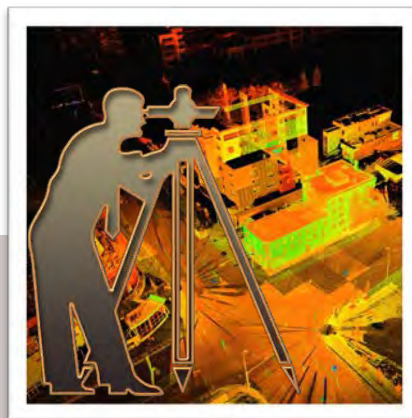


JANET

AREA STRUCTURE PLAN

Transportation Network Analysis

December 1, 2020




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JANET AREA STRUCTURE PLAN

Transportation Network Analysis

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Date	Dec. 1, 2020
PERMIT NUMBER: P 3818 The Association of Professional Engineers and Geoscientists of Alberta	



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1.0 INTRODUCTION

1.1 STUDY BACKGROUND

The Janet Area Structure Plan (ASP) encompasses approximately 2,330 hectares (5,758 acres) of land in central east Rocky View County (RVC), adjacent to the Cities of Calgary and Chestermere. The ASP is a long-term planning document that outlines a vision for the future physical development of the area with regard to land use, transportation, protection of the natural environment, emergency services, general design, utility servicing and other planning issues. The current ASP was approved by Rocky View Council in November 2014 (bylaw C-7418-2014). At the time when the Janet ASP was approved, the lands east of the Western Headworks Irrigation Canal (WIC) were designated as “Long Term Development” (Regional Business Centre) with the understanding that an ASP amendment would come forth in the future to provide more clarity regarding the specific land uses in the area. This area includes 988 hectares (2,443 acres) of land. Rocky View County is now moving ahead with the Janet ASP amendment and the first reading of the draft document was presented to Council on February 25, 2020. To support the Janet ASP amendment process, Rocky View County retained Watt Consulting Group (WATT) to assess the impacts of the proposed land uses on the transportation network.

1.2 STUDY OBJECTIVES

The primary objective of this study is review of the transportation capacity and operational conditions on the existing network, to forecast future traffic volumes and to identify the transportation network improvements required to support the proposed land uses. The results of the study will provide RVC with information related to potential transportation improvements required within the 5, 10 and 20-year time horizons. More detailed Transportation Impact Assessments will still be required when development applications are submitted however, this document provides an overview of all the infrastructure that will likely be required to support full development of the Janet ASP area.



1.3 STUDY AREA

The Janet ASP is bounded by Glenmore Trail (Highway 560) and the City of Calgary to the south, the City of Calgary to the west, the Cities of Calgary and Chestermere to the north and Range Road 282 to the east. The study area is shown in **Figure 1**.



Figure 1: Site Context



1.4 SCOPE OF WORK

A scope of work for the transportation analysis was developed in consultation with RVC staff members and included the following major tasks:

- 1) Review existing plans and background documents for the area.
- 2) Conduct capacity analysis for the existing transportation network.
- 3) Correspond with Alberta Transportation on long term plans for the provincial highways in the area.
- 4) Update of the existing RVC transportation model.
- 5) Develop a future ultimate road network concept based on ASP development pattern.
- 6) Evaluate regional infrastructure connections, their timing and possible cost impact.
- 7) Identify the number of lanes, intersectional configuration, traffic controls and right-of-way requirements for the major transportation corridors in the plan area.



2.0 EXISTING CONDITIONS

2.1 EXISTING TRANSPORTATION NETWORK

There are several major transportation corridors within and along the boundaries of the Janet ASP. It should be noted that the study area includes transportation corridors that are under the control of three different road authorities including Rocky View County, Alberta Transportation and the City of Calgary. A brief description of each of the major roads that form the transportation network within the Janet ASP is provided below.

- **Highway 201 (Stoney Trail)** is a provincial highway under the authority of Alberta Transportation. It provides four travel lanes in each direction between Hwy. 560 (Glenmore Trail) and Peigan Trail and the posted speed limit is 100 km/h throughout the study area. According to A.T.'s highway classification system, it is classified as a Level 1 highway.
- **Highway 560 (Glenmore Trail)** is a provincial highway under the authority of Alberta Transportation. It provides two travel lanes in each direction and the posted speed limit is 80 km/h throughout the study area. According to A.T.'s highway classification system, it is classified as a Level 3 highway.
- **Peigan Trail** is an east/west arterial road that primarily services industrial lands in SE Calgary and a portion of the Janet ASP. It is classified as a skeletal road within the City of Calgary and transitions to an arterial road in Rocky View County, east of Stoney Trail. East of 52nd Street, the cross-section includes one travel lane in each direction and the road currently terminates at 100th Street (Range Road 285) in Rocky View County.
- **61 Avenue** is an arterial road that extends from Barlow Trail in the City of Calgary to just east of 100th Street in Rocky View County. It primarily services industrial land uses in Calgary and RVC. When Stoney Trail was constructed, the 61st Avenue flyover was built in anticipation of future growth occurring on both sides of the ring road. The cross-section within

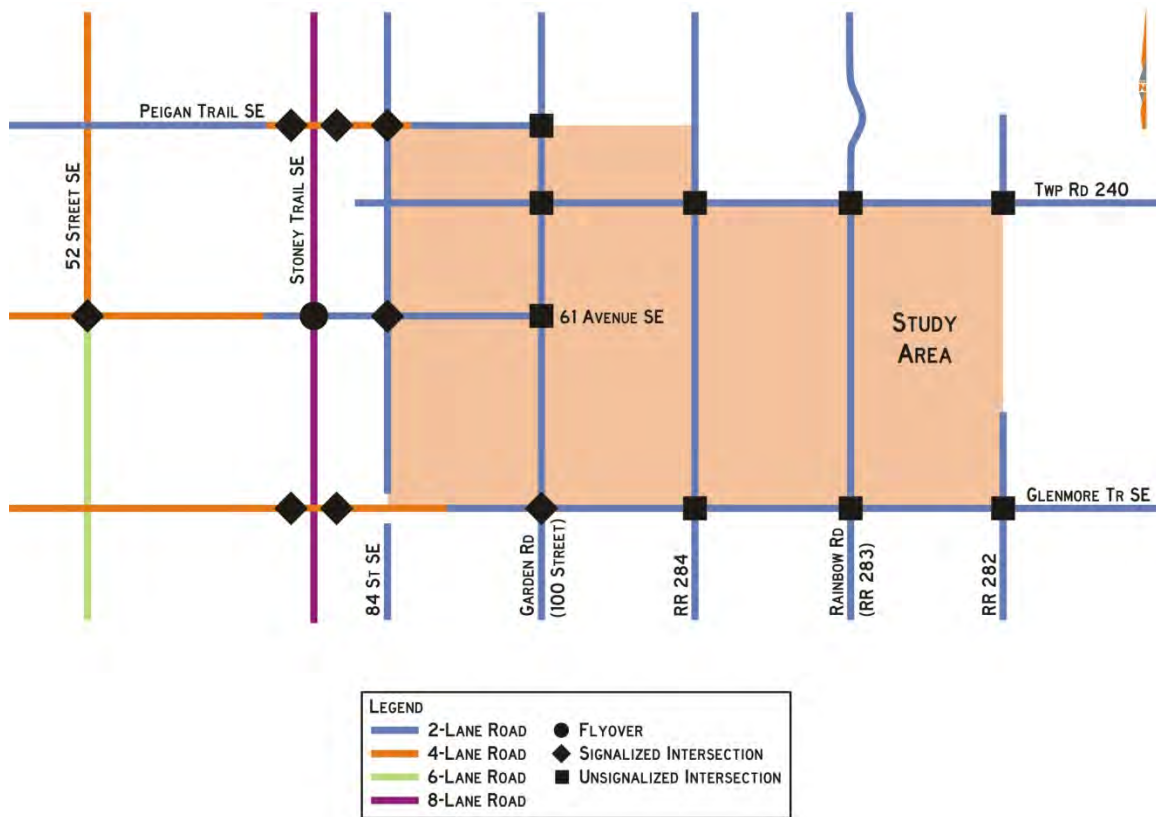


the Janet ASP consists of one travel lane in each direction and the posted speed limit is 50 km/h.

- **Township Road 240** is a two-lane gravel roadway that extends from 84th Street in the west to Hwy. 797 in the east beyond Chestermere. The speed limit along TWP 240 is 50 km/h throughout the Janet ASP.
- **84th Street** is under the authority of the City of Calgary and forms the west boundary of the Janet ASP area and the boundary between RVC and the City of Calgary. 84th Street used to serve a regional purpose prior to Stoney Trail being constructed. Now it primarily services industrial lands located in the City and RVC. Within the Janet ASP area, it extends from just north of Glenmore Trail to Peigan Trail. The rural cross-section includes one travel lane in each direction and the speed limit is 80 km/h.
- **Range Road 285 (Garden Road / 100th Street)** is a paved two-lane arterial road within the Janet ASP from Hwy.560 in the south to Peigan Trail in the north. The posted speed limit along Range Road 285 is 50 km/h.
- **Range Road 284** is a paved two-lane road within the Janet ASP from Hwy.560 in the south to TWP 240 in the north. It primarily services the agricultural land uses along the corridor. The posted speed limit along Range Road 284 is 50 km/h.
- **Range Road 283 (Rainbow Rd.)** is a paved two-lane road within the Janet ASP from Hwy.560 in the south to TWP 240 in the north. It services the agricultural land uses along the corridor and also serves as a connection between Chestermere and Hwy.560. The posted speed limit along Range Road 283 is 50 km/h.
- **Range Road 282** is a gravel two-lane road and currently acts as the primary access for one property north of Hwy.560. Beyond this property, Range Rd. 282 is undeveloped at this time.



The existing transportation network including the number of lanes on each roadway and the traffic control at the major intersections within the Janet ASP is shown in **Figure 2**.



Schematic - Not To Scale

Figure 2: Existing Road Network



2.2 INTERSECTION PERFORMANCE AND EVALUATION CRITERIA

The operating conditions during the peak hours at the studied intersections were evaluated using the Synchro/SimTraffic software package, which is based on the Highway Capacity Manual (HCM 2010) evaluation methodology.

For un-signalized (stop-controlled) intersections, the Level-of-Service (LOS) is based on the computed delays on each of the critical movements. LOS 'A' represents minimal delays for minor-street traffic movements, and LOS 'F' represents a scenario with an insufficient number of gaps on the major street for minor street motorists to complete their movements without significant delays.

For signalized intersections, the methodology considers the intersection geometry, traffic volumes, traffic signal phasing/timing plan, and also pedestrian volumes. The average delay for each lane group is calculated, as well as the delay for the overall intersection. The operating conditions can also be expressed in terms of volume to capacity (v/c) ratios. LOS criteria for both unsignalized and signalized intersections, as summarized in the Highway Capacity Manual, are illustrated in **Table 1**.

TABLE 1: LOS CRITERIA FOR INTERSECTIONS

Level of Service (LOS)	Average Delay for UNSIGNALIZED Intersection Movements	Average Delay for SIGNALIZED Intersection Movements
A	0 – 10 seconds per vehicle	0 – 10 seconds per vehicle
B	> 10 – 15 seconds per vehicle	> 10 – 20 seconds per vehicle
C	> 15 – 25 seconds per vehicle	> 20 – 35 seconds per vehicle
D	> 25 – 35 seconds per vehicle	> 35 – 55 seconds per vehicle
E	> 35 – 50 seconds per vehicle	> 55 – 80 seconds per vehicle
F	> 50 seconds per vehicle	> 80 seconds per vehicle



INTERSECTION IMPROVEMENT CRITERIA

As Highway 560 is a highway under the jurisdiction, management and control of Alberta Transportation (AT), AT Urban Standards and criteria for acceptable LOS operations was followed in the analysis as summarized below for the Highway:

- A maximum v/c ratio of 0.9 with a minimum LOS of D is acceptable for developments within urban areas.

For Rocky View County roads, the following urban criteria was used:

- For developments that are predominately urban in nature and are in close proximity to the City of Calgary or City of Airdrie the accepted v/c ratio is 1.0 with a minimum LOS of E.

2.3 EXISTING TRAFFIC VOLUMES AND CAPACITY ANALYSIS

The existing daily traffic volumes are from the model which is based on traffic counts provided by AT and Rocky View County. The traffic counts are provided in **Appendix A** while the model outputs can be found in **Appendix B**. These volumes were analyzed on the existing road network, as shown in **Figure 2**. The results of the analysis on the existing transportation network are summarized in **Figure 3** along with the estimated daily volumes. The detailed capacity analysis results for each intersection is included in **Appendix C**.

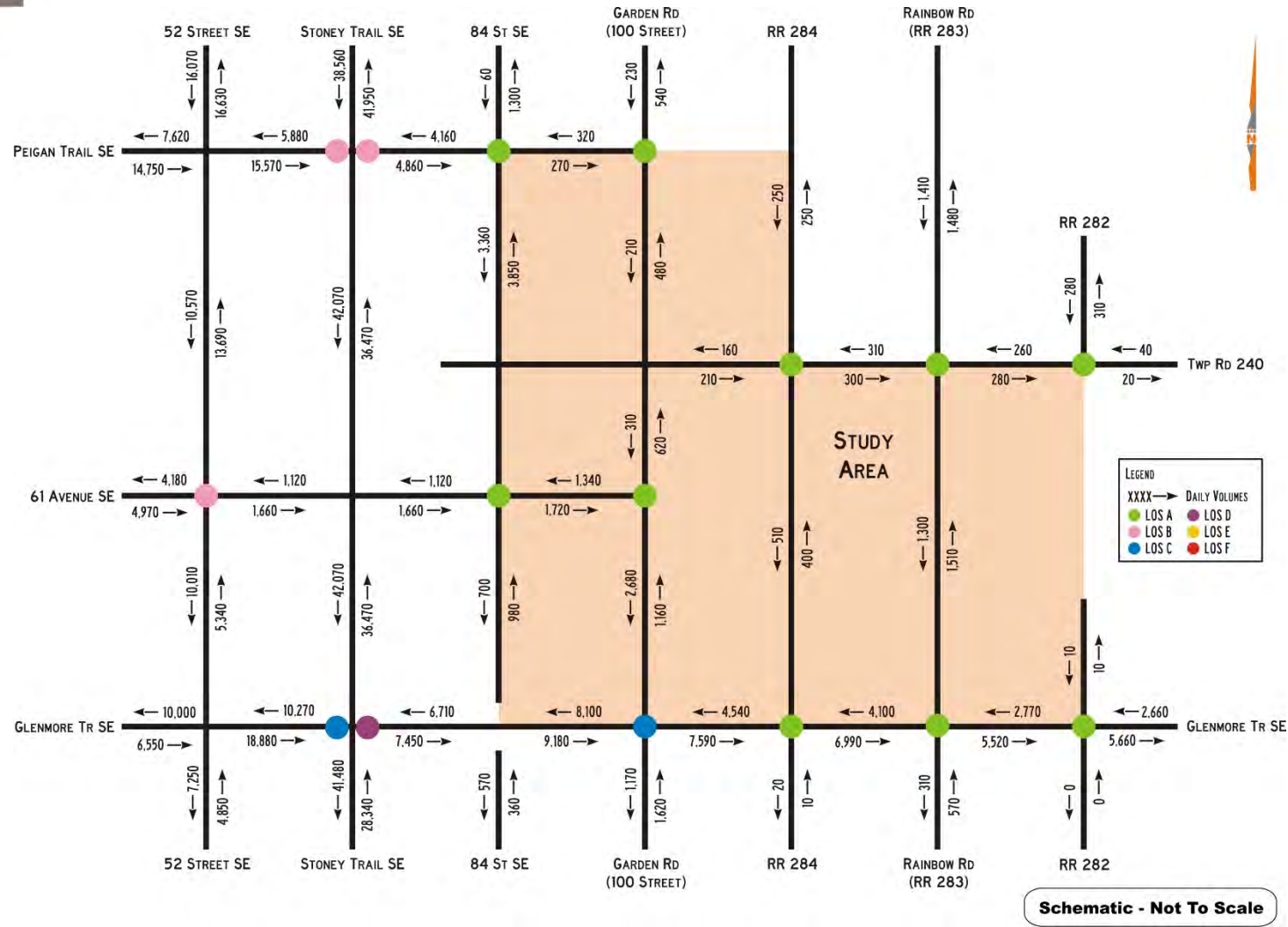


Figure 3: Existing Traffic Volumes and Operating Conditions



2.4 DISCUSSION OF RESULTS

The results of the intersection capacity analysis indicate that all study intersections are currently operating at an acceptable LOS D or better during the peak periods. These results were expected since the Janet ASP is only partially developed with most of the industrial lands located between 84th Street and 100th Street. There are a few specific turning movements at intersections that are approaching capacity as summarized below.

- The westbound through movement at the Glenmore/Stoney interchange (east terminal) is operating at LOS E during the PM peak period
- The northbound movement at the Glenmore Trail / Range Road 284 intersection is operating at LOS F during the PM peak period as an unsignalized intersection.

The operational issues at the Stoney / Glenmore interchange are limited to a single movement and are not considered critical at this time. The noted issue at Glenmore Trail / Range Road 284 intersection can be addressed through signalization when development proceeds both north and south of the highway. The signal would be considered an interim measure until interchanges are constructed as per the functional plans. Although a signal warrant was not performed for the existing conditions at this location, they are likely not warranted based on the relatively low traffic volumes on the north and south approaches.



3.0 FUTURE CONDITIONS

3.1 FUTURE TRANSPORTATION NETWORK

Based on the information provided by Rocky View County the following road network improvements within the Janet ASP area were assumed to be in place for the 2025 horizon year:

- **Range Road 282** is extended to become continuous between TWP Road 240 and Highway 560 as a two-lane roadway.
- **Peigan Trail** is extended and realigned to the south to join TWP Road 240 at the intersection with Range Road 284. TWP Road 240 is discontinued between 100 Street and Range Road 284.
- **61 Avenue** is extended east to Range Road 282 as a two-lane roadway. The alignment of the road is also assumed to gradually shift 800m to the south between Range Road 284 and Range Road 282 to align with the quarter section boundary.

The following improvements were assumed to be in place for the 2040 horizon year:

- **Highway 560** is upgraded with three diverging diamond interchanges at the intersections of 100 Street, Range Road 284, and Range Road 283.

3.2 REGIONAL GROWTH ASSUMPTIONS

Rocky View County's traffic-forecasting model (updated in 2017) was used to estimate the PM peak hour traffic volumes for the 2025, 2030 and 2040 horizons. RVC's traffic model incorporates population and employment growth projections within the County and for the Calgary Region. Assumptions related to the growth factors for each of these areas is summarized in the following sections.

ROCKY VIEW COUNTY - POPULATION GROWTH

The RVC traffic model includes a population growth estimate of 2.9 percent per year between 2018 and 2040 (compounded). It was assumed that the population growth would occur in the developments located within approved Area Structure Plans (i.e.



Conrich, Langdon, Harmony, Cochrane Lakes, Bragg Creek, Glenbow and Elbow Valley) to reach a projected 2040 RVC population of 74,000. The employment numbers in Rocky View County were assumed to grow by an annual rate of approximately 3 percent per year, as per information provided by RVC.

CITY OF CALGARY GROWTH

The published City of Calgary land use information for the future horizon years was also used as input to the RVC traffic forecasting model. The City's forecast model divides the City into hundreds of zones referred to as "Transportation Zones". The Rocky View model has aggregated these zones into "super-zones" since detailed analysis within the City is not required. An overview of the super-zones and the population and employment assumptions in the City of Calgary are provided in **Appendix D**.

GROWTH IN SURROUNDING AREAS

Population growth in the City of Chestermere was assumed at 3 percent per year with the growth primarily occurring in the following areas:

- South Shores
- Bridgeport
- Chelsea and Dawson
- Waterford (Stages 1 and 2)
- Webster (industrial area)

Although growth in Airdrie and Cochrane will have a negligible impact on traffic volumes in the Janet ASP, population increases of 2.5 percent per year in Airdrie and 3.5 percent per year in Cochrane were included in the model.

3.3 ASP LAND USE ASSUMPTIONS & PHASING

The Janet ASP is partially developed with the majority of the development located between Glenmore Trail and Peigan Trail and between 84th Street and 100th Street. East of 100th Street, there is limited development except for the Heather Glen Golf



Course, the Emcor site (currently being developed) and the Prairie Schooner Estates residential development adjacent to the golf course. The remaining lands accommodate mostly agricultural uses and some country residential uses.

For traffic modelling purposes, RVC staff provided some guidance on the land uses proposed within the Janet ASP. A summary of the assumed land uses within each area of the Janet ASP is provided in **Table 2** together with the assumed net developable area of each land use type.

TABLE 2: SUMMARY OF LAND USE ASSUMPTIONS WITHIN JANET ASP

Phase	LAND USE	Net Developable Area*	Unit
Phase 1	General Light Industrial (ITE 110)	1550	acres
	Commercial	21	acres
Phase 2	Commercial	56	acres
Phase 3	General Light Industrial (ITE 110)	1482	acres
	Commercial	230	acres
Phase 2/3	Country Residential 1 upa	110	units

* Note – Net developable area was assumed to be 0.6 times gross area

It should be noted that in order to ensure compatibility with the *Glenmore Trail East Functional Planning Study Report*¹ the same phasing and trip generation information was used for development in the Janet ASP area. The net developable area and land use information for Phase 3 was provided by Rocky View County and used in subsequent calculations.

¹ Glenmore Trail East Functional Planning Study Report – ISL July 2018



3.4 ASP TRIP GENERATION AND ASSIGNMENT

Development plans were provided by Rocky View County as part of their Area Structure Plan, and included anticipated residential, commercial and industrial growth areas. To be consistent with previous traffic analysis in the area, the trip generation rates and zones from the Glenmore Trail East Functional Planning Study Report were used for this study. A summary of the trip generation assumptions is displayed in **Table 3** and the transportation zones they are based off of are displayed in **Figure 4**. More detailed trip generation information is available in **Appendix E**.

TABLE 3: TRIP GENERATION

TZ	SOURCE	LAND USE	NET DEV AREA (ACRES)	TRIP GEN. RATE	AM PEAK HOUR TRIPS			PM PEAK HOUR TRIPS		
					IN	OUT	TOTAL	IN	OUT	TOTAL
TZ 3553	EMCOR TIA	Light Industrial	169.53	ITE Equation	712	146	858	189	669	858
		Comm.	30.53	ITE Rate	198	121	319	592	641	1,233
		Rail Yard Access	37.1	EMCOR TIA Trip Gen Study	28	42	70	42	28	70
TZ 3553	Janet ASP	Light Industrial	541	ITE Equation	1,750	358	2,108	464	1,644	2,108
Sub-Total:					2,688	667	3,355	1,287	2,982	4,269
TZ 1660	Janet ASP	Comm.	72	ITE Equation	340	209	549	1,146	1,241	2,387
Sub-Total:					340	209	549	1,146	1,241	2,387
TZ 3552	Janet ASP	Comm.	15	ITE Rate	79	48	127	236	256	492
		Light Industrial	91	ITE Equation	376	77	453	100	353	453
		Heavy Industrial	46	ITE Rate	75	15	90	22	77	99
Sub-Total:					530	140	670	358	686	1,044
TZ 3519	Janet ASP	Comm.	215	ITE Equation	652	400	1052	2270	2459	4729
		Light Industrial	870	ITE Equation	2745	562	3307	728	2580	3307
		Heavy Industrial	475	ITE Rate	780	160	940	226	800	1026
Sub-Total:					4,176	1,122	5,299	3,224	5,839	9,062
Total Trips:					7,734	2,138	9,873	6,015	10,748	16,762
Total Internal Trips (10%):					773	214	987	601	1075	1676
Total Trips (without Internal Trips):					6,961	1,925	8,886	5,413	9,673	15,085

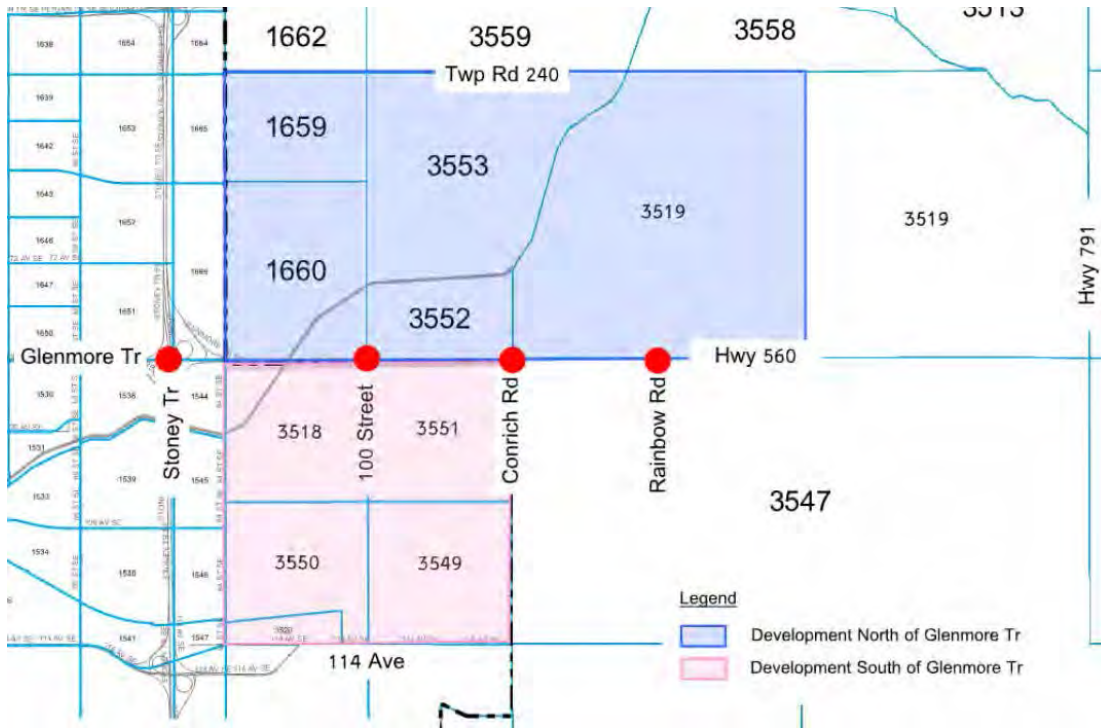


Figure 4: Transportation Zones (from Parsons Report)

The trip generation prepared by WATT for this report was compared to the trip generation analysis outlined in the Parsons report using land use information from RVC. The results of this comparison are displayed in **Table 4**.

TABLE 4: TRIP GENERATION COMPARISON

Source	Janet IB / OB Total Trips		
	Phase 1	Phase 2	Phase 3
Adjusted Parsons Study	6656	1044	10106
WATT VISUM Model	8824	1052	10099

It can be seen from the comparison results, the trips generated by WATT’s Visum model is consistent with the trip generation estimated within the Parsons study. It is noted that the Phase 1 Visum results are higher than those depicted in the Trip Generation Table as the Visum model is accounting for existing development



whereas the Parsons study is not. More detailed information on the trip generation is available in **Appendix E**.

The development and generated trips were assigned to the network at each time horizon in the following manner:

- 2025 Horizon: 25% of development complete
- 2030 Horizon: 50% of development complete
- 2040 Horizon: 100% of development complete

It is noted that full build-out of the Janet ASP would likely take longer than 20 years however, the point of this study was to identify the road improvements that would be required to support full build-out of the ASP area, not necessarily tied to a specific timeframe.

The traffic generated by the development cells within the study area was assigned to the adjacent road network for each analyzed horizon with the help of the Visum traffic model software. A summary of cell by cell assignment is attached in **Appendix E**.

It should be noted that the RVC model does not account for alternative modes of transportation. Although the number of trips by transit, cycling and walking is expected to be minimal, the results are considered conservative.

3.5 2025 TRAFFIC VOLUMES AND CAPACITY ANALYSIS

The 2025 horizon year intersection traffic volumes, as derived per Section 3.3, can be found in **Appendix B**. These volumes were analyzed on the revised road network, as described in **Section 3.1**. The initial results of the analysis without any additional improvements are summarized in **Figure 5** along with the estimated daily volumes. The detailed model outputs included in **Appendix B**.

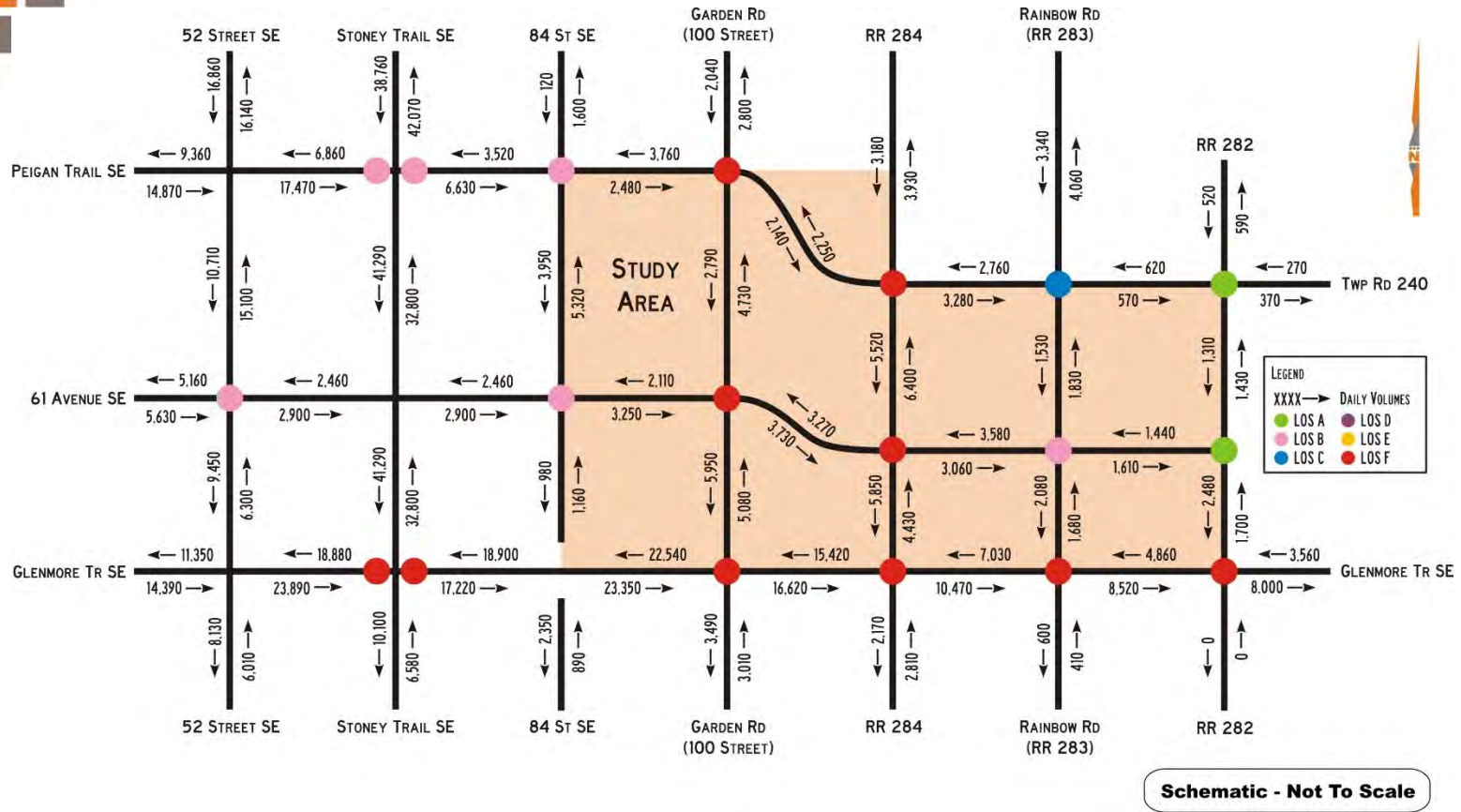


Figure 5: 2025 Daily Traffic Volumes and Capacity Analysis



Based on the capacity analysis on the unimproved network summarized in **Figure 5** most intersections operate at an acceptable level of service with the exceptions of the following intersections:

- Peigan Trail / 100 Street
- Peigan Trail / 116 Street
- 61 Avenue / 100 Street
- 61 Avenue / 116 Street
- Glenmore Trail / Stoney Trail (East and West Terminals)
- Glenmore Trail / 100 Street
- Glenmore Trail / 116 Street
- Glenmore Trail / Range Road 283
- Glenmore Trail / Range Road 282

PROPOSED IMPROVEMENTS

To address the operational issues at the 2025 horizon, several intersection upgrades and other road network improvements were evaluated. The list of recommended network improvements is summarized in **Table 5**.



TABLE 5: 2025 PROPOSED IMPROVEMENTS

Location	Improvement
Peigan Trail / 100 Street	Signalization
TWP 240 / RR 284	Signalization + Turn bays (NB Right, EB Right, WB Left)
61 Avenue / 100 Street	Signalization
61 Avenue / RR 284	Signalization + Turn bays (NB Right, WB Left&Right, SB Left&Right)
Glenmore Trail / Stoney Trail	Dual Lefts (both terminals)
Glenmore Trail / 100 Street	Turn bays (NB Dual Left, EB Dual Left, WB Left)
Glenmore Trail / RR 284	Turn bays (SB Right, NB Left, EB Dual Left)
Glenmore Trail / RR 283	Signalization + turn bays (EB Left/Right, WB Left)
Glenmore Trail / RR 282	SB Right turn lane
Glenmore Trail Corridor	Road Widening (From 4 to 6 lanes, Stoney Trail to east of 100 St and from 2 to 4 lanes to east of RR 284)

The results of the analysis on the improved network are summarized in **Figure 6** along with the estimated daily volumes, with the detailed model outputs included in **Appendix C**.

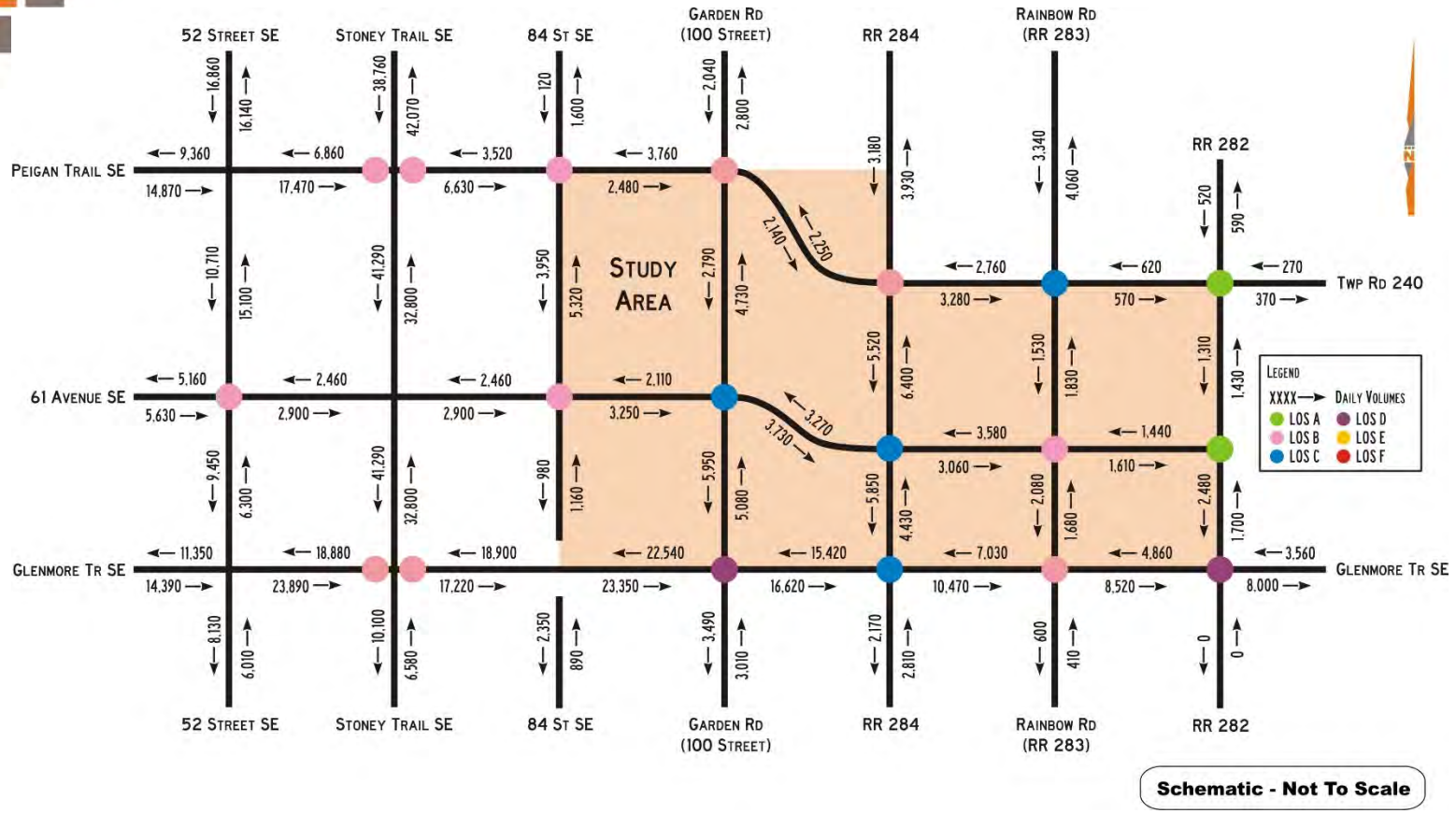


Figure 6: 2025 Improved Operating Conditions

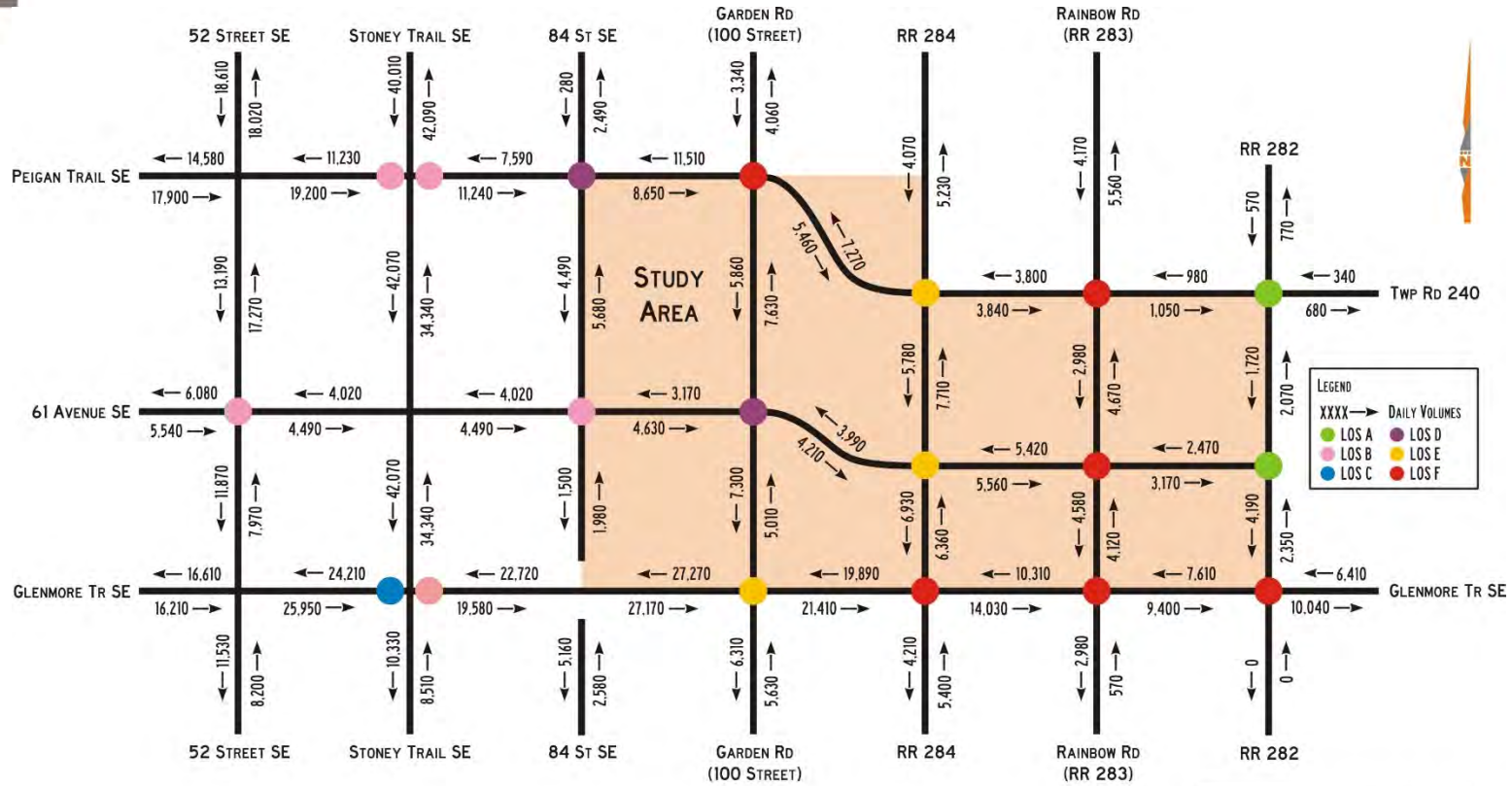


As previously noted, it is assumed that Peigan Trail and 61st Avenue are realigned through the ASP area at the 2025 horizon. Based on the analysis presented in this report, upgrades to the transportation network will be required to accommodate the anticipated 25 percent development of the Janet ASP. The critical improvements include upgrades to the Peigan Trail and 61st Avenue corridors. The upgrades include signals at Peigan / 100th Street, Peigan / Range Road 284 and 61st Avenue / Range Road 284. Other minor intersection upgrades are also recommended throughout the ASP area to support the anticipated development as previously outlined.

Based on the projected traffic volumes along Glenmore Trail, widening from 2 to 4 lanes is recommended from Stoney Trail to Range Road 284. Intersection analysis at the terminals of the Glenmore Trail / Stoney Trail interchange and the Glenmore Trail / 100 Street intersection indicate that a 6-lane cross section may be necessary to achieve Alberta Transportation LOS requirements. Some intersection upgrades along the Glenmore Trail corridor could also be considered in advance of the planned interchanges at 100th Street and Range Road 284.

3.6 2030 OPERATING CONDITIONS

The 2030 horizon year traffic volumes, as derived per Section 3.3, can be found in **Appendix B**. These volumes were analyzed on the 2025 improved road network, as described in section 3.2. The results of the analysis on the 2030 unimproved network are summarized in **Figure 7** along with the estimated daily volumes, with the detailed model outputs included in **Appendix C**.



Schematic - Not To Scale

Figure 7: 2030 Unimproved Operating Conditions



Based on the capacity analysis on the unimproved network summarized in **Figure 7** most intersections operate at an acceptable LOS with the exception of the following intersections:

- Peigan Trail / 84 Street
- Peigan Trail / 100 Street
- Peigan Trail / RR 284
- Peigan Trail / RR 283
- 61 Avenue / 100 Street
- 61 Avenue / RR 284
- Glenmore Trail / 100 Street
- Glenmore Trail / 116 Street
- Glenmore Trail / Range Road 283
- Glenmore Trail / Range Road 282

It should be noted that in some cases intersections with an acceptable LOS are still recommended for improvement as their v/c capacity ratios exceed those required by RVC standards.

PROPOSED IMPROVEMENTS

At this horizon, it is assumed that 50 percent of the Janet ASP is developed. The traffic analysis indicates that the transportation network will require upgrades to accommodate the anticipated level of development in the area. A summary of the recommended upgrades to the transportation network is provided in **Table 6**.

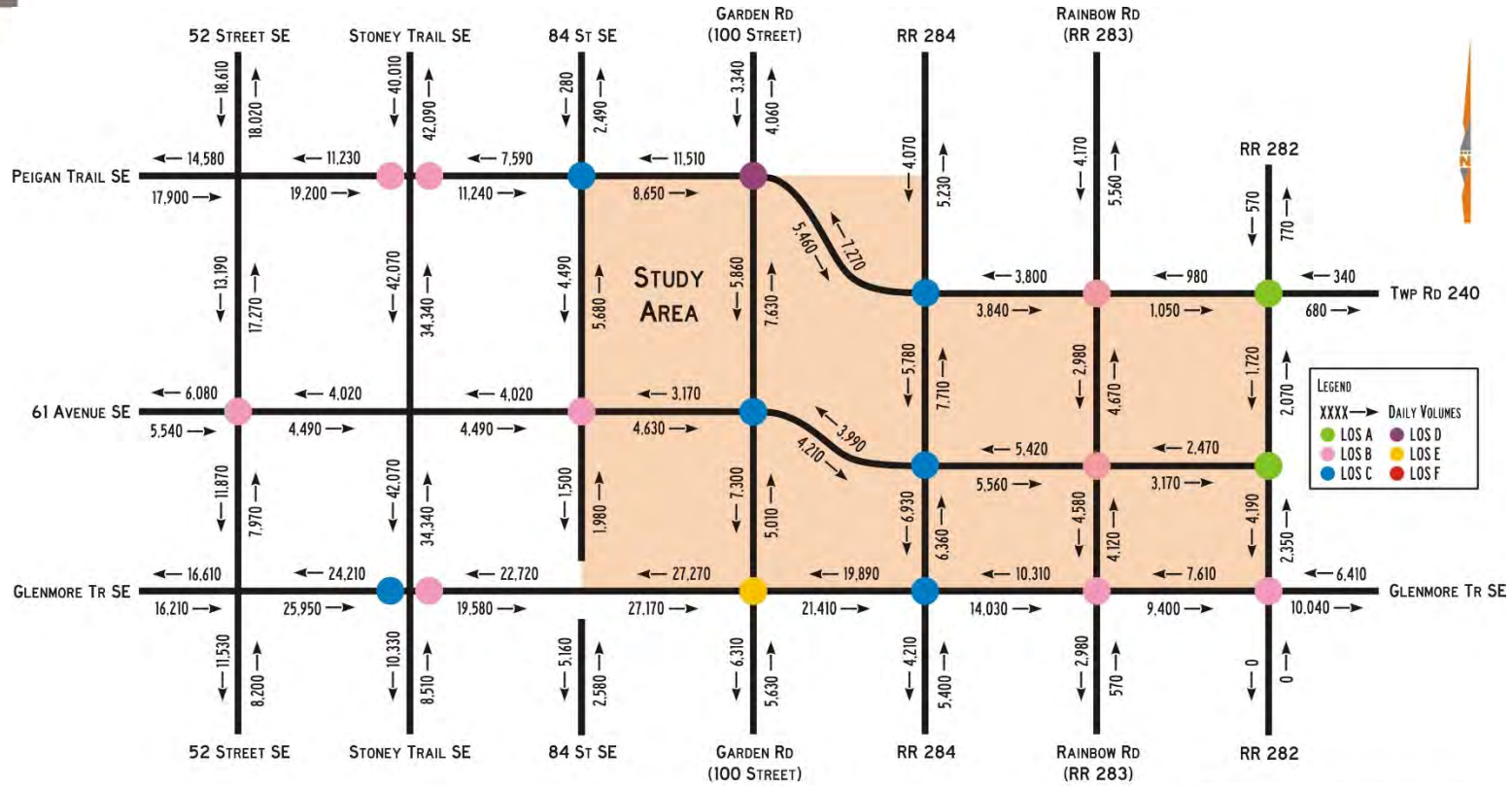
The volumes projected along Glenmore Trail indicate a maximum daily volume in the range of 50,000 vpd just east of Stoney Trail. If the development proceeds as projected significant improvements along Glenmore Trail will be required to ensure an adequate level of service for traffic along the corridor and for intersecting roadways. This is earlier than anticipated as compared to the Glenmore Trail East Functional Planning Study Report and will likely depend on how quickly the Janet ASP and Shepard Industrial areas are developed.



TABLE 6: 2030 PROPOSED IMPROVEMENTS

Location	Improvement
Peigan Trail / 84 Street	EB Dual Left turn lane
Peigan Trail / 100 Street	NB Dual Left turn, SB Left Turn, EB Right
TWP 240 / RR 284	Turn bay additions (NB Left, EB Left)
TWP 240 / RR 283	Signalization + Turn bays (EB Left, NB Left, SB Right&Left)
61 Avenue / 100 Street	Turn bay additions (NB Right, EB/WB Left)
61 Avenue / RR 284	Turn bay additions (NB Left, EB Left&Right)
61 Avenue / RR 283	Signalization + Turn bays (NB Right, EB/WB Left)
Glenmore Trail / 100 Street	Turn bays (SB Right&Left, WB Dual Left)
Glenmore Trail / RR 284	Turn bays (SB Left, NB Dual Left, WB Left)
Glenmore Trail / RR 283	Turn bays (SB Right, EB Dual Left)
Glenmore Trail / RR 282	Signalization + turn bays (EB Left, SB Right)
Glenmore Trail Corridor	Road Widening (6 lanes, Stoney Trail to East of RR 284 and 2 to 4 lanes, East of RR 284 to East of RR 282))
Peigan Trail Corridor	Road Widening (2 to 4 Lanes, 84 Street to East of 100 St)

The results of the analysis on the improved network are summarized in **Figure 8** along with the estimated daily volumes, with the detailed model outputs included in **Appendix C**.



Schematic - Not To Scale

Figure 8: 2030 Improved Operating Conditions



It can be seen from the improvements listed in **Table 6** and the capacity analysis results in **Figure 8** that despite significant intersection upgrades at the Glenmore Trail / 100 Street intersection, it is still expected to operate at LOS E. A traffic monitoring program should be prioritized at this location to determine the timing of the planned diverging diamond interchange.

3.7 2040 OPERATING CONDITIONS

The 2040 horizon year traffic volumes, as derived per Section 3.3, can be found in **Appendix B**. These volumes were analyzed on the 2030 improved road network, as described in section 3.3. The results of the analysis on the 2040 unimproved network are summarized in **Figure 9** along with the estimated daily volumes, with the detailed model outputs included in **Appendix C**.

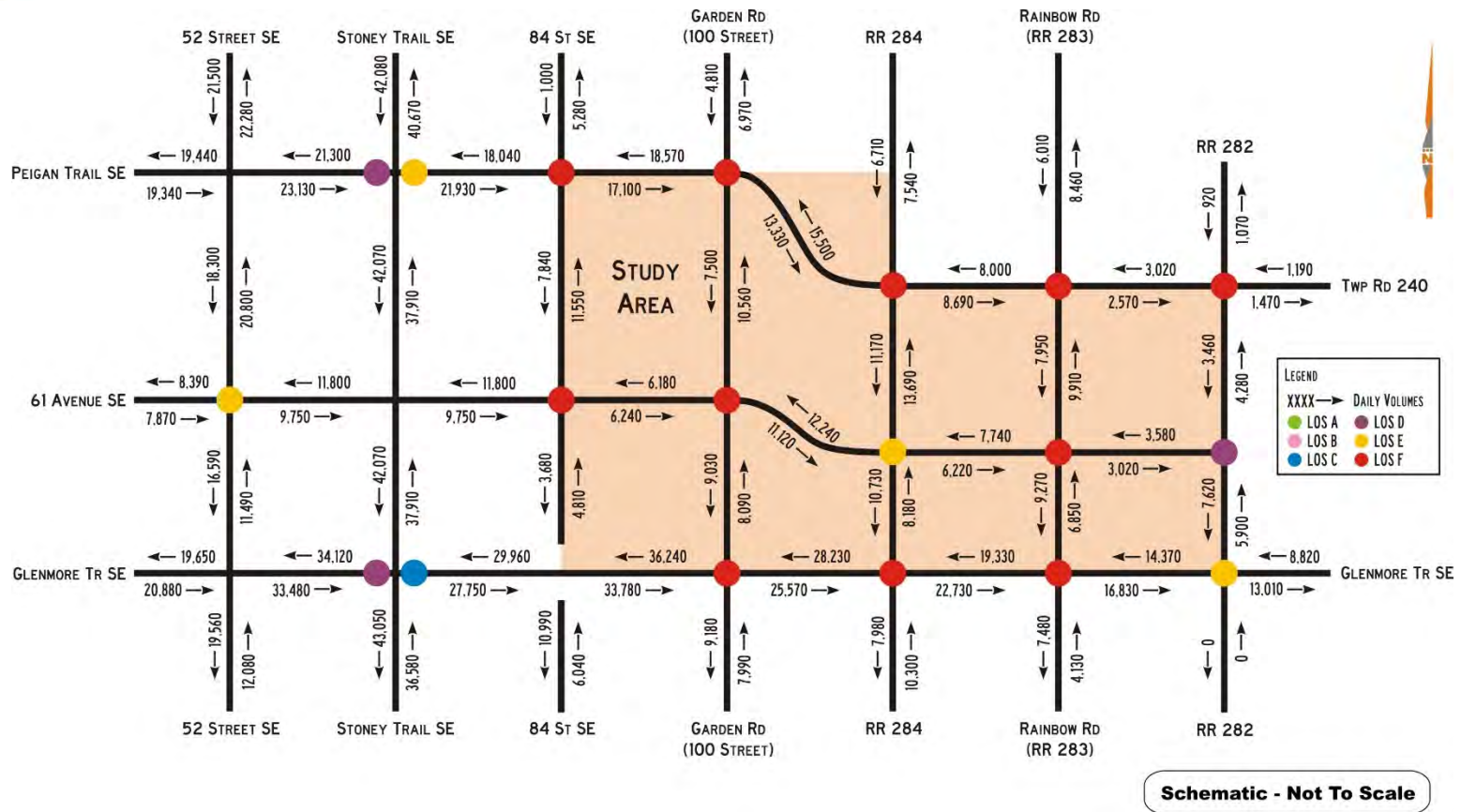


Figure 9: 2040 Unimproved Operating Conditions



Based on the capacity analysis on the unimproved network summarized in **Figure 9** some intersections operate at an acceptable LOS with the exception of the following intersections:

- Peigan Trail / 84 Street
- Peigan Trail / 100 Street
- TWP 240 / RR 284
- TWP 240 / RR 283
- TWP 240 / RR 282
- 61 Avenue / 84 Street
- 61 Avenue / 100 Street
- 61 Avenue / RR 284
- 61 Avenue / RR 283
- Glenmore Trail / 100 Street
- Glenmore Trail / RR 284
- Glenmore Trail / RR 283
- Glenmore Trail / RR282

It should be noted that in some cases intersections with an acceptable LOS are still recommended for improvement as their v/c capacity ratios exceed those required by RVC standards.

PROPOSED IMPROVEMENTS

At the 2040 horizon, the diverging diamond interchanges are assumed to be in place along Glenmore Trail at 100th Street, Range Road 284 and Range Road 283. These interchanges are expected to address the anticipated congestion along this corridor. The transportation network within the easterly portion of the Janet ASP will require additional upgrades to support full build-out of the development area. The upgrades include signals, road widening and intersection upgrades throughout the plan area. The specific road network upgrades required to support the full development of the Janet ASP are summarized in **Table 7**.

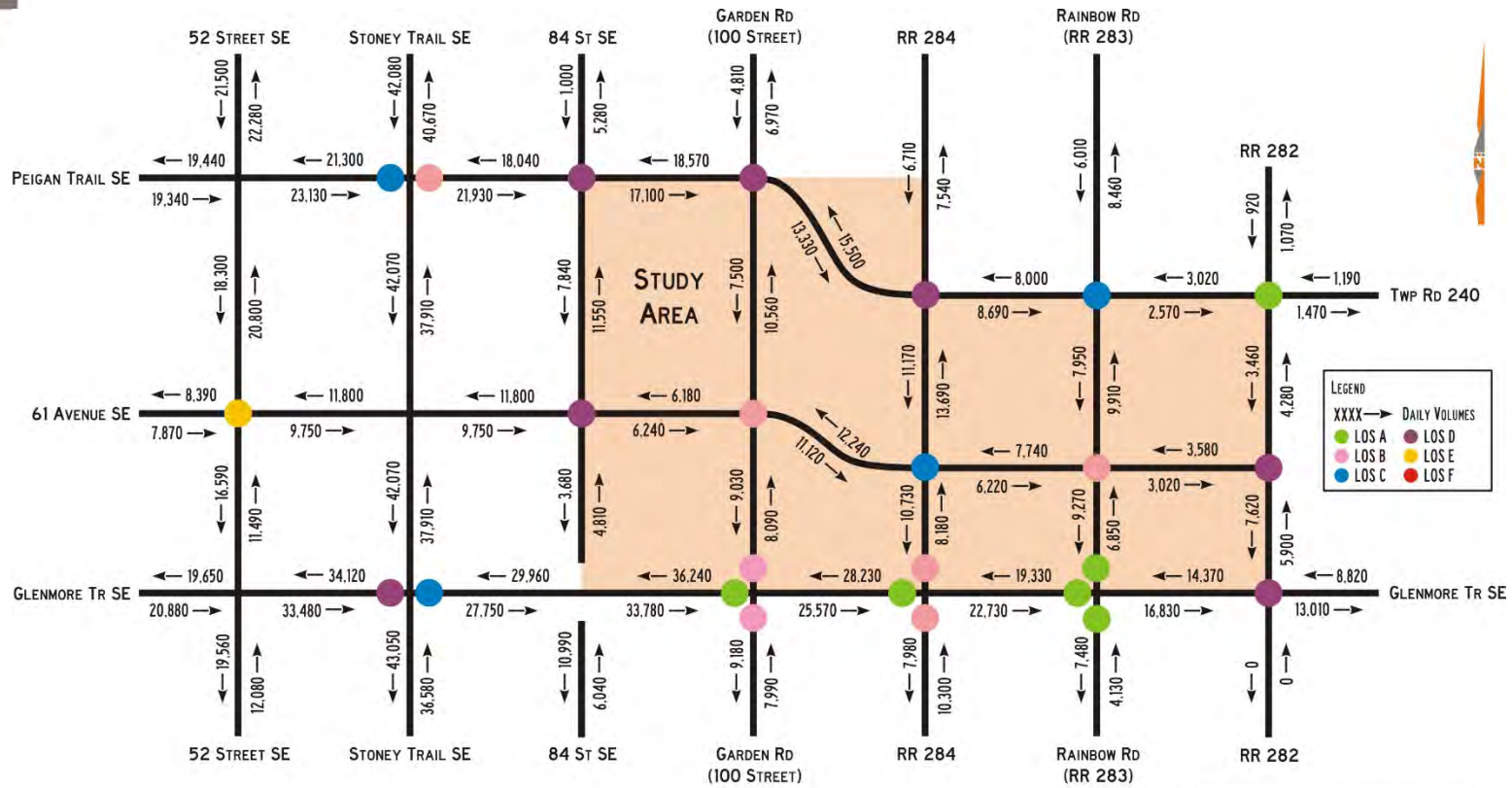


TABLE 7: 2040 PROPOSED IMPROVEMENTS

Location	Improvement
Peigan Trail / 84 Street	EB right channelized
Peigan Trail / 100 Street	EB Left, WB Left & Right turn bays
TWP 240 / RR 284	Turn bay additions (NB dual left)
TWP 240 / RR 283	Turn bay additions (dual left NB / EB)
TWP 240 / RR 282	Signalization + Turn bays (NB Left)
61 Avenue / 84 Street	Turn bay additions (NB dual Left, EB Left&Right, WB Right, SB Left)
61 Avenue / 100 Street	Turn bay additions (NB Left&Right, EB Right, WB Right + dual Left, SB Left&Right)
61 Avenue / RR 284	Dual left turn bay in all directions
61 Avenue / RR 283	Left Turn bays (NB/SB Left, WB Dual Left)
61 Avenue / RR 282	Turn bays (NB Left, EB Right)
Glenmore Trail / 100 Street	Diverging Diamond Interchange (3 signalized intersections)
Glenmore Trail / RR 284	Diverging Diamond Interchange (3 signalized intersections)
Glenmore Trail / RR 283	Diverging Diamond Interchange (3 signalized intersections)
Glenmore Trail / RR 282	Turn bay additions + Dual Left EB + SB
Peigan Trail Corridor	Road Widening (4 to 6 Lanes, Stoney Trail to East of 100 St, 2 to 4 Lanes, East of 100 St to RR 283)
61 Avenue Corridor	Road Widening (2 to 4 Lanes, 52 St to East of RR 284)
Garden Road Corridor	Road Widening (2 to 4 Lanes, 61 Avenue to south of Glenmore Trail)
RR 284 Corridor	Road Widening (2 to 4 Lanes, North of TWP 240 to south of Glenmore Trail)
RR 283 Corridor	Road Widening (2 to 4 Lanes, TWP 240 to Glenmore Trail)



The results of the analysis on the improved network are summarized in **Figure 10** along with the estimated daily volumes, with the detailed model outputs included in **Appendix C**. Please note that each of the three proposed diverging diamond interchanges include three signalized intersections which are represented in the results.



Schematic - Not To Scale

Figure 10: 2040 Improved Operating Conditions

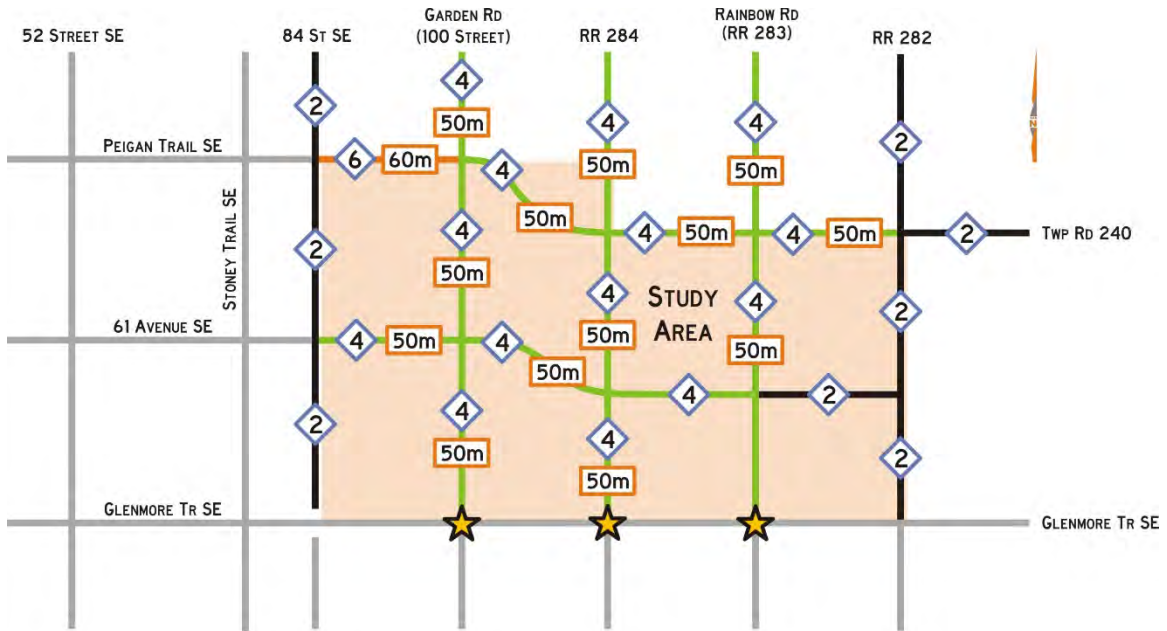


4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis contained within this report, the recommended improvements for the overall transportation network at the noted time horizons are summarized in **Table 8** as well as in **Figure 11** and **12**.

