" and "Zoning Amendment Bylaw No. 2021-36" to the October 19, 2021 Public Hearing.

Strategic Priority Objective

Community Safety: The City of Penticton will support a safe, secure and healthy community.

Community Vitality: The City of Penticton, guided by the Official Community Plan, will promote the economic wellbeing and vitality of the community.

Executive Summary

The City has received an application package for a multi-family development at 955 Timmins Street (the "subject property"). The applicant intends to construct a mixture of townhouse and apartment units (total 219 units) over the property. The proposed development includes 71 townhouses that provide 3-bedroom units, and 2 apartment buildings that provide a mixture of studio, 1- and 2-bedroom units (Figure 1). The application package proposes to amend the Official Community Plan (OCP) Future Land Use Designations and zoning on the subject property in order to facilitate the proposed development.

Upon receiving the application package, staff prepared a report to Council recommending endorsement of the community engagement plan to be carried out in keeping with the Community Engagement Procedure for OCP Amendments. On July 20, 2021, Council endorsed the engagement plan, which took place between July 26, 2021 and August 29, 2021.

Figure 1 - Proposed Site Layout

This reports contains staff's analysis of the City's future land use policies relating to the proposed development. This report also provides a summary of the results from the community engagement period and discusses the amendments made to the proposal by the applicant as a result of the community engagement. Staff are recommending that Council give first reading to the OCP and Zoning Amendment Bylaws and forward them to the Public

Hearing on October 19, 2021, to give the public an opportunity to speak directly to Council on the proposed development.

Proposal

The applicants are proposing a multi-family development on the property located at 955 Timmins Street that features a mix of townhouse and apartment units (total 219 units). In order to facilitate the proposed development, the applicants are requesting the following:

1. To amend the Official Community Plan (OCP) future land use designation on the subject property from 'Industrial' and 'Urban Residential' to only 'Urban Residential', and
2. To amend the zoning on the property from M1 (General Industrial) to RM3 (Medium Density Multiple Housing).

This report will also present the engagement summary from the public engagement period that occurred between July 26, 2021 and August 29, 2021 to seek feedback from the community on the proposed development.

Figure 2 - Apartment on Lot 1

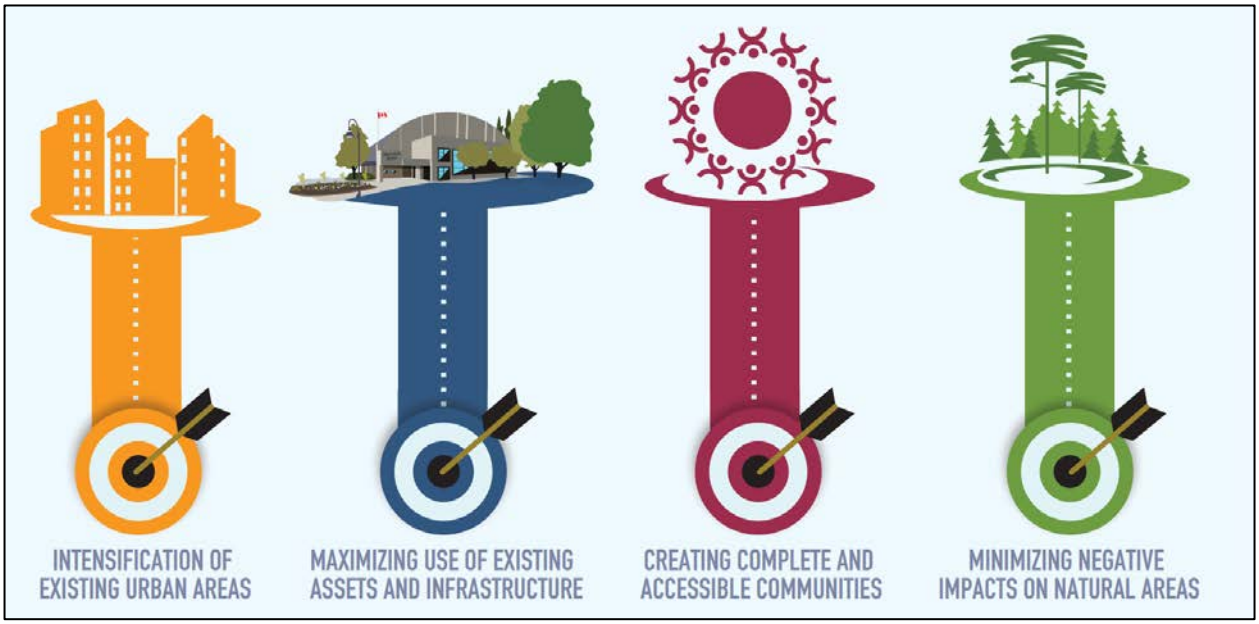
Figure 3 - Typical Townhouse

Background

Official Community Plan

The Official Community Plan Bylaw No. 2019-08 was adopted in August 2019, establishing a vision for Penticton's growth over the next 30 years and beyond. It provides strategic policies and direction for meeting that vision. The plan, however, is not meant to be a static document; it includes a process, through meaningful community consultation, where amendments to the plan may be considered as long as the vision and intent remains intact.

The OCP considers population growth and creates a growth plan for how the anticipated growth can be accommodated. Penticton's growth plan places great emphasis on strategic and sensitive use of our limited land base. It recognizes that we must make the most efficient use of the land and infrastructure we have available, and also protect the natural environment that many residents value.



The OCP identifies a growth rate of 0.65% per year up to 2045, however this growth may not occur as a steady increase each year. There may be times over the next 25 years where the City sees substantial development and growth, and perhaps other times where the growth and pace of development is slower.

Council recently adopted the *Community Engagement for OCP Amendments Procedure*, which outlines how public engagement for Official Community Plan amendments should occur. At the July 20, 2021 Council meeting, Council directed staff to begin engagement following this procedure. The purpose of the engagement was to share information and gather public feedback on the proposal. A summary of this engagement is included in this report.

Property Description

955 Timmins Street is located within the northwest area of the City (Figure 4) and is currently being utilized as an industrial property, under the current M1 (General Industrial) zoning. The property is currently the business location of the Radec Group, which is a home builder company based in Penticton.

Figure 4 - Property location map

In 2018, the City received development applications that, similar to the current proposal, proposed to amend the Official Community Plan designation from industrial to allow for multi-family residential. The proposal at the time proposed urban residential only at the southern portion of the property (Figure 5). Staff and the applicant worked through the applications at the time, however there were concerns with site contamination (Ministry of Environment), and Zoning Bylaw requirements including parking, amenity space and setbacks that could not be resolved. Due to these concerns, a significant period of inactivity on the proposal, and the adoption of a new Official Community Plan, the 2018 development applications were cancelled in late 2020/early 2021.

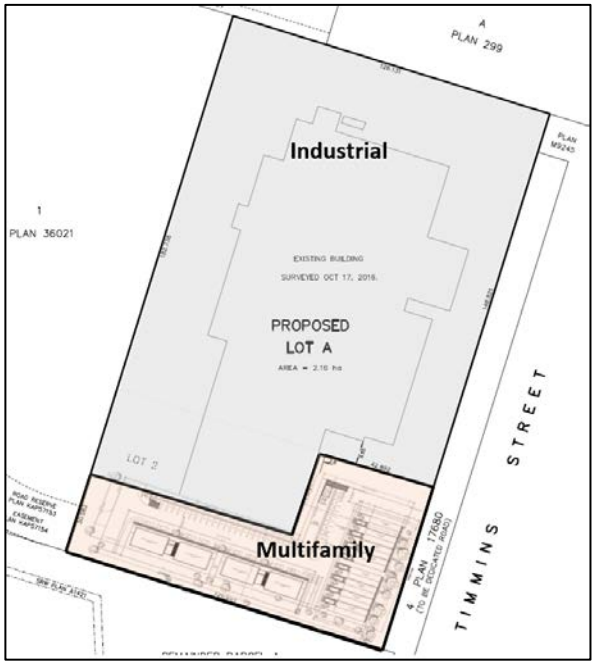


Figure 5 - 2018 Development Proposal Sketch

Since the cancellation of the previous applications, the applicant has completed the following adjustments to make the development proposal available for consideration by Council, staff and the community:

1. Received release letter providing support from the Ministry of Environment to proceed with subdivision and zoning applications. The Ministry of Environment will be consulted throughout subsequent steps of the proposed development, should it proceed.
2. Successfully meeting zoning bylaw requirements including parking, amenity space and setback requirements. Contrary to the previous development applications, the proposed development is being proposed without needing any variances at this time.

Subject Property Context:	
Current Use:	Industrial
Total Parcel Size:	2.68 hectares (6.644 acres)
Current Zoning:	M1 (General Industrial)
Current OCP Land Use Designation:	Industrial Urban Residential
Neighbouring Uses	
North:	Parks (King's Park)
East:	Single Family Residential (Timmins Street)
South:	Institutional (Okanagan College)
West:	Commercial (Canadian Tire)

Required Subsequent Applications upon Approval

The current proposal would change the use on the property and allow the lands to redevelop into multi-family residential, featuring a mix of townhouses and low rise apartments through a number of phases. The following table outlines the planning applications that would be required for the proposed development to proceed (prior to any building permits being issued):

Application Required	Description	Approval Authority
Official Community Plan Amendment Bylaw	To amend the future land use designation on the subject property from 'Industrial' and 'Urban Residential' to 'Urban Residential'.	Council with community engagement. Public Hearing required.
Zoning Amendment Bylaw	To amend the zoning on the subject property from M1 (General Industrial) to RM3 (Medium Density Multiple Housing).	Council Public Hearing required.
Development Permit	To approve the form and character of the multi-family residential development	Council
Subdivision and Phased Strata	To subdivide the property into two land parcels to allow for phasing of the development.	Approving Officer (City Staff)

Financial Implications

Engagement Procedure

In accordance with the Fees and Charges Bylaw, the applicant was required to pay a recently introduced fee ($5,500.00) to account for the required engagement for OCP Amendments in the City. This fee accounts for the staff time and resources that it takes to prepare and operate the engagement period for the proposal. This fee is in addition to the standard applicable fees also required for Zoning Amendments.

Traffic-Calming Improvements

Through the engagement period, the largest concern that was raised from the community was regarding the increase of traffic as a result of the proposed development (see Engagement Summary section for full details). Upon the completion of the engagement period, staff and the applicant met several times to discuss ways to address this concern. As a result of the engagement feedback, the applicant's understanding of the current traffic concerns on Moosejaw St, and the applicant's desire to try to address these concerns, the applicant has agreed to provide the City with a $110,000.00 contribution, to be used exclusively for traffic-calming measures on Moosejaw St (see Traffic Impact Assessment section for full details). These traffic calming measures would be included in the 2022 Capital works program.

Development Cost Charges

The applicant will be required to pay Development Cost Charges (DCCs) at the time of building permit issuance for the proposed development. DCC rates will be in accordance with the 2021 rates as per the Development Cost Charges Bylaw No. 2007-79, at $6,671.50 per multi-family residential unit, totaling $1,461,058.50 overall (219 units). DCCs are intended to help offset the added demand on municipal services from new development.

Technical Review

The application was reviewed by the City's Technical Planning Committee (TPC). The committee is made up of City staff in various departments who review development applications. As the current applications are for OCP and Zoning Amendments, comments at this time were high level. At the time that the applicant proceeds to subdivision and development permit applications, the proposal will be referred back to the TPC group to review more specific details and ensure the plans conform to all City standards and bylaws.

Site Identification (Contaminated Sites)

The site contamination process is a series of legal provisions in the *Environmental Management Act* (EMA) and Contaminated Sites Regulation (CSR) that work together with municipal legislations (such as the *Local Government Act*) to: 1) identify potentially contaminated sites; 2) ensure contaminated sites are cleaned up before they are redeveloped for a new use; and 3) provide basic site information to the public through the Site Registry. The City works with the Ministry of Environment to identify sites that have contamination. Properties with current, or a history of, specified industrial and commercial uses are required to submit a Site Disclosure Statement for rezoning, development permit, subdivision and building permit applications.

For the subject application, the applicants have provided City staff with a release notice from the Ministry of Environment that allows staff to proceed with the current OCP and Zoning amendment applications (Attachment 'H'). City staff will ensure that the Ministry of Environment is notified and informed of any subsequent applications for the subject property. The applicant will need to work with the Ministry prior to applications for development permits, subdivision and building permits.

Boulevard Trees

The applicant has provided a design that considers the existing boulevard trees along the Timmins Street boulevard area. Early in the application, staff identified the need for a tree assessment to be completed to assess the health and ownership of the existing trees. As such, the applicant contracted a professional arborist who reviewed all trees in the boulevard and private property area in front of the subject property on Timmins Street. The applicant also hired a BC Land Surveyor, who surveyed the property line between the subject property and the City boulevard to determine if the trees are private or City-owned.

The arborist report was prepared and reviewed with the Parks Department who are in agreement with the conclusions contained in the report. Generally, there are a number of mature trees that exist in this boulevard area, however there are also a number of trees that are in poor health, are invasive, or are too close to another tree in better health and the close proximity compromises the health of both trees. The arborist report and staff are recommending that 24 City owned boulevard trees be removed at the time of Development Permit issuance for the proposed development. This would ensure that the trees are not removed prior to the development proceeding. The applicant and Parks Department staff will continue to work closely throughout the removal process. The arborist report with its findings has been included as Attachment 'J' of this report.

Traffic Impact Assessment

Staff required the developer to undertake a Traffic Impact Assessment (TIA) as part of this development submission. Addoz Engineering Inc. was hired by the applicant to complete the TIA. The TIA examined the impact of the proposed development on Timmins St and Moosejaw St, and all intersections along Moosejaw

St between Eckhardt Ave E and Duncan Ave E. Pre-existing traffic count data collected by the City supplemented the traffic count data collected by Addoz Engineering. A copy of the final TIA is included in this report as Attachment 'I'.

The TIA concluded that the current road network operates well and the addition of the extra traffic generated from the proposed development does not significantly impact the operation of the existing traffic networks. Under the future conditions, there is no requirement to upgrade the functionality of any of the intersections.

This conclusion is in line with the pre-existing investigations carried out by the City. In studies undertaken by the City since 2018 and the recent 2020 Transportation Master Plan, no upgrades to the intersections along Moosejaw St were warranted.

Staff acknowledge that over the engagement period, the local community identified traffic as a top concern with the proposed development. As such, the local community completed their own traffic report. This report was not completed by a qualified professional, or following any recognized traffic impact assessment methodology. The community report did include an independent traffic count that supported the traffic counts within the Addoz Engineering report and according to the report, "the counts from the two studies are in good agreement". The community report questions the decision to carry out the traffic count during "COVID" and states that the conclusions of the Addoz Engineering report are "unsubstantiated" because the counts Addoz Engineering completed were during COVID (when less vehicles may be counted in comparison to pre- or post-COVID).

Addoz Engineering reviewed the traffic count data collected as part of their study in addition to the pre-existing traffic count data collected by the City (completed pre-COVID). Based on their professional opinion they did not believe that further modification of the collected traffic data was required; the justification for this is included within their report. In summary, Addoz Engineering felt that the peak traffic data collected and contained within their report is an accurate representation of the peak traffic data for the road network.

Through the engagement period, the local community raised a number of traffic concerns with the current road network. A comment that staff heard from many was, why the proposed development is being accessed from Timmins St and not through the adjacent Canadian Tire property to Highway 97.

The subject property does not have frontage onto Highway 97, and the land separating the subject property and Highway 97 is privately owned land. Further, standard to any zoning amendment application within proximity of a provincial highway, City staff sent a referral to the Ministry of Transportation and Infrastructure, notifying them of the proposed development. The Ministry of Transportation and Infrastructure provided staff with a Preliminary Approval Conditions Letter (Attachment 'G'), that specifically states "no direct access to Highway 97 via the adjacent Canadian Tire property. All access via the local street (Timmins Street)." The letter further states as a requirement, that there be "physical closure of the connection between the subject property and the adjacent Canadian Tire property, with a combination of hard and soft landscaping." With both of these significant considerations in mind, the applicant is utilizing the existing road networks from Timmins Street in their designs.

Other traffic concerns raised by the community addressed operational issues of the current road network and the potential impact that the development may have on these conditions. The main concerns raised by

the local residents include the following, which are concerns that currently exist, and residents are concerned will be worsened as a result of the increased traffic:

1. Excessive vehicle speeds along Moosejaw St,
2. Vehicles not stopping for people on the pedestrian crossing at Eckhardt Ave E and Moosejaw St,
3. Concerns for pedestrian safety when crossing at Moosejaw St and Scott Ave due to the lack of crossings and the speeds of vehicles travelling along Moosejaw St,
4. Concerns for pedestrians crossing at Conklin Ave and Scott Ave due to the lack of crossings and the speeds of vehicles travelling along Moosejaw St,
5. Excessive wait times for vehicles trying to enter onto Eckhardt Ave E from Moosejaw St,
6. Poor sightlines from Moosejaw St at the intersection with Eckhardt Ave E, and
7. Parking issues during large sporting events at Kings Park.

Through staff's review of these concerns, it was identified that "no parking" signs were not currently installed around the crosswalk on Eckhardt Ave E, at the Moosejaw St intersection. As such, City crews have already been tasked with installing this signage. The no parking areas on either side of the crosswalk will improve the sightlines at this intersection, making it easier for vehicles to safely enter onto Eckhardt Ave E, and to see pedestrians preparing to cross Eckhardt Ave E.

The current situation of vehicles speeding along Moosejaw St is not an issue caused by the proposed development. The City did complete a study of the vehicle speeds along Moosejaw St in 2017 and it concluded that the 85th percentile speed was 51 km/h. This investigation did not identify any significant speeding issue on the street. Separate to this development application, the City's Engineering Department will be installing the speed monitoring equipment back into Moosejaw St to review the speeds. This will not be occurring until later in the year, once the college is back with in-person classes.

Although concerns with vehicle speed and the safety of pedestrians crossing at Eckhardt Ave E are not caused by the proposed development, the applicant does believe that the local community will benefit by these concerns being addressed. Working together, Staff and the applicant have identified two projects that would improve the traffic impacts identified by the community.

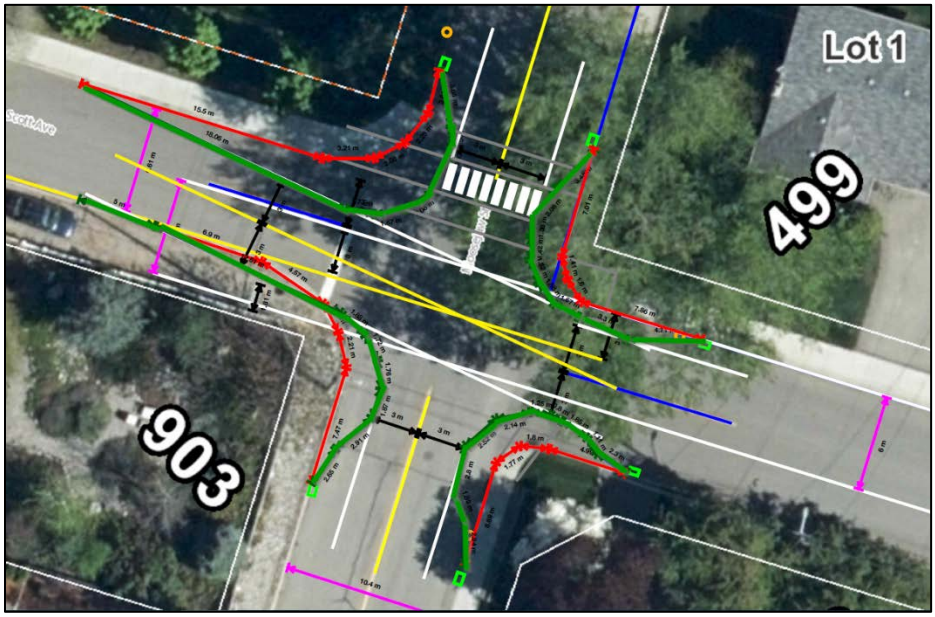


Figure 6 - Proposed Concept at Moosejaw St and Scott Ave

The applicant has volunteered to provide funds to the City to allow for the construction of traffic calming measures at the intersection of Moosejaw St and Scott Ave. This will include the creation of "bulb-outs" on all four corners of the intersection to narrow the road. The concept design is shown in Figure 6.

The applicant has also volunteered to fund the installation of pedestrian activated flashing lights on the Eckhardt Ave E pedestrian crossing at Moosejaw St (Figure 7). This aim of this is to increase the visibility of pedestrians when crossing Eckhardt Ave E. This, combined with the additional "No Parking" signage area, will greatly increase the visibility of pedestrians.

Staff determined the estimated cost for the proposed installations, and the applicant has volunteered to pay the amount of $110,000.00 for the construction of the traffic calming measures as discussed, on the condition that the City complete the works as part of their 2022 Capital Works Plan. The developer acknowledges that the final design may change, but the overall locations and impact will not be altered.

Figure 7 - Example of pedestrian lights to be installed

Community Engagement Summary

On July 20, 2021, Council endorsed the community engagement plan in accordance with the Community Engagement Procedure for OCP Amendments. Staff launched the engagement period on July 26, 2021, utilizing the Shape Your City Penticton webpage platform as the main tool for sharing information and gathering public feedback on the proposed development. An information booth was set up at City Hall as an alternative option of providing feedback for those who prefer paper or do not utilize the internet.

To advertise the engagement period, staff completed the following:

1. Mailed notices to property owners and tenants within 150m of the subject property,
2. Posted signs (2) on the subject property,
3. Reached out directly to stakeholder groups,
4. Issued a news release,
5. Placed advertisements in local newspapers, and
6. Conducted two information sessions; one online and one at the Farmers' Market.

Approximately 30 people attended the online information session, and the Farmer's Market was well attended, with interactions with 50 + people. The intent of both information sessions was to inform community members, share accurate information on the proposal and the process, and indicate how and where community members can share their comments, concerns and feedback on the proposal. All engagement sessions were hosted in accordance with Provincial Health Orders at the time. The engagement period closed on August 29, 2021.

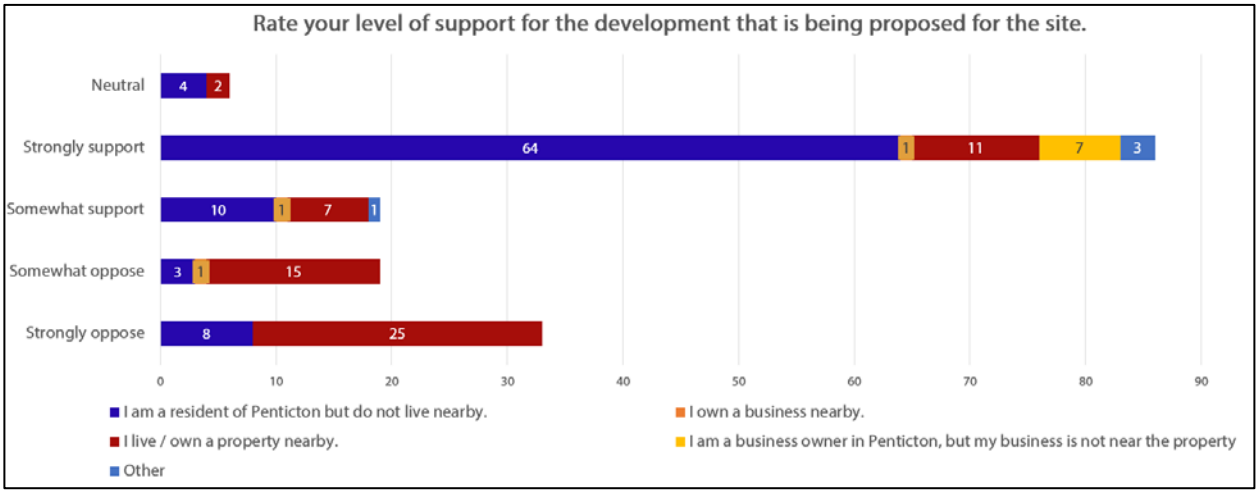
The community engagement for this proposal was completed prior to Council considering first reading of the OCP and Zoning Amendment Bylaws. The intent of the community engagement period was to gather comprehensive community feedback, and ensure an opportunity was provided for the applicant to consider the feedback and concerns of the community in their design proposal. This also helps to inform staff's analysis and Council's decision on the development proposal.

Staff reached out to stakeholder groups including the Regional District of Okanagan Similkameen, Penticton Indian Band, School District #67, Interior Health, Okanagan College and the Penticton Industrial Development Association. Letters were received from the Regional District of Okanagan Similkameen, Interior Health, and the Penticton Industrial Development Association.

The following is a summary of the key findings from the feedback forms collected during the engagement period:

1. 163 feedback forms were received in total, either through shapeyourcitypenticton.ca or paper copies submitted to staff.
2. 55% of respondents are residents of Penticton, but do not live near the subject property. 37% live or own a property near the subject property.
3. The majority of respondents either strongly support (53%) or somewhat support (12%) the development, while strongly oppose (20%) or somewhat opposed (12%).
4. The majority of respondents that strongly oppose the development live or own property nearby the subject property (25 of the 33 respondents who strongly oppose).
5. Although the majority of respondents were in support of the proposal, nearly half (47%) of respondents identified that they had concerns with the proposal, including:
    1. Increased traffic on surrounding residential streets and intersections,
    2. Existing traffic issues on Moosejaw St that need traffic calming,
    3. Special concern for children having to cross Eckhardt Ave W to go to Queen's Park Elementary,
    4. Desire to see access to the development be from Highway 97 as a solution,
    5. Too much density for this area of the City,
    6. Adequate parking must be provided or it will overflow onto the residential streets,
    7. Loss of industrial land, and
    8. Mature trees along Timmins Street should be saved.

The following chart shows the feedback form results to the questions "**Rate your level of support for the development that is being proposed for this site**", relative to the participant's interest in completing the form:



Amendments Completed as a Result of Engagement

The engagement period was led by Planning Department staff with assistance from the Communications Department. Throughout the engagement period, the applicant continued to show progression on the application, working through items that came through as clear concerns early in the engagement period (including traffic increases and protection of boulevard trees). The applicants listened quietly through the engagement period, to ensure that they heard a fair representation of comments and concerns from the community and nearby neighbours. Once the engagement period closed, staff shared the results to the public (via Shape Your City) and the applicant.

Shortly after the closing of the engagement period, staff and the applicant met to discuss amendments to the proposal. The following items are amendments that the applicant has made to their plans to address the concerns raised by the public (see Letter of Intent (Attachment 'D') that indicates changes made):

1. Amended the site layout:
    1. Proposed Lot 1 now contains only an apartment building (townhouse units have been moved to Lot 2 only),
    2. Proposed Lot 1 boundary now aligns with the current Urban Residential OCP designation on the property,
2. Both driveway access points have been relocated, resulting in more trees being preserved:
    1. The north entrance now aligns with Scott Avenue, which is more desirable from an engineering perspective,
3. Reduced the overall unit count by 10 units. 10 townhouse units were removed, to assist with addressing density and parking concerns,
4. Adjust design to account for retaining healthy trees within the boulevard and private property areas along Timmins Street frontage,
5. Amended TIA to consider other intersections (Conklin Ave and Duncan Ave E), and
6. Applicant offered to contribute $110,000.00 for traffic calming, even though this was not identified within Traffic Impact Assessment.

Development Statistics

The development plans are proposing 71 townhouse units and 148 apartment units (split between two apartment buildings) over 2 phases of development. The following table outlines how the proposed development meets the applicable Zoning Bylaw:

	RM3 Zone Requirement	Proposed Phase 1	Proposed Phase 2
Proposed Development		1 apartment building (70 units)	1 apartment building (78 units) 71 townhouse units
Total Units Proposed: 219 units		70 units	149 units
Lot Area:	1400 m^2	5,306.9 m^2	21,587.2 m^2
Maximum Density:	1.6 Floor Area Ratio (FAR)	0.77 Floor Area Ratio (FAR)	0.76 Floor Area Ratio (FAR)

	RM3 Zone Requirement	Proposed Phase 1	Proposed Phase 2
Maximum Lot Coverage:	50%	22%	35.2%
Vehicle Parking:	1 per unit + 0.25 visitor spaces	Required: 87 parking spaces Provided: 87 parking spaces	Apartment required: 97 parking spaces Provided: 157 parking spaces (1.61 per unit) Townhouse requires: 93 parking spaces Provided: 142 parking spaces (2 per unit)
Bicycle Parking:	Class 1: 0.5 spaces per dwelling unit	Required 35 spaces Provided: 36 spaces	Required: 39 spaces* Provided: 80 spaces
	Class 2: 0.1 spaces per dwelling unit	Required: 7 spaces Provided: 8 spaces	Required: 15 spaces Provided 16 spaces
Maximum Height Principal building:	24 m	Apartment: 14 m (4 storeys)	Apartment: 17.2 m (5 storeys) Townhouses: 8.4 m (2 storeys)
Minimum Amenity Space:	20m^2 per dwelling unit. • Minimum 25% of required amount to be at ground level. • Maximum 20% may be indoors.	Required: 1,400 m^2 (350m^2 required at ground level) Provided: 2,164 m^2 1,277 m^2 provided at ground level.	*Apartment* Required: 1,560 m^2 (390m^2 required at ground level) Provided: 2,668 m^2 1,657 m^2 provided at ground level. *Townhouse* Required: 1,420 m^2 (355m^2 required at ground level) Provided: 2,186 m^2 provided at ground level.
Required Setbacks:			
Front Yard (Timmins St):	3.0 m	61.7 m	6.0 m
Interior Side Yard (north):	4.5 m	5.4 m	4.5 m
Interior Side Yard (south):	4.5 m	5.4 m	4.5 m
Rear Yard (west)	6.0 m	6.1 m	6.1 m
Other Comments:	* Zoning Bylaw Section 6.4.3.5: For multiple housing developments, where a dwelling unit is designed with and has access to its own garage space, no Class 1 bicycle parking shall be required for that dwelling unit.		

Analysis

Official Community Plan Amendment

Recognizing that the Official Community Plan (OCP) is a "living document", amendments to the OCP are to be expected from time to time. While the OCP guides land use decisions up to 2045, it is likely that over that timeframe, changing trends or unexpected events will require the City and community to consider amendments to the plan. Proposals to amend the OCP that respect the overall vision and values of the OCP, but also allow for innovation and adaption as new opportunities arise, are considered by City Council, with the following considerations:

1. Alignment with broad OCP visions and goals
2. Provision of demonstrable social, economic and environmental benefits to the community
3. Assessment of cost and other implications for infrastructure – parks, roads, utilities, water, sanitary and storm sewer, public facilities
4. Suitability to context – form, character and design
5. All proposed amendments will be accompanied by meaningful public engagement, in addition to the required notification, and a formal Public Hearing.

The applicants are proposing to amend the Future Land Use designation on the subject property from 'Industrial' and 'Urban Residential', to only 'Urban Residential'. Explanations on what each of these designations means and what land use each supports are provided below.

Industrial Land Use Designation

The subject property's current OCP future land use designation is primarily 'Industrial', with a small piece of 'Urban Residential' at the southern end of the property (Attachment 'B'). The portion of urban residential on the property was introduced through the development of the 2019 OCP. The industrial land use designation is described in the OCP as areas of light and heavy industrial uses characterized by goods production, manufacturing, distribution, and storage. This designation supports a wide variety of industrial uses, including those currently permitted under the M1 (General Industrial) zone (i.e. cannabis production facility, manufacturing, towing compounds, motor vehicle body repair, paint shop, outdoor storage, self-storage, etc.).

The 'Industrial' land use designation supports the current M1 zoning, as well as M2 or M3 zoning, which are more intense industrial zones that allow for heavy industrial uses such as concrete mixing plants, foundry, or wrecking yard, among others (Figure 8).

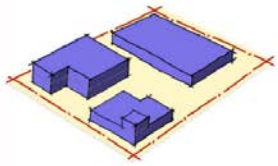
Land Use	Description	Building Type(s)	Uses	Height / Density	Zone(s)
Industrial 	Areas of light and heavy industrial uses characterized by goods production, manufacturing, distribution, and storage.	• Industrial buildings • Structures and lands	• General Industrial • Heavy Industrial (M2 zone only) • Wholesale, Storage and Warehouse • Vehicle and Equipment Repair	• Generally 1 or 2 storeys	• M1 • M2 • M3

Figure 8 - Industrial Future Land Use Designation

Urban Residential Land Use Designation

The question for the community and Council to consider is whether the 'Urban Residential' land use designation represents what we want to see at this location in the future. This change in land use designation would allow for the rezoning of the lands in support of higher-density residential developments including townhouses, stacked townhouses, low-rise and mid-rise apartment and condo buildings, up to a maximum of 6 storeys in height (Figure 9).

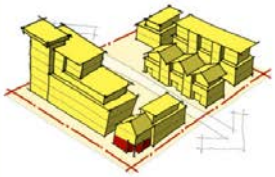
Land Use	Description	Building Type(s)	Uses	Height / Density	Zone(s)
Urban Residential 	Higher-density 3-6 storey apartment neighbourhoods in higher-amenity areas where building construction is primarily wood frame.	• Townhouses and stacked townhouses • Low-rise and mid-rise apartment/ condo buildings	• Residential • Limited Retail/ Service	• Heights up to 6 storeys	• RM3

Figure 9 - Urban Residential Future Land Use Designation

Staff's Analysis

The subject lands are unique in that they are substantially sized, and located in a desirable area, near existing commercial, residential and institutional uses. While the lands have been envisioned for the long term as industrial and urban residential by the Official Community Plan, the community can now consider whether this is what we (the community) want to see at this location for the future. The change in land use from industrial to residential would allow for residential housing units on the property, and also create the opportunity to provide student housing in close proximity of Okanagan College.

The proposed future land use change at 955 Timmins Street is considered consistent with the City's OCP, which provides a community vision and growth plan. The subject property is within the existing urban areas of the City, maximizes existing assets and infrastructure, helps to create complete and accessible communities and minimizes negative impacts on natural areas.

Staff consider that there is sufficient policy in the Official Community Plan to support the requested land use change from industrial to residential on the subject property. The following summary identifies specific OCP policy intended to guide sustainable planning practices:

OCP Reference	Policy
OCP Goal 4.1.1	Managing Growth Ensure that Penticton retains its compact "footprint" to help protect natural areas and environmental values and agricultural lands, avoid excessive infrastructure costs and hazard lands, and help create conditions that support transit and active modes of transportation.
Staff's Comments	The subject property is located within the existing urban area of the City, and represents redevelopment of a brownfield site. Utilizing these existing sites within the City helps to ease pressure of development on greenfield sites on the outskirts of the City, allowing the City to grow up, rather than out.
OCP Policy 4.1.1.1	Focus new residential development in or adjacent to existing developed areas.
Staff's Comments	The subject property is located within an already developed area, and doesn't require the construction or extension of City services in order to proceed.
OCP Goal 4.1.2	Housing Affordability Increase the availability of affordable housing across the housing spectrum, from subsidized social housing to home-ownership options.
Staff's Comments	The development proposes to include rental units available in one of the apartment buildings proposed. They have also expressed that they are working to provide some forms of affordability throughout the proposed development (see Letter of Intent as Attachment 'D' of this report).
OCP Goal 4.1.3	Housing Diversity Ensure a range of housing types, sizes, tenures and forms exist throughout the City to provide housing options for all ages, household types, and incomes.
Staff's Comments	The proposal includes a mixture of housing types, sizes, tenures and forms, including a mix of townhouse and apartment units. There is also a variety of sizes, from studio apartment units to 3-bedroom townhouse units.
OCP Policy 4.1.3.1	Encourage more intensive "infill" residential development in areas close to the Downtown, to employment, services and shopping, through zoning amendments for housing types compatible with existing neighbourhood character, with form and character guided from Development Permit Area Guidelines.
Staff's Comments	The subject property is located within an already developed area, near existing residential, institutional, commercial and public spaces. There is adequate opportunity for residents to access services and amenities near the proposed development due to its central location.
OCP Policy 4.1.3.4	Encourage developments that include one-bedroom and two-bedroom units in suitable neighbourhoods to enable people to downsize as they age and to provide entry-level housing for those people entering the housing market. At the same time, provide 3-bedroom units, or large, to accommodate families.

OCP Reference	Policy
Staff Comments:	The proposal would introduce studio, 1-, 2- and 3-bedroom units to the area. These units are provided through townhouse and apartment units, allowing potential residents the opportunity to select their preferred housing type.
OCP Policy 4.1.5.1	Recognize that some traditionally single-family neighbourhoods will see intensification as the city grows, but ensure that new forms of residential development area compatible with the neighbourhood in scale and design, and are appropriately located (e.g., greater density closer to collector roads, services and amenities).
Staff Comments:	Staff acknowledge that the subject property is located in the area of an existing single-family neighbourhood. The proposal has been designed to provide the townhouse units closest to Timmins Street, which is adjacent to the existing single family area. This helps to keep similar building styles and heights near each other and transition to the proposed apartment buildings, which are located further from Timmins Street, to the rear of the subject property.
OCP Policy 4.1.5.4	Ensure that all new neighbourhood developments and redevelopments of existing large sites, including bareland stratas, are fully incorporated into the surrounding community through publically-accessible roads, sidewalks, trails and public parks lands.
Staff Comments:	The proposal represents redevelopment of a large site. The proposed plans include incorporation into the surrounding area, with pedestrian walkways connecting to the existing street networks, as well as to the Okanagan College property.
OCP Policy 4.1.6.1	Ensure all residential neighborhoods in Penticton provide a range of appropriately scaled housing types and tenures, employment opportunities such as home-based businesses, transportation options like walking and cycling, social supports such as childcare facilities, and access to green space and parks.
Staff Comments:	The requested zone permit the use of home based businesses, which provides home owners with the opportunity to work from home, following regulations specified in the Zoning Bylaw. The proposed development will have pedestrian connections throughout the subject property, by way of sidewalks. There is very close access to Kings Park, as the subject property is directly adjacent to the Park.
OCP Policy 4.1.6.3	Consult with Interior Health to assist with the preparation of long range plans and strategies (e.g. neighbourhood plans, and parks and transportation plans), as well as guide the review of development applications that have the potential to affect community health.
Staff Comments:	Interior Health has provided a letter of support (Attachment 'F') for the proposed development and indicated that it links good planning principles to positive health incomes.
OCP Policy 4.2.1.4	Reduce road widths in existing rights-of-way to create spaces that support walking, biking and transit, to increase adjacent green space and to reduce asset management costs.

OCP Reference	Policy
Staff Comments:	The applicant has offered to contribute $110,000.00 to traffic calming on Moosejaw Street, which is anticipated to include 'bulb-outs' being installed at an intersection. Bulb-outs reduce the width of the roadway, reducing the distance that pedestrian take to cross the street. Bulb-outs also give the appearance of a narrower street, and naturally encourage drivers to slow down.
OCP Policy 4.2.3.8	Require adequate levels of secure bike parking in new multi-family, mixed-use and commercial development.
Staff Comments	The proposed development provides adequate bicycle parking, through Class 1 and Class 2 bicycle parking to account for both residents and visitors of the development.
OCP Policy 4.2.7.1	Design streets so as not to encourage speeds beyond the intended speed limit. Where speeding is an ongoing concern, consider reducing street widths, or employ other design approaches to lower speeds. Refer to and amend the City's Transportation Safety Policy as needed.
OCP Policy 4.2.7.4	Continue to deploy traffic calming measures around parks, schools and other areas with reduced speed limits, and monitor outcomes to ensure the measures are successful.
Staff Comments:	The applicant has offered to contribute $110,000.00 to traffic calming on Moosejaw Street, which is anticipated to include 'bulb-outs' being installed at an intersection. Bulb-outs reduce the width of the roadway, reducing the distance that pedestrian take to cross the street. Bulb-outs also give the appearance of a narrower street, and naturally encourage drivers to slow down.
OCP Policy 4.2.7.8	Ensure new residential developments provide an appropriate amount of parking for residents and their guests.
Staff Comments:	The proposed development has provided parking in excess of the required amount through the Zoning Bylaw.
OCP Policy 4.3.2.4	Discourage incompatible uses in and adjacent to industrial areas to ensure the integrity of a sound industrial land base.
Staff Comments:	The subject property is current designated in the OCP as Industrial and zoned M1 (General Industrial). The location is not ideal for industrial development, as it is immediately adjacent to existing single family residential and park areas, which can create land use conflicts (i.e. noise, smell, traffic, machinery, etc.). Ideally, industrial lands would be located in areas with adequate access to trucking routes, and not directly adjacent to sensitive land uses, such as residential, parks, or environmentally sensitive lands.
OCP Policy 4.3.4.3	Support and enhance existing partnerships with Okanagan College and UBC Okanagan in recognition of their contribution to the regional economy and as centres of innovation.

OCP Reference	Policy
Staff Comments:	The applicant and Okanagan College have been working collaboratively on the proposed development, with an effort to provide opportunities for student housing on the subject property. Due to the subject property's close proximity to the Okanagan College, this is an ideal location to offer student housing.
OCP Policy 4.3.6.3	Recognize that business growth is reliant on adequate housing availability, and work to develop policies that encourage housing development as outline in Section 4.1 [of the OCP].
Staff Comments:	Providing additional housing units throughout the City, with a variety of types, tenures and sizes helps to ensure housing is provided for working professionals.
OCP Policy 4.3.8.1	Support the operation, expansion and promotion of Okanagan College as a key component of Penticton's competitive advantage and as a centre of innovation.
Staff Comments:	The proposed development would provide housing directly adjacent to the Okanagan College location. The applicant intends to have housing provided for students and faculty of the Okanagan College campus. Ensuring housing close to the College helps to attract and retain both students and faculty staff that attend the College throughout the year.
OCP Policy 4.4.2.4	Recognize the value of urban trees to store carbon, reduce water run-off, buffer windstorms and mitigate summer hearing impacts.
Staff Comments:	The applicants have worked diligently with staff to assess, survey and review all trees located along the Timmins Street boulevard area. As there are trees with significant maturity and value, staff and the applicant realize the value that these trees hold. The applicant has proposed a plan that retains healthy, mature trees in the boulevard areas. The applicant has also proposed to retain several mature trees on private property. This required significant redesign of the site plan, including driveway access points and building locations.
OCP Policy 4.5.3.1	Review zoning and other relevant regulations and use existing land and infrastructure, where appropriate, to increase local food access and production.
Staff Comments:	The proposal includes an area for community gardens, which encourages and allows those living within the apartments the opportunity to grow food within close proximity of their home.

In addition to the policies provided above, which support the proposed development, staff also acknowledge that there are OCP policies which may contradict the proposal. The policy item referenced below may be considered when reviewing the proposed development:

OCP Reference	Policy
Industrial Land Use Targets (OCP Page 39)	• No net loss of land currently zoned for industrial uses. • 60 additional acres of industrial land in or near Penticton (note a portion of this will likely be accommodated outside of the City).
Staff Comments:	The subject property is currently zoned M1 (General Industrial), and any change in zoning would result in a loss of industrial land in the City. Staff acknowledge the importance of industrial land within the City and the economic benefits that such lands provide to the community. Any loss in industrial land would likely not be gained elsewhere within the City limits, as the natural limitations of Penticton and the location of the current industrial area significantly limits adding new lands to the industrial land base.

Zoning Bylaw Amendment

In addition to an OCP Amendment, the applicants have also applied for a zoning amendment. The current zoning on the property is M1 (General Industrial), as shown in Attachment 'A'. The applicants are proposing to rezone the subject property from M1 (General Industrial) to RM3 (Medium Density Multiple Housing). This change in zoning is not aligned with the current OCP designations on the property, which is why this proposal has come forward as an OCP and Zoning Amendment package.

Should Council consider that amending the OCP designation on the property is appropriate, they may also consider that the proposed RM3 (Medium Density Multiple Housing) zone is aligned with the requested OCP designation of 'Urban Residential'. The 'Urban Residential' designation is described as higher-density 3-6 storey apartment neighbourhoods in higher-amenity areas where building construction is primarily wood frame. This designation supports the development of townhouses, stacked townhouses and low-rise and mid-rise apartment buildings, with heights up to 6 storeys.

The subject property is considered an appropriate location for increased density due to its proximity to amenities and services nearby, including Okanagan College, Kings Park, and Penticton Plaza (Safeway, Shoppers Drug Mart, BC Liquor Store). There are also adequate pedestrian and cycling connections for alternative modes of transportation, and bus routes located near the College campus. Further, the OCP policies that are referenced to support the OCP land use change, also support the proposal to rezone the property to RM3 (Medium Density Multiple Family).

Summary

The proposed development meets a number of goals and policies of the Official Community Plan (OCP). The development was designed in keeping with the OCP, and has had significant revisions made in response to the community engagement results, in an effort to address many of the concerns raised by the public. The community engagement period indicates that there is both support (65%) and opposition (32%) for this development proposal, based on the feedback form completed through the community engagement period.

Ultimately, staff consider that there is significant OCP policy to support the land use change, and the updates made to the applicant's design plan, in addition to their offer to contribute $110,000.00 to support

traffic calming measures on Moosejaw Street have helped to make this a desirable project. Given the review of the proposal within this report, staff are recommending that Council give first reading to "Official Community Plan Amendment Bylaw No. 2021-35" and "Zoning Amendment Bylaw No. 2021-36", and forward the bylaws to the October 19, 2021 public hearing. At this time, the community will have an opportunity to speak directly to Council to provide their comments, feedback and concerns on the proposal.

Alternate Recommendations

Council may consider the proposed development to be undesirable at this location, or not in keeping with the goals and policies of the Official Community Plan. If this is the case, Council should deny first reading of the Official Community Plan Amendment and Zoning Bylaw Amendment.

1. THAT Council deny first reading of "Official Community Plan Amendment Bylaw No. 2021-35" and "Zoning Amendment Bylaw No. 2021-36".

Council may consider the proposed land use change appropriate, however, there may be concerns with the development plans submitted. If this is the case, Council may choose to give first reading to the Official Community Plan Amendment and not proceed with the Zoning Bylaw Amendment, and provide the applicant with specific direction to make revisions to the development plans prior to Council considering a zoning change. Staff are not recommending this option, as the development will be required to submit further applications including development permit plans, where further details will be provided.

1. THAT Council give first reading to "Official Community Plan Amendment Bylaw No. 2021-35" and deny "Zoning Amendment Bylaw No. 2021-36".