TABLE 8: PROPOSED IMPROVEMENTS

Location	Existing	2025 Horizon	2030 Horizon	2040 Horizon
61 Avenue / 52 Street	N/A	N/A	N/A	N/A
Peigan Trail / Stoney Trail	N/A	N/A	N/A	N/A
Peigan Trail / 84 Street	N/A	N/A	EB Dual Left turn lane	EB right channelized
Peigan Trail / 100 Street	N/A	Signalization	NB Dual Left turn, SB Left Turn, EB Right	EB Left, WB Left & Right turn bays
TWP 240 / RR 284	N/A	Signalization + Turn bays (NB Right, EB Right, WB Left)	Turn bay additions (NB Left, EB Left)	Turn bay additions (NB dual left)
TWP 240 / RR 283	N/A	N/A	Signalization + Turn bays (EB Left, NB Left, SB Right&Left)	Turn bay additions (dual left NB / EB)
TWP 240 / RR 282	N/A	N/A	N/A	Signalization + Turn bays (NB Left)
61 Avenue / 84 Street	N/A	N/A	N/A	Turn bay additions (NB dual Left, EB Left&Right, WB Right, SB Left)
61 Avenue / 100 Street	N/A	Signalization	Turn bay additions (NB Right, EB/WB Left)	Turn bay additions (NB Left&Right, EB Right, WB Right + dual Left, SB Left&Right)
61 Avenue / RR 284	N/A	Signalization + Turn bays (NB Right, WB Left&Right, SB Left&Right)	Turn bay additions (NB Left, EB Left&Right)	Dual left turn bay in all directions
61 Avenue / RR 283	N/A	N/A	Signalization + Turn bays (NB Right, EB/WB Left)	Left Turn bays (NB/SB Left, WB Dual Left)
61 Avenue / RR 282	N/A	N/A	N/A	Turn bays (NB Left, EB Right)
Glenmore Trail / Stoney Trail	N/A	Dual Lefts (both terminals)	N/A	N/A
Glenmore Trail / 100 Street	N/A	Turn bays (NB Dual Left, EB Dual Left, WB Left)	Turn bays (SB Right&Left, WB Dual Left)	Diverging Diamond Interchange (3 signalized intersections)
Glenmore Trail / RR 284	N/A	Turn bays (SB Right, NB Left, EB Dual Left)	Turn bays (SB Left, NB Dual Left, WB Left)	Diverging Diamond Interchange (3 signalized intersections)
Glenmore Trail / RR 283	N/A	Signalization + turn bays (EB Left/Right, WB Left)	Turn bays (SB Right, EB Dual Left)	Diverging Diamond Interchange (3 signalized intersections)
Glenmore Trail / RR 282	N/A	SB Right turn lane	Signalization + turn bays (EB Left, SB Right)	Turn bay additions + Dual Left EB + SB
Glenmore Trail Corridor	N/A	Road Widening (From 4 to 6 lanes, Stoney Trail to east of 100 St and from 2 to 4 lanes to east of RR 284)	Road Widening (6 lanes, Stoney Trail to East of RR 284 and 2 to 4 lanes, East of RR 284 to East of RR 282))	N/A
Peigan Trail Corridor	N/A	N/A	Road Widening (2 to 4 Lanes, 84 Street to East of 100 St)	Road Widening (4 to 6 Lanes, Stoney Trail to East of 100 St, 2 to 4 Lanes, East of 100 St to RR 283)
61 Avenue Corridor	N/A	N/A	N / A	Road Widening (2 to 4 Lanes, 52 St to East of RR 284)
Garden Road Corridor	N/A	N/A	N / A	Road Widening (2 to 4 Lanes, 61 Avenue to south of Glenmore Trail)
RR 284 Corridor	N/A	N/A	N / A	Road Widening (2 to 4 Lanes, North of TWP 240 to south of Glenmore Trail)
RR 283 Corridor	N/A	N/A	N / A	Road Widening (2 to 4 Lanes, TWP 240 to Glenmore Trail)



LEGEND			
	2-LANE ROAD		INTERCHANGE
	4-LANE ROAD		NUMBER OF LANES
	6-LANE ROAD		RIGHT-OF-WAY REQUIREMENT

Schematic - Not To Scale

Figure 11: ASP Network Improvements

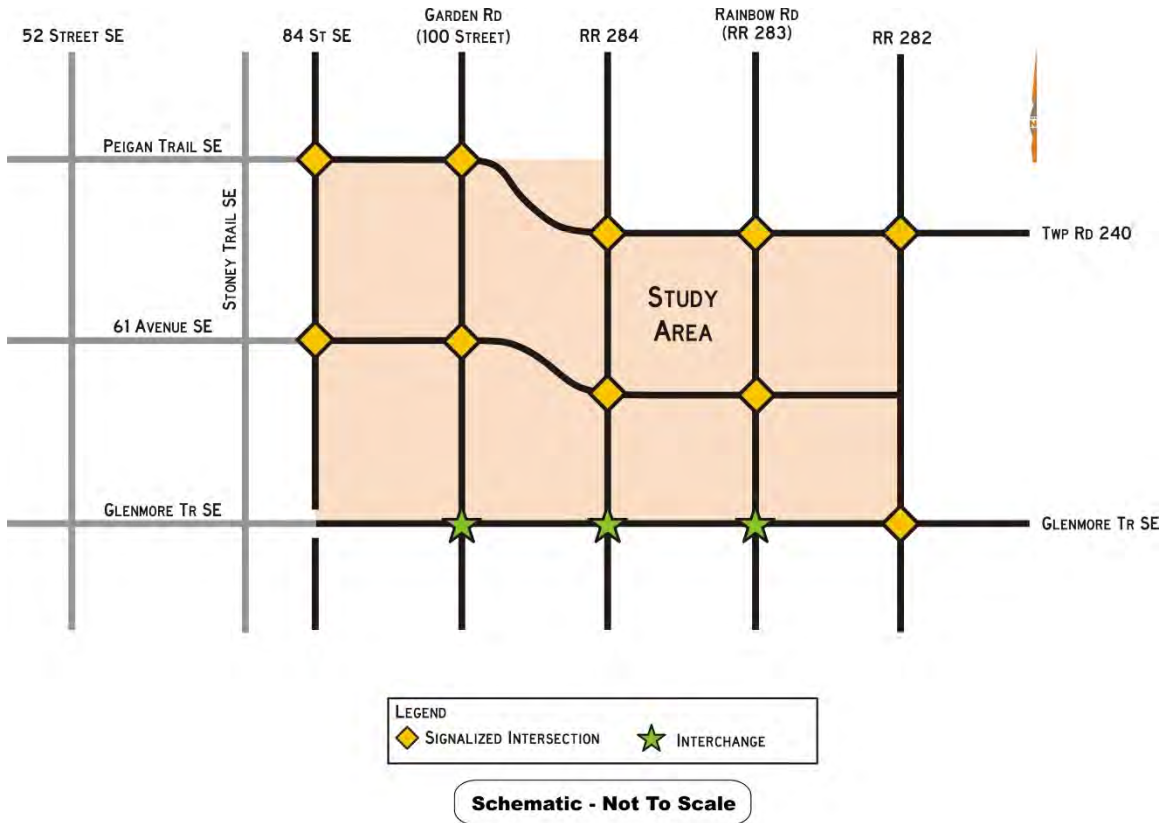


Figure 12: ASP Intersection Improvements



- Road classifications should be adopted per **Table 8** and **Figure 11** and Rocky View County should protect the ultimate right of way as recommended for the 2040 horizon year.
- Dimensions of the right-of-way in the intersection areas should be confirmed at the preliminary design stage for each access intersection.
- A traffic monitoring program should be initiated at the key intersections to provide up-to-date information on operational conditions throughout the development progression to ensure that the required improvements are introduced in a timely fashion.
- A periodic review of the network performance should be undertaken, including impact of the network modification, to verify improvement priorities and to ascertain that considered future network improvements are introduced in a timely fashion.
- The actual network improvements should be based on the actual traffic volumes related to the development progression in the area.
- Regional transit opportunities should be evaluated at the subsequent stages of the development planning and the future transit network should be identified in cooperation with Calgary Transit and other municipalities in the vicinity.



APPENDIX A: TRAFFIC COUNT DATA



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 283 NORTH OF HWY 560 (Legal: SE-28-23-28-W4M)

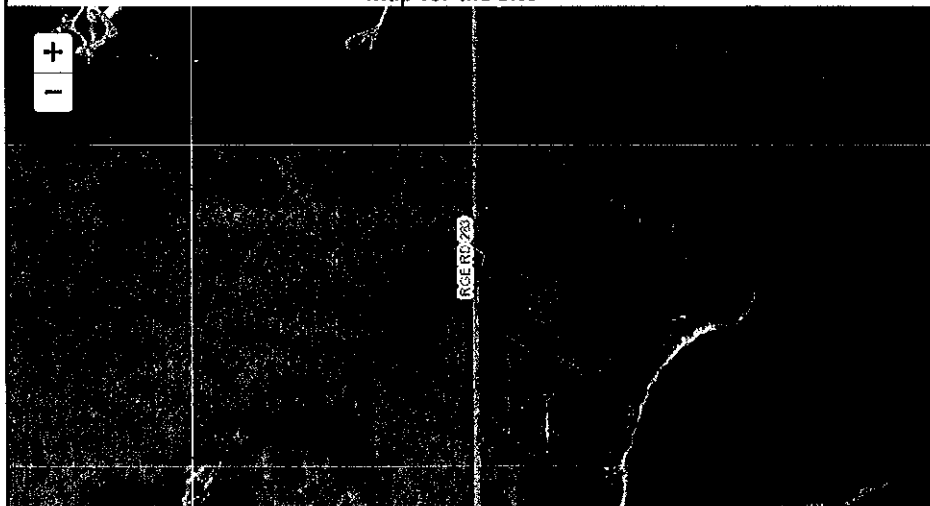
Date : 2019/07/09	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 2259	85 Percentile : 97 KM/H	Truck Percentage : 9 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary Axles Details Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	9	12	21
(2) PASSENGER CARS	609	738	1347
(3) 2 AXLE 4 TIRES	328	359	687
(4) BUSES	1	1	2
(5) 2 AXLE 6 TIRES	91	84	175
(6) 3 AXLE SINGLE UNIT TRUCK	3	3	6
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	6	4	10
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	2	0	2
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	4	4	8

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	0	0
20-30	0	0	0
30-40	1	0	1
40-50	0	1	1
50-60	4	4	8
60-70	4	23	27
70-80	80	163	243
80-90	446	602	1048
90-100	368	319	687
100-110	108	74	182
110-120	29	13	42
120-130	13	5	18
130-140	1	0	1
140-150	0	1	1
150-160	0	0	0
160-200	0	0	0
Total	1054	1205	2259

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 283 SOUTH OF TWP RD 240 (Legal: NW-34-23-28-W4M)

Date : 2019/07/09	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 2249	85 Percentile : 91 KM/H	Truck Percentage : 5 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	10	10	20
(2) PASSENGER CARS	641	816	1457
(3) 2 AXLE 4 TIRES	317	341	658
(4) BUSES	1	1	2
(5) 2 AXLE 6 TIRES	63	24	87
(6) 3 AXLE SINGLE UNIT TRUCK	2	3	5
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	6	3	9
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	2	0	2
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	4	4	8

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	0	0
20-30	1	0	1
30-40	1	0	1
40-50	0	1	1
50-60	5	3	8
60-70	31	62	93
70-80	162	520	682
80-90	505	504	1009
90-100	249	93	342
100-110	70	17	87
110-120	14	2	16
120-130	4	0	4
130-140	3	0	3
140-150	1	0	1
150-160	1	0	1
160-200	0	0	0
Total	1047	1202	2249

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 283 SOUTH OF HWY 560 (Legal: NE-21-23-28-W4M)

Date : 2019/07/09	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 815	85 Percentile : 89 KM/H	Truck Percentage : 19 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	4	6	10
(2) PASSENGER CARS	162	166	328
(3) 2 AXLE 4 TIRES	165	151	316
(4) BUSES	0	5	5
(5) 2 AXLE 6 TIRES	17	31	48
(6) 3 AXLE SINGLE UNIT TRUCK	31	24	55
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	3	4
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	4	4
(9) 5 AXLE SINGLE TRAILER TRUCK	2	3	5
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	14	10	24
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	9	7	16

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	0	0
20-30	4	1	5
30-40	6	2	8
40-50	15	6	21
50-60	22	14	36
60-70	85	44	129
70-80	123	125	248
80-90	100	156	256
90-100	30	46	76
100-110	12	9	21
110-120	4	7	11
120-130	2	0	2
130-140	1	0	1
140-150	1	0	1
150-160	0	0	0
160-200	0	0	0
Total	405	410	815

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 NORTH OF HWY 560 (Legal: SE-29-23-28-W4M)

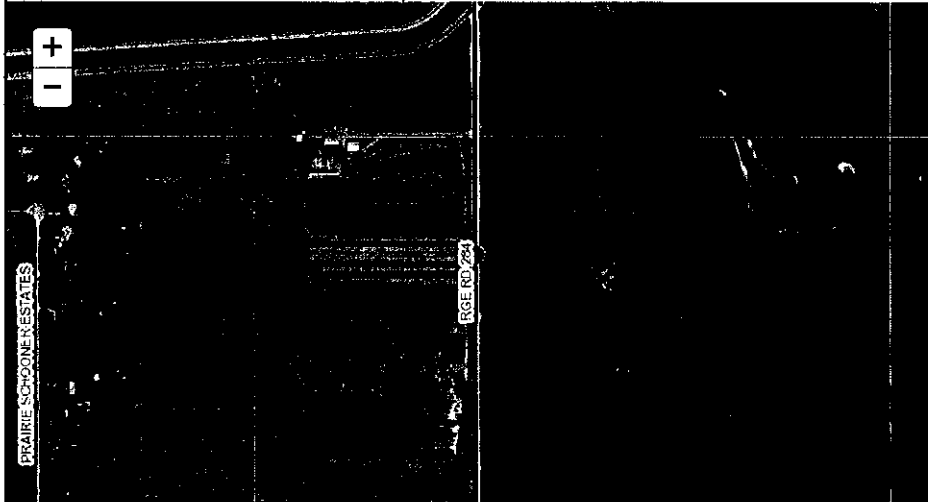
Date : 2019/07/09	Length of Count : 24 HR	Posted Speed : 80KM/H
Grand Total : 431	85 Percentile : 87 KM/H	Truck Percentage : 37 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary Axles Details Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	1	1	2
(2) PASSENGER CARS	68	55	123
(3) 2 AXLE 4 TIRES	76	56	132
(4) BUSES	2	11	13
(5) 2 AXLE 6 TIRES	19	39	58
(6) 3 AXLE SINGLE UNIT TRUCK	29	23	52
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	3	3	6
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	6	11	17
(9) 5 AXLE SINGLE TRAILER TRUCK	0	2	2
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	9	4	13
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	9	4	13

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	1	1
20-30	3	1	4
30-40	3	1	4
40-50	27	5	32
50-60	32	25	57
60-70	62	46	108
70-80	50	56	106
80-90	31	38	69
90-100	10	23	33
100-110	2	7	9
110-120	1	4	5
120-130	1	1	2
130-140	0	0	0
140-150	0	1	1
150-160	0	0	0
160-200	0	0	0
Total	222	209	431

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: 5067

Search

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

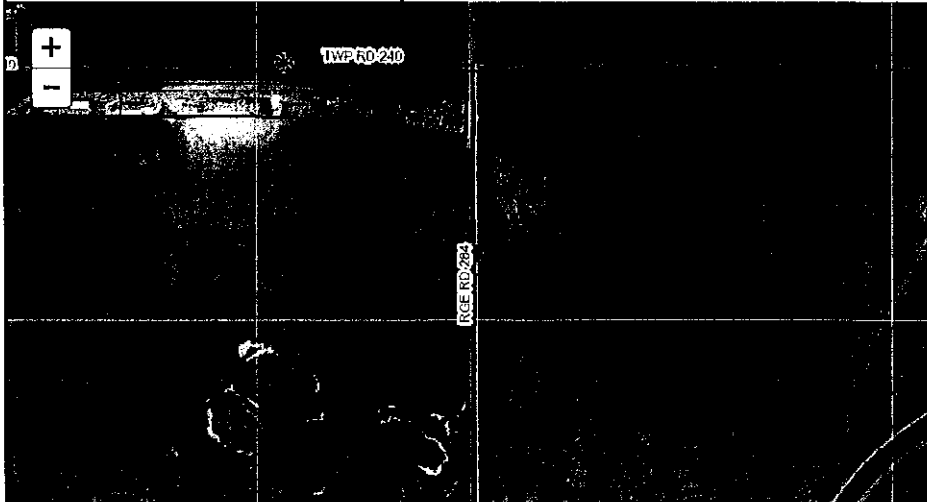
Date : 2017/05/18	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 292	85 Percentile : 96 KM/H	Truck Percentage : 41 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary Axles Details Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	2	2	4
(2) PASSENGER CARS	37	41	78
(3) 2 AXLE 4 TIRES	36	39	75
(4) BUSES	8	6	14
(5) 2 AXLE 6 TIRES	26	21	47
(6) 3 AXLE SINGLE UNIT TRUCK	25	25	50
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	5	5
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	4	2	6
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	4	3	7
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	3	3	6

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	0	0
20-30	0	0	0
30-40	0	4	4
40-50	3	1	4
50-60	3	11	14
60-70	10	22	32
70-80	30	39	69
80-90	49	35	84
90-100	30	21	51
100-110	12	10	22
110-120	7	4	11
120-130	1	0	1
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	145	147	292

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240(CNDR 126.40) (Legal: NE-32-23-28-W4M)

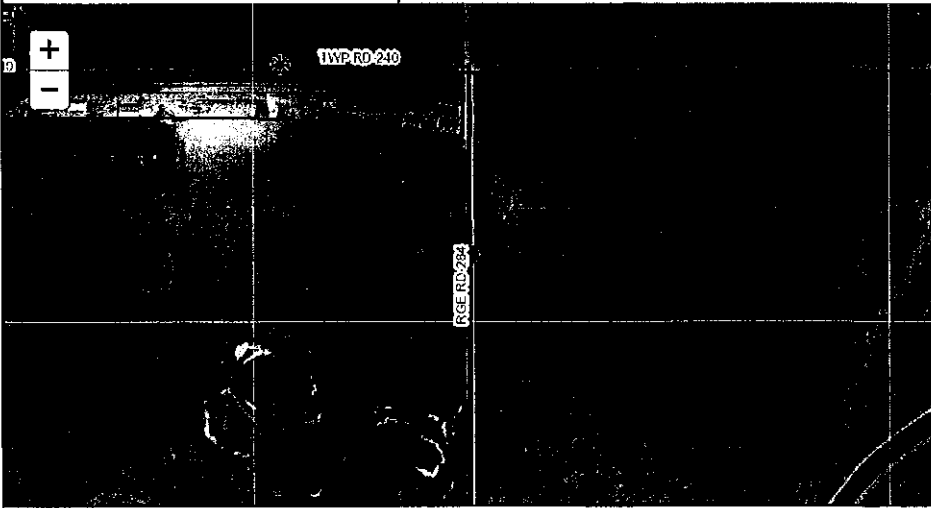
Date : 2018/07/27	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total: 586	85 Percentile : 30 KM/H	Truck Percentage : 16 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	4	1	5
(2) PASSENGER CARS	216	104	320
(3) 2 AXLE 4 TIRES	109	54	163
(4) BUSES	0	3	3
(5) 2 AXLE 6 TIRES	35	25	60
(6) 3 AXLE SINGLE UNIT TRUCK	15	13	28
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	2	2	4
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	1	1	2
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/h)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	58	16	74
20-30	288	123	411
30-40	33	53	86
40-50	3	8	11
50-60	1	3	4
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	383	203	586

Map for the Site



Vehicle Type

VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240(CNDR 126.40) (Legal: NE-32-23-28-W4M)

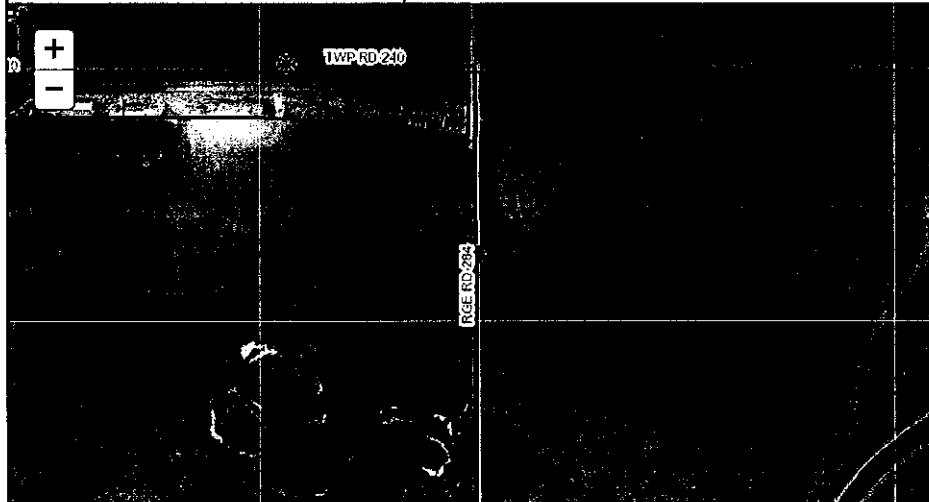
Date : 2018/07/28	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 374	85 Percentile : 32 KM/H	Truck Percentage : 8 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	1	1	2
(2) PASSENGER CARS	172	69	241
(3) 2 AXLE 4 TIRES	61	38	99
(4) BUSES	2	0	2
(5) 2 AXLE 6 TIRES	11	7	18
(6) 3 AXLE SINGLE UNIT TRUCK	4	4	8
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	3	0	3
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	0	0
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	38	6	44
20-30	187	56	243
30-40	27	46	73
40-50	2	8	10
50-60	0	2	2
60-70	0	0	0
70-80	0	1	1
80-90	0	0	0
90-100	1	0	1
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	255	119	374

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: 5744.2 Search

TWP NO. **33**

Location : RGE RD 284 SOUTH OF TWP RD 240(CNDR 126.40) (Legal: NE-32-23-28-W4M)

Date : 2018/07/29	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 180	85 Percentile : 31 KM/H	Truck Percentage : 9 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	2	1	3
(2) PASSENGER CARS	60	48	108
(3) 2 AXLE 4 TIRES	34	19	53
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	7	5	12
(6) 3 AXLE SINGLE UNIT TRUCK	1	1	2
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	0	0
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	1	2
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	0	0
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	18	4	22
20-30	81	43	124
30-40	5	23	28
40-50	1	4	5
50-60	0	0	0
60-70	0	1	1
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	105	75	180

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
	13



Traffic Count Report

SITE ID: 5744.3

Search

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240(CNDR 126.40) (Legal: NE-32-23-28-W4M)

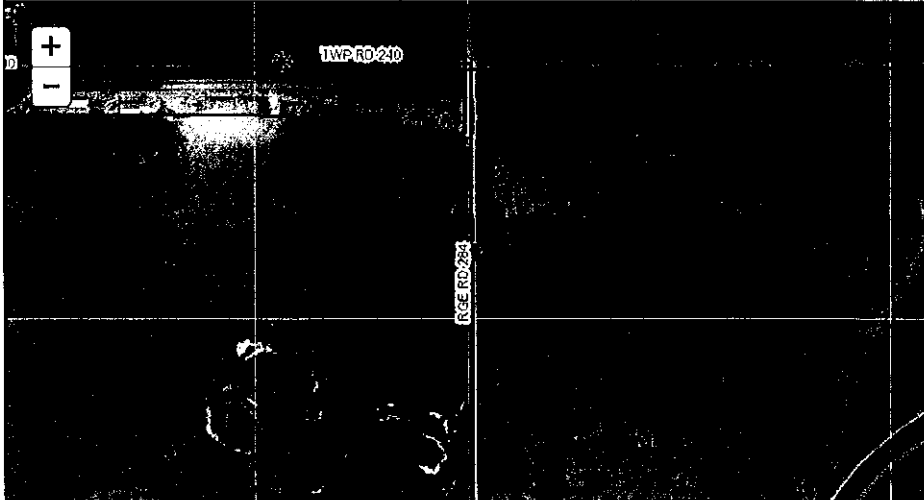
Date : 2018/07/30	Length of Count : 24 HR	Posted Speed : 80KM/H
Grand Total : 390	85 Percentile : 30 KM/H	Truck Percentage : 21 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary Axles Details Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	6	2	8
(2) PASSENGER CARS	103	89	192
(3) 2 AXLE 4 TIRES	68	41	109
(4) BUSES	0	1	1
(5) 2 AXLE 6 TIRES	28	22	50
(6) 3 AXLE SINGLE UNIT TRUCK	10	13	23
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	1	2
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	1	3	4
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	45	26	71
20-30	152	99	251
30-40	21	40	61
40-50	0	5	5
50-60	0	1	1
60-70	0	1	1
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	218	172	390

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240(CNDR 126.40) (Legal: NE-32-23-28-W4M)

Date : 2018/07/31	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 322	85 Percentile : 30 KM/H	Truck Percentage : 14 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	6	3	9
(2) PASSENGER CARS	91	70	161
(3) 2 AXLE 4 TIRES	61	43	104
(4) BUSES	2	1	3
(5) 2 AXLE 6 TIRES	20	19	39
(6) 3 AXLE SINGLE UNIT TRUCK	1	3	4
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	0	0
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	1	1
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	44	10	54
20-30	125	99	224
30-40	11	27	38
40-50	1	3	4
50-60	0	1	1
60-70	1	0	1
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	182	140	322

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240(CNDR 126.40) (Legal: NE-32-23-28-W4M)

Date : 2018/08/01	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 310	85 Percentile : 30 KM/H	Truck Percentage : 17 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	3	3	6
(2) PASSENGER CARS	77	76	153
(3) 2 AXLE 4 TIRES	54	36	90
(4) BUSES	3	6	9
(5) 2 AXLE 6 TIRES	17	19	36
(6) 3 AXLE SINGLE UNIT TRUCK	4	9	13
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	0	0
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	1	1	2
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	33	32	65
20-30	117	81	198
30-40	10	35	45
40-50	0	2	2
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	160	150	310

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240(CNDR 126.40) (Legal: NE-32-23-28-W4M)

Date : 2018/08/02	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 299	85 Percentile : 30 KM/H	Truck Percentage : 15 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	2	4	6
(2) PASSENGER CARS	67	91	158
(3) 2 AXLE 4 TIRES	51	39	90
(4) BUSES	1	0	1
(5) 2 AXLE 6 TIRES	24	16	40
(6) 3 AXLE SINGLE UNIT TRUCK	2	0	2
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	0	0
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	0	1
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	0	0
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	1	1

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	31	35	66
20-30	99	87	186
30-40	18	23	41
40-50	0	4	4
50-60	0	0	0
60-70	0	2	2
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	148	151	299

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

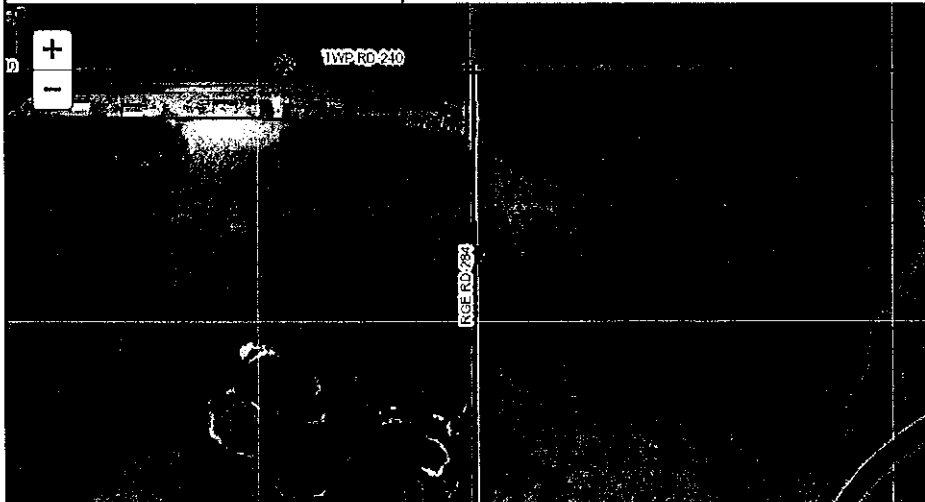
Date : 2018/11/16	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 201	85 Percentile : 28 KM/H	Truck Percentage : 20 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	0	2	2
(2) PASSENGER CARS	66	44	110
(3) 2 AXLE 4 TIRES	25	23	48
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	16	9	25
(6) 3 AXLE SINGLE UNIT TRUCK	6	4	10
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	1	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	1	1
(9) 5 AXLE SINGLE TRAILER TRUCK	0	1	1
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	1	1
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	2	2

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	43	16	59
20-30	68	56	124
30-40	1	14	15
40-50	0	2	2
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	1	0	1
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	113	68	201

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

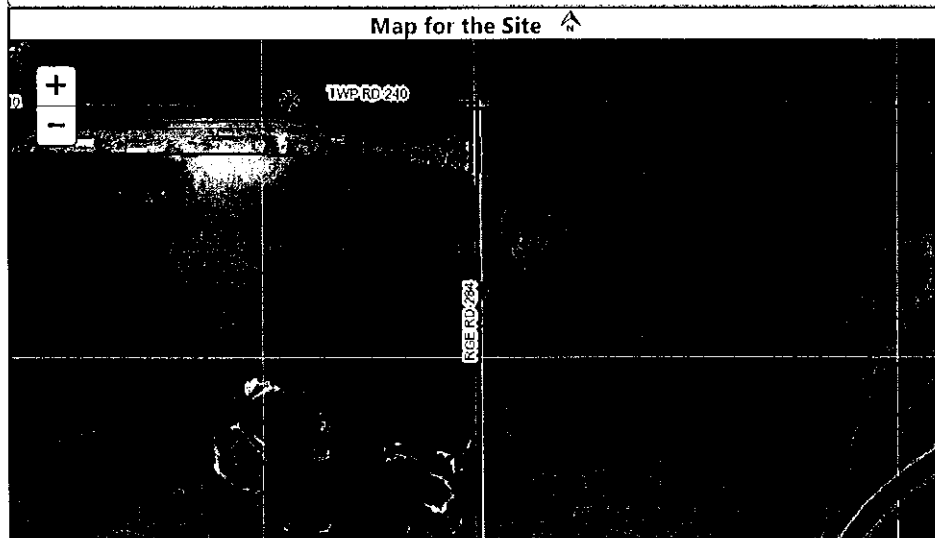
Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

Date : 2018/11/17	Length of Count : 24 HR	Posted Speed : 80KM/H
Grand Total : 164	85 Percentile : 28 KM/H	Truck Percentage : 21 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary Axles Details Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	0	0	0
(2) PASSENGER CARS	45	53	98
(3) 2 AXLE 4 TIRES	16	14	30
(4) BUSES	0	1	1
(5) 2 AXLE 6 TIRES	11	11	22
(6) 3 AXLE SINGLE UNIT TRUCK	2	6	8
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	1	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	1	1
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	0	0
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	3	3

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	22	24	46
20-30	51	54	105
30-40	1	10	11
40-50	0	2	2
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	74	90	164



Vehicle Type	
7	
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

Date : 2018/11/18	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 92	85 Percentile : 29 KM/H	Truck Percentage : 25 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

[Summary](#) |
 [Axles Details](#) |
 [Speed Details](#)

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	2	0	2
(2) PASSENGER CARS	19	31	50
(3) 2 AXLE 4 TIRES	11	6	17
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	13	2	15
(6) 3 AXLE SINGLE UNIT TRUCK	2	3	5
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	0	0
(9) 5 AXLE SINGLE TRAILER TRUCK	0	2	2
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	0	0
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	8	3	11
20-30	37	32	69
30-40	3	6	9
40-50	0	2	2
50-60	0	0	0
60-70	0	1	1
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	48	44	92

Map for the Site

Vehicle Type

7	
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: 5768.3

Search

TWP NO.

33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

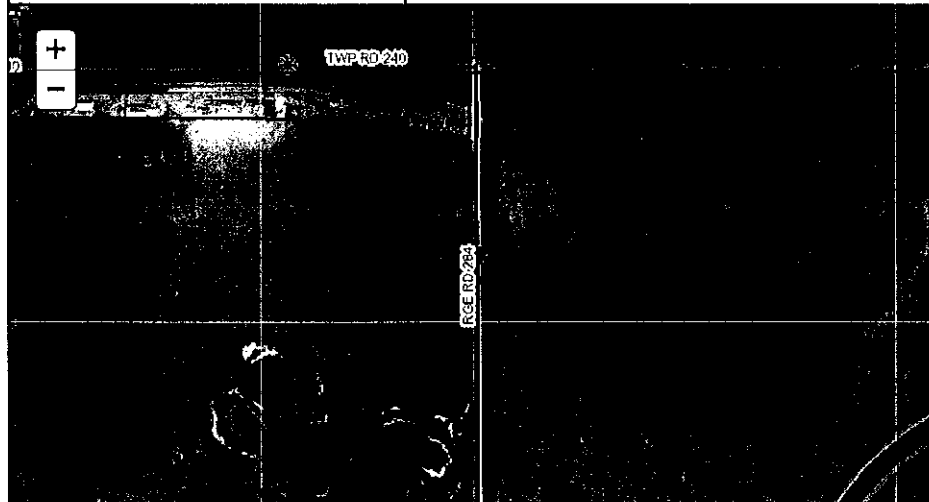
Date : 2018/11/19	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 249	85 Percentile : 28 KM/H	Truck Percentage : 18 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	5	1	6
(2) PASSENGER CARS	85	67	152
(3) 2 AXLE 4 TIRES	15	31	46
(4) BUSES	1	0	1
(5) 2 AXLE 6 TIRES	14	9	23
(6) 3 AXLE SINGLE UNIT TRUCK	3	3	6
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	3	2	5
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	4	4
(9) 5 AXLE SINGLE TRAILER TRUCK	0	4	4
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	0	0
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	2	2

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	49	13	62
20-30	77	94	171
30-40	0	15	15
40-50	0	1	1
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	126	123	249

Map for the Site



Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

Date : 2018/11/20	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 250	85 Percentile : 28 KM/H	Truck Percentage : 19 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	1	0	1
(2) PASSENGER CARS	72	66	138
(3) 2 AXLE 4 TIRES	24	40	64
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	19	10	29
(6) 3 AXLE SINGLE UNIT TRUCK	3	6	9
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	1	2
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	2	2
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	1	0	1
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	4	4

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	25	31	56
20-30	94	81	175
30-40	2	16	18
40-50	0	1	1
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	121	129	250

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

Date : 2018/11/21	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 286	85 Percentile : 28 KM/H	Truck Percentage : 24 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	5	4	9
(2) PASSENGER CARS	84	76	160
(3) 2 AXLE 4 TIRES	17	30	47
(4) BUSES	1	1	2
(5) 2 AXLE 6 TIRES	21	9	30
(6) 3 AXLE SINGLE UNIT TRUCK	17	6	23
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	3	3	6
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	3	3
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	1	1
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	2	3	5

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	58	32	90
20-30	87	84	171
30-40	5	20	25
40-50	0	0	0
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	150	136	286

Map for the Site

Vehicle Type

VEHICLE TYPES	7



Traffic Count Report

SITE ID: Search

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

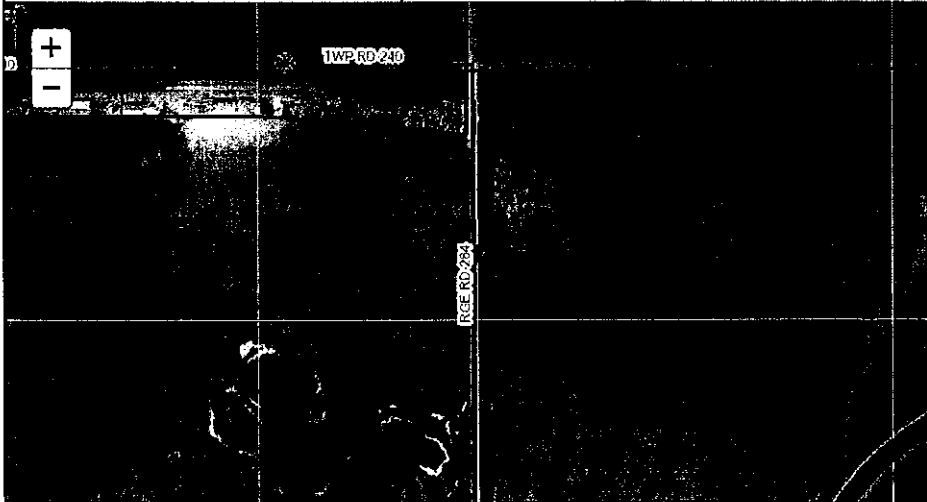
Date : 2018/11/22	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 296	85 Percentile : 27 KM/H	Truck Percentage : 26 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	1	5	6
(2) PASSENGER CARS	76	87	163
(3) 2 AXLE 4 TIRES	21	30	51
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	30	12	42
(6) 3 AXLE SINGLE UNIT TRUCK	5	9	14
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	4	4	8
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	2	3
(9) 5 AXLE SINGLE TRAILER TRUCK	0	1	1
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	1	1
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	2	5	7

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	56	54	110
20-30	78	87	165
30-40	5	12	17
40-50	0	2	2
50-60	1	1	2
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	140	156	296

Map for the Site



Vehicle Type

VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

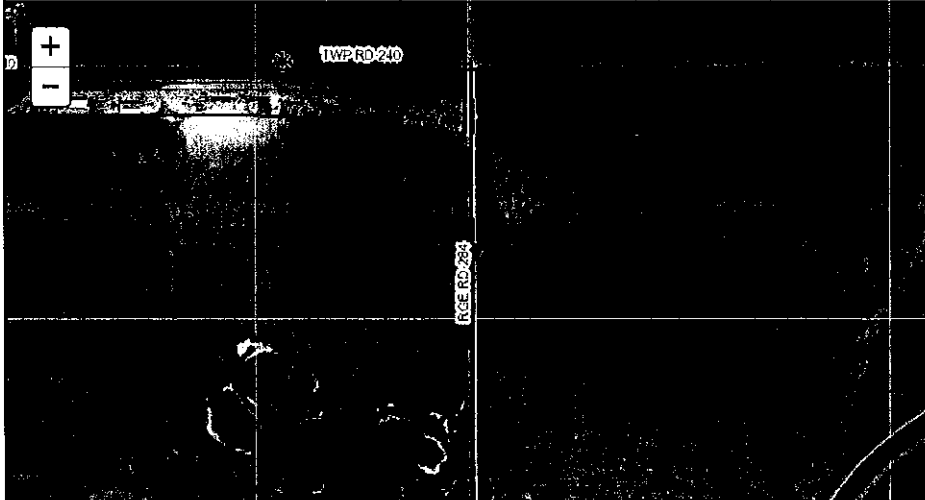
Date : 2019/01/08	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 96	85 Percentile : 23 KM/H	Truck Percentage : 24 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	1	0	1
(2) PASSENGER CARS	47	0	47
(3) 2 AXLE 4 TIRES	25	0	25
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	11	1	12
(6) 3 AXLE SINGLE UNIT TRUCK	6	1	7
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	3	0	3
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	0	1
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	0	0
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	57	0	57
20-30	36	2	38
30-40	1	0	1
40-50	0	0	0
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	94	2	96

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: 5772.1

Search

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

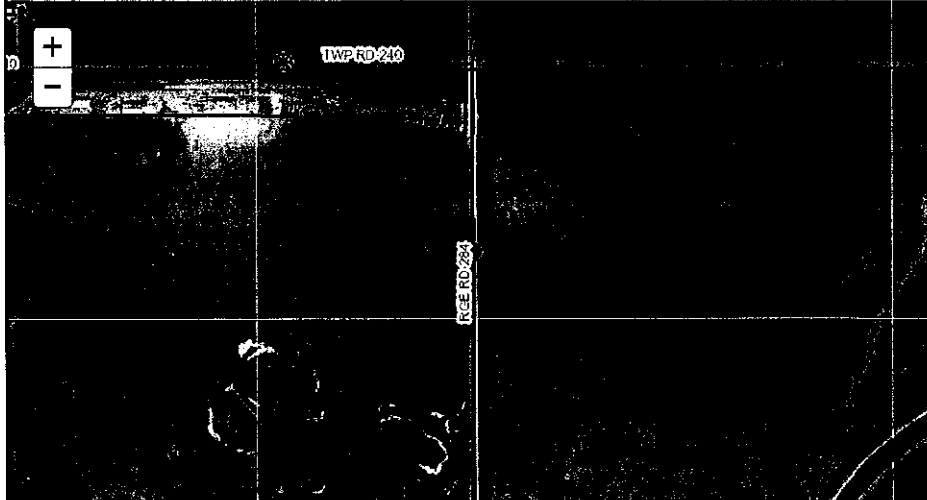
Date : 2019/03/09	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 164	85 Percentile : 25 KM/H	Truck Percentage : 19 %
Lane - A : Northbound	Lane - B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	4	0	4
(2) PASSENGER CARS	76	25	101
(3) 2 AXLE 4 TIRES	25	3	28
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	12	0	12
(6) 3 AXLE SINGLE UNIT TRUCK	11	1	12
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	3	0	3
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	3	0	3
(9) 5 AXLE SINGLE TRAILER TRUCK	1	0	1
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	0	0
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	71	14	85
20-30	62	10	72
30-40	2	4	6
40-50	0	1	1
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	135	29	164

Map for the Site



Vehicle Type

VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID: 5772.2

Search

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

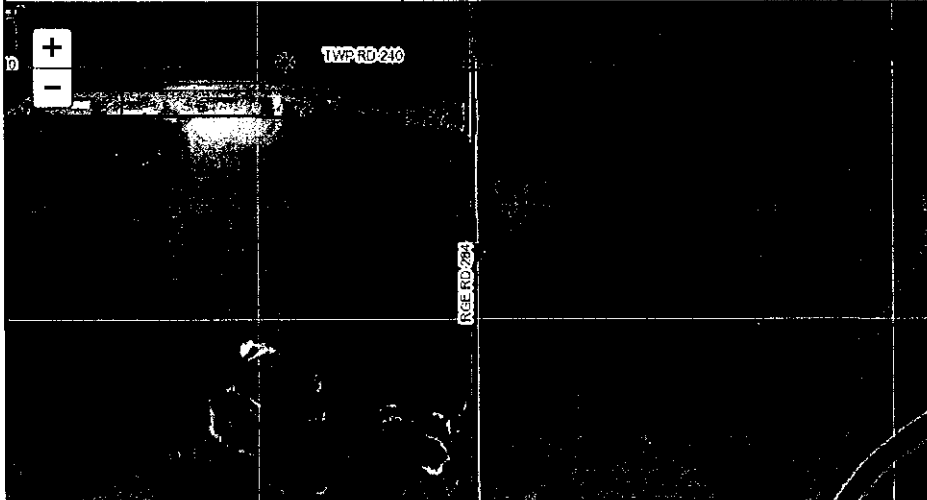
Date : 2019/01/10	Length of Count : 24 HR	Posted Speed : 80KM/H
Grand Total : 221	85 Percentile : 23 KM/H	Truck Percentage : 19 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	1	2	3
(2) PASSENGER CARS	82	66	148
(3) 2 AXLE 4 TIRES	26	0	26
(4) BUSES	0	1	1
(5) 2 AXLE 6 TIRES	11	3	14
(6) 3 AXLE SINGLE UNIT TRUCK	16	5	21
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	0	0
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	0	0
(9) 5 AXLE SINGLE TRAILER TRUCK	2	1	3
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	2	1	3
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	2	0	2

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	101	46	147
20-30	40	32	72
30-40	1	1	2
40-50	0	0	0
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	142	79	221

Map for the Site



Vehicle Type

VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

Date : 2019/01/11	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 191	85 Percentile : 23 KM/H	Truck Percentage : 20 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | **Axles Details** | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	4	2	6
(2) PASSENGER CARS	57	59	116
(3) 2 AXLE 4 TIRES	25	4	29
(4) BUSES	0	1	1
(5) 2 AXLE 6 TIRES	13	4	17
(6) 3 AXLE SINGLE UNIT TRUCK	9	4	13
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	2	3
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	2	0	2
(9) 5 AXLE SINGLE TRAILER TRUCK	1	0	1
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	2	0	2
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	1	1

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	70	60	130
20-30	42	16	58
30-40	2	1	3
40-50	0	0	0
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	114	77	191

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	



Traffic Count Report

SITE ID:

TWP NO.
33

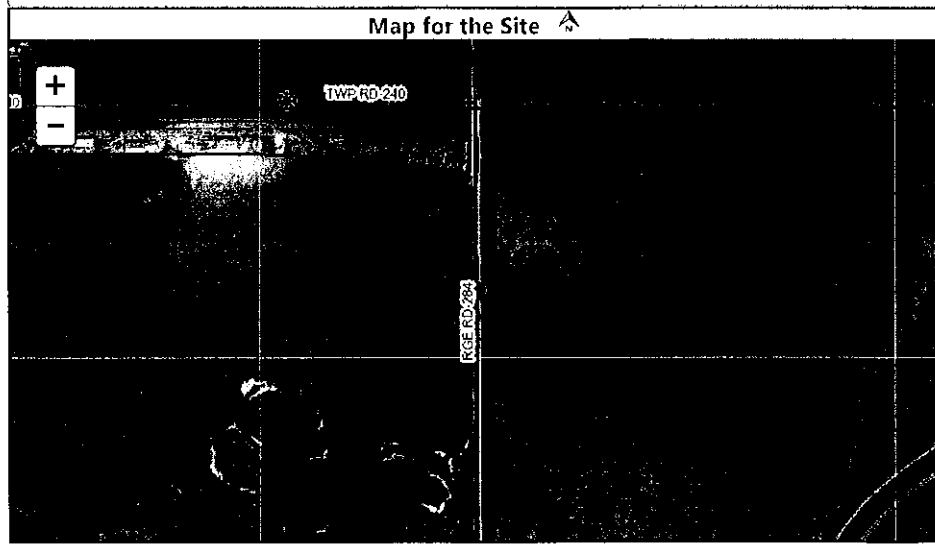
Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

Date : 2019/01/12	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 143	85 Percentile : 27 KM/H	Truck Percentage : 18 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary	Axles Details	Speed Details
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Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	3	0	3
(2) PASSENGER CARS	41	52	93
(3) 2 AXLE 4 TIRES	19	2	21
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	8	3	11
(6) 3 AXLE SINGLE UNIT TRUCK	4	6	10
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	0	1
(9) 5 AXLE SINGLE TRAILER TRUCK	1	0	1
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	1	1
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	1	1

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	42	24	66
20-30	33	29	62
30-40	3	12	15
40-50	0	0	0
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	78	65	143



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

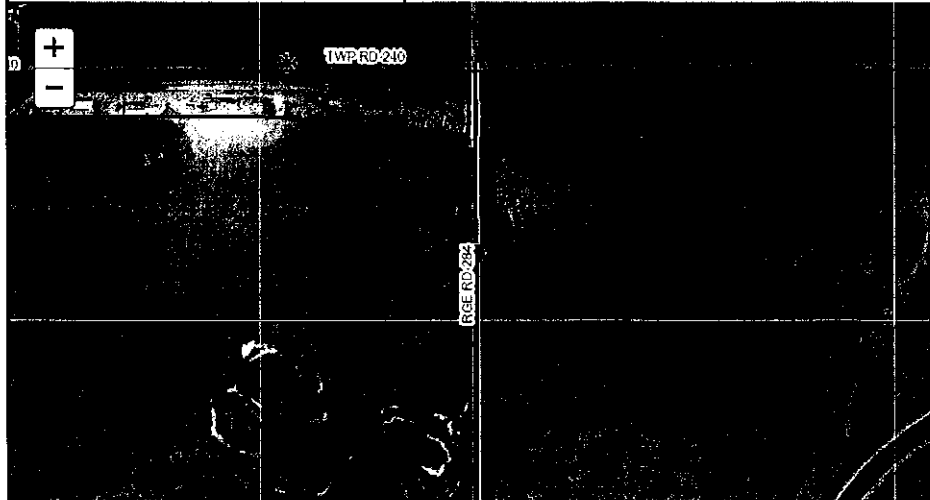
Date : 2019/01/13	Length of Count : 24 HR	Posted Speed : 80KM/H
Grand Total : 96	85 Percentile : 24 KM/H	Truck Percentage : 8 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	3	2	5
(2) PASSENGER CARS	34	43	77
(3) 2 AXLE 4 TIRES	5	1	6
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	4	0	4
(6) 3 AXLE SINGLE UNIT TRUCK	1	1	2
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	0	0
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	2	0	2
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	0	0
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	15	25	40
20-30	32	22	54
30-40	2	0	2
40-50	0	0	0
50-60	0	0	0
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	49	47	96

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

Date : 2019/01/14	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 292	85 Percentile : 23 KM/H	Truck Percentage : 16 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	4	4	8
(2) PASSENGER CARS	65	123	188
(3) 2 AXLE 4 TIRES	38	11	49
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	12	9	21
(6) 3 AXLE SINGLE UNIT TRUCK	17	4	21
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	0	0
(9) 5 AXLE SINGLE TRAILER TRUCK	3	0	3
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	0	0
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	1	0	1

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	73	62	135
20-30	66	82	148
30-40	2	6	8
40-50	0	0	0
50-60	0	1	1
60-70	0	0	0
70-80	0	0	0
80-90	0	0	0
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	141	151	292

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	



Traffic Count Report

SITE ID:

TWP NO.
33

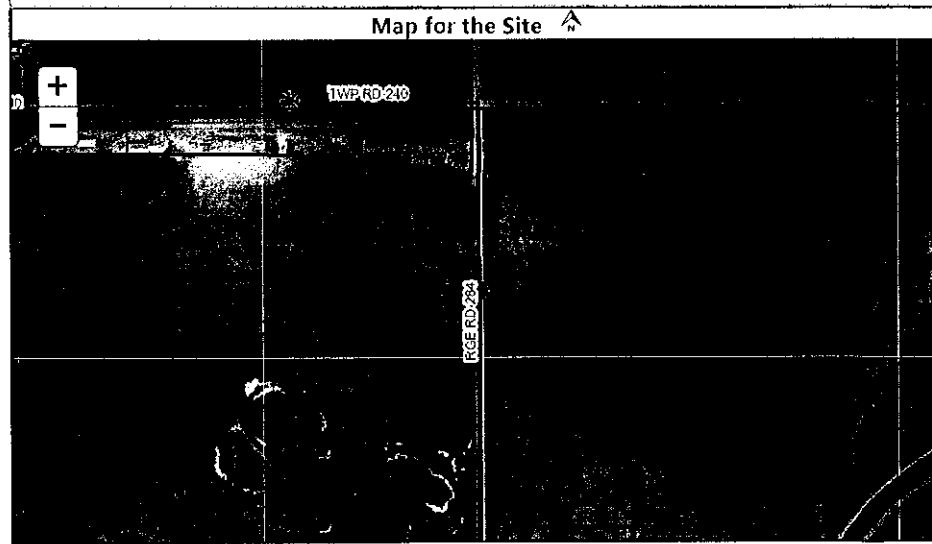
Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

Date : 2019/01/08	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 140	85 Percentile : 88 KM/H	Truck Percentage : 41 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	0	0	0
(2) PASSENGER CARS	20	25	45
(3) 2 AXLE 4 TIRES	11	23	34
(4) BUSES	0	3	3
(5) 2 AXLE 6 TIRES	4	16	20
(6) 3 AXLE SINGLE UNIT TRUCK	9	11	20
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	0	0
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	0	1
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	1	9	10
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	3	4	7

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	2	2
20-30	0	0	0
30-40	0	1	1
40-50	1	0	1
50-60	15	15	30
60-70	16	17	33
70-80	11	19	30
80-90	5	17	22
90-100	1	14	15
100-110	0	4	4
110-120	0	2	2
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	49	91	140



Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

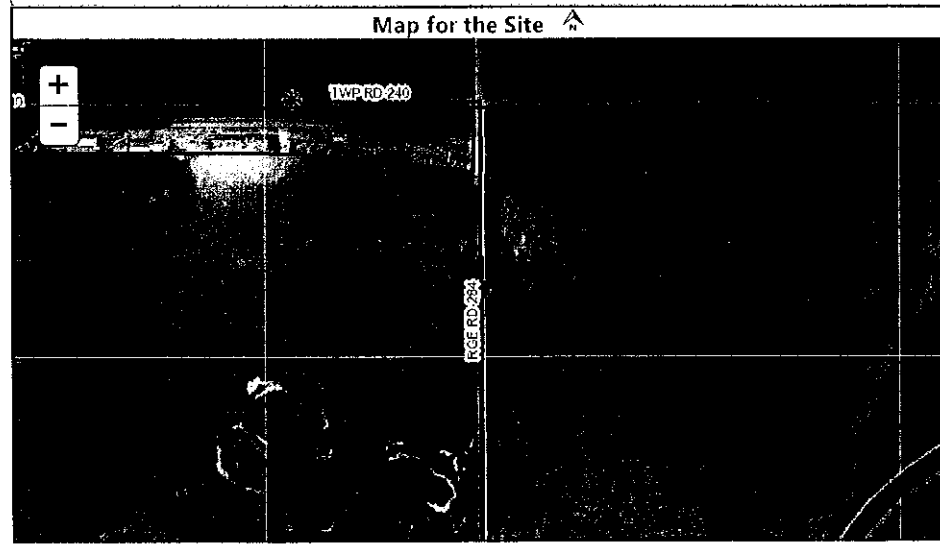
Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

Date : 2019/01/09	Length of Count : 24 HR	Posted Speed : 80KM/H
Grand Total : 149	85 Percentile : 88 KM/H	Truck Percentage : 38 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	0	0	0
(2) PASSENGER CARS	32	26	58
(3) 2 AXLE 4 TIRES	10	21	31
(4) BUSES	0	3	3
(5) 2 AXLE 6 TIRES	3	20	23
(6) 3 AXLE SINGLE UNIT TRUCK	6	15	21
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	2	1	3
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	0	1
(9) 5 AXLE SINGLE TRAILER TRUCK	1	0	1
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	1	3	4
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	2	2	4

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	0	0
20-30	0	1	1
30-40	0	3	3
40-50	2	2	4
50-60	11	5	16
60-70	21	10	31
70-80	21	27	48
80-90	3	23	26
90-100	0	15	15
100-110	0	2	2
110-120	0	2	2
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	1	1
160-200	0	0	0
Total	58	91	149



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: 5773.2 Search

TWP NO. **33**

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

Date : 2019/01/10	Length of Count : 24 HR	Posted Speed : 80KM/H
Grand Total : 215	85 Percentile : 84 KM/H	Truck Percentage : 38 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	0	0	0
(2) PASSENGER CARS	39	44	83
(3) 2 AXLE 4 TIRES	24	26	50
(4) BUSES	0	1	1
(5) 2 AXLE 6 TIRES	9	12	21
(6) 3 AXLE SINGLE UNIT TRUCK	20	13	33
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	2	2	4
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	2	3
(9) 5 AXLE SINGLE TRAILER TRUCK	0	1	1
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	6	6	12
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	5	2	7

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	0	0
20-30	0	0	0
30-40	1	1	2
40-50	1	3	4
50-60	11	9	20
60-70	44	23	67
70-80	37	34	71
80-90	11	22	33
90-100	0	13	13
100-110	1	2	3
110-120	0	1	1
120-130	0	1	1
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	106	109	215

Map for the Site

Vehicle Type

7	
VEHICLE TYPES	
1	
2	
3	
4	
5	
6	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

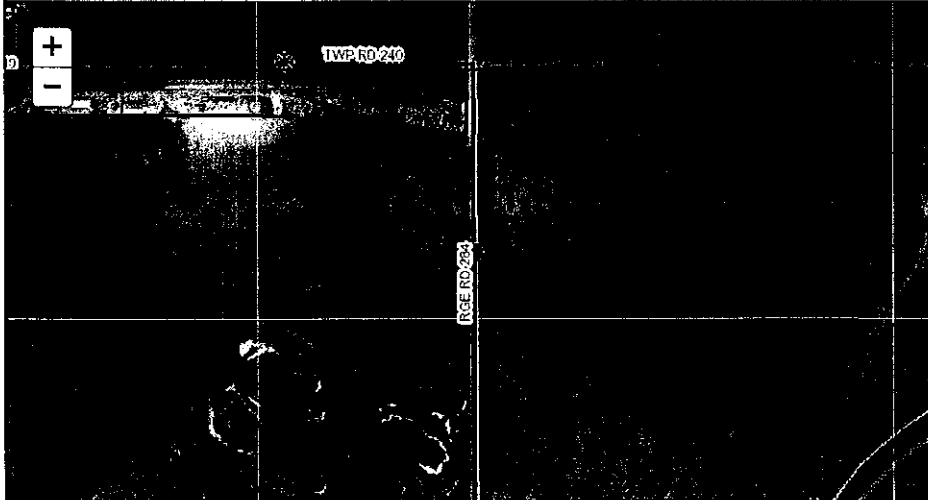
Date : 2019/01/11	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 231	85 Percentile : 81 KM/H	Truck Percentage : 31 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	1	0	1
(2) PASSENGER CARS	60	34	94
(3) 2 AXLE 4 TIRES	34	30	64
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	10	16	26
(6) 3 AXLE SINGLE UNIT TRUCK	12	13	25
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	2	3	5
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	0	0
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	5	7	12
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	1	3	4

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	1	0	1
20-30	0	1	1
30-40	1	1	2
40-50	2	3	5
50-60	16	12	28
60-70	45	26	71
70-80	39	36	75
80-90	12	13	25
90-100	8	9	17
100-110	1	4	5
110-120	0	1	1
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	125	106	231

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

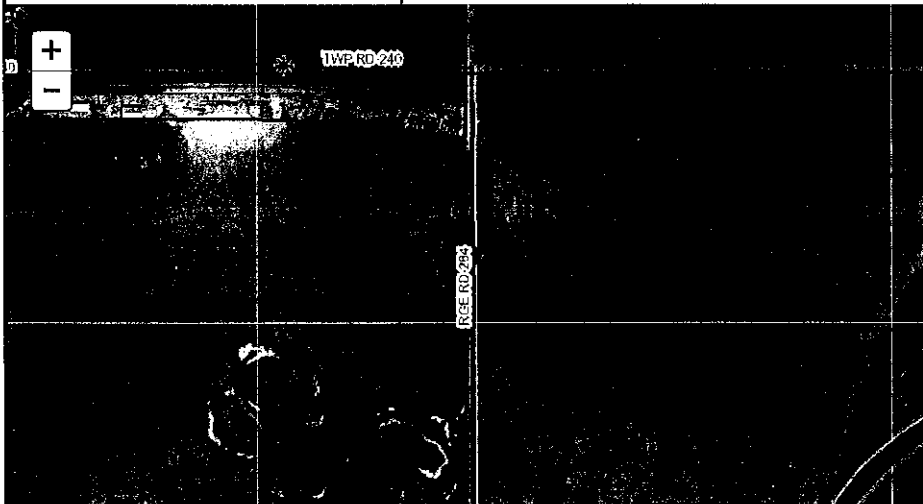
Date : 2019/01/12	Length of Count : 24 HR	Posted Speed : 80KM/H
Grand Total : 140	85 Percentile : 86 KM/H	Truck Percentage : 21 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	0	0	0
(2) PASSENGER CARS	35	38	73
(3) 2 AXLE 4 TIRES	23	15	38
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	3	5	8
(6) 3 AXLE SINGLE UNIT TRUCK	4	7	11
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	2	2	4
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	0	0
(9) 5 AXLE SINGLE TRAILER TRUCK	1	0	1
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	3	2	5
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	0	0
20-30	0	0	0
30-40	1	2	3
40-50	4	1	5
50-60	5	5	10
60-70	22	23	45
70-80	25	21	46
80-90	7	7	14
90-100	4	4	8
100-110	0	5	5
110-120	2	0	2
120-130	0	0	0
130-140	1	1	2
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	71	69	140

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

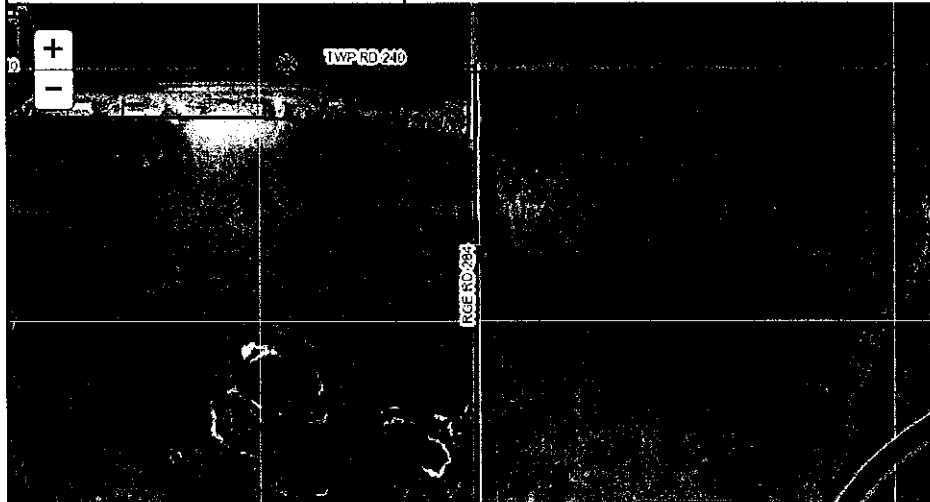
Date : 2019/01/13	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 93	85 Percentile : 84 KM/H	Truck Percentage : 13 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	0	0	0
(2) PASSENGER CARS	33	32	65
(3) 2 AXLE 4 TIRES	9	7	16
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	3	2	5
(6) 3 AXLE SINGLE UNIT TRUCK	2	3	5
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	1	1
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	0	0
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	0	0
20-30	0	0	0
30-40	0	0	0
40-50	3	0	3
50-60	8	2	10
60-70	15	10	25
70-80	14	16	30
80-90	7	11	18
90-100	1	6	7
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	48	45	93

Map for the Site



Vehicle Type

VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID: 5773.6 Search

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

Date : 2019/01/14	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 260	85 Percentile : 83 KM/H	Truck Percentage : 30 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	0	0	0
(2) PASSENGER CARS	50	52	102
(3) 2 AXLE 4 TIRES	41	40	81
(4) BUSES	0	0	0
(5) 2 AXLE 6 TIRES	8	11	19
(6) 3 AXLE SINGLE UNIT TRUCK	23	19	42
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	0	0
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	0	1
(9) 5 AXLE SINGLE TRAILER TRUCK	0	0	0
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	7	6	13
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	1	1	2

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	0	0
20-30	0	1	1
30-40	0	0	0
40-50	4	2	6
50-60	20	12	32
60-70	53	28	81
70-80	41	39	80
80-90	8	30	38
90-100	2	12	14
100-110	3	3	6
110-120	0	1	1
120-130	0	1	1
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	131	129	260

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: Search

TWP NO.
33

Location : RGE RD 284 SOUTH OF TWP RD 240 (Legal: NE-32-23-28-W4M)

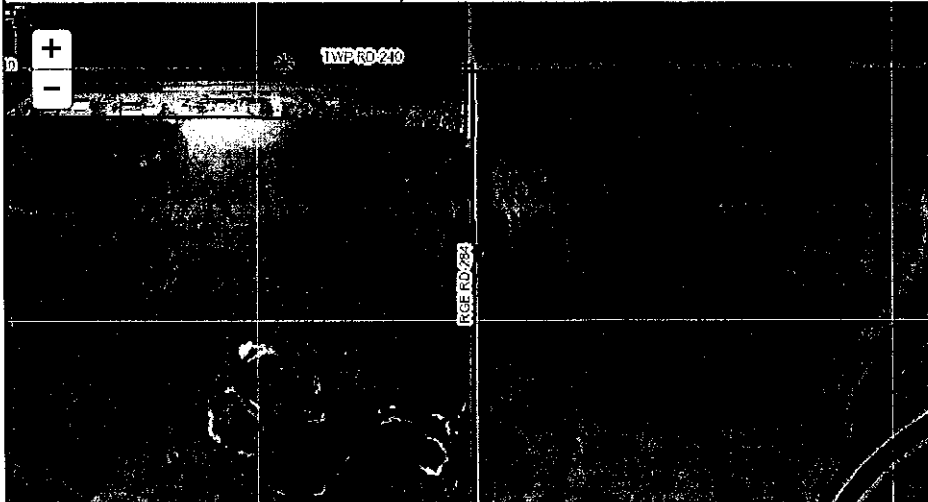
Date : 2019/07/09	Length of Count: 24 HR	Posted Speed : 80KM/H
Grand Total : 298	85 Percentile : 92 KM/H	Truck Percentage : 36 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	0	0	0
(2) PASSENGER CARS	61	31	92
(3) 2 AXLE 4 TIRES	51	36	87
(4) BUSES	1	11	12
(5) 2 AXLE 6 TIRES	4	48	52
(6) 3 AXLE SINGLE UNIT TRUCK	18	7	25
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	3	5	8
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	1	2
(9) 5 AXLE SINGLE TRAILER TRUCK	0	2	2
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	8	1	9
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	5	4	9

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	0	0
20-30	2	0	2
30-40	5	0	5
40-50	5	3	8
50-60	32	0	32
60-70	56	4	60
70-80	41	18	59
80-90	8	34	42
90-100	1	47	48
100-110	1	27	28
110-120	0	2	2
120-130	1	6	7
130-140	0	3	3
140-150	0	2	2
150-160	0	0	0
160-200	0	0	0
Total	152	146	298

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: Search

TWP NO.
33

Location : RGE RD 284 NORTH OF HWY 560 (Legal: SE-29-23-28-W4M)

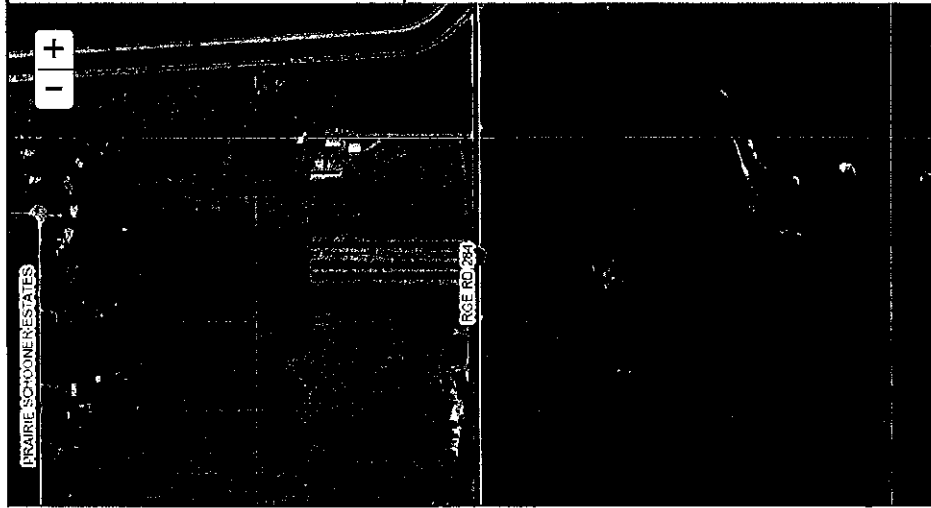
Date : 2019/07/09	Length of Count : 24 HR	Posted Speed : 80KM/H
Grand Total : 431	85 Percentile : 87 KM/H	Truck Percentage : 37 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	1	1	2
(2) PASSENGER CARS	68	55	123
(3) 2 AXLE 4 TIRES	76	56	132
(4) BUSES	2	11	13
(5) 2 AXLE 6 TIRES	19	39	58
(6) 3 AXLE SINGLE UNIT TRUCK	29	23	52
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	3	3	6
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	6	11	17
(9) 5 AXLE SINGLE TRAILER TRUCK	0	2	2
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	9	4	13
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	9	4	13

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	1	1
20-30	3	1	4
30-40	3	1	4
40-50	27	5	32
50-60	32	25	57
60-70	62	46	108
70-80	50	56	106
80-90	31	38	69
90-100	10	23	33
100-110	2	7	9
110-120	1	4	5
120-130	1	1	2
130-140	0	0	0
140-150	0	1	1
150-160	0	0	0
160-200	0	0	0
Total	222	209	431

Map for the Site



Vehicle Type	
VEHICLE TYPES	
7	
1	
2	
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5	
6	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 285 NORTH OF TWP RD 240 (Legal: SE-6-24-28-W4M)

Date : 2019/07/18	Length of Count : 24 HR	Posted Speed : 50KM/H
Grand Total : 2874	85 Percentile : 70 KM/H	Truck Percentage : 23 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	5	0	5
(2) PASSENGER CARS	885	507	1392
(3) 2 AXLE 4 TIRES	481	288	769
(4) BUSES	29	24	53
(5) 2 AXLE 6 TIRES	171	226	397
(6) 3 AXLE SINGLE UNIT TRUCK	57	44	101
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	6	9	15
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	18	19	37
(9) 5 AXLE SINGLE TRAILER TRUCK	19	12	31
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	20	27	47
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	15	12	27

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	0	0
20-30	0	2	2
30-40	20	10	30
40-50	228	102	330
50-60	767	361	1128
60-70	532	437	969
70-80	126	193	319
80-90	27	49	76
90-100	4	14	18
100-110	2	0	2
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	1706	1168	2874

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 285 SOUTH OF 61 AVE (Legal: SE-31-23-28-W4M)

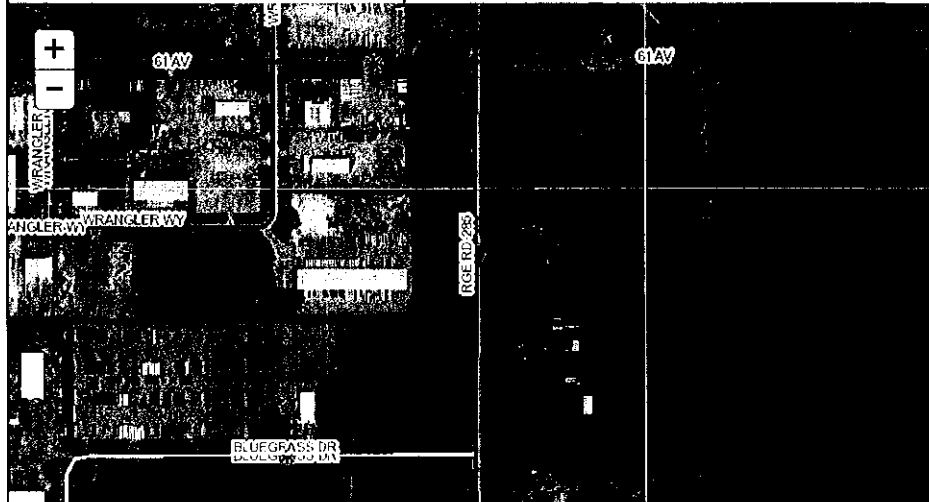
Date : 2019/07/12	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 3925	85 Percentile : 66 KM/H	Truck Percentage : 30 %
Lane A : Northbound	Lane B : Southbound	To History Page

Summary Axles Details Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	25	25	50
(2) PASSENGER CARS	754	786	1540
(3) 2 AXLE 4 TIRES	542	542	1084
(4) BUSES	42	37	79
(5) 2 AXLE 6 TIRES	170	193	363
(6) 3 AXLE SINGLE UNIT TRUCK	124	131	255
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	11	22	33
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	30	39	69
(9) 5 AXLE SINGLE TRAILER TRUCK	96	108	204
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	83	84	167
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	2	2
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	48	31	79

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	2	0	2
20-30	9	3	12
30-40	22	30	52
40-50	328	215	543
50-60	961	959	1920
60-70	459	584	1043
70-80	114	156	270
80-90	26	38	64
90-100	3	11	14
100-110	1	3	4
110-120	0	0	0
120-130	0	0	0
130-140	0	1	1
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	1925	2000	3925

Map for the Site



Vehicle Type	
VEHICLE TYPES	
7	
1	
2	
3	
4	
5	
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8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID: 5845.1 Search

TWP NO.
33

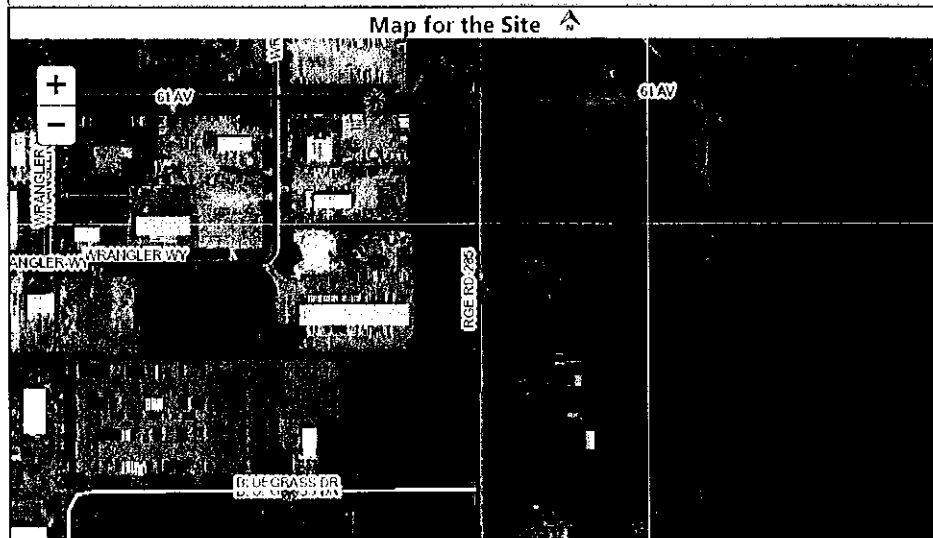
Location : RGE RD 285 SOUTH OF 61 AVE (Legal: SE-31-23-28-W4M)

Date : 2019/07/13	Length of Count : 24 HR	Posted Speed : 50KM/H
Grand Total : 1155	85 Percentile : 70 KM/H	Truck Percentage : 37 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	9	10	19
(2) PASSENGER CARS	217	232	449
(3) 2 AXLE 4 TIRES	126	125	251
(4) BUSES	5	8	13
(5) 2 AXLE 6 TIRES	47	41	88
(6) 3 AXLE SINGLE UNIT TRUCK	43	52	95
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	4	5
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	5	3	8
(9) 5 AXLE SINGLE TRAILER TRUCK	42	60	102
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	50	40	90
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	1	0	1
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	19	15	34

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	3	6	9
20-30	3	5	8
30-40	11	8	19
40-50	105	84	189
50-60	243	218	461
60-70	123	177	300
70-80	52	61	113
80-90	23	23	46
90-100	2	5	7
100-110	0	3	3
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	565	590	1155



Vehicle Type	
7	
8	
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11	
12	
13	



Traffic Count Report

SITE ID:

TWP NO.
33

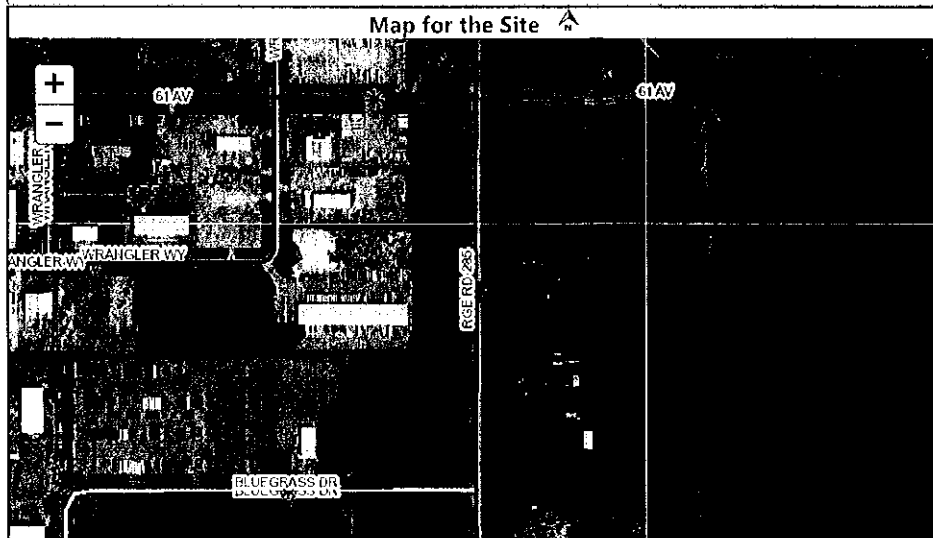
Location : RGE RD 285 SOUTH OF 61 AVE (Legal: SE-31-23-28-W4M)

Date : 2019/07/14	Length of Count : 24 HR	Posted Speed : 50KM/H
Grand Total : 688	85 Percentile : 71 KM/H	Truck Percentage : 44 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary	Axles Details	Speed Details
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Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	2	5	7
(2) PASSENGER CARS	125	117	242
(3) 2 AXLE 4 TIRES	69	62	131
(4) BUSES	0	2	2
(5) 2 AXLE 6 TIRES	25	26	51
(6) 3 AXLE SINGLE UNIT TRUCK	47	30	77
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	0	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	2	7	9
(9) 5 AXLE SINGLE TRAILER TRUCK	51	50	101
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	19	25	44
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	11	12	23

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	1	1
20-30	1	0	1
30-40	4	11	15
40-50	66	37	103
50-60	149	136	285
60-70	88	78	166
70-80	33	48	81
80-90	8	16	24
90-100	3	8	11
100-110	0	1	1
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	352	336	688



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 285 SOUTH OF 61 AVE (Legal: SE-31-23-28-W4M)

Date : 2019/07/15	Length of Count : 24 HR	Posted Speed : 50KM/H
Grand Total : 4215	85 Percentile : 66 KM/H	Truck Percentage : 31 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	13	15	28
(2) PASSENGER CARS	814	842	1656
(3) 2 AXLE 4 TIRES	551	530	1081
(4) BUSES	62	65	127
(5) 2 AXLE 6 TIRES	210	266	476
(6) 3 AXLE SINGLE UNIT TRUCK	174	138	312
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	7	9	16
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	37	38	75
(9) 5 AXLE SINGLE TRAILER TRUCK	102	101	203
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	67	96	163
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	2	2
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	45	31	76

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	1	1
20-30	2	2	4
30-40	25	17	42
40-50	391	263	654
50-60	1035	1054	2089
60-70	501	587	1088
70-80	112	162	274
80-90	11	35	46
90-100	5	7	12
100-110	0	5	5
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	2082	2133	4215

Map for the Site



Vehicle Type	
7	
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: 5743

Search

TWP NO.
33

Location : RGE RD 285 SOUTH OF TWP RD 240(CNDR 127.41) (Legal: NE-31-23-28-W4M)

Date : 2018/07/27	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 2282	85 Percentile : 40 KM/H	Truck Percentage : 16 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary

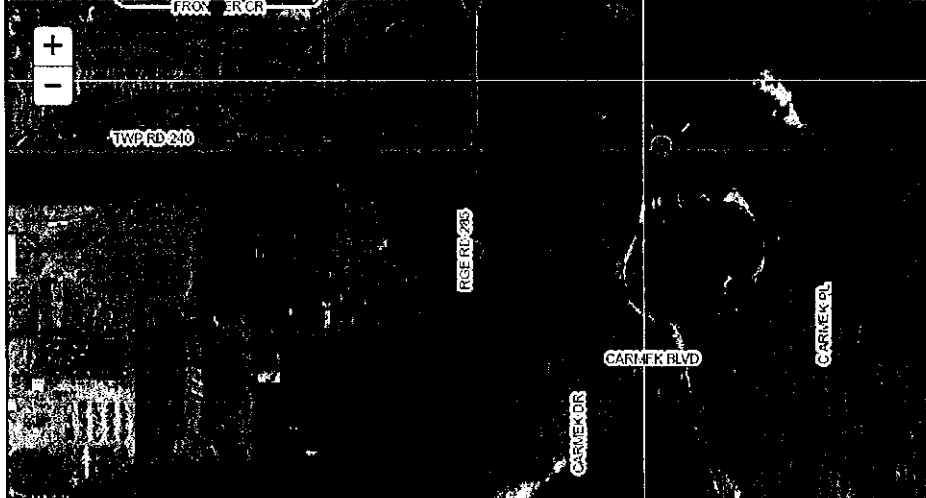
Axes Details

Speed Details

Axes	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	35	36	73
(2) PASSENGER CARS	771	468	1239
(3) 2 AXLE 4 TIRES	287	310	597
(4) BUSES	8	6	14
(5) 2 AXLE 6 TIRES	122	66	188
(6) 3 AXLE SINGLE UNIT TRUCK	62	81	143
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	2	3	5
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	2	9	11
(9) 5 AXLE SINGLE TRAILER TRUCK	1	4	5
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	1	3	4
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	3	3

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	139	21	160
20-30	510	168	678
30-40	498	588	1086
40-50	101	155	256
50-60	26	32	58
60-70	12	14	26
70-80	5	7	12
80-90	0	4	4
90-100	0	1	1
100-110	0	0	0
110-120	0	1	1
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	1291	991	2282

Map for the Site



Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 285 SOUTH OF TWP RD 240(CNDR 127.41) (Legal: NE-31-23-28-W4M)

Date : 2018/07/28	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 965	85 Percentile : 41 KM/H	Truck Percentage : 19 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	24	23	47
(2) PASSENGER CARS	319	207	526
(3) 2 AXLE 4 TIRES	98	106	204
(4) BUSES	1	1	2
(5) 2 AXLE 6 TIRES	62	29	91
(6)-3 AXLE SINGLE UNIT TRUCK	39	43	82
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	1	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	1	1
(9) 5 AXLE SINGLE TRAILER TRUCK	2	2	4
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	1	6	7
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	31	12	43
20-30	212	80	292
30-40	218	230	448
40-50	58	67	125
50-60	14	12	26
60-70	6	9	15
70-80	4	4	8
80-90	1	2	3
90-100	2	0	2
100-110	0	1	1
110-120	0	1	1
120-130	0	1	1
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	546	419	965

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: 5743.2 Search

TWP NO.
33

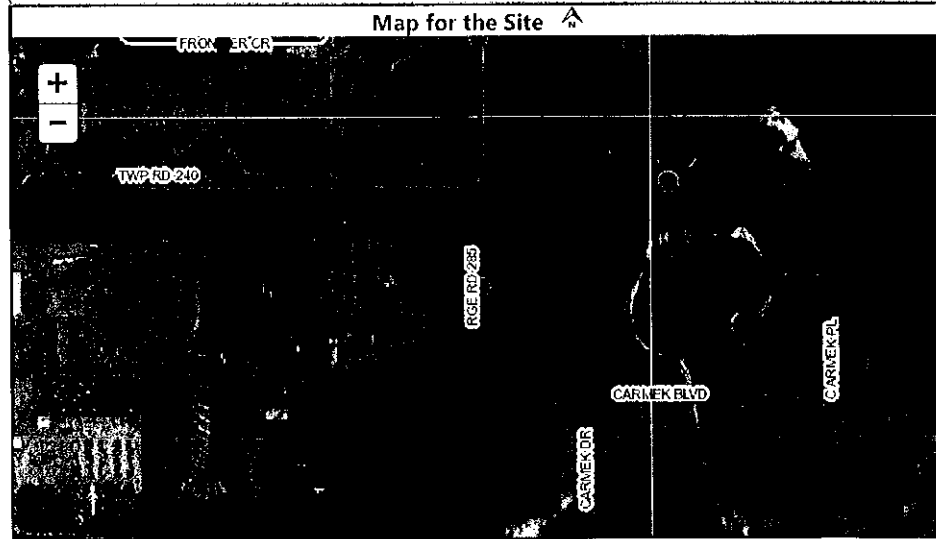
Location : RGE RD 285 SOUTH OF TWP RD 240(CNDR 127.41) (Legal: NE-31-23-28-W4M)

Date : 2018/07/29	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 561	85 Percentile : 45 KM/H	Truck Percentage : 14 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary Axles Details Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	8	9	17
(2) PASSENGER CARS	200	159	359
(3) 2 AXLE 4 TIRES	51	55	106
(4) BUSES	1	2	3
(5) 2 AXLE 6 TIRES	18	9	27
(6) 3 AXLE SINGLE UNIT TRUCK	21	25	46
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	0	0
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	0	0
(9) 5 AXLE SINGLE TRAILER TRUCK	1	1	2
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	1	1
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	10	9	19
20-30	102	44	146
30-40	124	125	249
40-50	45	53	98
50-60	8	13	21
60-70	8	9	17
70-80	1	5	6
80-90	1	3	4
90-100	1	0	1
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	300	261	561



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: 5743.3

Search

TWP NO.
33

Location : RGE RD 285 SOUTH OF TWP RD 240(CNDR 127.41) (Legal: NE-31-23-28-W4M)

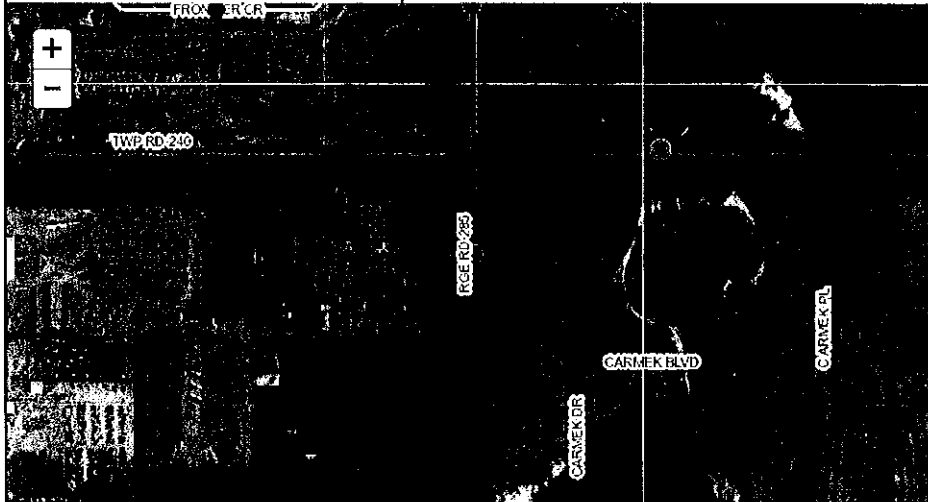
Date : 2018/07/30	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 2319	85 Percentile : 39 KM/H	Truck Percentage : 18 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	39	44	83
(2) PASSENGER CARS	720	469	1189
(3) 2 AXLE 4 TIRES	259	338	597
(4) BUSES	12	16	28
(5) 2 AXLE 6 TIRES	120	84	204
(6) 3 AXLE SINGLE UNIT TRUCK	94	83	177
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	4	4	8
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	4	5
(9) 5 AXLE SINGLE TRAILER TRUCK	1	7	8
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	2	14	16
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	1	3	4

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	162	17	179
20-30	544	192	736
30-40	442	609	1051
40-50	76	182	258
50-60	23	35	58
60-70	3	18	21
70-80	2	6	8
80-90	0	6	6
90-100	1	1	2
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	1253	1066	2319

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : RGE RD 285 SOUTH OF TWP RD 240(CNDR 127.41) (Legal: NE-31-23-28-W4M)

Date : 2018/07/31	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 2220	85 Percentile : 39 KM/H	Truck Percentage : 18 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary	Axles Details	Speed Details
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Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	31	37	68
(2) PASSENGER CARS	686	461	1147
(3) 2 AXLE 4 TIRES	281	311	592
(4) BUSES	10	9	19
(5) 2 AXLE 6 TIRES	154	77	231
(6) 3 AXLE SINGLE UNIT TRUCK	61	73	134
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	4	3	7
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	4	5
(9) 5 AXLE SINGLE TRAILER TRUCK	3	5	8
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	2	5	7
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	2	2

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	161	18	179
20-30	514	167	681
30-40	443	575	1018
40-50	67	167	234
50-60	34	36	70
60-70	12	12	24
70-80	1	11	12
80-90	1	1	2
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	1233	987	2220

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID: 5743.5 Search

TWP NO.
33

Location : RGE RD 285 SOUTH OF TWP RD 240(CNDR 127.41) (Legal: NE-31-23-28-W4M)

Date : 2018/08/01	Length of Count : 24 HR	Posted Speed : 50KM/H
Grand Total : 2201	85 Percentile : 37 KM/H	Truck Percentage : 20 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	28	35	63
(2) PASSENGER CARS	665	418	1083
(3) 2 AXLE 4 TIRES	304	304	608
(4) BUSES	5	10	15
(5) 2 AXLE 6 TIRES	162	77	239
(6) 3 AXLE SINGLE UNIT TRUCK	75	81	156
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	4	10	14
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	1	5	6
(9) 5 AXLE SINGLE TRAILER TRUCK	0	7	7
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	0	8	8
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	1	1	2

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	170	24	194
20-30	575	201	776
30-40	418	570	988
40-50	52	130	182
50-60	16	15	31
60-70	9	11	20
70-80	4	3	7
80-90	1	1	2
90-100	0	0	0
100-110	0	0	0
110-120	0	0	0
120-130	0	1	1
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	1245	956	2201

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: 5743.6 Search

TWP NO.
33

Location : RGE RD 285 SOUTH OF TWP RD 240(CNDR 127.41) (Legal: NE-31-23-28-W4M)

Date : 2018/08/02	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 2202	85 Percentile : 38 KM/H	Truck Percentage : 19 %
Lane-A : Northbound	Lane-B : Southbound	To History Page

Summary	Axles Details	Speed Details
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Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	31	29	60
(2) PASSENGER CARS	703	413	1116
(3) 2 AXLE 4 TIRES	289	295	584
(4) BUSES	7	15	22
(5) 2 AXLE 6 TIRES	147	79	226
(6) 3 AXLE SINGLE UNIT TRUCK	87	78	165
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	1	3	4
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	0	6	6
(9) 5 AXLE SINGLE TRAILER TRUCK	2	2	4
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	1	14	15
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	0	0	0

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	162	17	179
20-30	545	168	713
30-40	453	546	999
40-50	63	161	224
50-60	32	15	47
60-70	9	13	22
70-80	2	8	10
80-90	1	5	6
90-100	1	1	2
100-110	0	0	0
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	1268	934	2202

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: Search

TWP NO.
33

Location : FRONTIER RD EAST OF 84 ST SE (Legal: SW-6-24-28-W4M)

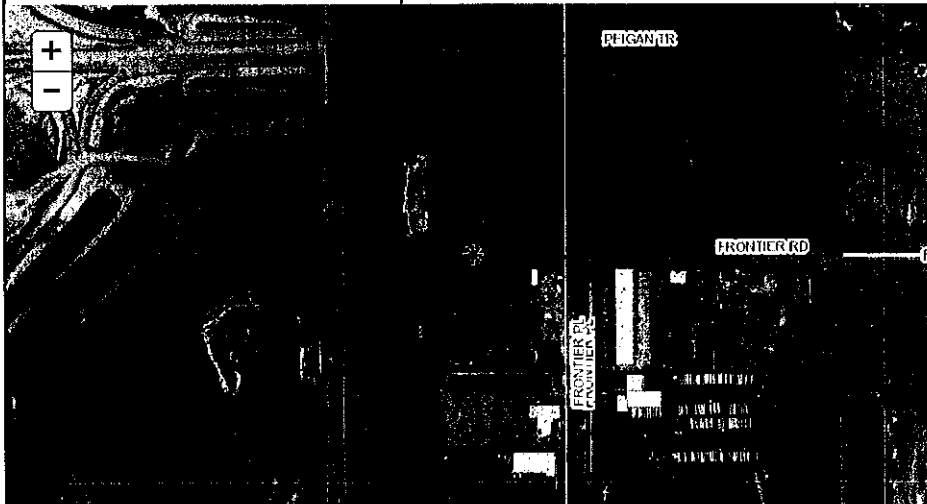
Date : 2019/07/18	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 3598	85 Percentile : 67 KM/H	Truck Percentage : 21 %
Lane-A : Eastbound	Lane-B : Westbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	7	8	15
(2) PASSENGER CARS	916	840	1756
(3) 2 AXLE 4 TIRES	544	508	1052
(4) BUSES	29	5	34
(5) 2 AXLE 6 TIRES	191	70	261
(6) 3 AXLE SINGLE UNIT TRUCK	127	139	266
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	8	3	11
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	37	23	60
(9) 5 AXLE SINGLE TRAILER TRUCK	19	20	39
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	46	40	86
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	12	6	18

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	2	1	3
20-30	8	8	16
30-40	36	97	133
40-50	195	551	746
50-60	640	706	1346
60-70	670	235	905
70-80	280	48	328
80-90	84	13	97
90-100	14	3	17
100-110	5	0	5
110-120	1	0	1
120-130	0	0	0
130-140	1	0	1
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	1936	1662	3598

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
	8
	9
	10
	11
	12
	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : 61 AVE EAST OF 84 ST SE (Legal: SW-31-23-28-W4M)

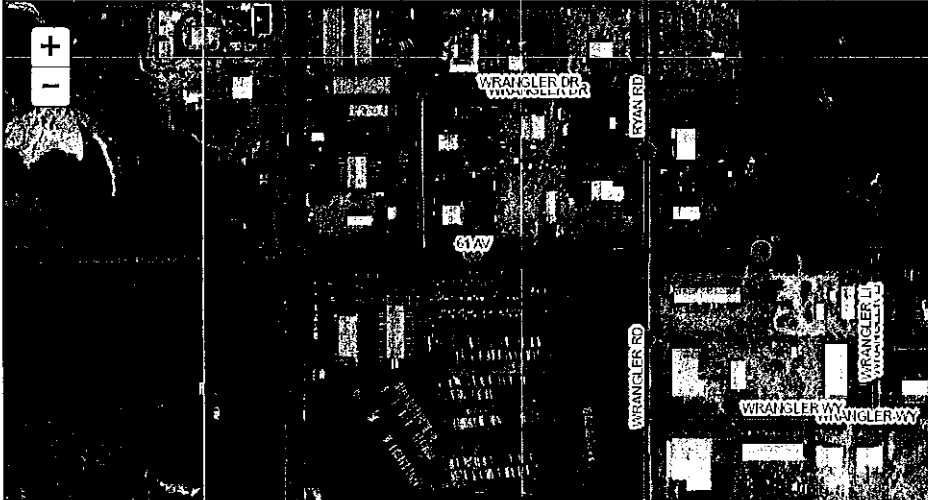
Date : 2019/07/12	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 6508	85 Percentile : 65 KM/H	Truck Percentage : 35 %
Lane-A : Eastbound	Lane-B : Westbound	To History Page

Summary Axles Details Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	44	79	123
(2) PASSENGER CARS	1508	1132	2640
(3) 2 AXLE 4 TIRES	601	586	1187
(4) BUSES	113	181	294
(5) 2 AXLE 6 TIRES	325	540	865
(6) 3 AXLE SINGLE UNIT TRUCK	329	437	766
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	17	11	28
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	45	42	87
(9) 5 AXLE SINGLE TRAILER TRUCK	132	181	313
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	69	58	127
(11) 5 /LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	1	0	1
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	37	40	77

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	1	3	4
20-30	12	39	51
30-40	182	157	339
40-50	618	737	1355
50-60	1381	1298	2679
60-70	825	793	1618
70-80	167	223	390
80-90	25	25	50
90-100	9	8	17
100-110	1	1	2
110-120	0	2	2
120-130	0	1	1
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	3221	3287	6508

Map for the Site



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID:

TWP NO.
33

Location : 61 AVE EAST OF 84 ST SE (Legal: SW-31-23-28-W4M)

Date : 2019/07/13	Length of Count : 24 HR	Posted Speed : 50KM/H
Grand Total : 2100	85 Percentile : 69 KM/H	Truck Percentage : 37 %
Lane-A : Eastbound	Lane-B : Westbound	To History Page

Summary Axles Details Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	12	22	34
(2) PASSENGER CARS	563	321	884
(3) 2 AXLE 4 TIRES	174	171	345
(4) BUSES	21	38	59
(5) 2 AXLE 6 TIRES	72	140	212
(6) 3 AXLE SINGLE UNIT TRUCK	143	217	360
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	6	4	10
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	7	13	20
(9) 5 AXLE SINGLE TRAILER TRUCK	40	55	95
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	23	26	49
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	12	20	32

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	3	3	6
20-30	11	9	20
30-40	78	57	135
40-50	167	223	390
50-60	395	333	728
60-70	301	247	548
70-80	85	118	203
80-90	23	31	54
90-100	6	4	10
100-110	4	2	6
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	1073	1027	2100

Map for the Site

Vehicle Type

VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	



Traffic Count Report

SITE ID: 5844.2

Search

TWP NO.
33

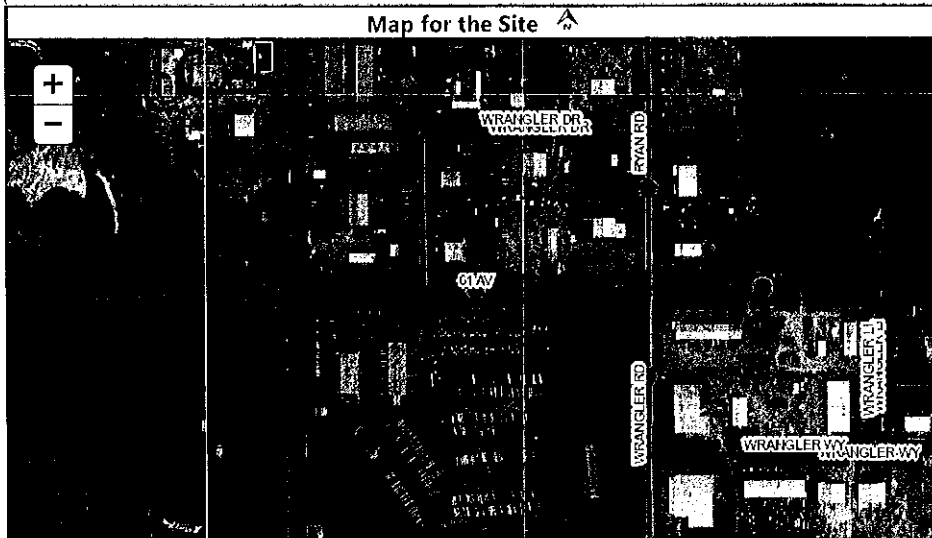
Location : 61 AVE EAST OF 84 ST SE (Legal: SW-31-23-28-W4M)

Date : 2019/07/14	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 1301	85 Percentile : 69 KM/H	Truck Percentage : 34 %
Lane-A : Eastbound	Lane-B : Westbound	To History Page

Summary	Axles Details	Speed Details
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Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	10	6	16
(2) PASSENGER CARS	378	241	619
(3) 2 AXLE 4 TIRES	82	122	204
(4) BUSES	4	13	17
(5) 2 AXLE 6 TIRES	34	64	98
(6) 3 AXLE SINGLE UNIT TRUCK	79	97	176
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	0	1	1
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	6	4	10
(9) 5 AXLE SINGLE TRAILER TRUCK	46	44	90
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	24	16	40
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	14	16	30

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	1	1	2
20-30	5	5	10
30-40	38	24	62
40-50	96	96	192
50-60	271	178	449
60-70	190	208	398
70-80	52	81	133
80-90	18	21	39
90-100	6	9	15
100-110	0	1	1
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	677	624	1301



Vehicle Type	
VEHICLE TYPES	7
1	8
2	9
3	10
4	11
5	12
6	13



Traffic Count Report

SITE ID: 5844.3

Search

TWP NO.
33

Location : 61 AVE EAST OF 84 ST SE (Legal: SW-31-23-28-W4M)

Date : 2019/07/15	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 6717	85 Percentile : 64 KM/H	Truck Percentage : 35 %
Lane-A : Eastbound	Lane-B : Westbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	42	58	100
(2) PASSENGER CARS	1422	1236	2658
(3) 2 AXLE 4 TIRES	629	591	1220
(4) BUSES	137	221	358
(5) 2 AXLE 6 TIRES	352	639	991
(6) 3 AXLE SINGLE UNIT TRUCK	306	436	742
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	11	15	26
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	49	54	103
(9) 5 AXLE SINGLE TRAILER TRUCK	165	164	329
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	83	42	125
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	1	0	1
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	29	35	64

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	0	6	6
20-30	8	24	32
30-40	191	231	422
40-50	668	832	1500
50-60	1406	1448	2854
60-70	773	718	1491
70-80	150	195	345
80-90	23	26	49
90-100	7	10	17
100-110	0	1	1
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	3226	3491	6717

Map for the Site



Vehicle Type

VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	



Traffic Count Report

SITE ID:

TWP NO.
33

Location : 61 AVE WEST OF RGE RD 285 (Legal: SE-31-23-28-W4M)

Date : 2019/07/09	Length of Count: 24 HR	Posted Speed : 50KM/H
Grand Total : 4268	85 Percentile : 62 KM/H	Truck Percentage : 32 %
Lane-A : Eastbound	Lane-B : Westbound	To History Page

Summary | Axles Details | Speed Details

Axles	Lane-A	Lane-B	Sum
(1) MOTORCYCLES	17	10	27
(2) PASSENGER CARS	819	825	1644
(3) 2 AXLE 4 TIRES	564	591	1155
(4) BUSES	26	53	79
(5) 2 AXLE 6 TIRES	160	232	392
(6) 3 AXLE SINGLE UNIT TRUCK	188	196	384
(7) 4 OR MORE AXLE SINGLE UNIT TRUCK	25	11	36
(8) 4 OR LESS AXLE SINGLE TRAILER TRUCK	21	33	54
(9) 5 AXLE SINGLE TRAILER TRUCK	119	123	242
(10) 6 OR MORE AXLE SINGLE TRAILER TRUCK	90	89	179
(11) 5 / LESS AXLE MULTI TRAILER TRUCK	0	0	0
(12) 6 AXLE MULTI TRAILER TRUCK	0	0	0
(13) 7 / MORE AXLE MULTI TRAILER TRUCK	39	37	76

Speed (Km/H)	Lane-A	Lane-B	Sum
0-10	0	0	0
10-20	3	2	5
20-30	38	8	46
30-40	221	64	285
40-50	740	432	1172
50-60	839	989	1828
60-70	189	507	696
70-80	31	167	198
80-90	5	26	31
90-100	2	4	6
100-110	0	1	1
110-120	0	0	0
120-130	0	0	0
130-140	0	0	0
140-150	0	0	0
150-160	0	0	0
160-200	0	0	0
Total	2068	2200	4268

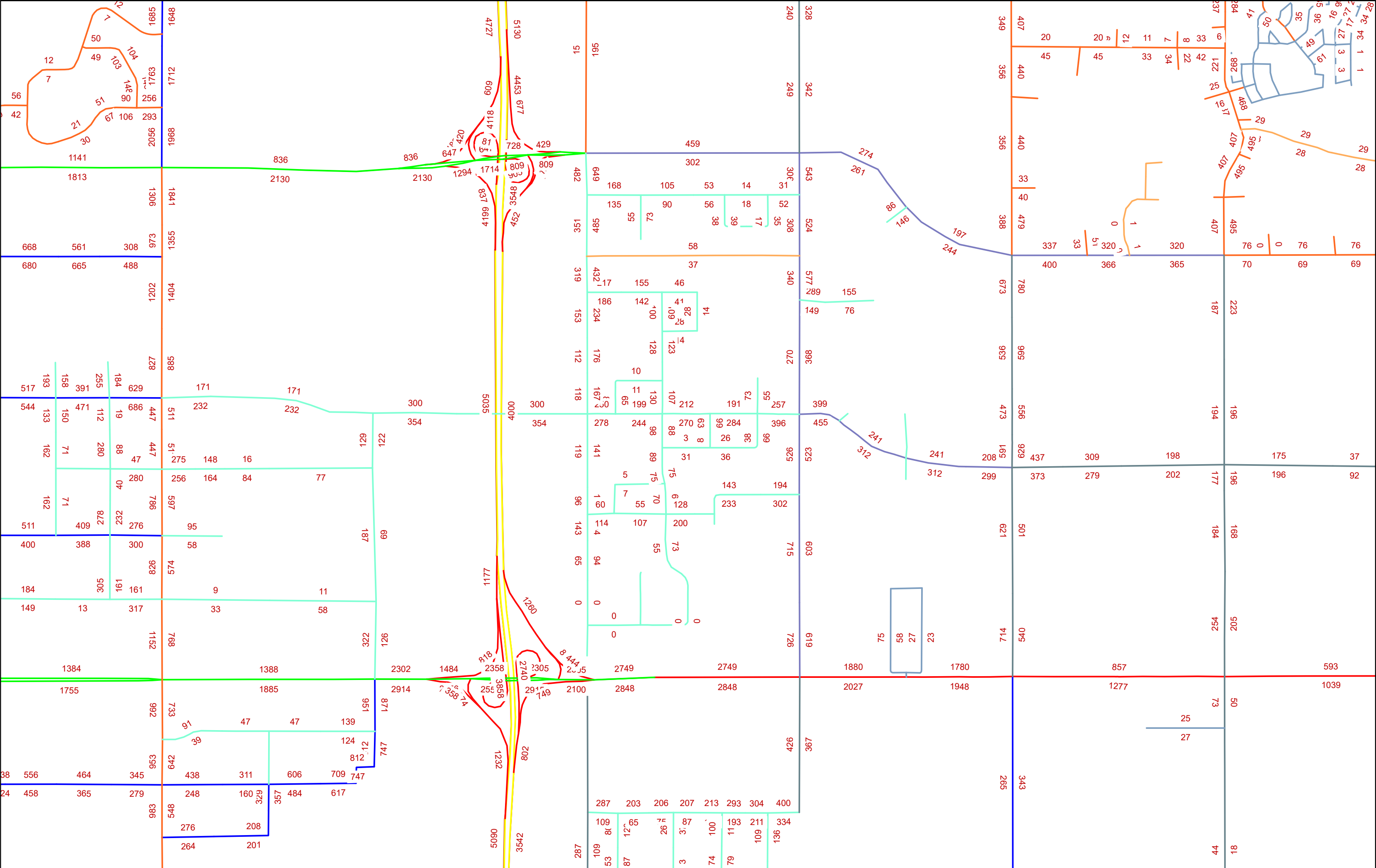
Map for the Site

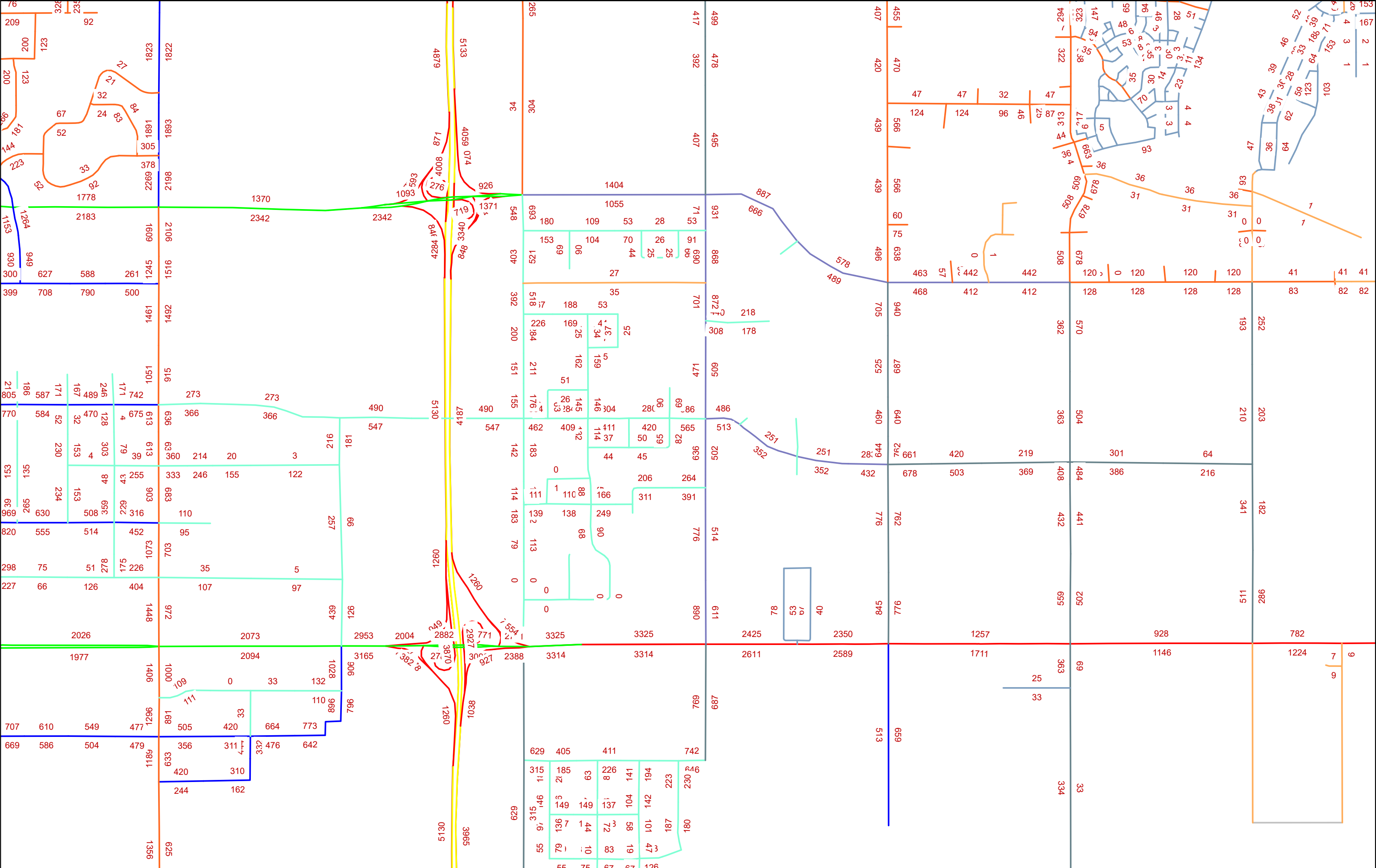
Vehicle Type

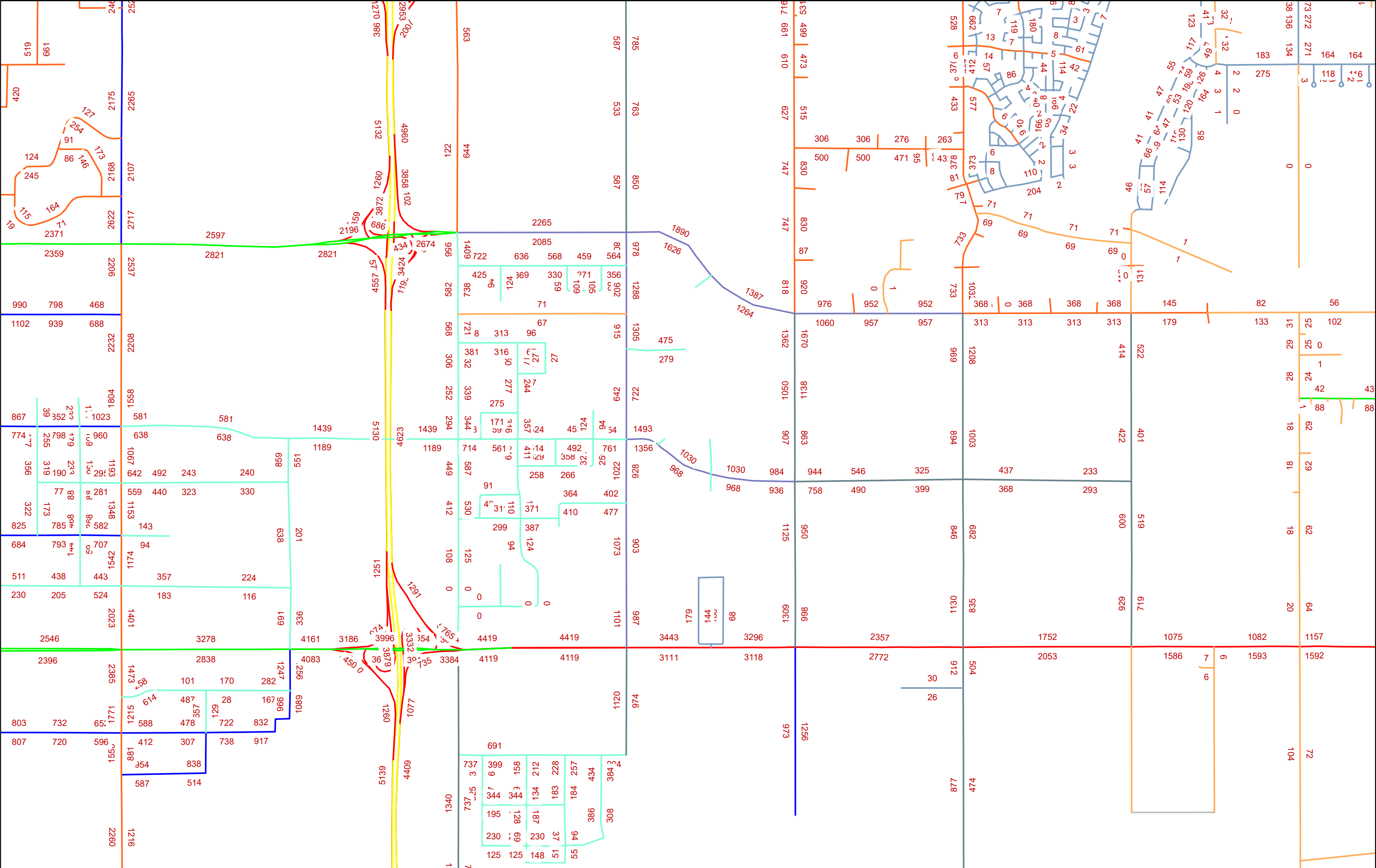
VEHICLE TYPES	7
1	
2	
3	
4	
5	
6	



APPENDIX B: VISUM MODEL RESULTS









APPENDIX C: CAPACITY ANALYSIS RESULTS

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

Existing
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Traffic Volume (vph)	417	186	2	22	115	0	2	384	16	0	383	392
Future Volume (vph)	417	186	2	22	115	0	2	384	16	0	383	392
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Fr								0.994			0.924	
Flt Protected		0.967			0.992		0.950					
Satd. Flow (prot)	0	3422	0	0	3511	0	1770	3518	0	1863	3270	0
Flt Permitted		0.717			0.842		0.273					
Satd. Flow (perm)	0	2538	0	0	2980	0	509	3518	0	1863	3270	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1						11				426
Link Speed (k/h)		50			50			50				50
Link Distance (m)		178.3			246.0			115.3				144.5
Travel Time (s)		12.8			17.7			8.3				10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	453	202	2	24	125	0	2	417	17	0	416	426
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	657	0	0	149	0	2	434	0	0	842	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6				3.6
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

Existing
12-01-2020

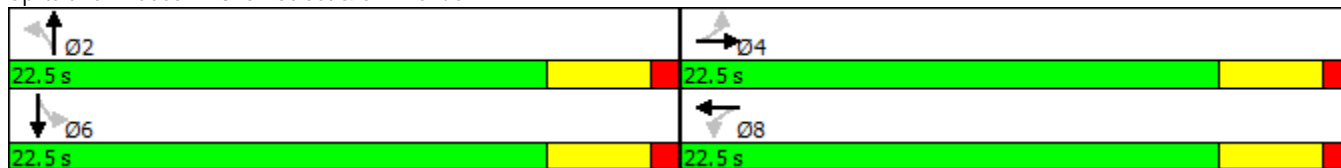


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		15.0			15.0		18.1	18.1			18.1	
Actuated g/C Ratio		0.36			0.36		0.43	0.43			0.43	
v/c Ratio		1.04dl			0.14		0.01	0.29			0.51	
Control Delay		17.0			9.2		8.5	8.9			5.8	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		17.0			9.2		8.5	8.9			5.8	
LOS		B			A		A	A			A	
Approach Delay		17.0			9.2			8.9			5.8	
Approach LOS		B			A			A			A	
Queue Length 50th (m)		21.7			3.8		0.1	10.6			10.4	
Queue Length 95th (m)		36.1			8.1		1.0	19.8			22.5	
Internal Link Dist (m)		154.3			222.0			91.3			120.5	
Turn Bay Length (m)												
Base Capacity (vph)		1090			1280		218	1516			1647	
Starvation Cap Reductn		0			0		0	0			0	
Spillback Cap Reductn		0			0		0	0			0	
Storage Cap Reductn		0			0		0	0			0	
Reduced v/c Ratio		0.60			0.12		0.01	0.29			0.51	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	42.1
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	10.2
Intersection LOS:	B
Intersection Capacity Utilization:	60.5%
ICU Level of Service:	B
Analysis Period (min):	15
dl	Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3: 52 Street & 61 Avenue



Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

Existing
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔	↗		↔↔		↗↗	↗		↗	↗	
Traffic Volume (vph)	149	33	410	0	39	0	460	9	0	0	0	7
Future Volume (vph)	149	33	410	0	39	0	460	9	0	0	0	7
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	100.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.850	
Flt Protected		0.961					0.950					
Satd. Flow (prot)	0	3401	1583	0	3539	0	3433	1863	0	1863	1583	0
Flt Permitted		0.754					0.752					
Satd. Flow (perm)	0	2669	1583	0	3539	0	2718	1863	0	1863	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			446								955	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		155.4			145.0			144.7			110.1	
Travel Time (s)		11.2			10.4			10.4			7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	162	36	446	0	42	0	500	10	0	0	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	198	446	0	42	0	500	10	0	0	8	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			7.2			7.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm		NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2			6		

Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

Existing
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effect Green (s)		9.0	9.0		9.0		18.1	18.1			18.1	
Actuated g/C Ratio		0.25	0.25		0.25		0.50	0.50			0.50	
v/c Ratio		0.30	0.61		0.05		0.37	0.01			0.01	
Control Delay		11.9	5.6		9.7		7.3	6.1			0.0	
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	
Total Delay		11.9	5.6		9.7		7.3	6.1			0.0	
LOS		B	A		A		A	A			A	
Approach Delay		7.5			9.7			7.3				
Approach LOS		A			A			A				
Queue Length 50th (m)		5.2	0.0		1.0		7.7	0.4			0.0	
Queue Length 95th (m)		10.5	13.4		3.2		22.0	2.2			0.0	
Internal Link Dist (m)		131.4			121.0			120.7			86.1	
Turn Bay Length (m)							100.0					
Base Capacity (vph)		1337	1015		1773		1362	933			1269	
Starvation Cap Reductn		0	0		0		0	0			0	
Spillback Cap Reductn		0	0		0		0	0			0	
Storage Cap Reductn		0	0		0		0	0			0	
Reduced v/c Ratio		0.15	0.44		0.02		0.37	0.01			0.01	

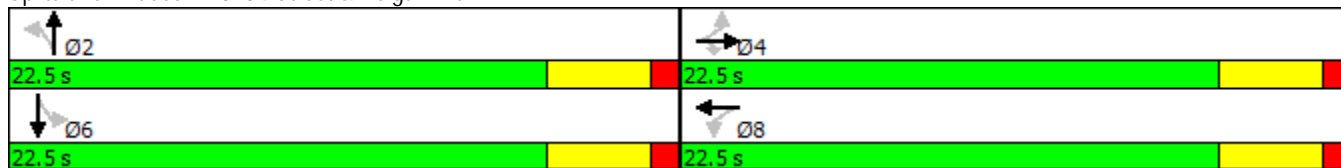
Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	36.2
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.61
Intersection Signal Delay:	7.4
Intersection LOS:	A
Intersection Capacity Utilization:	45.0%
ICU Level of Service:	A
Analysis Period (min):	15

Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

Existing
12-01-2020

Splits and Phases: 8: 84 Street & Peigan Trail



Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

Existing
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	37	122	43	2	78	85	47	41	1	74	32	12
Future Volume (vph)	37	122	43	2	78	85	47	41	1	74	32	12
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	60.0		0.0	0.0		100.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.922				0.850		0.986	
Flt Protected		0.991		0.950				0.974			0.970	
Satd. Flow (prot)	0	1792	0	1770	1717	0	0	1814	1583	0	1782	0
Flt Permitted		0.899		0.662				0.846			0.814	
Satd. Flow (perm)	0	1626	0	1233	1717	0	0	1576	1583	0	1495	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			92				36			13
Link Speed (k/h)		50			50			50				50
Link Distance (m)		90.4			116.8			200.2				92.7
Travel Time (s)		6.5			8.4			14.4				6.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	40	133	47	2	85	92	51	45	1	80	35	13
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	220	0	2	177	0	0	96	1	0	128	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0		10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0		0.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		

Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

Existing
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.5		4.5	4.5			4.5	4.5		4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effect Green (s)		9.3		9.3	9.3			22.0	22.0		22.0	
Actuated g/C Ratio		0.25		0.25	0.25			0.59	0.59		0.59	
v/c Ratio		0.51		0.01	0.36			0.10	0.00		0.14	
Control Delay		13.8		9.5	8.0			6.3	0.0		6.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		13.8		9.5	8.0			6.3	0.0		6.1	
LOS		B		A	A			A	A		A	
Approach Delay		13.8			8.0			6.2			6.1	
Approach LOS		B			A			A			A	
Queue Length 50th (m)		9.7		0.1	4.2			2.8	0.0		3.4	
Queue Length 95th (m)		22.3		1.0	13.9			9.6	0.0		11.7	
Internal Link Dist (m)		66.4			92.8			176.2			68.7	
Turn Bay Length (m)				60.0					100.0			
Base Capacity (vph)		804		595	877			925	944		883	
Starvation Cap Reductn		0		0	0			0	0		0	
Spillback Cap Reductn		0		0	0			0	0		0	
Storage Cap Reductn		0		0	0			0	0		0	
Reduced v/c Ratio		0.27		0.00	0.20			0.10	0.00		0.14	

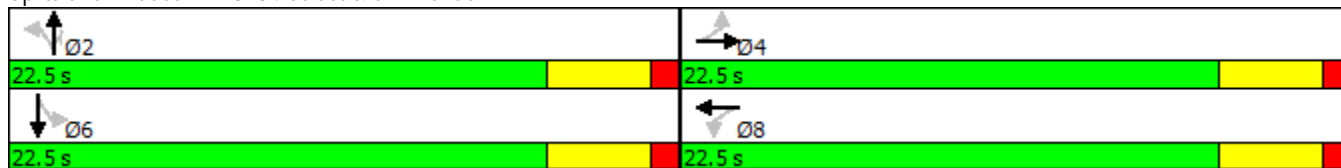
Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	37.4
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.51
Intersection Signal Delay:	9.4
Intersection LOS:	A
Intersection Capacity Utilization:	44.8%
ICU Level of Service:	A
Analysis Period (min):	15

Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

Existing
12-01-2020

Splits and Phases: 13: 84 Street & 61 Avenue



Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

Existing
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	868	123	12	529	13	176	1	21	37	7	283
Future Volume (vph)	128	868	123	12	529	13	176	1	21	37	7	283
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		125.0	125.0		0.0	0.0		60.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.996				0.850		0.883	
Flt Protected	0.950			0.950			0.950				0.994	
Satd. Flow (prot)	1770	1863	1583	1770	1855	0	1770	1863	1583	0	1635	0
Flt Permitted	0.305			0.087			0.426				0.971	
Satd. Flow (perm)	568	1863	1583	162	1855	0	794	1863	1583	0	1597	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			134		2				23		296	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		183.8			169.8			154.4			195.2	
Travel Time (s)		13.2			12.2			11.1			14.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	139	943	134	13	575	14	191	1	23	40	8	308
Shared Lane Traffic (%)												
Lane Group Flow (vph)	139	943	134	13	589	0	191	1	23	0	356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		

Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

Existing
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	56.0	56.0	56.0	56.0	56.0		34.0	34.0	34.0	34.0	34.0	
Total Split (%)	62.2%	62.2%	62.2%	62.2%	62.2%		37.8%	37.8%	37.8%	37.8%	37.8%	
Maximum Green (s)	51.5	51.5	51.5	51.5	51.5		29.5	29.5	29.5	29.5	29.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	
Act Effect Green (s)	46.2	46.2	46.2	46.2	46.2		29.7	29.7	29.7		29.7	
Actuated g/C Ratio	0.54	0.54	0.54	0.54	0.54		0.35	0.35	0.35		0.35	
v/c Ratio	0.45	0.93	0.15	0.15	0.58		0.69	0.00	0.04		0.47	
Control Delay	16.9	34.7	2.1	13.8	15.4		41.1	20.0	8.9		7.4	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	16.9	34.7	2.1	13.8	15.4		41.1	20.0	8.9		7.4	
LOS	B	C	A	B	B		D	B	A		A	
Approach Delay		29.1			15.4			37.6			7.4	
Approach LOS		C			B			D			A	
Queue Length 50th (m)	13.3	138.0	0.0	1.0	62.2		30.5	0.1	0.0		7.6	
Queue Length 95th (m)	29.2	#230.6	7.3	4.7	92.1		#65.7	1.2	5.4		29.6	
Internal Link Dist (m)		159.8			145.8			130.4			171.2	
Turn Bay Length (m)	125.0		125.0	125.0					60.0			
Base Capacity (vph)	347	1138	1019	98	1133		277	651	568		751	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.40	0.83	0.13	0.13	0.52		0.69	0.00	0.04		0.47	

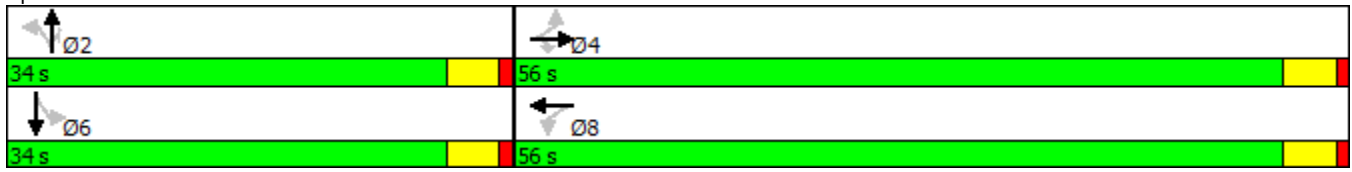
Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 85
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 23.1
 Intersection LOS: C
 Intersection Capacity Utilization 94.5%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

Existing
12-01-2020

Splits and Phases: 32: 100 Street & Glenmore Trail /Glenmore Trail



Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

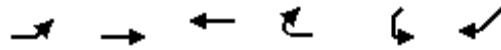
Existing
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	1068	908	818	0	0	0
Future Volume (vph)	1068	908	818	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)	200.0			0.0	0.0	0.0
Storage Lanes	1			0	0	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1770	3539	3539	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	3539	3539	0	0	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		662.8	149.5		114.0	
Travel Time (s)		47.7	10.8		8.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1161	987	889	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1161	987	889	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.6	3.6		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors	1	2	2			
Detector Template	Left	Thru	Thru			
Leading Detector (m)	2.0	10.0	10.0			
Trailing Detector (m)	0.0	0.0	0.0			
Detector 1 Position(m)	0.0	0.0	0.0			
Detector 1 Size(m)	2.0	0.6	0.6			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0	0.0			
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						

Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

Existing
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Detector Phase	7	4	8			
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5	22.5			
Total Split (s)	69.0	100.0	31.0			
Total Split (%)	69.0%	100.0%	31.0%			
Maximum Green (s)	64.5	95.5	26.5			
Yellow Time (s)	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5			
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0			
Recall Mode	None	None	None			
Walk Time (s)		7.0	7.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effct Green (s)	64.5	99.9	26.4			
Actuated g/C Ratio	0.65	1.00	0.26			
v/c Ratio	1.02	0.28	0.95			
Control Delay	50.1	0.2	56.7			
Queue Delay	0.0	0.0	0.0			
Total Delay	50.1	0.2	56.7			
LOS	D	A	E			
Approach Delay		27.2	56.7			
Approach LOS		C	E			
Queue Length 50th (m)	~232.8	0.0	93.7			
Queue Length 95th (m)	#331.3	0.0	#133.9			
Internal Link Dist (m)		638.8	125.5		90.0	
Turn Bay Length (m)	200.0					
Base Capacity (vph)	1142	3510	938			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	1.02	0.28	0.95			

Intersection Summary

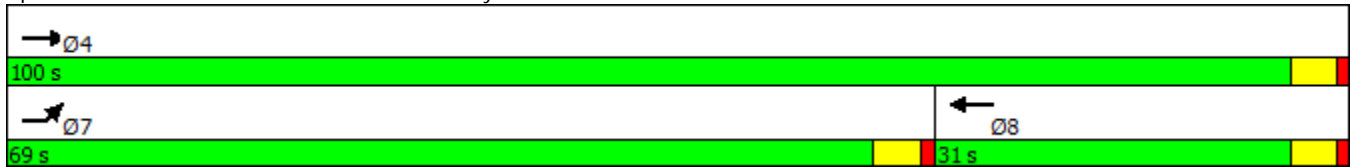
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	99.9
Natural Cycle:	100
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.02
Intersection Signal Delay:	35.8
Intersection LOS:	D
Intersection Capacity Utilization:	89.3%
ICU Level of Service:	E
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

Existing
12-01-2020

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

Splits and Phases: 67: Glenmore Trail & Stoney Trail



Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

Existing
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑		
Traffic Volume (vph)	1866	0	395	459	0	0
Future Volume (vph)	1866	0	395	459	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	175.0		0.0	0.0
Storage Lanes		0	1		0	0
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	3539	0	1770	3539	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	3539	0	1770	3539	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	199.5			662.8	102.4	
Travel Time (s)	14.4			47.7	7.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2028	0	429	499	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2028	0	429	499	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2		1	2		
Detector Template	Thru		Left	Thru		
Leading Detector (m)	10.0		2.0	10.0		
Trailing Detector (m)	0.0		0.0	0.0		
Detector 1 Position(m)	0.0		0.0	0.0		
Detector 1 Size(m)	0.6		2.0	0.6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						

Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

Existing
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		3	8		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	22.5		9.5	22.5		
Total Split (s)	61.0		29.0	90.0		
Total Split (%)	67.8%		32.2%	100.0%		
Maximum Green (s)	56.5		24.5	85.5		
Yellow Time (s)	3.5		3.5	3.5		
All-Red Time (s)	1.0		1.0	1.0		
Lost Time Adjust (s)	0.0		0.0	0.0		
Total Lost Time (s)	4.5		4.5	4.5		
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		None	None		
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	11.0			11.0		
Pedestrian Calls (#/hr)	0			0		
Act Effect Green (s)	53.4		23.1	85.6		
Actuated g/C Ratio	0.62		0.27	1.00		
v/c Ratio	0.92		0.90	0.14		
Control Delay	22.9		54.8	0.1		
Queue Delay	0.0		0.0	0.0		
Total Delay	22.9		54.8	0.1		
LOS	C		D	A		
Approach Delay	22.9			25.4		
Approach LOS	C			C		
Queue Length 50th (m)	152.8		74.9	0.0		
Queue Length 95th (m)	#204.5		#129.7	0.0		
Internal Link Dist (m)	175.5			638.8	78.4	
Turn Bay Length (m)			175.0			
Base Capacity (vph)	2363		512	3539		
Starvation Cap Reductn	0		0	0		
Spillback Cap Reductn	0		0	0		
Storage Cap Reductn	0		0	0		
Reduced v/c Ratio	0.86		0.84	0.14		

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 85.6
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 23.6
 Intersection LOS: C
 Intersection Capacity Utilization 89.3%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

Existing
12-01-2020

Splits and Phases: 68: Stoney Trail & Glenmore Trail



Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

Existing
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	413	0	0	177	206	0
Future Volume (vph)	413	0	0	177	206	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	421.0			179.4	93.7	
Travel Time (s)	30.3			12.9	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	449	0	0	192	224	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	449	0	0	192	224	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	7.2	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2			2	1	
Detector Template	Thru			Thru	Left	
Leading Detector (m)	10.0			10.0	2.0	
Trailing Detector (m)	0.0			0.0	0.0	
Detector 1 Position(m)	0.0			0.0	0.0	
Detector 1 Size(m)	0.6			0.6	2.0	
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0			0.0	0.0	
Detector 1 Queue (s)	0.0			0.0	0.0	
Detector 1 Delay (s)	0.0			0.0	0.0	
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA			NA	Prot	
Protected Phases	4			8	2	
Permitted Phases						
Detector Phase	4			8	2	
Switch Phase						
Minimum Initial (s)	5.0			5.0	5.0	

Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

Existing
12-01-2020

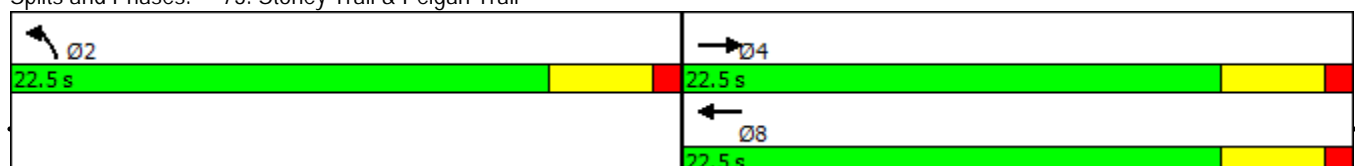


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	22.5			22.5	22.5	
Total Split (s)	22.5			22.5	22.5	
Total Split (%)	50.0%			50.0%	50.0%	
Maximum Green (s)	18.0			18.0	18.0	
Yellow Time (s)	3.5			3.5	3.5	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			None	Max	
Walk Time (s)	7.0			7.0	7.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effect Green (s)	9.9			9.9	18.0	
Actuated g/C Ratio	0.27			0.27	0.49	
v/c Ratio	0.47			0.20	0.13	
Control Delay	13.0			10.8	6.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	13.0			10.8	6.0	
LOS	B			B	A	
Approach Delay	13.0			10.8	6.0	
Approach LOS	B			B	A	
Queue Length 50th (m)	12.6			5.0	3.5	
Queue Length 95th (m)	21.3			10.0	8.8	
Internal Link Dist (m)	397.0			155.4	69.7	
Turn Bay Length (m)						
Base Capacity (vph)	1725			1725	1673	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.26			0.11	0.13	

Intersection Summary

Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 37
 Natural Cycle: 45
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.47
 Intersection Signal Delay: 10.7
 Intersection Capacity Utilization 39.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 73: Stoney Trail & Peigan Trail



Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

Existing
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	0	872	312	0	266	0
Future Volume (vph)	0	872	312	0	266	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	3539	0	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	3539	0	3433	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		133.7	421.0		94.2	
Travel Time (s)		9.6	30.3		6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	948	339	0	289	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	948	339	0	289	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		7.2	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors		2	2		1	
Detector Template		Thru	Thru		Left	
Leading Detector (m)		10.0	10.0		2.0	
Trailing Detector (m)		0.0	0.0		0.0	
Detector 1 Position(m)		0.0	0.0		0.0	
Detector 1 Size(m)		0.6	0.6		2.0	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases						
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		5.0	5.0		5.0	

Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

Existing
12-01-2020

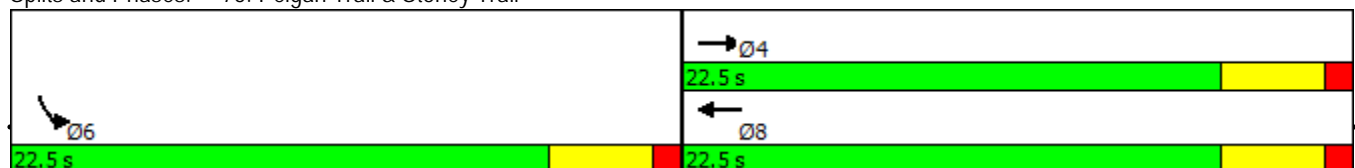


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		22.5	22.5		22.5	
Total Split (s)		22.5	22.5		22.5	
Total Split (%)		50.0%	50.0%		50.0%	
Maximum Green (s)		18.0	18.0		18.0	
Yellow Time (s)		3.5	3.5		3.5	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.5	4.5		4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		None	None		Max	
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effect Green (s)		16.0	16.0		18.1	
Actuated g/C Ratio		0.37	0.37		0.42	
v/c Ratio		0.72	0.26		0.20	
Control Delay		15.2	9.8		9.0	
Queue Delay		0.0	0.0		0.0	
Total Delay		15.2	9.8		9.0	
LOS		B	A		A	
Approach Delay		15.2	9.8		9.0	
Approach LOS		B	A		A	
Queue Length 50th (m)		31.8	9.2		7.5	
Queue Length 95th (m)		48.1	15.9		13.6	
Internal Link Dist (m)		109.7	397.0		70.2	
Turn Bay Length (m)						
Base Capacity (vph)		1483	1483		1439	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		0	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.64	0.23		0.20	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	43.1
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	12.9
Intersection LOS:	B
Intersection Capacity Utilization:	39.2%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 75: Peigan Trail & Stoney Trail



HCM Unsignalized Intersection Capacity Analysis
 18: Garden Road & Peigan Trail

Existing
 12-01-2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	4	6	3	54	17	2
Future Volume (Veh/h)	4	6	3	54	17	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	7	3	59	18	2
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type						
				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	84	19	20			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	84	19	20			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	100			
cM capacity (veh/h)	916	1059	1596			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	11	62	20			
Volume Left	4	3	0			
Volume Right	7	0	2			
cSH	1002	1596	1700			
Volume to Capacity	0.01	0.00	0.01			
Queue Length 95th (m)	0.3	0.0	0.0			
Control Delay (s)	8.6	0.4	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.6	0.4	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization			15.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 27: 100 Street & 61 Avenue

Existing
 12-01-2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	40	158	44	2	4	10
Future Volume (Veh/h)	40	158	44	2	4	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	172	48	2	4	11
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	108	10	15			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	108	10	15			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	95	84	97			
cM capacity (veh/h)	863	1072	1603			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	215	50	15			
Volume Left	43	48	0			
Volume Right	172	0	11			
cSH	1023	1603	1700			
Volume to Capacity	0.21	0.03	0.01			
Queue Length 95th (m)	6.3	0.7	0.0			
Control Delay (s)	9.5	7.0	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.5	7.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			8.5			
Intersection Capacity Utilization		27.8%		ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
37: RR 284 & TWP 240

Existing
12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	8	15	3	27	10	0	4	23	22	0	24	5
Future Volume (vph)	8	15	3	27	10	0	4	23	22	0	24	5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	16	3	29	11	0	4	25	24	0	26	5




















Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	28	40	53	31
Volume Left (vph)	9	29	4	0
Volume Right (vph)	3	0	24	5
Hadj (s)	0.03	0.18	-0.22	-0.06
Departure Headway (s)	4.1	4.3	3.9	4.0
Degree Utilization, x	0.03	0.05	0.06	0.03
Capacity (veh/h)	844	820	904	870
Control Delay (s)	7.3	7.5	7.1	7.2
Approach Delay (s)	7.3	7.5	7.1	7.2
Approach LOS	A	A	A	A

Intersection Summary			
Delay		7.3	
Level of Service		A	
Intersection Capacity Utilization	17.0%		ICU Level of Service A
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis

42: RR 284 & Glenmore Trail

Existing
12-01-2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	865	2	0	484	3	1	0	0	5	0	58
Future Volume (Veh/h)	45	865	2	0	484	3	1	0	0	5	0	58
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	49	940	2	0	526	3	1	0	0	5	0	63
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	529			942			1564	1567	940	1564	1566	526
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	529			942			1564	1567	940	1564	1566	526
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100			99	100	100	94	100	89
cM capacity (veh/h)	1038			728			77	106	320	87	106	552
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	989	2	526	3	1	68						
Volume Left	49	0	0	0	1	5						
Volume Right	0	2	0	3	0	63						
cSH	1038	1700	728	1700	77	397						
Volume to Capacity	0.05	0.00	0.00	0.00	0.01	0.17						
Queue Length 95th (m)	1.2	0.0	0.0	0.0	0.3	4.9						
Control Delay (s)	1.3	0.0	0.0	0.0	52.2	15.9						
Lane LOS	A				F	C						
Approach Delay (s)	1.3		0.0		52.2	15.9						
Approach LOS					F	C						
Intersection Summary												
Average Delay			1.5									
Intersection Capacity Utilization			87.2%		ICU Level of Service		E					
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
47: RR 283 & TWP 240

Existing
12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	33	0	0	0	0	4	0	0	0	3	0	31
Future Volume (vph)	33	0	0	0	0	4	0	0	0	3	0	31
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	36	0	0	0	0	4	0	0	0	3	0	34

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	36	4	0	37
Volume Left (vph)	36	0	0	3
Volume Right (vph)	0	4	0	34
Hadj (s)	0.23	-0.57	0.00	-0.50
Departure Headway (s)	4.2	3.4	4.0	3.5
Degree Utilization, x	0.04	0.00	0.00	0.04
Capacity (veh/h)	842	1028	889	1015
Control Delay (s)	7.4	6.5	7.0	6.6
Approach Delay (s)	7.4	6.5	0.0	6.6
Approach LOS	A	A	A	A

Intersection Summary			
Delay		7.0	
Level of Service		A	
Intersection Capacity Utilization	18.5%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

52: RR 283 & Glenmore Trail

Existing
12-01-2020



















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗	↖	↗			↕			↕	
Traffic Volume (veh/h)	167	655	31	1	309	3	40	15	15	2	6	151
Future Volume (Veh/h)	167	655	31	1	309	3	40	15	15	2	6	151
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	182	712	34	1	336	3	43	16	16	2	7	164
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	336			746			1418	1414	712	1424	1450	338
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	336			746			1418	1414	712	1424	1450	338
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	85			100			42	86	96	98	94	77
cM capacity (veh/h)	1223			862			74	117	432	87	111	705
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	894	34	1	339	75	173						
Volume Left	182	0	1	0	43	2						
Volume Right	0	34	0	3	16	164						
cSH	1223	1700	862	1700	100	543						
Volume to Capacity	0.15	0.02	0.00	0.20	0.75	0.32						
Queue Length 95th (m)	4.2	0.0	0.0	0.0	31.9	10.9						
Control Delay (s)	3.4	0.0	9.2	0.0	109.6	14.7						
Lane LOS	A		A		F	B						
Approach Delay (s)	3.3		0.0		109.6	14.7						
Approach LOS					F	B						
Intersection Summary												
Average Delay			9.1									
Intersection Capacity Utilization			87.2%		ICU Level of Service				E			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

57:

Existing

12-01-2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	0			0			0	0	0	0	0	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			0			0	0	0	0	0	0
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1623			1623			1023	896	1085	1023	896	1085
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	0	0	0	0								
Volume Left	0	0	0	0								
Volume Right	0	0	0	0								
cSH	1700	1700	1700	1700								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (m)	0.0	0.0	0.0	0.0								
Control Delay (s)	0.0	0.0	0.0	0.0								
Lane LOS			A	A								
Approach Delay (s)	0.0	0.0	0.0	0.0								
Approach LOS			A	A								
Intersection Summary												
Average Delay			0.0									
Intersection Capacity Utilization			0.0%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

62: RR 282 & Glenmore Trail

Existing
12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	1	690	0	0	324	0	0	0	0	0	0	1
Future Volume (Veh/h)	1	690	0	0	324	0	0	0	0	0	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	750	0	0	352	0	0	0	0	0	0	1
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	352			750			1105	1104	750	1104	1104	352
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	352			750			1105	1104	750	1104	1104	352
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1207			859			188	211	411	188	211	692
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	751	352	0	1								
Volume Left	1	0	0	0								
Volume Right	0	0	0	1								
cSH	1207	859	1700	692								
Volume to Capacity	0.00	0.00	0.00	0.00								
Queue Length 95th (m)	0.0	0.0	0.0	0.0								
Control Delay (s)	0.0	0.0	0.0	10.2								
Lane LOS	A		A	B								
Approach Delay (s)	0.0	0.0	0.0	10.2								
Approach LOS			A	B								
Intersection Summary												
Average Delay			0.0									
Intersection Capacity Utilization			47.1%		ICU Level of Service				A			
Analysis Period (min)			15									

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2025 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Traffic Volume (vph)	371	216	99	0	162	9	6	505	0	17	349	461
Future Volume (vph)	371	216	99	0	162	9	6	505	0	17	349	461
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.978			0.992						0.915	
Flt Protected		0.974					0.950			0.950		
Satd. Flow (prot)	0	3371	0	0	3511	0	1770	3539	0	1770	3238	0
Flt Permitted		0.732					0.250			0.441		
Satd. Flow (perm)	0	2534	0	0	3511	0	466	3539	0	821	3238	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		51			10						501	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		178.3			246.0			115.3			144.5	
Travel Time (s)		12.8			17.7			8.3			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	403	235	108	0	176	10	7	549	0	18	379	501
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	746	0	0	186	0	7	549	0	18	880	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2025 Unimproved
12-01-2020

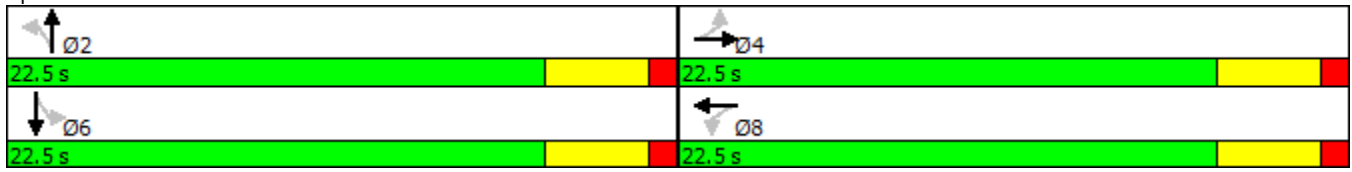


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		15.7			15.7		18.1	18.1		18.1	18.1	
Actuated g/C Ratio		0.37			0.37		0.42	0.42		0.42	0.42	
v/c Ratio		0.87dl			0.14		0.04	0.37		0.05	0.53	
Control Delay		17.6			8.6		9.0	9.9		8.9	5.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		17.6			8.6		9.0	9.9		8.9	5.4	
LOS		B			A		A	A		A	A	
Approach Delay		17.6			8.6			9.9			5.5	
Approach LOS		B			A			A			A	
Queue Length 50th (m)		23.6			4.5		0.3	15.9		0.9	10.5	
Queue Length 95th (m)		40.1			9.2		2.1	25.6		3.7	21.3	
Internal Link Dist (m)		154.3			222.0			91.3			120.5	
Turn Bay Length (m)										70.0		
Base Capacity (vph)		1099			1487		196	1493		346	1656	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.68			0.13		0.04	0.37		0.05	0.53	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	42.8
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	10.5
Intersection LOS:	B
Intersection Capacity Utilization:	61.0%
ICU Level of Service:	B
Analysis Period (min):	15
dl	Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3: 52 Street & 61 Avenue



Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

2025 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔	↗		↔↔		↗↗	↗		↗	↗	
Traffic Volume (vph)	177	302	482	0	459	0	631	18	0	0	0	15
Future Volume (vph)	177	302	482	0	459	0	631	18	0	0	0	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	100.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.850	
Flt Protected		0.982					0.950					
Satd. Flow (prot)	0	3476	1583	0	3539	0	3433	1863	0	1863	1583	0
Flt Permitted		0.680					0.747					
Satd. Flow (perm)	0	2407	1583	0	3539	0	2699	1863	0	1863	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			524									213
Link Speed (k/h)		50			50			50				50
Link Distance (m)		155.4			145.0			144.7				110.1
Travel Time (s)		11.2			10.4			10.4				7.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	328	524	0	499	0	686	20	0	0	0	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	520	524	0	499	0	686	20	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA	Perm		NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4		4	8			2			6		

Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

2025 Unimproved
12-01-2020

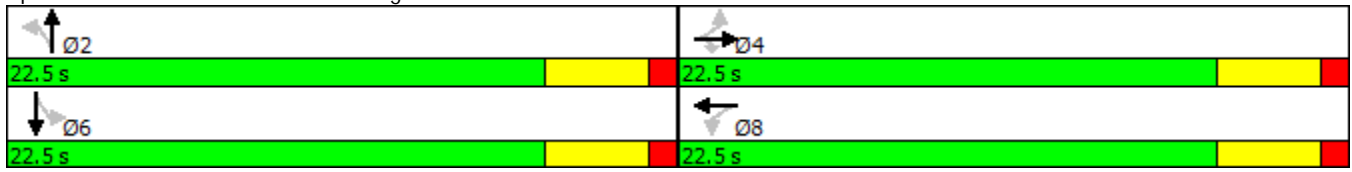


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		14.5	14.5		14.5		18.1	18.1			18.1	
Actuated g/C Ratio		0.35	0.35		0.35		0.43	0.43			0.43	
v/c Ratio		0.62	0.59		0.41		0.58	0.02			0.02	
Control Delay		14.8	4.3		11.1		12.3	8.2			0.1	
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	
Total Delay		14.8	4.3		11.1		12.3	8.2			0.1	
LOS		B	A		B		B	A			A	
Approach Delay		9.5			11.1			12.2			0.1	
Approach LOS		A			B			B			A	
Queue Length 50th (m)		16.3	0.0		14.2		19.7	0.9			0.0	
Queue Length 95th (m)		27.8	13.9		23.1		36.1	3.8			0.0	
Internal Link Dist (m)		131.4			121.0			120.7			86.1	
Turn Bay Length (m)							100.0					
Base Capacity (vph)		1047	984		1540		1174	810			809	
Starvation Cap Reductn		0	0		0		0	0			0	
Spillback Cap Reductn		0	0		0		0	0			0	
Storage Cap Reductn		0	0		0		0	0			0	
Reduced v/c Ratio		0.50	0.53		0.32		0.58	0.02			0.02	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	41.7
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	10.6
Intersection LOS:	B
Intersection Capacity Utilization:	62.1%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 8: 84 Street & Peigan Trail



Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

2025 Unimproved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	46	233	75	6	177	67	75	53	12	33	38	48
Future Volume (vph)	46	233	75	6	177	67	75	53	12	33	38	48
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	60.0		0.0	0.0		100.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.959				0.850		0.946	
Flt Protected		0.994		0.950				0.972			0.986	
Satd. Flow (prot)	0	1798	0	1770	1786	0	0	1811	1583	0	1737	0
Flt Permitted		0.924		0.485				0.797			0.910	
Satd. Flow (perm)	0	1671	0	903	1786	0	0	1485	1583	0	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			51				36			52
Link Speed (k/h)		50			50			50				50
Link Distance (m)		90.4			116.8			200.2				92.7
Travel Time (s)		6.5			8.4			14.4				6.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	253	82	7	192	73	82	58	13	36	41	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	385	0	7	265	0	0	140	13	0	129	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0		10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0		0.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		

Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

2025 Unimproved
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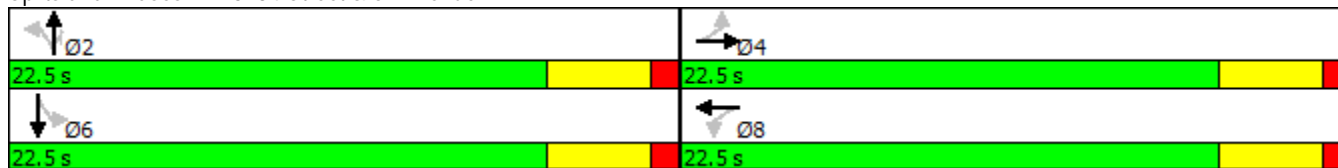


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.5		4.5	4.5			4.5	4.5		4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effect Green (s)		13.1		13.1	13.1			18.2	18.2		18.2	
Actuated g/C Ratio		0.33		0.33	0.33			0.45	0.45		0.45	
v/c Ratio		0.68		0.02	0.43			0.21	0.02		0.17	
Control Delay		17.2		8.7	10.6			9.1	1.6		6.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		17.2		8.7	10.6			9.1	1.6		6.1	
LOS		B		A	B			A	A		A	
Approach Delay		17.2			10.5			8.4			6.1	
Approach LOS		B			B			A			A	
Queue Length 50th (m)		20.6		0.3	11.4			5.7	0.0		3.0	
Queue Length 95th (m)		41.1		2.0	24.4			16.3	1.1		11.5	
Internal Link Dist (m)		66.4			92.8			176.2			68.7	
Turn Bay Length (m)				60.0					100.0			
Base Capacity (vph)		772		406	832			669	732		751	
Starvation Cap Reductn		0		0	0			0	0		0	
Spillback Cap Reductn		0		0	0			0	0		0	
Storage Cap Reductn		0		0	0			0	0		0	
Reduced v/c Ratio		0.50		0.02	0.32			0.21	0.02		0.17	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	40.3
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	12.3
Intersection LOS:	B
Intersection Capacity Utilization:	57.5%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 13: 84 Street & 61 Avenue



Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

2025 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	595	1986	267	56	1814	10	322	15	31	10	103	613
Future Volume (vph)	595	1986	267	56	1814	10	322	15	31	10	103	613
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		125.0	125.0		0.0	0.0		60.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999				0.850		0.886	
Flt Protected	0.950			0.950			0.950				0.999	
Satd. Flow (prot)	1770	1863	1583	1770	1861	0	1770	1863	1583	0	1649	0
Flt Permitted	0.170			0.170			0.226				0.998	
Satd. Flow (perm)	317	1863	1583	317	1861	0	421	1863	1583	0	1647	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			255		1				30		2	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		183.8			169.8			154.4			195.2	
Travel Time (s)		13.2			12.2			11.1			14.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	647	2159	290	61	1972	11	350	16	34	11	112	666
Shared Lane Traffic (%)												
Lane Group Flow (vph)	647	2159	290	61	1983	0	350	16	34	0	789	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8			2		2	6		

Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

2025 Unimproved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	28.0	28.0	28.0	28.0	28.0		27.0	27.0	27.0	27.0	27.0	
Total Split (%)	50.9%	50.9%	50.9%	50.9%	50.9%		49.1%	49.1%	49.1%	49.1%	49.1%	
Maximum Green (s)	23.5	23.5	23.5	23.5	23.5		22.5	22.5	22.5	22.5	22.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0	0	0	0	
Act Effct Green (s)	23.5	23.5	23.5	23.5	23.5		22.5	22.5	22.5		22.5	
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.43		0.41	0.41	0.41		0.41	
v/c Ratio	4.79	2.71	0.35	0.45	2.49		2.03	0.02	0.05		1.17	
Control Delay	1733.9	790.2	3.7	25.0	693.1		504.5	9.9	5.1		112.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	1733.9	790.2	3.7	25.0	693.1		504.5	9.9	5.1		112.8	
LOS	F	F	A	C	F		F	A	A		F	
Approach Delay		913.8			673.2			442.3			112.8	
Approach LOS		F			F			F			F	
Queue Length 50th (m)	~122.2	~399.6	2.0	4.3	~370.0		~59.9	1.0	0.3		~103.3	
Queue Length 95th (m)	#178.7	#476.7	13.8	#18.4	#449.0		#88.6	3.8	4.4		#164.1	
Internal Link Dist (m)		159.8			145.8			130.4			171.2	
Turn Bay Length (m)	125.0		125.0	125.0					60.0			
Base Capacity (vph)	135	796	822	135	795		172	762	665		674	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	4.79	2.71	0.35	0.45	2.49		2.03	0.02	0.05		1.17	

Intersection Summary

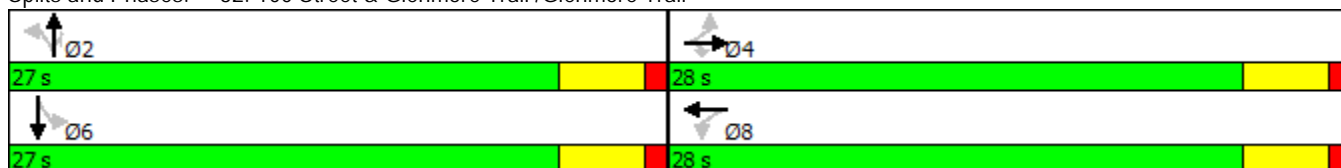
Area Type:	Other
Cycle Length:	55
Actuated Cycle Length:	55
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	4.79
Intersection Signal Delay:	706.4
Intersection LOS:	F
Intersection Capacity Utilization:	205.7%
ICU Level of Service:	H
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

Lanes, Volumes, Timings
 32: 100 Street & Glenmore Trail /Glenmore Trail

2025 Unimproved
 12-01-2020

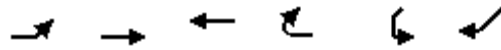
95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 32: 100 Street & Glenmore Trail /Glenmore Trail



Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

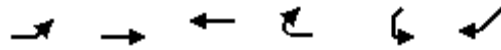
2025 Unimproved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	816	2100	2305	0	0	0
Future Volume (vph)	816	2100	2305	0	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (m)	200.0			0.0	0.0	0.0
Storage Lanes	1			0	0	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1770	3539	3539	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1770	3539	3539	0	0	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		662.8	149.5		114.0	
Travel Time (s)		47.7	10.8		8.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	887	2283	2505	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	887	2283	2505	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		3.6	3.6		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors	1	2	2			
Detector Template	Left	Thru	Thru			
Leading Detector (m)	2.0	10.0	10.0			
Trailing Detector (m)	0.0	0.0	0.0			
Detector 1 Position(m)	0.0	0.0	0.0			
Detector 1 Size(m)	2.0	0.6	0.6			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0	0.0			
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						

Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

2025 Unimproved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Detector Phase	7	4	8			
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5	22.5			
Total Split (s)	62.0	150.0	88.0			
Total Split (%)	41.3%	100.0%	58.7%			
Maximum Green (s)	57.5	145.5	83.5			
Yellow Time (s)	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5			
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0			
Recall Mode	None	None	None			
Walk Time (s)		7.0	7.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effct Green (s)	57.5	150.0	83.5			
Actuated g/C Ratio	0.38	1.00	0.56			
v/c Ratio	1.31	0.65	1.27			
Control Delay	187.0	0.9	157.0			
Queue Delay	0.0	0.0	0.0			
Total Delay	187.0	0.9	157.0			
LOS	F	A	F			
Approach Delay		53.0	157.0			
Approach LOS		D	F			
Queue Length 50th (m)	~355.6	0.0	~519.3			
Queue Length 95th (m)	#438.0	0.0	#557.5			
Internal Link Dist (m)		638.8	125.5		90.0	
Turn Bay Length (m)	200.0					
Base Capacity (vph)	678	3539	1970			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	1.31	0.65	1.27			

Intersection Summary

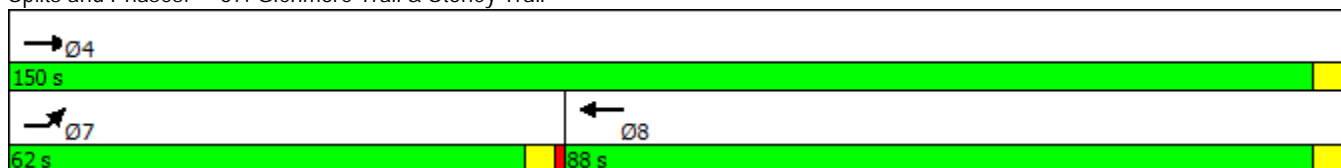
Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.31
 Intersection Signal Delay: 98.9
 Intersection Capacity Utilization 126.6%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service H
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

2025 Unimproved
12-01-2020

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

Splits and Phases: 67: Glenmore Trail & Stoney Trail



Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2025 Unimproved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↙	↑↑		
Traffic Volume (vph)	2556	0	874	1484	0	0
Future Volume (vph)	2556	0	874	1484	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	175.0		0.0	0.0
Storage Lanes		0	1		0	0
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	3539	0	1770	3539	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	3539	0	1770	3539	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	199.5			662.8	102.4	
Travel Time (s)	14.4			47.7	7.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2778	0	950	1613	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2778	0	950	1613	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	3.6			3.6	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2		1	2		
Detector Template	Thru		Left	Thru		
Leading Detector (m)	10.0		2.0	10.0		
Trailing Detector (m)	0.0		0.0	0.0		
Detector 1 Position(m)	0.0		0.0	0.0		
Detector 1 Size(m)	0.6		2.0	0.6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						

Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2025 Unimproved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		3	8		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	22.5		9.5	22.5		
Total Split (s)	90.0		60.0	150.0		
Total Split (%)	60.0%		40.0%	100.0%		
Maximum Green (s)	85.5		55.5	145.5		
Yellow Time (s)	3.5		3.5	3.5		
All-Red Time (s)	1.0		1.0	1.0		
Lost Time Adjust (s)	0.0		0.0	0.0		
Total Lost Time (s)	4.5		4.5	4.5		
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		None	None		
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	11.0			11.0		
Pedestrian Calls (#/hr)	0			0		
Act Effct Green (s)	85.5		55.5	150.0		
Actuated g/C Ratio	0.57		0.37	1.00		
v/c Ratio	1.38		1.45	0.46		
Control Delay	201.9		247.4	0.4		
Queue Delay	0.0		0.0	0.0		
Total Delay	201.9		247.4	0.4		
LOS	F		F	A		
Approach Delay	201.9			92.0		
Approach LOS	F			F		
Queue Length 50th (m)	~604.4		~404.1	0.0		
Queue Length 95th (m)	#640.3		#487.2	0.0		
Internal Link Dist (m)	175.5			638.8	78.4	
Turn Bay Length (m)			175.0			
Base Capacity (vph)	2017		654	3539		
Starvation Cap Reductn	0		0	0		
Spillback Cap Reductn	0		0	0		
Storage Cap Reductn	0		0	0		
Reduced v/c Ratio	1.38		1.45	0.46		

Intersection Summary

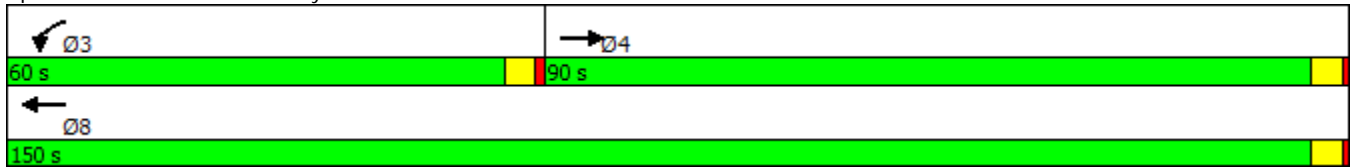
Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.45
 Intersection Signal Delay: 149.1
 Intersection Capacity Utilization 126.6%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service H
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2025 Unimproved
12-01-2020

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

Splits and Phases: 68: Stoney Trail & Glenmore Trail



Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

2025 Unimproved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	809	0	0	429	299	0
Future Volume (vph)	809	0	0	429	299	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	421.0			179.4	93.7	
Travel Time (s)	30.3			12.9	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	879	0	0	466	325	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	879	0	0	466	325	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	7.2	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2			2	1	
Detector Template	Thru			Thru	Left	
Leading Detector (m)	10.0			10.0	2.0	
Trailing Detector (m)	0.0			0.0	0.0	
Detector 1 Position(m)	0.0			0.0	0.0	
Detector 1 Size(m)	0.6			0.6	2.0	
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0			0.0	0.0	
Detector 1 Queue (s)	0.0			0.0	0.0	
Detector 1 Delay (s)	0.0			0.0	0.0	
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA			NA	Prot	
Protected Phases	4			8	2	
Permitted Phases						
Detector Phase	4			8	2	
Switch Phase						
Minimum Initial (s)	5.0			5.0	5.0	

Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

2025 Unimproved
12-01-2020

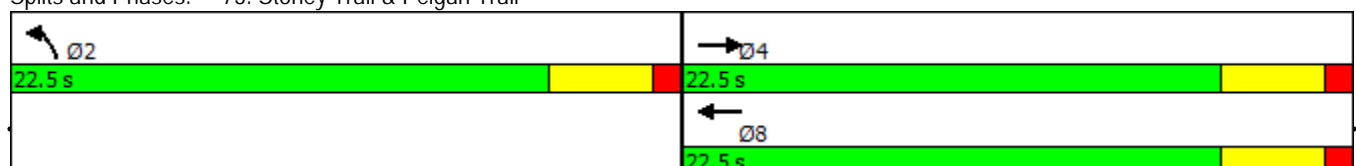


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	22.5			22.5	22.5	
Total Split (s)	22.5			22.5	22.5	
Total Split (%)	50.0%			50.0%	50.0%	
Maximum Green (s)	18.0			18.0	18.0	
Yellow Time (s)	3.5			3.5	3.5	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			None	Max	
Walk Time (s)	7.0			7.0	7.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effect Green (s)	15.3			15.3	18.1	
Actuated g/C Ratio	0.36			0.36	0.43	
v/c Ratio	0.69			0.36	0.22	
Control Delay	14.6			10.7	8.9	
Queue Delay	0.0			0.0	0.0	
Total Delay	14.6			10.7	8.9	
LOS	B			B	A	
Approach Delay	14.6			10.7	8.9	
Approach LOS	B			B	A	
Queue Length 50th (m)	28.7			13.1	7.9	
Queue Length 95th (m)	43.6			21.6	15.1	
Internal Link Dist (m)	397.0			155.4	69.7	
Turn Bay Length (m)						
Base Capacity (vph)	1507			1507	1462	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.58			0.31	0.22	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	42.4
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	12.4
Intersection LOS:	B
Intersection Capacity Utilization:	55.3%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 73: Stoney Trail & Peigan Trail



Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2025 Unimproved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	0	1294	647	0	420	0
Future Volume (vph)	0	1294	647	0	420	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	3539	0	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	3539	0	3433	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		133.7	421.0		94.2	
Travel Time (s)		9.6	30.3		6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1407	703	0	457	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1407	703	0	457	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		7.2	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors		2	2		1	
Detector Template		Thru	Thru		Left	
Leading Detector (m)		10.0	10.0		2.0	
Trailing Detector (m)		0.0	0.0		0.0	
Detector 1 Position(m)		0.0	0.0		0.0	
Detector 1 Size(m)		0.6	0.6		2.0	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases						
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		5.0	5.0		5.0	

Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2025 Unimproved
12-01-2020

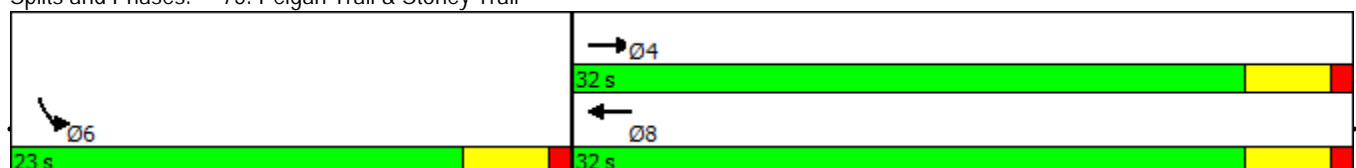


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		22.5	22.5		22.5	
Total Split (s)		32.0	32.0		23.0	
Total Split (%)		58.2%	58.2%		41.8%	
Maximum Green (s)		27.5	27.5		18.5	
Yellow Time (s)		3.5	3.5		3.5	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.5	4.5		4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		None	None		Max	
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effect Green (s)		25.3	25.3		18.6	
Actuated g/C Ratio		0.48	0.48		0.35	
v/c Ratio		0.83	0.41		0.38	
Control Delay		17.2	9.7		14.6	
Queue Delay		0.0	0.0		0.0	
Total Delay		17.2	9.7		14.6	
LOS		B	A		B	
Approach Delay		17.2	9.7		14.6	
Approach LOS		B	A		B	
Queue Length 50th (m)		58.8	22.1		18.4	
Queue Length 95th (m)		83.7	32.7		29.0	
Internal Link Dist (m)		109.7	397.0		70.2	
Turn Bay Length (m)						
Base Capacity (vph)		1844	1844		1203	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		0	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.76	0.38		0.38	

Intersection Summary

Area Type: Other
 Cycle Length: 55
 Actuated Cycle Length: 52.9
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 14.7
 Intersection Capacity Utilization 55.3%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 75: Peigan Trail & Stoney Trail



HCM Unsignalized Intersection Capacity Analysis
 18: Garden Road & Peigan Trail

2025 Unimproved
 12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	218	84	10	212	52	243	290	10	33	212	4
Future Volume (Veh/h)	0	218	84	10	212	52	243	290	10	33	212	4
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	237	91	11	230	57	264	315	11	36	230	4
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	1324	1158	232	1362	1154	320	234			326		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1324	1158	232	1362	1154	320	234			326		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	0	89	0	0	92	80			97		
cM capacity (veh/h)	0	153	807	0	153	720	1333			1234		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	328	298	590	270								
Volume Left	0	11	264	36								
Volume Right	91	57	11	4								
cSH	197	0	1333	1234								
Volume to Capacity	1.67	Err	0.20	0.03								
Queue Length 95th (m)	175.8	Err	5.9	0.7								
Control Delay (s)	363.1	Err	4.9	1.3								
Lane LOS	F	F	A	A								
Approach Delay (s)	363.1	Err	4.9	1.3								
Approach LOS	F	F										
Intersection Summary												
Average Delay			Err									
Intersection Capacity Utilization			75.2%		ICU Level of Service					D		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 27: 100 Street & 61 Avenue

2025 Unimproved
 12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Volume (veh/h)	89	192	115	213	106	76	91	167	240	18	168	58
Future Volume (Veh/h)	89	192	115	213	106	76	91	167	240	18	168	58
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	97	209	125	232	115	83	99	182	261	20	183	63
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type												
Median storage veh												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	906	896	214	994	796	312	246			443		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	906	896	214	994	796	312	246			443		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	34	18	85	0	60	89	92			98		
cM capacity (veh/h)	147	254	825	56	290	728	1320			1117		
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	431	430	542	266								
Volume Left	97	232	99	20								
Volume Right	125	83	261	63								
cSH	264	93	1320	1117								
Volume to Capacity	1.63	4.65	0.08	0.02								
Queue Length 95th (m)	215.0	Err	1.9	0.4								
Control Delay (s)	334.6	Err	2.1	0.8								
Lane LOS	F	F	A	A								
Approach Delay (s)	334.6	Err	2.1	0.8								
Approach LOS	F	F										
Intersection Summary												
Average Delay			2663.4									
Intersection Capacity Utilization			98.3%	ICU Level of Service		F						
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 37: RR 284 & Peigan Trail/TWP 240

2025 Unimproved
 12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	82	56	106	218	103	16	76	381	323	21	349	18
Future Volume (vph)	82	56	106	218	103	16	76	381	323	21	349	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	89	61	115	237	112	17	83	414	351	23	379	20




















Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	265	366	848	422
Volume Left (vph)	89	237	83	23
Volume Right (vph)	115	17	351	20
Hadj (s)	-0.16	0.14	-0.19	0.02
Departure Headway (s)	9.1	8.8	8.4	8.5
Degree Utilization, x	0.67	0.90	1.98	0.99
Capacity (veh/h)	380	366	433	422
Control Delay (s)	28.8	52.7	468.0	71.8
Approach Delay (s)	28.8	52.7	468.0	71.8
Approach LOS	D	F	F	F

Intersection Summary

Delay	238.8
Level of Service	F
Intersection Capacity Utilization	107.3%
ICU Level of Service	G
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis
42: RR 284 & Glenmore Trail

2025 Unimproved
12-01-2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	471	1248	229	9	811	37	297	32	14	14	27	672
Future Volume (Veh/h)	471	1248	229	9	811	37	297	32	14	14	27	672
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	512	1357	249	10	882	40	323	35	15	15	29	730
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	922			1606			3298	3323	1357	3300	3532	882
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	922			1606			3298	3323	1357	3300	3532	882
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	31			98			0	0	92	0	0	0
cM capacity (veh/h)	741			407			0	2	182	0	2	345
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	1869	249	892	40	373	774						
Volume Left	512	0	10	0	323	15						
Volume Right	0	249	0	40	15	730						
cSH	741	1700	407	1700	0	0						
Volume to Capacity	0.69	0.15	0.02	0.02	Err	Err						
Queue Length 95th (m)	44.9	0.0	0.6	0.0	Err	Err						
Control Delay (s)	20.0	0.0	0.9	0.0	Err	Err						
Lane LOS	C		A		F	F						
Approach Delay (s)	17.7		0.8		Err	Err						
Approach LOS					F	F						
Intersection Summary												
Average Delay			Err									
Intersection Capacity Utilization			211.0%		ICU Level of Service		H					
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
47: RR 283 & TWP 240

2025 Unimproved
12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	301	30	34	1	54	21	48	173	2	38	152	218
Future Volume (vph)	301	30	34	1	54	21	48	173	2	38	152	218
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	327	33	37	1	59	23	52	188	2	41	165	237

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	397	83	242	443
Volume Left (vph)	327	1	52	41
Volume Right (vph)	37	23	2	237
Hadj (s)	0.14	-0.13	0.07	-0.27
Departure Headway (s)	6.3	6.9	6.5	5.8
Degree Utilization, x	0.70	0.16	0.44	0.71
Capacity (veh/h)	538	423	503	598
Control Delay (s)	22.4	11.2	14.4	21.6
Approach Delay (s)	22.4	11.2	14.4	21.6
Approach LOS	C	B	B	C

Intersection Summary			
Delay		19.6	
Level of Service		C	
Intersection Capacity Utilization	59.9%		ICU Level of Service B
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis
52: RR 283 & Glenmore Trail

2025 Unimproved
12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔	↔	↔			↕			↕	
Traffic Volume (veh/h)	198	1016	63	5	585	3	30	3	17	6	5	242
Future Volume (Veh/h)	198	1016	63	5	585	3	30	3	17	6	5	242
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	215	1104	68	5	636	3	33	3	18	7	5	263
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	636			1172			2182	2180	1104	2183	2250	638
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	636			1172			2182	2180	1104	2183	2250	638
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	77			99			0	92	93	70	84	45
cM capacity (veh/h)	947			596			11	35	257	24	32	477
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1						
Volume Total	1319	68	5	639	54	275						
Volume Left	215	0	5	0	33	7						
Volume Right	0	68	0	3	18	263						
cSH	947	1700	596	1700	17	274						
Volume to Capacity	0.23	0.04	0.01	0.38	3.22	1.00						
Queue Length 95th (m)	7.0	0.0	0.2	0.0	Err	81.9						
Control Delay (s)	7.0	0.0	11.1	0.0	Err	96.3						
Lane LOS	A		B		F	F						
Approach Delay (s)	6.6		0.1		Err	96.3						
Approach LOS					F	F						
Intersection Summary												
Average Delay			243.9									
Intersection Capacity Utilization			125.9%		ICU Level of Service				H			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2025 Unimproved

57:

12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	12	58	25	8	0	68	72	33	0	64	0
Future Volume (Veh/h)	0	12	58	25	8	0	68	72	33	0	64	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	13	63	27	9	0	74	78	36	0	70	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	9			76			142	108	44	182	139	9
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	9			76			142	108	44	182	139	9
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			90	90	96	100	91	100
cM capacity (veh/h)	1611			1523			757	769	1025	684	739	1073

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	76	36	188	70
Volume Left	0	27	74	0
Volume Right	63	0	36	0
cSH	1611	1523	802	739
Volume to Capacity	0.00	0.02	0.23	0.09
Queue Length 95th (m)	0.0	0.4	7.3	2.5
Control Delay (s)	0.0	5.6	10.9	10.4
Lane LOS		A	B	B
Approach Delay (s)	0.0	5.6	10.9	10.4
Approach LOS			B	B

Intersection Summary			
Average Delay		8.0	
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis
62: RR 282 & Glenmore Trail

2025 Unimproved
12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	162	877	0	0	389	45	0	0	0	99	0	204
Future Volume (Veh/h)	162	877	0	0	389	45	0	0	0	99	0	204
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	176	953	0	0	423	49	0	0	0	108	0	222
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	472			953			1974	1777	953	1752	1752	448
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	472			953			1974	1777	953	1752	1752	448
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	84			100			100	100	100	0	100	64
cM capacity (veh/h)	1090			721			26	69	314	59	72	611
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	1129	472	0	330								
Volume Left	176	0	0	108								
Volume Right	0	49	0	222								
cSH	1090	721	1700	149								
Volume to Capacity	0.16	0.00	0.00	2.21								
Queue Length 95th (m)	4.6	0.0	0.0	217.1								
Control Delay (s)	4.2	0.0	0.0	614.1								
Lane LOS	A		A	F								
Approach Delay (s)	4.2	0.0	0.0	614.1								
Approach LOS			A	F								
Intersection Summary												
Average Delay			107.4									
Intersection Capacity Utilization			106.4%	ICU Level of Service		G						
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2025 Unimproved

82:

12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	148	85	66	209	79	149	33	329	139	149	346	97
Future Volume (vph)	148	85	66	209	79	149	33	329	139	149	346	97
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	161	92	72	227	86	162	36	358	151	162	376	105

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	325	475	545	643
Volume Left (vph)	161	227	36	162
Volume Right (vph)	72	162	151	105
Hadj (s)	0.00	-0.08	-0.12	-0.01
Departure Headway (s)	9.6	9.1	9.1	9.2
Degree Utilization, x	0.86	1.21	1.38	1.64
Capacity (veh/h)	364	406	405	395
Control Delay (s)	50.1	142.8	210.2	323.6
Approach Delay (s)	50.1	142.8	210.2	323.6
Approach LOS	F	F	F	F

Intersection Summary

Delay	204.6
Level of Service	F
Intersection Capacity Utilization	100.7%
ICU Level of Service	G
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

2025 Unimproved

88:

12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	52	120	30	43	97	35	50	108	38	38	105	52
Future Volume (vph)	52	120	30	43	97	35	50	108	38	38	105	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	57	130	33	47	105	38	54	117	41	41	114	57

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	220	190	212	212
Volume Left (vph)	57	47	54	41
Volume Right (vph)	33	38	41	57
Hadj (s)	0.00	-0.04	-0.03	-0.09
Departure Headway (s)	5.4	5.4	5.4	5.3
Degree Utilization, x	0.33	0.28	0.32	0.31
Capacity (veh/h)	615	608	610	622
Control Delay (s)	11.0	10.5	10.8	10.7
Approach Delay (s)	11.0	10.5	10.8	10.7
Approach LOS	B	B	B	B

Intersection Summary

Delay	10.8
Level of Service	B
Intersection Capacity Utilization	37.6%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

2025 Unimproved

93:

12-01-2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	20	72	15	133	138	22
Future Volume (vph)	20	72	15	133	138	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	78	16	145	150	24

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	100	161	174
Volume Left (vph)	22	16	0
Volume Right (vph)	78	0	24
Hadj (s)	-0.39	0.05	-0.05
Departure Headway (s)	4.3	4.4	4.3
Degree Utilization, x	0.12	0.20	0.21
Capacity (veh/h)	779	797	813
Control Delay (s)	7.8	8.4	8.3
Approach Delay (s)	7.8	8.4	8.3
Approach LOS	A	A	A

Intersection Summary			
Delay		8.3	
Level of Service		A	
Intersection Capacity Utilization		31.7%	ICU Level of Service
Analysis Period (min)		15	A

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2030 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Traffic Volume (vph)	278	337	60	0	273	0	0	636	0	29	553	470
Future Volume (vph)	278	337	60	0	273	0	0	636	0	29	553	470
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.987										0.931
Flt Protected		0.980								0.950		
Satd. Flow (prot)	0	3423	0	0	3539	0	1863	3539	0	1770	3295	0
Flt Permitted		0.726								0.351		
Satd. Flow (perm)	0	2536	0	0	3539	0	1863	3539	0	654	3295	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27										418
Link Speed (k/h)		50			50			50				50
Link Distance (m)		178.3			246.0			115.3				144.5
Travel Time (s)		12.8			17.7			8.3				10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	302	366	65	0	297	0	0	691	0	32	601	511
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	733	0	0	297	0	0	691	0	32	1112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6				3.6
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2030 Unimproved
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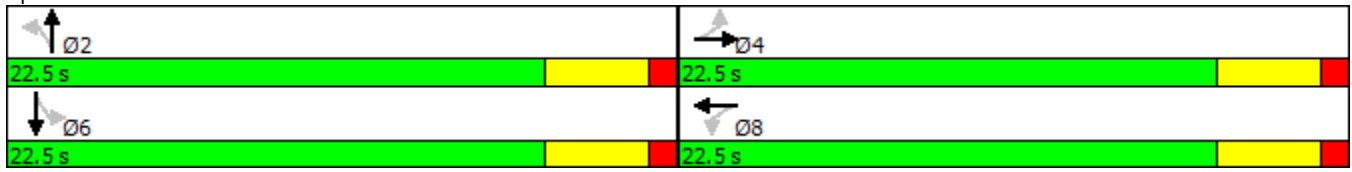


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		15.8			15.8			18.1		18.1	18.1	
Actuated g/C Ratio		0.37			0.37			0.42		0.42	0.42	
v/c Ratio		0.77			0.23			0.46		0.12	0.68	
Control Delay		17.9			9.6			10.7		10.0	9.0	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		17.9			9.6			10.7		10.0	9.0	
LOS		B			A			B		A	A	
Approach Delay		17.9			9.6			10.7			9.1	
Approach LOS		B			A			B			A	
Queue Length 50th (m)		24.1			8.0			21.1		1.6	21.6	
Queue Length 95th (m)		40.4			14.2			32.8		5.8	39.7	
Internal Link Dist (m)		154.3			222.0			91.3			120.5	
Turn Bay Length (m)										70.0		
Base Capacity (vph)		1084			1491			1491		275	1630	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.68			0.20			0.46		0.12	0.68	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	42.9
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	11.8
Intersection LOS:	B
Intersection Capacity Utilization:	68.5%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 3: 52 Street & 61 Avenue



Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔	↗		↔↔		↗↗	↗		↗	↗	
Traffic Volume (vph)	173	1055	548	0	1327	77	639	54	0	0	0	34
Future Volume (vph)	173	1055	548	0	1327	77	639	54	0	0	0	34
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	100.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992							0.850
Flt Protected		0.993					0.950					
Satd. Flow (prot)	0	3514	1583	0	3511	0	3433	1863	0	1863	1583	0
Flt Permitted		0.504					0.733					
Satd. Flow (perm)	0	1784	1583	0	3511	0	2649	1863	0	1863	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			596		11							65
Link Speed (k/h)		50			50			50				50
Link Distance (m)		155.4			145.0			144.7				110.1
Travel Time (s)		11.2			10.4			10.4				7.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	188	1147	596	0	1442	84	695	59	0	0	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1335	596	0	1526	0	695	59	0	0	37	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA	Perm		NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4		4	8			2		6			

Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	86.5	86.5	86.5	86.5	86.5		33.5	33.5		33.5	33.5	
Total Split (%)	72.1%	72.1%	72.1%	72.1%	72.1%		27.9%	27.9%		27.9%	27.9%	
Maximum Green (s)	82.0	82.0	82.0	82.0	82.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		82.0	82.0		82.0		29.0	29.0			29.0	
Actuated g/C Ratio		0.68	0.68		0.68		0.24	0.24			0.24	
v/c Ratio		1.29dl	0.47		0.64		1.09	0.13			0.09	
Control Delay		76.7	1.8		12.0		104.2	36.7			3.1	
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	
Total Delay		76.7	1.8		12.0		104.2	36.7			3.1	
LOS		E	A		B		F	D			A	
Approach Delay		53.6			12.0			98.9			3.1	
Approach LOS		D			B			F			A	
Queue Length 50th (m)		-196.9	0.0		100.2		-99.6	11.5			0.0	
Queue Length 95th (m)		#241.2	10.8		121.1		#138.2	23.1			3.4	
Internal Link Dist (m)		131.4			121.0			120.7			86.1	
Turn Bay Length (m)							100.0					
Base Capacity (vph)		1219	1270		2402		640	450			431	
Starvation Cap Reductn		0	0		0		0	0			0	
Spillback Cap Reductn		0	0		0		0	0			0	
Storage Cap Reductn		0	0		0		0	0			0	
Reduced v/c Ratio		1.10	0.47		0.64		1.09	0.13			0.09	

Intersection Summary





Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Natural Cycle: 120
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.10
 Intersection Signal Delay: 46.3
 Intersection LOS: D
 Intersection Capacity Utilization 109.5%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
 8: 84 Street & Peigan Trail

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- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
- dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 8: 84 Street & Peigan Trail

 Ø2 33.5 s	 Ø4 86.5 s
 Ø6 33.5 s	 Ø8 86.5 s

Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	19	436	92	4	324	56	82	101	0	26	46	83
Future Volume (vph)	19	436	92	4	324	56	82	101	0	26	46	83
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	60.0		0.0	0.0		100.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.978							0.928
Flt Protected		0.998		0.950				0.978				0.992
Satd. Flow (prot)	0	1816	0	1770	1822	0	0	1822	1863	0	1715	0
Flt Permitted		0.979		0.348				0.809				0.937
Satd. Flow (perm)	0	1782	0	648	1822	0	0	1507	1863	0	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			23							90
Link Speed (k/h)		50			50			50				50
Link Distance (m)		90.4			116.8			200.2				92.7
Travel Time (s)		6.5			8.4			14.4				6.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	474	100	4	352	61	89	110	0	28	50	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	595	0	4	413	0	0	199	0	0	168	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0		10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0		0.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		

Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

2030 Unimproved
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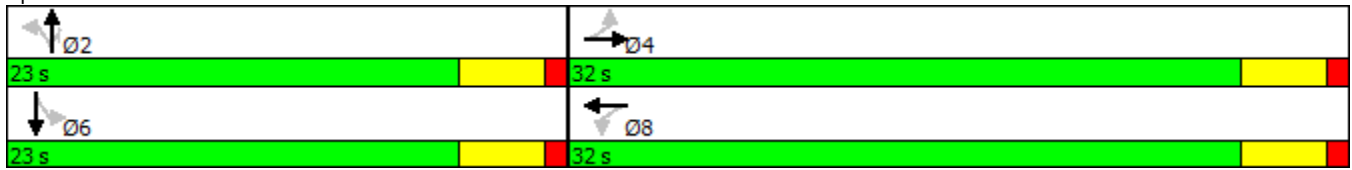


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	32.0	32.0		32.0	32.0		23.0	23.0	23.0	23.0	23.0	
Total Split (%)	58.2%	58.2%		58.2%	58.2%		41.8%	41.8%	41.8%	41.8%	41.8%	
Maximum Green (s)	27.5	27.5		27.5	27.5		18.5	18.5	18.5	18.5	18.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		4.5		4.5	4.5			4.5	4.5			4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effect Green (s)		19.7		19.7	19.7			18.8				18.8
Actuated g/C Ratio		0.41		0.41	0.41			0.39				0.39
v/c Ratio		0.79		0.01	0.54			0.34				0.24
Control Delay		19.8		7.5	12.3			14.1				7.5
Queue Delay		0.0		0.0	0.0			0.0				0.0
Total Delay		19.8		7.5	12.3			14.1				7.5
LOS		B		A	B			B				A
Approach Delay		19.8			12.2			14.1				7.5
Approach LOS		B			B			B				A
Queue Length 50th (m)		40.3		0.2	23.8			11.6				4.2
Queue Length 95th (m)		71.0		1.4	42.3			30.7				17.0
Internal Link Dist (m)		66.4			92.8			176.2				68.7
Turn Bay Length (m)				60.0								
Base Capacity (vph)		1055		379	1077			594				693
Starvation Cap Reductn		0		0	0			0				0
Spillback Cap Reductn		0		0	0			0				0
Storage Cap Reductn		0		0	0			0				0
Reduced v/c Ratio		0.56		0.01	0.38			0.34				0.24

Intersection Summary

Area Type:	Other
Cycle Length:	55
Actuated Cycle Length:	47.6
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	15.2
Intersection LOS:	B
Intersection Capacity Utilization:	73.5%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 13: 84 Street & 61 Avenue



Lanes, Volumes, Timings
18: Garden Road & Peigan Trail

2030 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	87	650	318	12	790	84	600	324	8	8	385	14
Future Volume (vph)	87	650	318	12	790	84	600	324	8	8	385	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.959			0.987			0.999			0.995	
Flt Protected		0.996			0.999			0.969			0.999	
Satd. Flow (prot)	0	1779	0	0	1837	0	0	1803	0	0	1852	0
Flt Permitted		0.701			0.980			0.497			0.979	
Satd. Flow (perm)	0	1252	0	0	1802	0	0	925	0	0	1815	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			8			1			3	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.2			182.0			112.9			101.5	
Travel Time (s)		8.9			13.1			8.1			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	95	707	346	13	859	91	652	352	9	9	418	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1148	0	0	963	0	0	1013	0	0	442	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	

Lanes, Volumes, Timings
18: Garden Road & Peigan Trail

2030 Unimproved
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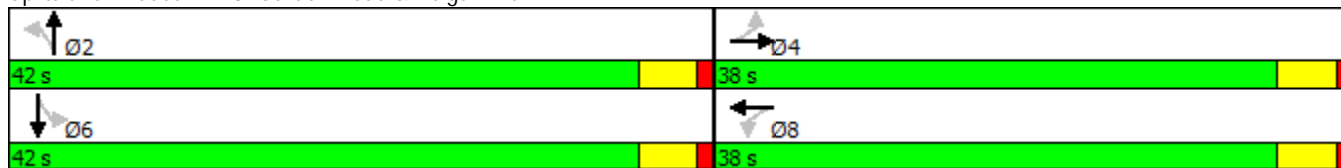


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	38.0	38.0		38.0	38.0		42.0	42.0		42.0	42.0	
Total Split (%)	47.5%	47.5%		47.5%	47.5%		52.5%	52.5%		52.5%	52.5%	
Maximum Green (s)	33.5	33.5		33.5	33.5		37.5	37.5		37.5	37.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		33.5			33.5			37.5			37.5	
Actuated g/C Ratio		0.42			0.42			0.47			0.47	
v/c Ratio		2.11			1.27			2.33			0.52	
Control Delay		527.4			155.8			626.1			17.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		527.4			155.8			626.1			17.5	
LOS		F			F			F			B	
Approach Delay		527.4			155.8			626.1			17.5	
Approach LOS		F			F			F			B	
Queue Length 50th (m)		~298.1			~198.2			~274.0			47.0	
Queue Length 95th (m)		#375.1			#271.7			#348.6			73.6	
Internal Link Dist (m)		99.2			158.0			88.9			77.5	
Turn Bay Length (m)												
Base Capacity (vph)		543			759			434			852	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		2.11			1.27			2.33			0.52	

Intersection Summary

Area Type:	Other
Cycle Length:	80
Actuated Cycle Length:	80
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	2.33
Intersection Signal Delay:	391.9
Intersection LOS:	F
Intersection Capacity Utilization:	191.9%
ICU Level of Service:	H
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 18: Garden Road & Peigan Trail



Lanes, Volumes, Timings
27: 100 Street & 61 Avenue

2030 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	223	221	118	254	157	72	96	180	195	88	224	126
Future Volume (vph)	223	221	118	254	157	72	96	180	195	88	224	126
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	60.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972			0.980			0.944			0.961	
Flt Protected		0.981			0.974			0.990			0.990	
Satd. Flow (prot)	0	1776	0	0	1778	0	0	1741	0	0	1772	0
Flt Permitted		0.675			0.558			0.768			0.763	
Satd. Flow (perm)	0	1222	0	0	1019	0	0	1350	0	0	1366	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		25			17			55			31	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		134.0			133.1			117.7			140.8	
Travel Time (s)		9.6			9.6			8.5			10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	242	240	128	276	171	78	104	196	212	96	243	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	610	0	0	525	0	0	512	0	0	476	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
27: 100 Street & 61 Avenue

2030 Unimproved
12-01-2020



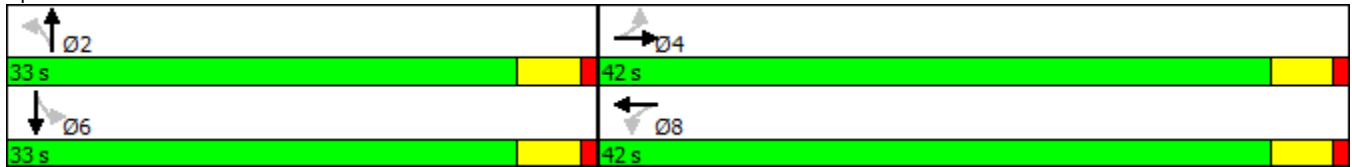
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	42.0	42.0		42.0	42.0		33.0	33.0		33.0	33.0	
Total Split (%)	56.0%	56.0%		56.0%	56.0%		44.0%	44.0%		44.0%	44.0%	
Maximum Green (s)	37.5	37.5		37.5	37.5		28.5	28.5		28.5	28.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		37.5			37.5			27.5			27.5	
Actuated g/C Ratio		0.51			0.51			0.37			0.37	
v/c Ratio		0.97			1.00			0.96			0.90	
Control Delay		48.7			61.0			52.2			44.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		48.7			61.0			52.2			44.3	
LOS		D			E			D			D	
Approach Delay		48.7			61.0			52.2			44.3	
Approach LOS		D			E			D			D	
Queue Length 50th (m)		81.2			~75.4			65.2			60.9	
Queue Length 95th (m)		#154.3			#141.7			#128.1			#119.0	
Internal Link Dist (m)		110.0			109.1			93.7			116.8	
Turn Bay Length (m)												
Base Capacity (vph)		632			525			554			545	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.97			1.00			0.92			0.87	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 74
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 51.6
 Intersection LOS: D
 Intersection Capacity Utilization 82.4%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

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

Splits and Phases: 27: 100 Street & 61 Avenue



Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

2030 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	455	2450	409	231	2119	74	509	82	96	65	128	697
Future Volume (vph)	455	2450	409	231	2119	74	509	82	96	65	128	697
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		125.0	125.0		0.0	0.0		60.0	0.0		0.0
Storage Lanes	2		1	1		1	2		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	1770	5085	1583	3433	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.059			0.950			0.699		
Satd. Flow (perm)	3433	5085	1583	110	5085	1583	3433	1863	1583	1302	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			357			142			109			329
Link Speed (k/h)		50			50			50				50
Link Distance (m)		183.8			169.8			154.4				195.2
Travel Time (s)		13.2			12.2			11.1				14.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	495	2663	445	251	2303	80	553	89	104	71	139	758
Shared Lane Traffic (%)												
Lane Group Flow (vph)	495	2663	445	251	2303	80	553	89	104	71	139	758
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8		8			2	6		Free

Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

2030 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	26.0	78.0	78.0	20.0	72.0	72.0	27.6	41.4	41.4	10.6	24.4	
Total Split (%)	17.3%	52.0%	52.0%	13.3%	48.0%	48.0%	18.4%	27.6%	27.6%	7.1%	16.3%	
Maximum Green (s)	21.5	73.5	73.5	15.5	67.5	67.5	23.1	36.9	36.9	6.1	19.9	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	21.5	73.5	73.5	83.0	67.5	67.5	23.1	36.9	36.9	26.0	19.9	150.0
Actuated g/C Ratio	0.14	0.49	0.49	0.55	0.45	0.45	0.15	0.25	0.25	0.17	0.13	1.00
v/c Ratio	1.01	1.07	0.46	1.08	1.01	0.10	1.05	0.19	0.22	0.29	0.56	0.48
Control Delay	105.0	76.8	6.5	125.5	61.2	0.3	111.8	46.2	7.9	42.7	70.6	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.0	76.8	6.5	125.5	61.2	0.3	111.8	46.2	7.9	42.7	70.6	1.0
LOS	F	E	A	F	E	A	F	D	A	D	E	A
Approach Delay		72.0			65.5			89.5			14.1	
Approach LOS		E			E			F			B	
Queue Length 50th (m)	-81.7	-336.9	14.6	-71.2	-265.3	0.0	-96.5	22.3	0.0	15.9	41.4	0.0
Queue Length 95th (m)	#120.7	#362.6	40.2	#130.4	#303.5	0.0	#135.4	38.6	14.3	28.9	65.6	0.0
Internal Link Dist (m)		159.8			145.8			130.4			171.2	
Turn Bay Length (m)	125.0		125.0	125.0					60.0			
Base Capacity (vph)	492	2491	957	232	2288	790	528	458	471	244	247	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	1.07	0.46	1.08	1.01	0.10	1.05	0.19	0.22	0.29	0.56	0.48

Intersection Summary

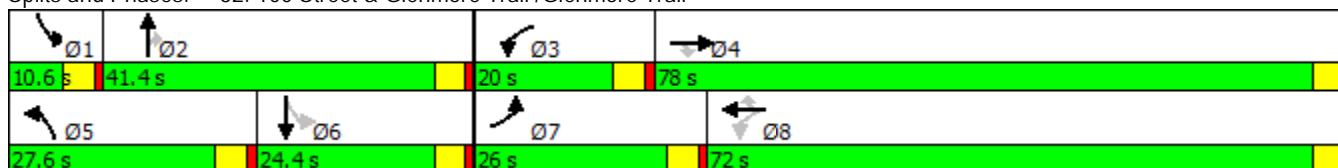
Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Natural Cycle:	150
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.08
Intersection Signal Delay:	64.4
Intersection LOS:	E
Intersection Capacity Utilization:	96.4%
ICU Level of Service:	F
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

Lanes, Volumes, Timings
 32: 100 Street & Glenmore Trail /Glenmore Trail

2030 Unimproved
 12-01-2020

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

Splits and Phases: 32: 100 Street & Glenmore Trail /Glenmore Trail



Lanes, Volumes, Timings
37: RR 284 & Peigan Trail/TWP 240

2030 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↘			↕	↗		↕	
Traffic Volume (vph)	70	283	136	121	325	18	208	550	181	4	448	45
Future Volume (vph)	70	283	136	121	325	18	208	550	181	4	448	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		15.0	75.0		0.0	0.0		15.0	0.0		0.0
Storage Lanes	0		1	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992				0.850		0.988	
Flt Protected		0.990		0.950				0.986				
Satd. Flow (prot)	0	1844	1583	1770	1848	0	0	1837	1583	0	1840	0
Flt Permitted		0.819		0.160				0.673			0.996	
Satd. Flow (perm)	0	1526	1583	298	1848	0	0	1254	1583	0	1833	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			73		3				73			9
Link Speed (k/h)		50			50			50				50
Link Distance (m)		141.3			146.3			96.2				83.8
Travel Time (s)		10.2			10.5			6.9				6.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	308	148	132	353	20	226	598	197	4	487	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	384	148	132	373	0	0	824	197	0	540	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2	1	1		2
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0		10.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0		0.6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4		3	8			2				6
Permitted Phases	4		4	8			2		2	6		

Lanes, Volumes, Timings
37: RR 284 & Peigan Trail/TWP 240

2030 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	9.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	25.0	25.0	25.0	9.5	34.5		55.5	55.5	55.5	55.5	55.5	
Total Split (%)	27.8%	27.8%	27.8%	10.6%	38.3%		61.7%	61.7%	61.7%	61.7%	61.7%	
Maximum Green (s)	20.5	20.5	20.5	5.0	30.0		51.0	51.0	51.0	51.0	51.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.5	4.5	4.5	4.5			4.5	4.5		4.5	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	
Walk Time (s)	7.0	7.0	7.0		7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0		0	0	0	0	0	
Act Effect Green (s)		20.5	20.5	30.0	30.0			51.0	51.0		51.0	
Actuated g/C Ratio		0.23	0.23	0.33	0.33			0.57	0.57		0.57	
v/c Ratio		1.11	0.36	0.73	0.60			1.16	0.21		0.52	
Control Delay		115.1	18.2	47.8	29.8			109.6	6.5		14.0	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		115.1	18.2	47.8	29.8			109.6	6.5		14.0	
LOS		F	B	D	C			F	A		B	
Approach Delay		88.1			34.5			89.7			14.0	
Approach LOS		F			C			F			B	
Queue Length 50th (m)		~80.4	11.1	17.1	55.6			~179.3	9.9		55.1	
Queue Length 95th (m)		#135.9	28.2	#40.8	85.6			#250.8	20.4		82.7	
Internal Link Dist (m)		117.3			122.3			72.2			59.8	
Turn Bay Length (m)			15.0	75.0					15.0			
Base Capacity (vph)		347	416	181	618			710	928		1042	
Starvation Cap Reductn		0	0	0	0			0	0		0	
Spillback Cap Reductn		0	0	0	0			0	0		0	
Storage Cap Reductn		0	0	0	0			0	0		0	
Reduced v/c Ratio		1.11	0.36	0.73	0.60			1.16	0.21		0.52	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.16
 Intersection Signal Delay: 62.9
 Intersection LOS: E
 Intersection Capacity Utilization 118.9%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.






