Attachments

Attachment A – Current Zoning Map
Attachment B – Current Official Community Plan Map
Attachment C – Photos of Subject Property
Attachment D – Letter of Intent (applicant)
Attachment E – Sample of Community Engagement Results
Attachment F – Letters from Stakeholder Groups
Attachment G – Ministry of Transportation and Infrastructure Conditions Letter
Attachment H – Ministry of Environment Release Letter
Attachment I – Traffic Impact Assessment
Attachment J – Arborist Report
Attachment K – Official Community Plan Amendment Bylaw No. 2021-35
Attachment L – Zoning Amendment Bylaw No. 2021-36

Respectfully submitted,

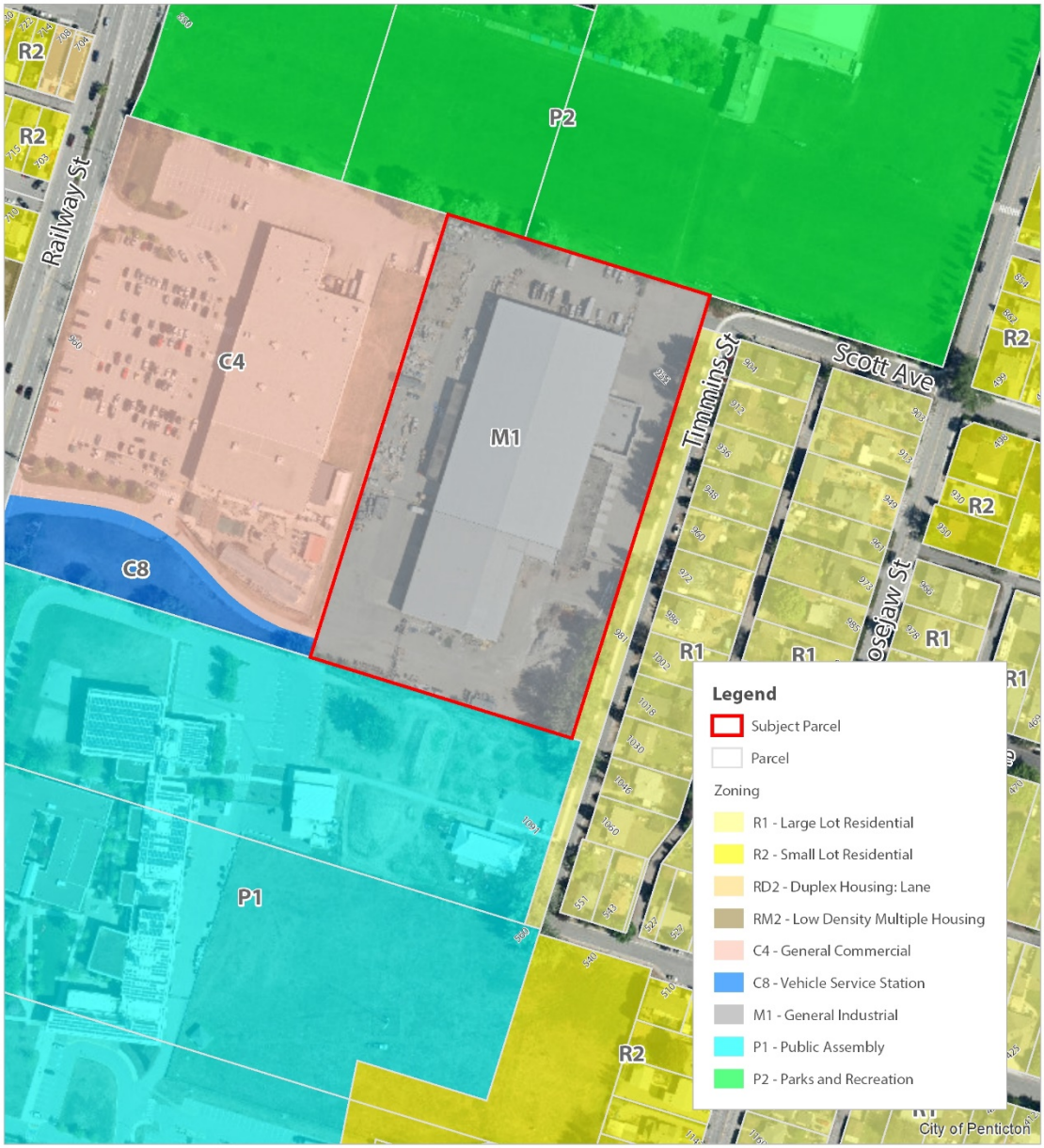
Nicole Capewell
Planner II

Director of Development Services	Chief Administrative Officer
BL	DvD

CITY OF Penticton

955 Timmins Street

Zoning Map



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Meters
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1:2,500

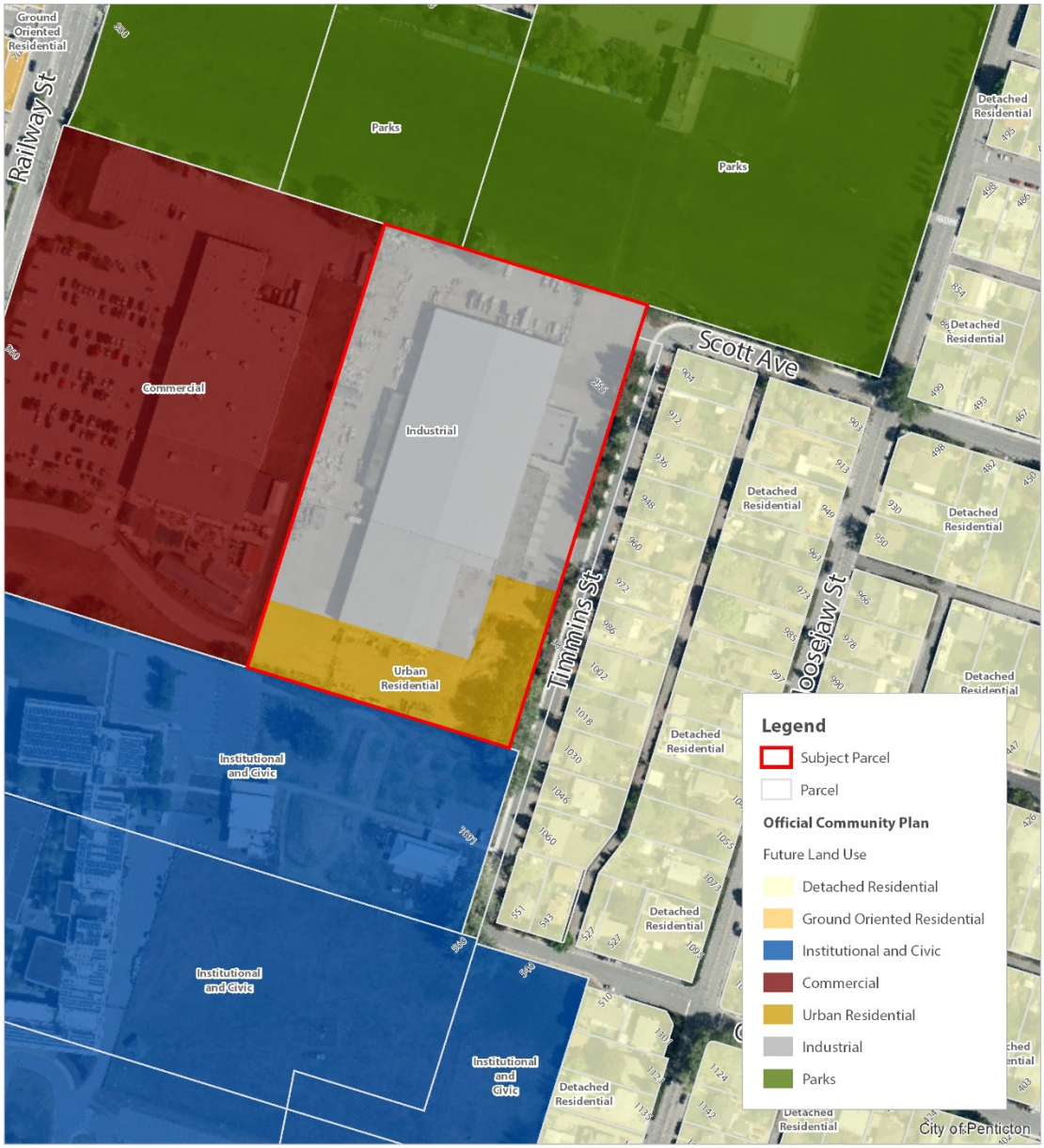
Friday, June 25, 2021
10:17:23 AM

penticton.ca

CITY OF Penticton

955 Timmins Street

Official Community Plan Map



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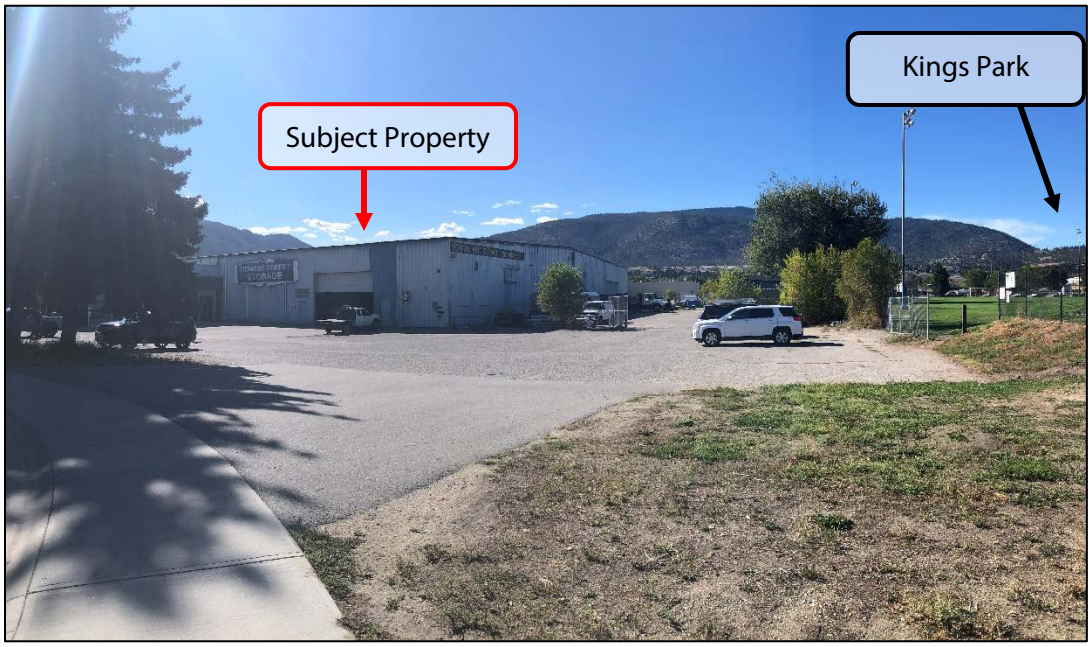
Friday, June 25, 2021
10:18:21 AM

penticton.ca

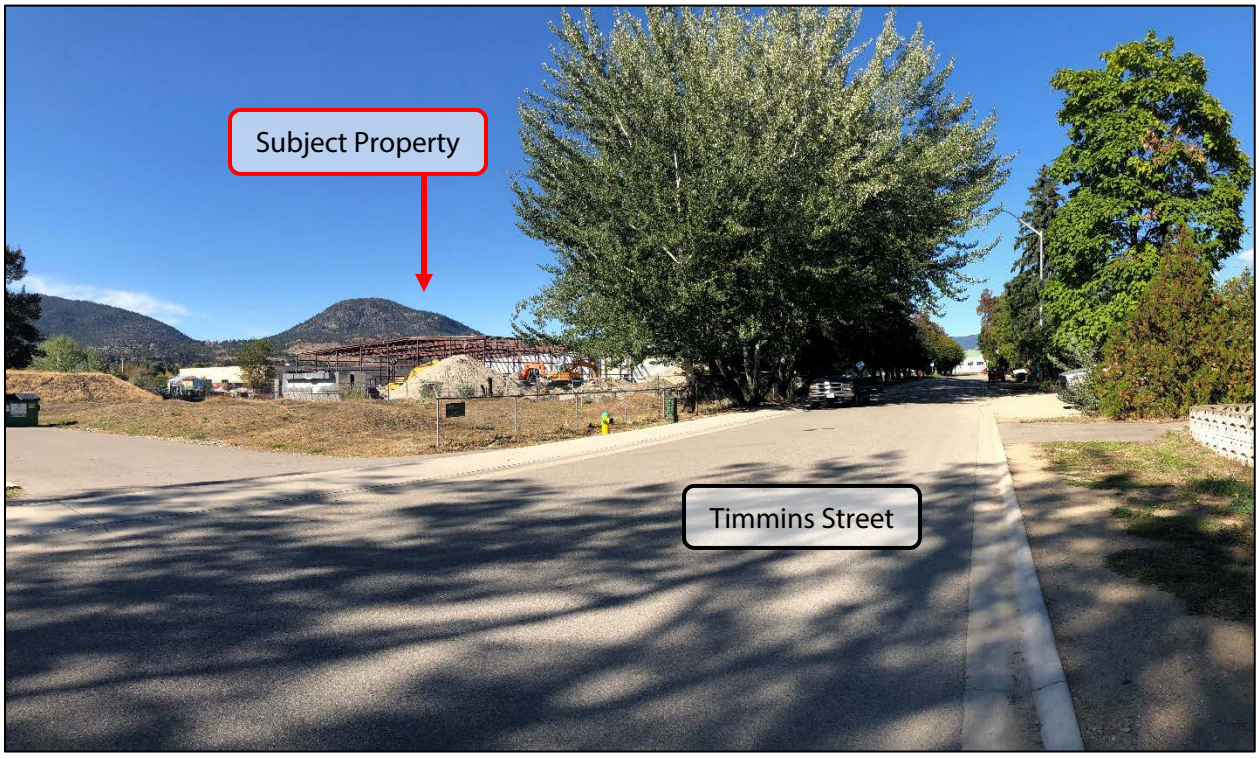
Attachment C – Photos of Subject Property



Looking at subject property from northeast corner of property

Looking south along Timmins Street from northeast corner of property

Looking at subject property from Timmins Street (approximately middle of property)



Looking at subject property from Timmins Street from southeast corner of property

Looking toward subject property from southwest corner

Radec Group Inc.
955 Timmins St.
Penticton, BC V2A 5V3
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September 20, 2021

City of Penticton
Development Services
171 Main Street
Penticton, BC
V2A 5A9

RE: Letter of Intent – 955 Timmins Street; Proposed OCP Amendment and Rezoning

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Project Description

Radec Group Inc., on behalf of Ryzak Holdings Timmins, is submitting this application for an OCP Amendment and Rezoning of 955 Timmins Street. This would allow for the development of a purpose-built rental apartment, strata apartment and family-oriented strata townhouse units in the heart of Penticton. Our application proposes to amend the OCP designation from Industrial & Urban Residential to Urban Residential, and to rezone from M1 (General Industrial) to RM3 (Medium Density Multiple Housing).

955 Timmins is a 6.6 acre parcel of underutilized industrial land within the City of Penticton with proximity to transit, a major transit corridor, schools and commercial/shopping areas. The site's location near Okanagan College and Kings Park, and within minutes from the Community Centre, offer an ideal location for a residential development, offering a mixture of rental and strata housing options for families and young adults. The proposed development includes a total of 148 apartments and ~~81~~ 71 townhouse units.

The self-contained rental apartments will be available to Okanagan College students, providing much-needed housing for students and young professionals seeking to upskill or enhance their careers. Penticton's challenging rental market includes a vacancy rate of less than 1%, putting pressure on post-secondary education facilities as well as local employers.

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Our thoughtfully designed townhouse units will be geared toward families and young professionals, providing an affordable three-bedroom housing option in a central location. Green space surrounding the site and landscape design will augment what is currently a blank industrial site, creating a welcome edge to the north side of Okanagan College.

The townhouses are provided with private patios and gardens at ground level and are ideal for families with children. Shared amenities such as a playground and sports courts are provided on site in the shared green spaces.

The design will be built with sustainability and energy efficiency in mind. Each housing unit is designed with maximum access to light and air, and each unit also benefits from a yard/deck for a variety of outdoor living situations. The proposed development will provide simple yet durable housing construction that is low in energy consumption and decreases the overall impact of housing development on our environment. Water retention strategies and solar energy collection for each building are proposed to reduce the overall environmental impact of the project.

OCP Amendment

This proposal supports sustainable growth within the City of Penticton boundaries, where residents live, work, shop and play nearby, and have easy access to daily needs and activities.

The current OCP designation at 955 Timmins is Industrial & Urban Residential. An amendment to the OCP would change the designation to Urban Residential to facilitate the redevelopment of the largely unused industrial land to allow for housing. This designation is justifiable due to the parcel's geographical location near a major corridor and with easy access by transit or active transportation options, being centrally located.

This amendment would address community needs by providing housing diversity and rental housing options located close to transit, major corridors, schools and amenities including parks and shopping, falling in line with the following Official Community Plan policies.

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Policy 4.1.3.1: *"Encourage more intensive "infill" residential development in areas close to the Downtown, to employment, services and shopping, through zoning amendments for housing types compatible with existing neighbourhood character, with form and character guided by Development Permit Area Guidelines."*

Policy 4.1.3.5: *"Ensure through the use of zoning that more-intensive forms of residential development are located close to transit and amenities, such as parks, schools and shopping."*

This proposal also falls in line with the 2017 *Housing Needs Assessment Report* findings, which recommended enhancing the market rate housing supply or rental and for sale units, especially for affordable and higher-density housing units.

Rezoning Application

In conjunction with the OCP amendment, Radec Group is proposing to rezone the property from M1 (General Industrial) to RM3 (Medium Density Multiple Housing) for the rental and strata apartment community and two-storey townhouse units.

We at Radec Group would like to thank you for the opportunity to outline the information for our proposed plan. Please contact us if you require any further information regarding this application.

Best regards,

Joe Walters
CEO, Radec Group

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Sept. 20, 2021

Amendment – 955 Timmins Street; Proposed OCP Amendment and Rezoning

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The following changes have been made to the proposal, taking into consideration feedback received during the public engagement process. These amendments address concerns regarding traffic and density, while ensuring the project meets our community's need for increased affordable housing and rental options.

Modifications involving density and building heights

- The number of townhomes has been reduced from 81 to 71. These units will be geared toward families and young professionals, providing an affordable three-bedroom housing option in a central location, with easy access to green space.
- The building height for Apartment 1 has been reduced from 5 storeys to 4 storeys.

Subdivided lot sizes now match OCP

- The proposed subdivision now matches what is shown on the south side of the lot in the current OCP. This will also make it possible to prioritize the construction of the much-needed student housing development. These self-contained rental apartments will be available to Okanagan College students, providing much-needed housing for students and young professionals seeking to upskill or enhance their careers.

Adjustments to road layout and additional parking

- The North Entrance now aligns with Scott Avenue to reduce the traffic on Timmins Street, addressing concerns about vehicle congestion.
- To address concerns involving the speed of traffic along Moosejaw Street, Radec will provide a fixed cash contribution of $110,000 to the City's Public Works department with the intent that it would be put toward adding traffic calming measures such as bulb-outs at the intersections of Scott Avenue and Moosejaw Street and a pedestrian activated light on Eckhardt Ave at the Moosejaw St. intersection.
- An additional 30 surface parking stalls have been added, surpassing the required number of spaces of a development of this size. This includes parking along the edge of King's Park to accommodate sports drop-off/pick-up or to provide additional resident parking.

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Additional amenity spaces added

- In addition to the shared amenities already identified, including additional green spaces, a playground and sports courts, the updated plan includes increases for amenity spaces throughout. With the reduction of the number of roads on the site, we were able to increase the backyards of most of the townhomes as well as provide a path between the townhomes with access from the backyards.
- A dog park has been added, reducing the residents' impact on nearby Kings Park.
- A Community Garden has been added near the entrance to Lot 1.

Efforts to retain existing trees

- An arborist report was obtained and shared with the City's Parks department. After meeting with the parks department, it was determined that while the arborists' report notes that the Silver Leaf Poplar should be removed as they may not survive construction, the Parks department would like them to remain. This was taken into account and the revised plans now avoid all viable trees both on city and private property along Timmins St.

Thank you again for the opportunity to outline our amended proposal. Please contact us if you have any questions.

Best regards,

Joe Walters
CEO, Radec Group

Screen Name Redacted 7/26/2021 10:59 AM	This city needs housing so badly. This is a great idea!
Screen Name Redacted 7/26/2021 11:05 AM	The property is surrounded by residential units (aside from Canadian Tire). We also desperately need housing. I know residents nearby will go all NIMBY and try and prevent this but we can't keep denying housing which will help the current and future housing crisis in Penticton.
Screen Name Redacted 7/26/2021 11:21 AM	I support the project to increase residential home density and more rental homes, particularly near the College!
Screen Name Redacted 7/26/2021 11:34 AM	since we have been in this home traffic has multiplied, street work for sewer and water done which narrowed this street so much, traffic from the daycare, parking is a horrible issue with the soccer going on here so where is everyone supposed to park if this goes through!? having these complexs will destroy this area!!
Screen Name Redacted 7/26/2021 12:12 PM	We need more housing.
Screen Name Redacted 7/26/2021 01:49 PM	This is a good spot for urban residential and will provide much needed housing. Industrial is not a fit for the street.
Screen Name Redacted 7/26/2021 08:18 PM	Too many units. Too high of the buildings.
Screen Name Redacted 7/26/2021 08:46 PM	Will increase value of surrounding properties
Screen Name Redacted 7/27/2021 07:29 AM	Watch this developer.
Screen Name Redacted 7/27/2021 08:02 AM	You have an extreme deficiency of supply in the city of penticton, and rather than doing something the city leadership appears to want to limit supply when the city is clearly desperate for it. Want to fix housing prices and artificially inflated demand? Increase supply by allow for rezonings, have enough people staffed so that the permitting isn't excessive, don't add additional excessive regulatory burdens that it becomes impossible for any development to

	happen. The city has been putting barriers to development all over the city and the only organizations or people willing to do development are the large real estate development/building firms that have a dedicated compliance person to jump through all of the city's hoops. The city will start losing businesses that can't keep staff because of housing concerns. This isn't a provincial or federal issue, this is a penticton issue, and different municipalities are doing what they can to fix the problem. But penticton clearly thus far has not demonstrated any interest in fixing this manufactured crisis. If someone wants to add residential housing units and they meet federal/provincial/regional building codes, regardless of zoning, density, or price point of the housing unit, it would be in the city's best interest to assist rather than actively putting up road blocks.
Screen Name Redacted 7/27/2021 08:04 AM	The OCP should be followed after all the time and money that went into developing it. Sadly there is a housing crisis caused by too many short term rentals being allowed. Therefore housing is needing as long as this is a rental building and short term rentals are not allowed!
Screen Name Redacted 7/27/2021 08:23 AM	We need more housing
Screen Name Redacted 7/27/2021 08:32 AM	This is a perfect site for urban development, low interface with existing properties, a site that is pretty unkempt and messy. To me, nothing but positives. I would ask that the city mandates that the row of trees on Timmins/Conklin remains and is untouched. That boulevard of trees protects the neighbouring properties from potential noise and sightlines. I can't honestly think of a better location for urban development and renewal.
Screen Name Redacted 7/27/2021 09:03 AM	The ink is barely dry on the new OCP. The city went way over budget on the new OCP at great expense to taxpayers. The city wanted the new OCP, so live with it
Screen Name Redacted 7/27/2021 09:28 AM	This is a no brainer, people are desperate for housing and are now competing with people fleeing the coast and Alberta. We need more housing.
Screen Name Redacted 7/27/2021 09:32 AM	I want to move from Kelowna to Penticton and there is no housing in Penticton. There needs to be serious consideration given to

these projects in order for Penticton to grow and accommodate young families. I love Penticton and would prefer to live there over Kelowna but I have a baby on the way and absolutely can not find a rental anywhere in town. There needs to be more options for people and I feel your city council has already turned down a number of projects similar to this which is unfortunate. This one is in a good location and would bring in some diversity to the current rental market.

Screen Name Redacted
7/27/2021 12:12 PM

This is a plot of land is in a critical location and needs to be developed properly. I am not at all against a development, but it will be very regretful if tons of houses get crammed in with no benefit to the existing public. With the proximity to the soccer fields at King's Park and Okanagan College, this space should be developed into a hybrid greenspace of mixed public/park land and private reasonable housing around the outside. There is massive potential to benefit the entire city if done properly, but only if a balance can be struck between developer's profit and public need. I think the fields to the south should also be examined here for how they will ultimately play into changing this area, because they won't stay empty forever.

Screen Name Redacted
7/27/2021 02:38 PM

We desperately need housing in Penticton and this is a perfect place for a development.

Screen Name Redacted
7/27/2021 02:39 PM

Penticton urgently needs additional housing! 7 storey towers would better address the housing shortage. Permit greater density for this and other residential projects as well! This is the best solution to Penticton’s housing crisis.

Screen Name Redacted
7/27/2021 02:43 PM

a bit to many units

Screen Name Redacted
7/27/2021 02:44 PM

1. THE TRAFFIC ASSESSMENT DID NOT CONSIDER CONKLIN AVENUE, THE ARGYLE STREET OR THE FAIRVIEW STREET INTERSECTIONS. A lot of the traffic would naturally proceed down Conklin from Timmins Street. Since the daycare opened on Timmins street the traffic on Conklin has at the minimum doubled at certain times of the day. The drivers go so fast on Conklin Ave that there have been 2 accidents that I know of at Argyle and Conklin from people not able to stop at the stop sign or just plain missing it. I had a near miss from someone doing the same while I was driving east on Argyle. 2. It will be impossible to make a left

	turn onto Eckhardt from Moosejaw as more people will be wanting to turn left onto Moosejaw while going east on Eckhardt. 3. Also the corner at Conklin and Timmins right beside the daycare is an EXTREMELY tight corner and right now very dangerous for pedestrians or bicycle riders if the vehicles do not slow down as needed. The Council needs to actually go on-site at this corner to see the situation. 4. Between the extra traffic on Conklin and in the back alley along with the 2 story townhouses/carriage houses that have been allowed in this neighbourhood it has completely changed the atmosphere of the south side of Conklin and not for the better. 5. Our understanding is that the developer has an easement to Railway Street alongside the Canadian Tire south entrance. Is it possible for the traffic to be directed there rather than through residential areas? 6. Timmins is currently a beautifully shaded street which provides a cooler walking area a lot of the day. Something which Penticton really lacks. 7. Are 5 stories allowed so close to the end of the airport?
Screen Name Redacted 7/27/2021 03:02 PM	It seems like a good location for a project of this size/scope.
Screen Name Redacted 7/27/2021 04:21 PM	This is an area that is under-utilized. Densifying the use and changing it to Urban Residental will help take some pressure off of the current housing market.
Screen Name Redacted 7/27/2021 04:37 PM	Good location for multi-unit residential development
Screen Name Redacted 7/27/2021 04:55 PM	I work at the college, and it would be wonderful for students to have nearby accommodation options
Screen Name Redacted 7/27/2021 04:55 PM	We desperately need more housing - this area should be urban residential.
Screen Name Redacted 7/27/2021 05:16 PM	I am in favour of keeping as much of industrial use property in our current industrial park area, that is east of Main Street, south of Industrial and the additional portion of land near the Industrial Place and Industrial Court location. More rental appartments such as these proposed for this area, will be beneficial to those people who work in the downtown area, and want to walk to work. This location will also provide quick access to Highway 97 south and north, for those who commute to work.

Interior Health
Every person matters

August 20, 2021

Nicole Capewell, Planner II
City of Penticton – Development Services
171 Main Street
Penticton BC, V2A 5A9

Dear Ms. Capewell:

RE: File Number: OCP PL2021-9000 – 955 Timmins Street, Penticton BC; LOT 2 DISTRICT LOTS 1, 2 AND 4 GROUP 7 SIMILKAMEEN DIVISION YALE(YALE-LYTTON) DISTRICT PLAN 36021

Thank you for the opportunity to provide comments regarding the above noted OCP amendment and rezoning application. It is my understanding that this application is to amend the OCP designation from Industrial & Urban Residential to Urban Residential, and to rezone from M1(General Industrial) to RM3 (Medium Density Multiple Housing) for a proposed multi-family residential development consisting of two, 5-storey apartment buildings, and 81 townhouse units. The development is to be serviced by municipal water and sanitary sewer. The following population heath comments are provided for your consideration.

Healthy Communities

Housing plays a significant role in influencing people's health – living in affordable, safe, and stable housing is associated with positive physical and mental health outcomes. A recent report from the Canadian Mortgage and Housing Corporation (CMHC) shows Penticton's current rental vacancy rate around 1%. As such, Interior Health is pleased to see the proposed creation of purpose built rental units (apartments) for the community.

We are also pleased to see the inclusion of affordable three bedroom strata townhouses in the proposed development. If not already planned, consideration should also be given to providing some affordable/ low-cost units within the purpose built rental stock, and strata apartments as well. Given the low vacancy rate in Penticton, coupled with the lack of affordable housing units within the City, this development provides a great opportunity to create new affordable units through offering diverse housing forms and tenure types that would support families of all sizes. We encourage Universal Design for Housing be utilized when designing units in order to add housing units suitable for everyone.

Access to local, affordable and diverse housing options, including rental units can reduce stress and allow residents to take better care of themselves as well as their families by having more disposable income. More disposable income would allow residents easier access to healthy food, medication, recreational opportunities and educational opportunities, which in turn can help reduce health inequalities.

A healthy built environment is planned and built in a way which health evidence demonstrates a positive impact on people's physical, mental and social health. The Healthy Built Environment Toolkit is an evidence-based resource, which links planning principle to health outcomes. From a healthy built environment perspective, the proposed development would be located in close proximity to public transportation, amenities and health services. Further, it is noted that the proposed development includes onsite shared amenities (pool, playground and sports

Bus: (250) 851-7347 Fax: (250) 851-7341
Email: misty.palm@interiorhealth.ca
Web: interiorhealth.ca

Population Health
519 Columbia Street
Kamloops BC V2C 2T8

courts), green spaces and a community garden. Research shows that having these types of amenities within close distances to home makes active transportation more convenient, supports social connections between residents and can encourage physical activity, which can reduce both chronic illness and obesity.

Environmental Health

In reviewing the developer's supplied plans, it is my understanding that the proposed development is to include an outdoor swimming pool. From an Environmental Public Health perspective, the following legislation will apply to this proposal:

- Pool Regulations: Prior to the construction of a commercial pool, the applicant will require a Construction Permit from Interior Health. See IH Recreational Water Resources for more information on how to apply for a Construction Permit as well as a Permit to Operate. For more information or to speak with the local Public Health Engineer, please call: 1-855-743-3550.

Overall, Interior Health is in support of this application as the proposed development links good planning principles to positive health outcomes.

Interior Health is committed to improving the health and wellness of all by working collaboratively with the City of Penticton to create policies and environments that support good health. Please feel free to contact me directly if you have any further questions or comments.

Sincerely,

Misty Palm, B.Tech. CPHI(C)
Environmental Health Officer
Healthy Communities

PENTICTON INDUSTRIAL DEVELOPMENT ASSOCIATION
P.I.D.A. ...we're geared for Penticton's future...!

August 26, 2021

Mayor and Council
City of Penticton

Regarding: 955 Timmins Street OCP Amendment

Retaining and attracting manufacturers and other industrial operations to Penticton is a strategic defined goal set out in the City of Penticton 2018-2022 Economic Development Strategic Plan and Priority Clusters report. One of the chief limitations to success, addressed in the report, is the lack of land.

A single manufacturer operating on this property will bring millions of dollars into our community, dozens of high income jobs, contribute significant taxes and utility fees on an ongoing basis, month after month and year after year, employing leading edge technology and equipment.

Housing is an ongoing concern, but there are many more options for housing that are not available to industrial users, so the preservation of the very limited land available for industrial use is vital.

The reduction of industrial zoned land is a negative factor to the long term economic viability of our community. Industrial activity is key, long term, to having a wealth of well paying jobs and a substantial inflow of hard currency into Penticton.

Respectfully yours,

Frank Conci

August 27, 2021

Nicole Capewell
City of Penticton
171 Main Street
Penticton, BC V2A 5A9

Dear Ms Capewell,

Re: City of Penticton Referral – Official Community Plan
955 Timmons Street, Penticton

I am writing to advise that the Board of the Regional District of Okanagan-Similkameen (RDOS), at its meeting of August 19, 2021 resolved:

THAT, the Regional District has no objection to the Official Community Plan (OCP) Bylaw Amendment involving the property at 955 Timmons Street to "Urban Residential".

Should you have any queries on this matter, I can be reached at 250-490-4101 or by email at cgarrish@rdos.bc.ca.

Sincerely,

Christopher Garrish MCP, RPP
Planning Manager

p.c. K. Kozakevich, RDOS Chair

BRITISH COLUMBIA | Ministry of Transportation and Infrastructure

DEVELOPMENT SERVICES PRELIMINARY BYLAW COMMUNICATION

Your File #: RZ PL2021-9001
eDAS File #: 2021-02121
Date: Jun/07/2021

City of Penticton
171 Main Street
Penticton, BC V2A 5A9

Attention: Heather McDonald, Planning Clerk

Re: Proposed Bylaw for:
LOT 2 DISTRICT LOTS 1, 2 AND 4 GROUP 7 SIMILKAMEEN DIVISION YALE (YALE-LYTTON) DISTRICT PLAN 36021
955 Timmins Street, Penticton

Preliminary Approval is granted for the rezoning for one year pursuant to section 52(3)(a) of the *Transportation Act*, subject to the following conditions:

- No direct access to Highway 97 via the adjacent Canadian Tire property. All access via the municipal local street (Timmins Street).
- Discharge of Road Reserve Agreement Covenant KK54366, that provides for future road dedication between the subject property and Highway 97.
- Discharge of Easement KK54367, that provides for access over the Road Reserve Area to and from Highway 97 and the subject property.
- Physical closure of the connection between the subject property and the adjacent Canadian Tire property, with a combination of hard and soft landscaping.
- All development drainage is to be retained on site. No drainage is to be directed towards Highway 97.

If you have any questions, please feel free to call Penticton Development Approvals at (250) 712-3660.

Regards,

Mitch Benke
Development Officer

Local District Address
Penticton Area Office 102 Industrial Place Penticton, BC V2A 7C8 Canada Phone: (250) 712-3660 Fax: (250) 490-2231

BRITISH COLUMBIA

April 7, 2021 File: 26250-20/13391
SITE 13391

VIA EMAIL ONLY:

Ryzak Holdings (Timmins) Inc.
955 Timmins Street,
Penticton, BC V2A 5V3

City of Penticton
171 Main Street,
Penticton, BC V2A 5A9
Attention: Audrey Tanguay

Dear Joe Walters and Audrey Tanguay:

Re: Scenario 3 Release Request – Site Profile Submission – Subdivision and Zoning Applications
955 Timmins Street, Penticton, BC
PID: 002-581-574
Site ID: 13391

This letter supersedes our previous site profile release letter dated March 9, 2021.

The ministry has received the following information in support of a release request:

1. *Scenario 3 Release Request – Site Profile Submission – Zoning Application, 955 Timmins Street, Penticton, BC, PID: 002-581-574, Site ID: 13391,* prepared by Hamilton D'Ambra Consulting Inc. for the Ministry of Environment and Climate Change Strategy, dated January 29, 2021.
2. Confirmation by the owner that the site activity will continue on the portion of the parcel retained for that activity, and
3. *A written opinion from Gary Hamilton, Approved Professional, dated January 29, 2021, confirming that:*
   (a) the Subject Site is not a high-risk site;
   (b) investigations have been carried out on the portion of the Subject Site to be subdivided adequately delineated contamination (if any) at the Subject Site and migrating to neighbouring parcels; and
   (c) any existing contamination has not migrated to the portion of the parcel to be subdivided.

Based on the information provided, please accept this letter as notice pursuant to the *Land Title Act (*section 85.1 (2)(d)) and *Local Government Act* (section 557(2)(e)), that the approving officer and municipality may approve the subdivision and zoning applications under this section because in the opinion of the Director, the site would not present a significant threat or risk if the subdivision application were approved.

This release is for the limited purpose of the subdivision and zoning application. Please note that the requirement for a detailed site investigation imposed by the Director in the decision letter dated September 23, 2011, is not extinguished by this release; however, following subdivision the requirement for site investigation will only apply to the portion of the parcel retained for the ongoing Schedule 2 activity. This outstanding requirement will suspend the approval of future applications identified in section 40 of the *Environmental Management Act* (the Act) for that portion of the site until:

- the proponent has obtained one of the following contaminated sites legal instruments, as applicable: a Determination that the site is not a contaminated site, a Voluntary Remediation Agreement, an Approval in Principle of a remediation plan or a Certificate of Compliance confirming the satisfactory remediation of the site. A copy of the legal instrument must be provided to the approving authority; or
- the approving authority has received notice from the ministry that it may approve a specific application because a) in the opinion of the Director, the site would not present a significant threat or risk if the specified application were approved; b) the Director has received and accepted a Notification of Independent Remediation with respect to the site; or c) the Director has indicated that a site investigation is not required prior to the approval of the specified application.

Please be advised of the following:

- It is recommended that the proponent retain a qualified environmental consultant to identify and characterize any soil, groundwater, sediment and/or vapour of suspect environmental quality encountered during any subsurface work at the subject site;
- Those persons undertaking site investigations and remediation at contaminated sites in British Columbia are required to do so in accordance with the requirements of the Act and its regulations. The ministry considers these persons responsible for identifying and addressing any human health or environmental impacts associated with the contamination;
- This letter allows local governments to proceed with approval of specific applications for a site. Aside from the specific relief granted above, it does not constitute review or acceptance by the director of any aspect of the submission requirements for application of a contaminated sites legal instrument under the Protocol 6 review process.

Fees are applicable for the ministry's contaminated sites services, pursuant to section 9 of the Regulation. Information on the government's contaminated sites legislation and supporting guideline documents and protocols as well as a Contaminated Sites Services Application Form can be obtained from the ministry's Land Remediation web page located at: https://www2.gov.bc.ca/gov/content/environment/air-land-water/site-remediation; and

- Penalties for noncompliance with the applicable requirements of the Act and Regulation are provided in sections 115 and 120(17) of the Act.

Please contact the undersigned at SiteID@gov.bc.ca if you have any questions about this letter.

Yours truly,

Valentina Yetskalo,

for Director, *Environmental Management Act*

cc:

Gary Hamilton, Hamilton D'Ambra Consulting Inc., garyhamilton49@gmail.com

Trevor Roste, Associated Environmental Consultants Inc., rostet@ae.ca

Evan Scheidt, ENV, Evan.Scheidt@gov.bc.ca

A Transportation Impact Assessment (TIA) Report

For

LIV MIDTOWN DEVELOPMENT

955 Timmins Street, Penticton, British Columbia

Prepared for

RADEC GROUP

June 4, 2021
Updated on September 14, 2021

ADDOZ ENGINEERING INC

ADDOZ ENGINEERING INC
Clients are Our First Priority

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Calgary, AB T3P 0H9
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1.0 INTRODUCTION

1.1 General

Radec Group retained Addoz Engineering Inc. (AEI) to undertake a transportation impact assessment (TIA) in support of the proposed LIV MIDTOWN DEVELOPMENT to be in Penticton, British Columbia. The proposed development will be located at 955 Timmins Street, Penticton, BC. This traffic impact assessment is being prepared to assess potential transportation impacts of the proposed development and to satisfy the City of Penticton requirements for such a study as a result of the proposed development. **Figure 1a** presents a site map that shows the general location of the proposed development, and **Figure 1b** presents a local context aerial map.

1.2 Planned Development

The proposed development will consist of two phases that will be developed within the coming 5 years. The detail of each phase follows:

- **Phase 1:** 23 Townhouses and 78-unit apartment building
- **Phase 2:** 63 Townhouses and 78-unit apartment building

Phase 1 is planned to open in the Fall of 2022 and Phase 2 is planned to fully complete in 2026. The proposed site plans for the two phases are attached in **Appendix A** of this report.

1.3 Purpose of Study

The primary purposes of this transportation impact assessment study are:

- To evaluate the traffic operations and levels of service (LOS) at the following study intersections:
    - Eckhardt Avenue W and Moosejaw Street Intersection.
    - Moosejaw Street and Woodruff Avenue intersection.
    - Scott Avenue and Moosejaw Street intersection.
    - Moosejaw Street and Conklin Avenue intersection.
    - Moosejaw Street and Duncan Avenue intersection.
    - The Two Site Access intersections on Timmins Street.
- To evaluate any potential project traffic impacts of the proposed development to the surrounding roadway network, and to determine if the roadways, site accesses and traffic circulations in the project vicinities would be suitable for the intended development and the amount of development traffic volumes anticipated.

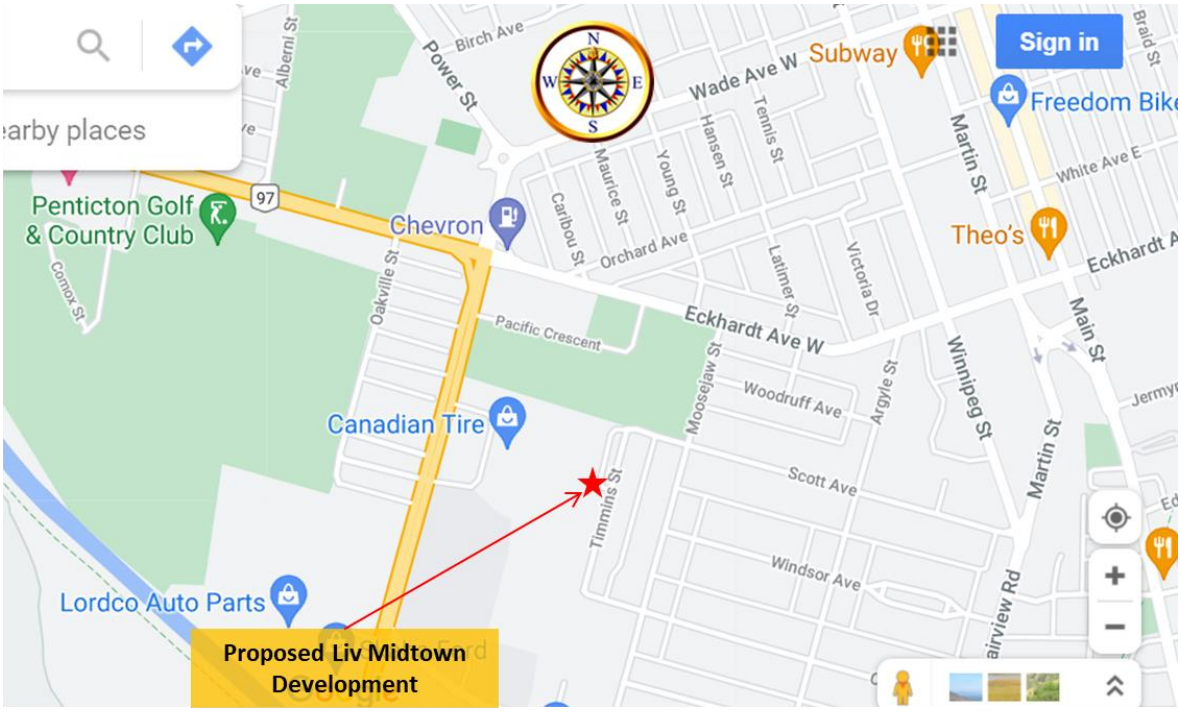

Figure 1a: Site Location Map

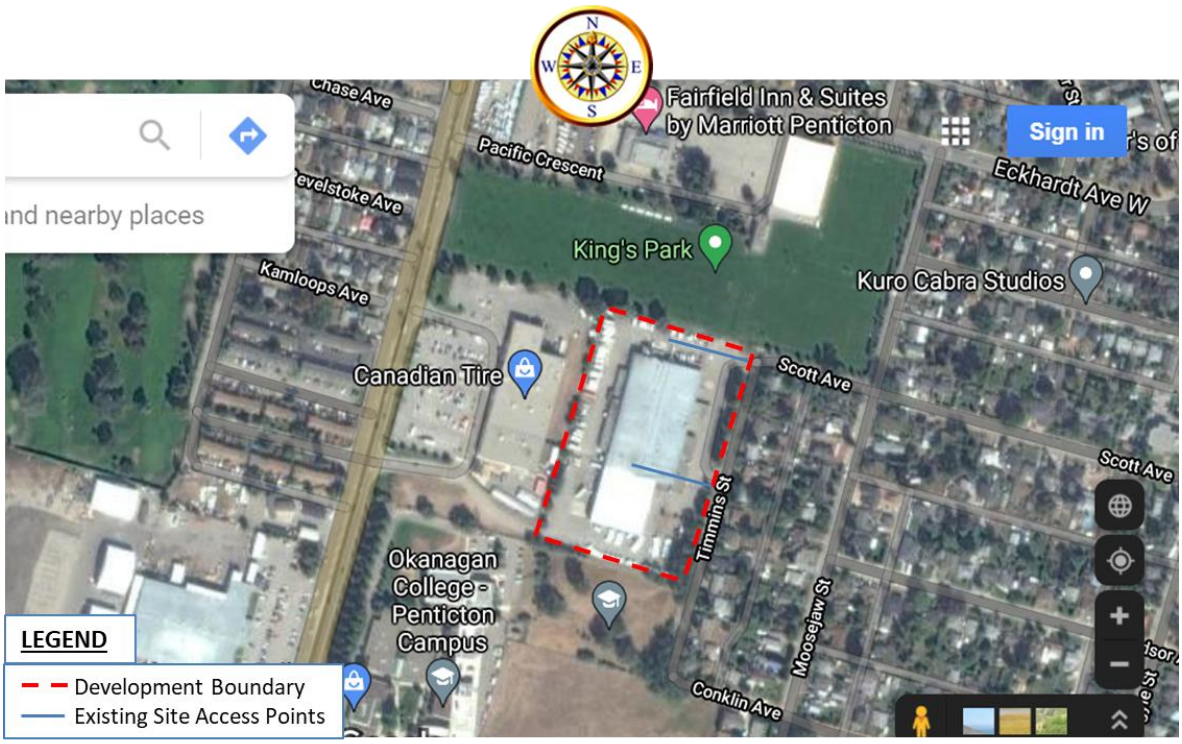

Figure 1b: Local Context Aerial Map

- To identify suitable intersection control and geometric configurations that would be required to properly service the proposed development including conducting signal warrant analyses for the unsignalized intersections, as needed.
- Also, to identify any needed short-term and long-term roadway improvements in the areas to enable acceptable traffic operations that would satisfy the City of Penticton's requirements
- To complete a transit, cycling and pedestrian network evaluation and to recommend improvements to accommodate the anticipated demand generated by the proposed development.

1.4 Methodologies

This transportation impact assessment utilizes the following evaluation methodologies:

- Data collection including but not limited to existing roadway and intersection geometric characteristic, pavement markings, traffic control types, and intersection turning movement traffic counts.
- The forecast of background peak hour traffic volumes with and without the site development traffic for the opening year horizons, 2022 and 2026, as well as the 2036 horizon, which is 15 years from today.
- Trip generation estimate for the proposed development based on appropriate ***Trip Generation*** land use categories and corresponding trip generation rates by the Institute of Transportation Engineers (ITE).
- Distribution of the site generated trips to/from the development site based on population, land uses, roadway network, and existing traffic patterns in the project vicinities.
- Assignment of the project trips to the adjacent roadways based on the proposed project site plan and the estimated roadway trip distribution characteristics.
- All traffic capacity analysis for the study area intersections and roadways are being completed to identify possible capacity constraints and to assess overall traffic impacts of the proposed development, which is based on the latest ***Highway Capacity Manual (HCM) 6th Edition*** methodologies by the Transportation Research Board, the US National Academies of Sciences, Engineering and Medicine.

2.0 EXISTING CONDITIONS

2.1 Area Road Network

There four main roadways providing access to the proposed site as described below. These are Eckhardt Avenue, Moosejaw Street, Scott Avenue, and Timmins Street. A brief description of each of these roadways follows.

Eckhardt Avenue is a is a two-lane, two-way undivided roadway that runs in the east / west directions in the vicinity of the proposed development. Eckhardt Avenue to the west of the signalized intersection at Vees Dr. joins the provincial Highway 97. The speed limit on Eckhardt Avenue in the vicinity of Moosejaw Street intersection is posted at 50 Km/hr.

Moosejaw Street is a two-lane two-way undivided roadway that runs in the north / south directions in the vicinity of the project. The speed limit of Moosejaw Street is not posted but the prima facie assumed at 50 Km/hr.

Scott Avenue is a two-lane two-way undivided local roadway that runs in the east / west directions in the vicinity of the site. The speed limit is not posted but prima facie assumed at 50 Km/hr.

Timmins Street is a two-lane two-way undivided local roadway that runs in the north / south directions in the vicinity of the site, and it provides direct access to the development. Timmins Street connects to Conklin Avenue to the south that connects to Moosejaw Street. The speed limit is not posted but prima facie assumed at 50 Km/hr.

Figure 1c presents the existing intersection lane configuration, traffic control types and storage lengths for exclusive lanes for all study intersections.

2.2 Historical Roadway Traffic Volumes / COVID19 Impact

EASL Transportation Consultants Inc., the parent company of Addoz Engineering Inc., completed a traffic count along Eckhardt Avenue at Caribou Street intersection in 2017 as part of a traffic impact assessment completed for Mundi Hotel Enterprises Inc. Copies of the 2017 historically collected data are attached in **Appendix B**. This historical data was compared with the recent count completed for the current TIA and the results of the comparison are presented in **Table 1**. The implied annual traffic growth rates for the AM and PM peak hours over the four-year period has been determined.

Table 1: Historical Traffic Volumes in the Vicinity of the Proposed Development

Roadway Section	Traffic Count Date	AM Peak Hour			PM Peak Hour		
		EB	WB	2-Way	EB	WB	2-Way
Eckhardt Avenue Between Caribou Street and Moosejaw Street	June 6, 2017	336	322	658	392	399	791
	May 18, 2021[(a)]	366	326	**692**	373	441	**814**
	Annual Growth Rate	**1.3% per year**			**0.73% per year**		

[(a)] Refer to Figure 2a for the 2021 traffic volume details

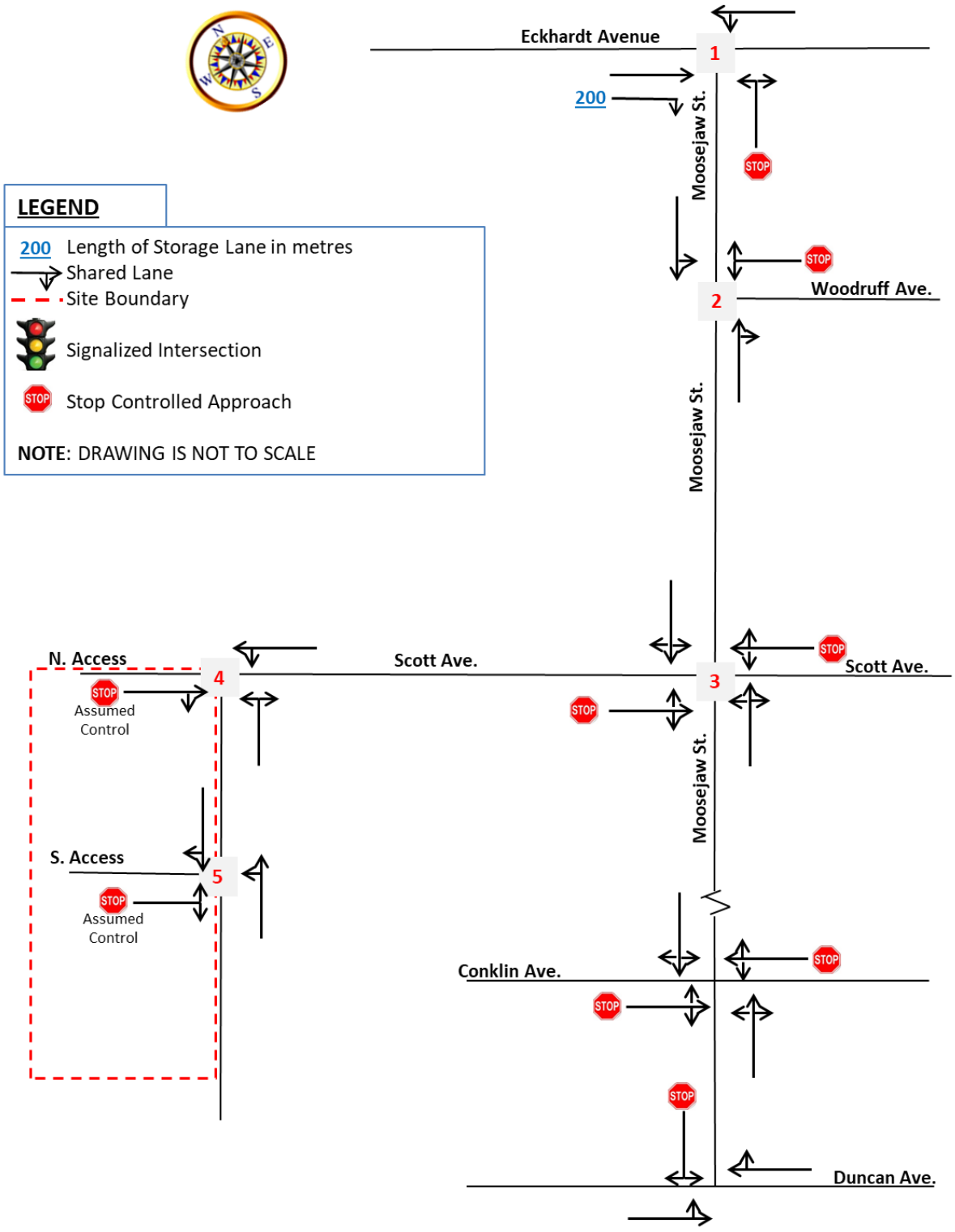

Figure 1c: Existing Lane Configuration and Control Types

A review of **Table 1** indicates that the AM peak hour showed average annual growth rate of 1.3%, and the PM peak hour showed a growth of 0.73%. Since the 2021 traffic volumes indicated general growth over 2017 data. Therefore, no need to apply any additional traffic growth to account for COVID19 impacts as the observed 2021 volumes are considered representative of the normal 2021 traffic volume levels.

Additionally, for purposes of estimating future traffic volumes for this TIA a growth factor of **1.5%** per year will be utilized, which is consistent with the above determined historical growth rates.

2.3 Existing Traffic Volumes and Conditions

A field reconnaissance of the site and its surroundings was conducted to establish a database of the existing conditions. The peak period for the proposed Multi Family Development would typically occur during the weekday morning and the late afternoon periods.

Turning movement traffic count data was collected between May 18, 2021, and May 20, 2021 (Tuesday to Thursday) from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM for the a.m. and p.m. peak periods respectively at the following study intersections:

- Eckhardt Avenue W and Moosejaw Street Intersection.
- Moosejaw Street and Woodruff Avenue intersection.
- Scott Avenue and Moosejaw Street intersection.
- The Two Site Access intersections on Timmins Street.

The Observed / Existing 2021 AM and PM peak-hour traffic volumes for the above five intersections are illustrated on **Figure 2a**. Copies of the collected traffic, cyclists and pedestrian data are attached in **Appendix C** of this report.

COVID-19 Impact on Traffic:

Addoz Engineering Inc. understands that COVID-19 may have some impacts on highway traffic due to some people working from home. Therefore, as mentioned earlier, the observed traffic count data along Eckhardt Avenue were compared with the available 2017 historical data shown in Table 1.

A review of Figure 2a observed 2021 peak hour volumes indicates that the observed Eckhardt Avenue two-way peak hour traffic volumes west of Moosejaw Street are as follows:

- AM Peak Hour = 692 VPH
- PM Peak Hour = 814 VPH

When these observed volumes are compared with the 2017 historical peak hour data collected at Caribou Street the observed volumes are much higher. In fact, the new count is 2.9% to 5.2% higher than the 2017 historical data. Therefore, no need to apply any factor on observed traffic volumes to account for COVID-19 impacts. Hence **Figure 2a** presents the **Existing 2021** traffic volumes that are being used for TIA capacity analyses.

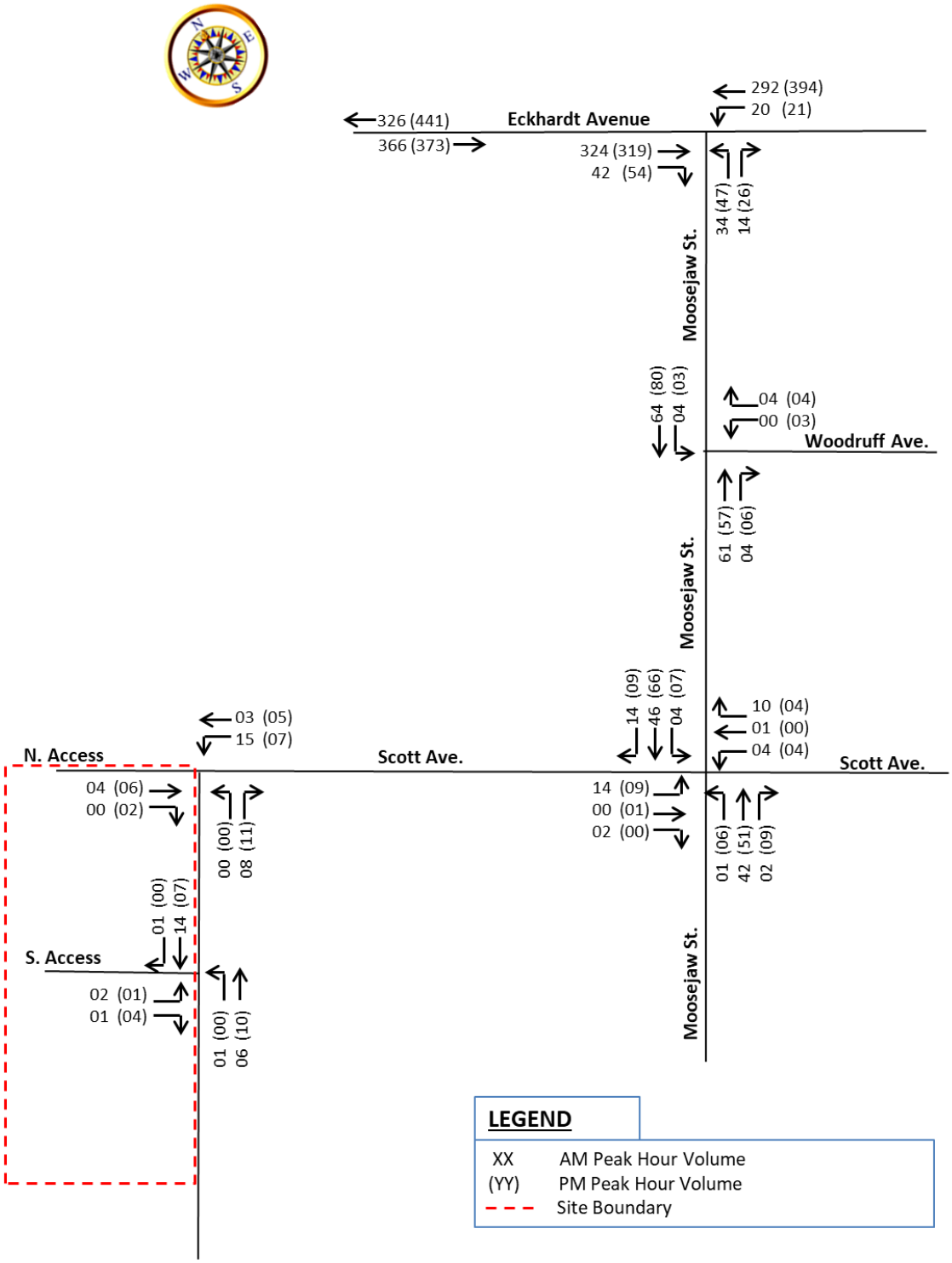

Figure 2a: Observed / Existing 2021 Peak Hour Traffic Volumes

For the Moosejaw Street / Conklin Avenue intersection and Moosejaw Street / Duncan Avenue intersection, the City of Penticton's traffic count data completed in February 2020 were utilized. The 2020 peak hour traffic volumes at these two intersections are presented on the upper portion of **Figure 2b**. To determine the existing 2021 peak hour traffic volumes, a 1.5% traffic growth rate has been applied on the 2020 data for one year. The resulted Existing 2021 peak hour traffic volumes are presented on the lower portion of **Figure 2b**.

The observed 2020 and 2021 bicycle traffic as well as pedestrian crossing volumes at all study intersections are presented on **Figure 2c**.

2.4 Existing Heavy Vehicle Composition

The AM peak hour and PM peak hour heavy vehicle (HV) compositions were calculated from the intersection turning movement traffic count performed at the five study intersections. The resulted HV percentages are presented in **Table 2**. Note that the Single Unit Trucks, Tractor Trailer Unit, multi-axle vehicle, city bus and school bus, all these were considered to represent heavy vehicle traffic and their percentages are presented in the below table.

Table 2: Intersection Approaches Heavy Vehicle Composition (in %)

No.	Intersection Name	AM Peak Hour				PM Peak Hour			
		EB	WB	NB	SB	EB	WB	NB	SB
1	Eckhardt Avenue and Moosejaw Street	3.0%	3.0%	0.0%	-	1.0%	1.0%	0.0%	-
2	Moosejaw Street and Woodruff Avenue	-	0.0%	2%	0.0%	-	0.0%	0.0%	0.0%
3	Moosejaw Street and Scott Avenue	0.0%	7.0%	0.0%	2.0%	0.0%	0.0%	0.0%	2.0%
4	Scott Ave. / N. Access and Timmins Street	25%	6.0%	13%	-	0.0%	0.0%	0.0%	-
5	S. Site Access and Timmins Street	33%	-	0.0%	0.0%	0.0%	-	0.0%	0.0%
6	Moosejaw Street and Conklin Avenue	0.0%	6.0%	0.0%	0.0%	0.0%	8.0%	9.0%	5.0%
7	Moosejaw Street and Duncan Avenue	6.0%	6.0%	0.0%	2.0%	1.0%	1.0%	0.0%	2.0%

A review of **Table 2** indicates that study area intersections carry small amounts of heavy vehicle traffic. Based on the above results, the capacity analysis for all study intersections utilized the observed heavy vehicle percentages as noted in Table 2. Noting that for the approaches where the observed percentage was lower than 2%, a heavy vehicle percentage of **2%** was utilized in capacity analysis software for that approach.

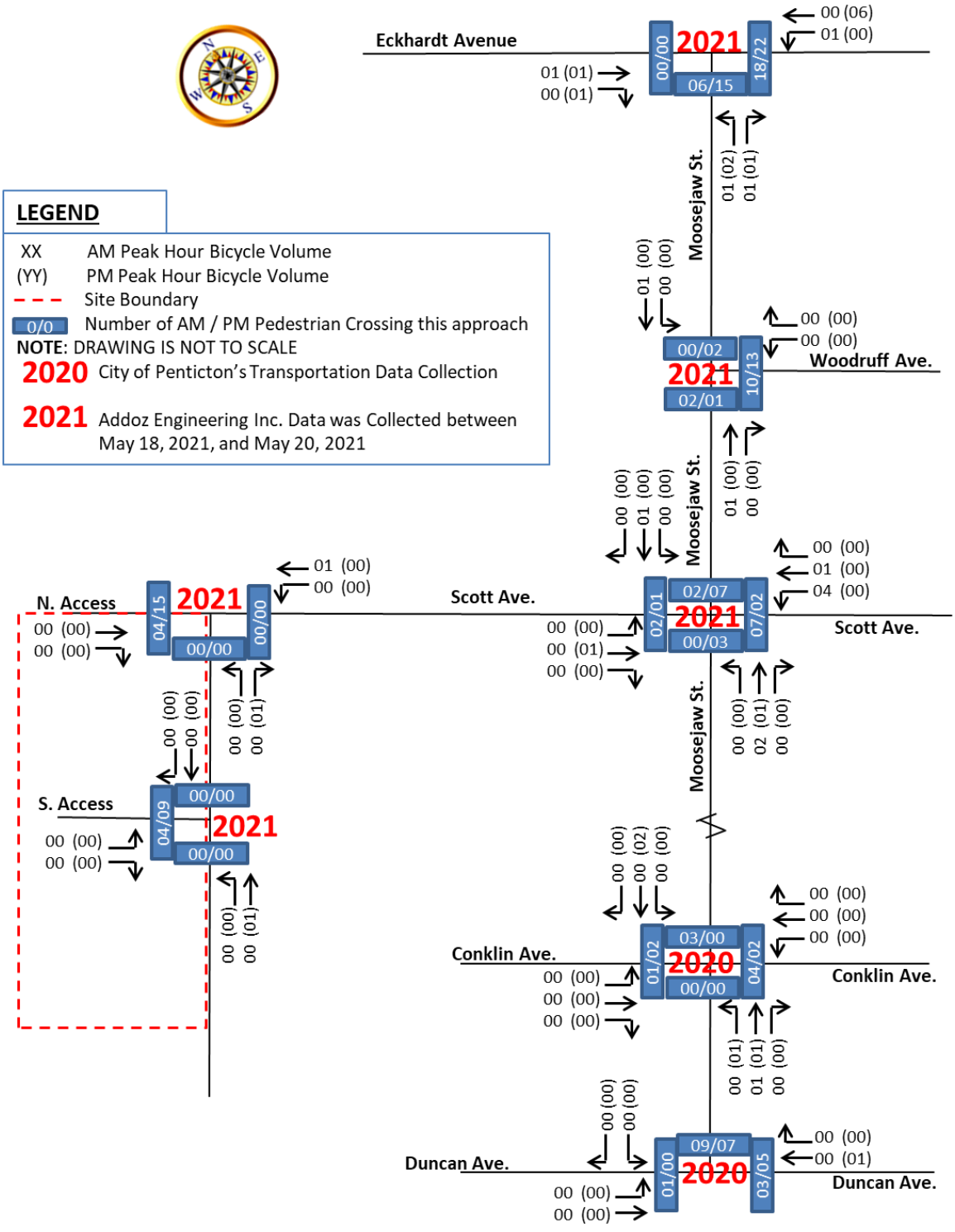

Figure 2c: Observed Bike and Pedestrian Peak Hour Volumes
(2020 Data at the Moosejaw St. & Conklin Ave. and at Moosejaw St. & Duncan Ave. Data from City of Penticton)

2.5 Planned Roadway Improvements

Based on our discussions with City of Penticton staff, there are no plans for any roadway improvements within the study area or at any of the major TIA study intersections in the near future.

3.0 PROJECTED TRAFFIC VOLUMES

3.1 Known Background Developments

Background traffic considers additional traffic on the roadway systems that will be generated by approved developments in the general study area that may be completed by the time of the site build-out. The City of Penticton website was reviewed to determine if any development is approved within the project's study area. The results indicated that there are no developments approved. Therefore, known background development traffic has not been considered in this TIA.

3.2 Historical Traffic Growth

To account for inherited growth in traffic and that traffic generated by other unknown developments that may occur at the build-out of the proposed project, a traffic growth factor was applied to the existing traffic volumes to forecast the future traffic conditions. A **1.5%** annual growth rate was used to estimate traffic growth for the 1-year, 5-year and 15-year horizons, which was applied to the 2021 existing traffic volumes to derive the 2022, 2026 and 2036 background traffic volumes for future development impact analyses. Note that the 1.5% annual traffic growth rate utilized is higher than the determined historical traffic growth between 2017 and 2021 as determined in subsection 2.4 above.

3.4 Total Background Traffic

The 1.5% background growth due to unknown developments was applied on the Existing 2021 traffic volumes for 1-year, 5-years, and 20-years to estimate the total Background 2022, total background 2026, and total Background 2036 scenarios that are presented on **Figure 3a / 3b, Figure 4a / 4b, and Figure 5a / 5b,** respectively.

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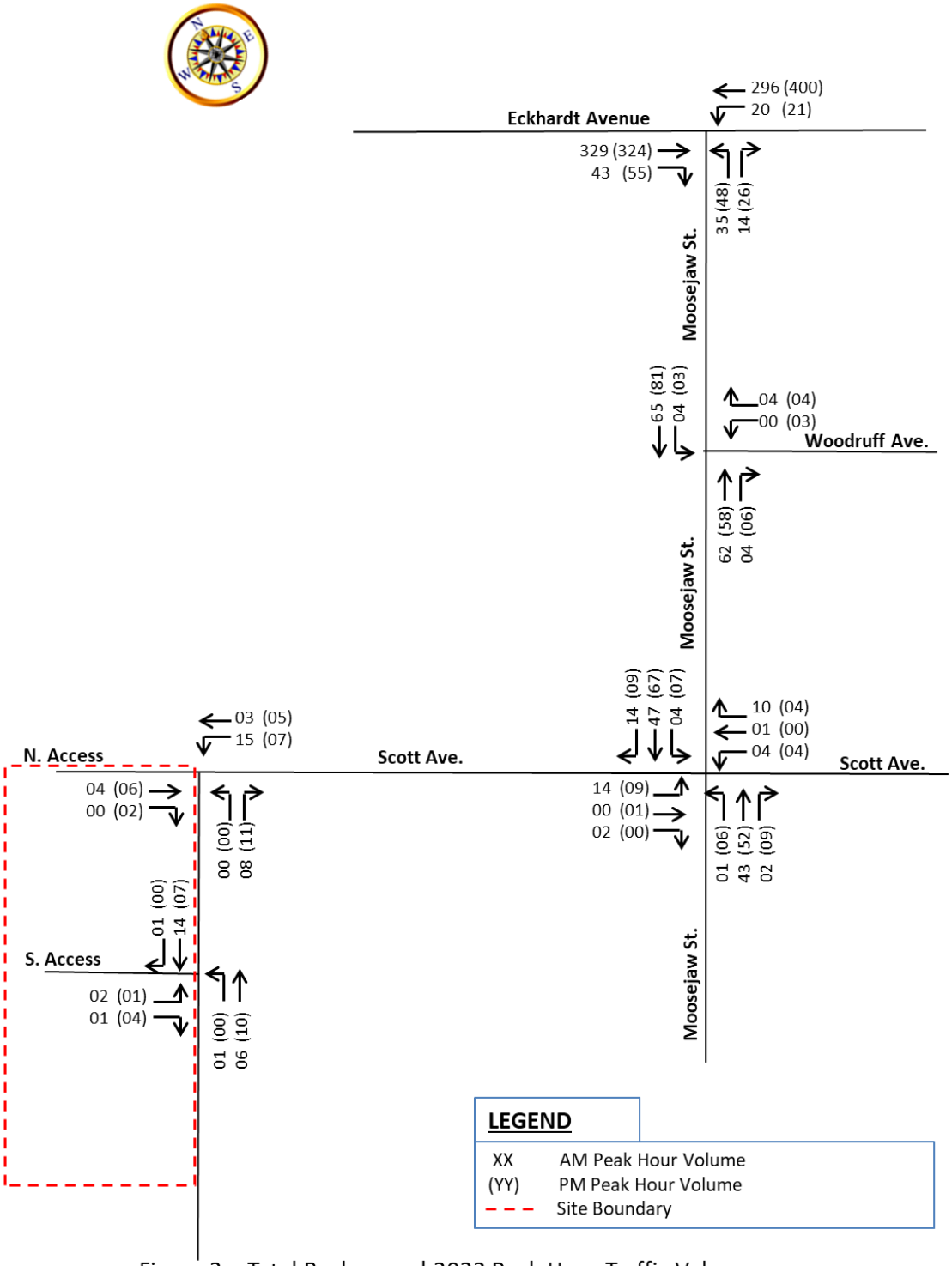
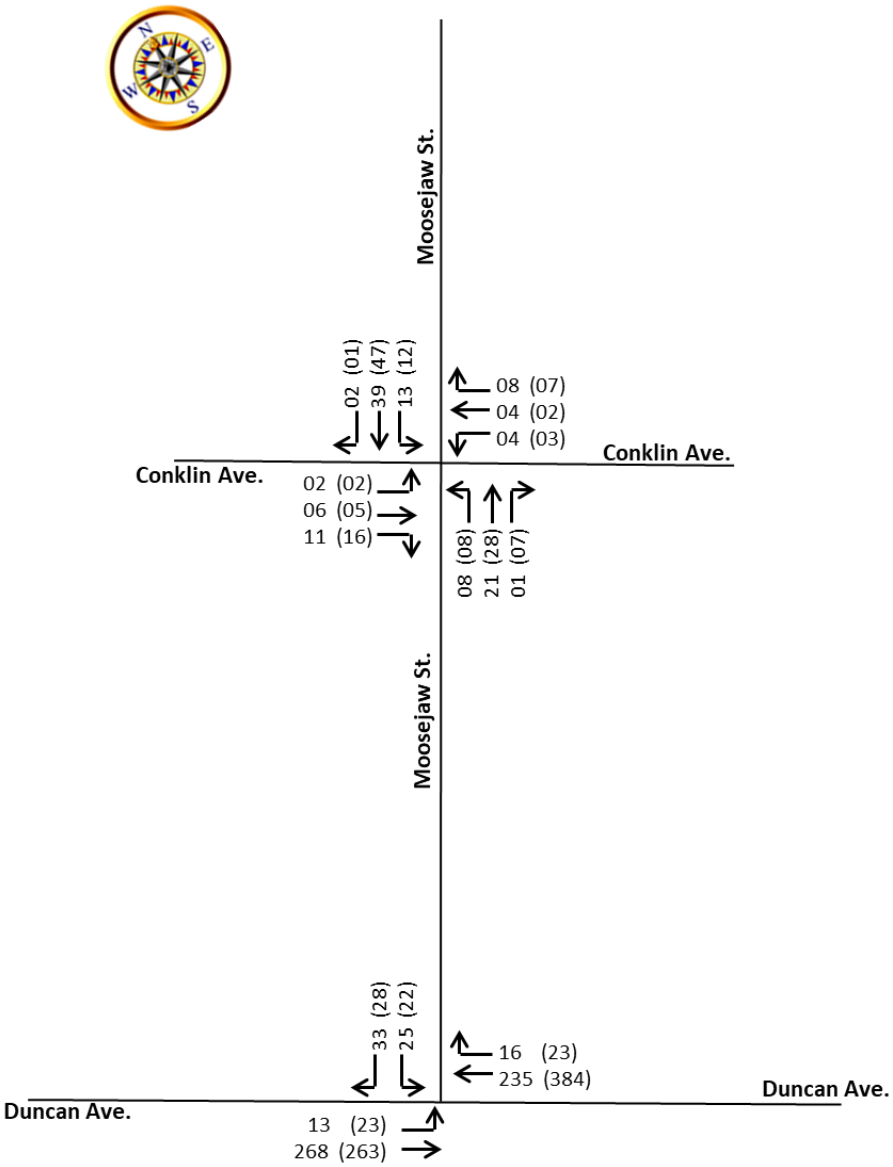


Figure 3a: Total Background 2022 Peak Hour Traffic Volumes
(Existing 2021 + 1.5% Traffic Growth Applied for 1 Year)



LEGEND	
XX	AM Peak Hour Volume
(YY)	PM Peak Hour Volume

Figure 3b: Background 2022 Peak Hour Traffic Volumes
(Existing 2021 + 1.5% Traffic Growth Rate Applied for 1 Year)

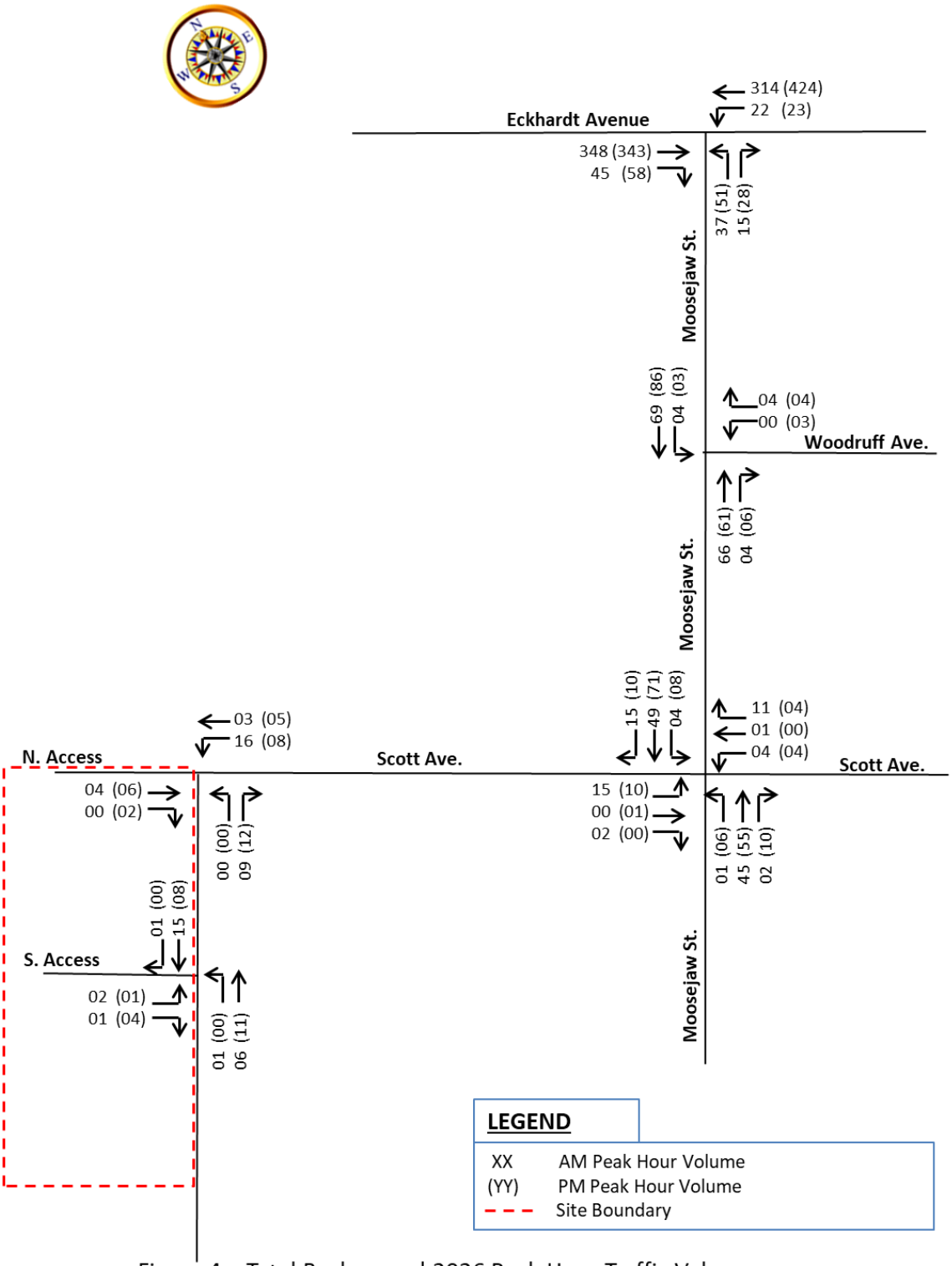
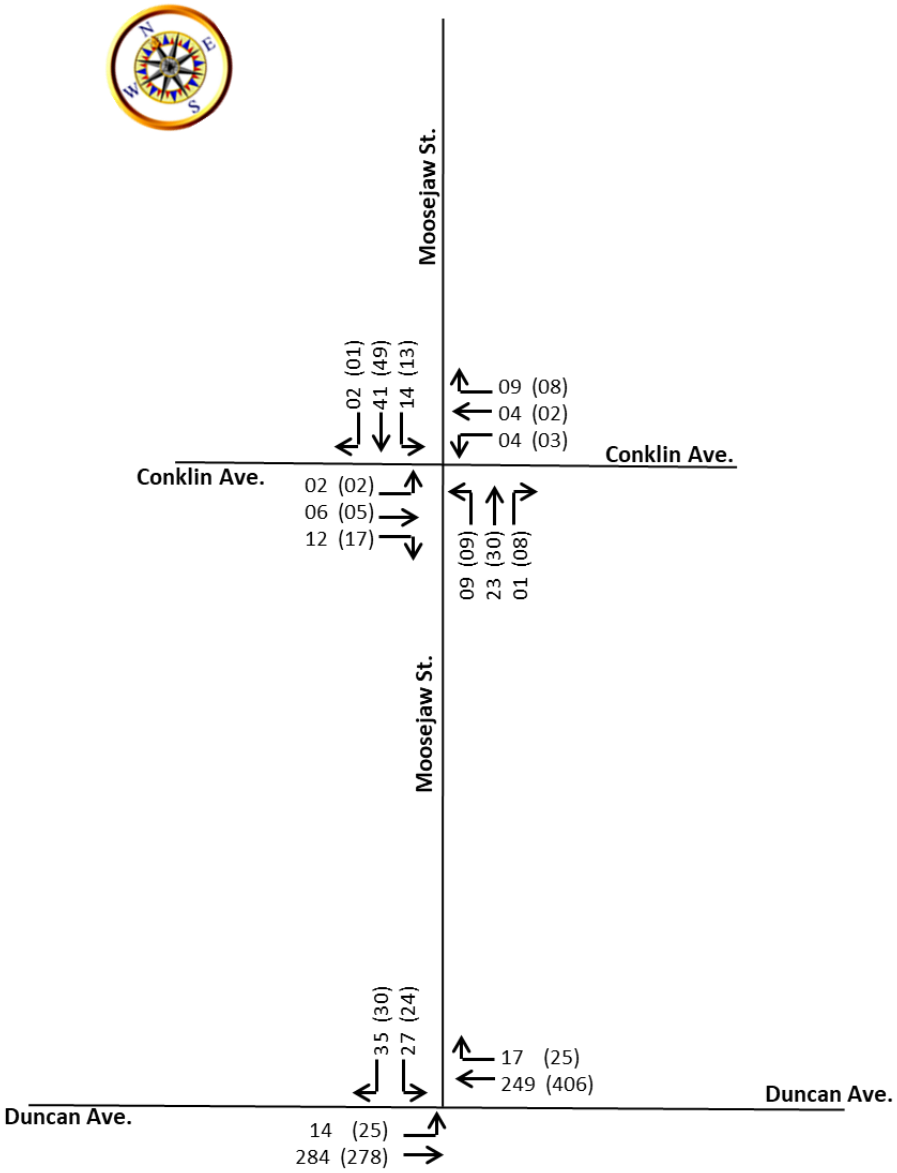


Figure 4a: Total Background 2026 Peak Hour Traffic Volumes
(Existing 2021 + 1.5% Traffic Growth Applied for 5 Years)



LEGEND	
XX	AM Peak Hour Volume
(YY)	PM Peak Hour Volume

Figure 4b: Background 2026 Peak Hour Traffic Volumes
(Existing 2021 + 1.5% Traffic Growth Rate Applied for 5 Year)

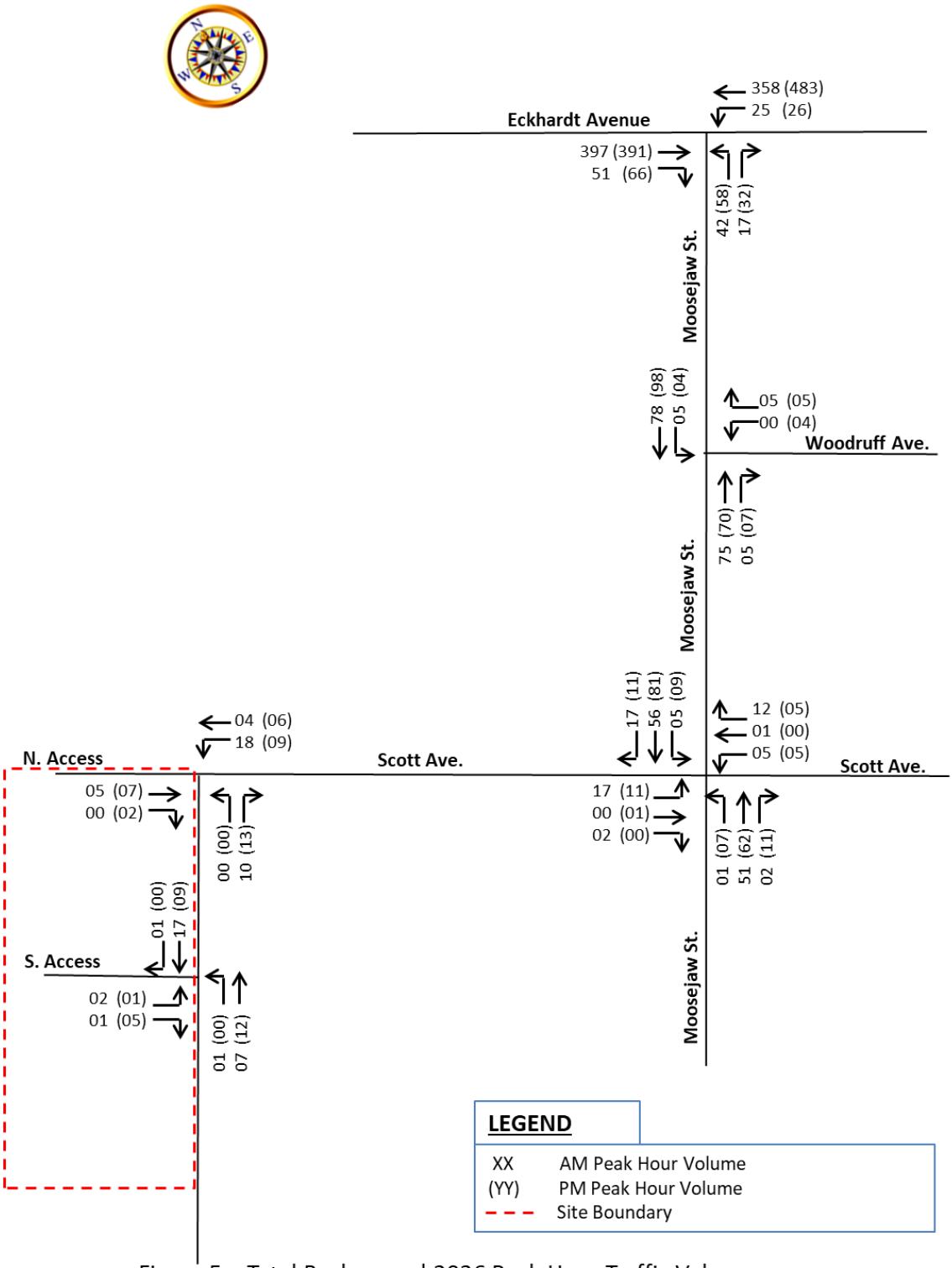


Figure 5a: Total Background 2036 Peak Hour Traffic Volumes
(Existing 2021 + 1.5% Traffic Growth Applied for 15 Years)

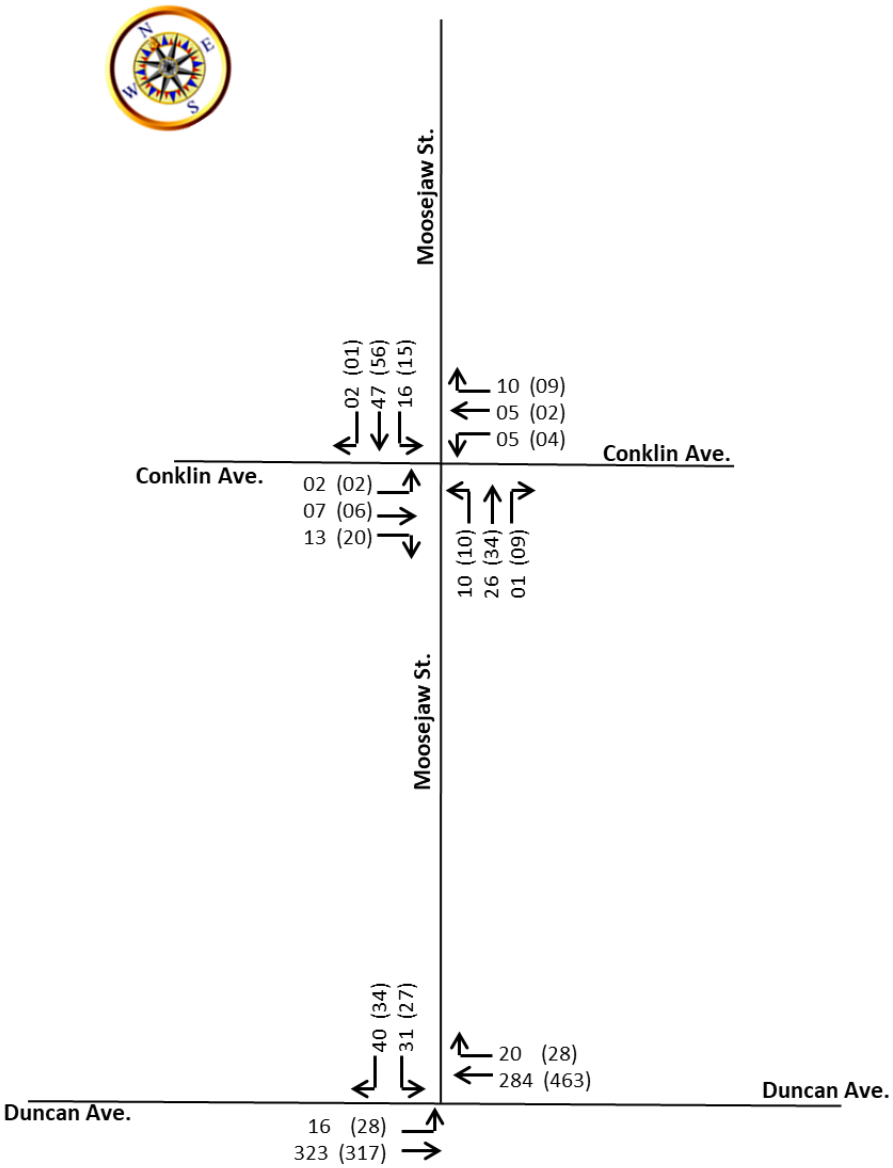


Figure 5b: Background 2036 Peak Hour Traffic Volumes
(Existing 2021 + 1.5% Traffic Growth Rate Applied for 15 Year)

3.5 Site Generated Trips

To estimate the number of vehicle trips expected to be generated by a development, trip generation rates are applied based on the proposed land uses and intensity. The number of trips that would be generated by a proposed development would be estimated based on the rates published in ***Trip Generation, 10th Edition*** by the Institute of Transportation Engineers (ITE). The trip generation rates along with the proposed land uses and the corresponding ITE land use codes are presented in **Table 3**. The projected LIV MIDTOWN Development peak-hours and daily site-generated traffic volumes are presented in **Table 4** by each phase of the development.

Table 3: Trip Generation Rates (ITE Trip Generation Manual 10th Edition)

Land Use	ITE Code	Unit	AM Peak Hour			PM Peak Hour			Daily Trips
			in	out	total	in	out	total	
Multifamily Housing (Low-Rise 1 or 2 Levels)	220	No. of Units	23%	77%	0.46	63%	37%	0.56	7.32
Multifamily Housing (Mid-Rise Less than 10 level)	221	No. of Units	26%	74%	0.36	61%	39%	0.44	5.44

Table 4: Projected Site-Generated Peak-Hour and Daily Traffic Volumes

Stage	Land Use	ITE Code	Density (# of Units)	AM Peak Hour			PM Peak Hour			Daily Trips
				in	out	total	in	out	total	
Phase 1	Townhouses	220	23	3	8	11	8	5	13	169
	Apartments	221	78	7	21	28	21	13	34	424
	Phase 1 Totals		101	**10**	**29**	**39**	**29**	**18**	**47**	**593**
Phase 2	Townhouses	220	64[(a)]	7	22	29	23	13	36	469
	Apartments	221	78	7	21	28	21	13	34	424
	Phase 2 Totals		142	**14**	**43**	**57**	**44**	**26**	**70**	**893**
Development Totals (P1+P2)			**243**	**24**	**72**	**96**	**73**	**44**	**117**	**1,486**

[(a)] Note that the trip generation were estimated based on the originally planned 64 townhouses not the 63. Therefore, the completed analysis can be considered conservative.

3.5.1 Pass-by Trips

Pass-by trips are not new trips, but they are the trips that are attracted from the traffic passing the site on adjacent roadways. While pass-by trips are new trips at the access points to the site, they are not new trips on the adjacent roadway systems. Since the proposed development will include multi-family residential development, no pass-by trips are expected for such land use. Therefore, no reduction for pass-by trips considered.

3.5.2 Internal Trips

An internal trip is a trip that has both its origin and destination within a multi-use development area under investigation, which should be deducted from the total number of trips departing and entering the study site. The appropriate internal trip reduction rates are based on the characteristics of the mixed land uses. Internal trips would not be expected within the proposed residential development. Therefore, no reduction has been applied for internal trips.

3.6 Trip Distribution

The directions from which vehicles will approach and depart a site is a function of several variables, including the population and employment distribution within the development's area of influence, the operational characteristics of the road system, and the ease with which drivers can travel over various sections of the roadway network without encountering congestion. The directional distribution of new project trips by the proposed LIV MIDTOWN Multi Family development was estimated based on consideration of all the pertinent factors above including existing traffic patterns. Additionally, the site accesses distributions of traffic volumes were determined based on the above-described directional distributions coupled with the ability of traffic to perform the needed turns. The resulting final directions of approaches (DOA) and site access distributions are illustrated on **Figure 6a and Figure 6b** for Phase 1 and Full Development, respectively. **Figure 6c** presents how the above DOA were determined from the Existing 2021 traffic volumes (refer to Figure 2a). Also note that since Timmins Street connects to Moosejaw Street south of the development via Conklin Avenue, the Moosejaw 7% from/to the south were assigned to utilize Timmins Street south of the site. This is because this would be the shorter path to/from proposed development.

3.7 Trip Assignment

3.7.1 Opening Phase 1 Traffic Volumes

The project's peak-hour trips for the proposed LIV MIDTOWN Multi Family Development were assigned to the adjacent roadways based on the estimated directional distribution discusses above. The resulted Phase 1 and Phase 2 (Interim) site generated AM peak hour and PM peak hour trips are illustrated on **Figure 7a / 7b and Figure 8a / 8b.**

The site-generated trips shown on **Figure 7a / 7b** were then added to the Total Background 2022 peak-hour traffic volumes shown on **Figure 3a / 3b** to arrive at the Phase 1 Opening 2022 peak-hour traffic volumes, which are illustrated on **Figure 9a / 9b**.

3.7.2 Phase 2 Interim 2026 Volumes

The development's site-generated trips shown on **Figure 8a / 8b** were then added to the Total Background 2026 peak-hour traffic volumes shown on **Figure 4a / 4b** to arrive at the Phase 2 Interim 2026 peak-hour traffic volumes, which are illustrated on **Figure 10a / 10b**.

3.7.3 Future 2036 Volumes

The development's site-generated trips shown on **Figure 8a / 8b** were added to the Total Background 2036 peak-hour traffic volumes shown on **Figure 5a / 5b** to arrive at the ultimate Total Future 2036 peak-hour traffic volumes, which are illustrated on **Figure 11a / 11b**.

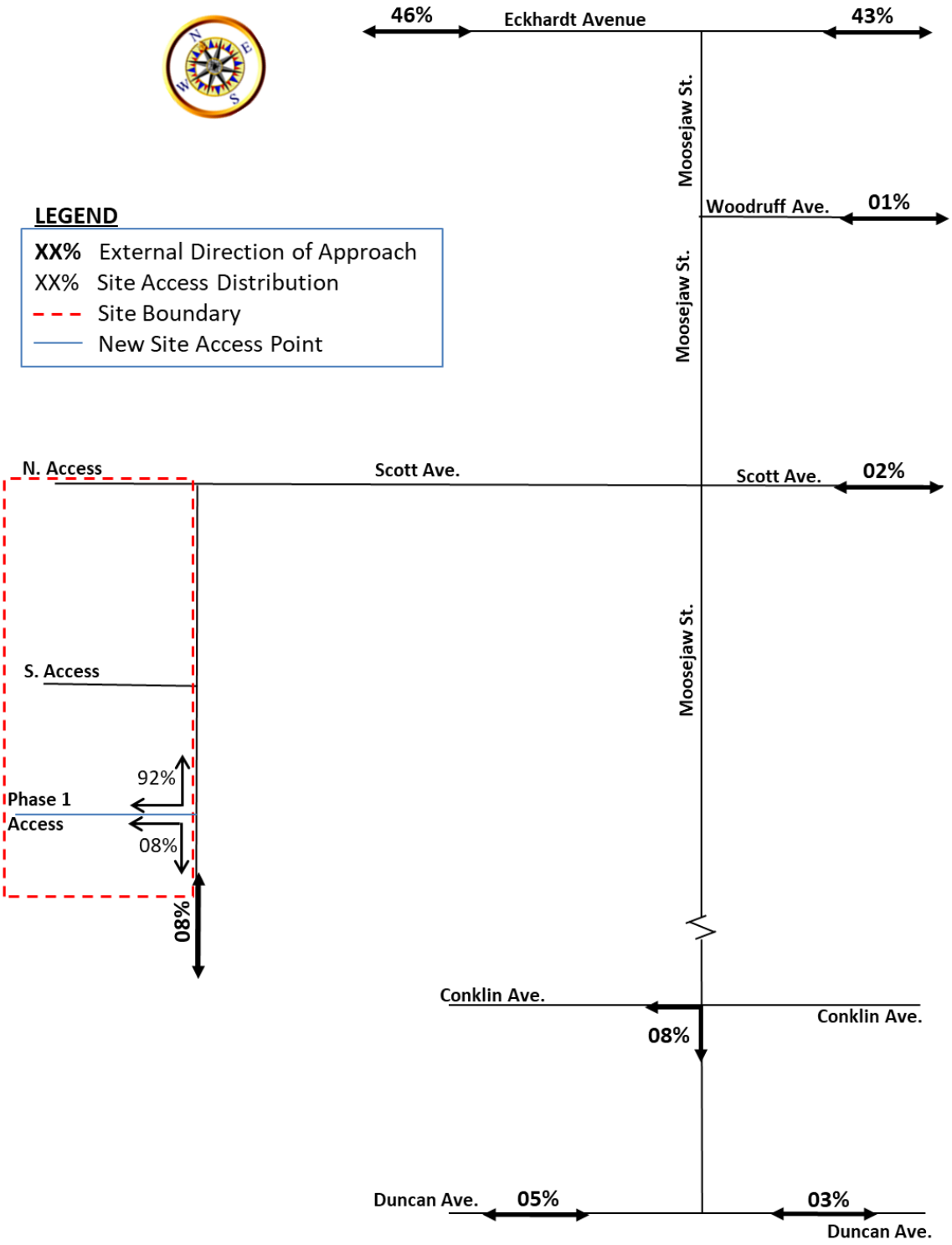


Figure 6a: Direction of Approach and Site Access Distribution – Phase 1

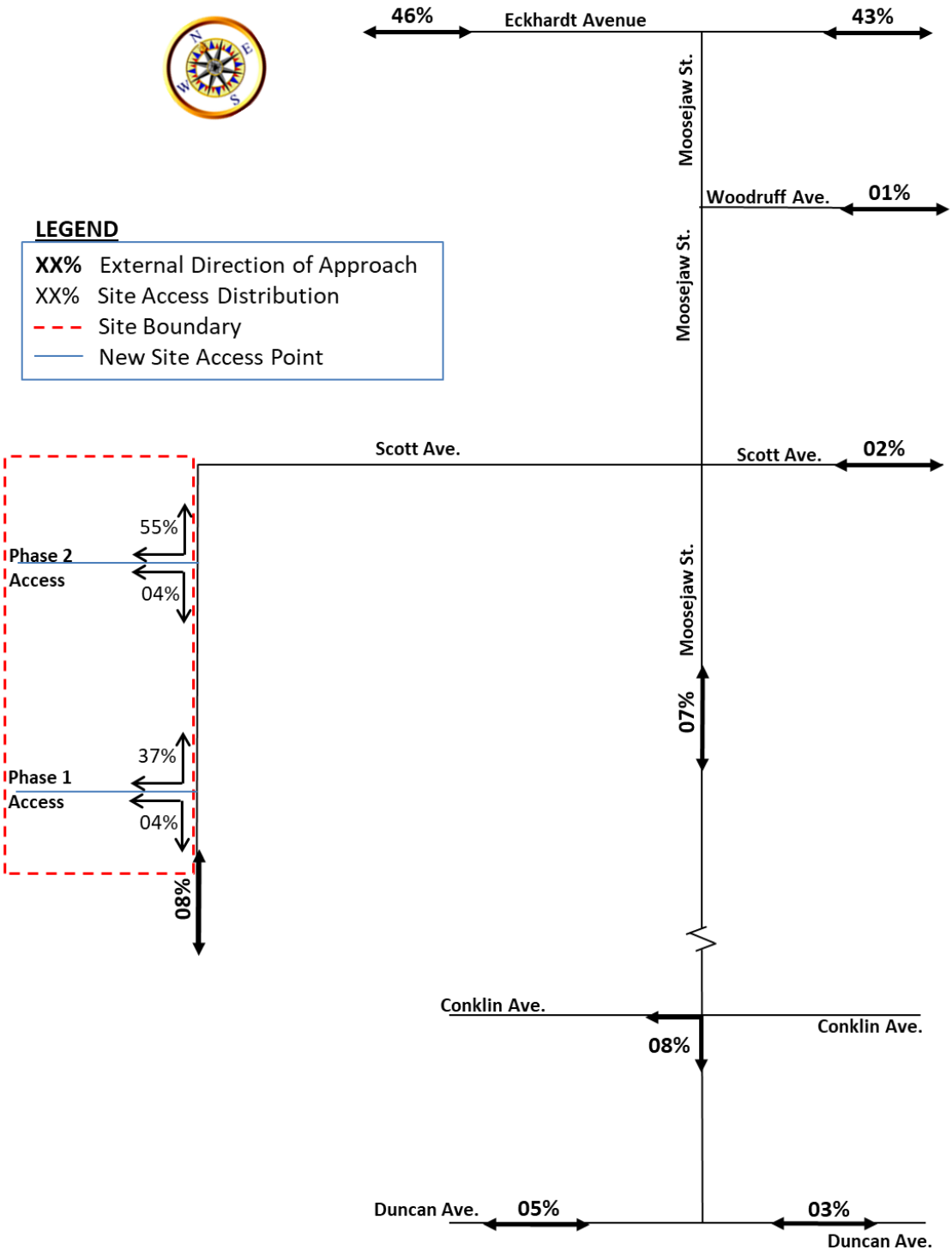


Figure 6b: Direction of Approach and Site Access Distribution – Full Development

Departing /Approaching to/from Road Name & Direction	Total AM + PM Peak Hour Volumes	Percent of Total
East on Eckhardt Ave	1410	(1410/3266)X100 = 43%
West on Eckhardt Ave	1506	(1506/3266)X100 = 46%
East on Woodruff Ave	28	(28/3266)X100 = 1%
East on Scott Ave	46	(46/3266)X100 = 2%
South on Moosejaw St.	233	(233/3266)X100 = 7%
South on Timmins St.	43	(43/3266)X100 = 1%
Totals	**3266**	**100%**

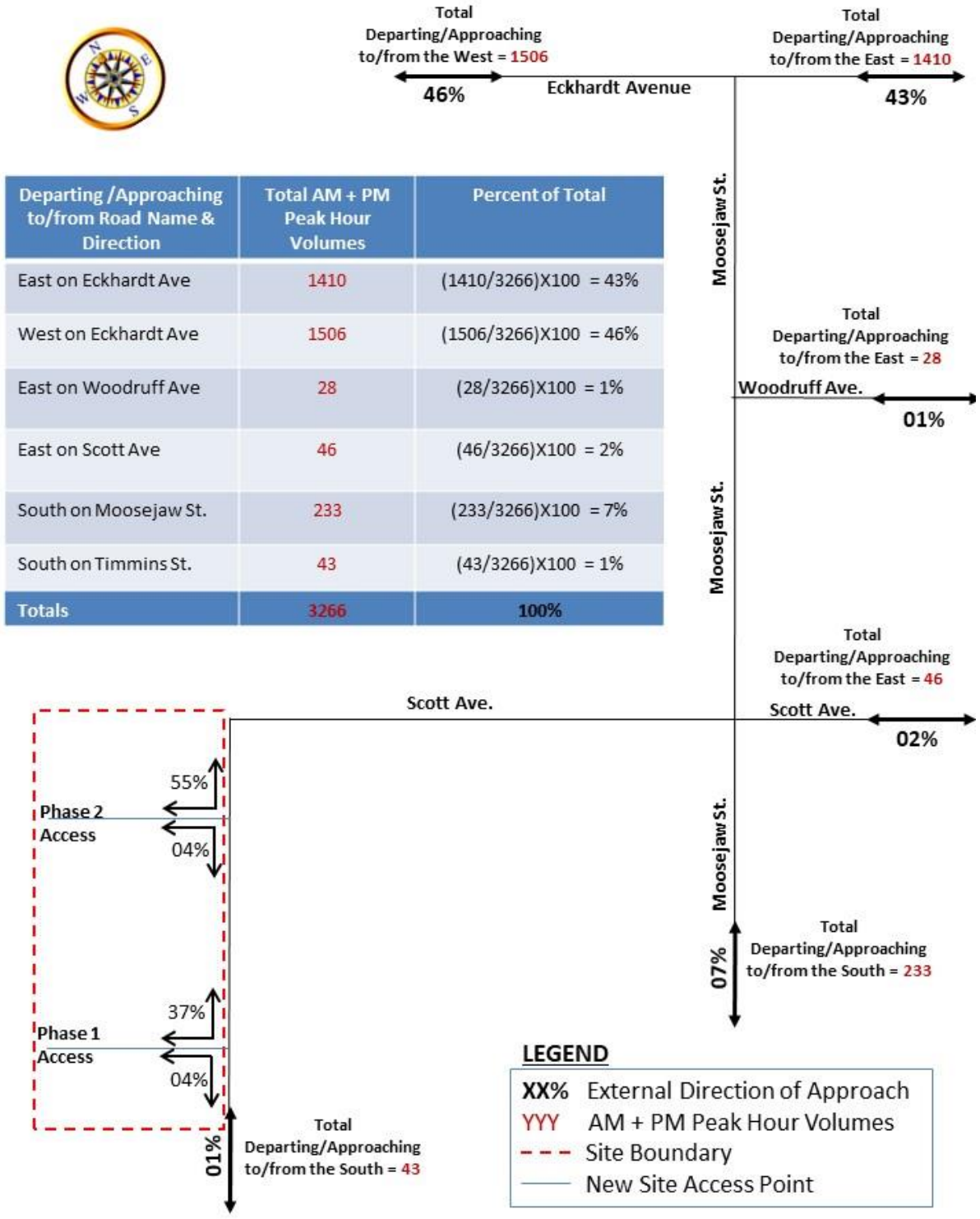


Figure 6c: Study Area Approaching / Departing Traffic Volumes Based on Existing Data (Total Volumes Presented Here were Taken from Figure 2a)

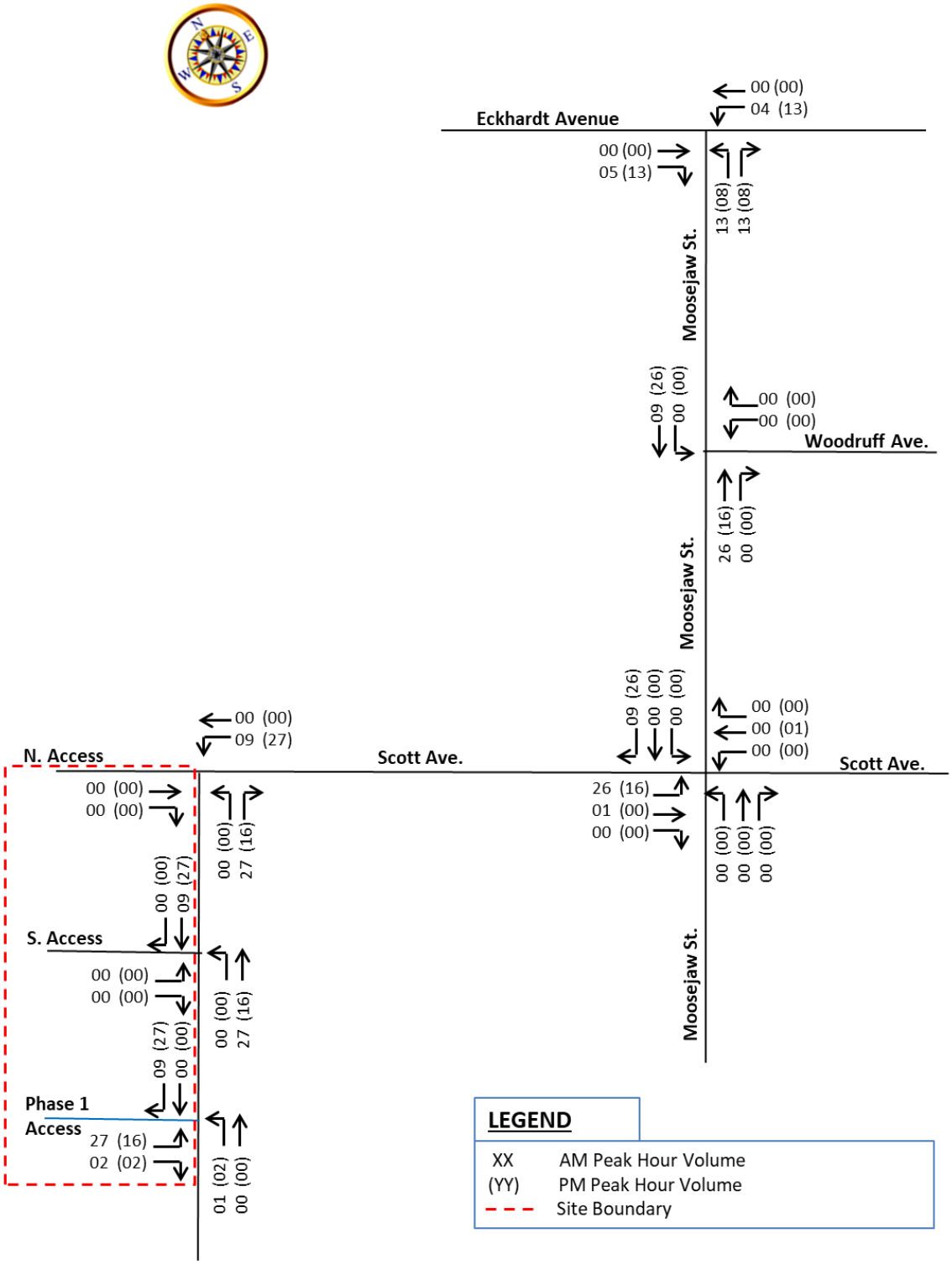


Figure 7a: Site Generated Peak Hour Traffic Volumes (Phase 1)

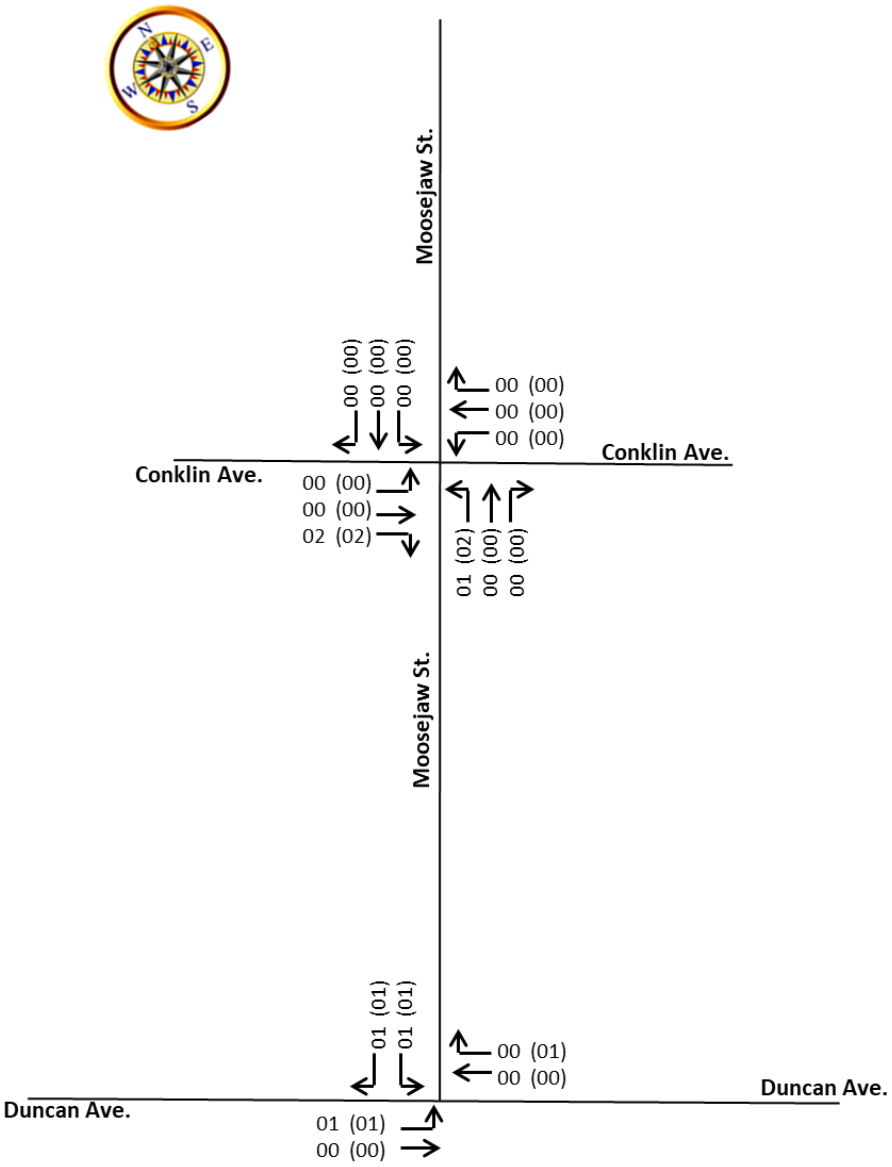


Figure 7b: Site Generated Peak Hour Traffic Volumes (Phase 1)