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

Splits and Phases: 37: RR 284 & Peigan Trail/TWP 240



Lanes, Volumes, Timings
42: RR 284 & Glenmore Trail

2030 Unimproved
12-01-2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	670	1528	392	62	1133	62	542	44	72	112	59	674
Future Volume (vph)	670	1528	392	62	1133	62	542	44	72	112	59	674
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	200.0		30.0	0.0		30.0	100.0		0.0	0.0		125.0
Storage Lanes	2		1	0		1	1		0	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.907				0.850
Flt Protected	0.950				0.997		0.950				0.968	
Satd. Flow (prot)	3433	3539	1583	0	3529	1583	1770	1690	0	0	1803	1583
Flt Permitted	0.950				0.594		0.580				0.732	
Satd. Flow (perm)	3433	3539	1583	0	2102	1583	1080	1690	0	0	1364	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			156			55		18				283
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		223.9			290.4			160.7			206.5	
Travel Time (s)		16.1			20.9			11.6			14.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	728	1661	426	67	1232	67	589	48	78	122	64	733
Shared Lane Traffic (%)												
Lane Group Flow (vph)	728	1661	426	0	1299	67	589	126	0	0	186	733
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases			4	8		8	2			6		6

Lanes, Volumes, Timings
42: RR 284 & Glenmore Trail

2030 Unimproved
12-01-2020



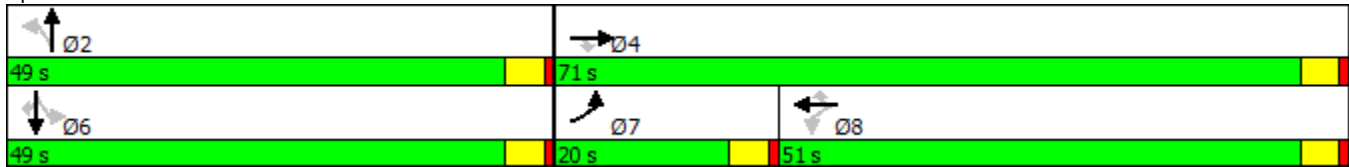
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8	8	2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	20.0	71.0	71.0	51.0	51.0	51.0	49.0	49.0		49.0	49.0	49.0
Total Split (%)	16.7%	59.2%	59.2%	42.5%	42.5%	42.5%	40.8%	40.8%		40.8%	40.8%	40.8%
Maximum Green (s)	15.5	66.5	66.5	46.5	46.5	46.5	44.5	44.5		44.5	44.5	44.5
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Min	Min		Min	Min	Min
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)	15.5	66.5	66.5		46.5	46.5	44.5	44.5			44.5	44.5
Actuated g/C Ratio	0.13	0.55	0.55		0.39	0.39	0.37	0.37			0.37	0.37
v/c Ratio	1.64	0.85	0.45		1.60	0.10	1.47	0.20			0.37	0.96
Control Delay	333.2	27.8	11.2		302.4	8.5	256.3	22.8			30.2	47.0
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	333.2	27.8	11.2		302.4	8.5	256.3	22.8			30.2	47.0
LOS	F	C	B		F	A	F	C			C	D
Approach Delay		104.2			288.0			215.2			43.6	
Approach LOS		F			F			F			D	
Queue Length 50th (m)	~134.6	174.0	36.1		~242.0	1.8	~200.5	17.8			33.3	122.5
Queue Length 95th (m)	#173.4	209.5	60.7		#286.3	11.3	#271.7	32.4			54.0	#209.6
Internal Link Dist (m)		199.9			266.4			136.7			182.5	
Turn Bay Length (m)	200.0		30.0			30.0	100.0					125.0
Base Capacity (vph)	443	1961	946		814	647	400	638			505	765
Starvation Cap Reductn	0	0	0		0	0	0	0			0	0
Spillback Cap Reductn	0	0	0		0	0	0	0			0	0
Storage Cap Reductn	0	0	0		0	0	0	0			0	0
Reduced v/c Ratio	1.64	0.85	0.45		1.60	0.10	1.47	0.20			0.37	0.96

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Natural Cycle:	120
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.64
Intersection Signal Delay:	151.4
Intersection LOS:	F
Intersection Capacity Utilization:	123.3%
ICU Level of Service:	H
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

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

Splits and Phases: 42: RR 284 & Glenmore Trail



Lanes, Volumes, Timings
52: RR 283 & Glenmore Trail

2030 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	450	1087	174	77	809	42	38	10	21	38	111	410
Future Volume (vph)	450	1087	174	77	809	42	38	10	21	38	111	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		75.0	125.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.993			0.959			0.901	
Flt Protected	0.950			0.950				0.973			0.997	
Satd. Flow (prot)	1770	1863	1583	1770	1850	0	0	1738	0	0	1673	0
Flt Permitted	0.098			0.110				0.427			0.975	
Satd. Flow (perm)	183	1863	1583	205	1850	0	0	763	0	0	1636	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			189		4			23			151	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		182.4			198.2			127.6			172.2	
Travel Time (s)		13.1			14.3			9.2			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	489	1182	189	84	879	46	41	11	23	41	121	446
Shared Lane Traffic (%)												
Lane Group Flow (vph)	489	1182	189	84	925	0	0	75	0	0	608	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		

Lanes, Volumes, Timings
52: RR 283 & Glenmore Trail

2030 Unimproved
12-01-2020



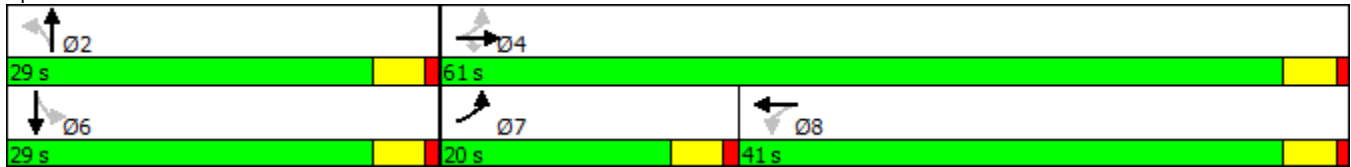
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	20.0	61.0	61.0	41.0	41.0		29.0	29.0		29.0	29.0	
Total Split (%)	22.2%	67.8%	67.8%	45.6%	45.6%		32.2%	32.2%		32.2%	32.2%	
Maximum Green (s)	15.5	56.5	56.5	36.5	36.5		24.5	24.5		24.5	24.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Walk Time (s)		7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0	0		0	0	
Act Effect Green (s)	56.5	56.5	56.5	36.5	36.5		24.5	24.5		24.5	24.5	
Actuated g/C Ratio	0.63	0.63	0.63	0.41	0.41		0.27	0.27		0.27	0.27	
v/c Ratio	1.26	1.01	0.18	1.01	1.23		0.33	0.33		0.33	0.33	
Control Delay	161.8	47.7	1.5	136.0	142.0		24.1	24.1		24.1	24.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	161.8	47.7	1.5	136.0	142.0		24.1	24.1		24.1	24.1	
LOS	F	D	A	F	F		C	C		C	C	
Approach Delay		73.0					24.1	24.1		24.1	24.1	
Approach LOS		E					C	C		C	C	
Queue Length 50th (m)	~97.0	~203.7	0.0	~15.3	~210.9		7.4	7.4		7.4	7.4	
Queue Length 95th (m)	#158.8	#306.4	7.2	#45.7	#286.0		20.4	20.4		20.4	20.4	
Internal Link Dist (m)		158.4					103.6	103.6		103.6	103.6	
Turn Bay Length (m)	30.0		75.0	125.0								
Base Capacity (vph)	388	1169	1064	83	752		224	224		224	224	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	1.26	1.01	0.18	1.01	1.23		0.33	0.33		0.33	0.33	

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.26
Intersection Signal Delay:	94.8
Intersection LOS:	F
Intersection Capacity Utilization:	114.3%
ICU Level of Service:	H
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

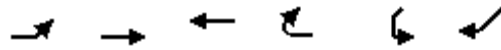
95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 52: RR 283 & Glenmore Trail



Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

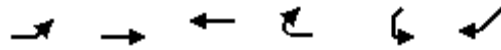
2030 Unimproved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑			
Traffic Volume (vph)	706	2388	2771	0	0	0
Future Volume (vph)	706	2388	2771	0	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (m)	200.0			0.0	0.0	0.0
Storage Lanes	2			0	0	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	0.97	0.91	0.91	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	3433	5085	5085	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	5085	5085	0	0	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		662.8	149.5		114.0	
Travel Time (s)		47.7	10.8		8.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	767	2596	3012	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	767	2596	3012	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.2	7.2		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors	1	2	2			
Detector Template	Left	Thru	Thru			
Leading Detector (m)	2.0	10.0	10.0			
Trailing Detector (m)	0.0	0.0	0.0			
Detector 1 Position(m)	0.0	0.0	0.0			
Detector 1 Size(m)	2.0	0.6	0.6			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0	0.0			
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						

Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

2030 Unimproved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Detector Phase	7	4	8			
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5	22.5			
Total Split (s)	24.0	80.0	56.0			
Total Split (%)	30.0%	100.0%	70.0%			
Maximum Green (s)	19.5	75.5	51.5			
Yellow Time (s)	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5			
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0			
Recall Mode	None	None	None			
Walk Time (s)		7.0	7.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effct Green (s)	19.3	79.8	51.5			
Actuated g/C Ratio	0.24	1.00	0.65			
v/c Ratio	0.92	0.51	0.92			
Control Delay	48.2	0.4	18.5			
Queue Delay	0.0	0.0	0.0			
Total Delay	48.2	0.4	18.5			
LOS	D	A	B			
Approach Delay		11.3	18.5			
Approach LOS		B	B			
Queue Length 50th (m)	61.7	0.0	135.4			
Queue Length 95th (m)	#95.4	0.0	166.3			
Internal Link Dist (m)		638.8	125.5		90.0	
Turn Bay Length (m)	200.0					
Base Capacity (vph)	838	5037	3280			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.92	0.52	0.92			

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 79.8
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 14.7
 Intersection LOS: B
 Intersection Capacity Utilization 86.3%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 67: Glenmore Trail & Stoney Trail



Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2030 Unimproved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↔	↑↑↑		
Traffic Volume (vph)	2783	0	878	2004	0	0
Future Volume (vph)	2783	0	878	2004	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	175.0		0.0	0.0
Storage Lanes		0	2		0	0
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	5085	0	3433	5085	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	5085	0	3433	5085	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	199.5			662.8	102.4	
Travel Time (s)	14.4			47.7	7.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3025	0	954	2178	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3025	0	954	2178	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.2			7.2	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2		1	2		
Detector Template	Thru		Left	Thru		
Leading Detector (m)	10.0		2.0	10.0		
Trailing Detector (m)	0.0		0.0	0.0		
Detector 1 Position(m)	0.0		0.0	0.0		
Detector 1 Size(m)	0.6		2.0	0.6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						

Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2030 Unimproved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		3	8		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	22.5		9.5	22.5		
Total Split (s)	59.5		30.5	90.0		
Total Split (%)	66.1%		33.9%	100.0%		
Maximum Green (s)	55.0		26.0	85.5		
Yellow Time (s)	3.5		3.5	3.5		
All-Red Time (s)	1.0		1.0	1.0		
Lost Time Adjust (s)	0.0		0.0	0.0		
Total Lost Time (s)	4.5		4.5	4.5		
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		None	None		
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	11.0			11.0		
Pedestrian Calls (#/hr)	0			0		
Act Effect Green (s)	55.0		26.0	90.0		
Actuated g/C Ratio	0.61		0.29	1.00		
v/c Ratio	0.97		0.96	0.43		
Control Delay	28.7		53.6	0.3		
Queue Delay	0.0		0.0	0.0		
Total Delay	28.7		53.6	0.3		
LOS	C		D	A		
Approach Delay	28.7			16.5		
Approach LOS	C			B		
Queue Length 50th (m)	176.4		87.7	0.0		
Queue Length 95th (m)	#235.8		#128.5	0.0		
Internal Link Dist (m)	175.5			638.8	78.4	
Turn Bay Length (m)			175.0			
Base Capacity (vph)	3107		991	5085		
Starvation Cap Reductn	0		0	0		
Spillback Cap Reductn	0		0	0		
Storage Cap Reductn	0		0	0		
Reduced v/c Ratio	0.97		0.96	0.43		

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 22.5
 Intersection LOS: C
 Intersection Capacity Utilization 86.3%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 68: Stoney Trail & Glenmore Trail



Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

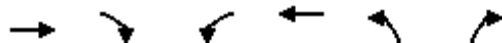
2030 Unimproved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↘	
Traffic Volume (vph)	1371	0	0	926	443	0
Future Volume (vph)	1371	0	0	926	443	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	421.0			179.4	93.7	
Travel Time (s)	30.3			12.9	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1490	0	0	1007	482	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1490	0	0	1007	482	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	7.2	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2			2	1	
Detector Template	Thru			Thru	Left	
Leading Detector (m)	10.0			10.0	2.0	
Trailing Detector (m)	0.0			0.0	0.0	
Detector 1 Position(m)	0.0			0.0	0.0	
Detector 1 Size(m)	0.6			0.6	2.0	
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0			0.0	0.0	
Detector 1 Queue (s)	0.0			0.0	0.0	
Detector 1 Delay (s)	0.0			0.0	0.0	
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA			NA	Prot	
Protected Phases	4			8	2	
Permitted Phases						
Detector Phase	4			8	2	
Switch Phase						
Minimum Initial (s)	5.0			5.0	5.0	

Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

2030 Unimproved
12-01-2020

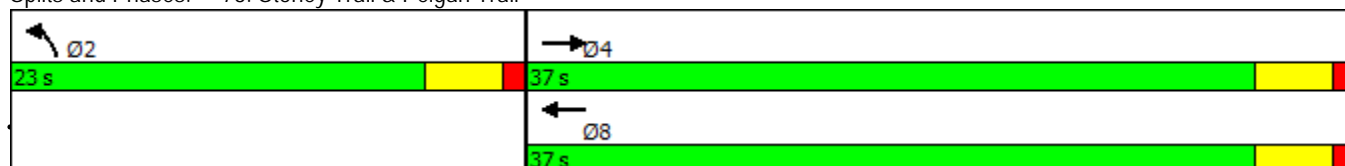


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	22.5			22.5	22.5	
Total Split (s)	37.0			37.0	23.0	
Total Split (%)	61.7%			61.7%	38.3%	
Maximum Green (s)	32.5			32.5	18.5	
Yellow Time (s)	3.5			3.5	3.5	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			None	Max	
Walk Time (s)	7.0			7.0	7.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effect Green (s)	29.0			29.0	18.6	
Actuated g/C Ratio	0.51			0.51	0.33	
v/c Ratio	0.82			0.56	0.43	
Control Delay	16.2			10.6	17.2	
Queue Delay	0.0			0.0	0.0	
Total Delay	16.2			10.6	17.2	
LOS	B			B	B	
Approach Delay	16.2			10.6	17.2	
Approach LOS	B			B	B	
Queue Length 50th (m)	64.7			35.4	22.6	
Queue Length 95th (m)	90.6			49.8	34.8	
Internal Link Dist (m)	397.0			155.4	69.7	
Turn Bay Length (m)						
Base Capacity (vph)	2042			2042	1127	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.73			0.49	0.43	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 56.7
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 14.5
 Intersection LOS: B
 Intersection Capacity Utilization 65.8%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 73: Stoney Trail & Peigan Trail



Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2030 Unimproved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	0	1497	1093	0	593	0
Future Volume (vph)	0	1497	1093	0	593	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	3539	0	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	3539	0	3433	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		133.7	421.0		94.2	
Travel Time (s)		9.6	30.3		6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1627	1188	0	645	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1627	1188	0	645	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		7.2	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors		2	2		1	
Detector Template		Thru	Thru		Left	
Leading Detector (m)		10.0	10.0		2.0	
Trailing Detector (m)		0.0	0.0		0.0	
Detector 1 Position(m)		0.0	0.0		0.0	
Detector 1 Size(m)		0.6	0.6		2.0	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases						
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		5.0	5.0		5.0	

Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2030 Unimproved
12-01-2020

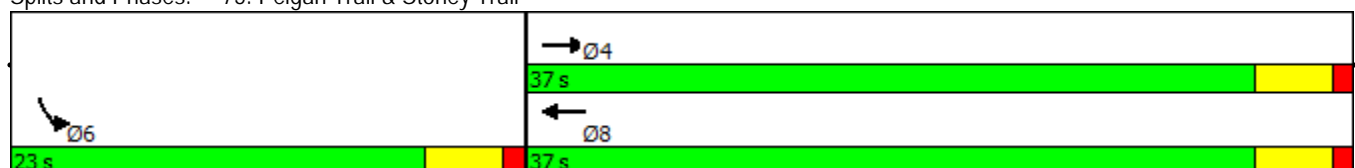


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		22.5	22.5		22.5	
Total Split (s)		37.0	37.0		23.0	
Total Split (%)		61.7%	61.7%		38.3%	
Maximum Green (s)		32.5	32.5		18.5	
Yellow Time (s)		3.5	3.5		3.5	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.5	4.5		4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		None	None		Max	
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effect Green (s)		30.7	30.7		18.5	
Actuated g/C Ratio		0.53	0.53		0.32	
v/c Ratio		0.87	0.64		0.59	
Control Delay		18.8	11.6		19.8	
Queue Delay		0.0	0.0		0.0	
Total Delay		18.8	11.6		19.8	
LOS		B	B		B	
Approach Delay		18.8	11.6		19.8	
Approach LOS		B	B		B	
Queue Length 50th (m)		76.0	44.9		32.3	
Queue Length 95th (m)		#107.9	62.9		47.5	
Internal Link Dist (m)		109.7	397.0		70.2	
Turn Bay Length (m)						
Base Capacity (vph)		1977	1977		1092	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		0	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.82	0.60		0.59	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 58.3
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 16.5
 Intersection LOS: B
 Intersection Capacity Utilization 65.8%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 75: Peigan Trail & Stoney Trail



Lanes, Volumes, Timings

2030 Unimproved

82:

12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	193	137	344	133	183	70	477	214	270	295	79
Future Volume (vph)	101	193	137	344	133	183	70	477	214	270	295	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		15.0	0.0		15.0	50.0		15.0
Storage Lanes	0		0	1		1	0		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.957				0.850			0.850			0.850
Flt Protected		0.988		0.950				0.994		0.950		
Satd. Flow (prot)	0	1761	0	1770	1863	1583	0	1852	1583	1770	1863	1583
Flt Permitted		0.876		0.290				0.907		0.093		
Satd. Flow (perm)	0	1562	0	540	1863	1583	0	1690	1583	173	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21				199			104			60
Link Speed (k/h)		50			50			50				50
Link Distance (m)		226.8			365.5			199.0				205.2
Travel Time (s)		16.3			26.3			14.3				14.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	110	210	149	374	145	199	76	518	233	293	321	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	469	0	374	145	199	0	594	233	293	321	86
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6				3.6
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2	6		6

Lanes, Volumes, Timings

2030 Unimproved

82:

12-01-2020



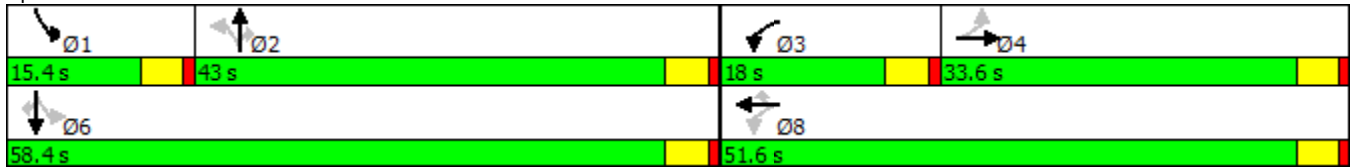
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	33.6	33.6		18.0	51.6	51.6	43.0	43.0	43.0	15.4	58.4	58.4
Total Split (%)	30.5%	30.5%		16.4%	46.9%	46.9%	39.1%	39.1%	39.1%	14.0%	53.1%	53.1%
Maximum Green (s)	29.1	29.1		13.5	47.1	47.1	38.5	38.5	38.5	10.9	53.9	53.9
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	Min	Min	Min	None	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0	0		0	0
Act Effect Green (s)		29.1		47.1	47.1	47.1		38.5	38.5	53.9	53.9	53.9
Actuated g/C Ratio		0.26		0.43	0.43	0.43		0.35	0.35	0.49	0.49	0.49
v/c Ratio		1.10		0.98	0.18	0.25		1.01	0.38	1.21	0.35	0.11
Control Delay		109.3		68.2	20.3	3.6		74.9	16.3	151.9	18.7	6.3
Queue Delay		0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		109.3		68.2	20.3	3.6		74.9	16.3	151.9	18.7	6.3
LOS		F		E	C	A		E	B	F	B	A
Approach Delay		109.3			40.6			58.4			72.9	
Approach LOS		F			D			E			E	
Queue Length 50th (m)		~116.6		60.0	19.9	0.0		~134.2	20.5	~64.8	43.2	2.9
Queue Length 95th (m)		#182.4		#124.5	33.5	13.5		#209.9	41.8	#120.4	64.4	11.4
Internal Link Dist (m)		202.8			341.5			175.0			181.2	
Turn Bay Length (m)				50.0		15.0			15.0	50.0		15.0
Base Capacity (vph)		428		382	797	791		591	621	243	912	806
Starvation Cap Reductn		0		0	0	0		0	0	0	0	0
Spillback Cap Reductn		0		0	0	0		0	0	0	0	0
Storage Cap Reductn		0		0	0	0		0	0	0	0	0
Reduced v/c Ratio		1.10		0.98	0.18	0.25		1.01	0.38	1.21	0.35	0.11

Intersection Summary

Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Natural Cycle:	110
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.21
Intersection Signal Delay:	66.2
Intersection LOS:	E
Intersection Capacity Utilization:	102.7%
ICU Level of Service:	G
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite.	
Queue shown is maximum after two cycles.	

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

Splits and Phases: 82:



HCM Unsignalized Intersection Capacity Analysis
47: RR 283 & TWP 240

2030 Unimproved
12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	213	74	125	8	87	25	127	440	4	51	229	228
Future Volume (vph)	213	74	125	8	87	25	127	440	4	51	229	228
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	232	80	136	9	95	27	138	478	4	55	249	248

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	448	131	620	552
Volume Left (vph)	232	9	138	55
Volume Right (vph)	136	27	4	248
Hadj (s)	-0.04	-0.08	0.07	-0.22
Departure Headway (s)	7.8	9.4	7.9	7.6
Degree Utilization, x	0.97	0.34	1.36	1.17
Capacity (veh/h)	448	376	466	479
Control Delay (s)	63.7	17.3	199.0	121.7
Approach Delay (s)	63.7	17.3	199.0	121.7
Approach LOS	F	C	F	F

Intersection Summary			
Delay		126.4	
Level of Service		F	
Intersection Capacity Utilization	92.1%	ICU Level of Service	F
Analysis Period (min)	15		

HCM Unsignalized Intersection Capacity Analysis

2030 Unimproved

57:

12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	5	7	116	24	18	0	87	89	76	0	53	16
Future Volume (Veh/h)	5	7	116	24	18	0	87	89	76	0	53	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	8	126	26	20	0	95	97	83	0	58	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	20			134			199	153	71	284	216	20
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	20			134			199	153	71	284	216	20
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			86	87	92	100	91	98
cM capacity (veh/h)	1596			1451			687	723	991	540	668	1058
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	139	46	275	75								
Volume Left	5	26	95	0								
Volume Right	126	0	83	17								
cSH	1596	1451	772	728								
Volume to Capacity	0.00	0.02	0.36	0.10								
Queue Length 95th (m)	0.1	0.4	12.9	2.7								
Control Delay (s)	0.3	4.3	12.2	10.5								
Lane LOS	A	A	B	B								
Approach Delay (s)	0.3	4.3	12.2	10.5								
Approach LOS			B	B								
Intersection Summary												
Average Delay			8.2									
Intersection Capacity Utilization			40.7%	ICU Level of Service		A						
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
62: RR 282 & Glenmore Trail

2030 Unimproved
12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Traffic Volume (veh/h)	171	974	0	0	667	115	0	0	0	250	0	261
Future Volume (Veh/h)	171	974	0	0	667	115	0	0	0	250	0	261
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	186	1059	0	0	725	125	0	0	0	272	0	284
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	850			1059			2218	2281	1059	2218	2218	788
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	850			1059			2218	2281	1059	2218	2218	788
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	76			100			100	100	100	0	100	27
cM capacity (veh/h)	788			658			7	30	273	25	33	391
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total	1245	850	0	272	284							
Volume Left	186	0	0	272	0							
Volume Right	0	125	0	0	284							
cSH	788	658	1700	25	391							
Volume to Capacity	0.24	0.00	0.00	10.68	0.73							
Queue Length 95th (m)	7.3	0.0	0.0	Err	44.8							
Control Delay (s)	7.5	0.0	0.0	Err	35.0							
Lane LOS	A		A	F	E							
Approach Delay (s)	7.5	0.0	0.0	4909.5								
Approach LOS			A	F								
Intersection Summary												
Average Delay			1033.2									
Intersection Capacity Utilization			126.7%		ICU Level of Service				H			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2030 Unimproved

88:

12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	121	164	83	108	93	100	50	283	151	71	217	76
Future Volume (vph)	121	164	83	108	93	100	50	283	151	71	217	76
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	132	178	90	117	101	109	54	308	164	77	236	83

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	400	327	526	396
Volume Left (vph)	132	117	54	77
Volume Right (vph)	90	109	164	83
Hadj (s)	-0.03	-0.09	-0.13	-0.05
Departure Headway (s)	9.2	9.5	9.1	9.2
Degree Utilization, x	1.02	0.86	1.33	1.01
Capacity (veh/h)	400	367	405	396
Control Delay (s)	81.4	49.2	189.2	78.1
Approach Delay (s)	81.4	49.2	189.2	78.1
Approach LOS	F	E	F	F

Intersection Summary			
Delay		108.6	
Level of Service		F	
Intersection Capacity Utilization		66.1%	ICU Level of Service C
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis

2030 Unimproved

93:

12-01-2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	58	158	37	145	183	27
Future Volume (vph)	58	158	37	145	183	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	63	172	40	158	199	29

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	235	198	228
Volume Left (vph)	63	40	0
Volume Right (vph)	172	0	29
Hadj (s)	-0.35	0.07	-0.04
Departure Headway (s)	4.6	4.8	4.7
Degree Utilization, x	0.30	0.27	0.30
Capacity (veh/h)	731	705	725
Control Delay (s)	9.5	9.6	9.7
Approach Delay (s)	9.5	9.6	9.7
Approach LOS	A	A	A

Intersection Summary			
Delay		9.6	
Level of Service		A	
Intersection Capacity Utilization	43.9%		ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Traffic Volume (vph)	450	490	20	35	505	41	0	1067	0	148	1138	515
Future Volume (vph)	450	490	20	35	505	41	0	1067	0	148	1138	515
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.997			0.989						0.953	
Flt Protected		0.977			0.997					0.950		
Satd. Flow (prot)	0	3447	0	0	3490	0	1863	3539	0	1770	3373	0
Flt Permitted		0.564			0.784					0.107		
Satd. Flow (perm)	0	1990	0	0	2744	0	1863	3539	0	199	3373	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			11						110	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		178.3			246.0			115.3			144.5	
Travel Time (s)		12.8			17.7			8.3			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	489	533	22	38	549	45	0	1160	0	161	1237	560
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1044	0	0	632	0	0	1160	0	161	1797	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		9.5	22.5	
Total Split (s)	43.0	43.0		43.0	43.0		37.4	37.4		9.6	47.0	
Total Split (%)	47.8%	47.8%		47.8%	47.8%		41.6%	41.6%		10.7%	52.2%	
Maximum Green (s)	38.5	38.5		38.5	38.5		32.9	32.9		5.1	42.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		38.5			38.5			32.9		42.5	42.5	
Actuated g/C Ratio		0.43			0.43			0.37		0.47	0.47	
v/c Ratio		1.82dl			0.54			0.90		0.88	1.09	
Control Delay		138.1			20.8			37.7		61.9	74.2	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		138.1			20.8			37.7		61.9	74.2	
LOS		F			C			D		E	E	
Approach Delay		138.1			20.8			37.7			73.2	
Approach LOS		F			C			D			E	
Queue Length 50th (m)		~125.0			42.8			103.2		16.3	~190.1	
Queue Length 95th (m)		#165.7			59.6			#144.1		#50.1	#234.7	
Internal Link Dist (m)		154.3			222.0			91.3			120.5	
Turn Bay Length (m)										70.0		
Base Capacity (vph)		852			1180			1293		182	1650	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		1.23			0.54			0.90		0.88	1.09	

Intersection Summary

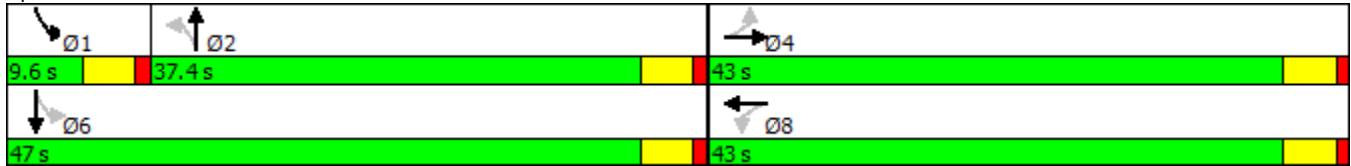
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.23
Intersection Signal Delay:	71.8
Intersection LOS:	E
Intersection Capacity Utilization:	110.6%
ICU Level of Service:	H
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

Lanes, Volumes, Timings
 3: 52 Street & 61 Avenue

2040 Unimproved
 12-01-2020

- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
- dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3: 52 Street & 61 Avenue



Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	2085	956	0	2459	6	721	488	0	0	0	122
Future Volume (vph)	150	2085	956	0	2459	6	721	488	0	0	0	122
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	150.0		0.0	0.0		0.0	100.0		0.0	0.0		0.0
Storage Lanes	2		1	0		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.95	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.850	
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	3539	1583	0	3539	0	3433	1863	0	1863	1583	0
Flt Permitted	0.950						0.610					
Satd. Flow (perm)	3433	3539	1583	0	3539	0	2204	1863	0	1863	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			657									78
Link Speed (k/h)		50			50			50				50
Link Distance (m)		155.4			145.0			144.7				110.1
Travel Time (s)		11.2			10.4			10.4				7.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	2266	1039	0	2673	7	784	530	0	0	0	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	163	2266	1039	0	2680	0	784	530	0	0	133	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm		NA		Perm	NA		Perm		NA
Protected Phases	7	4			8			2				6
Permitted Phases			4	8			2			6		

Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	11.0	102.0	102.0	91.0	91.0		48.0	48.0		48.0	48.0	
Total Split (%)	7.3%	68.0%	68.0%	60.7%	60.7%		32.0%	32.0%		32.0%	32.0%	
Maximum Green (s)	6.5	97.5	97.5	86.5	86.5		43.5	43.5		43.5	43.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead			Lag			Lag			Lag		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0	0		0	0	
Act Effect Green (s)	6.5	97.5	97.5		86.5		43.5	43.5				43.5
Actuated g/C Ratio	0.04	0.65	0.65		0.58		0.29	0.29				0.29
v/c Ratio	1.10	0.99	0.83		1.31		1.23	0.98				0.26
Control Delay	166.6	41.2	13.1		174.1		159.9	86.8				18.9
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0				0.0
Total Delay	166.6	41.2	13.1		174.1		159.9	86.8				18.9
LOS	F	D	B		F		F	F				B
Approach Delay		38.7			174.1			130.4				18.9
Approach LOS		D			F			F				B
Queue Length 50th (m)	-29.6	342.8	89.5		-567.0		-155.4	165.4				12.7
Queue Length 95th (m)	#55.1	#421.8	169.5		#603.5		#197.2	#242.7				30.8
Internal Link Dist (m)		131.4			121.0			120.7				86.1
Turn Bay Length (m)	150.0						100.0					
Base Capacity (vph)	148	2300	1258		2040		639	540				514
Starvation Cap Reductn	0	0	0		0		0	0				0
Spillback Cap Reductn	0	0	0		0		0	0				0
Storage Cap Reductn	0	0	0		0		0	0				0
Reduced v/c Ratio	1.10	0.99	0.83		1.31		1.23	0.98				0.26

Intersection Summary

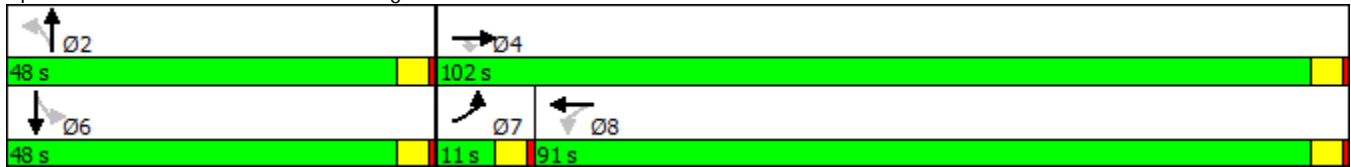
Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.31
 Intersection Signal Delay: 102.0
 Intersection Capacity Utilization 146.2%
 Analysis Period (min) 15
 Intersection LOS: F
 ICU Level of Service H
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
 8: 84 Street & Peigan Trail

2040 Unimproved
 12-01-2020

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

Splits and Phases: 8: 84 Street & Peigan Trail



Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	103	694	392	0	783	95	441	146	0	20	58	216
Future Volume (vph)	103	694	392	0	783	95	441	146	0	20	58	216
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	60.0		0.0	0.0		100.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.955			0.984							0.901
Flt Protected		0.996						0.964				0.997
Satd. Flow (prot)	0	1772	0	1863	1833	0	0	1796	1863	0	1673	0
Flt Permitted		0.157						0.479				0.562
Satd. Flow (perm)	0	279	0	1863	1833	0	0	892	1863	0	943	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			6							109
Link Speed (k/h)		50			50			50				50
Link Distance (m)		90.4			116.8			200.2				92.7
Travel Time (s)		6.5			8.4			14.4				6.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	112	754	426	0	851	103	479	159	0	22	63	235
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1292	0	0	954	0	0	638	0	0	320	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0		10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0		0.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		

Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

2040 Unimproved
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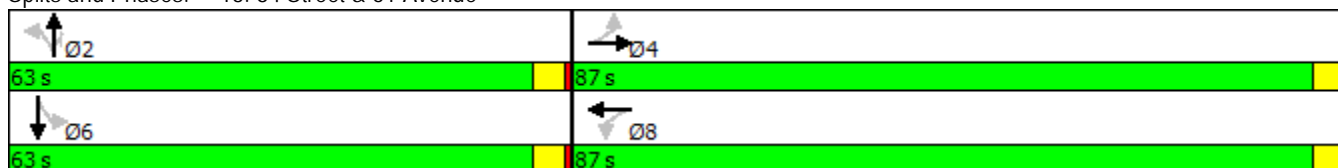
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	87.0	87.0		87.0	87.0		63.0	63.0	63.0	63.0	63.0	
Total Split (%)	58.0%	58.0%		58.0%	58.0%		42.0%	42.0%	42.0%	42.0%	42.0%	
Maximum Green (s)	82.5	82.5		82.5	82.5		58.5	58.5	58.5	58.5	58.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0			0.0
Total Lost Time (s)		4.5		4.5	4.5			4.5	4.5			4.5
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effct Green (s)		82.5			82.5			58.5				58.5
Actuated g/C Ratio		0.55			0.55			0.39				0.39
v/c Ratio		7.83			0.94			1.84				0.74
Control Delay		3093.2			49.6			416.8				36.8
Queue Delay		0.0			0.0			0.0				0.0
Total Delay		3093.2			49.6			416.8				36.8
LOS		F			D			F				D
Approach Delay		3093.2			49.6			416.8				36.8
Approach LOS		F			D			F				D
Queue Length 50th (m)		-742.3			270.1			-301.2				58.5
Queue Length 95th (m)		#829.2			#374.7			#379.1				102.9
Internal Link Dist (m)		66.4			92.8			176.2				68.7
Turn Bay Length (m)												
Base Capacity (vph)		165			1010			347				434
Starvation Cap Reductn		0			0			0				0
Spillback Cap Reductn		0			0			0				0
Storage Cap Reductn		0			0			0				0
Reduced v/c Ratio		7.83			0.94			1.84				0.74

Intersection Summary

Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Natural Cycle:	150
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	7.83
Intersection Signal Delay:	1348.8
Intersection LOS:	F
Intersection Capacity Utilization:	177.6%
ICU Level of Service:	H
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

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

Splits and Phases: 13: 84 Street & 61 Avenue



Lanes, Volumes, Timings
18: Garden Road & Peigan Trail

2040 Unimproved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔	↔		↔↔		↔↔	↔		↔	↔	
Traffic Volume (vph)	202	1411	473	58	1612	220	642	427	109	106	269	212
Future Volume (vph)	202	1411	473	58	1612	220	642	427	109	106	269	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.983			0.970			0.934	
Flt Protected		0.994			0.998		0.950			0.950		
Satd. Flow (prot)	0	3518	1583	0	3472	0	3433	1807	0	1770	1740	0
Flt Permitted		0.499			0.576		0.950			0.200		
Satd. Flow (perm)	0	1766	1583	0	2004	0	3433	1807	0	373	1740	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			365		17			10			13	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.2			182.0			112.9			101.5	
Travel Time (s)		8.9			13.1			8.1			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	220	1534	514	63	1752	239	698	464	118	115	292	230
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1754	514	0	2054	0	698	582	0	115	522	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			7.2			7.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8						6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	

Lanes, Volumes, Timings
18: Garden Road & Peigan Trail

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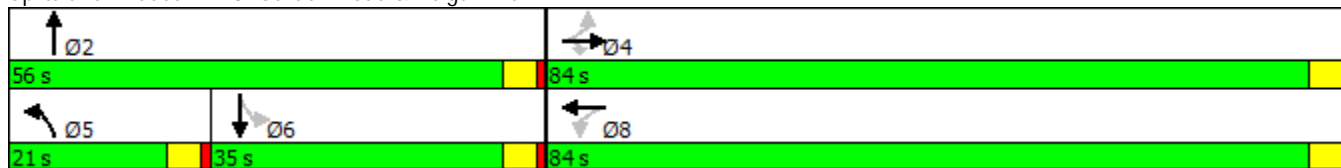


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5		22.5	22.5	
Total Split (s)	84.0	84.0	84.0	84.0	84.0		21.0	56.0		35.0	35.0	
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%		15.0%	40.0%		25.0%	25.0%	
Maximum Green (s)	79.5	79.5	79.5	79.5	79.5		16.5	51.5		30.5	30.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		Max	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0		0	0	
Act Effect Green (s)		79.5	79.5		79.5		16.5	51.5		30.5	30.5	
Actuated g/C Ratio		0.57	0.57		0.57		0.12	0.37		0.22	0.22	
v/c Ratio		4.23dl	0.49		1.79		1.73	0.87		1.42	1.34	
Control Delay		366.4	6.2		384.8		373.0	55.1		286.0	211.0	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		366.4	6.2		384.8		373.0	55.1		286.0	211.0	
LOS		F	A		F		F	E		F	F	
Approach Delay		284.8			384.8			228.5			224.5	
Approach LOS		F			F			F			F	
Queue Length 50th (m)		~398.6	20.0		~474.4		~154.4	154.6		~45.0	~196.0	
Queue Length 95th (m)		#442.8	46.1		#518.0		#194.3	#221.8		#86.7	#269.6	
Internal Link Dist (m)		99.2			158.0			88.9			77.5	
Turn Bay Length (m)												
Base Capacity (vph)		1002	1056		1145		404	671		81	389	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		1.75	0.49		1.79		1.73	0.87		1.42	1.34	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.79
 Intersection Signal Delay: 300.0
 Intersection LOS: F
 Intersection Capacity Utilization 158.5%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 18: Garden Road & Peigan Trail



Lanes, Volumes, Timings
27: 100 Street & 61 Avenue

2040 Unimproved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	436	105	486	664	324	16	148	736	167	388	50
Future Volume (vph)	210	436	105	486	664	324	16	148	736	167	388	50
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	120.0		0.0	0.0		25.0	60.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.951				0.850		0.989	
Flt Protected	0.950			0.950				0.995			0.986	
Satd. Flow (prot)	1770	1809	0	1770	1771	0	0	1853	1583	0	1816	0
Flt Permitted	0.092			0.083				0.921			0.763	
Satd. Flow (perm)	171	1809	0	155	1771	0	0	1716	1583	0	1406	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			23				500			4
Link Speed (k/h)		50			50			50				50
Link Distance (m)		134.0			133.1			117.7				140.8
Travel Time (s)		9.6			9.6			8.5				10.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	228	474	114	528	722	352	17	161	800	182	422	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	228	588	0	528	1074	0	0	178	800	0	658	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0		10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0		0.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases	7	4		3	8			2				6
Permitted Phases	4			8			2		2	6		

Lanes, Volumes, Timings
27: 100 Street & 61 Avenue

2040 Unimproved
12-01-2020



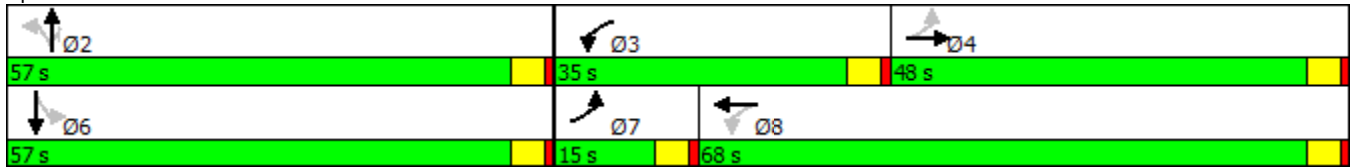
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	15.0	48.0		35.0	68.0		57.0	57.0	57.0	57.0	57.0	
Total Split (%)	10.7%	34.3%		25.0%	48.6%		40.7%	40.7%	40.7%	40.7%	40.7%	
Maximum Green (s)	10.5	43.5		30.5	63.5		52.5	52.5	52.5	52.5	52.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Min	Min	Min	Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effect Green (s)	54.0	43.5		78.5	63.5		52.5	52.5	52.5	52.5	52.5	
Actuated g/C Ratio	0.39	0.31		0.56	0.45		0.38	0.38	0.38	0.38	0.38	
v/c Ratio	1.23	1.04		1.21	1.32		0.28	0.88	0.88	0.88	1.24	
Control Delay	177.2	93.2		149.9	184.0		32.0	27.4	27.4	27.4	162.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	177.2	93.2		149.9	184.0		32.0	27.4	27.4	27.4	162.4	
LOS	F	F		F	F		C	C	C	C	F	
Approach Delay		116.6			172.8		28.2				162.4	
Approach LOS		F			F		C				F	
Queue Length 50th (m)	~65.5	~182.0		~170.9	~401.1		36.0	96.5	96.5	96.5	~238.1	
Queue Length 95th (m)	#121.3	#257.4		#244.5	#485.8		55.5	#192.6	#192.6	#192.6	#316.0	
Internal Link Dist (m)		110.0			109.1		93.7				116.8	
Turn Bay Length (m)	25.0			120.0					25.0			
Base Capacity (vph)	185	568		438	815		643	906	906	906	529	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	1.23	1.04		1.21	1.32		0.28	0.88	0.88	0.88	1.24	

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.32
 Intersection Signal Delay: 124.9
 Intersection LOS: F
 Intersection Capacity Utilization 122.7%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

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

Splits and Phases: 27: 100 Street & 61 Avenue



Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

2040 Unimproved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	727	2809	582	407	2923	114	585	147	243	58	131	912
Future Volume (vph)	727	2809	582	407	2923	114	585	147	243	58	131	912
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		125.0	125.0		0.0	0.0		60.0	0.0		0.0
Storage Lanes	2		1	2		1	2		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	5085	1583	3433	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.656		
Satd. Flow (perm)	3433	5085	1583	3433	5085	1583	3433	1863	1583	1222	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			452			142			206			351
Link Speed (k/h)		50			50			50				50
Link Distance (m)		183.8			169.8			154.4				195.2
Travel Time (s)		13.2			12.2			11.1				14.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	790	3053	633	442	3177	124	636	160	264	63	142	991
Shared Lane Traffic (%)												
Lane Group Flow (vph)	790	3053	633	442	3177	124	636	160	264	63	142	991
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		Free

Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	29.0	82.0	82.0	19.0	72.0	72.0	25.0	38.6	38.6	10.4	24.0	
Total Split (%)	19.3%	54.7%	54.7%	12.7%	48.0%	48.0%	16.7%	25.7%	25.7%	6.9%	16.0%	
Maximum Green (s)	24.5	77.5	77.5	14.5	67.5	67.5	20.5	34.1	34.1	5.9	19.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	24.5	77.5	77.5	14.5	67.5	67.5	20.5	36.2	36.2	25.4	19.5	150.0
Actuated g/C Ratio	0.16	0.52	0.52	0.10	0.45	0.45	0.14	0.24	0.24	0.17	0.13	1.00
v/c Ratio	1.41	1.16	0.61	1.34	1.39	0.16	1.36	0.36	0.49	0.28	0.59	0.63
Control Delay	239.2	111.6	9.1	219.3	211.1	2.8	220.5	50.9	15.6	44.1	72.2	1.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	239.2	111.6	9.1	219.3	211.1	2.8	220.5	50.9	15.6	44.1	72.2	1.9
LOS	F	F	A	F	F	A	F	D	B	D	E	A
Approach Delay		119.6			205.2			143.9				12.5
Approach LOS		F			F			F				B
Queue Length 50th (m)	~170.5	~413.5	34.7	~92.3	~483.3	0.0	~134.3	42.7	14.7	14.5	42.5	0.0
Queue Length 95th (m)	#212.3	#436.1	73.0	#128.5	#504.9	9.0	#174.1	66.0	43.7	26.9	66.9	0.0
Internal Link Dist (m)		159.8			145.8			130.4				171.2
Turn Bay Length (m)	125.0		125.0	125.0					60.0			
Base Capacity (vph)	560	2627	1036	331	2288	790	469	449	538	228	242	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.41	1.16	0.61	1.34	1.39	0.16	1.36	0.36	0.49	0.28	0.59	0.63

Intersection Summary

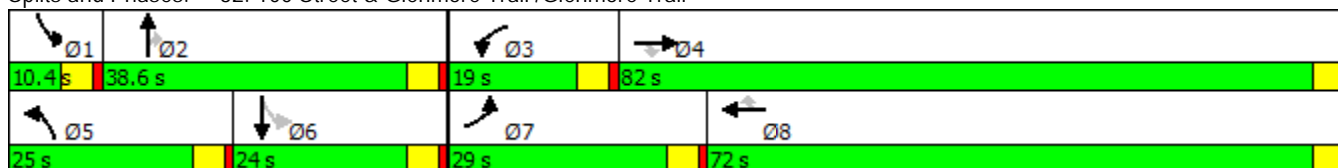
Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Natural Cycle:	150
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.41
Intersection Signal Delay:	140.4
Intersection LOS:	F
Intersection Capacity Utilization:	115.8%
ICU Level of Service:	H
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

Lanes, Volumes, Timings
 32: 100 Street & Glenmore Trail /Glenmore Trail

2040 Unimproved
 12-01-2020

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

Splits and Phases: 32: 100 Street & Glenmore Trail /Glenmore Trail



Lanes, Volumes, Timings
37: RR 284 & Peigan Trail/TWP 240

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	775	401	242	724	10	611	822	237	49	718	51
Future Volume (vph)	88	775	401	242	724	10	611	822	237	49	718	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		15.0	75.0		0.0	0.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.998				0.850		0.992	
Flt Protected	0.950			0.950			0.950				0.997	
Satd. Flow (prot)	1770	1863	1583	1770	1859	0	1770	1863	1583	0	1842	0
Flt Permitted	0.101			0.093			0.203				0.582	
Satd. Flow (perm)	188	1863	1583	173	1859	0	378	1863	1583	0	1075	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			76						49			3
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		141.3			146.3			96.2			83.8	
Travel Time (s)		10.2			10.5			6.9			6.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	842	436	263	787	11	664	893	258	53	780	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	842	436	263	798	0	664	893	258	0	888	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2				6
Permitted Phases	4		4	8			2		2	6		

Lanes, Volumes, Timings
37: RR 284 & Peigan Trail/TWP 240

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8		5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5		9.5	22.5	22.5	22.5	22.5	
Total Split (s)	9.5	44.0	44.0	13.0	47.5		18.0	93.0	93.0	75.0	75.0	
Total Split (%)	6.3%	29.3%	29.3%	8.7%	31.7%		12.0%	62.0%	62.0%	50.0%	50.0%	
Maximum Green (s)	5.0	39.5	39.5	8.5	43.0		13.5	88.5	88.5	70.5	70.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Min	Min	Min	Min	
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0			0	0	0	0	
Act Effct Green (s)	44.5	39.5	39.5	51.5	43.0		88.5	88.5	88.5		70.5	
Actuated g/C Ratio	0.30	0.26	0.26	0.34	0.29		0.59	0.59	0.59		0.47	
v/c Ratio	0.89	1.72	0.92	1.77	1.50		1.91	0.81	0.27		1.75	
Control Delay	100.0	365.1	70.4	396.3	271.8		438.9	31.7	12.7		375.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	100.0	365.1	70.4	396.3	271.8		438.9	31.7	12.7		375.3	
LOS	F	F	E	F	F		F	C	B		F	
Approach Delay		253.1			302.7			178.0			375.3	
Approach LOS		F			F			F			F	
Queue Length 50th (m)	20.6	~387.3	114.0	~106.5	~345.1		~283.3	211.6	30.1		~414.7	
Queue Length 95th (m)	#50.6	#469.1	#181.6	#167.1	#426.2		#396.5	278.7	46.4		#498.3	
Internal Link Dist (m)		117.3			122.3			72.2			59.8	
Turn Bay Length (m)	20.0		15.0	75.0					15.0			
Base Capacity (vph)	108	490	472	149	532		348	1099	954		506	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.89	1.72	0.92	1.77	1.50		1.91	0.81	0.27		1.75	

Intersection Summary

Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Natural Cycle:	150
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.91
Intersection Signal Delay:	257.9
Intersection LOS:	F
Intersection Capacity Utilization:	156.0%
ICU Level of Service:	H
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

Lanes, Volumes, Timings
 37: RR 284 & Peigan Trail/TWP 240

2040 Unimproved
 12-01-2020

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

Splits and Phases: 37: RR 284 & Peigan Trail/TWP 240



Lanes, Volumes, Timings
42: RR 284 & Glenmore Trail

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑↑	↔	↔	↑↑↑	↔	↔↔	↔		↔	↑	↔
Traffic Volume (vph)	446	2013	659	188	1810	359	739	192	270	489	127	693
Future Volume (vph)	446	2013	659	188	1810	359	739	192	270	489	127	693
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	200.0		30.0	0.0		30.0	100.0		0.0	0.0		125.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.912				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	1770	5085	1583	3433	1699	0	1770	1863	1583
Flt Permitted	0.950			0.084			0.950			0.142		
Satd. Flow (perm)	3433	5085	1583	156	5085	1583	3433	1699	0	265	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			162			142		44				349
Link Speed (k/h)		50			50			50				50
Link Distance (m)		223.9			290.4			160.7				206.5
Travel Time (s)		16.1			20.9			11.6				14.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	485	2188	716	204	1967	390	803	209	293	532	138	753
Shared Lane Traffic (%)												
Lane Group Flow (vph)	485	2188	716	204	1967	390	803	502	0	532	138	753
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8		8			6			Free

Lanes, Volumes, Timings
42: RR 284 & Glenmore Trail

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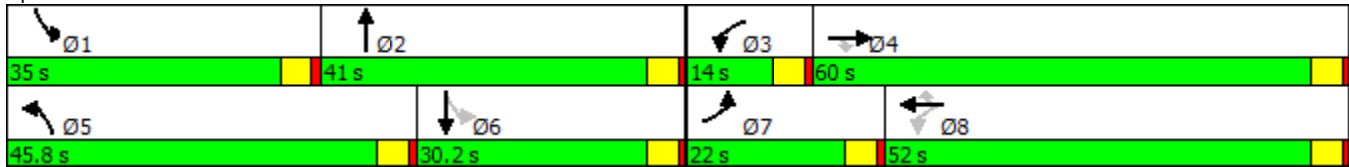
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	22.0	60.0	60.0	14.0	52.0	52.0	45.8	41.0		35.0	30.2	
Total Split (%)	14.7%	40.0%	40.0%	9.3%	34.7%	34.7%	30.5%	27.3%		23.3%	20.1%	
Maximum Green (s)	17.5	55.5	55.5	9.5	47.5	47.5	41.3	36.5		30.5	25.7	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	17.5	55.5	55.5	57.0	47.5	47.5	38.8	36.5		58.7	28.2	150.0
Actuated g/C Ratio	0.12	0.37	0.37	0.38	0.32	0.32	0.26	0.24		0.39	0.19	1.00
v/c Ratio	1.21	1.16	1.04	1.27	1.22	0.65	0.90	1.13		1.30	0.39	0.48
Control Delay	170.1	121.9	81.0	192.7	148.8	33.1	68.0	127.5		190.1	58.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	170.1	121.9	81.0	192.7	148.8	33.1	68.0	127.5		190.1	58.3	1.0
LOS	F	F	F	F	F	C	E	F		F	E	A
Approach Delay		120.1			134.7			90.9			77.3	
Approach LOS		F			F			F			E	
Queue Length 50th (m)	~95.2	~296.5	~207.8	~63.9	~276.2	68.1	123.6	~170.3		~199.4	39.1	0.0
Queue Length 95th (m)	#132.4	#325.3	#288.7	#118.5	#305.9	107.0	149.6	#244.6		#274.8	62.2	0.0
Internal Link Dist (m)		199.9			266.4			136.7			182.5	
Turn Bay Length (m)	200.0		30.0			30.0	100.0					125.0
Base Capacity (vph)	400	1881	687	161	1610	598	945	446		409	350	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	1.21	1.16	1.04	1.27	1.22	0.65	0.85	1.13		1.30	0.39	0.48

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.30
 Intersection Signal Delay: 113.0
 Intersection LOS: F
 Intersection Capacity Utilization 118.1%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

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

Splits and Phases: 42: RR 284 & Glenmore Trail



Lanes, Volumes, Timings
47: RR 283 & TWP 240

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	283	206	468	20	213	136	591	613	4	103	481	148
Future Volume (vph)	283	206	468	20	213	136	591	613	4	103	481	148
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		0.0	0.0		0.0	35.0		0.0	35.0		35.0
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.896			0.950			0.999				0.850
Flt Protected	0.950				0.997		0.950			0.950		
Satd. Flow (prot)	1770	1669	0	0	1764	0	1770	1861	0	1770	1863	1583
Flt Permitted	0.296				0.523		0.108			0.212		
Satd. Flow (perm)	551	1669	0	0	926	0	201	1861	0	395	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		108			24							126
Link Speed (k/h)		50			50			50				50
Link Distance (m)		118.3			123.8			84.8				99.0
Travel Time (s)		8.5			8.9			6.1				7.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	308	224	509	22	232	148	642	666	4	112	523	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	308	733	0	0	402	0	642	670	0	112	523	161
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6				3.6
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6

Lanes, Volumes, Timings
47: RR 283 & TWP 240

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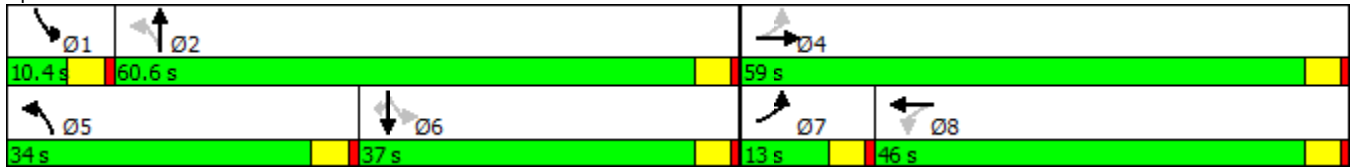
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	13.0	59.0		46.0	46.0		34.0	60.6		10.4	37.0	37.0
Total Split (%)	10.0%	45.4%		35.4%	35.4%		26.2%	46.6%		8.0%	28.5%	28.5%
Maximum Green (s)	8.5	54.5		41.5	41.5		29.5	56.1		5.9	32.5	32.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Walk Time (s)		7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0		0	0			0			0	0
Act Effct Green (s)	54.5	54.5			41.5		66.5	56.1		38.4	32.5	32.5
Actuated g/C Ratio	0.42	0.42			0.32		0.51	0.43		0.30	0.25	0.25
v/c Ratio	0.99	0.96			1.29		1.40	0.83		0.63	1.12	0.33
Control Delay	82.6	56.3			188.5		225.3	43.6		38.6	124.9	12.7
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	82.6	56.3			188.5		225.3	43.6		38.6	124.9	12.7
LOS	F	E			F		F	D		D	F	B
Approach Delay		64.1			188.5			132.5			90.0	
Approach LOS		E			F			F			F	
Queue Length 50th (m)	57.7	169.6			~133.9		~216.2	158.1		15.3	~162.5	7.3
Queue Length 95th (m)	#119.4	#256.7			#199.9		#291.9	#215.1		#27.7	#233.1	26.4
Internal Link Dist (m)		94.3			99.8			60.8			75.0	
Turn Bay Length (m)	35.0						35.0			35.0		35.0
Base Capacity (vph)	310	762			311		458	803		179	465	490
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.99	0.96			1.29		1.40	0.83		0.63	1.12	0.33

Intersection Summary

Area Type:	Other
Cycle Length:	130
Actuated Cycle Length:	130
Natural Cycle:	130
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.40
Intersection Signal Delay:	109.3
Intersection LOS:	F
Intersection Capacity Utilization:	133.3%
ICU Level of Service:	H
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

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

Splits and Phases: 47: RR 283 & TWP 240



Lanes, Volumes, Timings
52: RR 283 & Glenmore Trail

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	559	1848	365	374	1281	96	133	180	191	15	173	943
Future Volume (vph)	559	1848	365	374	1281	96	133	180	191	15	173	943
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	150.0		75.0	25.0		0.0	0.0		0.0	0.0		35.0
Storage Lanes	2		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.990			0.949				0.850
Flt Protected	0.950			0.950				0.987			0.996	
Satd. Flow (prot)	3433	3539	1583	1770	3504	0	0	1745	0	0	1855	1583
Flt Permitted	0.950			0.075				0.716			0.942	
Satd. Flow (perm)	3433	3539	1583	140	3504	0	0	1266	0	0	1755	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			200		7			25				410
Link Speed (k/h)		50			50			50				50
Link Distance (m)		182.4			198.2			127.6				172.2
Travel Time (s)		13.1			14.3			9.2				12.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	608	2009	397	407	1392	104	145	196	208	16	188	1025
Shared Lane Traffic (%)												
Lane Group Flow (vph)	608	2009	397	407	1496	0	0	549	0	0	204	1025
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	Free
Protected Phases	7	4		3	8			2				6
Permitted Phases			4	8			2			6		Free

Lanes, Volumes, Timings
52: RR 283 & Glenmore Trail

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	24.1	60.0	60.0	22.0	57.9		48.0	48.0		48.0	48.0	
Total Split (%)	18.5%	46.2%	46.2%	16.9%	44.5%		36.9%	36.9%		36.9%	36.9%	
Maximum Green (s)	19.6	55.5	55.5	17.5	53.4		43.5	43.5		43.5	43.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effct Green (s)	19.6	55.5	55.5	70.9	53.4		43.5	43.5		43.5	43.5	130.0
Actuated g/C Ratio	0.15	0.43	0.43	0.55	0.41		0.33	0.33		0.33	0.33	1.00
v/c Ratio	1.18	1.33	0.50	1.38	1.04		1.25	1.25		0.35	0.35	0.65
Control Delay	145.5	185.6	15.1	223.2	71.3		165.0	165.0		34.7	34.7	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	145.5	185.6	15.1	223.2	71.3		165.0	165.0		34.7	34.7	2.1
LOS	F	F	B	F	E		F	F		C	C	A
Approach Delay		155.0			103.7		165.0	165.0		7.5	7.5	
Approach LOS		F			F		F	F		A	A	
Queue Length 50th (m)	~100.8	~369.6	36.5	~129.5	~227.9		~180.4	~180.4		41.3	41.3	0.0
Queue Length 95th (m)	#138.6	#413.2	66.4	#196.1	#273.4		#253.2	#253.2		63.4	63.4	0.0
Internal Link Dist (m)		158.4			174.2		103.6	103.6		148.2	148.2	
Turn Bay Length (m)	150.0		75.0	25.0								35.0
Base Capacity (vph)	517	1510	790	295	1443		440	440		587	587	1583
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	1.18	1.33	0.50	1.38	1.04		1.25	1.25		0.35	0.35	0.65

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Natural Cycle: 130
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.38
 Intersection Signal Delay: 114.2
 Intersection LOS: F
 Intersection Capacity Utilization 125.2%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

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

Splits and Phases: 52: RR 283 & Glenmore Trail

 Ø2 48 s	 Ø3 22 s	 Ø4 60 s
 Ø6 48 s	 Ø7 24.1 s	 Ø8 57.9 s

Lanes, Volumes, Timings
62: RR 282 & Glenmore Trail

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	589	1465	0	0	944	131	0	0	0	122	0	807
Future Volume (vph)	589	1465	0	0	944	131	0	0	0	122	0	807
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.982							0.850
Fl _t Protected	0.950										0.950	
Satd. Flow (prot)	1770	3539	0	0	3476	0	0	1863	0	0	1770	1583
Fl _t Permitted	0.087										0.757	
Satd. Flow (perm)	162	3539	0	0	3476	0	0	1863	0	0	1410	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					11							548
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		161.7			151.4			105.3			140.9	
Travel Time (s)		11.6			10.9			7.6			10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	640	1592	0	0	1026	142	0	0	0	133	0	877
Shared Lane Traffic (%)												
Lane Group Flow (vph)	640	1592	0	0	1168	0	0	0	0	0	133	877
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA			NA					Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0

Lanes, Volumes, Timings
62: RR 282 & Glenmore Trail

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	45.8	92.0		46.2	46.2		48.0	48.0		48.0	48.0	48.0
Total Split (%)	32.7%	65.7%		33.0%	33.0%		34.3%	34.3%		34.3%	34.3%	34.3%
Maximum Green (s)	41.3	87.5		41.7	41.7		43.5	43.5		43.5	43.5	43.5
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effect Green (s)	87.5	87.5			41.7						43.5	43.5
Actuated g/C Ratio	0.62	0.62			0.30						0.31	0.31
v/c Ratio	1.11	0.72			1.12						0.30	1.01
Control Delay	110.4	20.3			111.3						39.1	51.0
Queue Delay	0.0	0.0			0.0						0.0	0.0
Total Delay	110.4	20.3			111.3						39.1	51.0
LOS	F	C			F						D	D
Approach Delay		46.1			111.3						49.4	
Approach LOS		D			F						D	
Queue Length 50th (m)	~196.9	157.4			~205.0						29.5	~137.5
Queue Length 95th (m)	#274.2	184.7			#250.2						48.6	#232.8
Internal Link Dist (m)		137.7			127.4			81.3			116.9	
Turn Bay Length (m)												
Base Capacity (vph)	575	2211			1043						438	869
Starvation Cap Reductn	0	0			0						0	0
Spillback Cap Reductn	0	0			0						0	0
Storage Cap Reductn	0	0			0						0	0
Reduced v/c Ratio	1.11	0.72			1.12						0.30	1.01

Intersection Summary

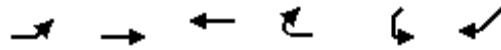
Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Natural Cycle: 140
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.12
 Intersection Signal Delay: 64.1
 Intersection LOS: E
 Intersection Capacity Utilization 88.8%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 62: RR 282 & Glenmore Trail



Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

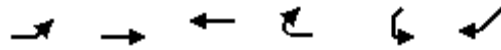
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Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑			
Traffic Volume (vph)	526	3384	3654	0	0	0
Future Volume (vph)	526	3384	3654	0	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (m)	200.0			0.0	0.0	0.0
Storage Lanes	2			0	0	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	0.97	0.91	0.91	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	3433	5085	5085	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	5085	5085	0	0	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		662.8	149.5		114.0	
Travel Time (s)		47.7	10.8		8.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	572	3678	3972	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	572	3678	3972	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.2	7.2		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors	1	2	2			
Detector Template	Left	Thru	Thru			
Leading Detector (m)	2.0	10.0	10.0			
Trailing Detector (m)	0.0	0.0	0.0			
Detector 1 Position(m)	0.0	0.0	0.0			
Detector 1 Size(m)	2.0	0.6	0.6			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0	0.0			
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						

Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

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Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Detector Phase	7	4	8			
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5	22.5			
Total Split (s)	29.2	150.0	120.8			
Total Split (%)	19.5%	100.0%	80.5%			
Maximum Green (s)	24.7	145.5	116.3			
Yellow Time (s)	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5			
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0			
Recall Mode	None	None	None			
Walk Time (s)		7.0	7.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effct Green (s)	24.7	150.0	116.3			
Actuated g/C Ratio	0.16	1.00	0.78			
v/c Ratio	1.01	0.72	1.01			
Control Delay	102.0	0.9	33.2			
Queue Delay	0.0	0.0	0.0			
Total Delay	102.0	0.9	33.2			
LOS	F	A	C			
Approach Delay		14.5	33.2			
Approach LOS		B	C			
Queue Length 50th (m)	~95.1	0.0	~424.2			
Queue Length 95th (m)	#135.9	0.0	#490.0			
Internal Link Dist (m)		638.8	125.5		90.0	
Turn Bay Length (m)	200.0					
Base Capacity (vph)	565	5085	3942			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	1.01	0.72	1.01			

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 23.6
 Intersection LOS: C
 Intersection Capacity Utilization 100.8%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

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

Splits and Phases: 67: Glenmore Trail & Stoney Trail



Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↔	↑↑↑		
Traffic Volume (vph)	3633	0	810	3186	0	0
Future Volume (vph)	3633	0	810	3186	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	175.0		0.0	0.0
Storage Lanes		0	2		0	0
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	5085	0	3433	5085	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	5085	0	3433	5085	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	199.5			662.8	102.4	
Travel Time (s)	14.4			47.7	7.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3949	0	880	3463	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3949	0	880	3463	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.2			7.2	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2		1	2		
Detector Template	Thru		Left	Thru		
Leading Detector (m)	10.0		2.0	10.0		
Trailing Detector (m)	0.0		0.0	0.0		
Detector 1 Position(m)	0.0		0.0	0.0		
Detector 1 Size(m)	0.6		2.0	0.6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						

Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2040 Unimproved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		3	8		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	22.5		9.5	22.5		
Total Split (s)	111.0		39.0	150.0		
Total Split (%)	74.0%		26.0%	100.0%		
Maximum Green (s)	106.5		34.5	145.5		
Yellow Time (s)	3.5		3.5	3.5		
All-Red Time (s)	1.0		1.0	1.0		
Lost Time Adjust (s)	0.0		0.0	0.0		
Total Lost Time (s)	4.5		4.5	4.5		
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		None	None		
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	11.0			11.0		
Pedestrian Calls (#/hr)	0			0		
Act Effect Green (s)	106.5		34.5	150.0		
Actuated g/C Ratio	0.71		0.23	1.00		
v/c Ratio	1.09		1.12	0.68		
Control Delay	70.3		120.3	0.8		
Queue Delay	0.0		0.0	0.0		
Total Delay	70.3		120.3	0.8		
LOS	E		F	A		
Approach Delay	70.3			25.0		
Approach LOS	E			C		
Queue Length 50th (m)	~509.7		~162.3	0.0		
Queue Length 95th (m)	#524.2		#204.8	0.0		
Internal Link Dist (m)	175.5			638.8	78.4	
Turn Bay Length (m)			175.0			
Base Capacity (vph)	3610		789	5085		
Starvation Cap Reductn	0		0	0		
Spillback Cap Reductn	0		0	0		
Storage Cap Reductn	0		0	0		
Reduced v/c Ratio	1.09		1.12	0.68		

Intersection Summary

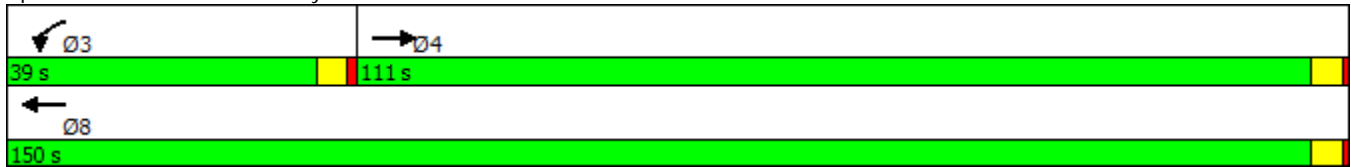
Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.12
 Intersection Signal Delay: 46.5
 Intersection LOS: D
 Intersection Capacity Utilization 100.8%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2040 Unimproved
12-01-2020

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

Splits and Phases: 68: Stoney Trail & Glenmore Trail



Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

2040 Unimproved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↘	
Traffic Volume (vph)	2674	0	0	2200	682	0
Future Volume (vph)	2674	0	0	2200	682	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	421.0			179.4	93.7	
Travel Time (s)	30.3			12.9	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2907	0	0	2391	741	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2907	0	0	2391	741	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	7.2	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2			2	1	
Detector Template	Thru			Thru	Left	
Leading Detector (m)	10.0			10.0	2.0	
Trailing Detector (m)	0.0			0.0	0.0	
Detector 1 Position(m)	0.0			0.0	0.0	
Detector 1 Size(m)	0.6			0.6	2.0	
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0			0.0	0.0	
Detector 1 Queue (s)	0.0			0.0	0.0	
Detector 1 Delay (s)	0.0			0.0	0.0	
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA			NA	Prot	
Protected Phases	4			8	2	
Permitted Phases						
Detector Phase	4			8	2	
Switch Phase						
Minimum Initial (s)	5.0			5.0	5.0	

Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

2040 Unimproved
12-01-2020




Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	22.5			22.5	22.5	
Total Split (s)	115.0			115.0	35.0	
Total Split (%)	76.7%			76.7%	23.3%	
Maximum Green (s)	110.5			110.5	30.5	
Yellow Time (s)	3.5			3.5	3.5	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			None	Max	
Walk Time (s)	7.0			7.0	7.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effect Green (s)	110.5			110.5	30.5	
Actuated g/C Ratio	0.74			0.74	0.20	
v/c Ratio	1.12			0.92	1.06	
Control Delay	79.2			23.2	107.4	
Queue Delay	0.0			0.0	0.0	
Total Delay	79.2			23.2	107.4	
LOS	E			C	F	
Approach Delay	79.2			23.2	107.4	
Approach LOS	E			C	F	
Queue Length 50th (m)	~547.7			289.0	~131.1	
Queue Length 95th (m)	#582.3			337.0	#172.3	
Internal Link Dist (m)	397.0			155.4	69.7	
Turn Bay Length (m)						
Base Capacity (vph)	2607			2607	698	
Starvation Cap Reductn	37			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	1.13			0.92	1.06	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.12
 Intersection Signal Delay: 60.5
 Intersection LOS: E
 Intersection Capacity Utilization 100.9%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 73: Stoney Trail & Peigan Trail

 Ø2	 Ø4
35 s	115 s
	 Ø8
	115 s

Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	0	2248	2196	0	859	0
Future Volume (vph)	0	2248	2196	0	859	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	3539	0	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	3539	0	3433	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		133.7	421.0		94.2	
Travel Time (s)		9.6	30.3		6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2443	2387	0	934	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2443	2387	0	934	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		7.2	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors		2	2		1	
Detector Template		Thru	Thru		Left	
Leading Detector (m)		10.0	10.0		2.0	
Trailing Detector (m)		0.0	0.0		0.0	
Detector 1 Position(m)		0.0	0.0		0.0	
Detector 1 Size(m)		0.6	0.6		2.0	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases						
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		5.0	5.0		5.0	

Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		22.5	22.5		22.5	
Total Split (s)		98.0	98.0		42.0	
Total Split (%)		70.0%	70.0%		30.0%	
Maximum Green (s)		93.5	93.5		37.5	
Yellow Time (s)		3.5	3.5		3.5	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.5	4.5		4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		None	None		Max	
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effect Green (s)		93.5	93.5		37.5	
Actuated g/C Ratio		0.67	0.67		0.27	
v/c Ratio		1.03	1.01		1.02	
Control Delay		51.6	44.5		84.0	
Queue Delay		0.0	0.0		0.0	
Total Delay		51.6	44.5		84.0	
LOS		D	D		F	
Approach Delay		51.6	44.5		84.0	
Approach LOS		D	D		F	
Queue Length 50th (m)		~401.3	~358.7		~147.8	
Queue Length 95th (m)		#441.7	#424.6		#190.2	
Internal Link Dist (m)		109.7	397.0		70.2	
Turn Bay Length (m)						
Base Capacity (vph)		2363	2363		919	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		0	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		1.03	1.01		1.02	

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	140
Natural Cycle:	140
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.03
Intersection Signal Delay:	53.9
Intersection LOS:	D
Intersection Capacity Utilization:	100.9%
ICU Level of Service:	G
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2040 Unimproved
12-01-2020

Splits and Phases: 75: Peigan Trail & Stoney Trail



























Lanes, Volumes, Timings

2040 Unimproved

82:

12-01-2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	382	285	269	380	388	176	224	513	213	261	476	372
Future Volume (vph)	382	285	269	380	388	176	224	513	213	261	476	372
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		15.0	75.0		40.0	25.0		15.0	50.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.201			0.288			0.148			0.141		
Satd. Flow (perm)	374	1863	1583	536	1863	1583	276	1863	1583	263	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			139			139			127			131
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		226.8			365.5			199.0			205.2	
Travel Time (s)		16.3			26.3			14.3			14.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	415	310	292	413	422	191	243	558	232	284	517	404
Shared Lane Traffic (%)												
Lane Group Flow (vph)	415	310	292	413	422	191	243	558	232	284	517	404
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings

2040 Unimproved

82:

12-01-2020



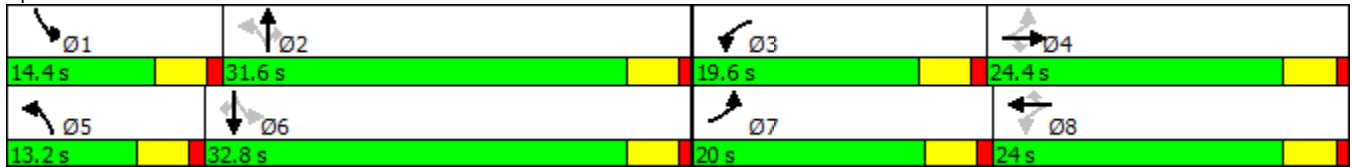
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	20.0	24.4	24.4	19.6	24.0	24.0	13.2	31.6	31.6	14.4	32.8	32.8
Total Split (%)	22.2%	27.1%	27.1%	21.8%	26.7%	26.7%	14.7%	35.1%	35.1%	16.0%	36.4%	36.4%
Maximum Green (s)	15.5	19.9	19.9	15.1	19.5	19.5	8.7	27.1	27.1	9.9	28.3	28.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	35.4	19.9	19.9	34.6	19.5	19.5	35.8	27.1	27.1	38.2	28.3	28.3
Actuated g/C Ratio	0.39	0.22	0.22	0.38	0.22	0.22	0.40	0.30	0.30	0.42	0.31	0.31
v/c Ratio	1.07	0.75	0.64	1.00	1.05	0.42	0.96	1.00	0.41	1.03	0.88	0.69
Control Delay	91.8	46.0	23.5	67.6	94.0	13.0	69.3	70.4	13.8	84.7	48.2	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	91.8	46.0	23.5	67.6	94.0	13.0	69.3	70.4	13.8	84.7	48.2	24.9
LOS	F	D	C	E	F	B	E	E	B	F	D	C
Approach Delay		58.2			68.3			57.5			49.0	
Approach LOS		E			E			E			D	
Queue Length 50th (m)	-68.3	53.0	24.5	53.3	-84.2	7.7	27.7	100.8	14.2	-37.6	88.5	43.0
Queue Length 95th (m)	#126.6	#91.0	52.8	#114.0	#141.6	26.6	#75.3	#169.6	34.2	#89.6	#147.7	77.3
Internal Link Dist (m)		202.8			341.5			175.0			181.2	
Turn Bay Length (m)	100.0		15.0	75.0		40.0	25.0		15.0	50.0		15.0
Base Capacity (vph)	387	411	458	413	403	451	254	560	565	277	585	587
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.07	0.75	0.64	1.00	1.05	0.42	0.96	1.00	0.41	1.03	0.88	0.69

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.07
 Intersection Signal Delay: 57.9
 Intersection LOS: E
 Intersection Capacity Utilization 98.0%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

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

Splits and Phases: 82:



Lanes, Volumes, Timings
88: RR 283 & 61 Avenue

2040 Unimproved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	83	41	203	66	169	95	559	64	221	509	165
Future Volume (vph)	275	83	41	203	66	169	95	559	64	221	509	165
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	60.0		0.0	0.0		15.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.950			0.892				0.850		0.975	
Flt Protected	0.950			0.950				0.993			0.988	
Satd. Flow (prot)	1770	1770	0	1770	1662	0	0	1850	1583	0	1794	0
Flt Permitted	0.212			0.476				0.748			0.526	
Satd. Flow (perm)	395	1770	0	887	1662	0	0	1393	1583	0	955	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			70				44			18
Link Speed (k/h)		50			50			50				50
Link Distance (m)		218.4			259.4			141.6				186.1
Travel Time (s)		15.7			18.7			10.2				13.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	299	90	45	221	72	184	103	608	70	240	553	179
Shared Lane Traffic (%)												
Lane Group Flow (vph)	299	135	0	221	256	0	0	711	70	0	972	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0		10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0		0.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases	7	4		3	8			2				6
Permitted Phases	4			8			2		2	6		

Lanes, Volumes, Timings
88: RR 283 & 61 Avenue

2040 Unimproved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	18.0	23.4		17.1	22.5		109.5	109.5	109.5	109.5	109.5	
Total Split (%)	12.0%	15.6%		11.4%	15.0%		73.0%	73.0%	73.0%	73.0%	73.0%	
Maximum Green (s)	13.5	18.9		12.6	18.0		105.0	105.0	105.0	105.0	105.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Min	Min	Min	Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effct Green (s)	32.4	18.9		30.6	18.0		105.0	105.0			105.0	
Actuated g/C Ratio	0.22	0.13		0.20	0.12		0.70	0.70			0.70	
v/c Ratio	1.43	0.57		0.87	0.98		0.73	0.06			1.44	
Control Delay	256.3	65.7		82.5	97.8		19.4	3.2			231.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay	256.3	65.7		82.5	97.8		19.4	3.2			231.5	
LOS	F	E		F	F		B	A			F	
Approach Delay		197.0			90.7		17.9				231.5	
Approach LOS		F			F		B				F	
Queue Length 50th (m)	~109.6	36.2		60.6	60.5		126.0	2.3			~413.1	
Queue Length 95th (m)	#170.9	60.2		#109.0	#120.7		179.8	7.2			#497.9	
Internal Link Dist (m)		194.4			235.4		117.6				162.1	
Turn Bay Length (m)	20.0			60.0					15.0			
Base Capacity (vph)	209	235		255	261		975	1121			673	
Starvation Cap Reductn	0	0		0	0		0	0			0	
Spillback Cap Reductn	0	0		0	0		0	0			0	
Storage Cap Reductn	0	0		0	0		0	0			0	
Reduced v/c Ratio	1.43	0.57		0.87	0.98		0.73	0.06			1.44	

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.44
 Intersection Signal Delay: 138.1
 Intersection LOS: F
 Intersection Capacity Utilization 127.8%
 ICU Level of Service H
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

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

Splits and Phases: 88: RR 283 & 61 Avenue

 Ø2 109.5 s	 Ø3 17.1 s	 Ø4 23.4 s
 Ø6 109.5 s	 Ø7 18 s	 Ø8 22.5 s

HCM Unsignalized Intersection Capacity Analysis

2040 Unimproved

57:

12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	55	257	54	91	0	267	131	123	0	102	9
Future Volume (Veh/h)	0	55	257	54	91	0	267	131	123	0	102	9
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	60	279	59	99	0	290	142	134	0	111	10
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	99			339			482	416	200	622	556	99
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	99			339			482	416	200	622	556	99
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			95			23	72	84	100	73	99
cM capacity (veh/h)	1494			1220			375	501	841	253	418	957
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	339	158	566	121								
Volume Left	0	59	290	0								
Volume Right	279	0	134	10								
cSH	1494	1220	466	438								
Volume to Capacity	0.00	0.05	1.21	0.28								
Queue Length 95th (m)	0.0	1.2	176.9	8.9								
Control Delay (s)	0.0	3.3	142.1	16.3								
Lane LOS		A	F	C								
Approach Delay (s)	0.0	3.3	142.1	16.3								
Approach LOS			F	C								
Intersection Summary												
Average Delay			70.0									
Intersection Capacity Utilization			72.4%	ICU Level of Service							C	
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2040 Unimproved

93:

12-01-2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	72	221	190	329	379	43
Future Volume (vph)	72	221	190	329	379	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	78	240	207	358	412	47

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	318	565	459
Volume Left (vph)	78	207	0
Volume Right (vph)	240	0	47
Hadj (s)	-0.37	0.11	-0.03
Departure Headway (s)	6.3	5.9	6.0
Degree Utilization, x	0.56	0.93	0.76
Capacity (veh/h)	552	598	586
Control Delay (s)	17.0	44.9	25.2
Approach Delay (s)	17.0	44.9	25.2
Approach LOS	C	E	D

Intersection Summary			
Delay		31.5	
Level of Service		D	
Intersection Capacity Utilization		78.0%	ICU Level of Service
Analysis Period (min)		15	D

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2025 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Traffic Volume (vph)	371	216	99	0	162	9	6	505	0	17	349	461
Future Volume (vph)	371	216	99	0	162	9	6	505	0	17	349	461
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.978			0.992						0.915	
Flt Protected		0.974					0.950			0.950		
Satd. Flow (prot)	0	3371	0	0	3511	0	1770	3539	0	1770	3238	0
Flt Permitted		0.732					0.250			0.441		
Satd. Flow (perm)	0	2534	0	0	3511	0	466	3539	0	821	3238	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		51			10						501	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		178.3			246.0			115.3			144.5	
Travel Time (s)		12.8			17.7			8.3			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	403	235	108	0	176	10	7	549	0	18	379	501
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	746	0	0	186	0	7	549	0	18	880	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2025 Improved
12-01-2020

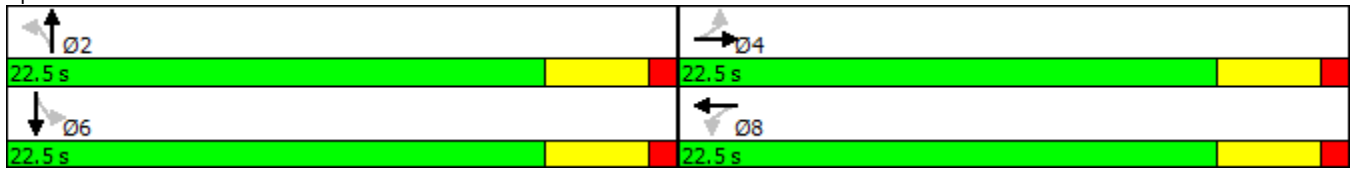


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		15.7			15.7		18.1	18.1		18.1	18.1	
Actuated g/C Ratio		0.37			0.37		0.42	0.42		0.42	0.42	
v/c Ratio		0.87dl			0.14		0.04	0.37		0.05	0.53	
Control Delay		17.6			8.6		9.0	9.9		8.9	5.4	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		17.6			8.6		9.0	9.9		8.9	5.4	
LOS		B			A		A	A		A	A	
Approach Delay		17.6			8.6			9.9			5.5	
Approach LOS		B			A			A			A	
Queue Length 50th (m)		23.6			4.5		0.3	15.9		0.9	10.5	
Queue Length 95th (m)		40.1			9.2		2.1	25.6		3.7	21.3	
Internal Link Dist (m)		154.3			222.0			91.3			120.5	
Turn Bay Length (m)										70.0		
Base Capacity (vph)		1099			1487		196	1493		346	1656	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.68			0.13		0.04	0.37		0.05	0.53	

Intersection Summary

Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 42.8
 Natural Cycle: 45
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 10.5
 Intersection Capacity Utilization 61.0%
 Analysis Period (min) 15
 dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3: 52 Street & 61 Avenue



Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

2025 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔	↗		↔↔		↗↗	↗		↗	↗	
Traffic Volume (vph)	177	302	482	0	459	0	631	18	0	0	0	15
Future Volume (vph)	177	302	482	0	459	0	631	18	0	0	0	15
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	100.0		0.0	0.0		0.0
Storage Lanes	0		1	0		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850								0.850	
Flt Protected		0.982					0.950					
Satd. Flow (prot)	0	3476	1583	0	3539	0	3433	1863	0	1863	1583	0
Flt Permitted		0.680					0.747					
Satd. Flow (perm)	0	2407	1583	0	3539	0	2699	1863	0	1863	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			524									213
Link Speed (k/h)		50			50			50				50
Link Distance (m)		155.4			145.0			144.7				110.1
Travel Time (s)		11.2			10.4			10.4				7.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	328	524	0	499	0	686	20	0	0	0	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	520	524	0	499	0	686	20	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA	Perm		NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2				6
Permitted Phases	4		4	8			2			6		

Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

2025 Improved
12-01-2020

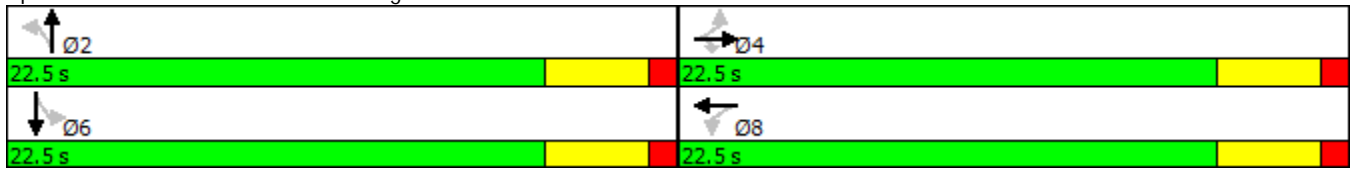


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0	18.0	18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	
Act Effct Green (s)		14.5	14.5		14.5		18.1	18.1			18.1	
Actuated g/C Ratio		0.35	0.35		0.35		0.43	0.43			0.43	
v/c Ratio		0.62	0.59		0.41		0.58	0.02			0.02	
Control Delay		14.8	4.3		11.1		12.3	8.2			0.1	
Queue Delay		0.0	0.0		0.0		0.0	0.0			0.0	
Total Delay		14.8	4.3		11.1		12.3	8.2			0.1	
LOS		B	A		B		B	A			A	
Approach Delay		9.5			11.1			12.2			0.1	
Approach LOS		A			B			B			A	
Queue Length 50th (m)		16.3	0.0		14.2		19.7	0.9			0.0	
Queue Length 95th (m)		27.8	13.9		23.1		36.1	3.8			0.0	
Internal Link Dist (m)		131.4			121.0			120.7			86.1	
Turn Bay Length (m)							100.0					
Base Capacity (vph)		1047	984		1540		1174	810			809	
Starvation Cap Reductn		0	0		0		0	0			0	
Spillback Cap Reductn		0	0		0		0	0			0	
Storage Cap Reductn		0	0		0		0	0			0	
Reduced v/c Ratio		0.50	0.53		0.32		0.58	0.02			0.02	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	41.7
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.62
Intersection Signal Delay:	10.6
Intersection Capacity Utilization:	62.1%
Analysis Period (min):	15
Intersection LOS:	B
ICU Level of Service:	B

Splits and Phases: 8: 84 Street & Peigan Trail



Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

2025 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	46	233	75	6	177	67	75	53	12	33	38	48
Future Volume (vph)	46	233	75	6	177	67	75	53	12	33	38	48
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	60.0		0.0	0.0		100.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.971			0.959				0.850		0.946	
Flt Protected		0.994		0.950				0.972			0.986	
Satd. Flow (prot)	0	1798	0	1770	1786	0	0	1811	1583	0	1737	0
Flt Permitted		0.924		0.485				0.797			0.910	
Satd. Flow (perm)	0	1671	0	903	1786	0	0	1485	1583	0	1604	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			51				36			52
Link Speed (k/h)		50			50			50				50
Link Distance (m)		90.4			116.8			200.2				92.7
Travel Time (s)		6.5			8.4			14.4				6.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	253	82	7	192	73	82	58	13	36	41	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	385	0	7	265	0	0	140	13	0	129	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0		10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0		0.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		

Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

2025 Improved
12-01-2020

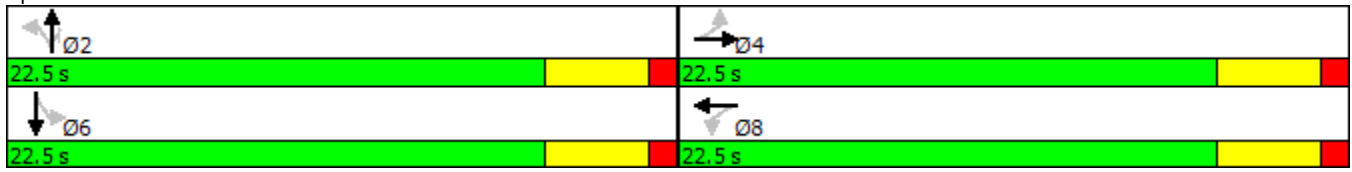


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0	18.0	18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.5		4.5	4.5			4.5	4.5		4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effect Green (s)		13.1		13.1	13.1			18.2	18.2		18.2	
Actuated g/C Ratio		0.33		0.33	0.33			0.45	0.45		0.45	
v/c Ratio		0.68		0.02	0.43			0.21	0.02		0.17	
Control Delay		17.2		8.7	10.6			9.1	1.6		6.1	
Queue Delay		0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay		17.2		8.7	10.6			9.1	1.6		6.1	
LOS		B		A	B			A	A		A	
Approach Delay		17.2			10.5			8.4			6.1	
Approach LOS		B			B			A			A	
Queue Length 50th (m)		20.6		0.3	11.4			5.7	0.0		3.0	
Queue Length 95th (m)		41.1		2.0	24.4			16.3	1.1		11.5	
Internal Link Dist (m)		66.4			92.8			176.2			68.7	
Turn Bay Length (m)				60.0					100.0			
Base Capacity (vph)		772		406	832			669	732		751	
Starvation Cap Reductn		0		0	0			0	0		0	
Spillback Cap Reductn		0		0	0			0	0		0	
Storage Cap Reductn		0		0	0			0	0		0	
Reduced v/c Ratio		0.50		0.02	0.32			0.21	0.02		0.17	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	40.3
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	12.3
Intersection LOS:	B
Intersection Capacity Utilization:	57.5%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 13: 84 Street & 61 Avenue



Lanes, Volumes, Timings
18: Garden Road & Peigan Trail

2025 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	218	84	10	212	52	243	290	10	33	212	4
Future Volume (vph)	0	218	84	10	212	52	243	290	10	33	212	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.963			0.974			0.997			0.998	
Fl _t Protected					0.998			0.978			0.993	
Satd. Flow (prot)	0	1794	0	0	1811	0	0	1816	0	0	1846	0
Fl _t Permitted					0.981			0.748			0.902	
Satd. Flow (perm)	0	1794	0	0	1780	0	0	1389	0	0	1677	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		33			20			3			2	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.2			182.0			112.9			101.5	
Travel Time (s)		8.9			13.1			8.1			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	237	91	11	230	57	264	315	11	36	230	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	328	0	0	298	0	0	590	0	0	270	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	

Lanes, Volumes, Timings
18: Garden Road & Peigan Trail

2025 Improved
12-01-2020

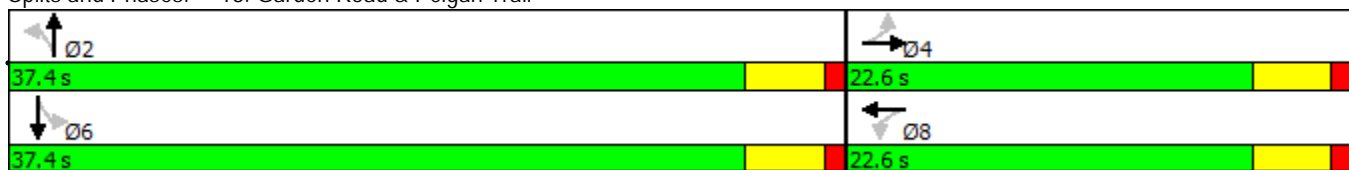


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.6	22.6		22.6	22.6		37.4	37.4		37.4	37.4	
Total Split (%)	37.7%	37.7%		37.7%	37.7%		62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	18.1	18.1		18.1	18.1		32.9	32.9		32.9	32.9	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		13.8			13.8			33.0			33.0	
Actuated g/C Ratio		0.25			0.25			0.59			0.59	
v/c Ratio		0.70			0.65			0.72			0.27	
Control Delay		25.6			24.7			16.2			7.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		25.6			24.7			16.2			7.2	
LOS		C			C			B			A	
Approach Delay		25.6			24.7			16.2			7.2	
Approach LOS		C			C			B			A	
Queue Length 50th (m)		28.3			26.3			39.5			12.4	
Queue Length 95th (m)		51.6			47.9			#107.0			27.1	
Internal Link Dist (m)		99.2			158.0			88.9			77.5	
Turn Bay Length (m)												
Base Capacity (vph)		605			591			821			991	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.54			0.50			0.72			0.27	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 55.9
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 18.3
 Intersection LOS: B
 Intersection Capacity Utilization 76.4%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 18: Garden Road & Peigan Trail



Lanes, Volumes, Timings
27: 100 Street & 61 Avenue

2025 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	89	192	115	213	106	76	91	167	240	18	168	58
Future Volume (vph)	89	192	115	213	106	76	91	167	240	18	168	58
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	60.0		0.0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.961			0.974			0.935			0.968	
Flt Protected		0.989			0.974			0.991			0.996	
Satd. Flow (prot)	0	1770	0	0	1767	0	0	1726	0	0	1796	0
Flt Permitted		0.846			0.608			0.899			0.955	
Satd. Flow (perm)	0	1514	0	0	1103	0	0	1566	0	0	1722	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		47			27			103			34	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		134.0			133.1			117.7			140.8	
Travel Time (s)		9.6			9.6			8.5			10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	97	209	125	232	115	83	99	182	261	20	183	63
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	431	0	0	430	0	0	542	0	0	266	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
27: 100 Street & 61 Avenue

2025 Improved
12-01-2020

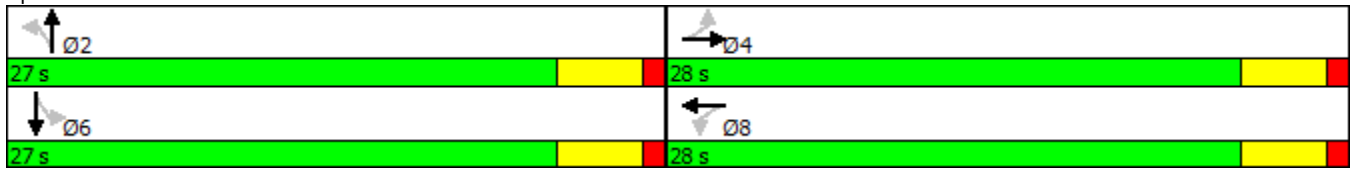


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	28.0	28.0		28.0	28.0		27.0	27.0		27.0	27.0	
Total Split (%)	50.9%	50.9%		50.9%	50.9%		49.1%	49.1%		49.1%	49.1%	
Maximum Green (s)	23.5	23.5		23.5	23.5		22.5	22.5		22.5	22.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		4.5			4.5			4.5			4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		22.1			22.1			18.7			18.7	
Actuated g/C Ratio		0.44			0.44			0.37			0.37	
v/c Ratio		0.62			0.86			0.83			0.40	
Control Delay		15.1			34.0			25.2			12.1	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		15.1			34.0			25.2			12.1	
LOS		B			C			C			B	
Approach Delay		15.1			34.0			25.2			12.1	
Approach LOS		B			C			C			B	
Queue Length 50th (m)		28.6			35.7			37.4			15.8	
Queue Length 95th (m)		56.6			#88.3			#87.6			31.1	
Internal Link Dist (m)		110.0			109.1			93.7			116.8	
Turn Bay Length (m)												
Base Capacity (vph)		754			546			778			813	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.57			0.79			0.70			0.33	

Intersection Summary

Area Type: Other
 Cycle Length: 55
 Actuated Cycle Length: 50
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.86
 Intersection Signal Delay: 22.8
 Intersection LOS: C
 Intersection Capacity Utilization 99.5%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 27: 100 Street & 61 Avenue



Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

2025 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	595	1986	267	56	1814	10	322	15	31	10	103	613
Future Volume (vph)	595	1986	267	56	1814	10	322	15	31	10	103	613
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		125.0	125.0		0.0	0.0		60.0	0.0		0.0
Storage Lanes	2		1	1		1	2		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850				0.850			0.850		0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	1770	5085	1583	3433	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.094			0.950			0.747		
Satd. Flow (perm)	3433	5085	1583	175	5085	1583	3433	1863	1583	1391	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			290			193			149			452
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		183.8			169.8			154.4			195.2	
Travel Time (s)		13.2			12.2			11.1			14.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	647	2159	290	61	1972	11	350	16	34	11	112	666
Shared Lane Traffic (%)												
Lane Group Flow (vph)	647	2159	290	61	1972	11	350	16	34	11	112	666
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2			7.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8		8			2	6		Free

Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

2025 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	25.2	61.7	61.7	9.5	46.0	46.0	16.2	29.3	29.3	9.5	22.6	
Total Split (%)	22.9%	56.1%	56.1%	8.6%	41.8%	41.8%	14.7%	26.6%	26.6%	8.6%	20.5%	
Maximum Green (s)	20.7	57.2	57.2	5.0	41.5	41.5	11.7	24.8	24.8	5.0	18.1	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effct Green (s)	20.7	59.1	59.1	46.5	41.5	41.5	11.7	32.4	32.4	23.1	18.1	110.0
Actuated g/C Ratio	0.19	0.54	0.54	0.42	0.38	0.38	0.11	0.29	0.29	0.21	0.16	1.00
v/c Ratio	1.00	0.79	0.29	0.42	1.03	0.02	0.96	0.03	0.06	0.04	0.37	0.42
Control Delay	81.0	23.7	2.4	21.6	62.4	0.0	87.4	30.1	0.2	27.2	44.8	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	81.0	23.7	2.4	21.6	62.4	0.0	87.4	30.1	0.2	27.2	44.8	0.8
LOS	F	C	A	C	E	A	F	C	A	C	D	A
Approach Delay		33.7			60.8			77.7			7.4	
Approach LOS		C			E			E			A	
Queue Length 50th (m)	~76.2	142.9	0.0	5.2	~174.8	0.0	41.1	2.5	0.0	1.7	22.7	0.0
Queue Length 95th (m)	#115.1	164.7	12.9	11.2	#205.7	0.0	#70.5	8.9	0.0	6.0	40.6	0.0
Internal Link Dist (m)		159.8			145.8			130.4			171.2	
Turn Bay Length (m)	125.0		125.0	125.0					60.0			
Base Capacity (vph)	646	2732	984	146	1918	717	365	548	571	309	306	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.79	0.29	0.42	1.03	0.02	0.96	0.03	0.06	0.04	0.37	0.42

Intersection Summary

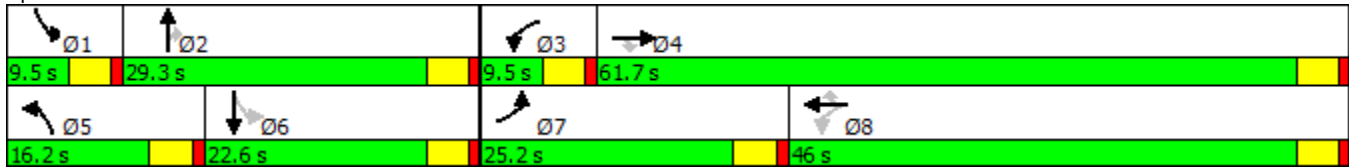
Area Type:	Other
Cycle Length:	110
Actuated Cycle Length:	110
Natural Cycle:	110
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.03
Intersection Signal Delay:	42.0
Intersection LOS:	D
Intersection Capacity Utilization:	79.1%
ICU Level of Service:	D
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

Lanes, Volumes, Timings
 32: 100 Street & Glenmore Trail /Glenmore Trail

2025 Improved
 12-01-2020

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

Splits and Phases: 32: 100 Street & Glenmore Trail /Glenmore Trail



Lanes, Volumes, Timings
37: RR 284 & Peigan Trail/TWP 240

2025 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	56	106	218	103	16	76	381	323	21	349	18
Future Volume (vph)	82	56	106	218	103	16	76	381	323	21	349	18
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		15.0	75.0		0.0	0.0		15.0	0.0		0.0
Storage Lanes	0		1	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.980				0.850		0.994	
Flt Protected		0.971		0.950				0.992			0.997	
Satd. Flow (prot)	0	1809	1583	1770	1825	0	0	1848	1583	0	1846	0
Flt Permitted		0.745		0.438				0.885			0.964	
Satd. Flow (perm)	0	1388	1583	816	1825	0	0	1649	1583	0	1785	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			115		17				200			5
Link Speed (k/h)		50		50				50			50	
Link Distance (m)		141.3		146.3				96.2			83.8	
Travel Time (s)		10.2		10.5				6.9			6.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	61	115	237	112	17	83	414	351	23	379	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	115	237	129	0	0	497	351	0	422	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6		3.6				0.0			0.0	
Link Offset(m)		0.0		0.0				0.0			0.0	
Crosswalk Width(m)		4.8		4.8				4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4		9.4			9.4		9.4		9.4	
Detector 2 Size(m)		0.6		0.6			0.6		0.6		0.6	
Detector 2 Type		Cl+Ex		Cl+Ex			Cl+Ex		Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0		0.0			0.0		0.0		0.0	
Turn Type	Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4		4	8			2		2	6		

Lanes, Volumes, Timings
37: RR 284 & Peigan Trail/TWP 240

2025 Improved
12-01-2020

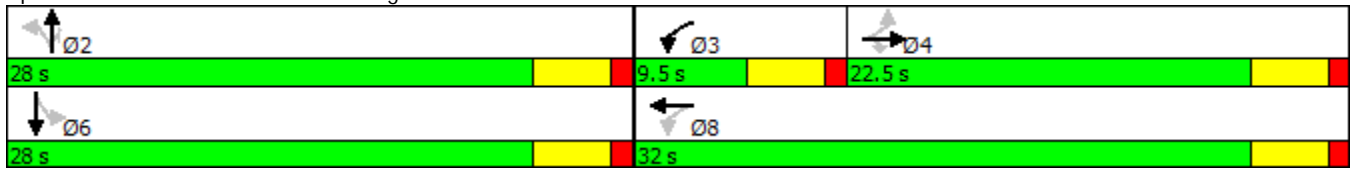


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4	4	3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5	22.5	9.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	22.5	22.5	22.5	9.5	32.0		28.0	28.0	28.0	28.0	28.0	
Total Split (%)	37.5%	37.5%	37.5%	15.8%	53.3%		46.7%	46.7%	46.7%	46.7%	46.7%	
Maximum Green (s)	18.0	18.0	18.0	5.0	27.5		23.5	23.5	23.5	23.5	23.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.5	4.5	4.5	4.5			4.5	4.5		4.5	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min	Min	Min	Min	
Walk Time (s)	7.0	7.0	7.0		7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0		11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0		0		0	0	0	0	0	
Act Effect Green (s)		10.5	10.5	17.5	17.5			21.6	21.6		21.6	
Actuated g/C Ratio		0.22	0.22	0.36	0.36			0.45	0.45		0.45	
v/c Ratio		0.50	0.26	0.59	0.19			0.68	0.43		0.53	
Control Delay		24.0	6.0	17.9	9.7			18.9	6.9		14.4	
Queue Delay		0.0	0.0	0.0	0.0			0.0	0.0		0.0	
Total Delay		24.0	6.0	17.9	9.7			18.9	6.9		14.4	
LOS		C	A	B	A			B	A		B	
Approach Delay		16.2			15.0			13.9			14.4	
Approach LOS		B			B			B			B	
Queue Length 50th (m)		12.8	0.0	15.1	6.6			36.7	8.6		28.2	
Queue Length 95th (m)		27.8	9.8	29.7	15.6			#89.3	27.9		59.3	
Internal Link Dist (m)		117.3			122.3			72.2			59.8	
Turn Bay Length (m)			15.0	75.0					15.0			
Base Capacity (vph)		534	680	400	1081			829	895		900	
Starvation Cap Reductn		0	0	0	0			0	0		0	
Spillback Cap Reductn		0	0	0	0			0	0		0	
Storage Cap Reductn		0	0	0	0			0	0		0	
Reduced v/c Ratio		0.28	0.17	0.59	0.12			0.60	0.39		0.47	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 48.4
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 14.6
 Intersection LOS: B
 Intersection Capacity Utilization 73.6%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 37: RR 284 & Peigan Trail/TWP 240



Lanes, Volumes, Timings
42: RR 284 & Glenmore Trail

2025 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	471	1248	229	9	811	37	297	32	14	14	27	672
Future Volume (vph)	471	1248	229	9	811	37	297	32	14	14	27	672
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	200.0		30.0	0.0		30.0	100.0		0.0	0.0		125.0
Storage Lanes	2		1	0		1	1		0	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.955				0.850
Flt Protected	0.950				0.999		0.950				0.983	
Satd. Flow (prot)	3433	3539	1583	0	3536	1583	1770	1779	0	0	1831	1583
Flt Permitted	0.950				0.931		0.728				0.929	
Satd. Flow (perm)	3433	3539	1583	0	3295	1583	1356	1779	0	0	1730	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			191			101		15				396
Link Speed (k/h)		50			50			50				50
Link Distance (m)		223.9			290.4			160.7				206.5
Travel Time (s)		16.1			20.9			11.6				14.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	512	1357	249	10	882	40	323	35	15	15	29	730
Shared Lane Traffic (%)												
Lane Group Flow (vph)	512	1357	249	0	892	40	323	50	0	0	44	730
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			3.6				3.6
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	7	4			8			2				6
Permitted Phases			4	8		8	2			6		6

Lanes, Volumes, Timings
42: RR 284 & Glenmore Trail

2025 Improved
12-01-2020



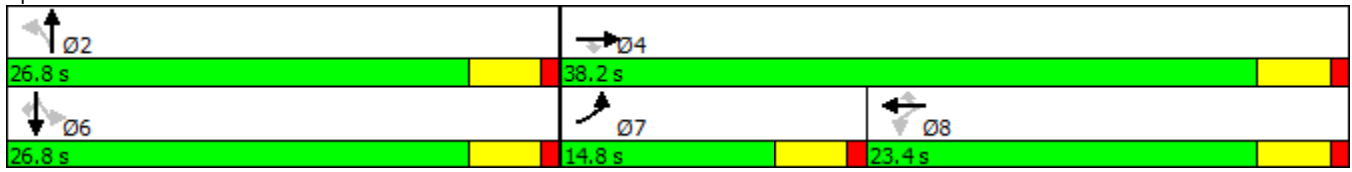
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8	8	2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	14.8	38.2	38.2	23.4	23.4	23.4	26.8	26.8		26.8	26.8	26.8
Total Split (%)	22.8%	58.8%	58.8%	36.0%	36.0%	36.0%	41.2%	41.2%		41.2%	41.2%	41.2%
Maximum Green (s)	10.3	33.7	33.7	18.9	18.9	18.9	22.3	22.3		22.3	22.3	22.3
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5		4.5	4.5	4.5	4.5			4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Min	Min		Min	Min	Min
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	0
Act Effect Green (s)	10.4	33.4	33.4		18.5	18.5	20.0	20.0			20.0	20.0
Actuated g/C Ratio	0.17	0.54	0.54		0.30	0.30	0.32	0.32			0.32	0.32
v/c Ratio	0.90	0.72	0.27		0.91	0.07	0.74	0.09			0.08	0.94
Control Delay	48.9	14.2	3.4		38.0	0.3	31.1	11.7			15.0	32.3
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0			0.0	0.0
Total Delay	48.9	14.2	3.4		38.0	0.3	31.1	11.7			15.0	32.3
LOS	D	B	A		D	A	C	B			B	C
Approach Delay		21.3			36.4			28.5			31.3	
Approach LOS		C			D			C			C	
Queue Length 50th (m)	33.6	65.1	3.4		57.4	0.0	34.6	2.9			3.7	40.9
Queue Length 95th (m)	#61.2	89.3	13.4		#93.2	0.4	#69.6	9.4			9.9	#113.9
Internal Link Dist (m)		199.9			266.4			136.7			182.5	
Turn Bay Length (m)	200.0		30.0			30.0	100.0					125.0
Base Capacity (vph)	569	1922	947		1004	552	487	649			621	822
Starvation Cap Reductn	0	0	0		0	0	0	0			0	0
Spillback Cap Reductn	0	0	0		0	0	0	0			0	0
Storage Cap Reductn	0	0	0		0	0	0	0			0	0
Reduced v/c Ratio	0.90	0.71	0.26		0.89	0.07	0.66	0.08			0.07	0.89

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 62.4
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 27.2
 Intersection LOS: C
 Intersection Capacity Utilization 92.0%
 ICU Level of Service F
 Analysis Period (min) 15

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

Splits and Phases: 42: RR 284 & Glenmore Trail



Lanes, Volumes, Timings
52: RR 283 & Glenmore Trail

2025 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	198	1016	63	5	585	3	30	3	17	6	5	242
Future Volume (vph)	198	1016	63	5	585	3	30	3	17	6	5	242
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		75.0	125.0		0.0	0.0		0.0	0.0		0.0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.999			0.955			0.871	
Flt Protected	0.950			0.950				0.970			0.999	
Satd. Flow (prot)	1770	1863	1583	1770	1861	0	0	1726	0	0	1621	0
Flt Permitted	0.224			0.167				0.398			0.991	
Satd. Flow (perm)	417	1863	1583	311	1861	0	0	708	0	0	1608	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68					18			263	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		182.4			198.2			127.6			172.2	
Travel Time (s)		13.1			14.3			9.2			12.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	215	1104	68	5	636	3	33	3	18	7	5	263
Shared Lane Traffic (%)												
Lane Group Flow (vph)	215	1104	68	5	639	0	0	54	0	0	275	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases	4		4	8			2			6		

Lanes, Volumes, Timings
52: RR 283 & Glenmore Trail

2025 Improved
12-01-2020

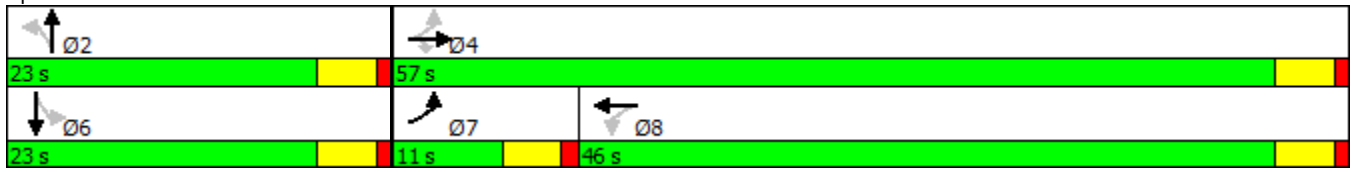


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	11.0	57.0	57.0	46.0	46.0		23.0	23.0		23.0	23.0	
Total Split (%)	13.8%	71.3%	71.3%	57.5%	57.5%		28.8%	28.8%		28.8%	28.8%	
Maximum Green (s)	6.5	52.5	52.5	41.5	41.5		18.5	18.5		18.5	18.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead			Lag			Lag			Lag		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Walk Time (s)		7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0	0		0	0	
Act Effect Green (s)	40.3	40.3	40.3	28.6	28.6		8.1	8.1		8.1	8.1	
Actuated g/C Ratio	0.69	0.69	0.69	0.49	0.49		0.14	0.14		0.14	0.14	
v/c Ratio	0.48	0.85	0.06	0.03	0.70		0.47	0.47		0.61	0.61	
Control Delay	6.8	15.2	1.1	7.8	15.4		34.2	34.2		11.3	11.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	6.8	15.2	1.1	7.8	15.4		34.2	34.2		11.3	11.3	
LOS	A	B	A	A	B		C	C		B	B	
Approach Delay		13.2			15.3		34.2	34.2		11.3	11.3	
Approach LOS		B			B		C	C		B	B	
Queue Length 50th (m)	5.7	62.9	0.0	0.2	46.4		3.8	3.8		1.2	1.2	
Queue Length 95th (m)	15.9	#191.6	3.1	1.8	93.1		15.6	15.6		21.2	21.2	
Internal Link Dist (m)		158.4			174.2		103.6	103.6		148.2	148.2	
Turn Bay Length (m)	30.0		75.0	125.0								
Base Capacity (vph)	450	1619	1384	232	1390		251	251		718	718	
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	
Reduced v/c Ratio	0.48	0.68	0.05	0.02	0.46		0.22	0.22		0.38	0.38	

Intersection Summary

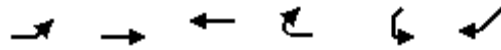
Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 58
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 14.0
 Intersection LOS: B
 Intersection Capacity Utilization 89.4%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 52: RR 283 & Glenmore Trail



Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

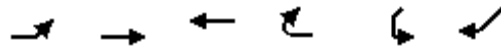
2025 Improved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑			
Traffic Volume (vph)	816	2100	2305	0	0	0
Future Volume (vph)	816	2100	2305	0	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (m)	200.0			0.0	0.0	0.0
Storage Lanes	2			0	0	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	0.97	0.91	0.91	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	3433	5085	5085	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	5085	5085	0	0	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		662.8	149.5		114.0	
Travel Time (s)		47.7	10.8		8.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	887	2283	2505	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	887	2283	2505	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.2	7.2		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors	1	2	2			
Detector Template	Left	Thru	Thru			
Leading Detector (m)	2.0	10.0	10.0			
Trailing Detector (m)	0.0	0.0	0.0			
Detector 1 Position(m)	0.0	0.0	0.0			
Detector 1 Size(m)	2.0	0.6	0.6			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0	0.0			
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						

Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

2025 Improved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Detector Phase	7	4	8			
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5	22.5			
Total Split (s)	22.0	60.0	38.0			
Total Split (%)	36.7%	100.0%	63.3%			
Maximum Green (s)	17.5	55.5	33.5			
Yellow Time (s)	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5			
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0			
Recall Mode	None	None	None			
Walk Time (s)		7.0	7.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effct Green (s)	17.2	59.7	33.5			
Actuated g/C Ratio	0.29	1.00	0.56			
v/c Ratio	0.90	0.45	0.88			
Control Delay	34.4	0.3	16.4			
Queue Delay	0.0	0.0	0.0			
Total Delay	34.4	0.3	16.4			
LOS	C	A	B			
Approach Delay		9.8	16.4			
Approach LOS		A	B			
Queue Length 50th (m)	50.0	0.0	82.6			
Queue Length 95th (m)	#81.9	0.0	106.7			
Internal Link Dist (m)		638.8	125.5		90.0	
Turn Bay Length (m)	200.0					
Base Capacity (vph)	1006	5034	2854			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.88	0.45	0.88			

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 59.7
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 12.7
 Intersection LOS: B
 Intersection Capacity Utilization 81.8%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 67: Glenmore Trail & Stoney Trail



Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2025 Improved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↙↘	↑↑↑		
Traffic Volume (vph)	2556	0	874	1484	0	0
Future Volume (vph)	2556	0	874	1484	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	175.0		0.0	0.0
Storage Lanes		0	2		0	0
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	5085	0	3433	5085	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	5085	0	3433	5085	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	199.5			662.8	102.4	
Travel Time (s)	14.4			47.7	7.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2778	0	950	1613	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2778	0	950	1613	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.2			7.2	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2		1	2		
Detector Template	Thru		Left	Thru		
Leading Detector (m)	10.0		2.0	10.0		
Trailing Detector (m)	0.0		0.0	0.0		
Detector 1 Position(m)	0.0		0.0	0.0		
Detector 1 Size(m)	0.6		2.0	0.6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						

Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2025 Improved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		3	8		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	22.5		9.5	22.5		
Total Split (s)	48.0		27.0	75.0		
Total Split (%)	64.0%		36.0%	100.0%		
Maximum Green (s)	43.5		22.5	70.5		
Yellow Time (s)	3.5		3.5	3.5		
All-Red Time (s)	1.0		1.0	1.0		
Lost Time Adjust (s)	0.0		0.0	0.0		
Total Lost Time (s)	4.5		4.5	4.5		
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		None	None		
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	11.0			11.0		
Pedestrian Calls (#/hr)	0			0		
Act Effect Green (s)	43.5		22.2	74.7		
Actuated g/C Ratio	0.58		0.30	1.00		
v/c Ratio	0.94		0.93	0.32		
Control Delay	22.6		42.9	0.2		
Queue Delay	0.0		0.0	0.0		
Total Delay	22.6		42.9	0.2		
LOS	C		D	A		
Approach Delay	22.6			16.0		
Approach LOS	C			B		
Queue Length 50th (m)	127.2		69.9	0.0		
Queue Length 95th (m)	#181.1		#106.8	0.0		
Internal Link Dist (m)	175.5			638.8	78.4	
Turn Bay Length (m)			175.0			
Base Capacity (vph)	2961		1033	5043		
Starvation Cap Reductn	0		0	0		
Spillback Cap Reductn	0		0	0		
Storage Cap Reductn	0		0	0		
Reduced v/c Ratio	0.94		0.92	0.32		

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 74.7
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 19.4
 Intersection LOS: B
 Intersection Capacity Utilization 81.8%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 68: Stoney Trail & Glenmore Trail



Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

2025 Improved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	809	0	0	429	299	0
Future Volume (vph)	809	0	0	429	299	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	421.0			179.4	93.7	
Travel Time (s)	30.3			12.9	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	879	0	0	466	325	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	879	0	0	466	325	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	7.2	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2			2	1	
Detector Template	Thru			Thru	Left	
Leading Detector (m)	10.0			10.0	2.0	
Trailing Detector (m)	0.0			0.0	0.0	
Detector 1 Position(m)	0.0			0.0	0.0	
Detector 1 Size(m)	0.6			0.6	2.0	
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0			0.0	0.0	
Detector 1 Queue (s)	0.0			0.0	0.0	
Detector 1 Delay (s)	0.0			0.0	0.0	
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA			NA	Prot	
Protected Phases	4			8	2	
Permitted Phases						
Detector Phase	4			8	2	
Switch Phase						
Minimum Initial (s)	5.0			5.0	5.0	

Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

2025 Improved
12-01-2020

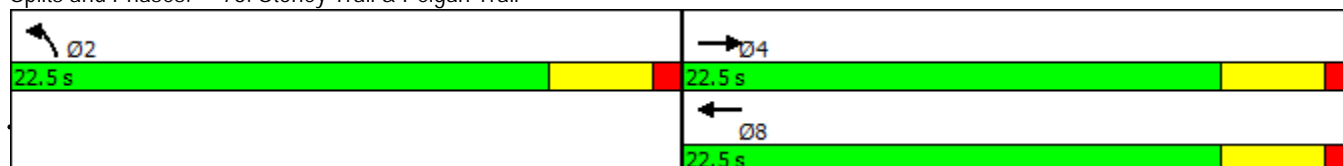


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	22.5			22.5	22.5	
Total Split (s)	22.5			22.5	22.5	
Total Split (%)	50.0%			50.0%	50.0%	
Maximum Green (s)	18.0			18.0	18.0	
Yellow Time (s)	3.5			3.5	3.5	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			None	Max	
Walk Time (s)	7.0			7.0	7.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effect Green (s)	15.3			15.3	18.1	
Actuated g/C Ratio	0.36			0.36	0.43	
v/c Ratio	0.69			0.36	0.22	
Control Delay	14.6			10.7	8.9	
Queue Delay	0.0			0.0	0.0	
Total Delay	14.6			10.7	8.9	
LOS	B			B	A	
Approach Delay	14.6			10.7	8.9	
Approach LOS	B			B	A	
Queue Length 50th (m)	28.7			13.1	7.9	
Queue Length 95th (m)	43.6			21.6	15.1	
Internal Link Dist (m)	397.0			155.4	69.7	
Turn Bay Length (m)						
Base Capacity (vph)	1507			1507	1462	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.58			0.31	0.22	

Intersection Summary

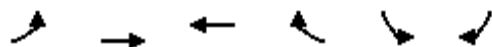
Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	42.4
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	12.4
Intersection LOS:	B
Intersection Capacity Utilization:	55.3%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 73: Stoney Trail & Peigan Trail



Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2025 Improved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	0	1294	647	0	420	0
Future Volume (vph)	0	1294	647	0	420	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	3539	0	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	3539	0	3433	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		133.7	421.0		94.2	
Travel Time (s)		9.6	30.3		6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1407	703	0	457	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1407	703	0	457	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		7.2	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors		2	2		1	
Detector Template		Thru	Thru		Left	
Leading Detector (m)		10.0	10.0		2.0	
Trailing Detector (m)		0.0	0.0		0.0	
Detector 1 Position(m)		0.0	0.0		0.0	
Detector 1 Size(m)		0.6	0.6		2.0	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases						
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		5.0	5.0		5.0	

Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2025 Improved
12-01-2020

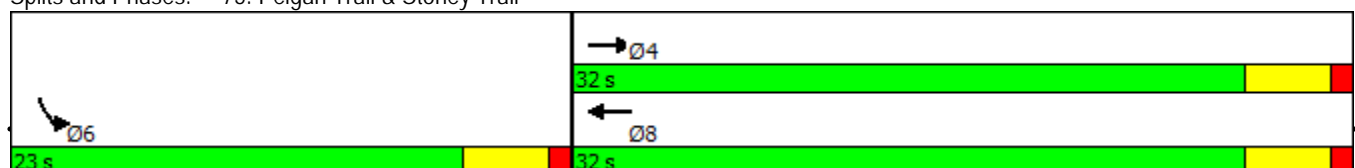


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		22.5	22.5		22.5	
Total Split (s)		32.0	32.0		23.0	
Total Split (%)		58.2%	58.2%		41.8%	
Maximum Green (s)		27.5	27.5		18.5	
Yellow Time (s)		3.5	3.5		3.5	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.5	4.5		4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		None	None		Max	
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effect Green (s)		25.3	25.3		18.6	
Actuated g/C Ratio		0.48	0.48		0.35	
v/c Ratio		0.83	0.41		0.38	
Control Delay		17.2	9.7		14.6	
Queue Delay		0.0	0.0		0.0	
Total Delay		17.2	9.7		14.6	
LOS		B	A		B	
Approach Delay		17.2	9.7		14.6	
Approach LOS		B	A		B	
Queue Length 50th (m)		58.8	22.1		18.4	
Queue Length 95th (m)		83.7	32.7		29.0	
Internal Link Dist (m)		109.7	397.0		70.2	
Turn Bay Length (m)						
Base Capacity (vph)		1844	1844		1203	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		0	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.76	0.38		0.38	

Intersection Summary

Area Type: Other
 Cycle Length: 55
 Actuated Cycle Length: 52.9
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 14.7
 Intersection Capacity Utilization 55.3%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 75: Peigan Trail & Stoney Trail



Lanes, Volumes, Timings

2025 Improved

82:

12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↖	↗	↗		↖	↗	↖	↗	↗
Traffic Volume (vph)	148	85	66	209	79	149	33	329	139	149	346	97
Future Volume (vph)	148	85	66	209	79	149	33	329	139	149	346	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	50.0		15.0	0.0		15.0	50.0		15.0
Storage Lanes	0		0	1		1	0		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.970				0.850			0.850			0.850
Flt Protected		0.976		0.950				0.995		0.950		
Satd. Flow (prot)	0	1763	0	1770	1863	1583	0	1853	1583	1770	1863	1583
Flt Permitted		0.799		0.525				0.937		0.228		
Satd. Flow (perm)	0	1444	0	978	1863	1583	0	1745	1583	425	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		22				162			176			101
Link Speed (k/h)		50			50			50				50
Link Distance (m)		226.8			365.5			199.0				205.2
Travel Time (s)		16.3			26.3			14.3				14.8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	161	92	72	227	86	162	36	358	151	162	376	105
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	325	0	227	86	162	0	394	151	162	376	105
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6				3.6
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8		8	2		2	6		6

Lanes, Volumes, Timings

2025 Improved

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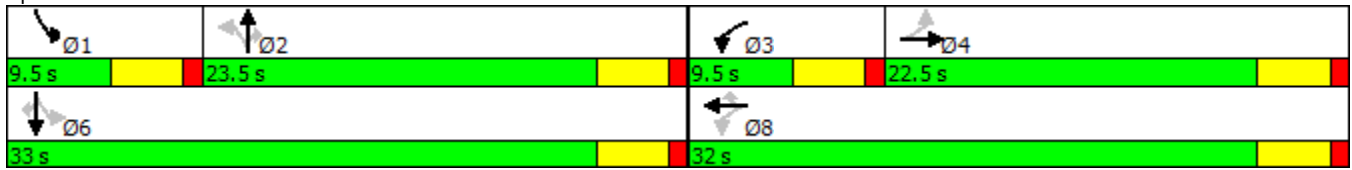


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		3	8	8	2	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5		9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	22.5	22.5		9.5	32.0	32.0	23.5	23.5	23.5	9.5	33.0	33.0
Total Split (%)	34.6%	34.6%		14.6%	49.2%	49.2%	36.2%	36.2%	36.2%	14.6%	50.8%	50.8%
Maximum Green (s)	18.0	18.0		5.0	27.5	27.5	19.0	19.0	19.0	5.0	28.5	28.5
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		4.5		4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lag	Lag		Lead			Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None	None	Min	Min	Min	None	Min	Min
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0	0		0	0
Act Effct Green (s)		15.9		25.8	25.8	25.8		16.7	16.7	23.8	23.8	23.8
Actuated g/C Ratio		0.27		0.44	0.44	0.44		0.28	0.28	0.40	0.40	0.40
v/c Ratio		0.80		0.46	0.11	0.21		0.79	0.26	0.56	0.50	0.15
Control Delay		37.5		15.9	11.8	3.2		34.7	3.9	19.7	15.6	3.6
Queue Delay		0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		37.5		15.9	11.8	3.2		34.7	3.9	19.7	15.6	3.6
LOS		D		B	B	A		C	A	B	B	A
Approach Delay		37.5			10.8			26.1			14.7	
Approach LOS		D			B			C			B	
Queue Length 50th (m)		35.3		18.2	6.3	0.0		45.3	0.0	12.1	32.0	0.3
Queue Length 95th (m)		#75.2		32.8	14.0	9.4		#86.3	9.0	23.2	53.2	7.7
Internal Link Dist (m)		202.8			341.5			175.0			181.2	
Turn Bay Length (m)				50.0		15.0			15.0	50.0		15.0
Base Capacity (vph)		474		497	905	852		586	648	290	938	847
Starvation Cap Reductn		0		0	0	0		0	0	0	0	0
Spillback Cap Reductn		0		0	0	0		0	0	0	0	0
Storage Cap Reductn		0		0	0	0		0	0	0	0	0
Reduced v/c Ratio		0.69		0.46	0.10	0.19		0.67	0.23	0.56	0.40	0.12

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 58.9
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 20.6 Intersection LOS: C
 Intersection Capacity Utilization 72.0% ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 82:



HCM Unsignalized Intersection Capacity Analysis
47: RR 283 & TWP 240

2025 Improved
12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	301	30	34	1	54	21	48	173	2	38	152	218
Future Volume (vph)	301	30	34	1	54	21	48	173	2	38	152	218
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	327	33	37	1	59	23	52	188	2	41	165	237

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	397	83	242	443
Volume Left (vph)	327	1	52	41
Volume Right (vph)	37	23	2	237
Hadj (s)	0.14	-0.13	0.07	-0.27
Departure Headway (s)	6.3	6.9	6.5	5.8
Degree Utilization, x	0.70	0.16	0.44	0.71
Capacity (veh/h)	538	423	503	598
Control Delay (s)	22.4	11.2	14.4	21.6
Approach Delay (s)	22.4	11.2	14.4	21.6
Approach LOS	C	B	B	C

Intersection Summary			
Delay		19.6	
Level of Service		C	
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)		15	

HCM Unsignalized Intersection Capacity Analysis

2025 Improved

57:

12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	12	58	25	8	0	68	72	33	0	64	0
Future Volume (Veh/h)	0	12	58	25	8	0	68	72	33	0	64	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	13	63	27	9	0	74	78	36	0	70	0
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	9			76			142	108	44	182	139	9
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	9			76			142	108	44	182	139	9
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			90	90	96	100	91	100
cM capacity (veh/h)	1611			1523			757	769	1025	684	739	1073
Direction, Lane #												
	EB 1	WB 1	NB 1	SB 1								
Volume Total	76	36	188	70								
Volume Left	0	27	74	0								
Volume Right	63	0	36	0								
cSH	1611	1523	802	739								
Volume to Capacity	0.00	0.02	0.23	0.09								
Queue Length 95th (m)	0.0	0.4	7.3	2.5								
Control Delay (s)	0.0	5.6	10.9	10.4								
Lane LOS		A	B	B								
Approach Delay (s)	0.0	5.6	10.9	10.4								
Approach LOS			B	B								
Intersection Summary												
Average Delay			8.0									
Intersection Capacity Utilization			31.4%	ICU Level of Service		A						
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
62: RR 282 & Glenmore Trail

2025 Improved
12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Volume (veh/h)	162	877	0	0	389	45	0	0	0	99	0	204
Future Volume (Veh/h)	162	877	0	0	389	45	0	0	0	99	0	204
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	176	953	0	0	423	49	0	0	0	108	0	222
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	472			953			1752	1777	953	1752	1752	448
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	472			953			1752	1777	953	1752	1752	448
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	84			100			100	100	100	0	100	64
cM capacity (veh/h)	1090			721			37	69	314	59	72	611
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total	1129	472	0	108	222							
Volume Left	176	0	0	108	0							
Volume Right	0	49	0	0	222							
cSH	1090	721	1700	59	611							
Volume to Capacity	0.16	0.00	0.00	1.85	0.36							
Queue Length 95th (m)	4.6	0.0	0.0	81.3	13.2							
Control Delay (s)	4.2	0.0	0.0	552.3	14.2							
Lane LOS	A		A	F	B							
Approach Delay (s)	4.2	0.0	0.0	190.3								
Approach LOS			A	F								
Intersection Summary												
Average Delay			35.0									
Intersection Capacity Utilization			93.8%		ICU Level of Service				F			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2025 Improved

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12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	52	120	30	43	97	35	50	108	38	38	105	52
Future Volume (vph)	52	120	30	43	97	35	50	108	38	38	105	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	57	130	33	47	105	38	54	117	41	41	114	57

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	220	190	212	212
Volume Left (vph)	57	47	54	41
Volume Right (vph)	33	38	41	57
Hadj (s)	0.00	-0.04	-0.03	-0.09
Departure Headway (s)	5.4	5.4	5.4	5.3
Degree Utilization, x	0.33	0.28	0.32	0.31
Capacity (veh/h)	615	608	610	622
Control Delay (s)	11.0	10.5	10.8	10.7
Approach Delay (s)	11.0	10.5	10.8	10.7
Approach LOS	B	B	B	B

Intersection Summary

Delay	10.8
Level of Service	B
Intersection Capacity Utilization	37.6%
ICU Level of Service	A
Analysis Period (min)	15

HCM Unsignalized Intersection Capacity Analysis

2025 Improved

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12-01-2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	20	72	15	133	138	22
Future Volume (vph)	20	72	15	133	138	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	78	16	145	150	24

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	100	161	174
Volume Left (vph)	22	16	0
Volume Right (vph)	78	0	24
Hadj (s)	-0.39	0.05	-0.05
Departure Headway (s)	4.3	4.4	4.3
Degree Utilization, x	0.12	0.20	0.21
Capacity (veh/h)	779	797	813
Control Delay (s)	7.8	8.4	8.3
Approach Delay (s)	7.8	8.4	8.3
Approach LOS	A	A	A

Intersection Summary

Delay		8.3	
Level of Service		A	
Intersection Capacity Utilization		31.7%	ICU Level of Service
Analysis Period (min)		15	A