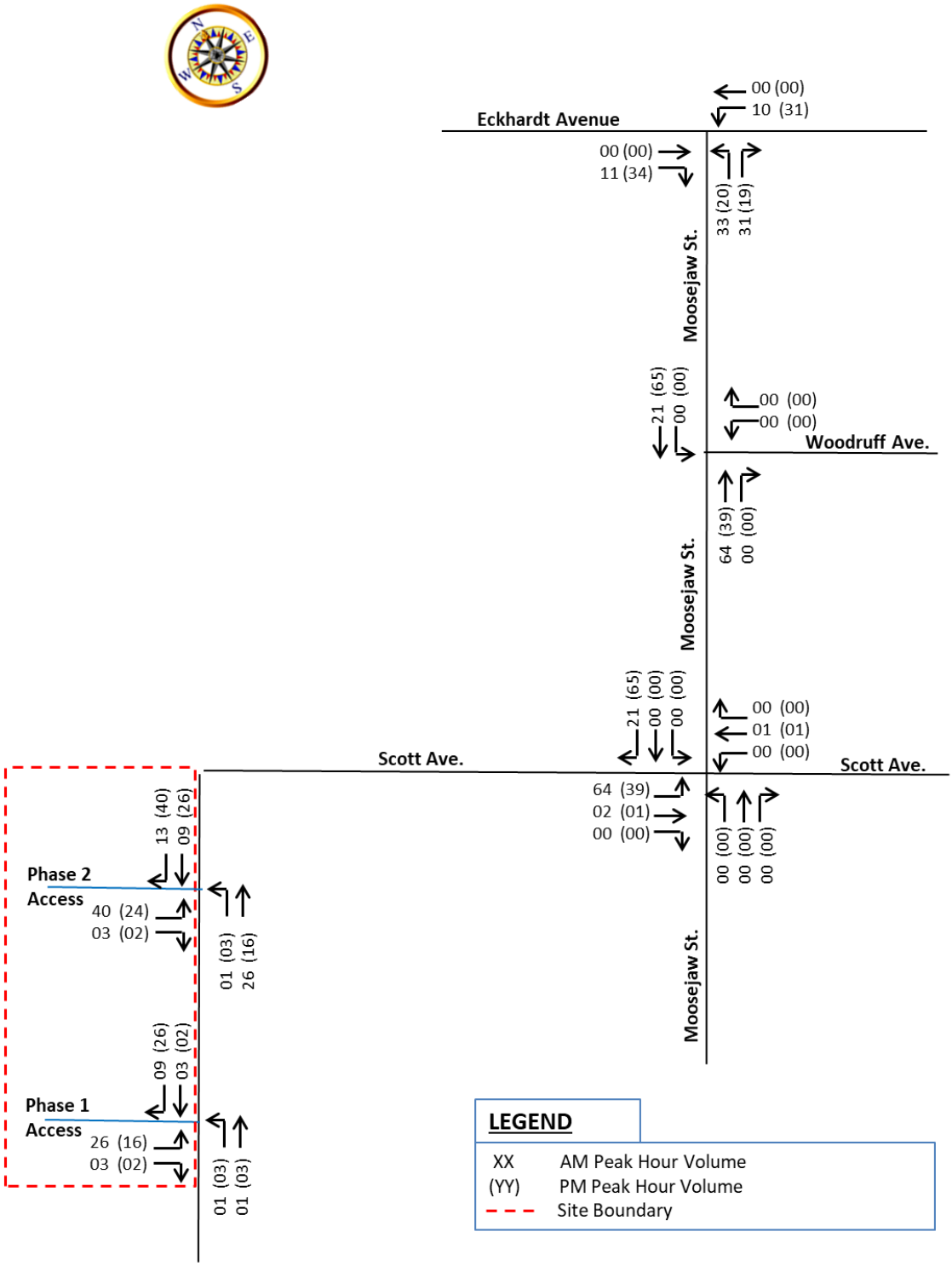


Figure 8a: Site Generated Peak Hour Traffic Volumes (Phase 1 + Phase 2)

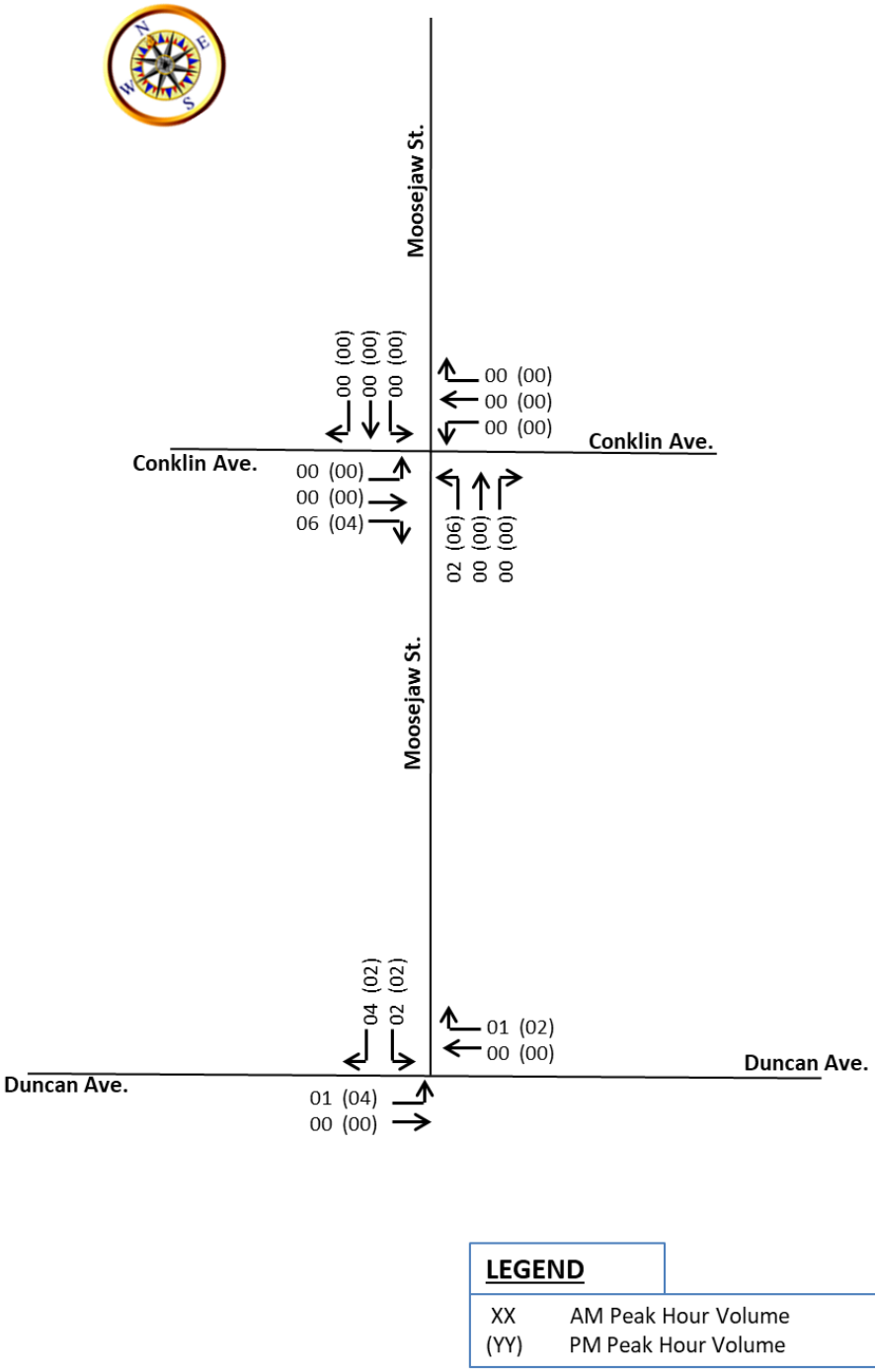


Figure 8b: Site Generated Peak Hour Traffic Volumes (Phase 1 + Phase 2)

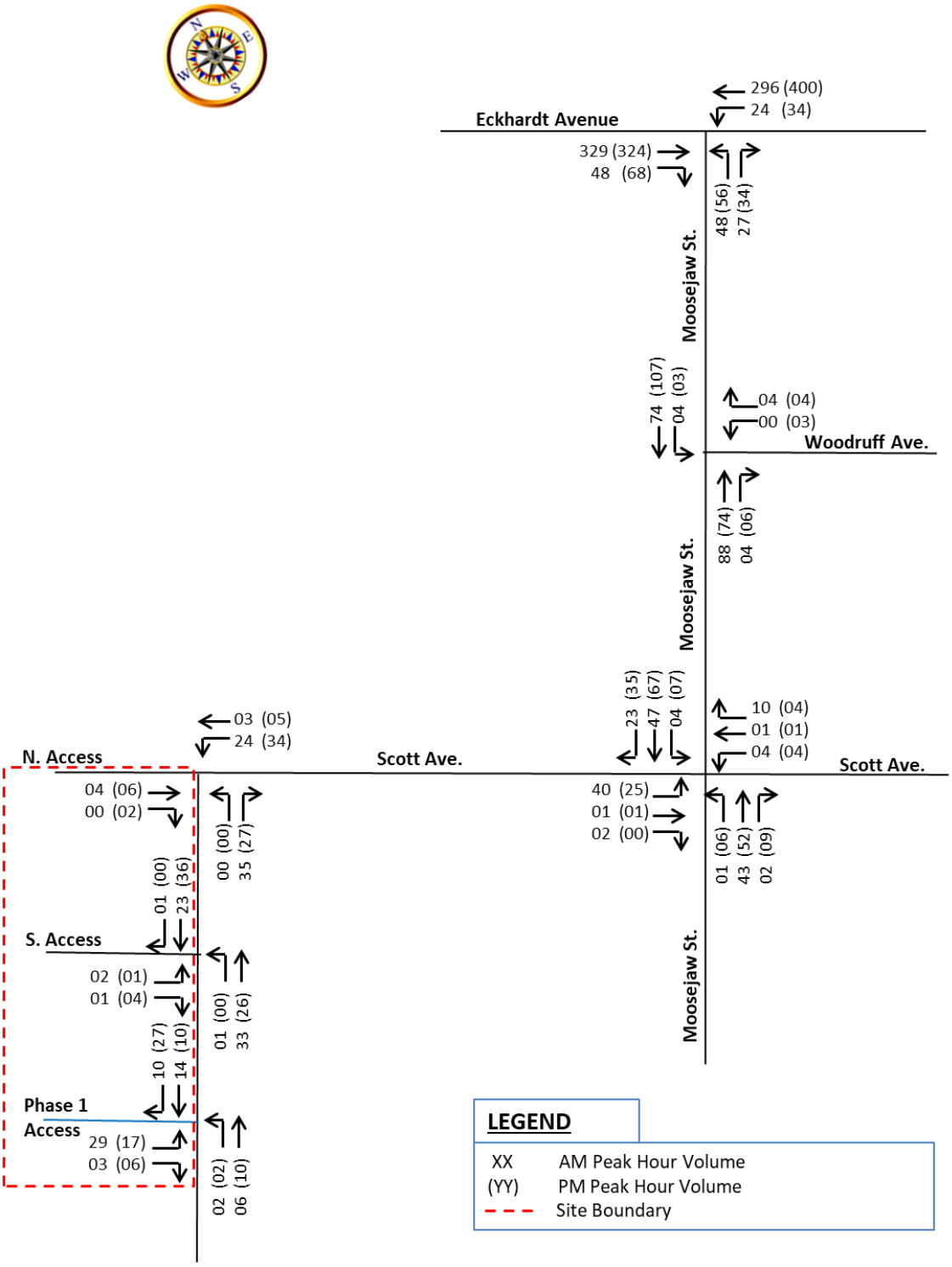


Figure 9a: Opening 2022 Peak Hour Traffic Volumes (Phase 1)

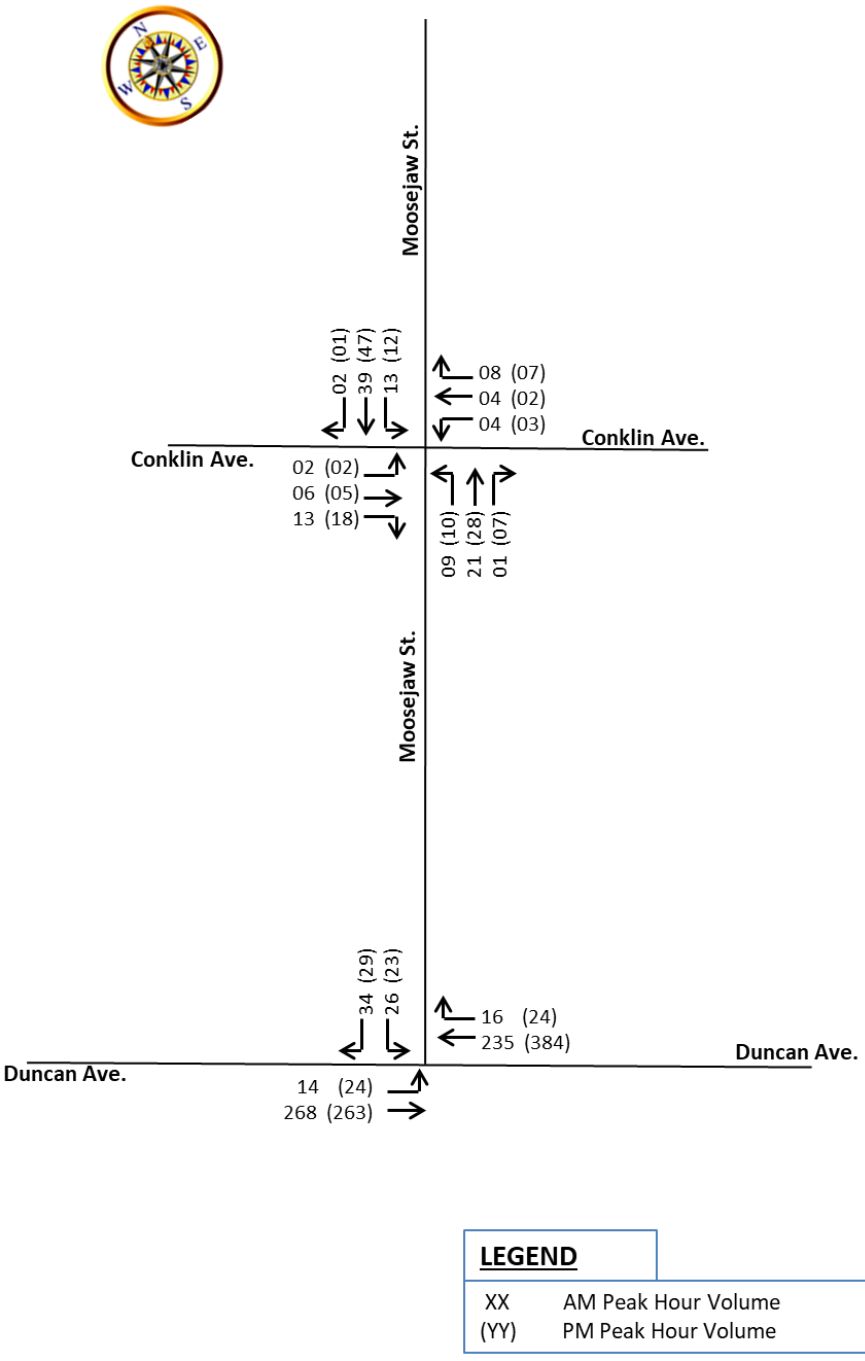


Figure 9b: Opening 2022 Peak Hour Traffic Volumes
(Figure 3b + Figure 7b)

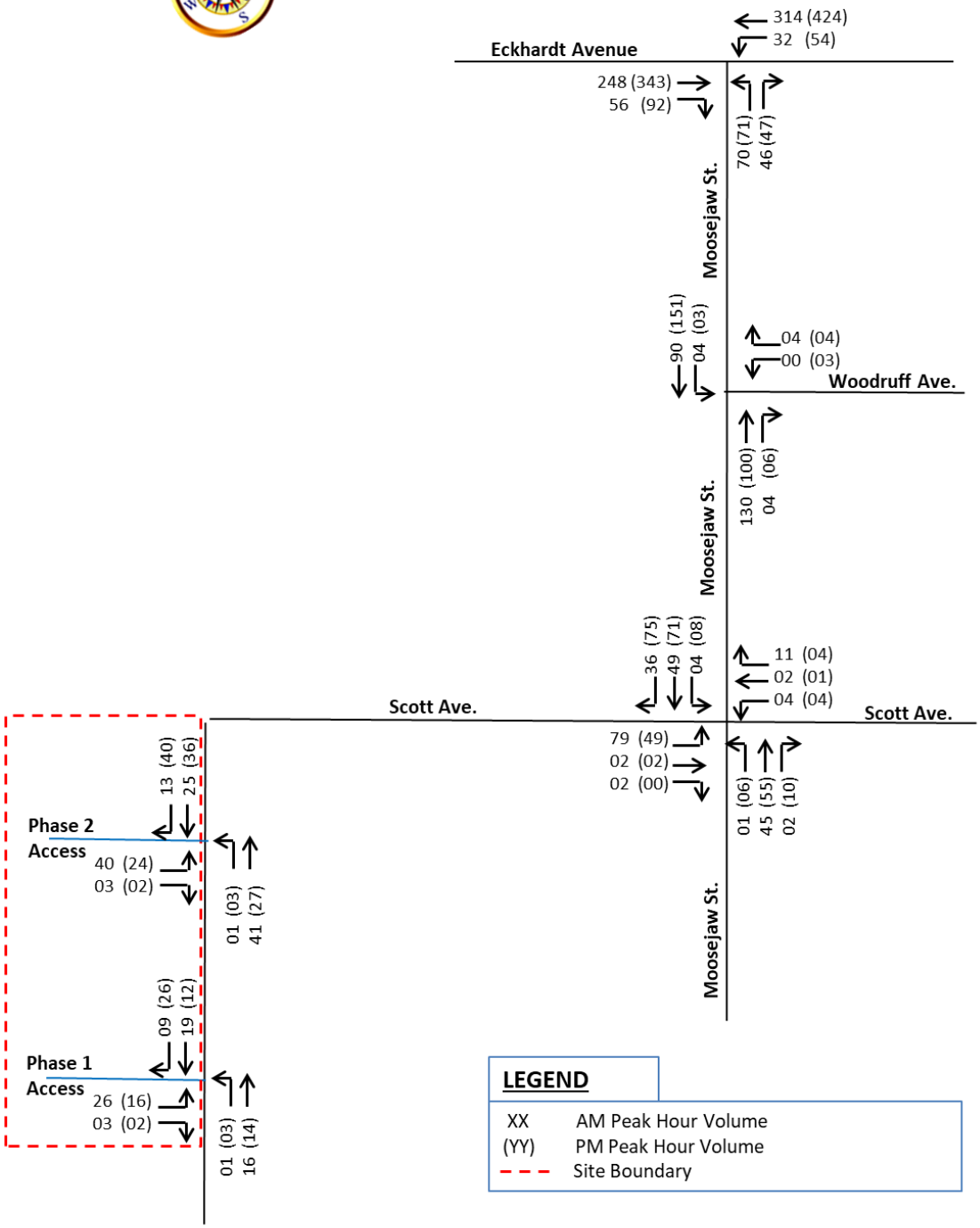


Figure 10a: Interim 2026 Peak Hour Traffic Volumes (Phase 1 + Phase 2)
(Figure 4a + Figure 8a)

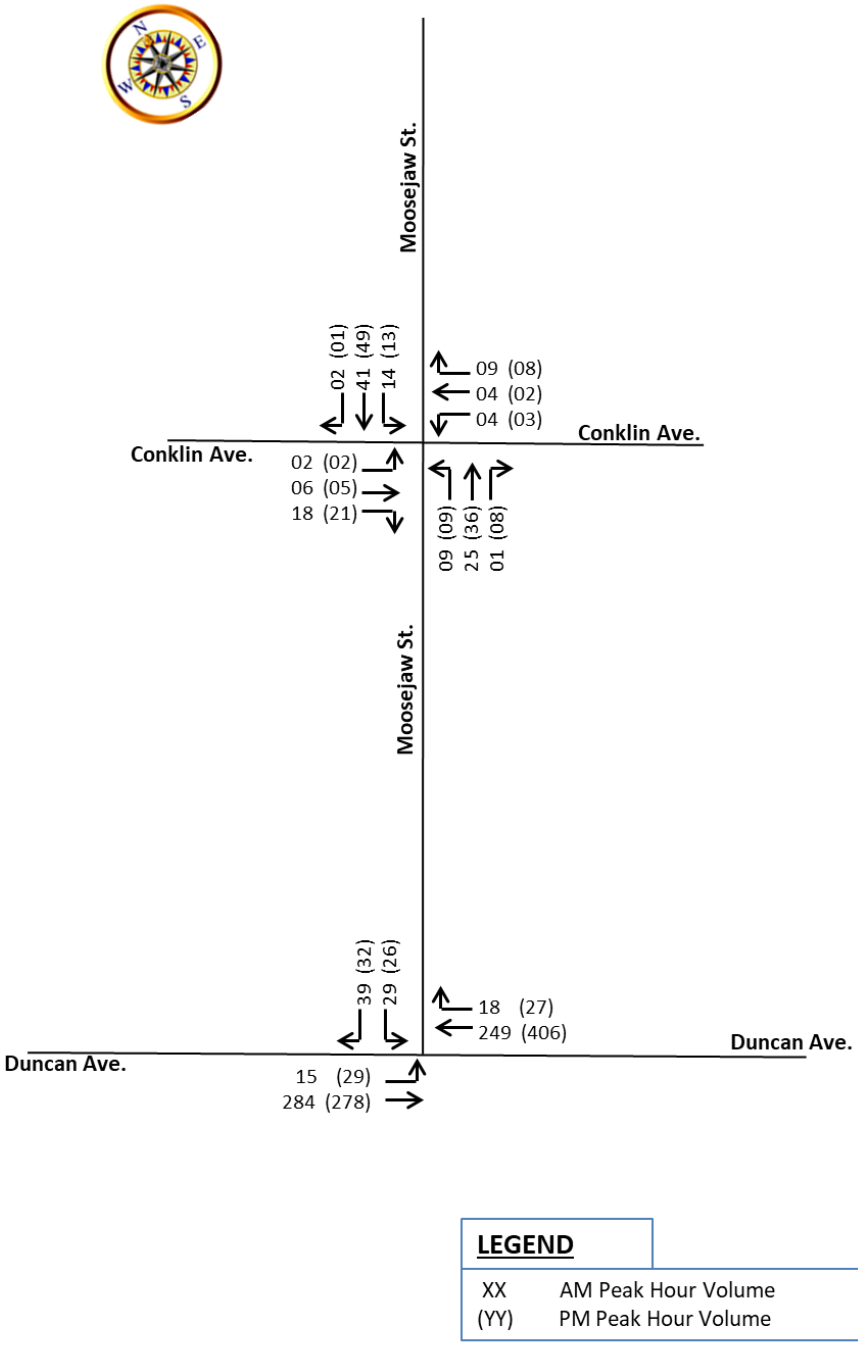


Figure 10b: Interim 2026 Peak Hour Traffic Volumes
(Figure 4b + Figure 8b)

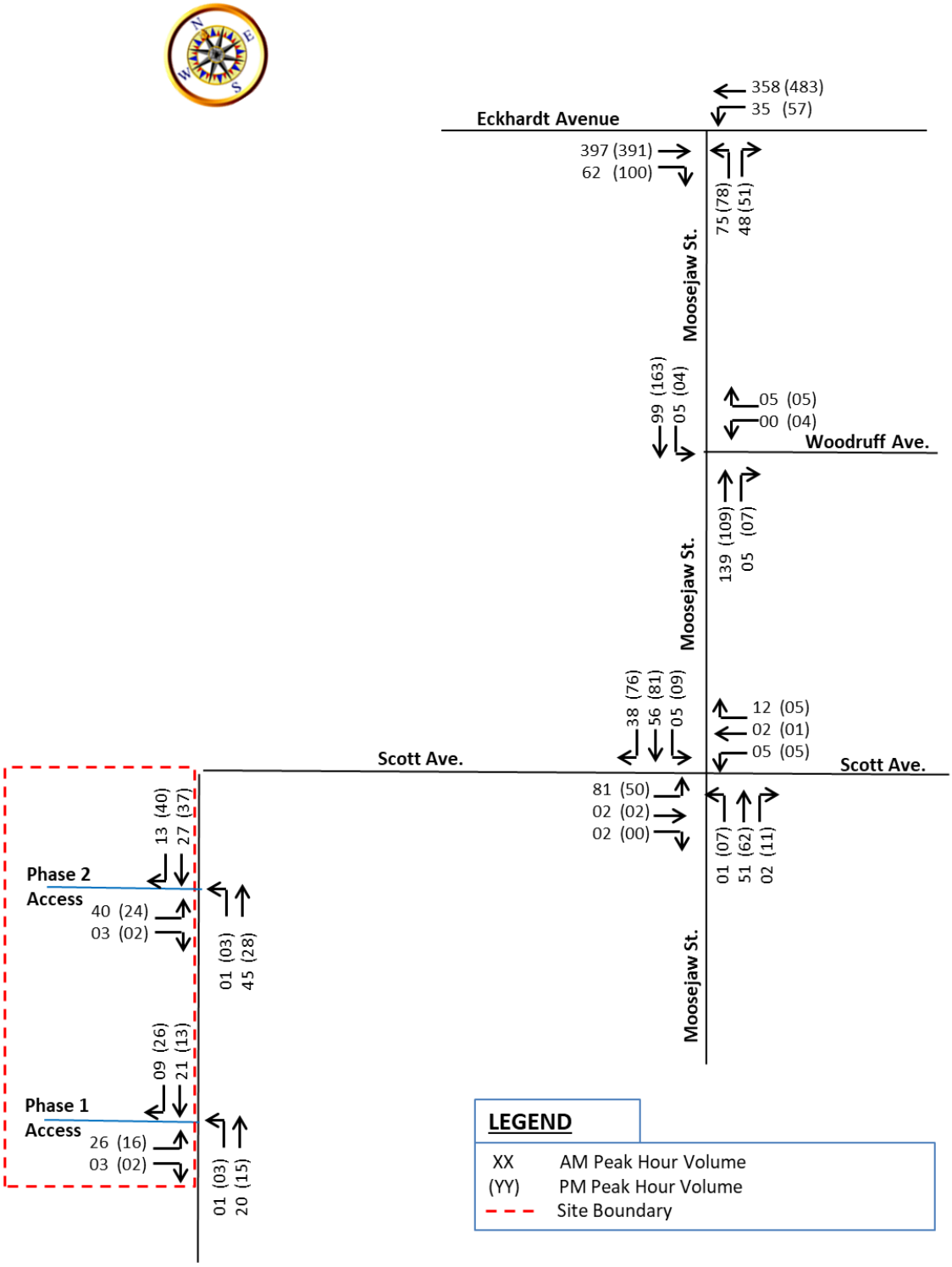


Figure 11a: Future 2036 Peak Hour Traffic Volumes (Phase 1 + Phase 2)
(Figure 5a + Figure 8a)

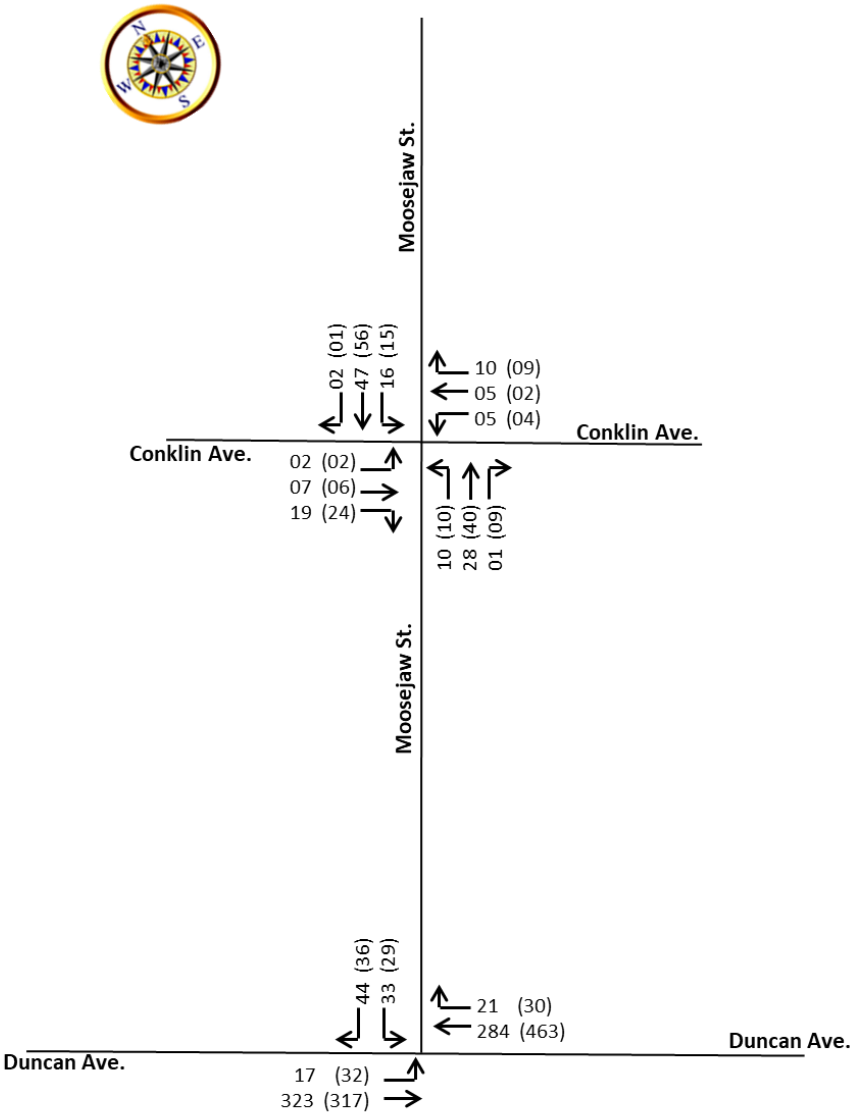


Figure 11b: Future 2036 Peak Hour Traffic Volumes
(Figure 5b + Figure 8b)

4.0 EVALUATION AND RECOMMENDED IMPROVEMENTS

4.1 Level of Service Criteria for Intersections

The intersections identified for the study were analyzed according to the methodologies presented in the ***2016 Highway Capacity Manual***. The analysis determines the "Level of Service (LOS)" of unsignalized intersections considering the factors including but not limited to number and types of lanes, traffic volumes, heavy vehicle composition, peak hour factors, pedestrian activities, etc. Levels of service are expressed in a range from "A" through "F," with "A" being the highest level of service, and "F" representing the lowest level of service. **Table 5** presents the thresholds for Levels of Service "A" through "F" for unsignalized intersections and **Table 6** presents the LOS criteria for signalized intersections.

Table 5: Level of Service Criteria for Unsignalized Intersections *

Level of Service	Delay/Vehicle (seconds)	Description
A	≤ 10.0	Little or no delay, very low main street traffic.
B	10.1 to 15.0	Short traffic delays, many acceptable gaps.
C	15.1 to 25.0	Average traffic delays, frequent gaps still occur.
D	25.1 to 35.0	Long traffic delays, limited number of acceptable gaps.
E	35.1 to 50.0	Very long traffic delays, very small number of acceptable gaps.
F	> 50.0	Extreme traffic delays, virtually no acceptable gaps in traffic.

* Note: Capacity analysis for two-way stop-controlled intersection provides the LOS for the critical movements, not of the overall intersection.

Table 6: Level of Service Criteria for Signalized Intersections

Level of Service	Delay/Vehicle (seconds)	Description
A	≤ 10.0	Most vehicles do not stop at all.
B	10.1 to 20.0	Some vehicles stop.
C	20.1 to 35.0	The number of vehicles stopping is significant, although many passes through without stopping.
D	35.1 to 55.0	Many vehicles stop. Individual cycle failures are noticeable.
E	55.1 to 80.0	Considered to be the limit of acceptable delay. Individual cycle failures are frequent.
F	> 80.0	Unacceptable delay.

4.2 Capacity and Level of Service Analyses

Capacity and level of service analyses were conducted for the following conditions:

- Existing 2021 Traffic Conditions.
- Total Background 2022 Traffic Conditions (without site traffic).
- Total Background 2026 Traffic Conditions (without site traffic).
- Total Background 2036 Traffic Conditions (without site traffic).
- Opening 2022 Traffic Conditions (with site traffic).
- Future 2026 Traffic Conditions (with site traffic).
- Future 2036 Traffic Conditions (with site traffic).

The software package Synchro 10 was utilized for the capacity analyses of all study intersections and site accesses. The Synchro software utilizes ***Highway Capacity Manual 2016*** **(HCM 6th Edition)** methodologies for the evaluations.

Note that the observed heavy vehicle percentages (refer to Section 2.4) and the calculated peak hour factors (PHF)'s were utilized in the capacity analysis of study area intersections. The maximum PHF utilized was 0.95. Note with respect to heavy vehicle percentages that for the approaches where the observed percentage was lower than 2%, a HV% of **2%** was utilized for that approach.

4.2.1 Existing 2021 Traffic Conditions

Existing 2021 capacity and level of service analysis results for all study intersections are presented in **Table 7**.

A review of **Table 7** results indicates that all study intersections are currently operating at acceptable levels of service during the AM and PM peak hours including the stop-controlled approaches. All volume to capacity ratios (V/C) are within the acceptable ranges. Therefore, none of the study intersections require mitigations under existing traffic conditions.

The detailed capacity and LOS analyses HCM 6th Edition reports for all Synchro capacity analyses scenarios are contained in **Appendix D** of this report.

Table 7: Capacity Analysis for Existing 2021 Traffic Conditions

Intersection	App.	AM Peak Hour				PM Peak Hour			
		V/C[a] Ratio	95th % Queue (m)	Delay "Sec"	LOS	V/C[a] Ratio	95th % Queue (m)	Delay "Sec"	LOS
Eckhardt Ave and Moosejaw St.	EB	-	-	0.0	A	-	-	0.0	A
	WB	0.022	0.7	0.5	A	0.020	0.7	0.4	A
	NB	0.146	3.5	15.5	C	0.202	4.9	16.2	C
Moosejaw St. and Woodruff Ave.	WB	0.006	0.0	8.7	A	0.009	0.0	9.0	A
	NB	-	-	0.0	A	-	-	0.0	A
	SB	0.004	0.0	0.4	A	0.002	0.0	0.3	A
Moosejaw St. and Scott Ave.	EB	0.028	0.7	9.5	A	0.014	0.0	9.7	A
	WB	0.023	0.7	9.1	A	0.010	0.0	9.1	A
	NB	0.001	0.0	0.2	A	0.004	0.0	0.7	A
	SB	0.004	0.0	0.5	A	0.005	0.0	0.6	A
Timmins St. & N. Site Access / Scott Ave. **3-Way Stop**	**Overall**	**-**	**-**	**7.1**	**A**	**-**	**-**	**6.8**	**A**
	EB	0.006	0.0	7.4	A	0.012	0.0	6.9	A
	WB	0.028	0.7	7.3	A	0.019	0.7	7.2	A
	NB	0.011	0.0	6.6	A	0.015	0.0	6.4	A
Timmins St. and South Site Access	EB	0.005	0.0	8.9	A	0.006	0.0	8.4	A
	NB	0.001	0.0	1.0	A	-	0.0	0.0	A
	SB	-	-	0.0	A	-	-	0.0	A
Moosejaw St. and Conklin Ave.	EB	0.028	0.7	9.2	A	0.031	0.7	9.1	A
	WB	0.024	0.7	9.2	A	0.017	0.7	9.2	A
	NB	0.007	0.0	2.0	A	0.007	0.0	1.4	A
	SB	0.011	0.0	1.8	A	0.010	0.0	1.5	A
Moosejaw St. and Duncan Ave.	EB	0.012	0.0	0.4	A	0.022	0.7	0.7	A
	WB	-	-	0.0	A	-	-	0.0	A
	SB	0.118	2.8	12.0	B	0.114	2.8	13.5	B

[a] The V/C values presented are for the movements with highest V/C within that approach

4.2.2 Background 2022 and Background 2026 Traffic Conditions

LOS and capacity analyses results for the Background 2022 and Background 2026 traffic conditions are presented in **Table 8 and Table 9,** respectively.

Table 8: Capacity Analysis for Background 2022 Traffic Conditions

Intersection	App.	AM Peak Hour				PM Peak Hour			
		V/C[a] Ratio	95th % Queue (m)	Delay "Sec"	LOS	V/C[a] Ratio	95th % Queue (m)	Delay "Sec"	LOS
Eckhardt Ave and Moosejaw St	EB	-	-	0.0	A	-	-	0.0	A
	WB	0.022	0.7	0.5	A	0.021	0.7	0.4	A
	NB	0.152	3.5	15.8	C	0.208	5.6	16.5	C
Moosejaw St. and Woodruff Ave.	WB	0.006	0.0	8.8	A	0.009	0.0	9.0	A
	NB	-	-	0.0	A	-	-	0.0	A
	SB	0.004	0.0	0.4	A	0.002	0.0	0.3	A
Moosejaw St. and Scott Ave.	EB	0.028	0.7	9.6	A	0.014	0.0	9.7	A
	WB	0.023	0.7	9.1	A	0.010	0.0	9.1	A
	NB	0.001	0.0	0.2	A	0.004	0.0	0.7	A
	SB	-	0.0	0.5	A	0.005	0.0	0.6	A
Timmins St. & N. Site Access / Scott Ave. **3-Way Stop**	**Overall**	**-**	**-**	**7.1**	**A**	**-**	**-**	**6.8**	**A**
	EB	0.006	0.0	7.4	A	0.012	0.0	6.9	A
	WB	0.028	0.7	7.3	A	0.019	0.7	7.2	A
	NB	0.011	0.0	6.6	A	0.015	0.0	6.4	A
Timmins St. and South Site Access	EB	0.005	0.0	8.9	A	0.006	0.0	8.4	A
	NB	0.001	0.0	1.0	A	-	0.0	0.0	A
	SB	-	-	0.0	A	-	-	0.0	A
Moosejaw St. and Conklin Ave.	EB	0.028	0.7	9.2	A	0.031	0.7	9.1	A
	WB	0.024	0.7	9.2	A	0.017	0.7	9.2	A
	NB	0.007	0.0	2.0	A	0.007	0.0	1.4	A
	SB	0.011	0.0	1.8	A	0.010	0.0	1.5	A
Moosejaw St. and Duncan Ave.	EB	0.012	0.0	0.4	A	0.022	0.7	0.7	A
	WB	-	-	0.0	A	-	-	0.0	A
	SB	0.119	2.8	12.1	B	0.115	2.8	13.6	B

[a] The V/C values presented are for the movements with highest V/C within that approach

A review of **Table 8** indicates that all study intersections would continue to operate at acceptable levels of service under Background 2022 traffic conditions during the AM and PM peak hours including the stop-controlled approaches. All volume to capacity ratios (V/C) would be within the acceptable ranges. Therefore, none of the study intersections would require mitigations under Background 2022 traffic conditions.

Table 9: Capacity Analysis for Background 2026 Traffic Conditions

Intersection	App.	AM Peak Hour				PM Peak Hour			
		V/C[a] Ratio	95th % Queue (m)	Delay "Sec"	LOS	V/C[a] Ratio	95th % Queue (m)	Delay "Sec"	LOS
Eckhardt Ave and Moosejaw St.	EB	-	-	0.0	A	-	-	0.0	A
	WB	0.025	0.7	0.6	A	0.023	0.7	0.4	A
	NB	0.172	4.2	16.8	C	0.237	6.3	17.7	C
Moosejaw St. and Woodruff Ave.	WB	0.006	0.0	8.8	A	0.009	0.0	9.0	A
	NB	-	-	0.0	A	-	-	0.0	A
	SB	0.004	0.0	0.4	A	0.002	0.0	0.2	A
Moosejaw St. and Scott Ave.	EB	0.030	0.7	9.6	A	0.016	0.0	9.8	A
	WB	0.025	0.7	9.1	A	0.010	0.0	9.2	A
	NB	0.001	0.0	0.2	A	0.004	0.0	0.6	A
	SB	-	-	0.4	A	0.006	0.0	0.7	A
Timmins St. & N. Site Access / Scott Ave. **3-Way Stop**	**Overall**	**-**	**-**	**7.1**	**A**	**-**	**-**	**6.9**	**A**
	EB	0.006	0.0	7.4	A	0.012	0.0	6.9	A
	WB	0.029	0.7	7.3	A	0.022	0.7	7.2	A
	NB	0.012	0.0	6.6	A	0.016	0.0	6.5	A
Timmins St. and South Site Access	EB	0.005	0.0	8.9	A	0.006	0.0	8.4	A
	NB	0.001	0.0	1.0	A	-	0.0	0.0	A
	SB	-	-	0.0	A	-	-	0.0	A
Moosejaw St. and Conklin Ave.	EB	0.029	0.7	9.2	A	0.033	0.7	9.1	A
	WB	0.025	0.7	9.2	A	0.018	0.7	9.2	A
	NB	0.008	0.0	2.0	A	0.007	0.0	1.4	A
	SB	0.011	0.0	1.8	A	0.010	0.0	1.5	A
Moosejaw St. and Duncan Ave.	EB	0.013	0.0	0.4	A	0.025	0.7	0.7	A
	WB	-	-	0.0	A	-	-	0.0	A
	SB	0.132	3.5	12.5	B	0.131	2.8	14.2	B

[a] The V/C values presented are for the movements with highest V/C within that approach

A review of **Table 9** indicates that all study intersections would continue to operate at acceptable levels of service under Background 2026 traffic conditions during the AM and PM peak hours including the stop-controlled approaches. All volume to capacity ratios (V/C) would be within the acceptable ranges. Therefore, none of the study intersections would require mitigations under Background 2026 traffic conditions.

4.2.3 Background 2036 Traffic Conditions

The LOS and capacity analyses results for the Background 2036 traffic conditions are presented in **Table 10**.

Table 10: Capacity Analysis for Background 2036 Traffic Conditions

Intersection	App.	AM Peak Hour				PM Peak Hour			
		V/C[(a)] Ratio	95th % Queue (m)	Delay "Sec"	LOS	V/C[(a)] Ratio	95th % Queue (m)	Delay "Sec"	LOS
Eckhardt Ave and Moosejaw St.	EB	-	-	0.0	A	-	-	0.0	A
	WB	0.030	0.7	0.6	A	0.027	0.7	0.4	A
	NB	0.228	6.3	19.8	C	0.316	9.1	21.6	C
Moosejaw St. and Woodruff Ave.	WB	0.008	0.0	8.9	A	0.012	0.0	9.2	A
	NB	-	-	0.0	A	-	-	0.0	A
	SB	0.005	0.0	0.4	A	0.003	0.0	0.3	A
Moosejaw St. and Scott Ave.	EB	0.035	0.7	9.8	A	0.018	0.7	10.0	B
	WB	0.029	0.7	9.2	A	0.013	0.0	9.3	A
	NB	0.001	0.0	0.1	A	0.005	0.0	0.7	A
	SB	0.005	0.0	0.5	A	-	-	0.7	A
Timmins St. & N. Site Access / Scott Ave.	**Overall**	**-**	**-**	**7.2**	**A**	**-**	**-**	**6.9**	**A**
	EB	0.009	0.0	7.4	A	0.014	0.0	6.9	A
	WB	0.034	0.7	7.3	A	0.024	0.7	7.2	A
	NB	0.013	0.0	6.7	A	0.018	0.7	6.5	A
Timmins St. and South Site Access	EB	0.005	0.0	8.9	A	0.007	0.0	8.4	A
	NB	0.001	0.0	0.9	A	-	0.0	0.0	A
	SB	-	-	0.0	A	-	-	0.0	A
Moosejaw St. and Conklin Ave.	EB	0.033	0.7	9.3	A	0.039	0.7	9.2	A
	WB	0.031	0.7	9.4	A	0.022	0.7	9.3	A
	NB	0.008	0.0	2.0	A	0.008	0.0	1.4	A
	SB	0.013	0.0	1.8	A	0.012	0.0	1.5	A
Moosejaw St. and Duncan Ave.	EB	0.016	0.0	0.4	A	0.029	0.7	0.7	A
	WB	-	-	0.0	A	-	-	0.0	A
	SB	0.167	4.2	13.7	B	0.168	4.2	16.0	C

[(a)] The V/C values presented are for the movements with highest V/C within that approach

A review of **Table 10** indicates that all study intersections would continue to operate at acceptable levels of service under Background 2036 traffic conditions during the AM and PM peak hours including the stop-controlled approaches. All volume to capacity ratios (V/C) would be within the acceptable ranges. Therefore, none of the study intersections would require mitigations under Background 2036 traffic conditions.

4.2.4 Opening 2022 Traffic Conditions (Phase 1)

LOS and capacity analyses results for the Opening 2022 of Phase 1 traffic conditions for all study intersections are presented in **Table 11**.

Table 11: Capacity Analysis for Opening 2022 Traffic Conditions

Intersection	App.	AM Peak Hour				PM Peak Hour			
		V/C[a] Ratio	95th % Queue (m)	Delay "Sec"	LOS	V/C[a] Ratio	95th % Queue (m)	Delay "Sec"	LOS
Eckhardt Ave and Moosejaw St.	EB	-	-	0.0	A	-	-	0.0	A
	WB	0.027	0.7	0.6	A	0.034	0.7	0.7	A
	NB	0.226	6.3	16.5	C	0.260	7.0	17.6	C
Moosejaw St. and Woodruff Ave.	WB	0.006	0.0	8.9	A	0.009	0.0	9.2	A
	NB	-	-	0.0	A	-	-	0.0	A
	SB	0.004	0.0	0.4	A	0.002	0.0	0.2	A
Moosejaw St. and Scott Ave.	EB	0.075	1.4	9.9	A	0.038	0.7	10.0	B
	WB	0.023	0.7	9.1	A	0.012	0.0	9.3	A
	NB	0.001	0.0	0.2	A	0.005	0.0	0.7	A
	SB	-	-	0.4	A	0.005	0.0	0.5	A
Timmins St. & N. Site Access / Scott Ave.	**Overall**	**-**	**-**	**7.1**	**A**	**-**	**-**	**7.1**	**A**
	EB	0.006	0.0	7.5	A	0.012	0.0	7.0	A
	WB	0.043	0.7	7.5	A	0.065	1.4	7.5	A
	NB	0.047	0.7	6.8	A	0.038	0.7	6.6	A
Timmins St. and South Site Access	EB	0.005	0.0	9.1	A	0.006	0.0	8.6	A
	NB	0.001	0.0	0.2	A	-	0.0	0.0	A
	SB	-	-	0.0	A	-	-	0.0	A
Timmins St. and Phase 1 Access	EB	0.035	0.7	8.8	A	0.025	0.7	8.7	A
	NB	0.01	0.0	1.8	A	0.001	0.0	1.2	A
	SB	-	-	0.0	A	-	-	0.0	A
Moosejaw St. and Conklin Ave.	EB	0.030	0.7	9.1	A	0.034	0.7	9.1	A
	WB	0.024	0.7	9.2	A	0.017	0.7	9.2	A
	NB	0.008	0.0	2.1	A	0.008	0.0	1.6	A
	SB	0.011	0.0	1.8	A	0.010	0.0	1.5	A
Moosejaw St. and Duncan Ave.	EB	0.013	0.0	0.4	A	0.023	0.7	0.7	A
	WB	-	-	0.0	A	-	-	0.0	A
	SB	0.123	2.8	12.2	B	0.120	2.8	13.7	B

[a] The V/C values presented are for the movements with highest V/C within that approach

A review of **Table 11** indicates that all study intersections would continue to operate at acceptable levels of service under Phase 1 Opening 2022 traffic conditions during the AM and PM peak hours including the stop-controlled approaches. Therefore, none of the study intersections would require mitigations under Opening 2022 traffic conditions.

4.2.5 Interim 2026 Traffic Conditions (Phase 2)

LOS and capacity analyses results for the Interim 2026 of Phase 2 traffic conditions (with full site generated traffic volumes) are presented in **Table 12.**

Table 12: Capacity Analysis for Interim 2026 Traffic Conditions

Intersection	App.	AM Peak Hour				PM Peak Hour			
		V/C[(a)] Ratio	95th % Queue (m)	Delay "Sec"	LOS	V/C[(a)] Ratio	95th % Queue (m)	Delay "Sec"	LOS
Eckhardt Ave and Moosejaw St.	EB	-	-	0.0	A	-	-	0.0	A
	WB	0.037	0.7	0.8	A	0.056	1.4	1.0	A
	NB	0.372	11.9	20.0	C	0.383	11.9	21.9	C
Moosejaw St. and Woodruff Ave.	WB	0.007	0.0	9.2	A	0.010	0.0	9.5	A
	NB	-	-	0.0	A	-	-	0.0	A
	SB	0.004	0.0	0.3	A	0.002	0.0	0.1	A
Moosejaw St. and Scott Ave.	EB	0.149	3.5	10.5	B	0.079	2.1	10.4	B
	WB	0.025	0.7	9.1	A	0.012	0.0	9.5	A
	NB	0.001	0.0	0.2	A	0.005	0.0	0.6	A
	SB	0.004	0.0	0.3	A	-	-	0.4	A
Timmins St. and Phase 2 Site Access	EB	0.075	1.4	9.7	A	0.037	0.7	9.2	A
	NB	0.001	0.0	0.2	A	0.003	0.0	0.7	A
	SB	-	-	0.0	A	-	-	0.0	A
Timmins St. and Phase 1 Site Access	EB	0.032	0.7	8.8	A	0.020	0.7	8.8	A
	NB	0.001	0.0	0.4	A	0.002	0.0	1.3	A
	SB	-	-	0.0	A	-	-	0.0	A
Moosejaw St. and Conklin Ave.	EB	0.037	0.7	9.1	A	0.038	0.7	9.1	A
	WB	0.025	0.7	9.3	A	0.018	0.7	9.2	A
	NB	0.008	0.0	1.9	A	0.007	0.0	1.3	A
	SB	0.012	0.0	1.8	A	0.010	0.0	1.5	A
Moosejaw St. and Duncan Ave.	EB	0.014	0.0	0.4	A	0.029	0.7	0.8	A
	WB	-	-	0.0	A	-	-	0.0	A
	SB	0.145	3.5	12.6	B	0.143	3.5	14.5	B

[(a)] The V/C values presented are for the movements with highest V/C within that approach

A review of the **Table 12** indicates that all study intersections would continue to operate at acceptable levels of service under Interim 2026, Opening of Phase 2 traffic conditions during the AM and PM peak hours including the stop-controlled approaches. All volume to capacity ratios (V/C) would continue to be within the acceptable ranges. Therefore, none of the study intersections would require mitigations under the Interim 2026 of Phase 2 Opening traffic conditions.

4.2.6 Future 2036 Traffic Conditions

LOS and capacity analyses results for the Future 2036 traffic conditions (with full site generated traffic) for all study intersections are presented in **Table 13.**

Table 13: Capacity Analysis for Future 2036 Traffic Conditions

Intersection	App.	AM Peak Hour				PM Peak Hour			
		V/C[(a)] Ratio	95th % Queue (m)	Delay "Sec"	LOS	V/C[(a)] Ratio	95th % Queue (m)	Delay "Sec"	LOS
Eckhardt Ave and Moosejaw St.	EB	-	-	0.0	A	-	-	0.0	A
	WB	0.042	0.7	0.8	A	0.062	1.4	0.9	A
	NB	0.463	16.1	25.3	D	0.494	18.2	29.0	D
Moosejaw St. and Woodruff Ave.	WB	0.009	0.0	9.3	A	0.013	0.0	9.6	A
	NB	-	-	0.0	A	-	-	0.0	A
	SB	0.005	0.0	0.4	A	0.003	0.0	0.2	A
Moosejaw St. and Scott Ave.	EB	0.163	4.2	10.8	B	0.083	2.1	10.7	B
	WB	0.031	0.7	9.3	A	0.015	0.0	9.6	A
	NB	0.001	0.0	0.1	A	0.006	0.0	0.7	A
	SB	0.005	0.0	0.4	A	-	-	0.4	A
Timmins St. and Phase 2 Site Access	EB	0.076	1.4	9.8	A	0.037	0.7	9.2	A
	NB	0.001	0.0	0.2	A	0.003	0.0	0.7	A
	SB	-	-	0.0	A	-	-	0.0	A
Timmins St. and Phase 1 Site Access	EB	0.033	0.7	8.9	A	0.020	0.7	8.8	A
	NB	0.001	0.0	0.3	A	0.002	0.0	1.2	A
	SB	-	-	0.0	A	-	-	0.0	A
Moosejaw St. and Conklin Ave.	EB	0.041	0.7	9.2	A	0.044	0.7	9.2	A
	WB	0.031	0.7	9.4	A	0.022	0.7	9.3	A
	NB	0.008	0.0	1.9	A	0.008	0.0	1.3	A
	SB	0.013	0.0	1.8	A	0.012	0.0	1.5	A
Moosejaw St. and Duncan Ave.	EB	0.017	0.7	0.4	A	0.034	0.7	0.8	A
	WB	-	-	0.0	A	-	-	0.0	A
	SB	0.182	4.9	13.8	B	0.182	4.9	16.3	C

[(a)] The V/C values presented are for the movements with highest V/C within that approach

A review of the **Table 13** indicates that all study intersections would continue to operate at acceptable levels of service under Future 2036 traffic conditions during the AM and PM peak hours including the stop-controlled approaches. All volume to capacity ratios (V/C) would continue to be within the acceptable ranges. Therefore, none of the study intersections would require mitigations under the Future 2036 traffic conditions.

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4.3 Sight Distance Review

Timmins Street northbound and southbound approaches to/from the proposed Site Access points were reviewed in the field to make sure no obstructions exist. The review covered approximately more than 200 metres to the south of the site access intersections. There is nothing that would obstruct driver views to the south and to the north of the proposed access points intersection. It should be noted that the minimum sight distance required to be available as per 2017 TAC standards for site access intersections is 125 metres.

Field measurement indicated that for Phase 1 site access, more than 140 metres sight line distance is available to/from the south and north directions. For proposed Phase 2 site access point, approximately 140 metres sight line distance is also available to/from the south. However, for the north direction, only 30 metres sight line is available. This is because Timmins Street intersects with Scott Avenue, where Timmins Street ends. The 30-metre intersection sight distance to the north is enough as the vehicles entering Timmins Street would be entering with a left-turn and their speeds would be very low, ranging between 10 to 20 Km/hr. Hence, approaching drivers would be able to easily observe any vehicle exiting the proposed site access. Therefore, no sight distance issues would be expected at the proposed Phase 1 and Phase 2 site access intersections.

4.4 Traffic Signal Warrant Analysis

Traffic signal installation warrants were conducted for the Eckhardt Avenue and Moosejaw Street intersection for the ultimate Future 2036 traffic volume scenario. The purposes of this analysis were to determine if the installation of traffic signal control would be warranted and when it would become warranted. The signal warrant analyses were performed in accordance with Transportation Association of Canada (TAC) standards and utilizing TAC warrants table.

The 6-hour traffic volumes for each analysis scenario considered were estimated as follows:

- AM peak hour volumes presented on the corresponding scenario figure were used for the 2 AM hours in TAC warrants table.
- PM peak hour volumes presented on the corresponding scenario figure were used for the 2 PM hours in TAC warrants table.
- To estimate the 2 mid-day hours, 85% of the AM volumes were used for one hour and 85% of the PM volumes were used for the second hour.

Note that the 85% midday to peak hour factor is based on Addoz Engineering Inc.'s experience with similar areas and projects. The 85% percentage was utilized by applying it on the AM and the PM peak hour volumes to estimate midday peak hour volumes as described in the above bullets.

Table 14 presents a summary of the traffic signal warrant analysis results for Eckhardt Avenue and Moosejaw Street intersection. Since the resulting score is 58, installation of a traffic signal control at this intersection would not be warranted under the **Future 2036** conditions (with full site generated traffic). The worksheet results for TAC's traffic signal warrant analysis are included in **Appendix E**.

Table 14: TAC Signal Warrant Analysis for 2036 Traffic Conditions

Intersection	Warranting Score	Traffic Signal, Warranted?
Eckhardt Avenue and Moosejaw Street	58	NO

The traffic signal warrant analysis for the Interim 2026 and the Opening 2022 conditions were not conducted because the traffic volumes are much lower than Future 2036 volumes. Therefore, traffic signal installation would not be warranted under these two scenarios at this intersection.

5.0 PEDESTRIAN, CYCLING AND TRANSIT NETWORKS EVALUATION

5.1 Pedestrian Network

The field review indicated that in the immediate area where the proposed LIV MIDTOWN development project would be located, sidewalks exist on one side of the road, as per the following details:

- Timmins Street, sidewalk exists on the west side.
- Scott Avenue, sidewalk exists on the north side.
- Moosejaw Street, sidewalk exists on the east side.

On Eckhardt Avenue, sidewalks exist on both sides of the road in the vicinity of Moosejaw Street intersection, both east and wet of the intersection.

Additionally, AEI completed a thorough review of the City of Penticton's '2005 Transportation Study – Phase 2 – Final Technical Report' document as well as the December 2020 "Integrated Infrastructure Master Plan – Transportation Portion Update" with concentration on the pedestrian network. The results of this review indicated that promoting walking is one of the top priorities of the City of Penticton's transportation plan. As mentioned in the 2005 Transportation Study the mainly level topography west of Government Street and overall climate of Penticton are favourable for walking conditions. Penticton streets are well provided with sidewalks on major streets, but tends to be sporadic on local streets, and there is an excellent trail network throughout the city.

The project's strategic location west of Government Street, within the mainly level areas lend itself to encouraging walking as a means of travel. Additionally, the site is located within a 15-minute walk to amenities and services as well as commercial uses along Main Street.

Based on the above review it can be concluded that the proposed project area is already served with pedestrian sidewalks. Additionally, the City of Penticton has long term plans for improving walking all over the City. This has been determined based on the review of the December 2020 "Integrated Infrastructure Master Plan – Transportation Portion Update", which identified the roads and streets that do not have sidewalks and City's prioritization principles. Among these principles are the following:

- Proactive focus on infill growth areas.
- Known pedestrian generators: parks, schools, shopping, employment, community centres, recreation centres and transit.
- Prioritize vulnerable users: seniors, children, and people with mobility restrictions.
- Gaps in sidewalk network according to bylaw requirements (one or both sides).

5.2 Cycling Network

The proposed LIV DOWNTOWN development is planned to provide a total of 147 bicycle parking stalls. These stalls will be distributed between each of the two phases with the following details:

Phase 1

- Class 1 bike parking stalls - 52
- Class 2 bike parking stalls - 10

Phase 2

- Class 1 bike parking stalls - 70
- Class 2 bike parking stalls - 15

Note that Class 1 would have bike parking located in lockers / rooms with lockable doors. Class 2 would only have bike parking racks.

As part of this TIA, a review of Penticton's cycling network has been completed. AEI reviewed the 'the City of Penticton's '2005 Transportation Study – Phase 2 – Final Technical Report' document as well as the December 2020 "Integrated Infrastructure Master Plan – Transportation Portion Update" with concentration on the cycling network. The results of this review indicated that cycling is a convenient, relatively low cost and a practical alternative for vehicle travel for short trips and is an important and growing mobility option for Penticton residents. The City of Penticton recognizes the benefits of cycling to individuals, the community, and the environment. Cycling is enjoyable, efficient, affordable, healthy, sociable, and a non-polluting form of transportation. With that said, the December 2020 plan identified the following issues from advisory group to be considered for improving cycling in Penticton including:

1. Establish Penticton as a cycling hub for tourism.
2. Add a bike facility on Lakeside Road.
3. Re-evaluate the bike route on Carmi Avenue vs Duncan Avenue.
4. Improve bike parking at transit stops.
5. Add bike repair areas along the KVRT.
6. Address regulations for micro-mobility such as motorized scooters and e-bikes.

City of Penticton's Cycling Infrastructure Prioritization Principles

- Update the bike network plan per BC MOTI Active Transportation Guidelines.
- Prioritize cycling infrastructure improvements that address safety.
- Construct routes that connect to key destinations in the infill growth areas:
    - Schools and Okanagan College

- Employment centres, and major retail and service areas
- Downtown
- Parks and beaches

- Construct the Lake-to-Lake bike route.
- Improve street connections to major trails.

Therefore, the City of Penticton is considering long-term cycling plan that includes related strategies that are designed to provide cycling facilities and programs to make cycling comfortable convenient and accessible for people of all ages and abilities. All these strategies would encourage more residents to utilize the bicycle for their transportation needs.

5.3 Transit System Network

The City of Penticton's goal is to support public transit as a comfortable, affordable, safe, and convenient means of local and regional transportation. Public transit is the primary alternative to automobile travel in Penticton and across the region. Transit can often be the only option for people who do not drive, for travelling to jobs, school, shopping areas, and recreational centres. Public transit can also reduce overall environmental and community impacts of vehicle transportation. Penticton Transit System is a service cost-shared between the City of Penticton and BC Transit.

Penticton Transit has a modern fleet of "low floor" transit buses that are fully accessible. Buses operate six days a week excluding statutory holidays. During summer, a lake-to-lake route is offered every Sunday and holiday from the last Sunday in June to Labour Day in September.

The proposed development is located such that public transit is easily accessed along Duncan Avenue at the south end of Okanagan College, which is only 11-minute walking distance from the development site. Therefore, the proposed development can be considered already served with the public transit system.

6.0 CONCLUSIONS AND RECOMMENDATIONS

This study analyzed the traffic impacts of the proposed LIV MIDTOWN Development to be located at 955 Timmins Street, Penticton, British Columbia. The proposed development will consist of two phases, Phase 1 will include 23 townhouses and 78 apartment units and Phase 2 will include 63 townhouses and 78 apartment units. The estimated number of total site generated trips entering and exiting the development (Full Development) would be 96 trips during the AM peak hour, and 117 trips during the PM peak hour, and 1,486 trips daily. The following conclusions have been reached by this traffic impact assessment study:

- LOS and capacity analyses indicated that under the Existing 2021 traffic conditions, all five major study intersections as well as the two site access intersections are currently operating at acceptable levels of service with ample capacities. Therefore, mitigations are not needed at any of the study intersections under existing traffic conditions.

- Background 2022, Background 2026 and Background 2036 LOS and capacity analyses results for all study intersections indicated they would continue to operate at acceptable levels of service without any capacity issues. Therefore, no mitigations would be needed under these three background traffic conditions.

- Opening 2022 and Interim 2026 (Phase 2 Opening) traffic conditions capacity analyses for all study intersections indicated they would continue to operate at acceptable levels of service. Therefore, no mitigation would be needed under the Opening 2022 or 2026 traffic conditions.

- Future 2036 traffic conditions capacity analyses for the five major study intersections as well as the two site access intersections indicated they would continue to operate at acceptable levels of service without any capacity issues. Therefore, no mitigations would be needed under the Future 2036, with site traffic conditions.

- A field sight distance review was completed for Timmins Street northbound and southbound approaches to/from the proposed Site Access points. The review covered approximately more than 200 metres to the south of the site access intersections. There is nothing that would obstruct driver views to the south and to the north of the proposed access points intersection.

- The sight distance review further indicated that the minimum sight distance required to be available as per 2017 TAC standards for site access intersection is 125 metres.

- Field measurement indicated that for Phase 1 site access, more than 140 metres sight line distance is available to/from the south and north directions.

- For proposed Phase 2 site access point, approximately 140 metres sight line distance is available to/from the south. However, for the north direction, only 30 metres sight line is available.

- The 30-metre intersection sight distance to the north is considered adequate as the vehicles entering Timmins Street would be entering with a WB left-turn off Scott Avenue and their speeds would be very low, ranging between 10 to 20 Km/hr. The low turning speed would allow drivers to be able to easily sight the proposed access. Therefore, no safety issues would be expected.

- Traffic signal control warrant analyses were performed for the Eckhardt Avenue and Moosejaw Street intersection based on Transportation Association of Canada standards. The results indicated that a traffic signal installation would not be warranted under the 2036 traffic conditions.

- AEI completed a thorough review of the City of Penticton's '2005 Transportation Study – Phase 2 – Final Technical Report' document as well as the December 2020 "Integrated Infrastructure Master Plan – Transportation Portion Update" to help in the evaluation of the pedestrian, cycling and transit networks.

- Based on the completed pedestrian network review it can be concluded that the proposed project area is already served with pedestrian sidewalks. The completed review indicated sidewalks exist on one side of the road along Timmins Street, Scott Avenue and Moosejaw Street. Also, sidewalks exist on both sides of Eckhardt Avenue in the vicinity of Moosejaw Street intersection.

- The proposed development is located within a 15-minute walk to amenities and services as well as commercial uses along Main Street.

- The proposed development encourages cycling as a total of 147 bike parking stalls are provided with 122 bike parking stalls located in lockers/rooms with lockable doors and 25 stalls on bike parking racks.

- The cycling network review indicates that the City of Penticton is considering long-term cycling plans that includes related strategies that are designed to provide cycling facilities and programs to make cycling comfortable convenient and accessible for people of all ages and abilities.

- City of Penticton's cycling plans being considered would encourage more residents to utilize the bicycle for their transportation needs.

- The transit network system review indicated that the City of Penticton's goal is to support public transit as a comfortable, affordable, safe, and convenient means of local and regional transportation.

- Penticton Transit has a modern fleet of "low floor" transit buses that are fully accessible. Buses operate six days a week excluding statutory holidays. During summer, a lake-to-lake route is offered every Sunday and holiday from the last Sunday in June to Labour Day in September.

- The proposed development is located such that public transit is easily accessed along Duncan Avenue at the south end of Okanagan College, which is only 11-minute walking distance from the development site.

In summary, this traffic impact assessment concludes that the proposed LIV MIDTOWN Residential Development will have very minor impacts on the traffic operations of the future road network.

Yours truly,

ADDOZ ENGINEERING INC

September 14, 2021

Prepared by:

Emad Alsaidi, PhD, PEng, PE
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E-mail: ealsaidi@addozeng.ca
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APPENDICES

A Transportation Impact Assessment (TIA) Report

For

LIV MIDTOWN DEVELOPMENT

955 Timmins Street, Penticton, British Columbia

Prepared for

RADEC GROUP

APPENDICES

May 31, 2021

ADDOZ ENGINEERING INC

ADDOZ ENGINEERING INC
Clients are Our First Priority

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Calgary, AB T3P 0H9
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Appendix A

Project Development Site Plans

PROJECT INFORMATION

PROJECT NAME	LIV MIDTOWN
PROJECT NUMBER	18209
MUNICIPAL ADDRESS	955 TIMMINS ST PENTICTON, BC
CURRENT ZONING	M1 GENERAL INDUSTRIAL
PROPOSED ZONING	RM 3 MEDIUM DENSITY MULTIPLE HOUSING
CURRENT OCP	INDUSTRIAL & URBAN RESIDENTIAL
PROPOSED OCP	URBAN RESIDENTIAL

PROJECT DESCRIPTION

The proposed development supports sustainable growth within the City of Penticton boundaries, where residents live, work, shop and play nearby, and have easy access to daily needs and activities. The project will transform an underutilized industrial lot into a diverse residential community providing a variety of rental and strata housing options for families and young people.

AMENITIES
The site is located within a 15 minute walk to amenities including the Community Centre, Okanagan College, schools and commercial/shopping areas. Green space surrounding the site and landscape design will augment what is currently a blank industrial site, creating a welcome edge to the north side of Okanagan College. The Rowhouse apartments are provided with private patios and gardens at ground level ideal for families with children. Shared amenities such as community gardens and picnic areas are provided on site in the shared green spaces.

GREEN AND ENERGY EFFICIENT
Each housing unit has been designed with maximum access to light and air, and each townhouse unit also benefits from a backyard for a variety of outdoor living situations. The proposed development will provide simple yet durable housing construction that is low in energy consumption and decreases the overall impact of housing development on our environment.

TRANSPORTATION
The site is located within a 15 minute walk to amenities and services as well as commercial uses along Main Street. Public Transit is easily accessed along Duncan Avenue at the south end of Okanagan College.

ZONING COMPLIANCE TABLE

Bylaw Reference	Bylaw Description	Allowable	PROPOSED - PHASE 1	PROPOSED - PHASE 2
10.9	RM3 – Medium Density Multiple Housing			
	The purpose of this zone is to provide a zone for medium density multiple housing up to six (6) storeys above grade on urban services.	TOWNHOUSE/ APARTMENT	2 STOREY TOWNHOUSES & 5 STOREY APARTMENT BUILDINGS	2 STOREY TOWNHOUSES & 5 STOREY APARTMENT BUILDINGS
10.9.1	PERMITTED USES			
	.1 accessory use, building or structure			
	.2 apartment		APARTMENT	APARTMENT 2 - STRATA UNITS
	.3 congregate housing			
	.4 day care centre, major			
	.5 day care centre, minor			
	.6 extended care residence			
	.7 minor home occupation (subject to specific use regulation 7.3)			
	.8 townhouse		3 BEDROOM TOWNHOUSES	3 BEDROOM TOWNHOUSES
	.9 vacation rental (subject to specific use regulation 7.6)		VACATION RENTALS	
10.9.2	SUBDIVISION AND DEVELOPMENT REGULATIONS			
	.1 Minimum lot width:	25 m	60.15m	151.9m
	.2 Minimum lot area:	1400 m2	8,887 m2	18,008 m2
	.3 Maximum lot coverage:	50%	34.3%	38.7%
	.4 Maximum density:	1.6 FAR	0.90	0.82
	.5 Maximum Height: i. principal building	24 m	TOWNHOUSES - 8.6m / APARTMENT 1 - 17.2m	TOWNHOUSES - 8.6m / APARTMENT 2 - 17.2m
	ii. accessory building or structure	4.5 m	N/A	N/A
	.6 Minimum front yard (subject to general development regulation 4.2.5):	3.0 m	3.0m	3.0m
	.7 Minimum side yard:			
	i. interior side yard	4.5m	4.5m	4.5m
	ii. exterior side yard	4.5 m	4.5m	4.5m
	.8 Minimum rear yard:	6.0 m	15.1m	19.4m
10.9.3	AMENITY SPACE			
	.1 Amenity space shall be provided at the rate of 20 m2 for each dwelling unit.		TOWNHOUSES - 20m2 private yard.	TOWNHOUSES - 20m2 private yard.
	.2 25% of the required amenity space must be provided at the ground floor level.			
10.9.4	OTHER REGULATIONS			
	.1 A maximum of 60% of the lot shall be covered with hard surfacing, including buildings, structures, parking areas, driveways, walkways, patios and similar construction.	60%	60%	59%
6.1	OFF-STREET PARKING			
	Apartment, Townhouse, Cluster Home,...	1.25 spaces/unit	126 req,d — 126 provided	176 req'd — 215 provided
6.4	OFF-STREET BICYCLE PARKING			
	Class 1	0.5 spaces/unit	50 req'd — 52 provided	70 req'd — 70 provided
	Class 2	0.1 spaces/unit	10 req'd — 10 provided	14 req'd — 15 provided

PHASE 1

LOT COVERAGE - Phase 1

Name	Count	Area (sq.m.)	Area (sq.ft.)	%
3 UNIT TOWNHOUSE	1	247 m²	2655.9 ft²	2.8%
4 UNIT TOWNHOUSE	5	1647 m²	17723.2 ft²	18.5%
APARTMENT 1	1	1154 m²	12425.5 ft²	13.0%
Grand total		3048 m²	32804.6 ft²	34.3%

FLOOR AREA RATIO - Phase 1

Name	Area (sq.m.)	Area (sq.ft.)	F.A.R.
3 unit townhouse phase 1	403.87 m²	4347.22 ft²	0.05
4 unit townhouse phase 1	2692.44 m²	28981.16 ft²	0.30
apartment 1	4865.30 m²	52369.61 ft²	0.55
	7961.60 m²	85697.99 ft²	0.90

AMENITY SCHEDULE - Phase 1

Name	Location	Area (sq.m.)	Area (sq.ft.)
COMMON AMENITY SPACE	apartment 1	78 m²	840 ft²
PRIVATE AMENITY	3 unit townhouse phase 1	60 m²	647 ft²
PRIVATE AMENITY	4 unit townhouse phase 1	401 m²	4312 ft²
PRIVATE AMENITY	apartment 1	446 m²	4796 ft²
Grand total		984 m²	10595 ft²

BUILDING SCHEDULE & REQUIRED PARKING - Phase 1

Building Type	# of Buildings	Total Units	Stalls / Unit	Req'd Stalls	Req'd Bike C-1	Req'd Bike C-2
3 unit townhouse phase 1.rvt	1	3	1.25	3.75	1.5	0.3
4 unit townhouse phase 1.rvt	5	20	1.25	25.00	10	2
apartment 1.rvt	1	78	1.25	97.50	39	7.8
	7	101		126.25	50.5	10.1

ZONING BYLAW # 17,42 Where calculation of the required number of parking spaces yields a fractional number, the required number of spaces shall be rounded down to the nearest whole number.

PROPOSED PARKING - Phase 1

Type	Type	Count
APARTMENT 1 - PARKADE	CoP -3.0m X 5.8m	7
APARTMENT 1 - PARKADE	CoP - 2.7m X 5.8m	30
SURFACE PARKING	CoP 3.7m X 5.8m (HANDICAP)	2
SURFACE PARKING	CoP - 2.5m X 5.6m (small car)	25
SURFACE PARKING	CoP - 2.5m X 7.0m (small car)	3
SURFACE PARKING	CoP - 2.7m X 5.8m	36
TOWNHOUSE PARKING	CoP - 2.7m X 5.8m	23
		126

PROPOSED BIKE PARKING - Phase 1

Type	Type	Count
BIKE PARKING	Class 1 Bike Parking	52
BIKE PARKING	Class 2 Bike Parking	10
		62

PHASE 2

LOT COVERAGE - Phase 2

Name	Count	Area	Area (sq.ft.)	%
3 UNIT TOWNHOUSE	5	1234 m²	13279.7 ft²	6.9%
4 UNIT TOWNHOUSE	12	3952 m²	42535.7 ft²	21.9%
APARTMENT 2	1	1790 m²	19264.6 ft²	9.9%
Grand total		6975 m²	75080.0 ft²	38.7%

FLOOR AREA RATIO - Phase 2

Name	Area (sq.m.)	Area (sq.ft.)	F.A.R.
3 unit townhouse phase 2	2019.35 m²	21736.08 ft²	0.11
4 unit townhouse phase 2	6461.85 m²	69554.79 ft²	0.36
apartment 2	6219.17 m²	66942.59 ft²	0.35
	14700.37 m²	158233.46 ft²	0.82

AMENITY SCHEDULE - Phase 2

Name	Location	Area (sq.m.)	Area (sq.ft.)
COMMON AMENITY SPACE	apartment 2	162 m²	1746 ft²
		162 m²	1746 ft²
PRIVATE AMENITY	3 unit townhouse phase 2	300 m²	3234 ft²
PRIVATE AMENITY	4 unit townhouse phase 2	961 m²	10348 ft²
PRIVATE AMENITY	apartment 2	817 m²	8799 ft²
		2079 m²	22381 ft²
Grand total		2241 m²	24127 ft²

BUILDING SCHEDULE & REQUIRED PARKING - Phase 2

Building Type	# of Buildings	Total Units	Stalls per Unit	Req'd Stalls	Req'd Bike C-1	Req'd Bike C-2
3 unit townhouse phase 2.rvt	5	15	1.25	18.75	7.5	1.5
4 unit townhouse phase 2.rvt	12	48	1.25	60	24	4.8
apartment 2.rvt	1	78	1.25	97.5	39	7.8
	18	141		176.25	70.5	14.1

ZONING BYLAW # 17,42 Where calculation of the required number of parking spaces yields a fractional number, the required number of spaces shall be rounded down to the nearest whole number.

PROPOSED PARKING - Phase 2

Type	Type	Count
APARTMENT 2 - PARKADE	CoP -3.0m X 5.8m	9
APARTMENT 2 - PARKADE	CoP - 2.7m X 5.8m	48
SURFACE PARKING	CoP 3.7m X 5.8m (HANDICAP)	2
SURFACE PARKING	CoP - 2.7m X 5.8m	94
TOWNHOUSE PARKING	CoP - 2.7m X 5.8m	62
		215

PROPOSED BIKE PARKING - Phase 2

Type	Type	Count
BIKE PARKING	Class 1 Bike Parking	70
BIKE PARKING	Class 2 Bike Parking	15
		85

PHASE 1 & 2

LOT COVERAGE - All Phases

Name	Count	Area	Area (sq.ft.)	%
3 UNIT TOWNHOUSE	6	1480 m²	15935.6 ft²	5.5%
4 UNIT TOWNHOUSE	17	5598 m²	60258.9 ft²	20.8%
APARTMENT 2	1	1790 m²	19264.6 ft²	6.7%
APARTMENT 1	1	1154 m²	12425.5 ft²	4.3%
Grand total		10023 m²	107884.6 ft²	37.3%

FLOOR AREA RATIO - All Phases

RVT Link: File Name	Area (sq.m.)	Area (sq.ft.)	F.A.R.
3 unit townhouse phase 1	403.87 m²	4347.22 ft²	0.02
3 unit townhouse phase 2	2019.35 m²	21736.08 ft²	0.08
4 unit townhouse phase 1	2692.44 m²	28981.16 ft²	0.10
4 unit townhouse phase 2	6461.85 m²	69554.79 ft²	0.24
apartment 1	4865.30 m²	52369.61 ft²	0.16
apartment 2	6219.17 m²	66942.59 ft²	0.23
	22661.97 m²	243931.45 ft²	0.84

AMENITY SCHEDULE - All Phases

Name	Location	Area (sq.m.)	Area (sq.ft.)
COMMON AMENITY SPACE	apartment 1	78 m²	840 ft²
COMMON AMENITY SPACE	apartment 2	162 m²	1746 ft²
		240 m²	2587 ft²
PRIVATE AMENITY	3 unit townhouse phase 1	60 m²	647 ft²
PRIVATE AMENITY	3 unit townhouse phase 2	300 m²	3234 ft²
PRIVATE AMENITY	4 unit townhouse phase 1	401 m²	4312 ft²
PRIVATE AMENITY	4 unit townhouse phase 2	961 m²	10348 ft²
PRIVATE AMENITY	apartment 1	446 m²	4796 ft²
PRIVATE AMENITY	apartment 2	817 m²	8799 ft²
		2985 m²	32135 ft²
Grand total		3226 m²	34722 ft²

BUILDING SCHEDULE & REQUIRED PARKING - All...

Building Type	# of Buildings	Total Units	Stalls / Unit	Req'd Stalls
3 unit townhouse phase 1.rvt	1	3	1.25	3.75
3 unit townhouse phase 2.rvt	5	15	1.25	18.75
4 unit townhouse phase 1.rvt	5	20	1.25	25.00
4 unit townhouse phase 2.rvt	12	48	1.25	60.00
apartment 1.rvt	1	78	1.25	97.50
apartment 2.rvt	1	78	1.25	97.50
	25	242		302.50

ZONING BYLAW # 17,42 Where calculation of the required number of parking spaces yields a fractional number, the required number of spaces shall be rounded down to the nearest whole number.

PROPOSED PARKING - All Phases

Type	Type	Count
APARTMENT 1 - PARKADE	CoP -3.0m X 5.8m	7
APARTMENT 1 - PARKADE	CoP - 2.7m X 5.8m	30
		37
APARTMENT 2 - PARKADE	CoP -3.0m X 5.8m	9
APARTMENT 2 - PARKADE	CoP - 2.7m X 5.8m	48
		57
SURFACE PARKING	CoP 3.7m X 5.8m (HANDICAP)	4
SURFACE PARKING	CoP - 2.5m X 5.6m (small car)	25
SURFACE PARKING	CoP - 2.5m X 7.0m (small car)	3
SURFACE PARKING	CoP - 2.7m X 5.8m	130
		162
TOWNHOUSE PARKING	CoP - 2.7m X 5.8m	85
		85
Grand total		341

RADEC GROUP

RADEC GROUP
955 TIMMINS ST
PENTICTON, BC V2A 5V3

250.492.0069

NOTES:

Revision Schedule

Date	#	Description
2021-02-12	1	Issued for Coordination
2021-02-22	2	Issued for Coordination
2021-03-01	3	Issued for Review
2021-04-09	4	Issued for Zoning/OCP Amendment
2021-06-04	5	Issued for Zoning/OCP Amendment Rev1

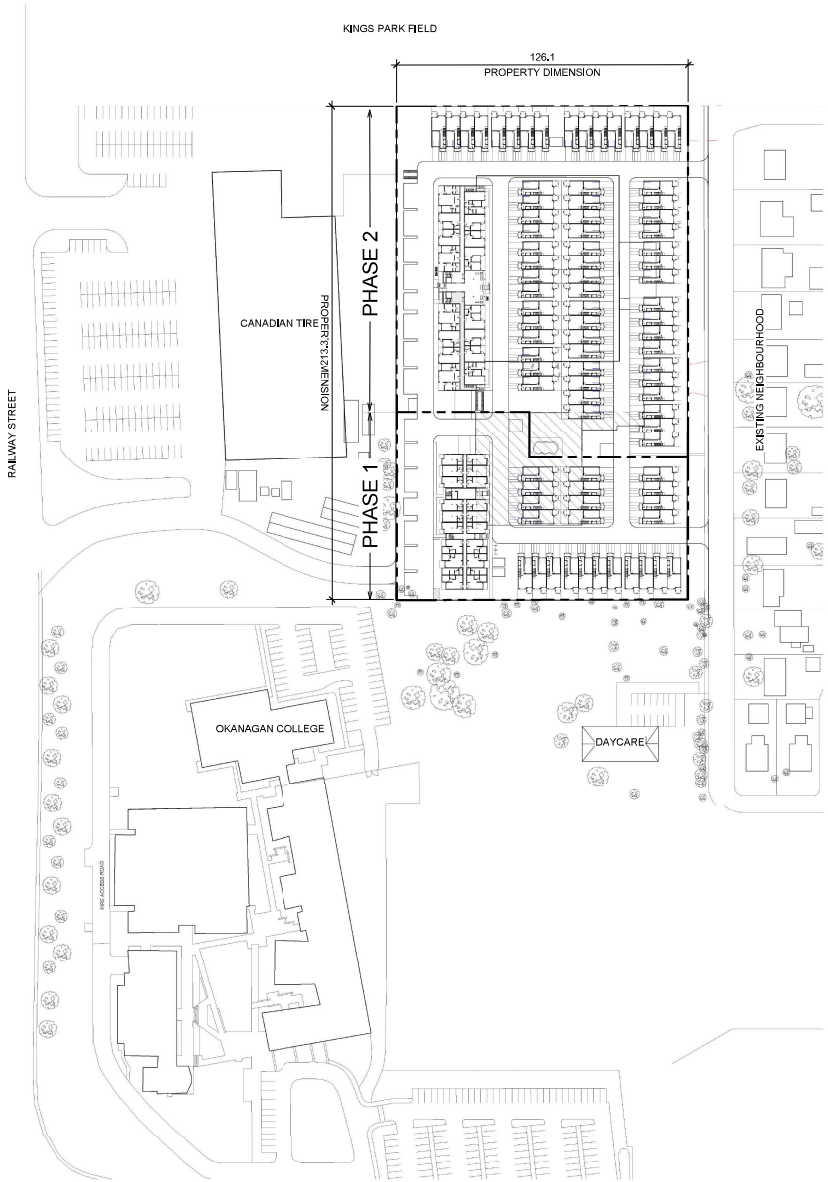
PROJECT
LIV MIDTOWN

ADDRESS
955 TIMMINS ST
PENTICTON, BC

SHEET TITLE
PROJECT INFORMATION

DRAWN BY LM

SHEET No.
a00-10



1 Context Plan
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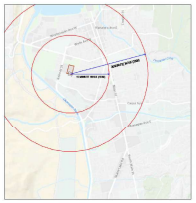
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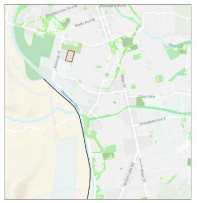

GREENSPACE NETWORK

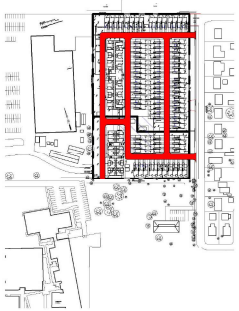

CYCLING NETWORK


PRIMARY STREET NETWORK

PEDESTRIAN NETWORK

OPEN SPACE NETWORK

PROPOSED INTERNAL ROAD NETWORK



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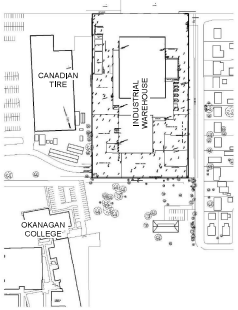
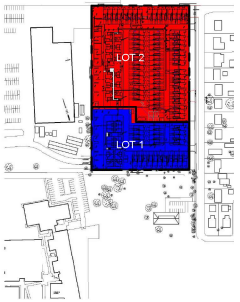
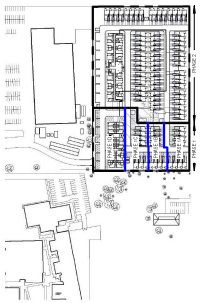


PROPOSED SUBDIVISION



PROPOSED PHASING



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PENTICTON, BC V2A 5V3

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NOTES:

Revision Schedule

Date	#	Description
2021-02-12	1	Issued for Coordination
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2021-06-04	5	Issued for Zoning/OCP Amendment Rev1

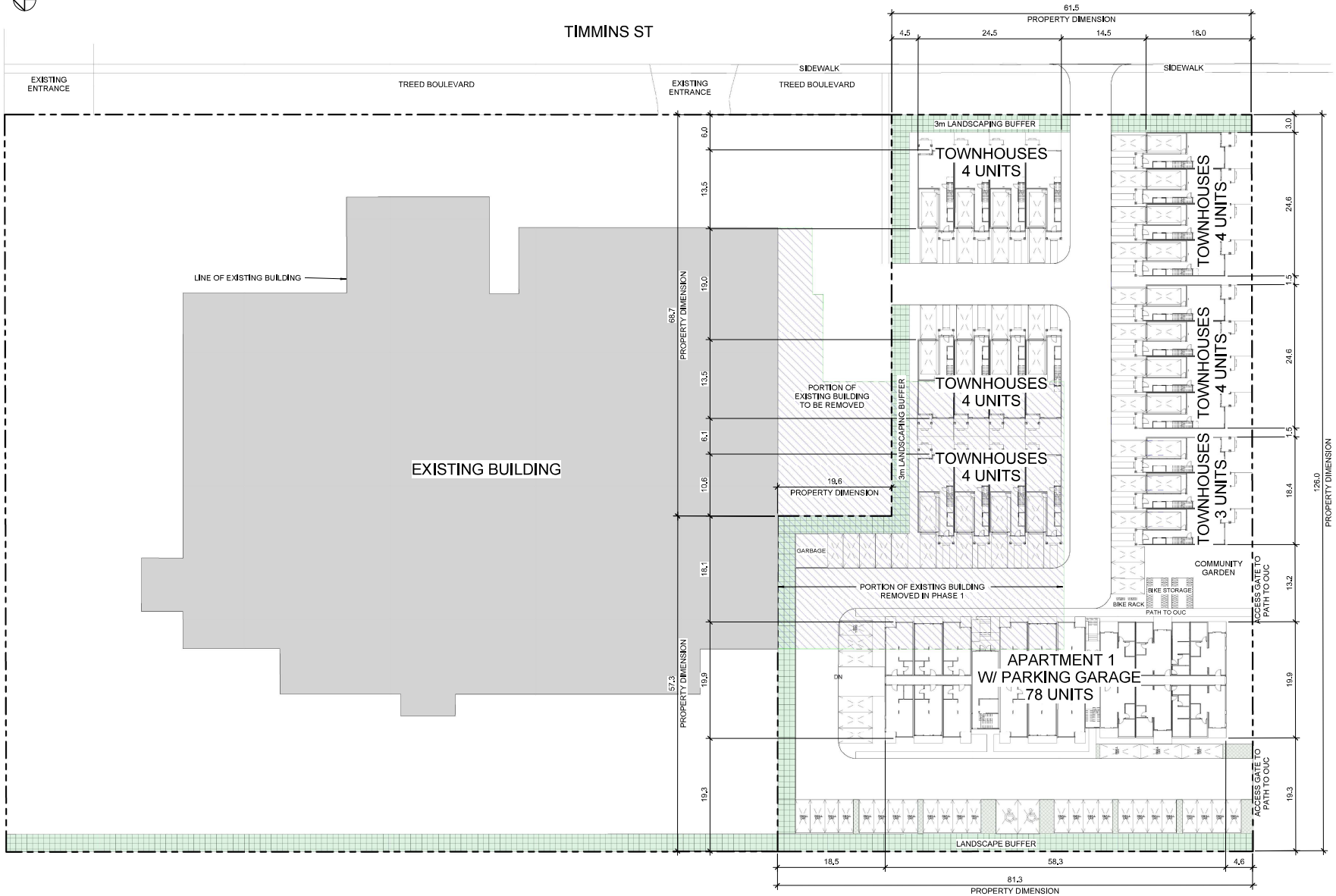
PROJECT
LIV MIDTOWN

ADDRESS
955 TIMMINS ST
PENTICTON, BC

SHEET TITLE
CONTEXT INFORMATION

DRAWN BY LM

SHEET No.
a00-20



1 Site Plan - Phase 1
1 : 300

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955 TIMMINS ST
PENTICTON, BC V2A 5V3

250.492.0069

NOTES:

Revision Schedule

Date	#	Description
2021-02-12	1	Issued for Coordination
2021-02-22	2	Issued for Coordination
2021-03-01	3	Issued for Review
2021-04-09	4	Issued for Zoning/OCP Amendment
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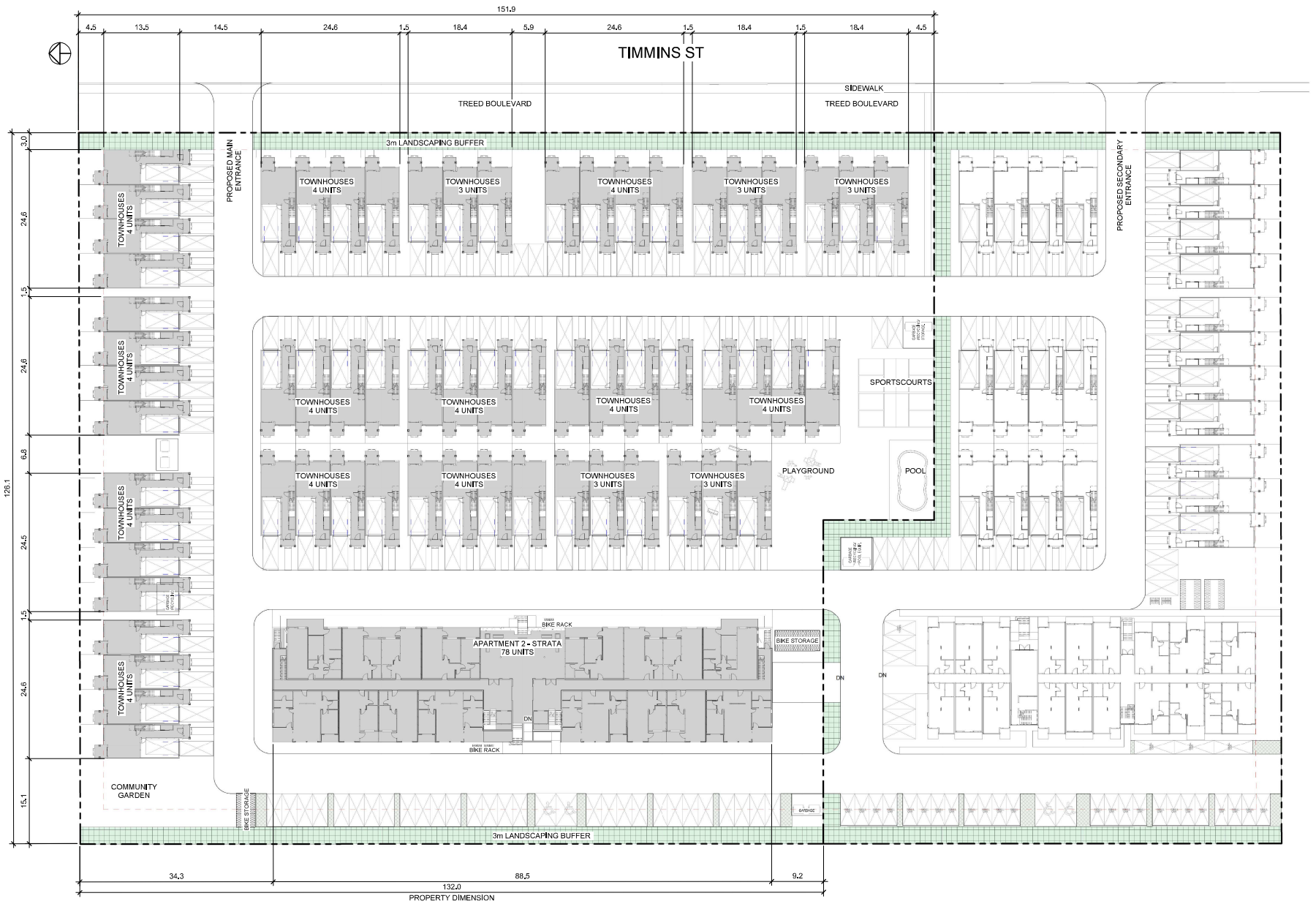
PROJECT
LIV MIDTOWN

ADDRESS
955 TIMMINS ST
PENTICTON, BC

SHEET TITLE
SITE PLAN - PHASE 1

DRAWN BY LM

SHEET No.
a10-10



1 Site Plan - Phase 2
1 : 300

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955 TIMMINS ST
PENTICTON, BC V2A 5V3

250.492.0069

NOTES:

Revision Schedule

Date	#	Description
2021-03-01	3	Issued for Review
2021-04-09	4	Issued for Zoning/OCP Amendment
2021-06-04	5	Issued for Zoning/OCP Amendment Rev1

PROJECT
LIV MIDTOWN

ADDRESS
955 TIMMINS ST
PENTICTON, BC

SHEET TITLE
SITE PLAN - PHASE 2

DRAWN BY LM

SHEET No.
a10-20

Appendix B

2017 Historical Traffic Count Data (EASL)

Intersection: Eckhardt Avenue and Orchard Ave - Caribou St.
Count Date: 6-Jun-17
Count Day: Tuesday
Counted By: EASL Transportation Consultants, Inc.

ALL VEHICLES

AM Peak Hour Traffic Count at Eckhardt Avenue and Orchard Ave - Caribou St. Intersection

Time Period	Eckhardt Ave Eastbound			Eckhardt Ave Westbound			Orchard Ave Southbound			Caribou St Southbound			Sum	4-P Total	PHF
AM	L	T	R	L	T	R	L	T	R	L	T	R			
7:00 - 7:15	7	54	0	0	42	1	0	0	5	0	0	0	109		
7:15 - 7:30	3	46	0	0	54	0	0	0	5	4	0	0	112		
7:30 - 7:45	4	48	0	0	67	0	0	0	5	0	0	0	124		
7:45 - 8:00	6	89	0	0	47	1	0	0	4	1	0	0	148	493	
8:00 - 8:15	2	85	0	0	64	2	0	0	7	3	0	0	163	547	
8:15 - 8:30	1	117	0	0	86	2	0	0	6	3	0	0	215	650	
8:30 - 8:45	3	77	0	0	85	0	0	0	7	2	0	0	174	700	
8:45 - 9:00	3	57	0	0	79	2	0	0	6	2	0	0	149	**701**	**0.82**
Peak Hour	**9**	**336**	**0**	**0**	**314**	**6**	**0**	**0**	**26**	**10**	**0**	**0**	**701**		
App Total	345			320			26			10			701		
HV %	**2%**			**3%**			**8%**			**10%**			**3%**		

ALL VEHICLES

PM Peak Hour Traffic Count at Eckhardt Avenue and Orchard Ave - Caribou St. Intersection

Time Period	Eckhardt Ave Eastbound			Eckhardt Ave Westbound			Orchard Ave Southbound			Caribou St Southbound			Sum	4-P Total	PHF
PM	L	T	R	L	T	R	L	T	R	L	T	R			
4:00 – 4:15	9	95	0	0	105	1	0	0	13	1	0	0	224		
4:15 – 4:30	6	99	0	0	88	5	1	0	8	1	0	0	208		
4:30 – 4:45	8	88	0	0	106	7	0	0	11	2	0	0	222		
4:45 – 5:00	3	106	0	0	83	4	0	0	5	0	0	0	201	**855**	**0.95**
5:00 – 5:15	7	96	0	0	108	2	0	0	2	2	0	0	217	848	
5:15 – 5:30	4	95	0	0	92	1	0	0	4	0	0	0	196	836	
5:30 – 5:45	5	72	0	0	78	1	0	0	11	0	0	0	167	781	
5:45 – 6:00	3	90	0	0	80	1	0	0	9	0	0	0	183	763	
Peak Hour	**26**	**388**	**0**	**0**	**382**	**17**	**1**	**0**	**37**	**4**	**0**	**0**	**855**		
App Total	414			399			38			4			855		
HV %	**1%**			**1%**			**0%**			**0%**			**1%**		

Intersection: Eckhardt Avenue and Orchard Ave - Caribou St.
Count Date: 6-Jun-17
Count Day: Tuesday
Counted By: EASL Transportation Consultants, Inc.

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

AM Peak Hour Traffic Count at Eckhardt Avenue and Orchard Ave - Caribou St. Intersection

Time Period	Eckhardt Ave Eastbound			Eckhardt Ave Westbound			Orchard Ave Southbound			Caribou St Southbound			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	2			0	0			0	0			2
7:15 - 7:30	0	1			0	0			0	0			1
7:30 - 7:45	0	6			2	0			0	0			8
7:45 - 8:00	0	2			3	0			0	0			5
8:00 - 8:15	0	4			3	0			1	0			8
8:15 - 8:30	0	1			4	0			0	0			5
8:30 - 8:45	0	2			0	0			0	0			2
8:45 - 9:00	0	0			2	0			1	1			4
Peak Hour	**0**	**7**	**0**	**0**	**9**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**19**
App Total		**7**			**9**			**2**			**1**		**19**

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

PM Peak Hour Traffic Count at Eckhardt Avenue and Orchard Ave - Caribou St. Intersection

Time Period	Eckhardt Ave Eastbound			Eckhardt Ave Westbound			Orchard Ave Southbound			Caribou St Southbound			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	0	1			1	0			0	0			2
4:15 – 4:30	0	1			1	0			0	0			2
4:30 – 4:45	0	3			1	0			0	0			4
4:45 – 5:00	0	0			1	0			0	0			1
5:00 – 5:15	0	1			2	0			0	0			3
5:15 – 5:30	0	1			0	0			0	0			1
5:30 – 5:45	0	0			0	0			0	0			0
5:45 – 6:00	0	0			0	0			0	0			0
Peak Hour	0	5	0	0	4	0	0	0	0	0	0	0	9
App Total		**5**			**4**			**0**			**0**		**9**

Intersection: Eckhardt Avenue and Orchard Ave - Caribou St.
Count Date: 06-Jun-17
Count Day: Tuesday
Counted By: EASL Transportation Consultants, Inc.

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

AM Peak Hour Traffic Count at Eckhardt Avenue and Orchard Ave - Caribou St. Intersection

Time Period	Eckhardt Ave Eastbound			Eckhardt Ave Westbound			Orchard Ave Southbound			Caribou St Southbound			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	7	52			42	1			5	0			107
7:15 - 7:30	3	45			54	0			5	4			111
7:30 - 7:45	4	42			65	0			5	0			116
7:45 - 8:00	6	87			44	1			4	1			143
8:00 - 8:15	2	81			61	2			6	3			155
8:15 - 8:30	1	116			82	2			6	3			210
8:30 - 8:45	3	75			85	0			7	2			172
8:45 - 9:00	3	57			77	2			5	1			145
Peak Hour	**9**	**329**	**0**	**0**	**305**	**6**	**0**	**0**	**24**	**9**	**0**	**0**	**682**
App Total	**338**			**311**			**24**			**9**			**682**

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

PM Peak Hour Traffic Count at Eckhardt Avenue and Orchard Ave - Caribou St. Intersection

Time Period	Eckhardt Ave Eastbound			Eckhardt Ave Westbound			Orchard Ave Southbound			Caribou St Southbound			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	9	94			104	1			13	1			222
4:15 – 4:30	6	98			87	5	1		8	1			206
4:30 – 4:45	8	85			105	7			11	2			218
4:45 – 5:00	3	106			82	4			5	0			200
5:00 – 5:15	7	95			106	2			2	2			214
5:15 – 5:30	4	94			92	1			4	0			195
5:30 – 5:45	5	72			78	1			11	0			167
5:45 – 6:00	3	90			80	1			9	0			183
Peak Hour	**26**	**383**	**0**	**0**	**378**	**17**	**1**	**0**	**37**	**4**	**0**	**0**	**846**
App Total	**409**			**395**			**38**			**4**			**846**

Appendix C

Existing 2021 Turning Movement Traffic Count Data

Intersection: Eckhardt Avenue and Moosjaw Street
Count Date: 05/18/2021
Count Day: Tuesday
Counted By: Addoz Engineering Inc.

ALL VEHICLES

AM Peak Hour Traffic Count atEckhardt Avenue and Moosjaw Street

Time Period	Eckhardt Avenue EB			Eckhardt Avenue WB			Moosjaw Street NB			-			Sum	4-P Total	PHF
AM	L	T	R	L	T	R	L	T	R	L	T	R			
7:00 - 7:15	0	35	5	3	47	0	2	0	0	0	0	0	92		
7:15 - 7:30	0	34	2	1	42	0	4	0	0	0	0	0	83		
7:30 - 7:45	0	43	7	1	52	0	8	0	5	0	0	0	116		
7:45 - 8:00	**0**	**60**	**8**	**6**	**62**	**0**	**9**	**0**	**1**	**0**	**0**	**0**	**146**	437	
8:00 - 8:15	**0**	**81**	**14**	**2**	**80**	**0**	**8**	**0**	**2**	**0**	**0**	**0**	**187**	532	
8:15 - 8:30	**0**	**106**	**9**	**5**	**85**	**0**	**12**	**0**	**4**	**0**	**0**	**0**	**221**	670	
8:30 - 8:45	**0**	**77**	**11**	**7**	**65**	**0**	**5**	**0**	**7**	**0**	**0**	**0**	**172**	**726**	**0.82**
8:45 - 9:00	0	63	8	7	62	0	5	0	6	0	0	0	151	731	
Peak Hour	**0**	**324**	**42**	**20**	**292**	**0**	**34**	**0**	**14**	**0**	**0**	**0**	**726**		
App Total		366			312			48			0		726		
HV %		**3%**			**3%**			**0%**			**0%**		**3%**		

ALL VEHICLES

PM Peak Hour Traffic Count at Eckhardt Avenue and Moosjaw Street

Time Period	Eckhardt Avenue EB			Eckhardt Avenue WB			Moosjaw Street NB			-			Sum	4-P Total	PHF
PM	L	T	R	L	T	R	L	T	R	L	T	R			
4:00 – 4:15	**0**	**71**	**21**	**4**	**91**	**0**	**10**	**0**	**8**	**0**	**0**	**0**	**205**		
4:15 – 4:30	**0**	**79**	**10**	**10**	**122**	**0**	**13**	**0**	**5**	**0**	**0**	**0**	**239**		
4:30 – 4:45	**0**	**91**	**12**	**4**	**89**	**0**	**13**	**0**	**6**	**0**	**0**	**0**	**215**		
4:45 – 5:00	**0**	**78**	**11**	**3**	**92**	**0**	**11**	**0**	**7**	**0**	**0**	**0**	**202**	**861**	**0.90**
5:00 – 5:15	0	80	10	3	83	0	10	0	9	0	0	0	195	851	
5:15 – 5:30	0	125	22	7	65	0	9	0	8	0	0	0	236	848	
5:30 – 5:45	0	56	9	2	58	0	7	0	5	0	0	0	137	770	
5:45 – 6:00	0	67	4	3	51	0	11	0	3	0	0	0	139	707	
Peak Hour	**0**	**319**	**54**	**21**	**394**	**0**	**47**	**0**	**26**	**0**	**0**	**0**	**861**		
App Total		373			415			73			0		861		
HV %		**1%**			**1%**			**0%**			**0%**		**1%**		

Intersection: Eckhardt Avenue and Moosjaw Street
Count Date: 05/18/2021
Count Day: Tuesday
Counted By: Addoz Engineering Inc.