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2030 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↔	↔↔		↔	↔↔	
Traffic Volume (vph)	278	337	60	0	273	0	0	636	0	29	553	470
Future Volume (vph)	278	337	60	0	273	0	0	636	0	29	553	470
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.987										0.931
Flt Protected		0.980								0.950		
Satd. Flow (prot)	0	3423	0	0	3539	0	1863	3539	0	1770	3295	0
Flt Permitted		0.726								0.351		
Satd. Flow (perm)	0	2536	0	0	3539	0	1863	3539	0	654	3295	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27										418
Link Speed (k/h)		50			50			50				50
Link Distance (m)		178.3			246.0			115.3				144.5
Travel Time (s)		12.8			17.7			8.3				10.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	302	366	65	0	297	0	0	691	0	32	601	511
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	733	0	0	297	0	0	691	0	32	1112	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6				3.6
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2030 Improved
12-01-2020

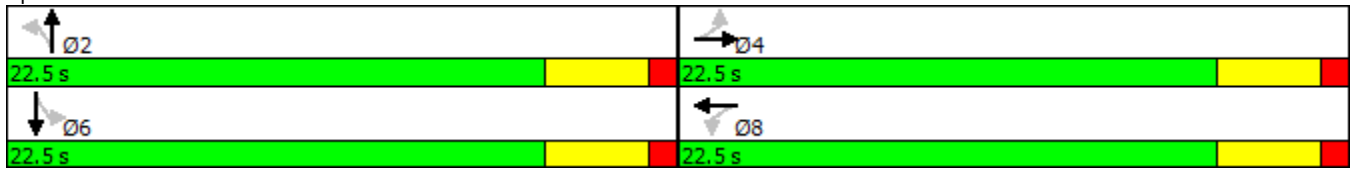


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	18.0	18.0		18.0	18.0		18.0	18.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		15.8			15.8			18.1		18.1	18.1	
Actuated g/C Ratio		0.37			0.37			0.42		0.42	0.42	
v/c Ratio		0.77			0.23			0.46		0.12	0.68	
Control Delay		17.9			9.6			10.7		10.0	9.0	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		17.9			9.6			10.7		10.0	9.0	
LOS		B			A			B		A	A	
Approach Delay		17.9			9.6			10.7			9.1	
Approach LOS		B			A			B			A	
Queue Length 50th (m)		24.1			8.0			21.1		1.6	21.6	
Queue Length 95th (m)		40.4			14.2			32.8		5.8	39.7	
Internal Link Dist (m)		154.3			222.0			91.3			120.5	
Turn Bay Length (m)										70.0		
Base Capacity (vph)		1084			1491			1491		275	1630	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.68			0.20			0.46		0.12	0.68	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	42.9
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.77
Intersection Signal Delay:	11.8
Intersection LOS:	B
Intersection Capacity Utilization:	68.5%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 3: 52 Street & 61 Avenue



Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

2030 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	173	1055	548	0	1327	77	639	54	0	0	0	34
Future Volume (vph)	173	1055	548	0	1327	77	639	54	0	0	0	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	150.0		0.0	0.0		0.0	100.0		0.0	0.0		0.0
Storage Lanes	2		1	0		0	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.95	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992							0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	3539	1583	0	3511	0	3433	1863	0	1863	1583	0
Flt Permitted	0.950						0.733					
Satd. Flow (perm)	3433	3539	1583	0	3511	0	2649	1863	0	1863	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			596		9							161
Link Speed (k/h)		50			50			50				50
Link Distance (m)		155.4			145.0			144.7				110.1
Travel Time (s)		11.2			10.4			10.4				7.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	188	1147	596	0	1442	84	695	59	0	0	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	188	1147	596	0	1526	0	695	59	0	0	37	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm		NA		Perm	NA		Perm		NA
Protected Phases	7	4			8			2				6
Permitted Phases			4	8			2			6		

Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

2030 Improved
12-01-2020

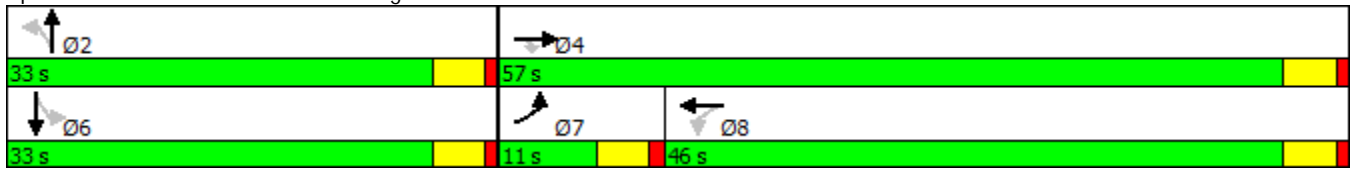


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	11.0	57.0	57.0	46.0	46.0		33.0	33.0		33.0	33.0	
Total Split (%)	12.2%	63.3%	63.3%	51.1%	51.1%		36.7%	36.7%		36.7%	36.7%	
Maximum Green (s)	6.5	52.5	52.5	41.5	41.5		28.5	28.5		28.5	28.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead			Lag			Lag			Lag		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Max	Max		Max	Max	
Walk Time (s)		7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0	0	0		0	0		0	0	
Act Effct Green (s)	6.5	51.9	51.9		40.9		28.5	28.5				28.5
Actuated g/C Ratio	0.07	0.58	0.58		0.46		0.32	0.32				0.32
v/c Ratio	0.76	0.56	0.51		0.95		0.82	0.10				0.06
Control Delay	61.0	12.9	2.5		37.1		38.0	22.4				0.2
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0				0.0
Total Delay	61.0	12.9	2.5		37.1		38.0	22.4				0.2
LOS	E	B	A		D		D	C				A
Approach Delay		14.4			37.1			36.8				0.2
Approach LOS		B			D			D				A
Queue Length 50th (m)	17.6	62.5	0.0		133.2		59.8	7.5				0.0
Queue Length 95th (m)	#34.3	80.2	13.3		#186.6		#89.2	16.5				0.0
Internal Link Dist (m)		131.4			121.0			120.7				86.1
Turn Bay Length (m)	150.0						100.0					
Base Capacity (vph)	249	2079	1175		1635		844	593				614
Starvation Cap Reductn	0	0	0		0		0	0				0
Spillback Cap Reductn	0	0	0		0		0	0				0
Storage Cap Reductn	0	0	0		0		0	0				0
Reduced v/c Ratio	0.76	0.55	0.51		0.93		0.82	0.10				0.06

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 89.4
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 26.4
 Intersection LOS: C
 Intersection Capacity Utilization 104.4%
 ICU Level of Service G
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 8: 84 Street & Peigan Trail



Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

2030 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗			↖	↗		↕	
Traffic Volume (vph)	19	436	92	4	324	56	82	101	0	26	46	83
Future Volume (vph)	19	436	92	4	324	56	82	101	0	26	46	83
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	60.0		0.0	0.0		100.0	0.0		0.0
Storage Lanes	0		0	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.978							0.928
Flt Protected		0.998		0.950				0.978				0.992
Satd. Flow (prot)	0	1816	0	1770	1822	0	0	1822	1863	0	1715	0
Flt Permitted		0.979		0.348				0.809				0.937
Satd. Flow (perm)	0	1782	0	648	1822	0	0	1507	1863	0	1620	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26			23							90
Link Speed (k/h)		50			50			50				50
Link Distance (m)		90.4			116.8			200.2				92.7
Travel Time (s)		6.5			8.4			14.4				6.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	474	100	4	352	61	89	110	0	28	50	90
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	595	0	4	413	0	0	199	0	0	168	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0		10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0		0.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm		NA
Protected Phases		4			8			2				6
Permitted Phases	4			8			2		2	6		

Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

2030 Improved
12-01-2020

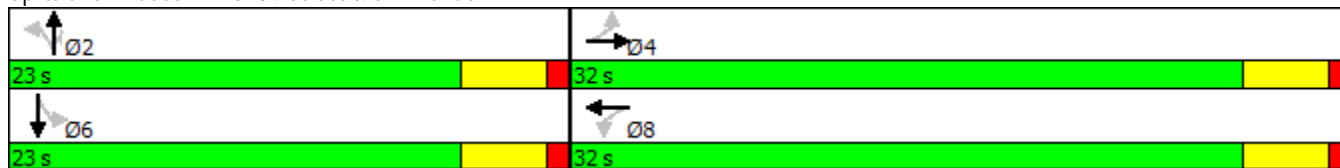


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	32.0	32.0		32.0	32.0		23.0	23.0	23.0	23.0	23.0	
Total Split (%)	58.2%	58.2%		58.2%	58.2%		41.8%	41.8%	41.8%	41.8%	41.8%	
Maximum Green (s)	27.5	27.5		27.5	27.5		18.5	18.5	18.5	18.5	18.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.5		4.5	4.5			4.5	4.5		4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Max	Max	Max	Max	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	
Act Effect Green (s)		19.7		19.7	19.7			18.8			18.8	
Actuated g/C Ratio		0.41		0.41	0.41			0.39			0.39	
v/c Ratio		0.79		0.01	0.54			0.34			0.24	
Control Delay		19.8		7.5	12.3			14.1			7.5	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		19.8		7.5	12.3			14.1			7.5	
LOS		B		A	B			B			A	
Approach Delay		19.8			12.2			14.1			7.5	
Approach LOS		B			B			B			A	
Queue Length 50th (m)		40.3		0.2	23.8			11.6			4.2	
Queue Length 95th (m)		71.0		1.4	42.3			30.7			17.0	
Internal Link Dist (m)		66.4			92.8			176.2			68.7	
Turn Bay Length (m)				60.0								
Base Capacity (vph)		1055		379	1077			594			693	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.56		0.01	0.38			0.34			0.24	

Intersection Summary

Area Type:	Other
Cycle Length:	55
Actuated Cycle Length:	47.6
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.79
Intersection Signal Delay:	15.2
Intersection LOS:	B
Intersection Capacity Utilization:	73.5%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 13: 84 Street & 61 Avenue



Lanes, Volumes, Timings
18: Garden Road & Peigan Trail

2030 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔	↔		↔↔		↔↔	↔		↔	↔	
Traffic Volume (vph)	87	650	318	12	790	84	600	324	8	8	385	14
Future Volume (vph)	87	650	318	12	790	84	600	324	8	8	385	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	0.95	0.95	0.95	0.97	1.00	1.00	1.00	1.00	1.00
Fr _t			0.850		0.986			0.996			0.995	
Fl _t Protected		0.994			0.999		0.950			0.950		
Satd. Flow (prot)	0	3518	1583	0	3486	0	3433	1855	0	1770	1853	0
Fl _t Permitted		0.608			0.941		0.950			0.546		
Satd. Flow (perm)	0	2152	1583	0	3284	0	3433	1855	0	1017	1853	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			346		16			2			2	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.2			182.0			112.9			101.5	
Travel Time (s)		8.9			13.1			8.1			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	95	707	346	13	859	91	652	352	9	9	418	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	802	346	0	963	0	652	361	0	9	433	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			7.2			7.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		Prot	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8						6		
Detector Phase	4	4	4	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	

Lanes, Volumes, Timings
18: Garden Road & Peigan Trail

2030 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	22.5	22.5	22.5	22.5	22.5		9.5	22.5		22.5	22.5	
Total Split (s)	35.4	35.4	35.4	35.4	35.4		20.2	44.6		24.4	24.4	
Total Split (%)	44.3%	44.3%	44.3%	44.3%	44.3%		25.3%	55.8%		30.5%	30.5%	
Maximum Green (s)	30.9	30.9	30.9	30.9	30.9		15.7	40.1		19.9	19.9	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5	4.5		4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		None	Max		Max	Max	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0		0	0	
Act Effect Green (s)		30.9	30.9		30.9		15.7	40.1		19.9	19.9	
Actuated g/C Ratio		0.39	0.39		0.39		0.20	0.50		0.25	0.25	
v/c Ratio		0.97	0.42		0.75		0.97	0.39		0.04	0.94	
Control Delay		49.8	3.8		25.5		61.6	13.8		23.5	60.5	
Queue Delay		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Delay		49.8	3.8		25.5		61.6	13.8		23.5	60.5	
LOS		D	A		C		E	B		C	E	
Approach Delay		35.9			25.5			44.6			59.7	
Approach LOS		D			C			D			E	
Queue Length 50th (m)		64.4	0.0		67.5		53.7	33.6		1.1	67.6	
Queue Length 95th (m)		#104.6	15.9		90.8		#87.8	53.3		4.8	#124.6	
Internal Link Dist (m)		99.2			158.0			88.9			77.5	
Turn Bay Length (m)												
Base Capacity (vph)		831	823		1278		673	930		252	462	
Starvation Cap Reductn		0	0		0		0	0		0	0	
Spillback Cap Reductn		0	0		0		0	0		0	0	
Storage Cap Reductn		0	0		0		0	0		0	0	
Reduced v/c Ratio		0.97	0.42		0.75		0.97	0.39		0.04	0.94	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 38.5
 Intersection LOS: D
 Intersection Capacity Utilization 98.6%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 18: Garden Road & Peigan Trail



Lanes, Volumes, Timings
27: 100 Street & 61 Avenue

2030 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	223	221	118	254	157	72	96	180	195	88	224	126
Future Volume (vph)	223	221	118	254	157	72	96	180	195	88	224	126
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		0.0	120.0		0.0	0.0		25.0	60.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.948			0.953				0.850		0.961	
Flt Protected	0.950			0.950				0.983			0.990	
Satd. Flow (prot)	1770	1766	0	1770	1775	0	0	1831	1583	0	1772	0
Flt Permitted	0.572			0.309				0.691			0.851	
Satd. Flow (perm)	1065	1766	0	576	1775	0	0	1287	1583	0	1523	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		46			40				212			38
Link Speed (k/h)		50			50			50				50
Link Distance (m)		134.0			133.1			117.7				140.8
Travel Time (s)		9.6			9.6			8.5				10.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	242	240	128	276	171	78	104	196	212	96	243	137
Shared Lane Traffic (%)												
Lane Group Flow (vph)	242	368	0	276	249	0	0	300	212	0	476	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0		10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0		0.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases	7	4		3	8			2				6
Permitted Phases	4			8			2		2	6		

Lanes, Volumes, Timings
27: 100 Street & 61 Avenue

2030 Improved
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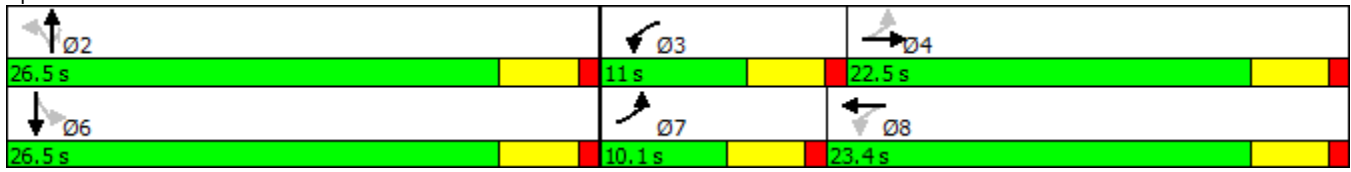


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	10.1	22.5		11.0	23.4		26.5	26.5	26.5	26.5	26.5	
Total Split (%)	16.8%	37.5%		18.3%	39.0%		44.2%	44.2%	44.2%	44.2%	44.2%	
Maximum Green (s)	5.6	18.0		6.5	18.9		22.0	22.0	22.0	22.0	22.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Min	Min	Min	Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effect Green (s)	20.0	14.3		21.8	15.2		19.3	19.3	19.3	19.3	19.3	
Actuated g/C Ratio	0.37	0.26		0.40	0.28		0.36	0.36	0.36	0.36	0.36	
v/c Ratio	0.52	0.73		0.73	0.47		0.65	0.30	0.30	0.30	0.84	
Control Delay	14.7	25.8		24.5	17.0		23.1	3.7	3.7	3.7	31.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	14.7	25.8		24.5	17.0		23.1	3.7	3.7	3.7	31.1	
LOS	B	C		C	B		C	A	A	A	C	
Approach Delay		21.4			21.0		15.1				31.1	
Approach LOS		C			C		B				C	
Queue Length 50th (m)	15.6	31.8		18.2	18.5		25.8	0.0	0.0	0.0	41.4	
Queue Length 95th (m)	28.4	57.9		#38.6	36.3		52.5	11.4	11.4	11.4	#94.2	
Internal Link Dist (m)		110.0			109.1		93.7				116.8	
Turn Bay Length (m)	25.0			120.0					25.0			
Base Capacity (vph)	469	631		379	659		535	782	782	782	655	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.52	0.58		0.73	0.38		0.56	0.27	0.27	0.27	0.73	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 54
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 21.9
 Intersection LOS: C
 Intersection Capacity Utilization 87.0%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 27: 100 Street & 61 Avenue



Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

2030 Improved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	455	2450	409	231	2119	74	509	82	96	65	128	697
Future Volume (vph)	455	2450	409	231	2119	74	509	82	96	65	128	697
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	125.0		125.0	125.0		0.0	0.0		60.0	0.0		0.0
Storage Lanes	2		1	2		1	2		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	3433	5085	1583	3433	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.699		
Satd. Flow (perm)	3433	5085	1583	3433	5085	1583	3433	1863	1583	1302	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			372			142			109			326
Link Speed (k/h)		50			50			50				50
Link Distance (m)		183.8			169.8			154.4				195.2
Travel Time (s)		13.2			12.2			11.1				14.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	495	2663	445	251	2303	80	553	89	104	71	139	758
Shared Lane Traffic (%)												
Lane Group Flow (vph)	495	2663	445	251	2303	80	553	89	104	71	139	758
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2	6		Free

Lanes, Volumes, Timings
32: 100 Street & Glenmore Trail /Glenmore Trail

2030 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	26.0	81.0	81.0	16.0	71.0	71.0	29.0	42.4	42.4	10.6	24.0	
Total Split (%)	17.3%	54.0%	54.0%	10.7%	47.3%	47.3%	19.3%	28.3%	28.3%	7.1%	16.0%	
Maximum Green (s)	21.5	76.5	76.5	11.5	66.5	66.5	24.5	37.9	37.9	6.1	19.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	
Act Effect Green (s)	21.5	76.5	76.5	11.5	66.5	66.5	24.5	37.9	37.9	25.6	19.5	150.0
Actuated g/C Ratio	0.14	0.51	0.51	0.08	0.44	0.44	0.16	0.25	0.25	0.17	0.13	1.00
v/c Ratio	1.01	1.03	0.45	0.95	1.02	0.10	0.99	0.19	0.22	0.29	0.57	0.48
Control Delay	105.0	61.1	5.4	112.7	65.6	0.3	96.8	45.3	7.7	42.4	71.6	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	105.0	61.1	5.4	112.7	65.6	0.3	96.8	45.3	7.7	42.4	71.6	1.0
LOS	F	E	A	F	E	A	F	D	A	D	E	A
Approach Delay		60.3			68.1			78.3			14.2	
Approach LOS		E			E			E			B	
Queue Length 50th (m)	-81.7	-324.8	11.5	41.1	-279.5	0.0	90.2	22.1	0.0	15.7	41.6	0.0
Queue Length 95th (m)	#120.7	#350.5	34.5	#70.0	#307.6	0.0	#130.0	38.2	14.2	28.6	65.8	0.0
Internal Link Dist (m)		159.8			145.8			130.4			171.2	
Turn Bay Length (m)	125.0		125.0	125.0					60.0			
Base Capacity (vph)	492	2593	989	263	2254	780	560	470	481	241	242	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	1.03	0.45	0.95	1.02	0.10	0.99	0.19	0.22	0.29	0.57	0.48

Intersection Summary

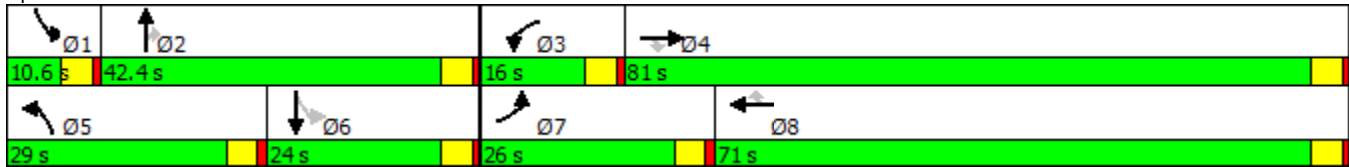
Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Natural Cycle:	150
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.03
Intersection Signal Delay:	59.0
Intersection LOS:	E
Intersection Capacity Utilization:	90.2%
ICU Level of Service:	E
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

Lanes, Volumes, Timings
 32: 100 Street & Glenmore Trail /Glenmore Trail

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

Splits and Phases: 32: 100 Street & Glenmore Trail /Glenmore Trail



Lanes, Volumes, Timings
37: RR 284 & Peigan Trail/TWP 240

2030 Improved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	283	136	121	325	18	208	550	181	4	448	45
Future Volume (vph)	70	283	136	121	325	18	208	550	181	4	448	45
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		15.0	75.0		0.0	0.0		15.0	0.0		0.0
Storage Lanes	1		1	1		0	1		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.992				0.850		0.988	
Flt Protected	0.950			0.950			0.950					
Satd. Flow (prot)	1770	1863	1583	1770	1848	0	1770	1863	1583	0	1840	0
Flt Permitted	0.258			0.369			0.238				0.996	
Satd. Flow (perm)	481	1863	1583	687	1848	0	443	1863	1583	0	1833	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			153		4				92			8
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		141.3			146.3			96.2			83.8	
Travel Time (s)		10.2			10.5			6.9			6.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	308	148	132	353	20	226	598	197	4	487	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	76	308	148	132	373	0	226	598	197	0	540	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	
Protected Phases	7	4		3	8		5	2				6
Permitted Phases	4		4	8			2		2	6		

Lanes, Volumes, Timings
37: RR 284 & Peigan Trail/TWP 240

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8		5	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5		9.5	22.5	22.5	22.5	22.5	
Total Split (s)	9.5	23.0	23.0	9.5	23.0		9.5	42.5	42.5	33.0	33.0	
Total Split (%)	12.7%	30.7%	30.7%	12.7%	30.7%		12.7%	56.7%	56.7%	44.0%	44.0%	
Maximum Green (s)	5.0	18.5	18.5	5.0	18.5		5.0	38.0	38.0	28.5	28.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5		4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead			Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None	None	None	None		None	Min	Min	Min	Min	
Walk Time (s)		7.0	7.0		7.0			7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0			11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0			0	0	0	0	
Act Effect Green (s)	20.4	16.7	16.7	20.4	16.7		33.4	33.4	33.4		23.4	
Actuated g/C Ratio	0.31	0.25	0.25	0.31	0.25		0.50	0.50	0.50		0.35	
v/c Ratio	0.31	0.66	0.29	0.45	0.80		0.69	0.64	0.23		0.83	
Control Delay	18.6	32.0	6.0	21.5	39.9		25.3	16.9	6.6		32.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0	
Total Delay	18.6	32.0	6.0	21.5	39.9		25.3	16.9	6.6		32.7	
LOS	B	C	A	C	D		C	B	A		C	
Approach Delay		22.8			35.1			16.8			32.7	
Approach LOS		C			D			B			C	
Queue Length 50th (m)	6.9	39.6	0.0	12.3	49.6		17.9	60.7	7.8		67.8	
Queue Length 95th (m)	15.8	68.0	12.6	24.9	#96.4		#38.6	94.4	18.5		#117.6	
Internal Link Dist (m)		117.3			122.3			72.2			59.8	
Turn Bay Length (m)	20.0		15.0	75.0					15.0			
Base Capacity (vph)	248	541	568	296	540		326	1112	982		825	
Starvation Cap Reductn	0	0	0	0	0		0	0	0		0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0		0	
Storage Cap Reductn	0	0	0	0	0		0	0	0		0	
Reduced v/c Ratio	0.31	0.57	0.26	0.45	0.69		0.69	0.54	0.20		0.65	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 66.5
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 24.9
 Intersection LOS: C
 Intersection Capacity Utilization 92.8%
 ICU Level of Service F
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 37: RR 284 & Peigan Trail/TWP 240

 Ø2 42.5 s		 Ø3 9.5 s		 Ø4 23 s	
 Ø5 9.5 s	 Ø6 33 s			 Ø7 9.5 s	 Ø8 23 s

Lanes, Volumes, Timings
42: RR 284 & Glenmore Trail

2030 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	670	1528	392	62	1133	62	542	44	72	117	59	674
Future Volume (vph)	670	1528	392	62	1133	62	542	44	72	117	59	674
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	200.0		30.0	0.0		30.0	100.0		0.0	0.0		125.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850		0.907				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5085	1583	1770	5085	1583	3433	1690	0	1770	1863	1583
Flt Permitted	0.950			0.157			0.950			0.676		
Satd. Flow (perm)	3433	5085	1583	292	5085	1583	3433	1690	0	1259	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			203			213		78				533
Link Speed (k/h)		50			50			50				50
Link Distance (m)		223.9			290.4			160.7				206.5
Travel Time (s)		16.1			20.9			11.6				14.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	728	1661	426	67	1232	67	589	48	78	127	64	733
Shared Lane Traffic (%)												
Lane Group Flow (vph)	728	1661	426	67	1232	67	589	126	0	127	64	733
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8		8			6			Free

Lanes, Volumes, Timings
42: RR 284 & Glenmore Trail

2030 Improved
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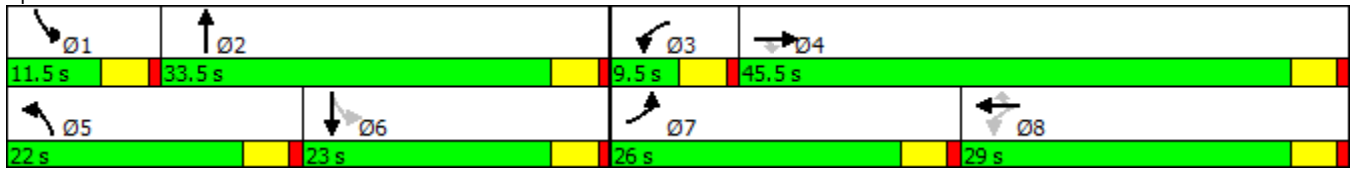


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	26.0	45.5	45.5	9.5	29.0	29.0	22.0	33.5		11.5	23.0	
Total Split (%)	26.0%	45.5%	45.5%	9.5%	29.0%	29.0%	22.0%	33.5%		11.5%	23.0%	
Maximum Green (s)	21.5	41.0	41.0	5.0	24.5	24.5	17.5	29.0		7.0	18.5	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0	0		0	0		0			0	
Act Effct Green (s)	21.5	43.0	43.0	29.5	24.5	24.5	17.5	19.0		15.4	8.4	90.0
Actuated g/C Ratio	0.24	0.48	0.48	0.33	0.27	0.27	0.19	0.21		0.17	0.09	1.00
v/c Ratio	0.89	0.68	0.49	0.38	0.89	0.11	0.88	0.30		0.50	0.37	0.46
Control Delay	47.9	20.9	11.0	19.4	41.2	0.4	52.2	15.0		30.3	44.2	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	47.9	20.9	11.0	19.4	41.2	0.4	52.2	15.0		30.3	44.2	1.0
LOS	D	C	B	B	D	A	D	B		C	D	A
Approach Delay		26.4			38.1			45.6			8.0	
Approach LOS		C			D			D			A	
Queue Length 50th (m)	66.0	86.1	25.4	5.2	78.6	0.0	54.0	7.1		16.3	11.1	0.0
Queue Length 95th (m)	#103.4	110.7	55.1	12.0	#110.5	0.0	#87.7	21.9		29.6	23.7	0.0
Internal Link Dist (m)		199.9			266.4			136.7			182.5	
Turn Bay Length (m)	200.0		30.0			30.0	100.0					125.0
Base Capacity (vph)	821	2429	862	178	1385	586	668	598		255	383	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.89	0.68	0.49	0.38	0.89	0.11	0.88	0.21		0.50	0.17	0.46

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 90
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 28.6 Intersection LOS: C
 Intersection Capacity Utilization 74.4% ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 42: RR 284 & Glenmore Trail



Lanes, Volumes, Timings
47: RR 283 & TWP 240

2030 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	213	74	125	8	87	25	127	440	4	51	229	228
Future Volume (vph)	213	74	125	8	87	25	127	440	4	51	229	228
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		0.0	0.0		0.0	35.0		0.0	35.0		35.0
Storage Lanes	1		0	0		0	1		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.906			0.972			0.999				0.850
Flt Protected	0.950				0.997		0.950			0.950		
Satd. Flow (prot)	1770	1688	0	0	1805	0	1770	1861	0	1770	1863	1583
Flt Permitted	0.453				0.958		0.555			0.349		
Satd. Flow (perm)	844	1688	0	0	1735	0	1034	1861	0	650	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		136			20			1				248
Link Speed (k/h)		50			50			50				50
Link Distance (m)		118.3			123.8			84.8				99.0
Travel Time (s)		8.5			8.9			6.1				7.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	232	80	136	9	95	27	138	478	4	55	249	248
Shared Lane Traffic (%)												
Lane Group Flow (vph)	232	216	0	0	131	0	138	482	0	55	249	248
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6				3.6
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8			2			6		6

Lanes, Volumes, Timings
47: RR 283 & TWP 240

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		22.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	9.6	32.1		22.5	22.5		9.5	23.4		9.5	23.4	23.4
Total Split (%)	14.8%	49.4%		34.6%	34.6%		14.6%	36.0%		14.6%	36.0%	36.0%
Maximum Green (s)	5.1	27.6		18.0	18.0		5.0	18.9		5.0	18.9	18.9
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Walk Time (s)		7.0		7.0	7.0			7.0			7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0		0	0			0			0	0
Act Effct Green (s)	15.8	16.0			9.2		23.6	23.1		22.6	21.0	21.0
Actuated g/C Ratio	0.33	0.33			0.19		0.49	0.48		0.47	0.44	0.44
v/c Ratio	0.59	0.33			0.38		0.23	0.54		0.12	0.30	0.30
Control Delay	20.7	7.3			21.2		9.6	19.6		8.8	16.1	3.7
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	20.7	7.3			21.2		9.6	19.6		8.8	16.1	3.7
LOS	C	A			C		A	B		A	B	A
Approach Delay		14.2			21.2			17.4			9.8	
Approach LOS		B			C			B			A	
Queue Length 50th (m)	18.7	5.9			10.8		7.2	44.5		2.7	19.7	0.0
Queue Length 95th (m)	34.3	18.4			24.1		17.0	#97.6		8.2	40.0	13.4
Internal Link Dist (m)		94.3			99.8			60.8			75.0	
Turn Bay Length (m)	35.0						35.0			35.0		35.0
Base Capacity (vph)	393	1084			765		598	852		442	850	857
Starvation Cap Reductn	0	0			0		0	0		0	0	0
Spillback Cap Reductn	0	0			0		0	0		0	0	0
Storage Cap Reductn	0	0			0		0	0		0	0	0
Reduced v/c Ratio	0.59	0.20			0.17		0.23	0.57		0.12	0.29	0.29

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 47.8
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 14.5
 Intersection LOS: B
 Intersection Capacity Utilization 57.3%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 47: RR 283 & TWP 240

 Ø1	 Ø2	 Ø4	
9.5 s	23.4 s	32.1 s	
 Ø5	 Ø6	 Ø7	 Ø8
9.5 s	23.4 s	9.6 s	22.5 s

Lanes, Volumes, Timings
52: RR 283 & Glenmore Trail

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	450	1087	174	77	809	42	38	10	21	38	111	410
Future Volume (vph)	450	1087	174	77	809	42	38	10	21	38	111	410
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	150.0		75.0	25.0		0.0	0.0		0.0	0.0		35.0
Storage Lanes	2		0	1		0	0		0	0		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.993			0.959				0.850
Flt Protected	0.950			0.950				0.973			0.988	
Satd. Flow (prot)	3433	3539	1583	1770	3514	0	0	1738	0	0	1840	1583
Flt Permitted	0.950			0.213				0.766			0.900	
Satd. Flow (perm)	3433	3539	1583	397	3514	0	0	1368	0	0	1676	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			189		9			23				446
Link Speed (k/h)		50			50			50				50
Link Distance (m)		182.4			198.2			127.6				172.2
Travel Time (s)		13.1			14.3			9.2				12.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	489	1182	189	84	879	46	41	11	23	41	121	446
Shared Lane Traffic (%)												
Lane Group Flow (vph)	489	1182	189	84	925	0	0	75	0	0	162	446
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	pm+pt	NA		Perm	NA		Perm	NA	Free
Protected Phases	7	4		3	8			2			6	
Permitted Phases			4	8			2		6			Free

Lanes, Volumes, Timings
52: RR 283 & Glenmore Trail

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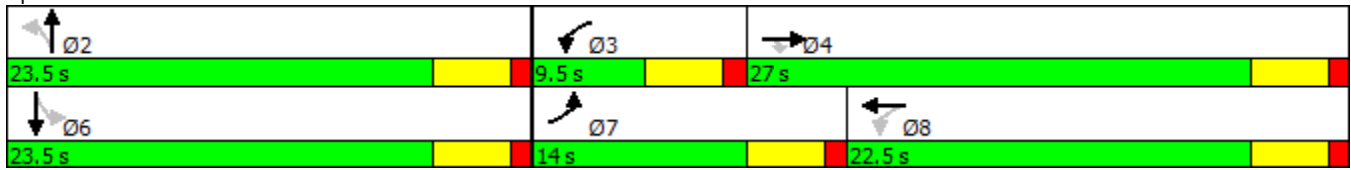


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5		22.5	22.5		22.5	22.5	
Total Split (s)	14.0	27.0	27.0	9.5	22.5		23.5	23.5		23.5	23.5	
Total Split (%)	23.3%	45.0%	45.0%	15.8%	37.5%		39.2%	39.2%		39.2%	39.2%	
Maximum Green (s)	9.5	22.5	22.5	5.0	18.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None	None	None	None		Min	Min		Min	Min	
Walk Time (s)		7.0	7.0		7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		11.0	11.0		11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0	0		0		0	0		0	0	
Act Effect Green (s)	9.6	25.7	25.7	22.0	16.9		10.0	10.0		10.0	10.0	50.1
Actuated g/C Ratio	0.19	0.51	0.51	0.44	0.34		0.20	0.20		0.20	0.20	1.00
v/c Ratio	0.75	0.65	0.21	0.27	0.77		0.26	0.26		0.49	0.28	0.28
Control Delay	29.7	13.6	2.8	7.8	21.0		15.2	15.2		23.2	0.4	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	29.7	13.6	2.8	7.8	21.0		15.2	15.2		23.2	0.4	0.4
LOS	C	B	A	A	C		B	B		C	A	A
Approach Delay		16.8			19.9		15.2	15.2		6.5		
Approach LOS		B			B		B	B		A		
Queue Length 50th (m)	23.1	46.6	0.0	2.6	39.2		4.2	4.2		14.0	0.0	0.0
Queue Length 95th (m)	#48.0	#82.1	9.6	7.9	#74.1		12.9	12.9		28.2	0.0	0.0
Internal Link Dist (m)		158.4			174.2		103.6	103.6		148.2		
Turn Bay Length (m)	150.0		75.0	25.0								35.0
Base Capacity (vph)	656	1812	903	312	1278		537	537		640	1583	1583
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.75	0.65	0.21	0.27	0.72		0.14	0.14		0.25	0.28	0.28

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 50.1
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 15.9
 Intersection LOS: B
 Intersection Capacity Utilization 58.4%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 52: RR 283 & Glenmore Trail



Lanes, Volumes, Timings
62: RR 282 & Glenmore Trail

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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	171	974	0	0	667	115	0	0	0	250	0	261
Future Volume (vph)	171	974	0	0	667	115	0	0	0	250	0	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t					0.978							0.850
Fl _t Protected	0.950										0.950	
Satd. Flow (prot)	1770	3539	0	0	3461	0	0	1863	0	0	1770	1583
Fl _t Permitted	0.191										0.757	
Satd. Flow (perm)	356	3539	0	0	3461	0	0	1863	0	0	1410	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					38							284
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		161.7			151.4			105.3			140.9	
Travel Time (s)		11.6			10.9			7.6			10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	186	1059	0	0	725	125	0	0	0	272	0	284
Shared Lane Traffic (%)												
Lane Group Flow (vph)	186	1059	0	0	850	0	0	0	0	0	272	284
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0			0.0	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA			NA					Perm	NA	Perm
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	7	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0

Lanes, Volumes, Timings
62: RR 282 & Glenmore Trail

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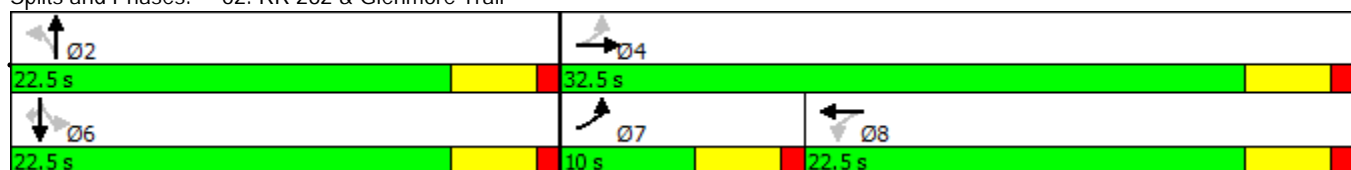


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Split (s)	9.5	22.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (s)	10.0	32.5		22.5	22.5		22.5	22.5		22.5	22.5	22.5
Total Split (%)	18.2%	59.1%		40.9%	40.9%		40.9%	40.9%		40.9%	40.9%	40.9%
Maximum Green (s)	5.5	28.0		18.0	18.0		18.0	18.0		18.0	18.0	18.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	0.0
Total Lost Time (s)	4.5	4.5			4.5			4.5			4.5	4.5
Lead/Lag	Lead			Lag			Lag			Lag		
Lead-Lag Optimize?	Yes			Yes			Yes			Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		Min	Min		Min	Min	Min
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0	0
Act Effect Green (s)	23.7	23.7			16.4						13.8	13.8
Actuated g/C Ratio	0.50	0.50			0.35						0.29	0.29
v/c Ratio	0.52	0.59			0.69						0.66	0.43
Control Delay	13.0	10.1			17.5						24.2	4.5
Queue Delay	0.0	0.0			0.0						0.0	0.0
Total Delay	13.0	10.1			17.5						24.2	4.5
LOS	B	B			B						C	A
Approach Delay		10.6			17.5						14.2	
Approach LOS		B			B						B	
Queue Length 50th (m)	8.3	31.7			34.8						23.1	0.0
Queue Length 95th (m)	#20.0	53.3			57.2						44.4	13.4
Internal Link Dist (m)		137.7			127.4			81.3			116.9	
Turn Bay Length (m)												
Base Capacity (vph)	355	2245			1434						575	814
Starvation Cap Reductn	0	0			0						0	0
Spillback Cap Reductn	0	0			0						0	0
Storage Cap Reductn	0	0			0						0	0
Reduced v/c Ratio	0.52	0.47			0.59						0.47	0.35

Intersection Summary

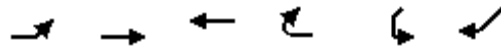
Area Type: Other
 Cycle Length: 55
 Actuated Cycle Length: 47.1
 Natural Cycle: 55
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 13.5
 Intersection LOS: B
 Intersection Capacity Utilization 74.1%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 62: RR 282 & Glenmore Trail



Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

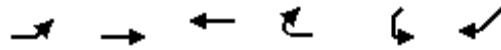
2030 Improved
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Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑			
Traffic Volume (vph)	706	2388	2771	0	0	0
Future Volume (vph)	706	2388	2771	0	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (m)	200.0			0.0	0.0	0.0
Storage Lanes	2			0	0	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	0.97	0.91	0.91	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	3433	5085	5085	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	5085	5085	0	0	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		662.8	149.5		114.0	
Travel Time (s)		47.7	10.8		8.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	767	2596	3012	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	767	2596	3012	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.2	7.2		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors	1	2	2			
Detector Template	Left	Thru	Thru			
Leading Detector (m)	2.0	10.0	10.0			
Trailing Detector (m)	0.0	0.0	0.0			
Detector 1 Position(m)	0.0	0.0	0.0			
Detector 1 Size(m)	2.0	0.6	0.6			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0	0.0			
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						

Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

2030 Improved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Detector Phase	7	4	8			
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5	22.5			
Total Split (s)	24.0	80.0	56.0			
Total Split (%)	30.0%	100.0%	70.0%			
Maximum Green (s)	19.5	75.5	51.5			
Yellow Time (s)	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5			
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0			
Recall Mode	None	None	None			
Walk Time (s)		7.0	7.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effct Green (s)	19.3	79.8	51.5			
Actuated g/C Ratio	0.24	1.00	0.65			
v/c Ratio	0.92	0.51	0.92			
Control Delay	48.2	0.4	18.5			
Queue Delay	0.0	0.0	0.0			
Total Delay	48.2	0.4	18.5			
LOS	D	A	B			
Approach Delay		11.3	18.5			
Approach LOS		B	B			
Queue Length 50th (m)	61.7	0.0	135.4			
Queue Length 95th (m)	#95.4	0.0	166.3			
Internal Link Dist (m)		638.8	125.5		90.0	
Turn Bay Length (m)	200.0					
Base Capacity (vph)	838	5037	3280			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	0.92	0.52	0.92			

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 79.8
 Natural Cycle: 80
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 14.7
 Intersection LOS: B
 Intersection Capacity Utilization 86.3%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 67: Glenmore Trail & Stoney Trail



Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2030 Improved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↔	↑↑↑		
Traffic Volume (vph)	2783	0	878	2004	0	0
Future Volume (vph)	2783	0	878	2004	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	175.0		0.0	0.0
Storage Lanes		0	2		0	0
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	5085	0	3433	5085	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	5085	0	3433	5085	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	199.5			662.8	102.4	
Travel Time (s)	14.4			47.7	7.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3025	0	954	2178	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3025	0	954	2178	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.2			7.2	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2		1	2		
Detector Template	Thru		Left	Thru		
Leading Detector (m)	10.0		2.0	10.0		
Trailing Detector (m)	0.0		0.0	0.0		
Detector 1 Position(m)	0.0		0.0	0.0		
Detector 1 Size(m)	0.6		2.0	0.6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						

Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2030 Improved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		3	8		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	22.5		9.5	22.5		
Total Split (s)	59.5		30.5	90.0		
Total Split (%)	66.1%		33.9%	100.0%		
Maximum Green (s)	55.0		26.0	85.5		
Yellow Time (s)	3.5		3.5	3.5		
All-Red Time (s)	1.0		1.0	1.0		
Lost Time Adjust (s)	0.0		0.0	0.0		
Total Lost Time (s)	4.5		4.5	4.5		
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		None	None		
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	11.0			11.0		
Pedestrian Calls (#/hr)	0			0		
Act Effect Green (s)	55.0		26.0	90.0		
Actuated g/C Ratio	0.61		0.29	1.00		
v/c Ratio	0.97		0.96	0.43		
Control Delay	28.7		53.6	0.3		
Queue Delay	0.0		0.0	0.0		
Total Delay	28.7		53.6	0.3		
LOS	C		D	A		
Approach Delay	28.7			16.5		
Approach LOS	C			B		
Queue Length 50th (m)	176.4		87.7	0.0		
Queue Length 95th (m)	#235.8		#128.5	0.0		
Internal Link Dist (m)	175.5			638.8	78.4	
Turn Bay Length (m)			175.0			
Base Capacity (vph)	3107		991	5085		
Starvation Cap Reductn	0		0	0		
Spillback Cap Reductn	0		0	0		
Storage Cap Reductn	0		0	0		
Reduced v/c Ratio	0.97		0.96	0.43		

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.97
 Intersection Signal Delay: 22.5
 Intersection LOS: C
 Intersection Capacity Utilization 86.3%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 68: Stoney Trail & Glenmore Trail



Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

2030 Improved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↑↑	
Traffic Volume (vph)	1371	0	0	926	443	0
Future Volume (vph)	1371	0	0	926	443	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	3539	0	0	3539	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	3539	0	0	3539	3433	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	421.0			179.4	93.7	
Travel Time (s)	30.3			12.9	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1490	0	0	1007	482	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1490	0	0	1007	482	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	7.2	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2			2	1	
Detector Template	Thru			Thru	Left	
Leading Detector (m)	10.0			10.0	2.0	
Trailing Detector (m)	0.0			0.0	0.0	
Detector 1 Position(m)	0.0			0.0	0.0	
Detector 1 Size(m)	0.6			0.6	2.0	
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0			0.0	0.0	
Detector 1 Queue (s)	0.0			0.0	0.0	
Detector 1 Delay (s)	0.0			0.0	0.0	
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA			NA	Prot	
Protected Phases	4			8	2	
Permitted Phases						
Detector Phase	4			8	2	
Switch Phase						
Minimum Initial (s)	5.0			5.0	5.0	

Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

2030 Improved
12-01-2020

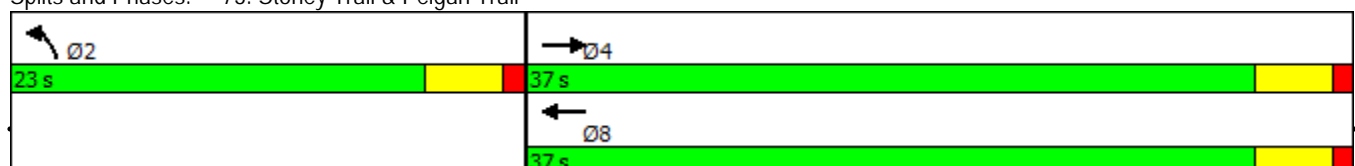


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	22.5			22.5	22.5	
Total Split (s)	37.0			37.0	23.0	
Total Split (%)	61.7%			61.7%	38.3%	
Maximum Green (s)	32.5			32.5	18.5	
Yellow Time (s)	3.5			3.5	3.5	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			None	Max	
Walk Time (s)	7.0			7.0	7.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effect Green (s)	29.0			29.0	18.6	
Actuated g/C Ratio	0.51			0.51	0.33	
v/c Ratio	0.82			0.56	0.43	
Control Delay	16.2			10.6	17.2	
Queue Delay	0.0			0.0	0.0	
Total Delay	16.2			10.6	17.2	
LOS	B			B	B	
Approach Delay	16.2			10.6	17.2	
Approach LOS	B			B	B	
Queue Length 50th (m)	64.7			35.4	22.6	
Queue Length 95th (m)	90.6			49.8	34.8	
Internal Link Dist (m)	397.0			155.4	69.7	
Turn Bay Length (m)						
Base Capacity (vph)	2042			2042	1127	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.73			0.49	0.43	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 56.7
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 14.5
 Intersection Capacity Utilization 65.8%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 73: Stoney Trail & Peigan Trail



Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2030 Improved
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Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑	↑↑		↑↑	
Traffic Volume (vph)	0	1497	1093	0	593	0
Future Volume (vph)	0	1497	1093	0	593	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	3539	3539	0	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	3539	3539	0	3433	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		133.7	421.0		94.2	
Travel Time (s)		9.6	30.3		6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1627	1188	0	645	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1627	1188	0	645	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		7.2	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors		2	2		1	
Detector Template		Thru	Thru		Left	
Leading Detector (m)		10.0	10.0		2.0	
Trailing Detector (m)		0.0	0.0		0.0	
Detector 1 Position(m)		0.0	0.0		0.0	
Detector 1 Size(m)		0.6	0.6		2.0	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases						
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		5.0	5.0		5.0	

Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2030 Improved
12-01-2020

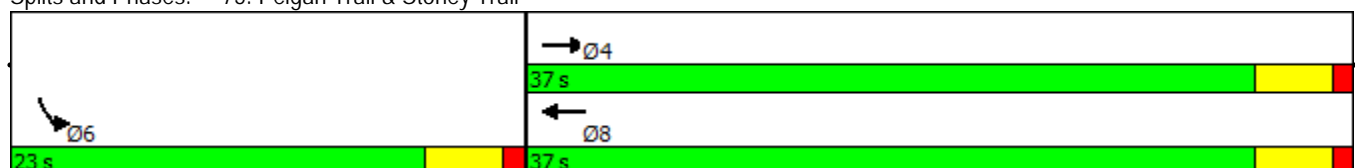


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		22.5	22.5		22.5	
Total Split (s)		37.0	37.0		23.0	
Total Split (%)		61.7%	61.7%		38.3%	
Maximum Green (s)		32.5	32.5		18.5	
Yellow Time (s)		3.5	3.5		3.5	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.5	4.5		4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		None	None		Max	
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effect Green (s)		30.7	30.7		18.5	
Actuated g/C Ratio		0.53	0.53		0.32	
v/c Ratio		0.87	0.64		0.59	
Control Delay		18.8	11.6		19.8	
Queue Delay		0.0	0.0		0.0	
Total Delay		18.8	11.6		19.8	
LOS		B	B		B	
Approach Delay		18.8	11.6		19.8	
Approach LOS		B	B		B	
Queue Length 50th (m)		76.0	44.9		32.3	
Queue Length 95th (m)		#107.9	62.9		47.5	
Internal Link Dist (m)		109.7	397.0		70.2	
Turn Bay Length (m)						
Base Capacity (vph)		1977	1977		1092	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		0	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.82	0.60		0.59	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 58.3
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 16.5
 Intersection LOS: B
 Intersection Capacity Utilization 65.8%
 ICU Level of Service C
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 75: Peigan Trail & Stoney Trail



Lanes, Volumes, Timings

2030 Improved

82:

12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	101	193	137	344	133	183	70	477	214	270	295	79
Future Volume (vph)	101	193	137	344	133	183	70	477	214	270	295	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		15.0	75.0		40.0	25.0		15.0	50.0		15.0
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.665			0.337			0.566			0.137		
Satd. Flow (perm)	1239	1863	1583	628	1863	1583	1054	1863	1583	255	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			236			199			236			182
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		226.8			365.5			199.0			205.2	
Travel Time (s)		16.3			26.3			14.3			14.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	110	210	149	374	145	199	76	518	233	293	321	86
Shared Lane Traffic (%)												
Lane Group Flow (vph)	110	210	149	374	145	199	76	518	233	293	321	86
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6

Lanes, Volumes, Timings

2030 Improved

82:

12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	10.7	22.5	22.5	17.0	28.8	28.8	9.6	35.5	35.5	15.0	40.9	40.9
Total Split (%)	11.9%	25.0%	25.0%	18.9%	32.0%	32.0%	10.7%	39.4%	39.4%	16.7%	45.4%	45.4%
Maximum Green (s)	6.2	18.0	18.0	12.5	24.3	24.3	5.1	31.0	31.0	10.5	36.4	36.4
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effct Green (s)	20.3	14.0	14.0	31.2	23.0	23.0	31.7	26.5	26.5	41.7	34.3	34.3
Actuated g/C Ratio	0.25	0.17	0.17	0.38	0.28	0.28	0.39	0.32	0.32	0.51	0.42	0.42
v/c Ratio	0.32	0.66	0.32	0.90	0.28	0.34	0.17	0.86	0.35	0.90	0.41	0.11
Control Delay	21.4	43.2	2.3	49.7	27.2	5.8	12.4	42.1	4.5	50.2	20.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	43.2	2.3	49.7	27.2	5.8	12.4	42.1	4.5	50.2	20.0	0.3
LOS	C	D	A	D	C	A	B	D	A	D	C	A
Approach Delay		25.1			33.0			28.8			30.2	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	12.5	34.2	0.0	50.7	20.5	0.0	6.2	79.6	0.0	30.8	38.4	0.0
Queue Length 95th (m)	24.2	57.8	1.8	#89.7	37.1	16.0	13.9	#137.4	14.9	#84.4	63.9	0.0
Internal Link Dist (m)		202.8			341.5			175.0			181.2	
Turn Bay Length (m)	100.0		15.0	75.0		40.0	25.0		15.0	50.0		15.0
Base Capacity (vph)	347	414	535	415	567	620	452	713	751	325	836	811
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.51	0.28	0.90	0.26	0.32	0.17	0.73	0.31	0.90	0.38	0.11

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 82
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 29.6 Intersection LOS: C
 Intersection Capacity Utilization 84.3% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 82:

↙ Ø1	↕ Ø2	↘ Ø3	→ Ø4
15 s	35.5 s	17 s	22.5 s
↙ Ø5	↘ Ø6	↕ Ø7	↙ Ø8
9.6 s	40.9 s	10.7 s	28.8 s

Lanes, Volumes, Timings
88: RR 283 & 61 Avenue

2030 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	121	164	83	108	93	100	50	283	151	71	217	76
Future Volume (vph)	121	164	83	108	93	100	50	283	151	71	217	76
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		0.0	60.0		0.0	0.0		15.0	0.0		0.0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.950			0.922				0.850		0.972	
Flt Protected	0.950			0.950				0.993			0.990	
Satd. Flow (prot)	1770	1770	0	1770	1717	0	0	1850	1583	0	1792	0
Flt Permitted	0.604			0.471				0.900			0.869	
Satd. Flow (perm)	1125	1770	0	877	1717	0	0	1676	1583	0	1573	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43			93				128			26
Link Speed (k/h)		50			50			50				50
Link Distance (m)		218.4			259.4			141.6				186.1
Travel Time (s)		15.7			18.7			10.2				13.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	132	178	90	117	101	109	54	308	164	77	236	83
Shared Lane Traffic (%)												
Lane Group Flow (vph)	132	268	0	117	210	0	0	362	164	0	396	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2	1	1		2
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left		Thru
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0	2.0	2.0		10.0
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6	2.0	2.0		0.6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm		NA
Protected Phases	7	4		3	8			2				6
Permitted Phases	4			8			2		2	6		

Lanes, Volumes, Timings
88: RR 283 & 61 Avenue

2030 Improved
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







Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		22.5	22.5	22.5	22.5	22.5	
Total Split (s)	9.5	22.5		9.5	22.5		28.0	28.0	28.0	28.0	28.0	
Total Split (%)	15.8%	37.5%		15.8%	37.5%		46.7%	46.7%	46.7%	46.7%	46.7%	
Maximum Green (s)	5.0	18.0		5.0	18.0		23.5	23.5	23.5	23.5	23.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		Min	Min	Min	Min	Min	
Walk Time (s)		7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)		11.0			11.0		11.0	11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		0			0		0	0	0	0	0	
Act Effect Green (s)	14.9	11.9		14.9	11.6		21.5	21.5	21.5	21.5	21.5	
Actuated g/C Ratio	0.34	0.27		0.34	0.26		0.49	0.49	0.49	0.49	0.49	
v/c Ratio	0.28	0.52		0.28	0.40		0.44	0.20	0.20	0.51	0.51	
Control Delay	10.7	17.6		10.7	11.9		14.6	4.8	4.8	14.9	14.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	10.7	17.6		10.7	11.9		14.6	4.8	4.8	14.9	14.9	
LOS	B	B		B	B		B	A	A	B	B	
Approach Delay		15.3			11.5		11.5			14.9	14.9	
Approach LOS		B			B		B			B	B	
Queue Length 50th (m)	6.1	16.5		5.4	8.1		24.5	1.9	1.9	25.7	25.7	
Queue Length 95th (m)	17.2	40.0		15.6	25.1		54.6	12.6	12.6	59.9	59.9	
Internal Link Dist (m)		194.4			235.4		117.6			162.1	162.1	
Turn Bay Length (m)	20.0			60.0				15.0	15.0			
Base Capacity (vph)	469	876		418	876		980	979	979	930	930	
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	
Reduced v/c Ratio	0.28	0.31		0.28	0.24		0.37	0.17	0.17	0.43	0.43	

Intersection Summary

Area Type:	Other
Cycle Length:	60
Actuated Cycle Length:	43.8
Natural Cycle:	60
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.52
Intersection Signal Delay:	13.2
Intersection LOS:	B
Intersection Capacity Utilization:	72.3%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 88: RR 283 & 61 Avenue

 28 s	 9.5 s	 22.5 s
 28 s	 9.5 s	 22.5 s

HCM Unsignalized Intersection Capacity Analysis

2030 Improved

57:

12-01-2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	5	7	116	24	18	0	87	89	76	0	53	16
Future Volume (Veh/h)	5	7	116	24	18	0	87	89	76	0	53	16
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	8	126	26	20	0	95	97	83	0	58	17
Pedestrians												
Lane Width (m)												
Walking Speed (m/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (m)												
pX, platoon unblocked												
vC, conflicting volume	20			134			199	153	71	284	216	20
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	20			134			199	153	71	284	216	20
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			86	87	92	100	91	98
cM capacity (veh/h)	1596			1451			687	723	991	540	668	1058
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	139	46	275	75								
Volume Left	5	26	95	0								
Volume Right	126	0	83	17								
cSH	1596	1451	772	728								
Volume to Capacity	0.00	0.02	0.36	0.10								
Queue Length 95th (m)	0.1	0.4	12.9	2.7								
Control Delay (s)	0.3	4.3	12.2	10.5								
Lane LOS	A	A	B	B								
Approach Delay (s)	0.3	4.3	12.2	10.5								
Approach LOS			B	B								
Intersection Summary												
Average Delay			8.2									
Intersection Capacity Utilization			40.7%	ICU Level of Service		A						
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis

2030 Improved

93:

12-01-2020



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	58	158	37	145	183	27
Future Volume (vph)	58	158	37	145	183	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	63	172	40	158	199	29

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total (vph)	235	198	228
Volume Left (vph)	63	40	0
Volume Right (vph)	172	0	29
Hadj (s)	-0.35	0.07	-0.04
Departure Headway (s)	4.6	4.8	4.7
Degree Utilization, x	0.30	0.27	0.30
Capacity (veh/h)	731	705	725
Control Delay (s)	9.5	9.6	9.7
Approach Delay (s)	9.5	9.6	9.7
Approach LOS	A	A	A

Intersection Summary			
Delay		9.6	
Level of Service		A	
Intersection Capacity Utilization	43.9%		ICU Level of Service A
Analysis Period (min)		15	

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2040 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↕	↕↕		↕	↕↕	
Traffic Volume (vph)	450	490	20	35	505	41	0	1067	0	148	1138	515
Future Volume (vph)	450	490	20	35	505	41	0	1067	0	148	1138	515
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	0.0		0.0	70.0		0.0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.997			0.989						0.953	
Flt Protected		0.977			0.997					0.950		
Satd. Flow (prot)	0	3447	0	0	3490	0	1863	3539	0	1770	3373	0
Flt Permitted		0.564			0.784					0.107		
Satd. Flow (perm)	0	1990	0	0	2744	0	1863	3539	0	199	3373	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3			11						110	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		178.3			246.0			115.3			144.5	
Travel Time (s)		12.8			17.7			8.3			10.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	489	533	22	38	549	45	0	1160	0	161	1237	560
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1044	0	0	632	0	0	1160	0	161	1797	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
3: 52 Street & 61 Avenue

2040 Improved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		2	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		22.5	22.5		9.5	22.5	
Total Split (s)	43.0	43.0		43.0	43.0		37.4	37.4		9.6	47.0	
Total Split (%)	47.8%	47.8%		47.8%	47.8%		41.6%	41.6%		10.7%	52.2%	
Maximum Green (s)	38.5	38.5		38.5	38.5		32.9	32.9		5.1	42.5	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		Max	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0			11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		38.5			38.5			32.9		42.5	42.5	
Actuated g/C Ratio		0.43			0.43			0.37		0.47	0.47	
v/c Ratio		1.82dl			0.54			0.90		0.88	1.09	
Control Delay		138.1			20.8			37.7		61.9	74.2	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		138.1			20.8			37.7		61.9	74.2	
LOS		F			C			D		E	E	
Approach Delay		138.1			20.8			37.7			73.2	
Approach LOS		F			C			D			E	
Queue Length 50th (m)		~125.0			42.8			103.2		16.3	~190.1	
Queue Length 95th (m)		#165.7			59.6			#144.1		#50.1	#234.7	
Internal Link Dist (m)		154.3			222.0			91.3			120.5	
Turn Bay Length (m)										70.0		
Base Capacity (vph)		852			1180			1293		182	1650	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		1.23			0.54			0.90		0.88	1.09	

Intersection Summary

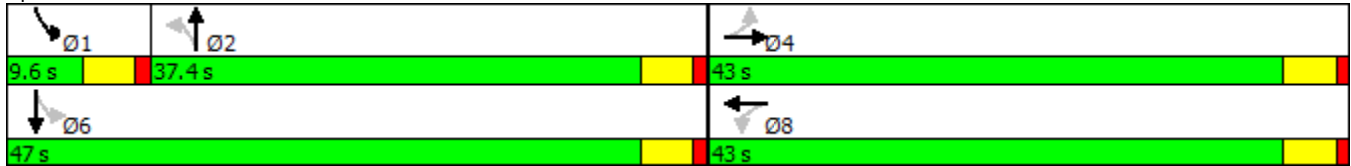
Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.23
Intersection Signal Delay:	71.8
Intersection LOS:	E
Intersection Capacity Utilization:	110.6%
ICU Level of Service:	H
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

Lanes, Volumes, Timings
 3: 52 Street & 61 Avenue

2040 Improved
 12-01-2020





























- # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
- dl Defacto Left Lane. Recode with 1 though lane as a left lane.