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

AM Peak Hour Traffic Count atEckhardt Avenue and Moosjaw Street

Time Period	Eckhardt Avenue EB			Eckhardt Avenue WB			Moosjaw Street NB			-			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	1	1	0	1	0	0	0	0	0	0	0	3
7:15 - 7:30	0	2	0	0	2	0	0	0	0	0	0	0	4
7:30 - 7:45	0	4	0	0	1	0	0	0	0	0	0	0	5
7:45 - 8:00	**0**	**2**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**
8:00 - 8:15	**0**	**4**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**
8:15 - 8:30	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
8:30 - 8:45	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**
8:45 - 9:00	0	2	1	0	3	0	0	0	0	0	0	0	6
Peak Hour	**0**	**11**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**19**
App Total		**11**			**8**			**0**			**0**		**19**

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

PM Peak Hour Traffic Count at Eckhardt Avenue and Moosjaw Street

Time Period	Eckhardt Avenue EB			Eckhardt Avenue WB			Moosjaw Street NB			-			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
4:15 – 4:30	**0**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	3
4:30 – 4:45	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	1
4:45 – 5:00	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
5:00 – 5:15	0	0	0	0	2	0	0	0	1	0	0	0	**3**
5:15 – 5:30	0	0	0	0	0	0	1	0	0	0	0	0	**1**
5:30 – 5:45	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:45 – 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**4**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**
App Total		**4**			**3**			**0**			**0**		**7**

Intersection: Eckhardt Avenue and Moosjaw Street
Count Date: 05/18/2021
Count Day: Tuesday
Counted By: Addoz Engineering Inc.

ADDOZ ENGINEERING INC

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

AM Peak Hour Traffic Count atEckhardt Avenue and Moosjaw Street

Time Period	Eckhardt Avenue EB			Eckhardt Avenue WB			Moosjaw Street NB			-			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	34	4	3	46	0	2	0	0	0	0	0	89
7:15 - 7:30	0	32	2	1	40	0	4	0	0	0	0	0	79
7:30 - 7:45	0	39	7	1	51	0	8	0	5	0	0	0	111
7:45 - 8:00	**0**	**58**	**8**	**6**	**59**	**0**	**9**	**0**	**1**	**0**	**0**	**0**	**141**
8:00 - 8:15	**0**	**77**	**14**	**2**	**77**	**0**	**8**	**0**	**2**	**0**	**0**	**0**	**180**
8:15 - 8:30	**0**	**104**	**9**	**5**	**83**	**0**	**12**	**0**	**4**	**0**	**0**	**0**	**217**
8:30 - 8:45	**0**	**74**	**11**	**7**	**65**	**0**	**5**	**0**	**7**	**0**	**0**	**0**	**169**
8:45 - 9:00	0	61	7	7	59	0	5	0	6	0	0	0	145
Peak Hour	**0**	**313**	**42**	**20**	**284**	**0**	**34**	**0**	**14**	**0**	**0**	**0**	**707**
App Total		**355**			**304**			**48**			**0**		**707**

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

PM Peak Hour Traffic Count at Eckhardt Avenue and Moosjaw Street

Time Period	Eckhardt Avenue EB			Eckhardt Avenue WB			Moosjaw Street NB			-			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	**0**	**70**	**21**	**4**	**91**	**0**	**10**	**0**	**8**	**0**	**0**	**0**	204
4:15 – 4:30	**0**	**78**	**10**	**10**	**120**	**0**	**13**	**0**	**5**	**0**	**0**	**0**	236
4:30 – 4:45	**0**	**90**	**12**	**4**	**89**	**0**	**13**	**0**	**6**	**0**	**0**	**0**	214
4:45 – 5:00	**0**	**77**	**11**	**3**	**91**	**0**	**11**	**0**	**7**	**0**	**0**	**0**	**200**
5:00 – 5:15	0	80	10	3	81	0	10	0	8	0	0	0	**192**
5:15 – 5:30	0	125	22	7	65	0	8	0	8	0	0	0	**235**
5:30 – 5:45	0	56	9	2	58	0	7	0	5	0	0	0	**137**
5:45 – 6:00	0	67	4	3	51	0	11	0	3	0	0	0	139
Peak Hour	**0**	**315**	**54**	**21**	**391**	**0**	**47**	**0**	**26**	**0**	**0**	**0**	**854**
App Total		**369**			**412**			**73**			**0**		**854**

Intersection: Eckhardt Avenue and Moosjaw Street
Count Date: 05/18/2021
Count Day: Tuesday
Counted By: Addoz Engineering Inc.

BICYCLE AND PEDESTRIAN TRAFFIC

AM Peak Hour Traffic Count atEckhardt Avenue and Moosjaw Street

Time Period	Eckhardt Ave EB				Eckhardt Ave WB				Moosjaw Street NB				-			
AM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
7:00 - 7:15	0	0	1	2	0	0	0	-	0	0	0	0				0
7:15 - 7:30	0	0	0	0	0	0	0	-	0	0	0	2				0
7:30 - 7:45	0	0	2	0	0	0	0	-	0	0	0	0				0
7:45 - 8:00	**0**	**1**	**0**	**2**	**1**	**0**	**0**	**-**	**0**	**0**	**1**	**0**				**0**
8:00 - 8:15	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**-**	**0**	**0**	**0**	**4**				**0**
8:15 - 8:30	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**-**	**0**	**0**	**0**	**10**				**0**
8:30 - 8:45	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**-**	**1**	**0**	**0**	**4**				**0**
8:45 - 9:00	0	1	0	3	0	1	0	-	0	0	0	0				0
Peak Hour	**0**	**1**	**0**	**6**	**1**	**0**	**0**	**0**	**1**	**0**	**1**	**18**	**0**	**0**	**0**	**0**

BICYCLE AND PEDESTRIAN TRAFFIC

PM Peak Hour Traffic Count at Eckhardt Avenue and Moosjaw Street

Time Period	Eckhardt Ave EB				Eckhardt Ave WB				Moosjaw Street NB				-			
PM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
4:00 – 4:15	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**-**	**0**	**0**	**1**	**4**				**0**
4:15 – 4:30	**0**	**1**	**1**	**2**	**0**	**2**	**0**	**-**	**0**	**0**	**0**	**4**				**0**
4:30 – 4:45	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**-**	**2**	**0**	**0**	**4**				**0**
4:45 – 5:00	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**-**	**0**	**0**	**0**	**0**				**0**
5:00 – 5:15	0	3	0	0	0	1	0	-	0	0	0	3				0
5:15 – 5:30	0	0	0	6	0	0	0	-	0	0	0	6				0
5:30 – 5:45	0	3	1	3	0	0	0	-	2	0	0	1				0
5:45 – 6:00	0	0	0	2	0	0	0	-	0	0	0	0				0
Peak Hour	**0**	**1**	**1**	**15**	**0**	**6**	**0**	**0**	**2**	**0**	**1**	**22**	**0**	**0**	**0**	**0**

Intersection: Moosjaw Street and Woodruff Avenue
Count Date: 05/19/2021
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

ADDOZ ENGINEERING INC

ALL VEHICLES

AM Peak Hour Traffic Count at Moosjaw Street and Woodruff Avenue

Time Period	-			Woodruff Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum	4-P Total	PHF
AM	L	T	R	L	T	R	L	T	R	L	T	R			
7:00 - 7:15	0	0	0	0	0	0	0	2	0	0	6	0	8		
7:15 - 7:30	0	0	0	0	0	0	0	6	0	0	7	0	13		
7:30 - 7:45	0	0	0	0	0	0	0	11	0	0	11	0	22		
7:45 - 8:00	0	0	0	1	0	1	0	8	0	0	11	0	21	64	
8:00 - 8:15	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**12**	**2**	**0**	**15**	**0**	**30**	86	
8:15 - 8:30	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**12**	**1**	**1**	**13**	**0**	**28**	101	
8:30 - 8:45	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**20**	**0**	**1**	**27**	**0**	**49**	128	
8:45 - 9:00	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**17**	**1**	**2**	**9**	**0**	**30**	**137**	**0.70**
Peak Hour	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**61**	**4**	**4**	**64**	**0**	**137**		
App Total	0			4			65			68			137		
HV %	**0%**			**0%**			**2%**			**0%**			**1%**		

ALL VEHICLES

PM Peak Hour Traffic Count atMoosjaw Street and Woodruff Avenue

Time Period	-			Woodruff Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum	4-P Total	PHF
PM	L	T	R	L	T	R	L	T	R	L	T	R			
4:00 – 4:15	0	0	0	0	0	0	0	15	1	1	14	0	31		
4:15 – 4:30	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**13**	**1**	**2**	**25**	**0**	**44**		
4:30 – 4:45	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**1**	**1**	**24**	**0**	**40**		
4:45 – 5:00	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**16**	**1**	**0**	**16**	**0**	**34**	149	
5:00 – 5:15	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**14**	**3**	**0**	**15**	**0**	**35**	**153**	**0.87**
5:15 – 5:30	0	0	0	0	0	0	0	9	0	0	10	0	19	128	
5:30 – 5:45	0	0	0	0	0	1	0	9	1	1	4	0	16	104	
5:45 – 6:00	0	0	0	0	0	0	0	11	3	2	7	0	23	93	
Peak Hour	**0**	**0**	**0**	**3**	**0**	**4**	**0**	**57**	**6**	**3**	**80**	**0**	**153**		
App Total	0			7			63			83			153		
HV %	**0%**			**0%**			**0%**			**2%**			**1%**		

Intersection: Moosjaw Street and Woodruff Avenue
Count Date: 05/19/2021
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

AM Peak Hour Traffic Count at Moosjaw Street and Woodruff Avenue

Time Period	-			Woodruff Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0										0
7:15 - 7:30	0	0	0										0
7:30 - 7:45	0	0	0										0
7:45 - 8:00	0	0	0										0
8:00 - 8:15	**0**	**0**	**0**					**1**					**1**
8:15 - 8:30	**0**	**0**	**0**										**0**
8:30 - 8:45	**0**	**0**	**0**										**0**
8:45 - 9:00	**0**	**0**	**0**										**0**
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**
App Total	**0**			**0**			**1**			**0**			**1**

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

PM Peak Hour Traffic Count atMoosjaw Street and Woodruff Avenue

Time Period	-			Woodruff Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	0	0	0										0
4:15 – 4:30	**0**	**0**	**0**										0
4:30 – 4:45	**0**	**0**	**0**								**2**		2
4:45 – 5:00	**0**	**0**	**0**										**0**
5:00 – 5:15	**0**	**0**	**0**										**0**
5:15 – 5:30	0	0	0										**0**
5:30 – 5:45	0	0	0										**0**
5:45 – 6:00	0	0	0										0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**
App Total	**0**			**0**			**0**			**2**			**2**

Intersection: Moosjaw Street and Woodruff Avenue
Count Date: 05/19/2021
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

AM Peak Hour Traffic Count at Moosjaw Street and Woodruff Avenue

Time Period	-			Woodruff Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0	0	0	0	0	2	0	0	6	0	8
7:15 - 7:30	0	0	0	0	0	0	0	6	0	0	7	0	13
7:30 - 7:45	0	0	0	0	0	0	0	11	0	0	11	0	22
7:45 - 8:00	0	0	0	1	0	1	0	8	0	0	11	0	21
8:00 - 8:15	0	0	0	**0**	**0**	**1**	**0**	**11**	**2**	**0**	**15**	**0**	**29**
8:15 - 8:30	0	0	0	**0**	**0**	**1**	**0**	**12**	**1**	**1**	**13**	**0**	**28**
8:30 - 8:45	0	0	0	**0**	**0**	**1**	**0**	**20**	**0**	**1**	**27**	**0**	**49**
8:45 - 9:00	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**17**	**1**	**2**	**9**	**0**	**30**
Peak Hour	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**60**	**4**	**4**	**64**	**0**	**136**
App Total	**0**			**4**			**64**			**68**			**136**

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

PM Peak Hour Traffic Count atMoosjaw Street and Woodruff Avenue

Time Period	-			Woodruff Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	0	0	0	0	0	0	0	15	1	1	14	0	31
4:15 – 4:30	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**13**	**1**	**2**	**25**	**0**	44
4:30 – 4:45	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**14**	**1**	**1**	**22**	**0**	38
4:45 – 5:00	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**16**	**1**	**0**	**16**	**0**	**34**
5:00 – 5:15	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**14**	**3**	**0**	**15**	**0**	**35**
5:15 – 5:30	0	0	0	0	0	0	0	9	0	0	10	0	**19**
5:30 – 5:45	0	0	0	0	0	1	0	9	1	1	4	0	**16**
5:45 – 6:00	0	0	0	0	0	0	0	11	3	2	7	0	23
Peak Hour	**0**	**0**	**0**	**3**	**0**	**4**	**0**	**57**	**6**	**3**	**78**	**0**	**151**
App Total	**0**			**7**			**63**			**81**			**151**

Intersection: Moosjaw Street and Woodruff Avenue
Count Date: 05/19/2021
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

BICYCLE AND PEDESTRIAN TRAFFIC

AM Peak Hour Traffic Count at Moosjaw Street and Woodruff Avenue

Time Period	-				Woodruff Avenue WB				Moosjaw Street NB				Moosjaw Street SB			
AM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
7:00 - 7:15												1				
7:15 - 7:30												2				
7:30 - 7:45				1									1			
7:45 - 8:00																
8:00 - 8:15										**1**		**1**				
8:15 - 8:30												**9**		**1**		
8:30 - 8:45				**2**												
8:45 - 9:00																
Peak Hour	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**10**	**0**	**1**	**0**	**0**

BICYCLE AND PEDESTRIAN TRAFFIC

PM Peak Hour Traffic Count atMoosjaw Street and Woodruff Avenue

Time Period	-				Woodruff Avenue WB				Moosjaw Street NB				Moosjaw Street SB			
PM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
4:00 – 4:15												5		1		
4:15 – 4:30												**3**				
4:30 – 4:45				**1**								**5**				
4:45 – 5:00												**3**				
5:00 – 5:15								**2**				**2**				
5:15 – 5:30										1				1		
5:30 – 5:45				3												
5:45 – 6:00				2								2		2		
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**13**	**0**	**0**	**0**	**0**

Intersection: Moosjaw Street and Scott Avenue
Count Date: 05/19/2021
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

ADDOZ ENGINEERING INC

ALL VEHICLES

AM Peak Hour Traffic Count at Moosjaw Street and Scott Avenue

Time Period	Scott Avenue EB			Scott Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum	4-P Total	PHF
AM	L	T	R	L	T	R	L	T	R	L	T	R			
7:00 - 7:15	0	0	0	0	0	1	0	1	0	0	4	2	8		
7:15 - 7:30	1	0	0	1	2	0	1	5	1	1	4	2	18		
7:30 - 7:45	2	0	0	1	1	5	0	4	0	1	7	4	25		
7:45 - 8:00	3	0	1	2	0	1	0	4	0	0	10	3	24	75	
8:00 - 8:15	**2**	**0**	**0**	**0**	**0**	**4**	**1**	**8**	**0**	**2**	**11**	**2**	**30**	97	
8:15 - 8:30	**1**	**0**	**0**	**2**	**0**	**5**	**0**	**8**	**0**	**0**	**11**	**2**	**29**	108	
8:30 - 8:45	**6**	**0**	**0**	**0**	**1**	**1**	**0**	**13**	**2**	**2**	**18**	**6**	**49**	132	
8:45 - 9:00	**5**	**0**	**2**	**2**	**0**	**0**	**0**	**13**	**0**	**0**	**6**	**4**	**32**	**140**	**0.71**
Peak Hour	**14**	**0**	**2**	**4**	**1**	**10**	**1**	**42**	**2**	**4**	**46**	**14**	**140**		
App Total	16			15			45			64			140		
HV %	**0%**			**7%**			**0%**			**2%**			**1%**		

ALL VEHICLES

PM Peak Hour Traffic Count atMoosjaw Street and Scott Avenue

Time Period	Scott Avenue EB			Scott Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum	4-P Total	PHF
PM	L	T	R	L	T	R	L	T	R	L	T	R			
4:00 – 4:15	5	0	1	2	0	2	1	9	0	1	9	4	34		
4:15 – 4:30	**0**	**0**	**0**	**1**	**0**	**1**	**3**	**14**	**2**	**3**	**20**	**2**	**46**		
4:30 – 4:45	**5**	**0**	**0**	**1**	**0**	**1**	**1**	**9**	**5**	**0**	**19**	**4**	**45**		
4:45 – 5:00	**4**	**0**	**0**	**2**	**0**	**1**	**1**	**12**	**0**	**2**	**14**	**1**	**37**	162	
5:00 – 5:15	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**16**	**2**	**2**	**13**	**2**	**38**	**166**	**0.90**
5:15 – 5:30	1	0	1	0	0	0	0	8	0	1	9	0	20	140	
5:30 – 5:45	0	1	0	0	0	2	0	8	1	0	4	0	16	111	
5:45 – 6:00	0	0	0	1	2	0	1	15	2	0	6	1	28	102	
Peak Hour	**9**	**1**	**0**	**4**	**0**	**4**	**6**	**51**	**9**	**7**	**66**	**9**	**166**		
App Total	10			8			66			82			166		
HV %	**0%**			**0%**			**0%**			**2%**			**1%**		

Intersection: Moosjaw Street and Scott Avenue
Count Date: 05/19/2021
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

AM Peak Hour Traffic Count at Moosjaw Street and Scott Avenue

Time Period	Scott Avenue EB			Scott Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 8:15	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
8:15 - 8:30	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:30 - 8:45	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:45 - 9:00	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**2**
App Total		**0**			**1**			**0**			**1**		**2**

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

PM Peak Hour Traffic Count atMoosjaw Street and Scott Avenue

Time Period	Scott Avenue EB			Scott Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 – 4:30	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
4:30 – 4:45	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	2
4:45 – 5:00	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:00 – 5:15	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
5:15 – 5:30	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:30 – 5:45	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:45 – 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**2**
App Total		**0**			**0**			**0**			**2**		**2**

Intersection: Moosjaw Street and Scott Avenue
Count Date: 05/19/2021
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

AM Peak Hour Traffic Count at Moosjaw Street and Scott Avenue

Time Period	Scott Avenue EB			Scott Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0	0	0	1	0	1	0	0	4	2	8
7:15 - 7:30	1	0	0	1	2	0	1	5	1	1	4	2	18
7:30 - 7:45	2	0	0	1	1	5	0	4	0	1	7	4	25
7:45 - 8:00	3	0	1	2	0	1	0	4	0	0	10	3	24
8:00 - 8:15	2	0	0	**0**	**0**	**3**	**1**	**8**	**0**	**2**	**11**	**2**	**29**
8:15 - 8:30	1	0	0	**2**	**0**	**5**	**0**	**8**	**0**	**0**	**11**	**2**	**29**
8:30 - 8:45	6	0	0	**0**	**1**	**1**	**0**	**13**	**2**	**2**	**18**	**6**	**49**
8:45 - 9:00	**5**	**0**	**2**	**2**	**0**	**0**	**0**	**13**	**0**	**0**	**5**	**4**	**31**
Peak Hour	**14**	**0**	**2**	**4**	**1**	**9**	**1**	**42**	**2**	**4**	**45**	**14**	**138**
App Total	**16**			**14**			**45**			**63**			**138**

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

PM Peak Hour Traffic Count atMoosjaw Street and Scott Avenue

Time Period	Scott Avenue EB			Scott Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	5	0	1	2	0	2	1	9	0	1	9	4	34
4:15 – 4:30	**0**	**0**	**0**	**1**	**0**	**1**	**3**	**14**	**2**	**3**	**20**	**2**	46
4:30 – 4:45	**5**	**0**	**0**	**1**	**0**	**1**	**1**	**9**	**5**	**0**	**17**	**4**	43
4:45 – 5:00	**4**	**0**	**0**	**2**	**0**	**1**	**1**	**12**	**0**	**2**	**14**	**1**	**37**
5:00 – 5:15	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**16**	**2**	**2**	**13**	**2**	**38**
5:15 – 5:30	1	0	1	0	0	0	0	8	0	1	9	0	**20**
5:30 – 5:45	0	1	0	0	0	2	0	8	1	0	4	0	**16**
5:45 – 6:00	0	0	0	1	2	0	1	15	2	0	6	1	28
Peak Hour	**9**	**1**	**0**	**4**	**0**	**4**	**6**	**51**	**9**	**7**	**64**	**9**	**164**
App Total	**10**			**8**			**66**			**80**			**164**

Intersection: Moosjaw Street and Scott Avenue
Count Date: 05/19/2021
Count Day: Wednesday
Counted By: Addoz Engineering Inc.

BICYCLE AND PEDESTRIAN TRAFFIC

AM Peak Hour Traffic Count at Moosjaw Street and Scott Avenue

Time Period	Scott Avenue EB				Scott Avenue WB				Moosjaw Street NB				Moosjaw Street SB			
AM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
7:00 - 7:15	0	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0
8:00 - 8:15	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**2**
8:15 - 8:30	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**1**	**0**	**0**
8:30 - 8:45	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**
8:45 - 9:00	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**0**	**2**	**0**	**7**	**0**	**1**	**0**	**2**

BICYCLE AND PEDESTRIAN TRAFFIC

PM Peak Hour Traffic Count atMoosjaw Street and Scott Avenue

Time Period	Scott Avenue EB				Scott Avenue WB				Moosjaw Street NB				Moosjaw Street SB			
PM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
4:00 – 4:15	0	0	1	3	0	0	0	2	0	0	1	2	0	1	0	0
4:15 – 4:30	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**
4:30 – 4:45	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
4:45 – 5:00	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
5:00 – 5:15	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**
5:15 – 5:30	1	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0
5:30 – 5:45	0	0	0	2	0	1	0	2	0	0	0	1	0	0	0	0
5:45 – 6:00	0	0	0	2	0	0	0	2	0	0	0	6	0	2	0	0
Peak Hour	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**7**	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**1**

Intersection: Timmins Street and Scott Avenue / N. Access
Count Date: 05/20/2021
Count Day: Thursday
Counted By: Addoz Engineering Inc.

ALL VEHICLES

AM Peak Hour Traffic Count at Timmins Street and Scott Avenue / North Access

Time Period	N. Access EB			Scott Avenue WB			Timmins Street NB			-			Sum	4-P Total	PHF
AM	L	T	R	L	T	R	L	T	R	L	T	R			
7:00 - 7:15	0	0	0	0	1	0	0	0	0	0	0	0	1		
7:15 - 7:30	0	0	0	0	4	0	1	0	0	0	0	0	5		
7:30 - 7:45	0	3	0	0	1	0	0	0	0	0	0	0	4		
7:45 - 8:00	0	1	0	2	2	0	0	0	3	0	0	0	8	18	
8:00 - 8:15	**0**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**5**	22	
8:15 - 8:30	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**7**	24	
8:30 - 8:45	**0**	**3**	**0**	**5**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**10**	30	
8:45 - 9:00	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**8**	**30**	**0.75**
Peak Hour	**0**	**4**	**0**	**15**	**3**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**30**		
App Total	4			18			8			0			30		
HV %	**25%**			**6%**			**13%**			**0%**			**10%**		

ALL VEHICLES

PM Peak Hour Traffic Count at Timmins Street and Scott Avenue / North Access

Time Period	N. Access EB			Scott Avenue WB			Timmins Street NB			-			Sum	4-P Total	PHF
PM	L	T	R	L	T	R	L	T	R	L	T	R			
4:00 – 4:15	**0**	**1**	**1**	**3**	**3**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**11**		
4:15 – 4:30	**0**	**2**	**0**	**1**	**1**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**8**		
4:30 – 4:45	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**5**		
4:45 – 5:00	**0**	**1**	**1**	**3**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**7**	**31**	**0.70**
5:00 – 5:15	0	2	0	1	0	0	0	0	0	0	0	0	3	23	
5:15 – 5:30	0	0	0	0	0	0	0	0	0	0	0	0	0	15	
5:30 – 5:45	0	1	0	0	0	0	0	0	0	0	0	0	1	11	
5:45 – 6:00	0	1	0	0	1	0	0	0	0	0	0	0	2	6	
Peak Hour	**0**	**6**	**2**	**7**	**5**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**31**		
App Total	8			12			11			0			31		
HV %	**0%**			**0%**			**0%**			**0%**			**0%**		

Intersection: Timmins Street and Scott Avenue / N. Access
Count Date: 05/20/2021
Count Day: Thursday
Counted By: Addoz Engineering Inc.

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

AM Peak Hour Traffic Count at Timmins Street and Scott Avenue / North Access

Time Period	N. Access EB			Scott Avenue WB			Timmins Street NB			-			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 8:15	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0	0	**0**
8:15 - 8:30	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	0	0	0	**2**
8:30 - 8:45	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0	0	**1**
8:45 - 9:00	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0	0	0	**0**
Peak Hour	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**
App Total		**1**			**1**			**1**			**0**		**3**

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

PM Peak Hour Traffic Count at Timmins Street and Scott Avenue / North Access

Time Period	N. Access EB			Scott Avenue WB			Timmins Street NB			-			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 – 4:30	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 – 4:45	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 – 5:00	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 – 5:15	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:15 – 5:30	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:30 – 5:45	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:45 – 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
App Total		**0**			**0**			**0**			**0**		**0**

Intersection: Timmins Street and Scott Avenue / N. Access
Count Date: 05/20/2021
Count Day: Thursday
Counted By: Addoz Engineering Inc.

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

AM Peak Hour Traffic Count at Timmins Street and Scott Avenue / North Access

Time Period	N. Access EB			Scott Avenue WB			Timmins Street NB			-			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 - 7:30	0	0	0	0	4	0	1	0	0	0	0	0	5
7:30 - 7:45	0	3	0	0	1	0	0	0	0	0	0	0	4
7:45 - 8:00	0	1	0	2	2	0	0	0	3	0	0	0	8
8:00 - 8:15	0	1	0	**2**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**5**
8:15 - 8:30	0	0	0	**2**	**1**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**5**
8:30 - 8:45	0	2	0	**5**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**9**
8:45 - 9:00	**0**	**0**	**0**	**6**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**8**
Peak Hour	**0**	**3**	**0**	**15**	**2**	**0**	**0**	**0**	**7**	**0**	**0**	**0**	**27**
App Total		**3**			**17**			**7**			**0**		**27**

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

PM Peak Hour Traffic Count at Timmins Street and Scott Avenue / North Access

Time Period	N. Access EB			Scott Avenue WB			Timmins Street NB			-			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	0	1	1	3	3	0	0	0	3	0	0	0	11
4:15 – 4:30	**0**	**2**	**0**	**1**	**1**	**0**	**0**	**0**	**4**	0	0	0	8
4:30 – 4:45	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	0	0	0	5
4:45 – 5:00	**0**	**1**	**1**	**3**	**1**	**0**	**0**	**0**	**1**	0	0	0	**7**
5:00 – 5:15	**0**	**2**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	0	0	0	**3**
5:15 – 5:30	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:30 – 5:45	0	1	0	0	0	0	0	0	0	0	0	0	**1**
5:45 – 6:00	0	1	0	0	1	0	0	0	0	0	0	0	2
Peak Hour	**0**	**6**	**2**	**7**	**5**	**0**	**0**	**0**	**11**	**0**	**0**	**0**	**31**
App Total		**8**			**12**			**11**			**0**		**31**

Intersection: Timmins Street and Scott Avenue / N. Access
Count Date: 05/20/2021
Count Day: Thursday
Counted By: Addoz Engineering Inc.

BICYCLE AND PEDESTRIAN TRAFFIC

AM Peak Hour Traffic Count at Timmins Street and Scott Avenue / North Access

Time Period	North Access EB				Scott Avenue WB				Timmins Street NB				-			
AM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
7:00 - 7:15				0				0				0				1
7:15 - 7:30				0				0				0				0
7:30 - 7:45			1	2		1		0	1			0				0
7:45 - 8:00				0				0	1			0				1
8:00 - 8:15				**0**				**0**				**0**				**0**
8:15 - 8:30				**0**				**0**				**0**				**3**
8:30 - 8:45				**0**				**0**				**0**				**0**
8:45 - 9:00				**0**		**1**		**0**				**0**				**1**
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**

BICYCLE AND PEDESTRIAN TRAFFIC

PM Peak Hour Traffic Count at Timmins Street and Scott Avenue / North Access

Time Period	North Access EB				Scott Avenue WB				Timmins Street NB				-			
PM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
4:00 – 4:15				0				0			1	0				0
4:15 – 4:30				**0**				**0**				**0**				**3**
4:30 – 4:45				**0**				**0**				**0**				**2**
4:45 – 5:00				**0**				**0**				**0**				**3**
5:00 – 5:15				**0**				**0**				**0**				**4**
5:15 – 5:30				0				0				0				3
5:30 – 5:45				0				0				0				0
5:45 – 6:00				0	4			0				0				0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**15**

Intersection: Timmins Street and South Access
Count Date: 05/20/2021
Count Day: Thursday
Counted By: Addoz Engineering Inc.

ALL VEHICLES

AM Peak Hour Traffic Count at Timmins Street and South Access

Time Period	South Access EB			-			Timmins Street NB			Timmins Street SB			Sum	4-P Total	PHF
AM	L	T	R	L	T	R	L	T	R	L	T	R			
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 - 7:30	0	0	0	0	0	0	1	1	0	0	0	0	2		
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 - 8:00	0	0	1	0	0	0	1	1	0	0	2	0	5	7	
8:00 - 8:15	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**	**5**	12	
8:15 - 8:30	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**5**	15	
8:30 - 8:45	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**5**	**0**	**6**	21	
8:45 - 9:00	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**5**	**1**	**9**	**25**	**0.69**
Peak Hour	**2**	**0**	**1**	**0**	**0**	**0**	**1**	**6**	**0**	**0**	**14**	**1**	**25**		
App Total	3			0			7			15			25		
HV %	**33%**			**0%**			**0%**			**0%**			**4%**		

ALL VEHICLES

PM Peak Hour Traffic Count at Timmins Street and South Access

Time Period	South Access EB			-			Timmins Street NB			Timmins Street SB			Sum	4-P Total	PHF
PM	L	T	R	L	T	R	L	T	R	L	T	R			
4:00 – 4:15	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**4**	**0**	**7**		
4:15 – 4:30	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**5**		
4:30 – 4:45	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**6**		
4:45 – 5:00	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**3**	**0**	**4**	**22**	**0.79**
5:00 – 5:15	0	0	0	0	0	0	0	0	0	0	1	0	1	16	
5:15 – 5:30	0	0	0	0	0	0	0	0	0	0	1	0	1	12	
5:30 – 5:45	0	0	0	0	0	0	0	0	0	0	0	0	0	6	
5:45 – 6:00	0	0	0	0	0	0	0	1	0	0	0	0	1	3	
Peak Hour	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**7**	**0**	**22**		
App Total	5			0			10			7			22		
HV %	**0%**			**0%**			**0%**			**0%**			**0%**		

Intersection: Timmins Street and South Access
Count Date: 05/20/2021
Count Day: Thursday
Counted By: Addoz Engineering Inc.

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

AM Peak Hour Traffic Count at Timmins Street and South Access

Time Period	South Access EB			-			Timmins Street NB			Timmins Street SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 - 8:15	**0**	**0**	**0**	0	0	0	**0**	**0**	**0**	0	0	0	**0**
8:15 - 8:30	**1**	**0**	**0**	0	0	0	**0**	**0**	**0**	0	0	0	**1**
8:30 - 8:45	**0**	**0**	**0**	0	0	0	**0**	**0**	**0**	0	0	0	**0**
8:45 - 9:00	**0**	**0**	**0**	0	0	0	**0**	**0**	**0**	0	0	0	**0**
Peak Hour	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
App Total	**1**			**0**			**0**			**0**			**1**

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

PM Peak Hour Traffic Count at Timmins Street and South Access

Time Period	South Access EB			-			Timmins Street NB			Timmins Street SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 – 4:30	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 – 4:45	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 – 5:00	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:00 – 5:15	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:15 – 5:30	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:30 – 5:45	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:45 – 6:00	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
App Total	**0**			**0**			**0**			**0**			**0**

Intersection: Timmins Street and South Access
Count Date: 05/20/2021
Count Day: Thursday
Counted By: Addoz Engineering Inc.

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

AM Peak Hour Traffic Count at Timmins Street and South Access

Time Period	South Access EB			-			Timmins Street NB			Timmins Street SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	1	1	0	0	0	0	2
7:30 - 7:45	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 - 8:00	0	0	1	0	0	0	1	1	0	0	2	0	5
8:00 - 8:15	1	0	1	0	0	0	**1**	**0**	**0**	**0**	**2**	**0**	**5**
8:15 - 8:30	0	0	0	0	0	0	**0**	**2**	**0**	**0**	**2**	**0**	**4**
8:30 - 8:45	0	0	0	0	0	0	**0**	**1**	**0**	**0**	**5**	**0**	**6**
8:45 - 9:00	**0**	**0**	**0**	0	0	0	**0**	**3**	**0**	**0**	**5**	**1**	**9**
Peak Hour	**1**	**0**	**1**	**0**	**0**	**0**	**1**	**6**	**0**	**0**	**14**	**1**	**24**
App Total	**2**			**0**			**7**			**15**			**24**

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

PM Peak Hour Traffic Count at Timmins Street and South Access

Time Period	South Access EB			-			Timmins Street NB			Timmins Street SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	0	0	0	0	0	0	0	3	0	0	4	0	7
4:15 – 4:30	**1**	**0**	**1**	0	0	0	0	3	0	0	0	0	5
4:30 – 4:45	**0**	**0**	**3**	0	0	0	0	3	0	0	0	0	6
4:45 – 5:00	**0**	**0**	**0**	0	0	0	0	1	0	0	3	0	**4**
5:00 – 5:15	**0**	**0**	**0**	0	0	0	0	0	0	0	1	0	**1**
5:15 – 5:30	0	0	0	0	0	0	0	0	0	0	1	0	**1**
5:30 – 5:45	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:45 – 6:00	0	0	0	0	0	0	0	1	0	0	0	0	1
Peak Hour	**1**	**0**	**4**	**0**	**0**	**0**	**0**	**10**	**0**	**0**	**7**	**0**	**22**
App Total	**5**			**0**			**10**			**7**			**22**

Intersection: Timmins Street and South Access
Count Date: 05/20/2021
Count Day: Thursday
Counted By: Addoz Engineering Inc.

BICYCLE AND PEDESTRIAN TRAFFIC

AM Peak Hour Traffic Count at Timmins Street and South Access

Time Period	South Access EB				-				Timmins Street NB				Timmins Street SB			
AM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
7:00 - 7:15				0				0				0				1
7:15 - 7:30				0				0				0				0
7:30 - 7:45				0				0		1		0		1		7
7:45 - 8:00				0				0		1		0				1
8:00 - 8:15				**0**				**0**				**0**				**0**
8:15 - 8:30				**0**				**0**				**0**				**2**
8:30 - 8:45				**0**				**0**				**0**				**1**
8:45 - 9:00				**0**				**0**				**0**				**1**
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**

BICYCLE AND PEDESTRIAN TRAFFIC

PM Peak Hour Traffic Count at Timmins Street and South Access

Time Period	South Access EB				-				Timmins Street NB				Timmins Street SB			
PM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
4:00 – 4:15				0				0		1		0				0
4:15 – 4:30				**0**				**0**				**0**				**3**
4:30 – 4:45				**0**				**0**				**0**				**3**
4:45 – 5:00				**0**				**0**				**0**				**3**
5:00 – 5:15				0				0				0				2
5:15 – 5:30				0				0				0				3
5:30 – 5:45				0				0				0				0
5:45 – 6:00				0				0				0		4		0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**9**

Intersection: Conklin Avenue and Moosjaw Street
Count Date: 02/12 and 13/2020
Count Day: Wednesday and Thursday
Counted By: Penticton Transportation Data Collection

ADDOZ ENGINEERING INC

ALL VEHICLES

AM Peak Hour Traffic Count at Conklin Avenue and Moosjaw Street

Time Period	Conklin Avenue EB			Conklin Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum	4-P Total	PHF
AM	L	T	R	L	T	R	L	T	R	L	T	R			
7:00 - 7:15	0	0	0	0	0	0	1	1	1	1	3	0	7		
7:15 - 7:30	1	0	0	0	1	1	4	4	1	0	6	0	18		
7:30 - 7:45	0	0	2	1	0	0	1	2	0	2	8	0	16		
7:45 - 8:00	**0**	**1**	**1**	**1**	**0**	**2**	**0**	**4**	**0**	**5**	**8**	**0**	22	63	
8:00 - 8:15	**0**	**2**	**5**	**1**	**2**	**2**	**0**	**3**	**0**	**3**	**9**	**0**	27	83	
8:15 - 8:30	**1**	**0**	**2**	**1**	**1**	**2**	**5**	**6**	**1**	**3**	**7**	**1**	30	95	
8:30 - 8:45	**1**	**3**	**3**	**1**	**1**	**2**	**3**	**8**	**0**	**2**	**13**	**1**	38	**117**	**0.77**
8:45 - 9:00	1	0	3	1	1	0	0	4	1	0	7	3	21	116	
Peak Hour	**2**	**6**	**11**	**4**	**4**	**8**	**8**	**21**	**1**	**13**	**37**	**2**	**117**		
App Total	19			16			30			52			117		
HV %	**0%**			**6%**			**0%**			**2%**			**3%**		

ALL VEHICLES

PM Peak Hour Traffic Count at Conklin Avenue and Moosjaw Street

Time Period	Conklin Avenue EB			Conklin Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum	4-P Total	PHF
PM	L	T	R	L	T	R	L	T	R	L	T	R			
3:30 – 4:45	**0**	**2**	**3**	**1**	**0**	**2**	**1**	**11**	**0**	**4**	**10**	**0**	34		
3:45 – 4:00	**1**	**1**	**2**	**1**	**0**	**2**	**1**	**6**	**1**	**4**	**14**	**0**	33		
4:00 – 4:15	**0**	**1**	**6**	**1**	**1**	**2**	**4**	**7**	**3**	**3**	**14**	**0**	42		
4:15 – 4:30	**1**	**1**	**5**	**0**	**1**	**1**	**2**	**4**	**3**	**1**	**7**	**1**	27	**136**	**0.81**
4:30 – 4:45	0	0	2	1	1	2	2	11	0	0	15	0	34	136	
4:45 – 5:00	0	1	2	0	1	3	0	10	1	1	7	2	28	131	
5:00 – 5:15	2	1	1	0	3	0	0	18	0	3	10	0	38	127	
5:15 – 5:30	0	2	2	0	2	1	1	4	1	3	10	0	26	126	
Peak Hour	**2**	**5**	**16**	**3**	**2**	**7**	**8**	**28**	**7**	**12**	**45**	**1**	**136**		
App Total	23			12			43			58			136		
HV %	**0%**			**8%**			**9%**			**5%**			**6%**		

Intersection: Conklin Avenue and Moosjaw Street
Count Date: 02/12 and 13/2020
Count Day: Wednesday and Thursday
Counted By: Penticton Transportation Data Collection

ADDOZ ENGINEERING INC

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

AM Peak Hour Traffic Count at Conklin Avenue and Moosjaw Street

Time Period	Conklin Avenue EB			Conklin Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	1	0	0	0	1
7:30 - 7:45	0	0	0	1	0	0	0	0	0	0	0	0	1
7:45 - 8:00	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:00 - 8:15	0	0	0	0	0	0	0	0	0	0	1	0	**1**
8:15 - 8:30	0	0	0	0	0	0	0	1	1	0	0	0	**2**
8:30 - 8:45	0	0	0	1	0	0	0	0	0	0	0	0	**1**
8:45 - 9:00	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**1**	**1**	**0**	**1**	**0**	**4**
App Total	**0**			**1**			**2**			**1**			**4**

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

PM Peak Hour Traffic Count at Conklin Avenue and Moosjaw Street

Time Period	Conklin Avenue EB			Conklin Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
3:30 – 4:45	0	0	0	1	0	0	0	1	0	0	0	0	2
3:45 – 4:00	0	0	0	0	0	0	0	1	0	2	0	0	3
4:00 – 4:15	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 – 4:30	0	0	0	0	0	0	0	1	1	0	1	0	**3**
4:30 – 4:45	0	0	0	1	0	0	1	0	0	0	1	0	**3**
4:45 – 5:00	0	0	0	0	0	0	0	0	0	0	1	0	**1**
5:00 – 5:15	0	0	0	0	0	0	0	0	0	0	0	0	**0**
5:15 – 5:30	0	0	0	0	0	0	0	0	1	0	0	0	1
Peak Hour	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**1**	**2**	**1**	**0**	**8**
App Total	**0**			**1**			**4**			**3**			**8**

Intersection: Conklin Avenue and Moosjaw Street
Count Date: 02/12 and 13/2020
Count Day: Wednesday and Thursday
Project: Penticton Transportation Data Collection

ADDOZ ENGINEERING INC

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

AM Peak Hour Traffic Count at Conklin Avenue and Moosjaw Street

Time Period	Conklin Avenue EB			Conklin Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0	0	0	0	1	1	1	1	3	0	7
7:15 - 7:30	1	0	0	0	1	1	4	4	0	0	6	0	17
7:30 - 7:45	0	0	2	0	0	0	1	2	0	2	8	0	15
7:45 - 8:00	**0**	**1**	**1**	**1**	**0**	**2**	**0**	**4**	**0**	**5**	**8**	**0**	**22**
8:00 - 8:15	**0**	**2**	**5**	**1**	**2**	**2**	**0**	**3**	**0**	**3**	**8**	**0**	**26**
8:15 - 8:30	**1**	**0**	**2**	**1**	**1**	**2**	**5**	**5**	**0**	**3**	**7**	**1**	**28**
8:30 - 8:45	**1**	**3**	**3**	**0**	**1**	**2**	**3**	**8**	**0**	**2**	**13**	**1**	**37**
8:45 - 9:00	1	0	3	1	1	0	0	4	1	0	7	3	21
Peak Hour	**2**	**6**	**11**	**3**	**4**	**8**	**8**	**20**	**0**	**13**	**36**	**2**	**113**
App Total	**19**			**15**			**28**			**51**			**113**

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

PM Peak Hour Traffic Count at Conklin Avenue and Moosjaw Street

Time Period	Conklin Avenue EB			Conklin Avenue WB			Moosjaw Street NB			Moosjaw Street SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
3:30 – 4:45	**0**	**2**	**3**	**0**	**0**	**2**	**1**	**10**	**0**	**4**	**10**	**0**	32
3:45 – 4:00	**1**	**1**	**2**	**1**	**0**	**2**	**1**	**5**	**1**	**2**	**14**	**0**	30
4:00 – 4:15	**0**	**1**	**6**	**1**	**1**	**2**	**4**	**7**	**3**	**3**	**14**	**0**	42
4:15 – 4:30	**1**	**1**	**5**	**0**	**1**	**1**	**2**	**3**	**2**	**1**	**6**	**1**	**24**
4:30 – 4:45	0	0	2	0	1	2	1	11	0	0	14	0	**31**
4:45 – 5:00	0	1	2	0	1	3	0	10	1	1	6	2	**27**
5:00 – 5:15	2	1	1	0	3	0	0	18	0	3	10	0	**38**
5:15 – 5:30	0	2	2	0	2	1	1	4	0	3	10	0	25
Peak Hour	**2**	**5**	**16**	**2**	**2**	**7**	**8**	**25**	**6**	**10**	**44**	**1**	**128**
App Total	**23**			**11**			**39**			**55**			**128**

Intersection: Conklin Avenue and Moosjaw Street
Count Date: 02/12 and 13/2020
Count Day: Wednesday and Thursday
Counted By: Penticton Transportation Data Collection

ADDOZ ENGINEERING INC

BICYCLE AND PEDESTRIAN TRAFFIC

AM Peak Hour Traffic Count at Conklin Avenue and Moosjaw Street

Time Period	Conklin Ave EB				Conklin Ave WB				Moosjaw Street NB				Moosjaw Street SB			
AM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
7:00 - 7:15	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
7:45 - 8:00	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:00 - 8:15	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
8:15 - 8:30	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**1**
8:30 - 8:45	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**
8:45 - 9:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**1**	**0**	**4**	**0**	**0**	**0**	**1**

BICYCLE AND PEDESTRIAN TRAFFIC

PM Peak Hour Traffic Count at Conklin Avenue and Moosjaw Street

Time Period	Conklin Ave EB				Conklin Ave WB				Moosjaw Street NB				Moosjaw Street SB			
PM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
3:30 – 4:45	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**
3:45 – 4:00	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**2**
4:00 – 4:15	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
4:15 – 4:30	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**1**	**0**	**1**
4:30 – 4:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
4:45 – 5:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 – 5:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
5:15 – 5:30	0	0	0	1	0	0	0	5	0	0	0	0	0	0	0	1
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**	**0**	**2**	**0**	**2**	**0**	**2**

Intersection: Duncan Avenue and Moosjaw Street
Count Date: 02/03/2020
Count Day: Monday
Counted By: Penticton Transportation Data Collection

ADDOZ ENGINEERING INC

ALL VEHICLES

AM Peak Hour Traffic Count at Duncan Avenue and Moosjaw Street

Time Period	Duncan Avenue EB			Duncan Avenue WB			-			Moosjaw Street SB			Sum	4-P Total	PHF
AM	L	T	R	L	T	R	L	T	R	L	T	R			
7:00 - 7:15	0	30			36	1				4		2	73		
7:15 - 7:30	5	59			43	4				1		6	118		
7:30 - 7:45	3	43			48	2				11		6	113		
7:45 - 8:00	**5**	**59**			**58**	**3**				**9**		**6**	140	444	
8:00 - 8:15	**4**	**57**			**44**	**3**				**5**		**8**	121	492	
8:15 - 8:30	**1**	**63**			**61**	**3**				**5**		**12**	145	519	
8:30 - 8:45	**3**	**81**			**66**	**7**				**6**		**7**	170	**576**	**0.85**
8:45 - 9:00	3	45			62	8				6		7	131	567	
Peak Hour	**13**	**260**	**0**	**0**	**229**	**16**	**0**	**0**	**0**	**25**	**0**	**33**	**576**		
App Total	273			245			0			58			576		
HV %	**6%**			**6%**			**0%**			**2%**			**6%**		

ALL VEHICLES

PM Peak Hour Traffic Count at Duncan Avenue and Moosjaw Street

Time Period	Duncan Avenue EB			Duncan Avenue WB			-			Moosjaw Street SB			Sum	4-P Total	PHF
PM	L	T	R	L	T	R	L	T	R	L	T	R			
4:00 – 4:15	**6**	**52**			**104**	**3**				**7**		**6**	178		
4:15 – 4:30	**4**	**54**			**91**	**7**				**7**		**10**	173		
4:30 – 4:45	**4**	**79**			**93**	**9**				**5**		**7**	197		
4:45 – 5:00	**9**	**70**			**84**	**4**				**3**		**5**	175	**723**	**0.92**
5:00 – 5:15	9	56			73	12				4		5	159	704	
5:15 – 5:30	6	50			54	8				4		3	125	656	
5:30 – 5:45	3	53			57	3				2		4	122	581	
5:45 – 6:00	1	42			69	4				6		3	125	531	
Peak Hour	**23**	**255**	**0**	**0**	**372**	**23**	**0**	**0**	**0**	**22**	**0**	**28**	**723**		
App Total	278			395			0			50			723		
HV %	**1%**			**1%**			**0%**			**2%**			**1%**		

Intersection: Duncan Avenue and Moosjaw Street
Count Date: 02/03/2020
Count Day: Monday
Counted By: Penticton Transportation Data Collection

ADDOZ ENGINEERING INC

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

AM Peak Hour Traffic Count at Duncan Avenue and Moosjaw Street

Time Period	Duncan Avenue EB			Duncan Avenue WB			-			Moosjaw Street SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	0	0	0	2	0	0	0	0	0	0	0	2
7:15 - 7:30	1	6	0	0	1	0	0	0	0	0	0	1	9
7:30 - 7:45	0	2	0	0	0	0	0	0	0	0	0	1	3
7:45 - 8:00	1	6	0	0	1	0	0	0	0	0	0	0	**8**
8:00 - 8:15	1	2	0	0	4	0	0	0	0	0	0	0	**7**
8:15 - 8:30	0	3	0	0	5	0	0	0	0	0	0	0	**8**
8:30 - 8:45	0	4	0	0	4	0	0	0	0	0	0	1	**9**
8:45 - 9:00	0	3	0	0	0	0	0	0	0	0	0	0	3
Peak Hour	**2**	**15**	**0**	**0**	**14**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**32**
App Total	**17**			**14**			**0**			**1**			**32**

TRUCKS, MULTI-AXLE VEHICLE, CITY BUS OR SCHOOL BUS

PM Peak Hour Traffic Count at Duncan Avenue and Moosjaw Street

Time Period	Duncan Avenue EB			Duncan Avenue WB			-			Moosjaw Street SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	0	0	0	0	2	0	0	0	0	0	0	0	2
4:15 – 4:30	1	0	0	0	1	0	0	0	0	0	0	0	2
4:30 – 4:45	0	1	0	0	0	1	0	0	0	0	0	1	3
4:45 – 5:00	0	1	0	0	0	0	0	0	0	0	0	0	**1**
5:00 – 5:15	0	2	0	0	1	1	0	0	0	0	0	0	**4**
5:15 – 5:30	1	0	0	0	1	0	0	0	0	0	0	0	**2**
5:30 – 5:45	0	0	0	0	1	0	0	0	0	0	0	1	**2**
5:45 – 6:00	0	1	0	0	1	0	0	0	0	0	0	0	2
Peak Hour	**1**	**2**	**0**	**0**	**3**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**8**
App Total	**3**			**4**			**0**			**1**			**8**

Intersection: Duncan Avenue and Moosjaw Street
Count Date: 02/03/2020
Count Day: Monday
Project: Penticton Transportation Data Collection

ADDOZ ENGINEERING INC

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

AM Peak Hour Traffic Count at Duncan Avenue and Moosjaw Street

Time Period	Duncan Avenue EB			Duncan Avenue WB			-			Moosjaw Street SB			Sum
AM	L	T	R	L	T	R	L	T	R	L	T	R	
7:00 - 7:15	0	30			34	1				4		2	71
7:15 - 7:30	4	53			42	4				1		5	109
7:30 - 7:45	3	41			48	2				11		5	110
7:45 - 8:00	**4**	**53**			**57**	**3**				**9**		**6**	**132**
8:00 - 8:15	**3**	**55**			**40**	**3**				**5**		**8**	**114**
8:15 - 8:30	**1**	**60**			**56**	**3**				**5**		**12**	**137**
8:30 - 8:45	**3**	**77**			**62**	**7**				**6**		**6**	**161**
8:45 - 9:00	3	42			62	8				6		7	128
Peak Hour	**11**	**245**	**0**	**0**	**215**	**16**	**0**	**0**	**0**	**25**	**0**	**32**	**544**
App Total	**256**			**231**			**0**			**57**			**544**

PASSENGER CARS, MINI-VANS, TWO AXLE TRUCKS, MOTOR CYCLES AND STATION WAGONS

PM Peak Hour Traffic Count at Duncan Avenue and Moosjaw Street

Time Period	Duncan Avenue EB			Duncan Avenue WB			-			Moosjaw Street SB			Sum
PM	L	T	R	L	T	R	L	T	R	L	T	R	
4:00 – 4:15	**6**	**52**			**102**	**3**				**7**		**6**	176
4:15 – 4:30	**3**	**54**			**90**	**7**				**7**		**10**	171
4:30 – 4:45	**4**	**78**			**93**	**8**				**5**		**6**	194
4:45 – 5:00	**9**	**69**			**84**	**4**				**3**		**5**	**174**
5:00 – 5:15	9	54			72	11				4		5	**155**
5:15 – 5:30	5	50			53	8				4		3	**123**
5:30 – 5:45	3	53			56	3				2		3	**120**
5:45 – 6:00	1	41			68	4				6		3	123
Peak Hour	**22**	**253**	**0**	**0**	**369**	**22**	**0**	**0**	**0**	**22**	**0**	**27**	**715**
App Total	**275**			**391**			**0**			**49**			**715**

Intersection: Duncan Avenue and Moosjaw Street
Count Date: 02/03/2020
Count Day: Monday
Counted By: Penticton Transportation Data Collection

ADDOZ ENGINEERING INC

BICYCLE AND PEDESTRIAN TRAFFIC

AM Peak Hour Traffic Count at Duncan Avenue and Moosjaw Street

Time Period	Duncan Ave EB				Duncan Ave WB				-				Moosjaw Street SB			
AM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
7:00 - 7:15	0	0				0	0	0				0	0		0	0
7:15 - 7:30	0	0				0	0	1				2	0		0	1
7:30 - 7:45	0	0				0	0	3				1	0		0	0
7:45 - 8:00	**0**	**0**				**0**	**0**	**2**				**2**	**0**		**0**	**0**
8:00 - 8:15	**0**	**0**				**0**	**0**	**3**				**0**	**0**		**0**	**0**
8:15 - 8:30	**0**	**0**				**0**	**0**	**2**				**0**	**0**		**0**	**1**
8:30 - 8:45	**0**	**0**				**0**	**0**	**2**				**1**	**0**		**0**	**0**
8:45 - 9:00	0	0				0	0	1				0	0		0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**1**

BICYCLE AND PEDESTRIAN TRAFFIC

PM Peak Hour Traffic Count at Duncan Avenue and Moosjaw Street

Time Period	Duncan Ave EB				Duncan Ave WB				-				Moosjaw Street SB			
PM	L	T	R	PED S. Side	L	T	R	PED N. Side	L	T	R	PED E. Side	L	T	R	PED W. Side
4:00 – 4:15	**0**	**0**				**0**	**0**	**0**				**1**	**0**		**0**	**0**
4:15 – 4:30	**0**	**0**				**1**	**0**	**5**				**1**	**0**		**0**	**0**
4:30 – 4:45	**0**	**0**				**0**	**0**	**1**				**2**	**0**		**0**	**0**
4:45 – 5:00	**0**	**0**				**0**	**0**	**1**				**1**	**0**		**0**	**0**
5:00 – 5:15	0	0				0	1	4				0	0		0	0
5:15 – 5:30	0	0				0	0	0				0	0		0	0
5:30 – 5:45	0	0				0	0	2				0	0		0	0
5:45 – 6:00	0	0				0	0	1				0	0		0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**7**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**

Appendix D

Synchro Capacity Analyses Reports

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	0	15	3	0	8
Future Vol, veh/h	4	0	15	3	0	8
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	25	25	6	6	13	13
Mvmt Flow	5	0	20	4	0	11
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.4	7.3	6.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	83%
Vol Thru, %	0%	100%	17%
Vol Right, %	100%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	8	4	18
LT Vol	0	0	15
Through Vol	0	4	3
RT Vol	8	0	0
Lane Flow Rate	11	5	24
Geometry Grp	1	1	1
Degree of Util (X)	0.011	0.006	0.028
Departure Headway (Hd)	3.572	4.36	4.191
Convergence, Y/N	Yes	Yes	Yes
Cap	1004	824	858
Service Time	1.587	2.37	2.195
HCM Lane V/C Ratio	0.011	0.006	0.028
HCM Control Delay	6.6	7.4	7.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0.1

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	324	42	20	292	34	14
Future Vol, veh/h	324	42	20	292	34	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	395	51	24	356	41	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	446	0	799	395
Stage 1	-	-	-	-	395	-
Stage 2	-	-	-	-	404	-
Critical Hdwy	-	-	4.13	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.227	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1109	-	355	654
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	674	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1109	-	345	654
Mov Cap-2 Maneuver	-	-	-	-	345	-
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	656	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	400	-	-	1109	-
HCM Lane V/C Ratio	0.146	-	-	0.022	-
HCM Control Delay (s)	15.5	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	61	4	4	64
Future Vol, veh/h	0	4	61	4	4	64
Conflicting Peds, #/hr	0	0	0	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	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	87	6	6	91

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	193	90	0	0	93	0
Stage 1	90	-	-	-	-	-
Stage 2	103	-	-	-	-	-
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	796	968	-	-	1501	-
Stage 1	934	-	-	-	-	-
Stage 2	921	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	793	968	-	-	1501	-
Mov Cap-2 Maneuver	793	-	-	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	917	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	968	1501	-
HCM Lane V/C Ratio	-	-	0.006	0.004	-
HCM Control Delay (s)	-	-	8.7	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	0	2	4	1	10	1	42	2	4	46	14
Future Vol, veh/h	14	0	2	4	1	10	1	42	2	4	46	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	7	7	7	2	2	2	2	2	2
Mvmt Flow	20	0	3	6	1	14	1	59	3	6	65	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	157	151	75	152	160	61	85	0	0	62	0	0
Stage 1	87	87	-	63	63	-	-	-	-	-	-	-
Stage 2	70	64	-	89	97	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	809	741	986	804	723	990	1512	-	-	1541	-	-
Stage 1	921	823	-	936	833	-	-	-	-	-	-	-
Stage 2	940	842	-	906	805	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	794	737	986	798	719	990	1512	-	-	1541	-	-
Mov Cap-2 Maneuver	794	737	-	798	719	-	-	-	-	-	-	-
Stage 1	920	820	-	935	832	-	-	-	-	-	-	-
Stage 2	924	841	-	900	802	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	9.1	0.2	0.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1512	-	-	814	909	1541	-	-
HCM Lane V/C Ratio	0.001	-	-	0.028	0.023	0.004	-	-
HCM Control Delay (s)	7.4	0	-	9.5	9.1	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	1	6	14	1
Future Vol, veh/h	2	1	1	6	14	1
Conflicting Peds, #/hr	0	0	0	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	69	69	69	69	69	69
Heavy Vehicles, %	33	33	2	2	2	2
Mvmt Flow	3	1	1	9	20	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	32	21	21	0	-	0
Stage 1	21	-	-	-	-	-
Stage 2	11	-	-	-	-	-
Critical Hdwy	6.73	6.53	4.12	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.218	-	-	-
Pot Cap-1 Maneuver	908	974	1595	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	907	974	1595	-	-	-
Mov Cap-2 Maneuver	907	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	937	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1595	-	928	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	6.8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	2	7	5	0	11
Future Vol, veh/h	6	2	7	5	0	11
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	3	10	7	0	16
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	6.9	7.2	6.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	58%
Vol Thru, %	0%	75%	42%
Vol Right, %	100%	25%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	11	8	12
LT Vol	0	0	7
Through Vol	0	6	5
RT Vol	11	2	0
Lane Flow Rate	16	11	17
Geometry Grp	1	1	1
Degree of Util (X)	0.015	0.012	0.019
Departure Headway (Hd)	3.383	3.824	4.087
Convergence, Y/N	Yes	Yes	Yes
Cap	1061	940	880
Service Time	1.394	1.829	2.09
HCM Lane V/C Ratio	0.015	0.012	0.019
HCM Control Delay	6.4	6.9	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0.1

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	319	54	21	394	47	26
Future Vol, veh/h	319	54	21	394	47	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	354	60	23	438	52	29

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	414	0	838	354
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	484	-
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	-	-	1145	-	336	690
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	620	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1145	-	327	690
Mov Cap-2 Maneuver	-	-	-	-	327	-
Stage 1	-	-	-	-	710	-
Stage 2	-	-	-	-	603	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	16.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	402	-	-	1145	-
HCM Lane V/C Ratio	0.202	-	-	0.02	-
HCM Control Delay (s)	16.2	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	4	57	6	3	80
Future Vol, veh/h	3	4	57	6	3	80
Conflicting Peds, #/hr	0	0	0	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	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	66	7	3	92

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	168	70	0	0	73	0
Stage 1	70	-	-	-	-	-
Stage 2	98	-	-	-	-	-
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	822	993	-	-	1527	-
Stage 1	953	-	-	-	-	-
Stage 2	926	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	820	993	-	-	1527	-
Mov Cap-2 Maneuver	820	-	-	-	-	-
Stage 1	953	-	-	-	-	-
Stage 2	924	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	911	1527	-
HCM Lane V/C Ratio	-	-	0.009	0.002	-
HCM Control Delay (s)	-	-	9	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	1	0	4	0	4	6	51	9	7	66	9
Future Vol, veh/h	9	1	0	4	0	4	6	51	9	7	66	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	2	2	2	2	2	2	2	2
Mvmt Flow	10	1	0	4	0	4	7	57	10	8	73	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	172	175	78	171	175	62	83	0	0	67	0	0
Stage 1	94	94	-	76	76	-	-	-	-	-	-	-
Stage 2	78	81	-	95	99	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	791	718	983	792	718	1003	1514	-	-	1535	-	-
Stage 1	913	817	-	933	832	-	-	-	-	-	-	-
Stage 2	931	828	-	912	813	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	782	711	983	785	711	1003	1514	-	-	1535	-	-
Mov Cap-2 Maneuver	782	711	-	785	711	-	-	-	-	-	-	-
Stage 1	908	813	-	928	828	-	-	-	-	-	-	-
Stage 2	922	824	-	906	809	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	9.1	0.7	0.6
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1514	-	-	774	881	1535	-	-
HCM Lane V/C Ratio	0.004	-	-	0.014	0.01	0.005	-	-
HCM Control Delay (s)	7.4	0	-	9.7	9.1	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	4	0	10	7	0
Future Vol, veh/h	1	4	0	10	7	0
Conflicting Peds, #/hr	0	0	0	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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	5	0	13	9	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	22	9	9	0	-	0
Stage 1	9	-	-	-	-	-
Stage 2	13	-	-	-	-	-
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	995	1073	1611	-	-	-
Stage 1	1014	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	995	1073	1611	-	-	-
Mov Cap-2 Maneuver	995	-	-	-	-	-
Stage 1	1014	-	-	-	-	-
Stage 2	1010	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1611	-	1056	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s)	0	-	8.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	0	15	3	0	8
Future Vol, veh/h	4	0	15	3	0	8
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	25	25	6	6	13	13
Mvmt Flow	5	0	20	4	0	11
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.4	7.3	6.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	83%
Vol Thru, %	0%	100%	17%
Vol Right, %	100%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	8	4	18
LT Vol	0	0	15
Through Vol	0	4	3
RT Vol	8	0	0
Lane Flow Rate	11	5	24
Geometry Grp	1	1	1
Degree of Util (X)	0.011	0.006	0.028
Departure Headway (Hd)	3.572	4.36	4.191
Convergence, Y/N	Yes	Yes	Yes
Cap	1004	824	858
Service Time	1.587	2.37	2.195
HCM Lane V/C Ratio	0.011	0.006	0.028
HCM Control Delay	6.6	7.4	7.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0.1

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	329	43	20	296	35	14
Future Vol, veh/h	329	43	20	296	35	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	401	52	24	361	43	17

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	453	0	810	401
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	409	-
Critical Hdwy	-	-	4.13	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.227	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1102	-	349	649
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	671	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1102	-	340	649
Mov Cap-2 Maneuver	-	-	-	-	340	-
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	653	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	15.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	394	-	-	1102	-
HCM Lane V/C Ratio	0.152	-	-	0.022	-
HCM Control Delay (s)	15.8	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	62	4	4	65
Future Vol, veh/h	0	4	62	4	4	65
Conflicting Peds, #/hr	0	0	0	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	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	89	6	6	93

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	197	92	0	0	95	0
Stage 1	92	-	-	-	-	-
Stage 2	105	-	-	-	-	-
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	792	965	-	-	1499	-
Stage 1	932	-	-	-	-	-
Stage 2	919	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	789	965	-	-	1499	-
Mov Cap-2 Maneuver	789	-	-	-	-	-
Stage 1	932	-	-	-	-	-
Stage 2	915	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	965	1499	-
HCM Lane V/C Ratio	-	-	0.006	0.004	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	0	2	4	1	10	1	43	2	4	47	14
Future Vol, veh/h	14	0	2	4	1	10	1	43	2	4	47	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	7	7	7	2	2	2	2	2	2
Mvmt Flow	20	0	3	6	1	14	1	61	3	6	66	20

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	160	154	76	155	163	63	86	0	0	64	0	0
Stage 1	88	88	-	65	65	-	-	-	-	-	-	-
Stage 2	72	66	-	90	98	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	806	738	985	800	720	988	1510	-	-	1538	-	-
Stage 1	920	822	-	933	831	-	-	-	-	-	-	-
Stage 2	938	840	-	905	804	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	791	734	985	794	716	988	1510	-	-	1538	-	-
Mov Cap-2 Maneuver	791	734	-	794	716	-	-	-	-	-	-	-
Stage 1	919	819	-	932	830	-	-	-	-	-	-	-
Stage 2	922	839	-	899	801	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.6	9.1	0.2	0.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1510	-	-	811	906	1538	-	-
HCM Lane V/C Ratio	0.001	-	-	0.028	0.023	0.004	-	-
HCM Control Delay (s)	7.4	0	-	9.6	9.1	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	1	6	14	1
Future Vol, veh/h	2	1	1	6	14	1
Conflicting Peds, #/hr	0	0	0	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	69	69	69	69	69	69
Heavy Vehicles, %	33	33	2	2	2	2
Mvmt Flow	3	1	1	9	20	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	32	21	21	0	-	0
Stage 1	21	-	-	-	-	-
Stage 2	11	-	-	-	-	-
Critical Hdwy	6.73	6.53	4.12	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.218	-	-	-
Pot Cap-1 Maneuver	908	974	1595	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	907	974	1595	-	-	-
Mov Cap-2 Maneuver	907	-	-	-	-	-
Stage 1	926	-	-	-	-	-
Stage 2	937	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1595	-	928	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	6.8
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	2	7	5	0	11
Future Vol, veh/h	6	2	7	5	0	11
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	3	10	7	0	16
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	6.9	7.2	6.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	58%
Vol Thru, %	0%	75%	42%
Vol Right, %	100%	25%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	11	8	12
LT Vol	0	0	7
Through Vol	0	6	5
RT Vol	11	2	0
Lane Flow Rate	16	11	17
Geometry Grp	1	1	1
Degree of Util (X)	0.015	0.012	0.019
Departure Headway (Hd)	3.383	3.824	4.087
Convergence, Y/N	Yes	Yes	Yes
Cap	1061	940	880
Service Time	1.394	1.829	2.09
HCM Lane V/C Ratio	0.015	0.012	0.019
HCM Control Delay	6.4	6.9	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0.1

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	324	55	21	400	48	26
Future Vol, veh/h	324	55	21	400	48	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	360	61	23	444	53	29

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	421	0	850	360
Stage 1	-	-	-	-	360	-
Stage 2	-	-	-	-	490	-
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	-	-	1138	-	331	684
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	616	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1138	-	322	684
Mov Cap-2 Maneuver	-	-	-	-	322	-
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	599	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	396	-	-	1138	-
HCM Lane V/C Ratio	0.208	-	-	0.021	-
HCM Control Delay (s)	16.5	-	-	8.2	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	4	58	6	3	81
Future Vol, veh/h	3	4	58	6	3	81
Conflicting Peds, #/hr	0	0	0	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	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	67	7	3	93

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	170	71	0	0	74	0
Stage 1	71	-	-	-	-	-
Stage 2	99	-	-	-	-	-
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	820	991	-	-	1526	-
Stage 1	952	-	-	-	-	-
Stage 2	925	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	818	991	-	-	1526	-
Mov Cap-2 Maneuver	818	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	923	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	909	1526	-
HCM Lane V/C Ratio	-	-	0.009	0.002	-
HCM Control Delay (s)	-	-	9	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	1	0	4	0	4	6	52	9	7	67	9
Future Vol, veh/h	9	1	0	4	0	4	6	52	9	7	67	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	2	2	2	2	2	2	2	2
Mvmt Flow	10	1	0	4	0	4	7	58	10	8	74	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	174	177	79	173	177	63	84	0	0	68	0	0
Stage 1	95	95	-	77	77	-	-	-	-	-	-	-
Stage 2	79	82	-	96	100	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	789	717	981	790	717	1002	1513	-	-	1533	-	-
Stage 1	912	816	-	932	831	-	-	-	-	-	-	-
Stage 2	930	827	-	911	812	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	780	710	981	783	710	1002	1513	-	-	1533	-	-
Mov Cap-2 Maneuver	780	710	-	783	710	-	-	-	-	-	-	-
Stage 1	907	812	-	927	827	-	-	-	-	-	-	-
Stage 2	921	823	-	905	808	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	9.1	0.7	0.6
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1513	-	-	772	879	1533	-	-
HCM Lane V/C Ratio	0.004	-	-	0.014	0.01	0.005	-	-
HCM Control Delay (s)	7.4	0	-	9.7	9.1	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	4	0	10	7	0
Future Vol, veh/h	1	4	0	10	7	0
Conflicting Peds, #/hr	0	0	0	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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	5	0	13	9	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	22	9	9	0	-	0
Stage 1	9	-	-	-	-	-
Stage 2	13	-	-	-	-	-
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	995	1073	1611	-	-	-
Stage 1	1014	-	-	-	-	-
Stage 2	1010	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	995	1073	1611	-	-	-
Mov Cap-2 Maneuver	995	-	-	-	-	-
Stage 1	1014	-	-	-	-	-
Stage 2	1010	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1611	-	1056	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s)	0	-	8.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	0	16	3	0	9
Future Vol, veh/h	4	0	16	3	0	9
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	25	25	6	6	13	13
Mvmt Flow	5	0	21	4	0	12
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.4	7.3	6.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	84%
Vol Thru, %	0%	100%	16%
Vol Right, %	100%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	9	4	19
LT Vol	0	0	16
Through Vol	0	4	3
RT Vol	9	0	0
Lane Flow Rate	12	5	25
Geometry Grp	1	1	1
Degree of Util (X)	0.012	0.006	0.03
Departure Headway (Hd)	3.575	4.366	4.196
Convergence, Y/N	Yes	Yes	Yes
Cap	1003	823	858
Service Time	1.591	2.374	2.199
HCM Lane V/C Ratio	0.012	0.006	0.029
HCM Control Delay	6.6	7.4	7.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0.1

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	348	45	22	314	37	15
Future Vol, veh/h	348	45	22	314	37	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	424	55	27	383	45	18

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	479	0	861	424
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	437	-
Critical Hdwy	-	-	4.13	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.227	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1078	-	326	630
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	651	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1078	-	316	630
Mov Cap-2 Maneuver	-	-	-	-	316	-
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	630	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	16.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	369	-	-	1078	-
HCM Lane V/C Ratio	0.172	-	-	0.025	-
HCM Control Delay (s)	16.8	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	66	4	4	69
Future Vol, veh/h	0	4	66	4	4	69
Conflicting Peds, #/hr	0	0	0	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	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	94	6	6	99

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	208	97	0	0	100	0
Stage 1	97	-	-	-	-	-
Stage 2	111	-	-	-	-	-
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	780	959	-	-	1493	-
Stage 1	927	-	-	-	-	-
Stage 2	914	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	777	959	-	-	1493	-
Mov Cap-2 Maneuver	777	-	-	-	-	-
Stage 1	927	-	-	-	-	-
Stage 2	910	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	959	1493	-
HCM Lane V/C Ratio	-	-	0.006	0.004	-
HCM Control Delay (s)	-	-	8.8	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	0	2	4	1	11	1	45	2	4	49	15
Future Vol, veh/h	15	0	2	4	1	11	1	45	2	4	49	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	7	7	7	2	2	2	2	2	2
Mvmt Flow	21	0	3	6	1	15	1	63	3	6	69	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	167	160	80	160	169	65	90	0	0	66	0	0
Stage 1	92	92	-	67	67	-	-	-	-	-	-	-
Stage 2	75	68	-	93	102	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	797	732	980	794	715	985	1505	-	-	1536	-	-
Stage 1	915	819	-	931	829	-	-	-	-	-	-	-
Stage 2	934	838	-	902	801	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	780	728	980	788	711	985	1505	-	-	1536	-	-
Mov Cap-2 Maneuver	780	728	-	788	711	-	-	-	-	-	-	-
Stage 1	914	816	-	930	828	-	-	-	-	-	-	-
Stage 2	917	837	-	896	798	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.6	9.1	0.2	0.4
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1505	-	-	799	907	1536	-	-
HCM Lane V/C Ratio	0.001	-	-	0.03	0.025	0.004	-	-
HCM Control Delay (s)	7.4	0	-	9.6	9.1	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	1	6	15	1
Future Vol, veh/h	2	1	1	6	15	1
Conflicting Peds, #/hr	0	0	0	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	69	69	69	69	69	69
Heavy Vehicles, %	33	33	2	2	2	2
Mvmt Flow	3	1	1	9	22	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	34	23	23	0	-	0
Stage 1	23	-	-	-	-	-
Stage 2	11	-	-	-	-	-
Critical Hdwy	6.73	6.53	4.12	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.218	-	-	-
Pot Cap-1 Maneuver	906	971	1592	-	-	-
Stage 1	925	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	905	971	1592	-	-	-
Mov Cap-2 Maneuver	905	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	937	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1592	-	926	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	2	8	5	0	12
Future Vol, veh/h	6	2	8	5	0	12
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	3	11	7	0	17
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	6.9	7.2	6.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	62%
Vol Thru, %	0%	75%	38%
Vol Right, %	100%	25%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	12	8	13
LT Vol	0	0	8
Through Vol	0	6	5
RT Vol	12	2	0
Lane Flow Rate	17	11	19
Geometry Grp	1	1	1
Degree of Util (X)	0.016	0.012	0.021
Departure Headway (Hd)	3.386	3.828	4.095
Convergence, Y/N	Yes	Yes	Yes
Cap	1060	939	879
Service Time	1.398	1.833	2.099
HCM Lane V/C Ratio	0.016	0.012	0.022
HCM Control Delay	6.5	6.9	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0.1

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	343	58	23	424	51	28
Future Vol, veh/h	343	58	23	424	51	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	381	64	26	471	57	31

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	445	0	904	381
Stage 1	-	-	-	-	381	-
Stage 2	-	-	-	-	523	-
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	-	-	1115	-	307	666
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	595	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1115	-	297	666
Mov Cap-2 Maneuver	-	-	-	-	297	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	576	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	17.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	370	-	-	1115	-
HCM Lane V/C Ratio	0.237	-	-	0.023	-
HCM Control Delay (s)	17.7	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	4	61	6	3	86
Future Vol, veh/h	3	4	61	6	3	86
Conflicting Peds, #/hr	0	0	0	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	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	70	7	3	99

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	179	74	0	0	77	0
Stage 1	74	-	-	-	-	-
Stage 2	105	-	-	-	-	-
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	811	988	-	-	1522	-
Stage 1	949	-	-	-	-	-
Stage 2	919	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	809	988	-	-	1522	-
Mov Cap-2 Maneuver	809	-	-	-	-	-
Stage 1	949	-	-	-	-	-
Stage 2	917	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	902	1522	-
HCM Lane V/C Ratio	-	-	0.009	0.002	-
HCM Control Delay (s)	-	-	9	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	1	0	4	0	4	6	55	10	8	71	10
Future Vol, veh/h	10	1	0	4	0	4	6	55	10	8	71	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	2	2	2	2	2	2	2	2
Mvmt Flow	11	1	0	4	0	4	7	61	11	9	79	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	186	189	85	184	189	67	90	0	0	72	0	0
Stage 1	103	103	-	81	81	-	-	-	-	-	-	-
Stage 2	83	86	-	103	108	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	775	706	974	777	706	997	1505	-	-	1528	-	-
Stage 1	903	810	-	927	828	-	-	-	-	-	-	-
Stage 2	925	824	-	903	806	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	765	698	974	769	698	997	1505	-	-	1528	-	-
Mov Cap-2 Maneuver	765	698	-	769	698	-	-	-	-	-	-	-
Stage 1	898	805	-	922	824	-	-	-	-	-	-	-
Stage 2	916	820	-	896	801	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	9.2	0.6	0.7
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1505	-	-	758	868	1528	-	-
HCM Lane V/C Ratio	0.004	-	-	0.016	0.01	0.006	-	-
HCM Control Delay (s)	7.4	0	-	9.8	9.2	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	4	0	11	8	0
Future Vol, veh/h	1	4	0	11	8	0
Conflicting Peds, #/hr	0	0	0	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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	5	0	14	10	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	24	10	10	0	-	0
Stage 1	10	-	-	-	-	-
Stage 2	14	-	-	-	-	-
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	992	1071	1610	-	-	-
Stage 1	1013	-	-	-	-	-
Stage 2	1009	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	992	1071	1610	-	-	-
Mov Cap-2 Maneuver	992	-	-	-	-	-
Stage 1	1013	-	-	-	-	-
Stage 2	1009	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1610	-	1054	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s)	0	-	8.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	5	0	18	4	0	10
Future Vol, veh/h	5	0	18	4	0	10
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	25	25	6	6	13	13
Mvmt Flow	7	0	24	5	0	13
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.4	7.3	6.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	82%
Vol Thru, %	0%	100%	18%
Vol Right, %	100%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	10	5	22
LT Vol	0	0	18
Through Vol	0	5	4
RT Vol	10	0	0
Lane Flow Rate	13	7	29
Geometry Grp	1	1	1
Degree of Util (X)	0.013	0.008	0.034
Departure Headway (Hd)	3.583	4.371	4.194
Convergence, Y/N	Yes	Yes	Yes
Cap	999	822	858
Service Time	1.603	2.379	2.198
HCM Lane V/C Ratio	0.013	0.009	0.034
HCM Control Delay	6.7	7.4	7.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0	0	0.1

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	397	51	25	358	42	17
Future Vol, veh/h	397	51	25	358	42	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	484	62	30	437	51	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	546	0	981	484
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	497	-
Critical Hdwy	-	-	4.13	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.227	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1018	-	277	583
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	611	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1018	-	266	583
Mov Cap-2 Maneuver	-	-	-	-	266	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	587	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	19.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	315	-	-	1018	-
HCM Lane V/C Ratio	0.228	-	-	0.03	-
HCM Control Delay (s)	19.8	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	75	5	5	78
Future Vol, veh/h	0	5	75	5	5	78
Conflicting Peds, #/hr	0	0	0	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	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	107	7	7	111

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	236	111	0	0	114	0
Stage 1	111	-	-	-	-	-
Stage 2	125	-	-	-	-	-
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	752	942	-	-	1475	-
Stage 1	914	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	748	942	-	-	1475	-
Mov Cap-2 Maneuver	748	-	-	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	896	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	942	1475	-
HCM Lane V/C Ratio	-	-	0.008	0.005	-
HCM Control Delay (s)	-	-	8.9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	17	0	2	5	1	12	1	51	2	5	56	17
Future Vol, veh/h	17	0	2	5	1	12	1	51	2	5	56	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	7	7	7	2	2	2	2	2	2
Mvmt Flow	24	0	3	7	1	17	1	72	3	7	79	24

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	190	182	91	183	193	74	103	0	0	75	0	0
Stage 1	105	105	-	76	76	-	-	-	-	-	-	-
Stage 2	85	77	-	107	117	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	770	712	967	767	693	974	1489	-	-	1524	-	-
Stage 1	901	808	-	921	822	-	-	-	-	-	-	-
Stage 2	923	831	-	886	789	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	752	708	967	762	689	974	1489	-	-	1524	-	-
Mov Cap-2 Maneuver	752	708	-	762	689	-	-	-	-	-	-	-
Stage 1	900	804	-	920	821	-	-	-	-	-	-	-
Stage 2	905	830	-	879	785	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	9.2	0.1	0.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1489	-	-	770	885	1524	-	-
HCM Lane V/C Ratio	0.001	-	-	0.035	0.029	0.005	-	-
HCM Control Delay (s)	7.4	0	-	9.8	9.2	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	1	7	17	1
Future Vol, veh/h	2	1	1	7	17	1
Conflicting Peds, #/hr	0	0	0	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	69	69	69	69	69	69
Heavy Vehicles, %	33	33	2	2	2	2
Mvmt Flow	3	1	1	10	25	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	38	26	26	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	12	-	-	-	-	-
Critical Hdwy	6.73	6.53	4.12	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.218	-	-	-
Pot Cap-1 Maneuver	901	967	1588	-	-	-
Stage 1	922	-	-	-	-	-
Stage 2	936	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	900	967	1588	-	-	-
Mov Cap-2 Maneuver	900	-	-	-	-	-
Stage 1	921	-	-	-	-	-
Stage 2	936	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1588	-	921	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	6.9
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	7	2	9	6	0	13
Future Vol, veh/h	7	2	9	6	0	13
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	3	13	9	0	19
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	6.9	7.2	6.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	60%
Vol Thru, %	0%	78%	40%
Vol Right, %	100%	22%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	13	9	15
LT Vol	0	0	9
Through Vol	0	7	6
RT Vol	13	2	0
Lane Flow Rate	19	13	21
Geometry Grp	1	1	1
Degree of Util (X)	0.017	0.014	0.024
Departure Headway (Hd)	3.392	3.85	4.097
Convergence, Y/N	Yes	Yes	Yes
Cap	1057	934	879
Service Time	1.408	1.854	2.099
HCM Lane V/C Ratio	0.018	0.014	0.024
HCM Control Delay	6.5	6.9	7.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0	0.1

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	391	66	26	483	58	32
Future Vol, veh/h	391	66	26	483	58	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	434	73	29	537	64	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	507	0	1029	434
Stage 1	-	-	-	-	434	-
Stage 2	-	-	-	-	595	-
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	-	-	1058	-	259	622
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	551	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1058	-	249	622
Mov Cap-2 Maneuver	-	-	-	-	249	-
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	530	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	21.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	316	-	-	1058	-
HCM Lane V/C Ratio	0.316	-	-	0.027	-
HCM Control Delay (s)	21.6	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	5	70	7	4	98
Future Vol, veh/h	4	5	70	7	4	98
Conflicting Peds, #/hr	0	0	0	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	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	6	80	8	5	113

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	207	84	0	0	88	0
Stage 1	84	-	-	-	-	-
Stage 2	123	-	-	-	-	-
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	781	975	-	-	1508	-
Stage 1	939	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	778	975	-	-	1508	-
Mov Cap-2 Maneuver	778	-	-	-	-	-
Stage 1	939	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	876	1508	-
HCM Lane V/C Ratio	-	-	0.012	0.003	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	11	1	0	5	0	5	7	62	11	9	81	11
Future Vol, veh/h	11	1	0	5	0	5	7	62	11	9	81	11
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	2	2	2	2	2	2	2	2
Mvmt Flow	12	1	0	6	0	6	8	69	12	10	90	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	210	213	96	208	213	75	102	0	0	81	0	0
Stage 1	116	116	-	91	91	-	-	-	-	-	-	-
Stage 2	94	97	-	117	122	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	747	684	960	749	684	986	1490	-	-	1517	-	-
Stage 1	889	800	-	916	820	-	-	-	-	-	-	-
Stage 2	913	815	-	888	795	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	736	675	960	741	675	986	1490	-	-	1517	-	-
Mov Cap-2 Maneuver	736	675	-	741	675	-	-	-	-	-	-	-
Stage 1	884	794	-	911	815	-	-	-	-	-	-	-
Stage 2	902	810	-	881	789	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	9.3	0.7	0.7
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1490	-	-	730	846	1517	-	-
HCM Lane V/C Ratio	0.005	-	-	0.018	0.013	0.007	-	-
HCM Control Delay (s)	7.4	0	-	10	9.3	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	5	0	12	9	0
Future Vol, veh/h	1	5	0	12	9	0
Conflicting Peds, #/hr	0	0	0	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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	6	0	15	11	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	26	11	11	0	-	0
Stage 1	11	-	-	-	-	-
Stage 2	15	-	-	-	-	-
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	989	1070	1608	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	989	1070	1608	-	-	-
Mov Cap-2 Maneuver	989	-	-	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	1008	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.4	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1608	-	1056	-	-
HCM Lane V/C Ratio	-	-	0.007	-	-
HCM Control Delay (s)	0	-	8.4	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	4	0	24	3	0	35
Future Vol, veh/h	4	0	24	3	0	35
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	25	25	6	6	13	13
Mvmt Flow	5	0	32	4	0	47
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.5	7.5	6.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	89%
Vol Thru, %	0%	100%	11%
Vol Right, %	100%	0%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	35	4	27
LT Vol	0	0	24
Through Vol	0	4	3
RT Vol	35	0	0
Lane Flow Rate	47	5	36
Geometry Grp	1	1	1
Degree of Util (X)	0.047	0.007	0.043
Departure Headway (Hd)	3.593	4.434	4.265
Convergence, Y/N	Yes	Yes	Yes
Cap	996	808	842
Service Time	1.618	2.455	2.279
HCM Lane V/C Ratio	0.047	0.006	0.043
HCM Control Delay	6.8	7.5	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0	0.1

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	329	48	24	296	48	27
Future Vol, veh/h	329	48	24	296	48	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	401	59	29	361	59	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	460	0	820	401
Stage 1	-	-	-	-	401	-
Stage 2	-	-	-	-	419	-
Critical Hdwy	-	-	4.13	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.227	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1096	-	345	649
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	664	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1096	-	334	649
Mov Cap-2 Maneuver	-	-	-	-	334	-
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	642	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	16.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	405	-	-	1096	-
HCM Lane V/C Ratio	0.226	-	-	0.027	-
HCM Control Delay (s)	16.5	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	88	4	4	74
Future Vol, veh/h	0	4	88	4	4	74
Conflicting Peds, #/hr	0	0	0	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	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	126	6	6	106

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	247	129	0	0	132	0
Stage 1	129	-	-	-	-	-
Stage 2	118	-	-	-	-	-
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	741	921	-	-	1453	-
Stage 1	897	-	-	-	-	-
Stage 2	907	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	738	921	-	-	1453	-
Mov Cap-2 Maneuver	738	-	-	-	-	-
Stage 1	897	-	-	-	-	-
Stage 2	903	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	921	1453	-
HCM Lane V/C Ratio	-	-	0.006	0.004	-
HCM Control Delay (s)	-	-	8.9	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	0	2	4	1	10	1	43	2	4	47	23
Future Vol, veh/h	40	0	2	4	1	10	1	43	2	4	47	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	7	7	7	2	2	2	2	2	2
Mvmt Flow	56	0	3	6	1	14	1	61	3	6	66	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	166	160	82	161	175	63	98	0	0	64	0	0
Stage 1	94	94	-	65	65	-	-	-	-	-	-	-
Stage 2	72	66	-	96	110	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	798	732	978	793	709	988	1495	-	-	1538	-	-
Stage 1	913	817	-	933	831	-	-	-	-	-	-	-
Stage 2	938	840	-	898	795	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	782	728	978	787	705	988	1495	-	-	1538	-	-
Mov Cap-2 Maneuver	782	728	-	787	705	-	-	-	-	-	-	-
Stage 1	912	814	-	932	830	-	-	-	-	-	-	-
Stage 2	922	839	-	892	792	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	9.1	0.2	0.4
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1495	-	-	790	902	1538	-	-
HCM Lane V/C Ratio	0.001	-	-	0.075	0.023	0.004	-	-
HCM Control Delay (s)	7.4	0	-	9.9	9.1	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	1	1	33	23	1
Future Vol, veh/h	2	1	1	33	23	1
Conflicting Peds, #/hr	0	0	0	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	69	69	69	69	69	69
Heavy Vehicles, %	33	33	2	2	2	2
Mvmt Flow	3	1	1	48	33	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	84	34	34	0	-	0
Stage 1	34	-	-	-	-	-
Stage 2	50	-	-	-	-	-
Critical Hdwy	6.73	6.53	4.12	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.218	-	-	-
Pot Cap-1 Maneuver	847	957	1578	-	-	-
Stage 1	914	-	-	-	-	-
Stage 2	899	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	846	957	1578	-	-	-
Mov Cap-2 Maneuver	846	-	-	-	-	-
Stage 1	913	-	-	-	-	-
Stage 2	899	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.1	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1578	-	880	-	-
HCM Lane V/C Ratio	0.001	-	0.005	-	-
HCM Control Delay (s)	7.3	0	9.1	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	3	2	6	14	10
Future Vol, veh/h	29	3	2	6	14	10
Conflicting Peds, #/hr	0	0	0	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	32	3	2	7	15	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	32	21	26	0	-	0
Stage 1	21	-	-	-	-	-
Stage 2	11	-	-	-	-	-
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	982	1056	1588	-	-	-
Stage 1	1002	-	-	-	-	-
Stage 2	1012	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	981	1056	1588	-	-	-
Mov Cap-2 Maneuver	981	-	-	-	-	-
Stage 1	1001	-	-	-	-	-
Stage 2	1012	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	1.8	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1588	-	988	-	-
HCM Lane V/C Ratio	0.001	-	0.035	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	6	2	34	5	0	27
Future Vol, veh/h	6	2	34	5	0	27
Peak Hour Factor	0.70	0.70	0.70	0.70	0.70	0.70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	3	49	7	0	39
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7	7.5	6.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	0%	0%	87%
Vol Thru, %	0%	75%	13%
Vol Right, %	100%	25%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	27	8	39
LT Vol	0	0	34
Through Vol	0	6	5
RT Vol	27	2	0
Lane Flow Rate	39	11	56
Geometry Grp	1	1	1
Degree of Util (X)	0.037	0.012	0.065
Departure Headway (Hd)	3.45	3.893	4.184
Convergence, Y/N	Yes	Yes	Yes
Cap	1034	920	860
Service Time	1.483	1.912	2.192
HCM Lane V/C Ratio	0.038	0.012	0.065
HCM Control Delay	6.6	7	7.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.1	0	0.2

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	324	68	34	400	56	34
Future Vol, veh/h	324	68	34	400	56	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	360	76	38	444	62	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	436	0	880	360
Stage 1	-	-	-	-	360	-
Stage 2	-	-	-	-	520	-
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	-	-	1124	-	318	684
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	597	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1124	-	304	684
Mov Cap-2 Maneuver	-	-	-	-	304	-
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	570	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	17.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	385	-	-	1124	-
HCM Lane V/C Ratio	0.26	-	-	0.034	-
HCM Control Delay (s)	17.6	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	4	74	6	3	107
Future Vol, veh/h	3	4	74	6	3	107
Conflicting Peds, #/hr	0	0	0	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	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	85	7	3	123

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	218	89	0	0	92	0
Stage 1	89	-	-	-	-	-
Stage 2	129	-	-	-	-	-
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	770	969	-	-	1503	-
Stage 1	934	-	-	-	-	-
Stage 2	897	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	768	969	-	-	1503	-
Mov Cap-2 Maneuver	768	-	-	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	895	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	871	1503	-
HCM Lane V/C Ratio	-	-	0.009	0.002	-
HCM Control Delay (s)	-	-	9.2	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	1	0	4	1	4	6	52	9	7	67	35
Future Vol, veh/h	25	1	0	4	1	4	6	52	9	7	67	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	2	2	2	2	2	2	2	2
Mvmt Flow	28	1	0	4	1	4	7	58	10	8	74	39

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	190	192	94	187	206	63	113	0	0	68	0	0
Stage 1	110	110	-	77	77	-	-	-	-	-	-	-
Stage 2	80	82	-	110	129	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	770	703	963	774	691	1002	1476	-	-	1533	-	-
Stage 1	895	804	-	932	831	-	-	-	-	-	-	-
Stage 2	929	827	-	895	789	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	759	695	963	766	683	1002	1476	-	-	1533	-	-
Mov Cap-2 Maneuver	759	695	-	766	683	-	-	-	-	-	-	-
Stage 1	891	799	-	927	827	-	-	-	-	-	-	-
Stage 2	919	823	-	888	784	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	9.3	0.7	0.5
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1476	-	-	756	843	1533	-	-
HCM Lane V/C Ratio	0.005	-	-	0.038	0.012	0.005	-	-
HCM Control Delay (s)	7.5	0	-	10	9.3	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	4	0	26	36	0
Future Vol, veh/h	1	4	0	26	36	0
Conflicting Peds, #/hr	0	0	0	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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	5	0	33	46	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	79	46	46	0	-	0
Stage 1	46	-	-	-	-	-
Stage 2	33	-	-	-	-	-
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	924	1023	1562	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	989	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	924	1023	1562	-	-	-
Mov Cap-2 Maneuver	924	-	-	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	989	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1562	-	1002	-	-
HCM Lane V/C Ratio	-	-	0.006	-	-
HCM Control Delay (s)	0	-	8.6	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	6	2	10	10	27
Future Vol, veh/h	17	6	2	10	10	27
Conflicting Peds, #/hr	0	0	0	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	18	7	2	11	11	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	41	26	40	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	15	-	-	-	-	-
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	970	1050	1570	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	1008	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	969	1050	1570	-	-	-
Mov Cap-2 Maneuver	969	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	1008	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.7	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1570	-	989	-	-
HCM Lane V/C Ratio	0.001	-	0.025	-	-
HCM Control Delay (s)	7.3	0	8.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	348	56	32	314	70	46
Future Vol, veh/h	348	56	32	314	70	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	424	68	39	383	85	56

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	492	0	885	424
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	461	-
Critical Hdwy	-	-	4.13	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.227	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1066	-	315	630
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	635	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1066	-	301	630
Mov Cap-2 Maneuver	-	-	-	-	301	-
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	20
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	380	-	-	1066	-
HCM Lane V/C Ratio	0.372	-	-	0.037	-
HCM Control Delay (s)	20	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	4	130	4	4	90
Future Vol, veh/h	0	4	130	4	4	90
Conflicting Peds, #/hr	0	0	0	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	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	6	186	6	6	129

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	330	189	0	0	192	0
Stage 1	189	-	-	-	-	-
Stage 2	141	-	-	-	-	-
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	665	853	-	-	1381	-
Stage 1	843	-	-	-	-	-
Stage 2	886	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	662	853	-	-	1381	-
Mov Cap-2 Maneuver	662	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	882	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.2	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	853	1381	-
HCM Lane V/C Ratio	-	-	0.007	0.004	-
HCM Control Delay (s)	-	-	9.2	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	79	0	2	4	1	11	1	45	2	4	49	36
Future Vol, veh/h	79	0	2	4	1	11	1	45	2	4	49	36
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	7	7	7	2	2	2	2	2	2
Mvmt Flow	111	0	3	6	1	15	1	63	3	6	69	51

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	182	175	95	175	199	65	120	0	0	66	0	0
Stage 1	107	107	-	67	67	-	-	-	-	-	-	-
Stage 2	75	68	-	108	132	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	779	718	962	777	688	985	1468	-	-	1536	-	-
Stage 1	898	807	-	931	829	-	-	-	-	-	-	-
Stage 2	934	838	-	885	778	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	763	714	962	772	685	985	1468	-	-	1536	-	-
Mov Cap-2 Maneuver	763	714	-	772	685	-	-	-	-	-	-	-
Stage 1	897	804	-	930	828	-	-	-	-	-	-	-
Stage 2	917	837	-	879	775	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.5	9.1	0.2	0.3
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1468	-	-	767	898	1536	-	-
HCM Lane V/C Ratio	0.001	-	-	0.149	0.025	0.004	-	-
HCM Control Delay (s)	7.5	0	-	10.5	9.1	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.1	0	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	3	1	41	25	13
Future Vol, veh/h	40	3	1	41	25	13
Conflicting Peds, #/hr	0	0	0	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	69	69	69	69	69	69
Heavy Vehicles, %	33	33	2	2	2	2
Mvmt Flow	58	4	1	59	36	19

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	107	46	55	0	-	0
Stage 1	46	-	-	-	-	-
Stage 2	61	-	-	-	-	-
Critical Hdwy	6.73	6.53	4.12	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.218	-	-	-
Pot Cap-1 Maneuver	821	942	1550	-	-	-
Stage 1	903	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	820	942	1550	-	-	-
Mov Cap-2 Maneuver	820	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	888	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.7	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1550	-	827	-	-
HCM Lane V/C Ratio	0.001	-	0.075	-	-
HCM Control Delay (s)	7.3	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	3	1	16	19	9
Future Vol, veh/h	26	3	1	16	19	9
Conflicting Peds, #/hr	0	0	0	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	28	3	1	17	21	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	45	26	31	0	-	0
Stage 1	26	-	-	-	-	-
Stage 2	19	-	-	-	-	-
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	965	1050	1582	-	-	-
Stage 1	997	-	-	-	-	-
Stage 2	1004	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	964	1050	1582	-	-	-
Mov Cap-2 Maneuver	964	-	-	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	1004	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	0.4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1582	-	972	-	-
HCM Lane V/C Ratio	0.001	-	0.032	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	343	92	54	424	71	47
Future Vol, veh/h	343	92	54	424	71	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	381	102	60	471	79	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	483	0	972	381
Stage 1	-	-	-	-	381	-
Stage 2	-	-	-	-	591	-
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	-	-	1080	-	280	666
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	553	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1080	-	259	666
Mov Cap-2 Maneuver	-	-	-	-	259	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	512	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	21.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	342	-	-	1080	-
HCM Lane V/C Ratio	0.383	-	-	0.056	-
HCM Control Delay (s)	21.9	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.7	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	4	100	6	3	151
Future Vol, veh/h	3	4	100	6	3	151
Conflicting Peds, #/hr	0	0	0	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	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	5	115	7	3	174

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	299	119	0	0	122	0
Stage 1	119	-	-	-	-	-
Stage 2	180	-	-	-	-	-
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	692	933	-	-	1465	-
Stage 1	906	-	-	-	-	-
Stage 2	851	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	691	933	-	-	1465	-
Mov Cap-2 Maneuver	691	-	-	-	-	-
Stage 1	906	-	-	-	-	-
Stage 2	849	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	0.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	811	1465	-
HCM Lane V/C Ratio	-	-	0.01	0.002	-
HCM Control Delay (s)	-	-	9.5	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

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	49	2	0	4	1	4	6	55	10	8	71	75
Future Vol, veh/h	49	2	0	4	1	4	6	55	10	8	71	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	2	2	2	2	2	2	2	2
Mvmt Flow	54	2	0	4	1	4	7	61	11	9	79	83

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	222	225	121	221	261	67	162	0	0	72	0	0
Stage 1	139	139	-	81	81	-	-	-	-	-	-	-
Stage 2	83	86	-	140	180	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	734	674	930	735	644	997	1417	-	-	1528	-	-
Stage 1	864	782	-	927	828	-	-	-	-	-	-	-
Stage 2	925	824	-	863	750	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	723	666	930	726	636	997	1417	-	-	1528	-	-
Mov Cap-2 Maneuver	723	666	-	726	636	-	-	-	-	-	-	-
Stage 1	860	777	-	922	824	-	-	-	-	-	-	-
Stage 2	915	820	-	855	745	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	9.5	0.6	0.4
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1417	-	-	721	811	1528	-	-
HCM Lane V/C Ratio	0.005	-	-	0.079	0.012	0.006	-	-
HCM Control Delay (s)	7.6	0	-	10.4	9.5	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

Intersection	
Int Delay, s/veh	2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	2	3	27	36	40
Future Vol, veh/h	24	2	3	27	36	40
Conflicting Peds, #/hr	0	0	0	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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	3	4	34	46	51

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	114	72	97	0	-	0
Stage 1	72	-	-	-	-	-
Stage 2	42	-	-	-	-	-
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	882	990	1496	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	980	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	879	990	1496	-	-	-
Mov Cap-2 Maneuver	879	-	-	-	-	-
Stage 1	948	-	-	-	-	-
Stage 2	980	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1496	-	887	-	-
HCM Lane V/C Ratio	0.003	-	0.037	-	-
HCM Control Delay (s)	7.4	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	2	3	14	12	26
Future Vol, veh/h	16	2	3	14	12	26
Conflicting Peds, #/hr	0	0	0	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	17	2	3	15	13	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	48	27	41	0	-	0
Stage 1	27	-	-	-	-	-
Stage 2	21	-	-	-	-	-
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	962	1048	1568	-	-	-
Stage 1	996	-	-	-	-	-
Stage 2	1002	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	960	1048	1568	-	-	-
Mov Cap-2 Maneuver	960	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	1002	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	1.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1568	-	969	-	-
HCM Lane V/C Ratio	0.002	-	0.02	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	397	62	35	358	75	48
Future Vol, veh/h	397	62	35	358	75	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	3	3	3	3	2	2
Mvmt Flow	484	76	43	437	91	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	560	0	1007	484
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	523	-
Critical Hdwy	-	-	4.13	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.227	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1006	-	267	583
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	595	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1006	-	252	583
Mov Cap-2 Maneuver	-	-	-	-	252	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	562	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	25.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	324	-	-	1006	-
HCM Lane V/C Ratio	0.463	-	-	0.042	-
HCM Control Delay (s)	25.3	-	-	8.7	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	2.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	5	139	5	5	99
Future Vol, veh/h	0	5	139	5	5	99
Conflicting Peds, #/hr	0	0	0	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	70	70	70	70	70	70
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	7	199	7	7	141

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	358	203	0	0	206	0
Stage 1	203	-	-	-	-	-
Stage 2	155	-	-	-	-	-
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	640	838	-	-	1365	-
Stage 1	831	-	-	-	-	-
Stage 2	873	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	636	838	-	-	1365	-
Mov Cap-2 Maneuver	636	-	-	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	868	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.3	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	838	1365	-
HCM Lane V/C Ratio	-	-	0.009	0.005	-
HCM Control Delay (s)	-	-	9.3	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	81	2	2	5	2	12	1	51	2	5	56	38
Future Vol, veh/h	81	2	2	5	2	12	1	51	2	5	56	38
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	71	71	71	71	71	71	71	71	71	71	71	71
Heavy Vehicles, %	2	2	2	7	7	7	2	2	2	2	2	2
Mvmt Flow	114	3	3	7	3	17	1	72	3	7	79	54

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	206	197	106	199	223	74	133	0	0	75	0	0
Stage 1	120	120	-	76	76	-	-	-	-	-	-	-
Stage 2	86	77	-	123	147	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.17	6.57	6.27	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.17	5.57	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.563	4.063	3.363	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	752	699	948	749	667	974	1452	-	-	1524	-	-
Stage 1	884	796	-	921	822	-	-	-	-	-	-	-
Stage 2	922	831	-	869	766	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	733	695	948	741	663	974	1452	-	-	1524	-	-
Mov Cap-2 Maneuver	733	695	-	741	663	-	-	-	-	-	-	-
Stage 1	883	792	-	920	821	-	-	-	-	-	-	-
Stage 2	902	830	-	859	762	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.8	9.3	0.1	0.4
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1452	-	-	736	860	1524	-	-
HCM Lane V/C Ratio	0.001	-	-	0.163	0.031	0.005	-	-
HCM Control Delay (s)	7.5	0	-	10.8	9.3	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	0.1	0	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	3	1	45	27	13
Future Vol, veh/h	40	3	1	45	27	13
Conflicting Peds, #/hr	0	0	0	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	69	69	69	69	69	69
Heavy Vehicles, %	33	33	2	2	2	2
Mvmt Flow	58	4	1	65	39	19

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	116	49	58	0	-	0
Stage 1	49	-	-	-	-	-
Stage 2	67	-	-	-	-	-
Critical Hdwy	6.73	6.53	4.12	-	-	-
Critical Hdwy Stg 1	5.73	-	-	-	-	-
Critical Hdwy Stg 2	5.73	-	-	-	-	-
Follow-up Hdwy	3.797	3.597	2.218	-	-	-
Pot Cap-1 Maneuver	811	938	1546	-	-	-
Stage 1	900	-	-	-	-	-
Stage 2	883	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	810	938	1546	-	-	-
Mov Cap-2 Maneuver	810	-	-	-	-	-
Stage 1	899	-	-	-	-	-
Stage 2	883	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.8	0.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1546	-	818	-	-
HCM Lane V/C Ratio	0.001	-	0.076	-	-
HCM Control Delay (s)	7.3	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	3	1	20	21	9
Future Vol, veh/h	26	3	1	20	21	9
Conflicting Peds, #/hr	0	0	0	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	28	3	1	22	23	10

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	52	28	33	0	-	0
Stage 1	28	-	-	-	-	-
Stage 2	24	-	-	-	-	-
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	957	1047	1579	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	999	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	956	1047	1579	-	-	-
Mov Cap-2 Maneuver	956	-	-	-	-	-
Stage 1	994	-	-	-	-	-
Stage 2	999	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.9	0.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1579	-	965	-	-
HCM Lane V/C Ratio	0.001	-	0.033	-	-
HCM Control Delay (s)	7.3	0	8.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	391	100	57	483	78	51
Future Vol, veh/h	391	100	57	483	78	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	2000	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	434	111	63	537	87	57

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	545	0	1097	434
Stage 1	-	-	-	-	434	-
Stage 2	-	-	-	-	663	-
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	-	-	1024	-	236	622
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	512	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1024	-	215	622
Mov Cap-2 Maneuver	-	-	-	-	215	-
Stage 1	-	-	-	-	653	-
Stage 2	-	-	-	-	467	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	29
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	290	-	-	1024	-
HCM Lane V/C Ratio	0.494	-	-	0.062	-
HCM Control Delay (s)	29	-	-	8.7	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	2.6	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	5	109	7	4	163
Future Vol, veh/h	4	5	109	7	4	163
Conflicting Peds, #/hr	0	0	0	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	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	5	6	125	8	5	187

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	326	129	0	0	133	0
Stage 1	129	-	-	-	-	-
Stage 2	197	-	-	-	-	-
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	668	921	-	-	1452	-
Stage 1	897	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	665	921	-	-	1452	-
Mov Cap-2 Maneuver	665	-	-	-	-	-
Stage 1	897	-	-	-	-	-
Stage 2	833	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	786	1452	-
HCM Lane V/C Ratio	-	-	0.013	0.003	-
HCM Control Delay (s)	-	-	9.6	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

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	50	2	0	5	1	5	7	62	11	9	81	76
Future Vol, veh/h	50	2	0	5	1	5	7	62	11	9	81	76
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	2	2	2	2	2	2	2	2
Mvmt Flow	56	2	0	6	1	6	8	69	12	10	90	84

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	247	249	132	244	285	75	174	0	0	81	0	0
Stage 1	152	152	-	91	91	-	-	-	-	-	-	-
Stage 2	95	97	-	153	194	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	707	654	917	710	624	986	1403	-	-	1517	-	-
Stage 1	850	772	-	916	820	-	-	-	-	-	-	-
Stage 2	912	815	-	849	740	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	695	645	917	701	616	986	1403	-	-	1517	-	-
Mov Cap-2 Maneuver	695	645	-	701	616	-	-	-	-	-	-	-
Stage 1	845	767	-	911	815	-	-	-	-	-	-	-
Stage 2	900	810	-	841	735	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	9.6	0.7	0.4
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1403	-	-	693	796	1517	-	-
HCM Lane V/C Ratio	0.006	-	-	0.083	0.015	0.007	-	-
HCM Control Delay (s)	7.6	0	-	10.7	9.6	7.4	0	-
HCM Lane LOS	A	A	-	B	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	0	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	2	3	28	37	40
Future Vol, veh/h	24	2	3	28	37	40
Conflicting Peds, #/hr	0	0	0	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	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	3	4	35	47	51

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	116	73	98	0	-	0
Stage 1	73	-	-	-	-	-
Stage 2	43	-	-	-	-	-
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	880	989	1495	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	877	989	1495	-	-	-
Mov Cap-2 Maneuver	877	-	-	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	979	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.2	0.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1495	-	885	-	-
HCM Lane V/C Ratio	0.003	-	0.037	-	-
HCM Control Delay (s)	7.4	0	9.2	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	2	3	15	13	26
Future Vol, veh/h	16	2	3	15	13	26
Conflicting Peds, #/hr	0	0	0	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	17	2	3	16	14	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	50	28	42	0	-	0
Stage 1	28	-	-	-	-	-
Stage 2	22	-	-	-	-	-
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	959	1047	1567	-	-	-
Stage 1	995	-	-	-	-	-
Stage 2	1001	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	957	1047	1567	-	-	-
Mov Cap-2 Maneuver	957	-	-	-	-	-
Stage 1	993	-	-	-	-	-
Stage 2	1001	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.8	1.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1567	-	966	-	-
HCM Lane V/C Ratio	0.002	-	0.02	-	-
HCM Control Delay (s)	7.3	0	8.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Appendix E

TAC Traffic Signal Warrant Analysis Worksheets

City of Penticton - Traffic Signal Warrant Analysis

Main Street (name)	Eckhardt Avenue	Direction (EW or NS)	EW	Road Authority:	City of Penticton
Side Street (name)	Moosejaw Street	Direction (EW or NS)	NS	City:	Penticton
Quadrant / Int #	1	Comments	Future 2036 Traffic Volume Conditions using the peak hour volumes +85% of the AM for 1st MD hour and 85% of PM for 2nd MD hour	Analysis Date:	2021 May 26, Wed
for Warrant Calculation Results, please hit 'Page Down'	CHECK SHEET			Count Date:	Future 2036
				Date Entry Format:	(yyyy-mm-dd)

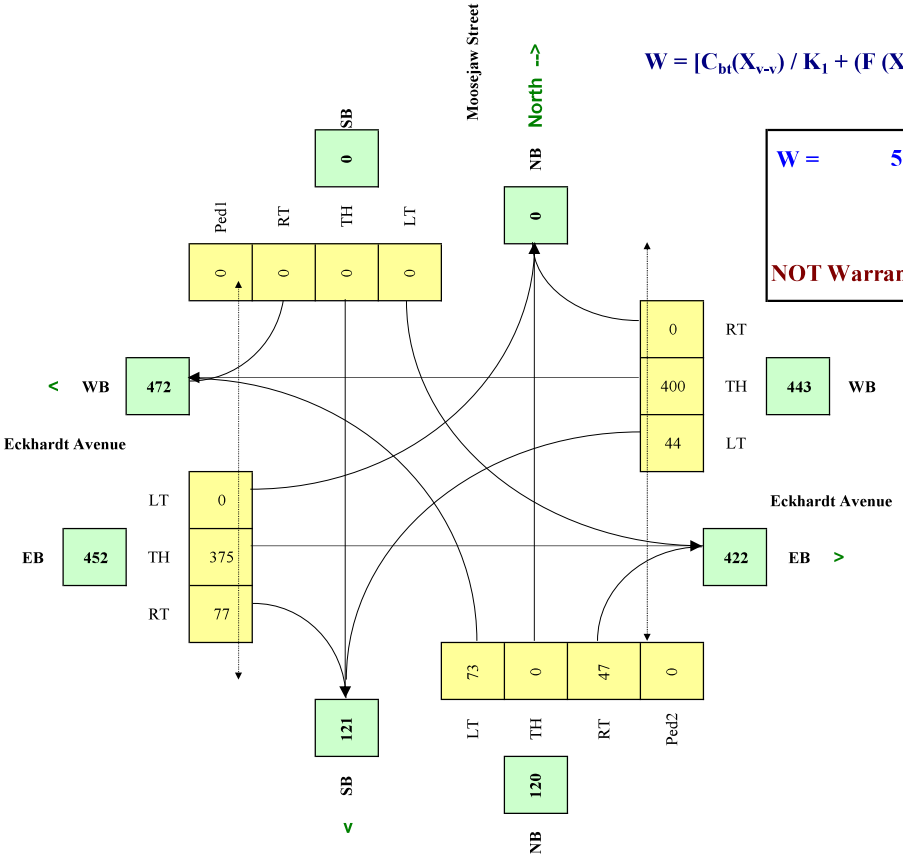
Lane Configuration		Excl LT	Th & LT	Through	Th+RT+LT	Th & RT	Excl RT	UpStream Signal (m)	# of Thru Lanes
Eckhardt Avenue	WB	0	0	0	1	0	0	1,500	1
Eckhardt Avenue	EB	0	0	1	0	0	1	800	1
Moosejaw Street	NB	0	0	0	1	0	0		
Moosejaw Street	SB	0	0	0	0	0	0		
Are the Moosejaw Street NB right turns significantly impeded by through movements? (y/n)							n		
							n		

Demographics		
Elem. School/Mobility Challenged	(y/n)	n
Senior's Complex	(y/n)	n
Pathway to School	(y/n)	n
Metro Area Population	(#)	35,000
Central Business District	(y/n)	n

Other input		Speed (Km/h)	Truck %	Bus Rt (y/n)	Median (m)
Eckhardt Avenue	EW	50	3.0%	y	0.0
Moosejaw Street	NS	50	2.0%	y	0.0

Set Peak Hours													Ped1	Ped2	Ped3	Ped4
Traffic Input	NB			SB			WB			EB			NS	NS	EW	EW
	LT	Th	RT	LT	Th	RT	LT	Th	RT	LT	Th	RT	W Side	E Side	N Side	S Side
7:00 - 8:00	75	0	48	0	0	0	35	358	0	0	397	62				
8:00 - 9:00	75	0	48	0	0	0	35	358	0	0	397	62				
11:00 - 12:00	64	0	41	0	0	0	30	304	0	0	338	53				
12:00 - 13:00	66	0	44	0	0	0	49	411	0	0	333	85				
16:00 - 17:00	78	0	51	0	0	0	57	483	0	0	391	100				
17:00 - 18:00	78	0	51	0	0	0	57	483	0	0	391	100				
Total (6-hour peak)	**436**	**0**	**283**	**0**	**0**	**0**	**263**	**2,397**	**0**	**0**	**2,247**	**462**	**0**	**0**	**0**	**0**
Average (6-hour peak)	**73**	**0**	**47**	**0**	**0**	**0**	**44**	**400**	**0**	**0**	**375**	**77**	**0**	**0**	**0**	**0**

Average 6-hour Peak Turning Movements



$$W = [C_{bt}(X_{v\text{-}v}) / K_1 + (F (X_{v\text{-}p}) L) / K_2] \times C_i$$

W =	58	58	0
		Veh	*Ped*

NOT Warranted

RESET SHEET

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	6	11	4	4	8	8	21	1	13	38	2
Future Vol, veh/h	2	6	11	4	4	8	8	21	1	13	38	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	6	6	6	2	2	2	2	2	2
Mvmt Flow	3	8	14	5	5	10	10	27	1	17	49	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	140	133	51	144	134	28	52	0	0	28	0	0
Stage 1	85	85	-	48	48	-	-	-	-	-	-	-
Stage 2	55	48	-	96	86	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.16	6.56	6.26	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.554	4.054	3.354	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	830	758	1017	816	749	1036	1554	-	-	1585	-	-
Stage 1	923	824	-	955	847	-	-	-	-	-	-	-
Stage 2	957	855	-	901	816	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	806	744	1017	787	736	1036	1554	-	-	1585	-	-
Mov Cap-2 Maneuver	806	744	-	787	736	-	-	-	-	-	-	-
Stage 1	917	815	-	948	841	-	-	-	-	-	-	-
Stage 2	935	849	-	870	807	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	9.2	2	1.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1554	-	-	889	877	1585	-	-
HCM Lane V/C Ratio	0.007	-	-	0.028	0.024	0.011	-	-
HCM Control Delay (s)	7.3	0	-	9.2	9.2	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	264	232	16	25	33
Future Vol, veh/h	13	264	232	16	25	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	15	311	273	19	29	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	292	0	-	0	624	283
Stage 1	-	-	-	-	283	-
Stage 2	-	-	-	-	341	-
Critical Hdwy	4.16	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1247	-	-	-	449	756
Stage 1	-	-	-	-	765	-
Stage 2	-	-	-	-	720	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1247	-	-	-	442	756
Mov Cap-2 Maneuver	-	-	-	-	442	-
Stage 1	-	-	-	-	754	-
Stage 2	-	-	-	-	720	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1247	-	-	-	579
HCM Lane V/C Ratio	0.012	-	-	-	0.118
HCM Control Delay (s)	7.9	0	-	-	12
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	5	16	3	2	7	8	28	7	12	46	1
Future Vol, veh/h	2	5	16	3	2	7	8	28	7	12	46	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	8	8	8	9	9	9	5	5	5
Mvmt Flow	2	6	20	4	2	9	10	35	9	15	57	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	153	152	58	161	148	40	58	0	0	44	0	0
Stage 1	88	88	-	60	60	-	-	-	-	-	-	-
Stage 2	65	64	-	101	88	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.18	6.58	6.28	4.19	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.572	4.072	3.372	2.281	-	-	2.245	-	-
Pot Cap-1 Maneuver	814	740	1008	791	733	1014	1503	-	-	1545	-	-
Stage 1	920	822	-	937	833	-	-	-	-	-	-	-
Stage 2	946	842	-	891	810	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	794	727	1008	760	721	1014	1503	-	-	1545	-	-
Mov Cap-2 Maneuver	794	727	-	760	721	-	-	-	-	-	-	-
Stage 1	914	814	-	930	827	-	-	-	-	-	-	-
Stage 2	929	836	-	858	802	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.2	1.4	1.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1503	-	-	910	881	1545	-	-
HCM Lane V/C Ratio	0.007	-	-	0.031	0.017	0.01	-	-
HCM Control Delay (s)	7.4	0	-	9.1	9.2	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	23	259	378	23	22	28
Future Vol, veh/h	23	259	378	23	22	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	282	411	25	24	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	436	0	-	0	756	424
Stage 1	-	-	-	-	424	-
Stage 2	-	-	-	-	332	-
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	1124	-	-	-	376	630
Stage 1	-	-	-	-	660	-
Stage 2	-	-	-	-	727	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1124	-	-	-	366	630
Mov Cap-2 Maneuver	-	-	-	-	366	-
Stage 1	-	-	-	-	643	-
Stage 2	-	-	-	-	727	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	13.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1124	-	-	-	478
HCM Lane V/C Ratio	0.022	-	-	-	0.114
HCM Control Delay (s)	8.3	0	-	-	13.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	6	11	4	4	8	8	21	1	13	39	2
Future Vol, veh/h	2	6	11	4	4	8	8	21	1	13	39	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	6	6	6	2	2	2	2	2	2
Mvmt Flow	3	8	14	5	5	10	10	27	1	17	51	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	142	135	53	146	136	28	54	0	0	28	0	0
Stage 1	87	87	-	48	48	-	-	-	-	-	-	-
Stage 2	55	48	-	98	88	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.16	6.56	6.26	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.554	4.054	3.354	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	828	756	1014	814	748	1036	1551	-	-	1585	-	-
Stage 1	921	823	-	955	847	-	-	-	-	-	-	-
Stage 2	957	855	-	899	814	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	804	742	1014	786	735	1036	1551	-	-	1585	-	-
Mov Cap-2 Maneuver	804	742	-	786	735	-	-	-	-	-	-	-
Stage 1	915	814	-	948	841	-	-	-	-	-	-	-
Stage 2	935	849	-	868	805	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	9.2	2	1.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1551	-	-	887	877	1585	-	-
HCM Lane V/C Ratio	0.007	-	-	0.028	0.024	0.011	-	-
HCM Control Delay (s)	7.3	0	-	9.2	9.2	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	13	268	235	16	25	33
Future Vol, veh/h	13	268	235	16	25	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	15	315	276	19	29	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	295	0	-	0	631	286
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	345	-
Critical Hdwy	4.16	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1244	-	-	-	445	753
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	717	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1244	-	-	-	438	753
Mov Cap-2 Maneuver	-	-	-	-	438	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	717	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1244	-	-	-	575
HCM Lane V/C Ratio	0.012	-	-	-	0.119
HCM Control Delay (s)	7.9	0	-	-	12.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	5	16	3	2	7	8	28	7	12	47	1
Future Vol, veh/h	2	5	16	3	2	7	8	28	7	12	47	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	8	8	8	9	9	9	5	5	5
Mvmt Flow	2	6	20	4	2	9	10	35	9	15	58	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	154	153	59	162	149	40	59	0	0	44	0	0
Stage 1	89	89	-	60	60	-	-	-	-	-	-	-
Stage 2	65	64	-	102	89	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.18	6.58	6.28	4.19	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.572	4.072	3.372	2.281	-	-	2.245	-	-
Pot Cap-1 Maneuver	813	739	1007	790	732	1014	1501	-	-	1545	-	-
Stage 1	918	821	-	937	833	-	-	-	-	-	-	-
Stage 2	946	842	-	889	810	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	793	726	1007	759	720	1014	1501	-	-	1545	-	-
Mov Cap-2 Maneuver	793	726	-	759	720	-	-	-	-	-	-	-
Stage 1	912	813	-	930	827	-	-	-	-	-	-	-
Stage 2	929	836	-	856	802	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.2	1.4	1.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1501	-	-	909	880	1545	-	-
HCM Lane V/C Ratio	0.007	-	-	0.031	0.017	0.01	-	-
HCM Control Delay (s)	7.4	0	-	9.1	9.2	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	23	263	384	23	22	28
Future Vol, veh/h	23	263	384	23	22	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	286	417	25	24	30

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	442	0	-	0	766	430
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	336	-
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	1118	-	-	-	371	625
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	724	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1118	-	-	-	361	625
Mov Cap-2 Maneuver	-	-	-	-	361	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	724	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	13.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1118	-	-	-	473
HCM Lane V/C Ratio	0.022	-	-	-	0.115
HCM Control Delay (s)	8.3	0	-	-	13.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	6	12	4	4	9	9	23	1	14	41	2
Future Vol, veh/h	2	6	12	4	4	9	9	23	1	14	41	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	6	6	6	2	2	2	2	2	2
Mvmt Flow	3	8	16	5	5	12	12	30	1	18	53	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	154	146	55	158	147	31	56	0	0	31	0	0
Stage 1	91	91	-	55	55	-	-	-	-	-	-	-
Stage 2	63	55	-	103	92	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.16	6.56	6.26	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.554	4.054	3.354	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	813	745	1012	799	737	1032	1549	-	-	1582	-	-
Stage 1	916	820	-	947	841	-	-	-	-	-	-	-
Stage 2	948	849	-	893	811	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	787	730	1012	769	722	1032	1549	-	-	1582	-	-
Mov Cap-2 Maneuver	787	730	-	769	722	-	-	-	-	-	-	-
Stage 1	909	810	-	939	834	-	-	-	-	-	-	-
Stage 2	924	842	-	860	801	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	9.2	2	1.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1549	-	-	884	873	1582	-	-
HCM Lane V/C Ratio	0.008	-	-	0.029	0.025	0.011	-	-
HCM Control Delay (s)	7.3	0	-	9.2	9.2	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	284	249	17	27	35
Future Vol, veh/h	14	284	249	17	27	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	16	334	293	20	32	41

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	313	0	-	0	669	303
Stage 1	-	-	-	-	303	-
Stage 2	-	-	-	-	366	-
Critical Hdwy	4.16	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1225	-	-	-	423	737
Stage 1	-	-	-	-	749	-
Stage 2	-	-	-	-	702	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1225	-	-	-	416	737
Mov Cap-2 Maneuver	-	-	-	-	416	-
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	702	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1225	-	-	-	552
HCM Lane V/C Ratio	0.013	-	-	-	0.132
HCM Control Delay (s)	8	0	-	-	12.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	5	17	3	2	8	9	30	8	13	49	1
Future Vol, veh/h	2	5	17	3	2	8	9	30	8	13	49	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	8	8	8	9	9	9	5	5	5
Mvmt Flow	2	6	21	4	2	10	11	37	10	16	60	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	163	162	61	170	157	42	61	0	0	47	0	0
Stage 1	93	93	-	64	64	-	-	-	-	-	-	-
Stage 2	70	69	-	106	93	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.18	6.58	6.28	4.19	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.572	4.072	3.372	2.281	-	-	2.245	-	-
Pot Cap-1 Maneuver	802	730	1004	780	724	1012	1499	-	-	1541	-	-
Stage 1	914	818	-	932	830	-	-	-	-	-	-	-
Stage 2	940	837	-	885	806	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	780	716	1004	748	710	1012	1499	-	-	1541	-	-
Mov Cap-2 Maneuver	780	716	-	748	710	-	-	-	-	-	-	-
Stage 1	907	809	-	925	823	-	-	-	-	-	-	-
Stage 2	921	830	-	850	797	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.2	1.4	1.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1499	-	-	906	882	1541	-	-
HCM Lane V/C Ratio	0.007	-	-	0.033	0.018	0.01	-	-
HCM Control Delay (s)	7.4	0	-	9.1	9.2	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	278	406	25	24	30
Future Vol, veh/h	25	278	406	25	24	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	27	302	441	27	26	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	468	0	-	0	811	455
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	356	-
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	1094	-	-	-	349	605
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	709	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1094	-	-	-	339	605
Mov Cap-2 Maneuver	-	-	-	-	339	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	709	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1094	-	-	-	449
HCM Lane V/C Ratio	0.025	-	-	-	0.131
HCM Control Delay (s)	8.4	0	-	-	14.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	7	13	5	5	10	10	26	1	16	47	2
Future Vol, veh/h	2	7	13	5	5	10	10	26	1	16	47	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	6	6	6	2	2	2	2	2	2
Mvmt Flow	3	9	17	6	6	13	13	34	1	21	61	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	175	166	63	179	167	35	64	0	0	35	0	0
Stage 1	105	105	-	61	61	-	-	-	-	-	-	-
Stage 2	70	61	-	118	106	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.16	6.56	6.26	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.554	4.054	3.354	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	788	727	1002	774	719	1027	1538	-	-	1576	-	-
Stage 1	901	808	-	940	836	-	-	-	-	-	-	-
Stage 2	940	844	-	877	800	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	759	710	1002	741	702	1027	1538	-	-	1576	-	-
Mov Cap-2 Maneuver	759	710	-	741	702	-	-	-	-	-	-	-
Stage 1	893	797	-	932	828	-	-	-	-	-	-	-
Stage 2	913	836	-	840	789	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	9.4	2	1.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1538	-	-	864	847	1576	-	-
HCM Lane V/C Ratio	0.008	-	-	0.033	0.031	0.013	-	-
HCM Control Delay (s)	7.4	0	-	9.3	9.4	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	16	323	284	20	31	40
Future Vol, veh/h	16	323	284	20	31	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	19	380	334	24	36	47

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	358	0	-	0	764	346
Stage 1	-	-	-	-	346	-
Stage 2	-	-	-	-	418	-
Critical Hdwy	4.16	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1179	-	-	-	372	697
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	664	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1179	-	-	-	365	697
Mov Cap-2 Maneuver	-	-	-	-	365	-
Stage 1	-	-	-	-	702	-
Stage 2	-	-	-	-	664	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1179	-	-	-	499
HCM Lane V/C Ratio	0.016	-	-	-	0.167
HCM Control Delay (s)	8.1	0	-	-	13.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.6

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	6	20	4	2	9	10	34	9	15	56	1
Future Vol, veh/h	2	6	20	4	2	9	10	34	9	15	56	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	8	8	8	9	9	9	5	5	5
Mvmt Flow	2	7	25	5	2	11	12	42	11	19	69	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	186	185	70	196	180	48	70	0	0	53	0	0
Stage 1	108	108	-	72	72	-	-	-	-	-	-	-
Stage 2	78	77	-	124	108	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.18	6.58	6.28	4.19	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.572	4.072	3.372	2.281	-	-	2.245	-	-
Pot Cap-1 Maneuver	775	709	993	750	703	1004	1487	-	-	1534	-	-
Stage 1	897	806	-	923	823	-	-	-	-	-	-	-
Stage 2	931	831	-	866	794	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	753	694	993	714	688	1004	1487	-	-	1534	-	-
Mov Cap-2 Maneuver	753	694	-	714	688	-	-	-	-	-	-	-
Stage 1	890	796	-	916	816	-	-	-	-	-	-	-
Stage 2	911	824	-	826	784	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	9.3	1.4	1.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1487	-	-	891	858	1534	-	-
HCM Lane V/C Ratio	0.008	-	-	0.039	0.022	0.012	-	-
HCM Control Delay (s)	7.4	0	-	9.2	9.3	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	317	463	28	27	34
Future Vol, veh/h	28	317	463	28	27	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	30	345	503	30	29	37

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	533	0	-	0	923	518
Stage 1	-	-	-	-	518	-
Stage 2	-	-	-	-	405	-
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	1035	-	-	-	299	558
Stage 1	-	-	-	-	598	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1035	-	-	-	288	558
Mov Cap-2 Maneuver	-	-	-	-	288	-
Stage 1	-	-	-	-	576	-
Stage 2	-	-	-	-	673	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	16
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1035	-	-	-	394
HCM Lane V/C Ratio	0.029	-	-	-	0.168
HCM Control Delay (s)	8.6	0	-	-	16
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.6

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	6	13	4	4	8	9	21	1	13	39	2
Future Vol, veh/h	2	6	13	4	4	8	9	21	1	13	39	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	6	6	6	2	2	2	2	2	2
Mvmt Flow	3	8	17	5	5	10	12	27	1	17	51	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	146	139	53	151	140	28	54	0	0	28	0	0
Stage 1	87	87	-	52	52	-	-	-	-	-	-	-
Stage 2	59	52	-	99	88	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.16	6.56	6.26	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.554	4.054	3.354	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	823	752	1014	807	744	1036	1551	-	-	1585	-	-
Stage 1	921	823	-	951	844	-	-	-	-	-	-	-
Stage 2	953	852	-	898	814	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	798	738	1014	776	730	1036	1551	-	-	1585	-	-
Mov Cap-2 Maneuver	798	738	-	776	730	-	-	-	-	-	-	-
Stage 1	914	814	-	943	837	-	-	-	-	-	-	-
Stage 2	930	845	-	865	805	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.2	2.1	1.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1551	-	-	895	872	1585	-	-
HCM Lane V/C Ratio	0.008	-	-	0.03	0.024	0.011	-	-
HCM Control Delay (s)	7.3	0	-	9.1	9.2	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	268	235	16	26	34
Future Vol, veh/h	14	268	235	16	26	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	16	315	276	19	31	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	295	0	-	0	633	286
Stage 1	-	-	-	-	286	-
Stage 2	-	-	-	-	347	-
Critical Hdwy	4.16	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1244	-	-	-	444	753
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	716	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1244	-	-	-	437	753
Mov Cap-2 Maneuver	-	-	-	-	437	-
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	716	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1244	-	-	-	573
HCM Lane V/C Ratio	0.013	-	-	-	0.123
HCM Control Delay (s)	7.9	0	-	-	12.2
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	5	18	3	2	7	10	28	7	12	47	1
Future Vol, veh/h	2	5	18	3	2	7	10	28	7	12	47	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	8	8	8	9	9	9	5	5	5
Mvmt Flow	2	6	22	4	2	9	12	35	9	15	58	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	158	157	59	167	153	40	59	0	0	44	0	0
Stage 1	89	89	-	64	64	-	-	-	-	-	-	-
Stage 2	69	68	-	103	89	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.18	6.58	6.28	4.19	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.572	4.072	3.372	2.281	-	-	2.245	-	-
Pot Cap-1 Maneuver	808	735	1007	784	728	1014	1501	-	-	1545	-	-
Stage 1	918	821	-	932	830	-	-	-	-	-	-	-
Stage 2	941	838	-	888	810	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	788	722	1007	751	715	1014	1501	-	-	1545	-	-
Mov Cap-2 Maneuver	788	722	-	751	715	-	-	-	-	-	-	-
Stage 1	911	813	-	925	823	-	-	-	-	-	-	-
Stage 2	923	831	-	853	802	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.2	1.6	1.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1501	-	-	914	876	1545	-	-
HCM Lane V/C Ratio	0.008	-	-	0.034	0.017	0.01	-	-
HCM Control Delay (s)	7.4	0	-	9.1	9.2	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	24	263	384	24	23	29
Future Vol, veh/h	24	263	384	24	23	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	26	286	417	26	25	32

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	443	0	-	0	768	430
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	338	-
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	1117	-	-	-	370	625
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	722	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1117	-	-	-	360	625
Mov Cap-2 Maneuver	-	-	-	-	360	-
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	722	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1117	-	-	-	471
HCM Lane V/C Ratio	0.023	-	-	-	0.12
HCM Control Delay (s)	8.3	0	-	-	13.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.4

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	2	6	18	4	4	9	9	25	1	14	41	2
Future Vol, veh/h	2	6	18	4	4	9	9	25	1	14	41	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	6	6	6	2	2	2	2	2	2
Mvmt Flow	3	8	23	5	5	12	12	32	1	18	53	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	156	148	55	163	149	33	56	0	0	33	0	0
Stage 1	91	91	-	57	57	-	-	-	-	-	-	-
Stage 2	65	57	-	106	92	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.16	6.56	6.26	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.554	4.054	3.354	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	810	743	1012	793	735	1029	1549	-	-	1579	-	-
Stage 1	916	820	-	945	840	-	-	-	-	-	-	-
Stage 2	946	847	-	890	811	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	784	728	1012	757	720	1029	1549	-	-	1579	-	-
Mov Cap-2 Maneuver	784	728	-	757	720	-	-	-	-	-	-	-
Stage 1	909	810	-	937	833	-	-	-	-	-	-	-
Stage 2	922	840	-	851	801	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.3	1.9	1.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1549	-	-	910	868	1579	-	-
HCM Lane V/C Ratio	0.008	-	-	0.037	0.025	0.012	-	-
HCM Control Delay (s)	7.3	0	-	9.1	9.3	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	15	284	249	18	29	39
Future Vol, veh/h	15	284	249	18	29	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	18	334	293	21	34	46

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	314	0	-	0	674	304
Stage 1	-	-	-	-	304	-
Stage 2	-	-	-	-	370	-
Critical Hdwy	4.16	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1224	-	-	-	420	736
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	699	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1224	-	-	-	412	736
Mov Cap-2 Maneuver	-	-	-	-	412	-
Stage 1	-	-	-	-	735	-
Stage 2	-	-	-	-	699	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1224	-	-	-	551
HCM Lane V/C Ratio	0.014	-	-	-	0.145
HCM Control Delay (s)	8	0	-	-	12.6
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	5	21	3	2	8	9	36	8	13	49	1
Future Vol, veh/h	2	5	21	3	2	8	9	36	8	13	49	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	8	8	8	9	9	9	5	5	5
Mvmt Flow	2	6	26	4	2	10	11	44	10	16	60	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	170	169	61	180	164	49	61	0	0	54	0	0
Stage 1	93	93	-	71	71	-	-	-	-	-	-	-
Stage 2	77	76	-	109	93	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.18	6.58	6.28	4.19	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.572	4.072	3.372	2.281	-	-	2.245	-	-
Pot Cap-1 Maneuver	794	724	1004	769	718	1003	1499	-	-	1532	-	-
Stage 1	914	818	-	924	824	-	-	-	-	-	-	-
Stage 2	932	832	-	882	806	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	773	710	1004	734	704	1003	1499	-	-	1532	-	-
Mov Cap-2 Maneuver	773	710	-	734	704	-	-	-	-	-	-	-
Stage 1	907	809	-	917	817	-	-	-	-	-	-	-
Stage 2	913	825	-	843	797	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.1	9.2	1.3	1.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1499	-	-	917	872	1532	-	-
HCM Lane V/C Ratio	0.007	-	-	0.038	0.018	0.01	-	-
HCM Control Delay (s)	7.4	0	-	9.1	9.2	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	278	406	27	26	32
Future Vol, veh/h	29	278	406	27	26	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	32	302	441	29	28	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	470	0	-	0	822	456
Stage 1	-	-	-	-	456	-
Stage 2	-	-	-	-	366	-
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	1092	-	-	-	344	604
Stage 1	-	-	-	-	638	-
Stage 2	-	-	-	-	702	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1092	-	-	-	332	604
Mov Cap-2 Maneuver	-	-	-	-	332	-
Stage 1	-	-	-	-	616	-
Stage 2	-	-	-	-	702	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1092	-	-	-	442
HCM Lane V/C Ratio	0.029	-	-	-	0.143
HCM Control Delay (s)	8.4	0	-	-	14.5
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	2	7	19	5	5	10	10	28	1	16	47	2
Future Vol, veh/h	2	7	19	5	5	10	10	28	1	16	47	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	77	77	77	77	77	77	77	77	77	77	77	77
Heavy Vehicles, %	2	2	2	6	6	6	2	2	2	2	2	2
Mvmt Flow	3	9	25	6	6	13	13	36	1	21	61	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	177	168	63	185	169	37	64	0	0	37	0	0
Stage 1	105	105	-	63	63	-	-	-	-	-	-	-
Stage 2	72	63	-	122	106	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.16	6.56	6.26	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.16	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.554	4.054	3.354	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	785	725	1002	767	717	1024	1538	-	-	1574	-	-
Stage 1	901	808	-	938	835	-	-	-	-	-	-	-
Stage 2	938	842	-	873	800	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	756	708	1002	728	701	1024	1538	-	-	1574	-	-
Mov Cap-2 Maneuver	756	708	-	728	701	-	-	-	-	-	-	-
Stage 1	893	797	-	930	827	-	-	-	-	-	-	-
Stage 2	911	834	-	830	789	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	9.4	1.9	1.8
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1538	-	-	889	842	1574	-	-
HCM Lane V/C Ratio	0.008	-	-	0.041	0.031	0.013	-	-
HCM Control Delay (s)	7.4	0	-	9.2	9.4	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	323	284	21	33	44
Future Vol, veh/h	17	323	284	21	33	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	6	6	6	6	2	2
Mvmt Flow	20	380	334	25	39	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	359	0	-	0	767	347
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	420	-
Critical Hdwy	4.16	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.254	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1178	-	-	-	370	696
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	663	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1178	-	-	-	362	696
Mov Cap-2 Maneuver	-	-	-	-	362	-
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	663	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1178	-	-	-	499
HCM Lane V/C Ratio	0.017	-	-	-	0.182
HCM Control Delay (s)	8.1	0	-	-	13.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	6	24	4	2	9	10	40	9	15	56	1
Future Vol, veh/h	2	6	24	4	2	9	10	40	9	15	56	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
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	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	2	2	2	8	8	8	9	9	9	5	5	5
Mvmt Flow	2	7	30	5	2	11	12	49	11	19	69	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	193	192	70	205	187	55	70	0	0	60	0	0
Stage 1	108	108	-	79	79	-	-	-	-	-	-	-
Stage 2	85	84	-	126	108	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.18	6.58	6.28	4.19	-	-	4.15	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.18	5.58	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.572	4.072	3.372	2.281	-	-	2.245	-	-
Pot Cap-1 Maneuver	767	703	993	740	697	995	1487	-	-	1525	-	-
Stage 1	897	806	-	915	818	-	-	-	-	-	-	-
Stage 2	923	825	-	864	794	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	744	688	993	701	682	995	1487	-	-	1525	-	-
Mov Cap-2 Maneuver	744	688	-	701	682	-	-	-	-	-	-	-
Stage 1	890	796	-	908	811	-	-	-	-	-	-	-
Stage 2	903	818	-	820	784	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.2	9.3	1.3	1.5
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1487	-	-	899	848	1525	-	-
HCM Lane V/C Ratio	0.008	-	-	0.044	0.022	0.012	-	-
HCM Control Delay (s)	7.4	0	-	9.2	9.3	7.4	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	32	317	463	30	29	36
Future Vol, veh/h	32	317	463	30	29	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
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	35	345	503	33	32	39

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	536	0	-	0	935	520
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	415	-
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	1032	-	-	-	295	556
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	666	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1032	-	-	-	283	556
Mov Cap-2 Maneuver	-	-	-	-	283	-
Stage 1	-	-	-	-	572	-
Stage 2	-	-	-	-	666	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	16.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1032	-	-	-	389
HCM Lane V/C Ratio	0.034	-	-	-	0.182
HCM Control Delay (s)	8.6	0	-	-	16.3
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.7

Assignment

Assess 59 trees along 955 Timmins Street in Penticton, B.C. 44 of the trees are on City property and 15 on private property. Assess for health and structural stability; outline Tree Protection Zone (TPZ) and measures required for tree retention during construction.

Observations and Recommendations

The tree inventory starts at the north end, be aware the numbering on the survey is not in order. Of the 59 trees, there are 18 healthy and structurally sound trees to retain. I do not recommend retention of 41 trees. 14 have very low vigor, 10 are standing dead trees, 9 silver leaf poplars are not good candidates to retain on development sites because of their large root systems intolerance to soil grade or hydrology changes; 6 are Siberian elms (invasive tree species) and 2 Colorado Blue Spruce are not structurally sound to retain.

Picture 1 is the front of the north row of trees and Picture 2 the back row.

Picture 1

Picture 2

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Picture 3 is the row of trees south of the entrance.

Picture 3

These trees do not have any irrigation in comparison to the trees along the north. A few of the neighbors informed me the irrigation to the south row is turned off but the watering to the trees on the north side is working. Picture 4 is an example of the plant decline.

Picture 4

Table 1 outlines the survey tree number, tree type, diameter, height, biological condition, structural condition, Tree Protection Zone size in meters, comments, and recommendation to retain Yes or No.

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Survey #	Tree Type	Diameter (cm)	Height (m)	Biological condition % 20 – 100%	Structural condition 1 – 4 1 extreme 4 no issue	TPZ (m)	Comments	Good tree to retain Y/N
59	CB Spruce	47	10	80	3	3	Prune deadwood	Y
58	Hawthorn	36	8	90	4	2.5		Y
57	CB Spruce	51	13	75	2	3	lean	N
56	CB Spruce	37	10	40	1	-	Removal	N
55	Hawthorn	28	7.5	85	4	3		Y
54	CB Spruce	34	10	0	1	-	Removal	N
53	CB Spruce	52	14	35	1	-	Removal	N
52	Hawthorn	36	7	90	4	3		Y
51	CB Spruce	36	10	0	1	-	Removal	N
50	Hawthorn	35	7	90	4	2.5		Y
39	Mountain Ash	34	7.5	65	2	-	Has fire blight, not viable to retain	N
38	Hawthorn	43	8	85	4	3		Y
37	CB Spruce	52	13	70	3	3.5	Lean, root damage	N
36	Hawthorn	43	8	90	4	3		Y
35	CB Spruce	45	10	65	2	-	Upper stem crack, lean	N
34	CB Spruce	41	10	25	1	-	Removal	N
33	Hawthorn	23	6.5	80	3	2		Y
32	CB Spruce	47	12	50	2	-	Not viable	N
31	CB Spruce	36	10	70	3	3		Y
30	Hawthorn	38	8	85	4	2.5		Y
29	CB Spruce	44	13	20	1	-	Removal	N
28	CB Spruce	40	11	30	1	-		Y
27	Hawthorn	38	6	90	4	3		Y
26	CB Spruce	40	11	90	3	2	Prune deadwood	Y
25	Siberian Elm	20	4	90	4	-	Invasive species, removal	N
24	Hawthorn	22	5	70	1	2.5		Y
23	CB Spruce	25	5	60	3	-	Not viable	N
22	CB Spruce	51	11	60	2	4	Exposed roots, asymmetric	N
21	Hawthorn	29	7	90	4	2.5		Y
20	CB Spruce	38	9	20	1	0	Removal	N
19	CB Spruce	53	11	85	3	4		Y
18	CB Spruce	36	6	0	1	-	Removal	N
17	Hawthorn	31	5	0	1	-	Removal	N
16	Poplar	35	10	0	1	-	Removal	N
15	Siberian Elm	25	10	90	4	3	Invasive	N
14	Siberian Elm	60	13	90	3	6	Invasive	N
13	CB Spruce	42	12	60	3	-	Stem inclusion, not viable	N
12	Siberian Elm	41	10	70	2	-	Invasive	N
11	Siberian Elm	33	8	50	1	-	Invasive	N
10	CB Spruce	35	9	60	2	-	Lean, poor taper	N
9	Hawthorn	35	5	70	2	3	Requires plant health care	Y
8	CB Spruce	37	9	80	4	2.5		Y
7	Siberian Elm	86	16	65	3	7	Invasive species	N
6	CB Spruce	41	10	80	3	4		Y
5	Hawthorn	30	5	55	4	2.5	In decline, not viable	N
4	Mountain Ash	29	6	55	3	3	In decline, not viable	N
3	CB Spruce	21	6	60	2	-	Not structurally sound	N

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Survey #	Tree Type	Diameter (cm)	Height (m)	Biological condition % 20 – 100%	Structural condition 1 – 4 1 extreme 4 no issue	TPZ (m)	Comments	Good tree to retain Y/N
2	Hawthorn	29	5	50	4	-	In decline, poor vigor	N
1	Hawthorn	23	4.5	60	4	-	In decline, poor vigor	N
40	CB Spruce	32	9	60	2.5	3		Y
41	Silver leaf poplar	55	24	80	2	12	Exposed roots	N
42	Silver leaf poplar	47	18	80	2	8	Exposed roots	N
43	Silver leaf poplar	55	18	80	2	10	Exposed roots	N
44	Silver leaf poplar	69	22	80	2	10	Exposed roots	N
45	Silver leaf poplar	51	20	80	2	10	Exposed roots	N
46	Silver leaf poplar	53	21	80	2	10	Exposed roots	N
47	Silver leaf poplar	55	18	80	2	10	Exposed roots	N
48	Silver leaf poplar	60	19	80	2	10	Exposed roots	N
49	Silver leaf poplar	58	16	80	2	10	Exposed roots	N

TABLE 1

Examples of healthy spruce and hawthorn trees to retain.

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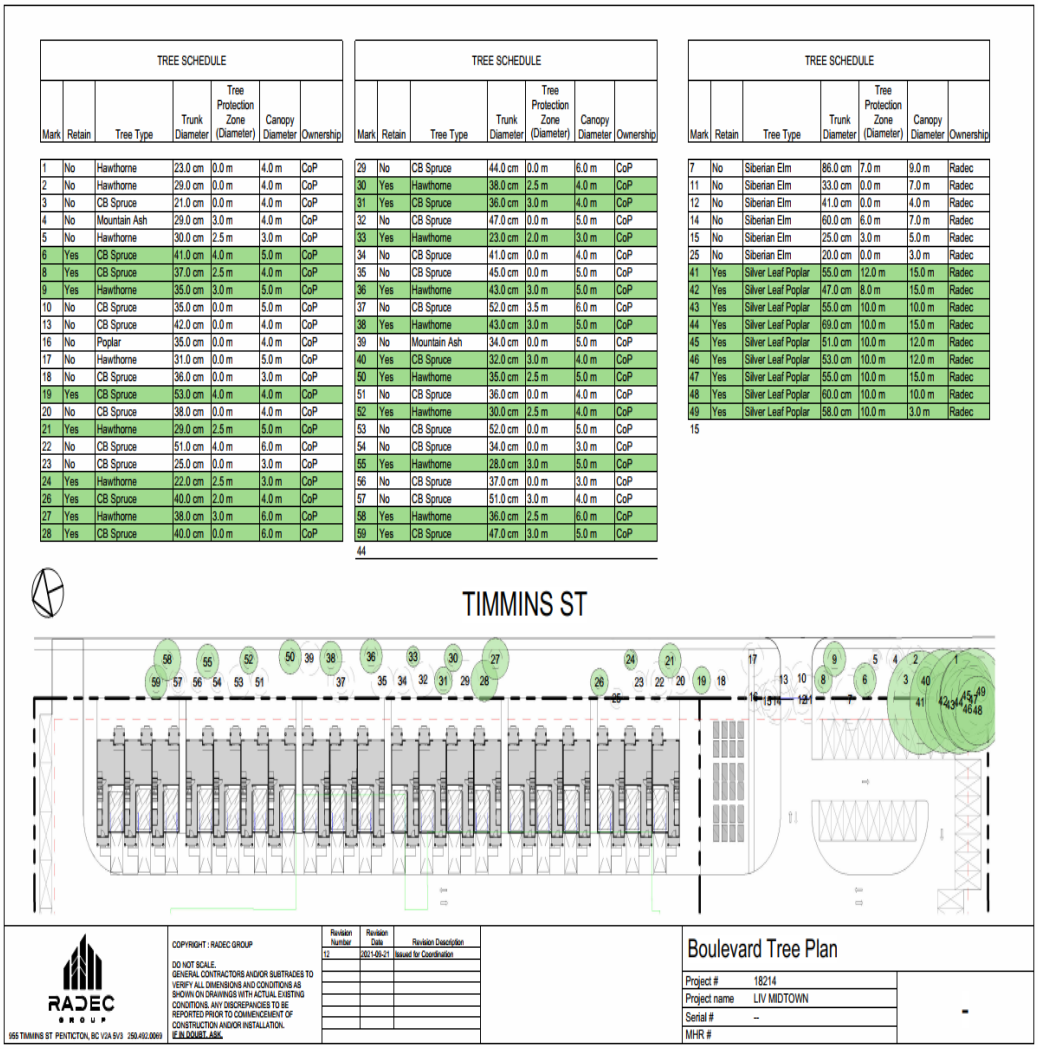
Conclusion

Below is the Tree Plan showing the location of 29 trees that will be retained.



TREE SCHEDULE

Mark	Retain	Tree Type	Trunk Diameter	Tree Protection Zone (Diameter)	Canopy Diameter	Ownership
1	No	Hawthorne	23.0 cm	0.0 m	4.0 m	CoP
2	No	Hawthorne	29.0 cm	0.0 m	4.0 m	CoP
3	No	CB Spruce	21.0 cm	0.0 m	4.0 m	CoP
4	No	Mountain Ash	29.0 cm	3.0 m	4.0 m	CoP
5	No	Hawthorne	30.0 cm	2.5 m	3.0 m	CoP
6	Yes	CB Spruce	41.0 cm	4.0 m	5.0 m	CoP
8	Yes	CB Spruce	37.0 cm	2.5 m	4.0 m	CoP
9	Yes	Hawthorne	35.0 cm	3.0 m	5.0 m	CoP
10	No	CB Spruce	35.0 cm	0.0 m	5.0 m	CoP
13	No	CB Spruce	42.0 cm	0.0 m	4.0 m	CoP
16	No	Poplar	35.0 cm	0.0 m	4.0 m	CoP
17	No	Hawthorne	31.0 cm	0.0 m	5.0 m	CoP
18	No	CB Spruce	36.0 cm	0.0 m	3.0 m	CoP
19	Yes	CB Spruce	53.0 cm	4.0 m	4.0 m	CoP
20	No	CB Spruce	38.0 cm	0.0 m	4.0 m	CoP
21	Yes	Hawthorne	29.0 cm	2.5 m	5.0 m	CoP
22	No	CB Spruce	51.0 cm	4.0 m	6.0 m	CoP
23	No	CB Spruce	25.0 cm	0.0 m	3.0 m	CoP
24	Yes	Hawthorne	22.0 cm	2.5 m	3.0 m	CoP
26	Yes	CB Spruce	40.0 cm	2.0 m	4.0 m	CoP
27	Yes	Hawthorne	38.0 cm	3.0 m	6.0 m	CoP
28	Yes	CB Spruce	40.0 cm	0.0 m	6.0 m	CoP

TREE SCHEDULE

Mark	Retain	Tree Type	Trunk Diameter	Tree Protection Zone (Diameter)	Canopy Diameter	Ownership
29	No	CB Spruce	44.0 cm	0.0 m	6.0 m	CoP
30	Yes	Hawthorne	38.0 cm	2.5 m	4.0 m	CoP
31	Yes	CB Spruce	36.0 cm	3.0 m	4.0 m	CoP
32	No	CB Spruce	47.0 cm	0.0 m	5.0 m	CoP
33	Yes	Hawthorne	23.0 cm	2.0 m	3.0 m	CoP
34	No	CB Spruce	41.0 cm	0.0 m	4.0 m	CoP
35	No	CB Spruce	45.0 cm	0.0 m	5.0 m	CoP
36	Yes	Hawthorne	43.0 cm	3.0 m	5.0 m	CoP
37	No	CB Spruce	52.0 cm	3.5 m	6.0 m	CoP
38	Yes	Hawthorne	43.0 cm	3.0 m	5.0 m	CoP
39	No	Mountain Ash	34.0 cm	0.0 m	5.0 m	CoP
40	Yes	CB Spruce	32.0 cm	3.0 m	4.0 m	CoP
50	Yes	Hawthorne	35.0 cm	2.5 m	5.0 m	CoP
51	No	CB Spruce	36.0 cm	0.0 m	4.0 m	CoP
52	Yes	Hawthorne	30.0 cm	2.5 m	4.0 m	CoP
53	No	CB Spruce	52.0 cm	0.0 m	5.0 m	CoP
54	No	CB Spruce	34.0 cm	0.0 m	3.0 m	CoP
55	Yes	Hawthorne	28.0 cm	3.0 m	5.0 m	CoP
56	No	CB Spruce	37.0 cm	0.0 m	3.0 m	CoP
57	No	CB Spruce	51.0 cm	3.0 m	4.0 m	CoP
58	Yes	Hawthorne	36.0 cm	2.5 m	6.0 m	CoP
59	Yes	CB Spruce	47.0 cm	3.0 m	5.0 m	CoP

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TREE SCHEDULE

Mark	Retain	Tree Type	Trunk Diameter	Tree Protection Zone (Diameter)	Canopy Diameter	Ownership
7	No	Siberian Elm	86.0 cm	7.0 m	9.0 m	Radec
11	No	Siberian Elm	33.0 cm	0.0 m	7.0 m	Radec
12	No	Siberian Elm	41.0 cm	0.0 m	4.0 m	Radec
14	No	Siberian Elm	60.0 cm	6.0 m	7.0 m	Radec
15	No	Siberian Elm	25.0 cm	3.0 m	5.0 m	Radec
25	No	Siberian Elm	20.0 cm	0.0 m	3.0 m	Radec
41	Yes	Silver Leaf Poplar	55.0 cm	12.0 m	15.0 m	Radec
42	Yes	Silver Leaf Poplar	47.0 cm	8.0 m	15.0 m	Radec
43	Yes	Silver Leaf Poplar	55.0 cm	10.0 m	10.0 m	Radec
44	Yes	Silver Leaf Poplar	69.0 cm	10.0 m	15.0 m	Radec
45	Yes	Silver Leaf Poplar	51.0 cm	10.0 m	12.0 m	Radec
46	Yes	Silver Leaf Poplar	53.0 cm	10.0 m	12.0 m	Radec
47	Yes	Silver Leaf Poplar	55.0 cm	10.0 m	15.0 m	Radec
48	Yes	Silver Leaf Poplar	60.0 cm	10.0 m	10.0 m	Radec
49	Yes	Silver Leaf Poplar	58.0 cm	10.0 m	3.0 m	Radec

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RADEC GROUP
955 TIMMINS ST PENTICTON, BC V2A 5V3 250.492.0069

Revision Number	Revision Date	Revision Description
12	2021-09-21	Issued for Coordination

Boulevard Tree Plan

Project #	18214
Project name	LIV MIDTOWN
Serial #	--
MHR #	

1. Turn on the irrigation on the south side of the entrance.
2. Prune dead branches out of any of the retained trees.
3. Any retained trees must have 10 cm of mulch installed over their root zones.
4. TPZ fencing must be to the measurement outlined in Table 1.
5. Watering of the trees must be provided prior to, during and post construction.

Mumby's Arboriculture Consulting Division of Mumby's Tree Services Ltd.
ISA Certified Arborist / ISA Tree Risk Assessment Qualified
ASCA Tree & Plant Appraisal Qualification
Member, American Society of Consulting Arborists
BC Wildlife Danger Tree Assessor #P2118
www.treelady.ca

Compensation for City trees being removed for a development site is based on City of Penticton Tree Protection Bylaw 2001-26, Section 6 which states the following:

> 6. REPLACEMENT TREES
>
> a) The Parks Division may replace any City tree that has died or been removed by the City, provided that such replacement, in the opinion of the Parks Supervisor is desirable.

Radec will provide a 1:1 replacement ratio of a tree species the City approves being of 10 cm caliper.

ARBORIST DISCLOSURE STATEMENT

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or seek additional advice. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like any medicine, cannot be guaranteed. Treatment, pruning, and removal of trees may involve considerations beyond the scope of the arborist's services such as property boundaries, property ownership, site lines, disputes between neighbors, and other issues. Arborists cannot consider such considerations unless complete and accurate information is disclosed to the arborist. An arborist should then be expected to reasonably rely upon the completeness and accuracy of the information provided. Trees can be managed, but they cannot be controlled. To live near a tree is to accept some degree of risk. The only way to eliminate all risks is to eliminate all trees.

I further certify that I am a member in good standing of the American Society of Consulting Arborists and the International Society of Arboriculture. I have been involved in the field of Arboriculture in a full time capacity for a period of more than twenty-five years.

Mumby's Arboriculture Consulting Division of Mumby's Tree Services Ltd.
ISA Certified Arborist / ISA Tree Risk Assessment Qualified
ASCA Tree & Plant Appraisal Qualification
Member, American Society of Consulting Arborists
BC Wildlife Danger Tree Assessor #P2118
www.treelady.ca

The Corporation of the City of Penticton

Bylaw No. 2021-35

A Bylaw to Amend Official Community Plan Bylaw No. 2019-08

WHEREAS the Council of the City of Penticton has adopted an Official Community Plan Bylaw pursuant to the *Local Government Act*;

AND WHEREAS the Council of the City of Penticton wishes to amend "Official Community Bylaw No. 2019-08";

NOW THEREFORE BE IT RESOLVED that the Municipal Council of the City of Penticton, in open meeting assembled, hereby ENACTS AS FOLLOWS:

1. **Title:**

This bylaw may be cited for all purposes as "Official Community Plan Amendment Bylaw No. 2021-35."

2. **Amendment:**

"Official Community Plan Bylaw No. 2019-08" is hereby amended as follows:

2.1 Amend Map 1: Future Land Use designations from Industrial and Urban Residential to only Urban Residential, as shown on Schedule 'A' for Lot 2 District Lots 1, 2 and 4 Group 7 Similkameen Division Yale (Formerly Yale-Lytton) District Plan 36021, located at 955 Timmins Street.

2.2 Schedule 'A' attached hereto forms part of this bylaw.

READ A FIRST time this	day of	, 2021
A PUBLIC HEARING was held this	day of	, 2021
READ A SECOND time this	day of	, 2021
READ A THIRD time this	day of	, 2021
ADOPTED this	day of	, 2021

Notice of intention to proceed with this bylaw was published on the __ day of _____, 2021 and the __ day of _____, 2021 in the Penticton newspaper, pursuant to Section 94 of the *Community Charter*.

John Vassilaki, Mayor

Angie Collison, Corporate Officer

955 Timmins Street

To amend the Official Community Plan (OCP) future land use designation on the subject property from 'Industrial' and 'Urban Residential' to only 'Urban Residential'

City of Penticton – Schedule 'A'

Official Community Plan Amendment Bylaw No. 2021-35

Date: _____ **Corporate Officer:** _____

The Corporation of the City of Penticton

Bylaw No. 2021-36

A Bylaw to Amend Zoning Bylaw 2021-01

WHEREAS the Council of the City of Penticton has adopted a Zoning Bylaw pursuant the *Local Government Act*;

AND WHEREAS the Council of the City of Penticton wishes to amend Zoning Bylaw No. 2021-01;

NOW THEREFORE BE IT RESOLVED that the Municipal Council of the City of Penticton, in open meeting assembled, hereby ENACTS AS FOLLOWS:

1. **Title:**

This bylaw may be cited for all purposes as "Zoning Amendment Bylaw No. 2021-36".

2. **Amendment:**

2.1 Zoning Bylaw No. 2021-01 is hereby amended as follows:

Rezone Lot 2 District Lots 1, 2 and 4 Group 7 Similkameen Division Yale (Yale-Lytton) District Plan 36021, located at 955 Timmins Street from M1 (General Industrial) to RM3 (Medium Density Multiple Housing) as shown on Schedule 'A'.

2.2 Schedule 'A' attached hereto forms part of this bylaw.

READ A FIRST time this	day of	, 2021
A PUBLIC HEARING was held this	day of	, 2021
READ A SECOND time this	day of	, 2021
READ A THIRD time this	day of	, 2021
ADOPTED this	day of	, 2021

Notice of intention to proceed with this bylaw was published on the __ day of _____, 2021 and the __ day of _____, 2021 in the Penticton newspaper, pursuant to Section 94 of the *Community Charter*.

John Vassilaki, Mayor

Angie Collison, Corporate Officer

955 Timmins Street

To amend the zoning on the property from M1 (General Industrial) to RM3 (Medium Density Multiple Housing)

City of Penticton – Schedule 'A'

Zoning Amendment Bylaw No. 2021-36

Date: _____ **Corporate Officer:** _____