Splits and Phases: 3: 52 Street & 61 Avenue



Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

2040 Improved
12-01-2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  		 					
Traffic Volume (vph)	150	2085	956	0	2459	0	721	488	0	0	0	122
Future Volume (vph)	150	2085	956	0	2459	0	721	488	0	0	0	122
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	150.0		0.0	0.0		0.0	100.0		0.0	0.0		0.0
Storage Lanes	2		1	1		1	0		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.850
Flt Protected	0.950						0.950					
Satd. Flow (prot)	3433	5085	1583	1863	5085	1863	3433	1863	0	1863	1583	0
Flt Permitted	0.050						0.950					
Satd. Flow (perm)	181	5085	1583	1863	5085	1863	3433	1863	0	1863	1583	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			330									76
Link Speed (k/h)		50			50			50				50
Link Distance (m)		155.4			145.0			144.7				110.1
Travel Time (s)		11.2			10.4			10.4				7.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	2266	1039	0	2673	0	784	530	0	0	0	133
Shared Lane Traffic (%)												
Lane Group Flow (vph)	163	2266	1039	0	2673	0	784	530	0	0	133	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA	Free	Perm	NA	Perm	Prot	NA		Perm	NA	
Protected Phases	7	4			8		5	2				6
Permitted Phases	4		Free	8		8				6		

Lanes, Volumes, Timings
8: 84 Street & Peigan Trail

2040 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		8	8	8	5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		22.5	22.5	22.5	9.5	22.5		22.5	22.5	
Total Split (s)	9.5	89.5		80.0	80.0	80.0	37.0	60.5		23.5	23.5	
Total Split (%)	6.3%	59.7%		53.3%	53.3%	53.3%	24.7%	40.3%		15.7%	15.7%	
Maximum Green (s)	5.0	85.0		75.5	75.5	75.5	32.5	56.0		19.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead			Lag	Lag	Lag	Lead			Lag	Lag	
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		Max	Max	
Walk Time (s)		7.0		7.0	7.0	7.0		7.0		7.0	7.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0		11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0		0		0	0	
Act Effct Green (s)	85.0	85.0	150.0		75.5		32.5	56.0				19.0
Actuated g/C Ratio	0.57	0.57	1.00		0.50		0.22	0.37				0.13
v/c Ratio	0.78	0.79	0.66		1.04		1.06	0.76				0.50
Control Delay	43.8	27.9	2.1		67.2		103.8	49.7				34.1
Queue Delay	0.0	0.0	0.0		0.0		0.0	0.0				0.0
Total Delay	43.8	27.9	2.1		67.2		103.8	49.7				34.1
LOS	D	C	A		E		F	D				C
Approach Delay		21.0			67.2			82.0				34.1
Approach LOS		C			E			F				C
Queue Length 50th (m)	11.5	196.3	0.0		~331.2		~137.8	144.8				16.4
Queue Length 95th (m)	#28.1	215.9	0.0		#356.9		#179.6	192.6				39.3
Internal Link Dist (m)		131.4			121.0			120.7				86.1
Turn Bay Length (m)	150.0						100.0					
Base Capacity (vph)	210	2881	1583		2559		743	695				266
Starvation Cap Reductn	0	0	0		0		0	0				0
Spillback Cap Reductn	0	0	0		0		0	0				0
Storage Cap Reductn	0	0	0		0		0	0				0
Reduced v/c Ratio	0.78	0.79	0.66		1.04		1.06	0.76				0.50

Intersection Summary

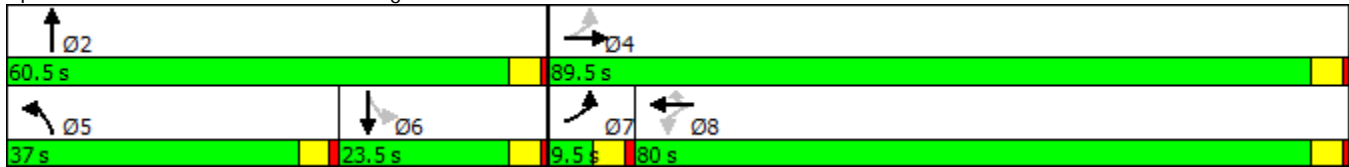
Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 48.0
 Intersection LOS: D
 Intersection Capacity Utilization 96.6%
 ICU Level of Service F
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
 8: 84 Street & Peigan Trail

2040 Improved
 12-01-2020

























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

Splits and Phases: 8: 84 Street & Peigan Trail



Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

2040 Improved
12-01-2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	694	392	0	783	95	441	146	0	20	58	216
Future Volume (vph)	103	694	392	0	783	95	441	146	0	20	58	216
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	30.0		30.0	30.0		30.0	70.0		30.0	30.0		0.0
Storage Lanes	1		1	1		1	2		1	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850				0.850					0.882
Flt Protected	0.950						0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1863	1863	1583	3433	1863	1863	1770	1643	0
Flt Permitted	0.082						0.950			0.656		
Satd. Flow (perm)	153	1863	1583	1863	1863	1583	3433	1863	1863	1222	1643	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			210			164						158
Link Speed (k/h)		50			50			50				50
Link Distance (m)		90.4			116.8			200.2				92.7
Travel Time (s)		6.5			8.4			14.4				6.7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	112	754	426	0	851	103	479	159	0	22	63	235
Shared Lane Traffic (%)												
Lane Group Flow (vph)	112	754	426	0	851	103	479	159	0	22	298	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	1	2
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	Prot	NA	Perm	pm+pt	NA	
Protected Phases	7	4			8		5	2		1		6
Permitted Phases	4		4	8		8			2	6		

Lanes, Volumes, Timings
13: 84 Street & 61 Avenue

2040 Improved
12-01-2020



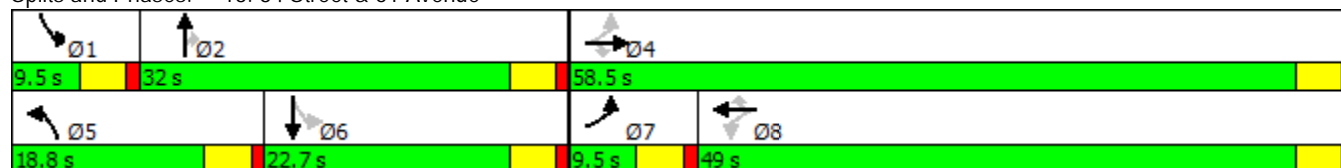
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	9.5	58.5	58.5	49.0	49.0	49.0	18.8	32.0	32.0	9.5	22.7	22.7
Total Split (%)	9.5%	58.5%	58.5%	49.0%	49.0%	49.0%	18.8%	32.0%	32.0%	9.5%	22.7%	22.7%
Maximum Green (s)	5.0	54.0	54.0	44.5	44.5	44.5	14.3	27.5	27.5	5.0	18.2	18.2
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Max	Max	None	Max	Max
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0		0	0		0	0
Act Effct Green (s)	54.0	54.0	54.0		44.5	44.5	14.3	33.2		23.2	18.2	18.2
Actuated g/C Ratio	0.54	0.54	0.54		0.44	0.44	0.14	0.33		0.23	0.18	0.18
v/c Ratio	0.69	0.75	0.45		1.03	0.13	0.98	0.26		0.07	0.70	0.70
Control Delay	35.7	23.6	8.2		67.1	0.9	79.3	27.3		21.8	27.3	27.3
Queue Delay	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	35.7	23.6	8.2		67.1	0.9	79.3	27.3		21.8	27.3	27.3
LOS	D	C	A		E	A	E	C		C	C	C
Approach Delay		19.6			59.9			66.3			26.9	26.9
Approach LOS		B			E			E			C	C
Queue Length 50th (m)	10.6	112.7	22.4		~186.3	0.0	50.7	22.0		2.8	26.3	26.3
Queue Length 95th (m)	#31.5	162.8	45.1		#260.6	2.1	#83.7	43.7		8.0	56.8	56.8
Internal Link Dist (m)		66.4			92.8			176.2			68.7	68.7
Turn Bay Length (m)	30.0		30.0			30.0	70.0			30.0		
Base Capacity (vph)	163	1006	951		829	795	490	618		310	428	428
Starvation Cap Reductn	0	0	0		0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0		0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0		0	0	0	0		0	0	0
Reduced v/c Ratio	0.69	0.75	0.45		1.03	0.13	0.98	0.26		0.07	0.70	0.70

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Natural Cycle: 100
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 41.6
 Intersection LOS: D
 Intersection Capacity Utilization 90.9%
 ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

































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

Splits and Phases: 13: 84 Street & 61 Avenue



Lanes, Volumes, Timings
18: 100 Street & Peigan Trail

2040 Improved
12-01-2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 		 	 	
Traffic Volume (vph)	202	1411	473	58	1612	220	642	427	109	106	269	212
Future Volume (vph)	202	1411	473	58	1612	220	642	427	109	106	269	212
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		50.0	100.0		25.0	0.0		0.0	0.0		0.0
Storage Lanes	1		1	1		1	2		0	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95	0.95	1.00	0.95	0.95
Frt			0.850			0.850		0.970			0.934	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	3433	3433	0	1770	3306	0
Flt Permitted	0.102			0.115			0.950			0.433		
Satd. Flow (perm)	190	5085	1583	214	5085	1583	3433	3433	0	807	3306	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			239			164		33			103	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		123.2			182.0			112.9			101.5	
Travel Time (s)		8.9			13.1			8.1			7.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	220	1534	514	63	1752	239	698	464	118	115	292	230
Shared Lane Traffic (%)												
Lane Group Flow (vph)	220	1534	514	63	1752	239	698	582	0	115	522	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		3.6			3.6			7.2			7.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	pm+pt	NA	Perm	Prot	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free	8		8				6		

Lanes, Volumes, Timings
18: 100 Street & Peigan Trail

2040 Improved
12-01-2020



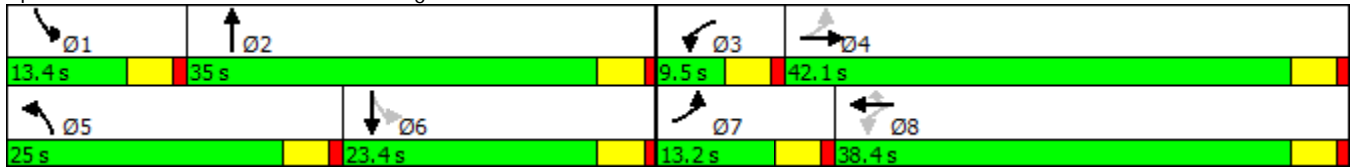
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8	8	5	2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5	22.5	9.5	22.5		9.5	22.5	
Total Split (s)	13.2	42.1		9.5	38.4	38.4	25.0	35.0		13.4	23.4	
Total Split (%)	13.2%	42.1%		9.5%	38.4%	38.4%	25.0%	35.0%		13.4%	23.4%	
Maximum Green (s)	8.7	37.6		5.0	33.9	33.9	20.5	30.5		8.9	18.9	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None	None	None	Max		None	Max	
Walk Time (s)		7.0			7.0	7.0		7.0			7.0	
Flash Dont Walk (s)		11.0			11.0	11.0		11.0			11.0	
Pedestrian Calls (#/hr)		0			0	0		0			0	
Act Effct Green (s)	46.5	39.5	100.0	38.9	33.9	33.9	20.5	31.1		27.2	18.9	
Actuated g/C Ratio	0.46	0.40	1.00	0.39	0.34	0.34	0.20	0.31		0.27	0.19	
v/c Ratio	0.98	0.76	0.32	0.39	1.02	0.37	0.99	0.53		0.39	0.74	
Control Delay	79.4	29.8	0.5	22.4	59.5	10.2	72.9	29.0		22.5	37.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	79.4	29.8	0.5	22.4	59.5	10.2	72.9	29.0		22.5	37.5	
LOS	E	C	A	C	E	B	E	C		C	D	
Approach Delay		28.0			52.6			53.0			34.8	
Approach LOS		C			D			D			C	
Queue Length 50th (m)	29.5	100.8	0.0	6.8	~134.1	10.5	73.7	48.7		13.7	42.8	
Queue Length 95th (m)	#77.4	120.2	0.0	14.3	#170.0	29.7	#112.4	66.4		25.0	62.0	
Internal Link Dist (m)		99.2			158.0			88.9			77.5	
Turn Bay Length (m)	100.0		50.0	100.0		25.0						
Base Capacity (vph)	225	2008	1583	161	1723	645	703	1092		310	708	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.98	0.76	0.32	0.39	1.02	0.37	0.99	0.53		0.37	0.74	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Natural Cycle:	100
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.02
Intersection Signal Delay:	41.9
Intersection LOS:	D
Intersection Capacity Utilization:	89.9%
ICU Level of Service:	E
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

























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

Splits and Phases: 18: 100 Street & Peigan Trail



Lanes, Volumes, Timings
27: 100 Street & 61 Avenue

2040 Improved
12-01-2020

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	210	436	105	486	664	324	16	148	736	167	388	50
Future Volume (vph)	210	436	105	486	664	324	16	148	736	167	388	50
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	25.0		25.0	120.0		25.0	50.0		25.0	50.0		25.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.274			0.950			0.506			0.488		
Satd. Flow (perm)	510	3539	1583	3433	3539	1583	943	3539	1583	909	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			164			276			480			164
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		134.0			133.1			117.7			140.8	
Travel Time (s)		9.6			9.6			8.5			10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	228	474	114	528	722	352	17	161	800	182	422	54
Shared Lane Traffic (%)												
Lane Group Flow (vph)	228	474	114	528	722	352	17	161	800	182	422	54
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Free	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		Free	6		6

Lanes, Volumes, Timings
27: 100 Street & 61 Avenue

2040 Improved
12-01-2020

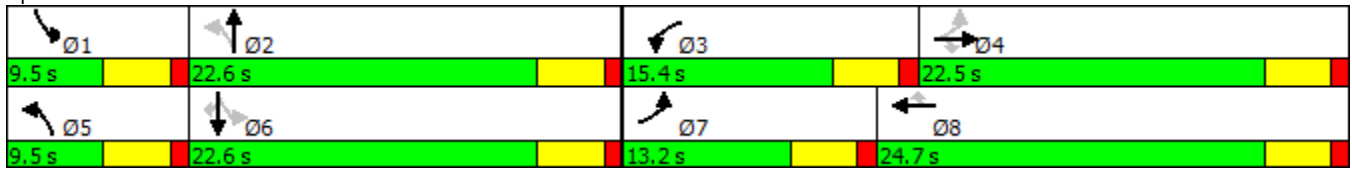


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5		9.5	22.5	22.5
Total Split (s)	13.2	22.5	22.5	15.4	24.7	24.7	9.5	22.6		9.5	22.6	22.6
Total Split (%)	18.9%	32.1%	32.1%	22.0%	35.3%	35.3%	13.6%	32.3%		13.6%	32.3%	32.3%
Maximum Green (s)	8.7	18.0	18.0	10.9	20.2	20.2	5.0	18.1		5.0	18.1	18.1
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0			0	0
Act Effect Green (s)	23.1	14.6	14.6	11.1	17.2	17.2	14.3	9.3	58.3	18.2	17.3	17.3
Actuated g/C Ratio	0.40	0.25	0.25	0.19	0.30	0.30	0.25	0.16	1.00	0.31	0.30	0.30
v/c Ratio	0.59	0.53	0.22	0.81	0.69	0.53	0.06	0.29	0.51	0.51	0.40	0.09
Control Delay	16.8	21.6	2.7	37.0	22.6	8.2	14.5	23.2	1.2	21.7	19.0	0.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	21.6	2.7	37.0	22.6	8.2	14.5	23.2	1.2	21.7	19.0	0.3
LOS	B	C	A	D	C	A	B	C	A	C	B	A
Approach Delay		17.6			24.2			5.0			18.2	
Approach LOS		B			C			A			B	
Queue Length 50th (m)	11.9	23.0	0.0	29.3	35.7	6.0	1.3	8.6	0.0	15.6	19.3	0.0
Queue Length 95th (m)	#35.0	43.2	5.5	#68.0	64.7	29.1	4.9	16.3	0.0	30.1	38.6	0.0
Internal Link Dist (m)		110.0			109.1			93.7			116.8	
Turn Bay Length (m)	25.0		25.0	120.0		25.0	50.0		25.0	50.0		25.0
Base Capacity (vph)	396	1107	608	650	1243	735	303	1114	1583	358	1117	612
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.43	0.19	0.81	0.58	0.48	0.06	0.14	0.51	0.51	0.38	0.09

Intersection Summary

Area Type:	Other
Cycle Length:	70
Actuated Cycle Length:	58.3
Natural Cycle:	70
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.81
Intersection Signal Delay:	17.3
Intersection LOS:	B
Intersection Capacity Utilization:	59.9%
ICU Level of Service:	B
Analysis Period (min):	15
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Splits and Phases: 27: 100 Street & 61 Avenue



Lanes, Volumes, Timings
37: RR 284 & Peigan Trail/TWP 240

2040 Improved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	775	401	242	724	10	611	822	237	49	718	51
Future Volume (vph)	88	775	401	242	724	10	611	822	237	49	718	51
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	20.0		15.0	75.0		0.0	0.0		15.0	0.0		0.0
Storage Lanes	1		1	2		0	2		1	1		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	0.95	0.97	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.998				0.850		0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3532	0	3433	3539	1583	1770	3504	0
Flt Permitted	0.177			0.950			0.950			0.319		
Satd. Flow (perm)	330	3539	1583	3433	3532	0	3433	3539	1583	594	3504	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			236		1				127			8
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		141.3			146.3			96.2			83.8	
Travel Time (s)		10.2			10.5			6.9			6.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	842	436	263	787	11	664	893	258	53	780	55
Shared Lane Traffic (%)												
Lane Group Flow (vph)	96	842	436	263	798	0	664	893	258	53	835	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2			7.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2		1	2	1	1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right	Left	Thru	
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0	2.0	10.0	
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0	2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Free	Prot	NA		Prot	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		Free						2	6		

Lanes, Volumes, Timings
37: RR 284 & Peigan Trail/TWP 240

2040 Improved
12-01-2020

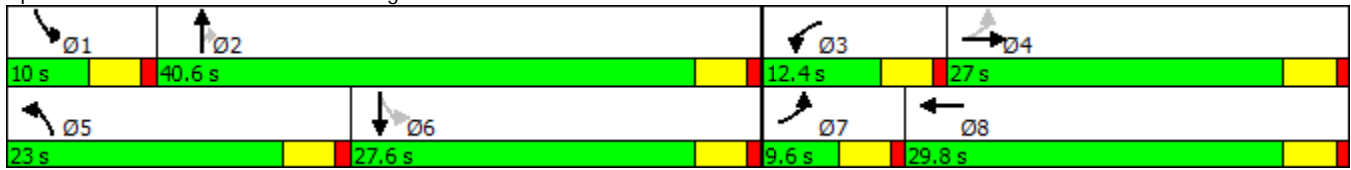


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5	22.5	9.5	22.5	
Total Split (s)	9.6	27.0		12.4	29.8		23.0	40.6	40.6	10.0	27.6	
Total Split (%)	10.7%	30.0%		13.8%	33.1%		25.6%	45.1%	45.1%	11.1%	30.7%	
Maximum Green (s)	5.1	22.5		7.9	25.3		18.5	36.1	36.1	5.5	23.1	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	Min	Min	None	Min	
Walk Time (s)		7.0			7.0			7.0	7.0		7.0	
Flash Dont Walk (s)		11.0			11.0			11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0			0			0	0		0	
Act Effct Green (s)	27.6	22.5	89.7	7.9	27.2		18.5	39.8	39.8	28.3	22.8	
Actuated g/C Ratio	0.31	0.25	1.00	0.09	0.30		0.21	0.44	0.44	0.32	0.25	
v/c Ratio	0.52	0.95	0.28	0.87	0.74		0.94	0.57	0.33	0.20	0.93	
Control Delay	29.8	54.4	0.4	69.4	34.0		58.1	21.2	10.3	15.0	50.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	29.8	54.4	0.4	69.4	34.0		58.1	21.2	10.3	15.0	50.8	
LOS	C	D	A	E	C		E	C	B	B	D	
Approach Delay		35.6			42.8			33.2			48.7	
Approach LOS		D			D			C			D	
Queue Length 50th (m)	11.1	79.4	0.0	24.8	70.7		61.8	66.8	15.2	4.6	77.2	
Queue Length 95th (m)	21.6	#118.2	0.0	#47.0	93.4		#95.8	87.5	33.7	10.5	#114.5	
Internal Link Dist (m)		117.3			122.3			72.2			59.8	
Turn Bay Length (m)	20.0		15.0	75.0					15.0			
Base Capacity (vph)	183	887	1583	302	1073		707	1570	773	259	908	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.52	0.95	0.28	0.87	0.74		0.94	0.57	0.33	0.20	0.92	

Intersection Summary















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 89.7
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 38.5
 Intersection LOS: D
 Intersection Capacity Utilization 82.2%
 ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 37: RR 284 & Peigan Trail/TWP 240



Lanes, Volumes, Timings
44: RR 284 Terminal

2040 Improved
12-01-2020

										
Lane Group	SBL	SBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Traffic Volume (vph)	616	0	0	0	0	638	0	0	0	0
Future Volume (vph)	616	0	0	0	0	638	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt										
Flt Protected	0.950									
Satd. Flow (prot)	3433	0	0	0	0	3539	0	0	0	0
Flt Permitted	0.950									
Satd. Flow (perm)	3433	0	0	0	0	3539	0	0	0	0
Right Turn on Red		Yes					Yes			Yes
Satd. Flow (RTOR)										
Link Speed (k/h)	50		50			50			50	
Link Distance (m)	71.7		67.8			58.9			78.9	
Travel Time (s)	5.2		4.9			4.2			5.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	670	0	0	0	0	693	0	0	0	0
Shared Lane Traffic (%)										
Lane Group Flow (vph)	670	0	0	0	0	693	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)	7.2		0.0			0.0			0.0	
Link Offset(m)	0.0		0.0			0.0			0.0	
Crosswalk Width(m)	4.8		4.8			4.8			4.8	
Two way Left Turn Lane										
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25	15	25		15	25		15
Number of Detectors	1					2				
Detector Template	Left					Thru				
Leading Detector (m)	2.0					10.0				
Trailing Detector (m)	0.0					0.0				
Detector 1 Position(m)	0.0					0.0				
Detector 1 Size(m)	2.0					0.6				
Detector 1 Type	Cl+Ex					Cl+Ex				
Detector 1 Channel										
Detector 1 Extend (s)	0.0					0.0				
Detector 1 Queue (s)	0.0					0.0				
Detector 1 Delay (s)	0.0					0.0				
Detector 2 Position(m)						9.4				
Detector 2 Size(m)						0.6				
Detector 2 Type						Cl+Ex				
Detector 2 Channel										
Detector 2 Extend (s)						0.0				
Turn Type	Prot					NA				
Protected Phases	6					4				
Permitted Phases										
Detector Phase	6					4				
Switch Phase										
Minimum Initial (s)	5.0					5.0				

Lanes, Volumes, Timings
44: RR 284 Terminal

2040 Improved
12-01-2020

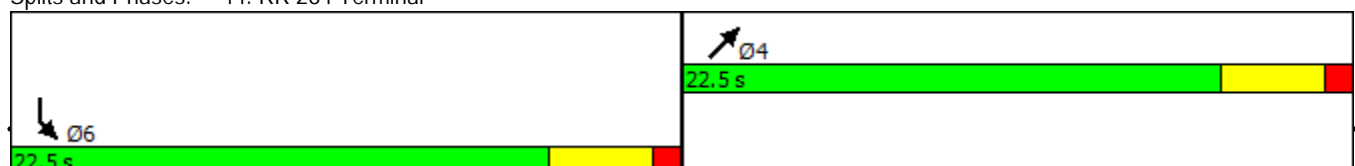


Lane Group	SBL	SBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Minimum Split (s)	22.5					22.5				
Total Split (s)	22.5					22.5				
Total Split (%)	50.0%					50.0%				
Maximum Green (s)	18.0					18.0				
Yellow Time (s)	3.5					3.5				
All-Red Time (s)	1.0					1.0				
Lost Time Adjust (s)	0.0					0.0				
Total Lost Time (s)	4.5					4.5				
Lead/Lag										
Lead-Lag Optimize?										
Vehicle Extension (s)	3.0					3.0				
Recall Mode	Min					None				
Walk Time (s)	7.0					7.0				
Flash Dont Walk (s)	11.0					11.0				
Pedestrian Calls (#/hr)	0					0				
Act Effect Green (s)	12.0					12.3				
Actuated g/C Ratio	0.36					0.37				
v/c Ratio	0.55					0.54				
Control Delay	10.9					10.5				
Queue Delay	0.0					0.0				
Total Delay	10.9					10.5				
LOS	B					B				
Approach Delay	10.9					10.5				
Approach LOS	B					B				
Queue Length 50th (m)	14.6					14.6				
Queue Length 95th (m)	31.3					32.9				
Internal Link Dist (m)	47.7			43.8		34.9			54.9	
Turn Bay Length (m)										
Base Capacity (vph)	1916					1975				
Starvation Cap Reductn	0					0				
Spillback Cap Reductn	0					0				
Storage Cap Reductn	0					0				
Reduced v/c Ratio	0.35					0.35				

Intersection Summary

Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 33.6
 Natural Cycle: 45
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 10.7
 Intersection Capacity Utilization 55.4%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 44: RR 284 Terminal



Lanes, Volumes, Timings
47: RR 283 & TWP 240

2040 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	283	206	468	20	213	136	591	613	4	103	481	148
Future Volume (vph)	283	206	468	20	213	136	591	613	4	103	481	148
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	35.0		0.0	0.0		0.0	35.0		0.0	35.0		35.0
Storage Lanes	2		1	1		1	2		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.00	1.00	1.00	1.00
Frt			0.850				0.850		0.999			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	1863	1583	1770	1863	1583	3433	1861	0	1770	1863	1583
Flt Permitted	0.950			0.619			0.950			0.274		
Satd. Flow (perm)	3433	1863	1583	1153	1863	1583	3433	1861	0	510	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			432			182						182
Link Speed (k/h)		50			50			50				50
Link Distance (m)		118.3			123.8			84.8				99.0
Travel Time (s)		8.5			8.9			6.1				7.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	308	224	509	22	232	148	642	666	4	112	523	161
Shared Lane Traffic (%)												
Lane Group Flow (vph)	308	224	509	22	232	148	642	670	0	112	523	161
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2				7.2
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	Perm	NA	Perm	Prot	NA		pm+pt	NA	Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases			4	8		8				6		6

Lanes, Volumes, Timings
47: RR 283 & TWP 240

2040 Improved
12-01-2020

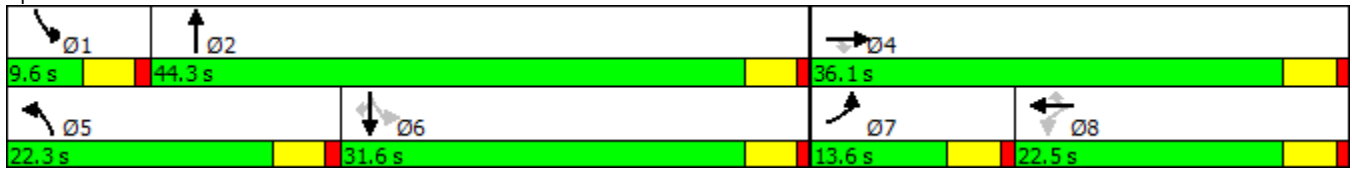


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8	8	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5		9.5	22.5	22.5
Total Split (s)	13.6	36.1	36.1	22.5	22.5	22.5	22.3	44.3		9.6	31.6	31.6
Total Split (%)	15.1%	40.1%	40.1%	25.0%	25.0%	25.0%	24.8%	49.2%		10.7%	35.1%	35.1%
Maximum Green (s)	9.1	31.6	31.6	18.0	18.0	18.0	17.8	39.8		5.1	27.1	27.1
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Min		None	Min	Min
Walk Time (s)		7.0	7.0	7.0	7.0	7.0		7.0			7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0		11.0			11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0		0			0	0
Act Effect Green (s)	9.1	28.6	28.6	14.9	14.9	14.9	17.8	41.0		31.3	26.2	26.2
Actuated g/C Ratio	0.11	0.33	0.33	0.17	0.17	0.17	0.21	0.48		0.36	0.30	0.30
v/c Ratio	0.85	0.36	0.63	0.11	0.72	0.35	0.91	0.76		0.43	0.92	0.27
Control Delay	61.1	23.9	8.1	31.2	46.9	5.2	52.7	27.0		17.0	54.3	4.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	61.1	23.9	8.1	31.2	46.9	5.2	52.7	27.0		17.0	54.3	4.1
LOS	E	C	A	C	D	A	D	C		B	D	A
Approach Delay		27.2			30.7			39.6			38.9	
Approach LOS		C			C			D			D	
Queue Length 50th (m)	28.2	29.6	9.4	3.3	38.9	0.0	58.0	98.4		8.7	88.7	0.0
Queue Length 95th (m)	#52.9	48.8	38.1	10.0	63.5	10.1	#93.7	#165.8		17.4	#154.7	10.9
Internal Link Dist (m)		94.3			99.8			60.8			75.0	
Turn Bay Length (m)	35.0						35.0			35.0		35.0
Base Capacity (vph)	364	685	855	241	390	475	711	885		260	587	624
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.85	0.33	0.60	0.09	0.59	0.31	0.90	0.76		0.43	0.89	0.26

Intersection Summary













Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 86.1
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 34.8
 Intersection LOS: C
 Intersection Capacity Utilization 76.5%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 47: RR 283 & TWP 240















Lanes, Volumes, Timings
54: RR 283 Terminal

2040 Improved
12-01-2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑						↑↑				
Traffic Volume (vph)	0	739	0	0	0	0	0	188	0	0	0	0
Future Volume (vph)	0	739	0	0	0	0	0	188	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	3539	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	3539	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			50				50
Link Distance (m)		70.4			73.1			77.1				73.4
Travel Time (s)		5.1			5.3			5.6				5.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	803	0	0	0	0	0	204	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	803	0	0	0	0	0	204	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2						2				
Detector Template		Thru						Thru				
Leading Detector (m)		10.0						10.0				
Trailing Detector (m)		0.0						0.0				
Detector 1 Position(m)		0.0						0.0				
Detector 1 Size(m)		0.6						0.6				
Detector 1 Type		Cl+Ex						Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)		0.0						0.0				
Detector 1 Queue (s)		0.0						0.0				
Detector 1 Delay (s)		0.0						0.0				
Detector 2 Position(m)		9.4						9.4				
Detector 2 Size(m)		0.6						0.6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type		NA						NA				
Protected Phases		2						4				
Permitted Phases												
Detector Phase		2						4				
Switch Phase												
Minimum Initial (s)		5.0						5.0				

Lanes, Volumes, Timings
54: RR 283 Terminal

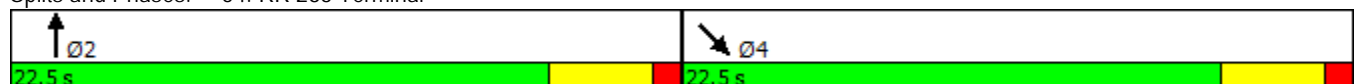
2040 Improved
12-01-2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Split (s)		22.5						22.5				
Total Split (s)		22.5						22.5				
Total Split (%)		50.0%						50.0%				
Maximum Green (s)		18.0						18.0				
Yellow Time (s)		3.5						3.5				
All-Red Time (s)		1.0						1.0				
Lost Time Adjust (s)		0.0						0.0				
Total Lost Time (s)		4.5						4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0						3.0				
Recall Mode		Min						None				
Walk Time (s)		7.0						7.0				
Flash Dont Walk (s)		11.0						11.0				
Pedestrian Calls (#/hr)		0						0				
Act Effect Green (s)		18.3						7.3				
Actuated g/C Ratio		0.59						0.23				
v/c Ratio		0.39						0.25				
Control Delay		5.8						10.8				
Queue Delay		0.0						0.0				
Total Delay		5.8						10.8				
LOS		A						B				
Approach Delay		5.8						10.8				
Approach LOS		A						B				
Queue Length 50th (m)		12.4						4.2				
Queue Length 95th (m)		22.8						10.1				
Internal Link Dist (m)		46.4			49.1			53.1			49.4	
Turn Bay Length (m)												
Base Capacity (vph)		2285						2064				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.35						0.10				

Intersection Summary

Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 31.2
 Natural Cycle: 45
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.39
 Intersection Signal Delay: 6.8
 Intersection Capacity Utilization 33.1%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 54: RR 283 Terminal



Lanes, Volumes, Timings
57: RR 282 & TWP 240

2040 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Volume (vph)	0	55	257	54	91	0	267	131	123	0	102	6
Future Volume (vph)	0	55	257	54	91	0	267	131	123	0	102	6
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	0.0		0.0	0.0		0.0	75.0		0.0	0.0		0.0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.889						0.927			0.992	
Flt Protected					0.982		0.950					
Satd. Flow (prot)	0	1656	0	0	1829	0	1770	1727	0	0	1848	0
Flt Permitted					0.656		0.430					
Satd. Flow (perm)	0	1656	0	0	1222	0	801	1727	0	0	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		279						126			6	
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		115.6			144.4			116.8			137.5	
Travel Time (s)		8.3			10.4			8.4			9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	60	279	59	99	0	290	142	134	0	111	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	339	0	0	158	0	290	276	0	0	118	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (m)	2.0	10.0		2.0	10.0		2.0	10.0		2.0	10.0	
Trailing Detector (m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Position(m)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Size(m)	2.0	0.6		2.0	0.6		2.0	0.6		2.0	0.6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		pm+pt	NA			NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4			8			2			6		

Lanes, Volumes, Timings
57: RR 282 & TWP 240

2040 Improved
12-01-2020

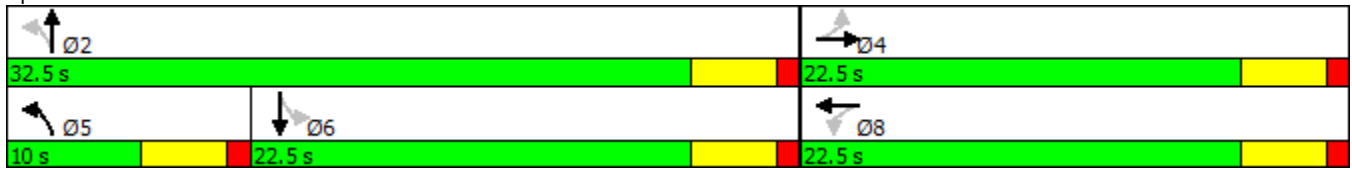


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	4	4		8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5		9.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5		10.0	32.5		22.5	22.5	
Total Split (%)	40.9%	40.9%		40.9%	40.9%		18.2%	59.1%		40.9%	40.9%	
Maximum Green (s)	18.0	18.0		18.0	18.0		5.5	28.0		18.0	18.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		4.5			4.5		4.5	4.5			4.5	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0			11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		9.3			9.3		17.8	17.8			7.7	
Actuated g/C Ratio		0.26			0.26		0.49	0.49			0.21	
v/c Ratio		0.54			0.51		0.53	0.30			0.30	
Control Delay		6.7			18.0		10.5	4.5			14.3	
Queue Delay		0.0			0.0		0.0	0.0			0.0	
Total Delay		6.7			18.0		10.5	4.5			14.3	
LOS		A			B		B	A			B	
Approach Delay		6.7			18.0			7.6			14.3	
Approach LOS		A			B			A			B	
Queue Length 50th (m)		2.9			8.3		9.4	4.4			5.9	
Queue Length 95th (m)		17.3			22.0		25.2	16.1			16.9	
Internal Link Dist (m)		91.6			120.4			92.8			113.5	
Turn Bay Length (m)							75.0					
Base Capacity (vph)		973			616		543	1382			935	
Starvation Cap Reductn		0			0		0	0			0	
Spillback Cap Reductn		0			0		0	0			0	
Storage Cap Reductn		0			0		0	0			0	
Reduced v/c Ratio		0.35			0.26		0.53	0.20			0.13	

Intersection Summary

Area Type:	Other
Cycle Length:	55
Actuated Cycle Length:	36.2
Natural Cycle:	55
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.54
Intersection Signal Delay:	9.4
Intersection LOS:	A
Intersection Capacity Utilization:	59.2%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 57: RR 282 & TWP 240



Lanes, Volumes, Timings
62: RR 282 & Glenmore Trail

2040 Improved
12-01-2020



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	589	1465	0	0	944	131	0	0	0	122	0	807
Future Volume (vph)	589	1465	0	0	944	131	0	0	0	122	0	807
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	50.0		20.0	20.0		25.0	0.0		0.0	60.0		35.0
Storage Lanes	2		1	1		1	0		0	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.850						0.850
Flt Protected	0.950									0.950		
Satd. Flow (prot)	3433	3539	1863	1863	3539	1583	0	1863	0	1770	1863	1583
Flt Permitted	0.950									0.757		
Satd. Flow (perm)	3433	3539	1863	1863	3539	1583	0	1863	0	1410	1863	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						73						435
Link Speed (k/h)		80			80			50				50
Link Distance (m)		161.7			151.4			105.3				140.9
Travel Time (s)		7.3			6.8			7.6				10.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	640	1592	0	0	1026	142	0	0	0	133	0	877
Shared Lane Traffic (%)												
Lane Group Flow (vph)	640	1592	0	0	1026	142	0	0	0	133	0	877
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			3.6				3.6
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0		2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6		2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4				9.4
Detector 2 Size(m)		0.6			0.6			0.6				0.6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	Prot	NA	Perm	Perm	NA	Perm				Perm		Perm
Protected Phases	7	4			8			2				6
Permitted Phases			4	8		8	2			6		6

Lanes, Volumes, Timings
62: RR 282 & Glenmore Trail

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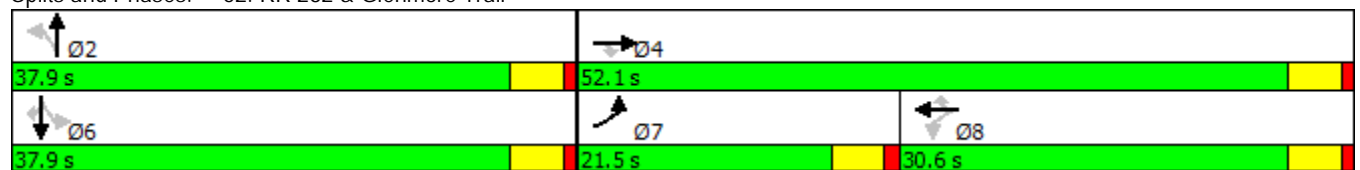
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	8	8	8	2	2		6	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5		22.5	22.5	22.5
Total Split (s)	21.5	52.1	52.1	30.6	30.6	30.6	37.9	37.9		37.9	37.9	37.9
Total Split (%)	23.9%	57.9%	57.9%	34.0%	34.0%	34.0%	42.1%	42.1%		42.1%	42.1%	42.1%
Maximum Green (s)	17.0	47.6	47.6	26.1	26.1	26.1	33.4	33.4		33.4	33.4	33.4
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5		4.5		4.5	4.5	4.5
Lead/Lag	Lead			Lag	Lag	Lag						
Lead-Lag Optimize?	Yes			Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	Min	Min		Min	Min	Min
Walk Time (s)		7.0	7.0	7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	11.0	11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0	0	0	0	0	0		0	0	0
Act Effct Green (s)	17.0	47.6			26.1	26.1				33.4		33.4
Actuated g/C Ratio	0.19	0.53			0.29	0.29				0.37		0.37
v/c Ratio	0.99	0.85			1.00	0.28				0.25		1.02
Control Delay	70.4	23.9			61.3	14.3				21.3		51.6
Queue Delay	0.0	0.0			0.0	0.0				0.0		0.0
Total Delay	70.4	23.9			61.3	14.3				21.3		51.6
LOS	E	C			E	B				C		D
Approach Delay		37.2			55.6							47.6
Approach LOS		D			E							D
Queue Length 50th (m)	60.3	123.1			97.8	9.3				16.5		~105.9
Queue Length 95th (m)	#96.3	157.0			#142.8	24.0				30.6		#190.5
Internal Link Dist (m)		137.7			127.4			81.3				116.9
Turn Bay Length (m)	50.0					25.0				60.0		35.0
Base Capacity (vph)	648	1871			1026	510				523		861
Starvation Cap Reductn	0	0			0	0				0		0
Spillback Cap Reductn	0	0			0	0				0		0
Storage Cap Reductn	0	0			0	0				0		0
Reduced v/c Ratio	0.99	0.85			1.00	0.28				0.25		1.02

Intersection Summary

Area Type:	Other
Cycle Length:	90
Actuated Cycle Length:	90
Natural Cycle:	90
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.02
Intersection Signal Delay:	44.5
Intersection LOS:	D
Intersection Capacity Utilization:	83.6%
ICU Level of Service:	E
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

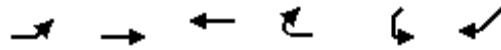
95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 62: RR 282 & Glenmore Trail



Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

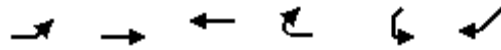
2040 Improved
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Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↔↔	↑↑↑	↑↑↑			
Traffic Volume (vph)	526	3384	3654	0	0	0
Future Volume (vph)	526	3384	3654	0	0	0
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900
Storage Length (m)	200.0			0.0	0.0	0.0
Storage Lanes	2			0	0	0
Taper Length (m)	7.5				7.5	
Lane Util. Factor	0.97	0.91	0.91	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	3433	5085	5085	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	3433	5085	5085	0	0	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		662.8	149.5		114.0	
Travel Time (s)		47.7	10.8		8.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	572	3678	3972	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	572	3678	3972	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		7.2	7.2		0.0	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors	1	2	2			
Detector Template	Left	Thru	Thru			
Leading Detector (m)	2.0	10.0	10.0			
Trailing Detector (m)	0.0	0.0	0.0			
Detector 1 Position(m)	0.0	0.0	0.0			
Detector 1 Size(m)	2.0	0.6	0.6			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0	0.0			
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	Prot	NA	NA			
Protected Phases	7	4	8			
Permitted Phases						

Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

2040 Improved
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Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Detector Phase	7	4	8			
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0			
Minimum Split (s)	9.5	22.5	22.5			
Total Split (s)	29.2	150.0	120.8			
Total Split (%)	19.5%	100.0%	80.5%			
Maximum Green (s)	24.7	145.5	116.3			
Yellow Time (s)	3.5	3.5	3.5			
All-Red Time (s)	1.0	1.0	1.0			
Lost Time Adjust (s)	0.0	0.0	0.0			
Total Lost Time (s)	4.5	4.5	4.5			
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0			
Recall Mode	None	None	None			
Walk Time (s)		7.0	7.0			
Flash Dont Walk (s)		11.0	11.0			
Pedestrian Calls (#/hr)		0	0			
Act Effct Green (s)	24.7	150.0	116.3			
Actuated g/C Ratio	0.16	1.00	0.78			
v/c Ratio	1.01	0.72	1.01			
Control Delay	102.0	0.9	33.2			
Queue Delay	0.0	0.0	0.0			
Total Delay	102.0	0.9	33.2			
LOS	F	A	C			
Approach Delay		14.5	33.2			
Approach LOS		B	C			
Queue Length 50th (m)	~95.1	0.0	~424.2			
Queue Length 95th (m)	#135.9	0.0	#490.0			
Internal Link Dist (m)		638.8	125.5		90.0	
Turn Bay Length (m)	200.0					
Base Capacity (vph)	565	5085	3942			
Starvation Cap Reductn	0	0	0			
Spillback Cap Reductn	0	0	0			
Storage Cap Reductn	0	0	0			
Reduced v/c Ratio	1.01	0.72	1.01			

Intersection Summary

Area Type:	Other
Cycle Length:	150
Actuated Cycle Length:	150
Natural Cycle:	150
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	1.01
Intersection Signal Delay:	23.6
Intersection LOS:	C
Intersection Capacity Utilization:	100.8%
ICU Level of Service:	G
Analysis Period (min):	15
~ Volume exceeds capacity, queue is theoretically infinite. Queue shown is maximum after two cycles.	

Lanes, Volumes, Timings
67: Glenmore Trail & Stoney Trail

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

Splits and Phases: 67: Glenmore Trail & Stoney Trail



Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2040 Improved
12-01-2020



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		↔	↑↑↑		
Traffic Volume (vph)	3633	0	810	3186	0	0
Future Volume (vph)	3633	0	810	3186	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (m)		0.0	175.0		0.0	0.0
Storage Lanes		0	2		0	0
Taper Length (m)			7.5		7.5	
Lane Util. Factor	0.91	1.00	0.97	0.91	1.00	1.00
Frt						
Flt Protected			0.950			
Satd. Flow (prot)	5085	0	3433	5085	0	0
Flt Permitted			0.950			
Satd. Flow (perm)	5085	0	3433	5085	0	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	199.5			662.8	102.4	
Travel Time (s)	14.4			47.7	7.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	3949	0	880	3463	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	3949	0	880	3463	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	7.2			7.2	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2		1	2		
Detector Template	Thru		Left	Thru		
Leading Detector (m)	10.0		2.0	10.0		
Trailing Detector (m)	0.0		0.0	0.0		
Detector 1 Position(m)	0.0		0.0	0.0		
Detector 1 Size(m)	0.6		2.0	0.6		
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0		0.0	0.0		
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA		Prot	NA		
Protected Phases	4		3	8		
Permitted Phases						

Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2040 Improved
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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Detector Phase	4		3	8		
Switch Phase						
Minimum Initial (s)	5.0		5.0	5.0		
Minimum Split (s)	22.5		9.5	22.5		
Total Split (s)	111.0		39.0	150.0		
Total Split (%)	74.0%		26.0%	100.0%		
Maximum Green (s)	106.5		34.5	145.5		
Yellow Time (s)	3.5		3.5	3.5		
All-Red Time (s)	1.0		1.0	1.0		
Lost Time Adjust (s)	0.0		0.0	0.0		
Total Lost Time (s)	4.5		4.5	4.5		
Lead/Lag	Lag		Lead			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0		3.0	3.0		
Recall Mode	None		None	None		
Walk Time (s)	7.0			7.0		
Flash Dont Walk (s)	11.0			11.0		
Pedestrian Calls (#/hr)	0			0		
Act Effect Green (s)	106.5		34.5	150.0		
Actuated g/C Ratio	0.71		0.23	1.00		
v/c Ratio	1.09		1.12	0.68		
Control Delay	70.3		120.3	0.8		
Queue Delay	0.0		0.0	0.0		
Total Delay	70.3		120.3	0.8		
LOS	E		F	A		
Approach Delay	70.3			25.0		
Approach LOS	E			C		
Queue Length 50th (m)	~509.7		~162.3	0.0		
Queue Length 95th (m)	#524.2		#204.8	0.0		
Internal Link Dist (m)	175.5			638.8	78.4	
Turn Bay Length (m)			175.0			
Base Capacity (vph)	3610		789	5085		
Starvation Cap Reductn	0		0	0		
Spillback Cap Reductn	0		0	0		
Storage Cap Reductn	0		0	0		
Reduced v/c Ratio	1.09		1.12	0.68		

Intersection Summary

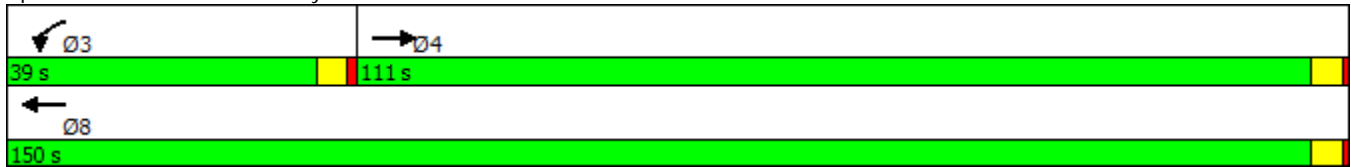
Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Natural Cycle: 150
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.12
 Intersection Signal Delay: 46.5
 Intersection LOS: D
 Intersection Capacity Utilization 100.8%
 ICU Level of Service G
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.

Lanes, Volumes, Timings
68: Stoney Trail & Glenmore Trail

2040 Improved
12-01-2020

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

Splits and Phases: 68: Stoney Trail & Glenmore Trail



Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

2040 Improved
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	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑	↖↗	
Traffic Volume (vph)	2674	0	0	2200	682	0
Future Volume (vph)	2674	0	0	2200	682	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	5085	0	0	5085	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	5085	0	0	5085	3433	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						
Link Speed (k/h)	50			50	50	
Link Distance (m)	421.0			179.4	93.7	
Travel Time (s)	30.3			12.9	6.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2907	0	0	2391	741	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	2907	0	0	2391	741	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	7.2	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2			2	1	
Detector Template	Thru			Thru	Left	
Leading Detector (m)	10.0			10.0	2.0	
Trailing Detector (m)	0.0			0.0	0.0	
Detector 1 Position(m)	0.0			0.0	0.0	
Detector 1 Size(m)	0.6			0.6	2.0	
Detector 1 Type	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0			0.0	0.0	
Detector 1 Queue (s)	0.0			0.0	0.0	
Detector 1 Delay (s)	0.0			0.0	0.0	
Detector 2 Position(m)	9.4			9.4		
Detector 2 Size(m)	0.6			0.6		
Detector 2 Type	Cl+Ex			Cl+Ex		
Detector 2 Channel						
Detector 2 Extend (s)	0.0			0.0		
Turn Type	NA			NA	Prot	
Protected Phases	4			8	2	
Permitted Phases						
Detector Phase	4			8	2	
Switch Phase						
Minimum Initial (s)	5.0			5.0	5.0	

Lanes, Volumes, Timings
73: Stoney Trail & Peigan Trail

2040 Improved
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Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Minimum Split (s)	22.5			22.5	22.5	
Total Split (s)	51.0			51.0	24.0	
Total Split (%)	68.0%			68.0%	32.0%	
Maximum Green (s)	46.5			46.5	19.5	
Yellow Time (s)	3.5			3.5	3.5	
All-Red Time (s)	1.0			1.0	1.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	4.5			4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0			3.0	3.0	
Recall Mode	None			None	Max	
Walk Time (s)	7.0			7.0	7.0	
Flash Dont Walk (s)	11.0			11.0	11.0	
Pedestrian Calls (#/hr)	0			0	0	
Act Effect Green (s)	46.5			46.5	19.5	
Actuated g/C Ratio	0.62			0.62	0.26	
v/c Ratio	0.92			0.76	0.83	
Control Delay	19.2			12.2	36.0	
Queue Delay	0.0			0.0	0.0	
Total Delay	19.2			12.2	36.0	
LOS	B			B	D	
Approach Delay	19.2			12.2	36.0	
Approach LOS	B			B	D	
Queue Length 50th (m)	124.5			82.6	53.6	
Queue Length 95th (m)	#156.7			101.8	#81.3	
Internal Link Dist (m)	397.0			155.4	69.7	
Turn Bay Length (m)						
Base Capacity (vph)	3152			3152	892	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.92			0.76	0.83	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 18.5
 Intersection LOS: B
 Intersection Capacity Utilization 78.6%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 73: Stoney Trail & Peigan Trail



Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2040 Improved
12-01-2020



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑	↑↑↑		↑↑	
Traffic Volume (vph)	0	2248	2196	0	859	0
Future Volume (vph)	0	2248	2196	0	859	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	1.00
Frt						
Flt Protected					0.950	
Satd. Flow (prot)	0	5085	5085	0	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	5085	5085	0	3433	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						
Link Speed (k/h)		50	50		50	
Link Distance (m)		133.7	421.0		94.2	
Travel Time (s)		9.6	30.3		6.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2443	2387	0	934	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	2443	2387	0	934	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(m)		0.0	0.0		7.2	
Link Offset(m)		0.0	0.0		0.0	
Crosswalk Width(m)		4.8	4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25			15	25	15
Number of Detectors		2	2		1	
Detector Template		Thru	Thru		Left	
Leading Detector (m)		10.0	10.0		2.0	
Trailing Detector (m)		0.0	0.0		0.0	
Detector 1 Position(m)		0.0	0.0		0.0	
Detector 1 Size(m)		0.6	0.6		2.0	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(m)		9.4	9.4			
Detector 2 Size(m)		0.6	0.6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	
Protected Phases		4	8		6	
Permitted Phases						
Detector Phase		4	8		6	
Switch Phase						
Minimum Initial (s)		5.0	5.0		5.0	

Lanes, Volumes, Timings
75: Peigan Trail & Stoney Trail

2040 Improved
12-01-2020

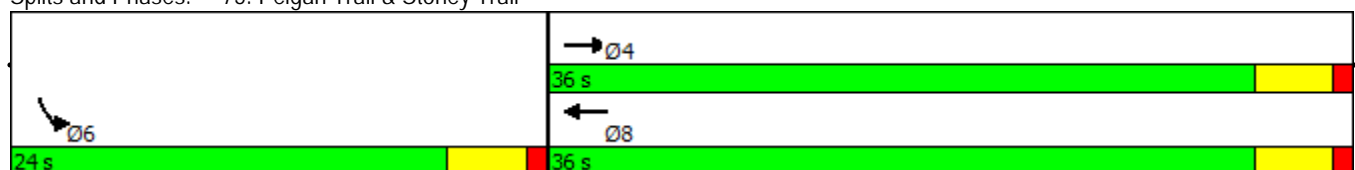


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Split (s)		22.5	22.5		22.5	
Total Split (s)		36.0	36.0		24.0	
Total Split (%)		60.0%	60.0%		40.0%	
Maximum Green (s)		31.5	31.5		19.5	
Yellow Time (s)		3.5	3.5		3.5	
All-Red Time (s)		1.0	1.0		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		4.5	4.5		4.5	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		None	None		Max	
Walk Time (s)		7.0	7.0		7.0	
Flash Dont Walk (s)		11.0	11.0		11.0	
Pedestrian Calls (#/hr)		0	0		0	
Act Effect Green (s)		31.5	31.5		19.5	
Actuated g/C Ratio		0.52	0.52		0.32	
v/c Ratio		0.92	0.89		0.84	
Control Delay		20.3	18.8		27.5	
Queue Delay		0.0	0.0		0.0	
Total Delay		20.3	18.8		27.5	
LOS		C	B		C	
Approach Delay		20.3	18.8		27.5	
Approach LOS		C	B		C	
Queue Length 50th (m)		86.1	82.4		50.7	
Queue Length 95th (m)		#130.5	#109.7		#81.2	
Internal Link Dist (m)		109.7	397.0		70.2	
Turn Bay Length (m)						
Base Capacity (vph)		2669	2669		1115	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		0	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.92	0.89		0.84	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 60
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 20.8
 Intersection LOS: C
 Intersection Capacity Utilization 78.6%
 ICU Level of Service D
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 75: Peigan Trail & Stoney Trail



Lanes, Volumes, Timings
82: RR 284 & 61 Avenue

2040 Improved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	382	285	269	380	388	176	224	513	213	261	476	372
Future Volume (vph)	382	285	269	380	388	176	224	513	213	261	476	372
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	100.0		15.0	75.0		40.0	25.0		15.0	50.0		15.0
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3539	1583	3433	3539	1583	3433	3539	1583	3433	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			265			234			234			301
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		226.8			365.5			199.0			205.2	
Travel Time (s)		16.3			26.3			14.3			14.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	415	310	292	413	422	191	243	558	232	284	517	404
Shared Lane Traffic (%)												
Lane Group Flow (vph)	415	310	292	413	422	191	243	558	232	284	517	404
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			7.2			7.2	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Free	Prot	NA	Free	Prot	NA	Free	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			Free			Free			Free			6

Lanes, Volumes, Timings
82: RR 284 & 61 Avenue

2040 Improved
12-01-2020











Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4		3	8		5	2		1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	5.0
Minimum Split (s)	9.5	22.5		9.5	22.5		9.5	22.5		9.5	22.5	22.5
Total Split (s)	13.5	22.5		13.5	22.5		10.5	23.0		11.0	23.5	23.5
Total Split (%)	19.3%	32.1%		19.3%	32.1%		15.0%	32.9%		15.7%	33.6%	33.6%
Maximum Green (s)	9.0	18.0		9.0	18.0		6.0	18.5		6.5	19.0	19.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None		None	Min		None	Min	Min
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		11.0			11.0			11.0			11.0	11.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	9.1	12.5	60.8	9.1	12.5	60.8	6.1	14.5	60.8	6.6	15.0	15.0
Actuated g/C Ratio	0.15	0.21	1.00	0.15	0.21	1.00	0.10	0.24	1.00	0.11	0.25	0.25
v/c Ratio	0.81	0.43	0.18	0.81	0.58	0.12	0.71	0.66	0.15	0.77	0.59	0.65
Control Delay	41.7	23.3	0.3	41.4	25.6	0.2	42.1	25.3	0.2	44.5	23.5	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.7	23.3	0.3	41.4	25.6	0.2	42.1	25.3	0.2	44.5	23.5	11.7
LOS	D	C	A	D	C	A	D	C	A	D	C	B
Approach Delay		24.2			27.2			23.6			24.5	
Approach LOS		C			C			C			C	
Queue Length 50th (m)	24.5	16.7	0.0	24.4	23.6	0.0	14.5	30.8	0.0	17.0	27.8	9.7
Queue Length 95th (m)	#54.4	29.0	0.0	#54.2	38.7	0.0	#34.9	49.7	0.0	#40.8	45.4	36.4
Internal Link Dist (m)		202.8			341.5			175.0			181.2	
Turn Bay Length (m)	100.0		15.0	75.0		40.0	25.0		15.0	50.0		15.0
Base Capacity (vph)	513	1057	1583	513	1057	1583	341	1086	1583	370	1116	705
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.29	0.18	0.81	0.40	0.12	0.71	0.51	0.15	0.77	0.46	0.57

Intersection Summary

Area Type: Other
 Cycle Length: 70
 Actuated Cycle Length: 60.8
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 24.9 Intersection LOS: C
 Intersection Capacity Utilization 58.2% ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 82: RR 284 & 61 Avenue

 Ø1 11 s	 Ø2 23 s	 Ø3 13.5 s	 Ø4 22.5 s
 Ø5 10.5 s	 Ø6 23.5 s	 Ø7 13.5 s	 Ø8 22.5 s

Lanes, Volumes, Timings
88: RR 283 & 61 Avenue

2040 Improved
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	275	83	41	203	66	169	95	559	64	221	509	165
Future Volume (vph)	275	83	41	203	66	169	95	559	64	221	509	165
Ideal Flow (vphp)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (m)	80.0		80.0	80.0		50.0	50.0		50.0	30.0		15.0
Storage Lanes	1		1	2		1	1		1	1		1
Taper Length (m)	7.5			7.5			7.5			7.5		
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	3539	1583	3433	3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.714			0.950			0.439			0.308		
Satd. Flow (perm)	1330	3539	1583	3433	3539	1583	818	3539	1583	574	3539	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			176			184			176			176
Link Speed (k/h)		50			50			50			50	
Link Distance (m)		218.4			259.4			141.6			186.1	
Travel Time (s)		15.7			18.7			10.2			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	299	90	45	221	72	184	103	608	70	240	553	179
Shared Lane Traffic (%)												
Lane Group Flow (vph)	299	90	45	221	72	184	103	608	70	240	553	179
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		7.2			7.2			3.6			3.6	
Link Offset(m)		0.0			0.0			0.0			0.0	
Crosswalk Width(m)		4.8			4.8			4.8			4.8	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (m)	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0	2.0	10.0	2.0
Trailing Detector (m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Size(m)	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0	2.0	0.6	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(m)		9.4			9.4			9.4			9.4	
Detector 2 Size(m)		0.6			0.6			0.6			0.6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4			8	2		2	6		6

Lanes, Volumes, Timings
88: RR 283 & 61 Avenue

2040 Improved
12-01-2020











Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	9.6	22.6	22.6	9.7	22.7	22.7	9.5	23.1	23.1	9.6	23.2	23.2
Total Split (%)	14.8%	34.8%	34.8%	14.9%	34.9%	34.9%	14.6%	35.5%	35.5%	14.8%	35.7%	35.7%
Maximum Green (s)	5.1	18.1	18.1	5.2	18.2	18.2	5.0	18.6	18.6	5.1	18.7	18.7
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None	None	None	None	None	None	Min	Min	None	Min	Min
Walk Time (s)		7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0		0	0		0	0
Act Effect Green (s)	10.9	7.2	7.2	5.4	7.3	7.3	19.1	13.9	13.9	20.5	16.7	16.7
Actuated g/C Ratio	0.23	0.15	0.15	0.11	0.15	0.15	0.40	0.29	0.29	0.43	0.35	0.35
v/c Ratio	0.84	0.17	0.12	0.57	0.13	0.46	0.24	0.59	0.12	0.63	0.44	0.27
Control Delay	39.6	20.2	0.6	30.5	19.8	8.5	9.1	17.6	0.4	19.1	15.4	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	20.2	0.6	30.5	19.8	8.5	9.1	17.6	0.4	19.1	15.4	4.2
LOS	D	C	A	C	B	A	A	B	A	B	B	A
Approach Delay		31.5			20.4			14.9			14.2	
Approach LOS		C			C			B			B	
Queue Length 50th (m)	21.4	3.9	0.0	10.3	3.1	0.0	4.7	24.9	0.0	12.0	22.1	0.2
Queue Length 95th (m)	#55.4	9.7	0.0	#26.7	8.2	14.1	12.4	41.9	0.0	#33.4	37.7	11.3
Internal Link Dist (m)		194.4			235.4			117.6			162.1	
Turn Bay Length (m)	80.0		80.0	80.0		50.0	50.0		50.0	30.0		15.0
Base Capacity (vph)	354	1392	729	388	1400	737	432	1431	745	380	1451	753
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.06	0.06	0.57	0.05	0.25	0.24	0.42	0.09	0.63	0.38	0.24

Intersection Summary

Area Type: Other
 Cycle Length: 65
 Actuated Cycle Length: 47.5
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 18.4
 Intersection LOS: B
 Intersection Capacity Utilization 60.8%
 ICU Level of Service B
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 88: RR 283 & 61 Avenue

 Ø1	 Ø2	 Ø3	 Ø4
9.6 s	23.1 s	9.7 s	22.6 s
 Ø5	 Ø6	 Ø7	 Ø8
9.5 s	23.2 s	9.6 s	22.7 s

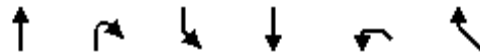
Lanes, Volumes, Timings
97: Garden Road Terminal

2040 Improved
12-01-2020

	↑	↖	↙	↓	↘	↗
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations	↑↑					↗↗
Traffic Volume (vph)	727	0	0	0	0	732
Future Volume (vph)	727	0	0	0	0	732
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	0.88
Fr t						0.850
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	2787
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						138
Link Speed (k/h)	50			50	50	
Link Distance (m)	74.4			58.8	45.0	
Travel Time (s)	5.4			4.2	3.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	790	0	0	0	0	796
Shared Lane Traffic (%)						
Lane Group Flow (vph)	790	0	0	0	0	796
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2					1
Detector Template	Thru					Right
Leading Detector (m)	10.0					2.0
Trailing Detector (m)	0.0					0.0
Detector 1 Position(m)	0.0					0.0
Detector 1 Size(m)	0.6					2.0
Detector 1 Type	Cl+Ex					Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0					0.0
Detector 1 Queue (s)	0.0					0.0
Detector 1 Delay (s)	0.0					0.0
Detector 2 Position(m)	9.4					
Detector 2 Size(m)	0.6					
Detector 2 Type	Cl+Ex					
Detector 2 Channel						
Detector 2 Extend (s)	0.0					
Turn Type	NA					Perm
Protected Phases	4					
Permitted Phases						2
Detector Phase	4					2
Switch Phase						
Minimum Initial (s)	5.0					5.0

Lanes, Volumes, Timings
97: Garden Road Terminal

2040 Improved
12-01-2020

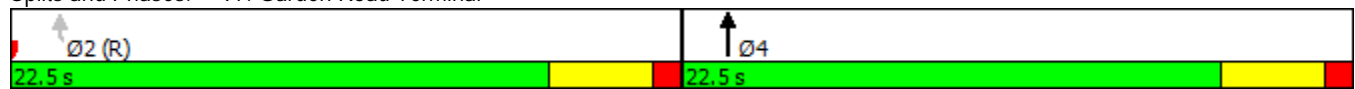


Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Minimum Split (s)	22.5					22.5
Total Split (s)	22.5					22.5
Total Split (%)	50.0%					50.0%
Maximum Green (s)	18.0					18.0
Yellow Time (s)	3.5					3.5
All-Red Time (s)	1.0					1.0
Lost Time Adjust (s)	0.0					0.0
Total Lost Time (s)	4.5					4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0					3.0
Recall Mode	None					C-Max
Walk Time (s)	7.0					7.0
Flash Dont Walk (s)	11.0					11.0
Pedestrian Calls (#/hr)	0					0
Act Effect Green (s)	15.2					20.8
Actuated g/C Ratio	0.34					0.46
v/c Ratio	0.66					0.58
Control Delay	15.3					3.9
Queue Delay	0.0					0.1
Total Delay	15.3					4.0
LOS	B					A
Approach Delay	15.3				4.0	
Approach LOS	B				A	
Queue Length 50th (m)	27.5					2.3
Queue Length 95th (m)	38.4					6.3
Internal Link Dist (m)	50.4			34.8	21.0	
Turn Bay Length (m)						
Base Capacity (vph)	1415					1364
Starvation Cap Reductn	0					76
Spillback Cap Reductn	0					0
Storage Cap Reductn	0					0
Reduced v/c Ratio	0.56					0.62

Intersection Summary













Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 45
 Offset: 0 (0%), Referenced to phase 2:NWR, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 9.7
 Intersection Capacity Utilization 53.2%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 97: Garden Road Terminal



Lanes, Volumes, Timings
99: Garden Road Terminal

2040 Improved
12-01-2020

												
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↑↑						↑↑				
Traffic Volume (vph)	0	874	0	0	0	0	0	189	0	0	0	0
Future Volume (vph)	0	874	0	0	0	0	0	189	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	3539	0	0	0	0	0	3539	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	3539	0	0	0	0	0	3539	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)												
Link Speed (k/h)		50			50			50				50
Link Distance (m)		54.0			44.3			48.0				60.0
Travel Time (s)		3.9			3.2			3.5				4.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	950	0	0	0	0	0	205	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	950	0	0	0	0	0	205	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(m)		0.0			0.0			0.0				0.0
Link Offset(m)		0.0			0.0			0.0				0.0
Crosswalk Width(m)		4.8			4.8			4.8				4.8
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25		15	25		15	25		15	25		15
Number of Detectors		2						2				
Detector Template		Thru						Thru				
Leading Detector (m)		10.0						10.0				
Trailing Detector (m)		0.0						0.0				
Detector 1 Position(m)		0.0						0.0				
Detector 1 Size(m)		0.6						0.6				
Detector 1 Type		Cl+Ex						Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)		0.0						0.0				
Detector 1 Queue (s)		0.0						0.0				
Detector 1 Delay (s)		0.0						0.0				
Detector 2 Position(m)		9.4						9.4				
Detector 2 Size(m)		0.6						0.6				
Detector 2 Type		Cl+Ex						Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0				
Turn Type		NA						NA				
Protected Phases		4						6				
Permitted Phases												
Detector Phase		4						6				
Switch Phase												
Minimum Initial (s)		5.0						5.0				

Lanes, Volumes, Timings
99: Garden Road Terminal

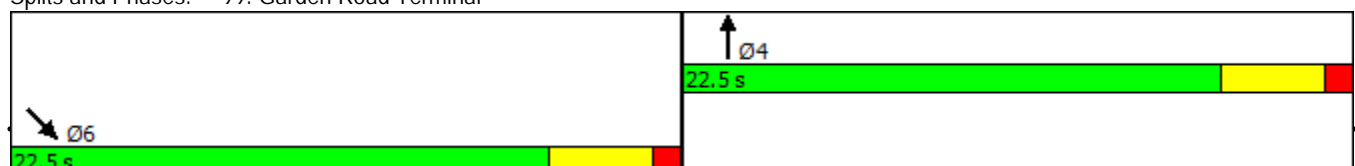
2040 Improved
12-01-2020

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Minimum Split (s)		22.5						22.5				
Total Split (s)		22.5						22.5				
Total Split (%)		50.0%						50.0%				
Maximum Green (s)		18.0						18.0				
Yellow Time (s)		3.5						3.5				
All-Red Time (s)		1.0						1.0				
Lost Time Adjust (s)		0.0						0.0				
Total Lost Time (s)		4.5						4.5				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)		3.0						3.0				
Recall Mode		None						Max				
Walk Time (s)		7.0						7.0				
Flash Dont Walk (s)		11.0						11.0				
Pedestrian Calls (#/hr)		0						0				
Act Effect Green (s)		16.0						18.1				
Actuated g/C Ratio		0.37						0.42				
v/c Ratio		0.72						0.14				
Control Delay		15.2						8.7				
Queue Delay		0.0						0.0				
Total Delay		15.2						8.7				
LOS		B						A				
Approach Delay		15.2						8.7				
Approach LOS		B						A				
Queue Length 50th (m)		31.9						5.3				
Queue Length 95th (m)		48.2						10.2				
Internal Link Dist (m)		30.0			20.3			24.0			36.0	
Turn Bay Length (m)												
Base Capacity (vph)		1483						1483				
Starvation Cap Reductn		0						0				
Spillback Cap Reductn		0						0				
Storage Cap Reductn		0						0				
Reduced v/c Ratio		0.64						0.14				

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	43.1
Natural Cycle:	45
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	14.1
Intersection LOS:	B
Intersection Capacity Utilization:	37.6%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 99: Garden Road Terminal



Lanes, Volumes, Timings
106: Garden Road Terminal & Glenmore Trail

2040 Improved
12-01-2020



Lane Group	NBL	NBR	SBR
Lane Configurations			
Traffic Volume (vph)	731	243	538
Future Volume (vph)	731	243	538
Ideal Flow (vphpl)	1900	1900	1900
Lane Util. Factor	0.97	1.00	0.88
Fr't		0.850	0.850
Flt Protected	0.950		
Satd. Flow (prot)	3433	1583	2787
Flt Permitted	0.950		
Satd. Flow (perm)	3433	1583	2787
Right Turn on Red		Yes	
Satd. Flow (RTOR)		264	
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Peak Hour Factor	0.92	0.92	0.92
Adj. Flow (vph)	795	264	585
Shared Lane Traffic (%)			
Lane Group Flow (vph)	795	264	585
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Right	Right
Median Width(m)			
Link Offset(m)			
Crosswalk Width(m)			
Two way Left Turn Lane			
Headway Factor	1.00	1.00	1.00
Turning Speed (k/h)	25	15	15
Number of Detectors	1	1	1
Detector Template	Left	Right	Right
Leading Detector (m)	2.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0
Detector 1 Size(m)	2.0	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel			
Detector 1 Extend (s)	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm
Protected Phases			
Permitted Phases	2	2	3
Detector Phase	2	2	3
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5

Lanes, Volumes, Timings
 106: Garden Road Terminal & Glenmore Trail

2040 Improved
 12-01-2020

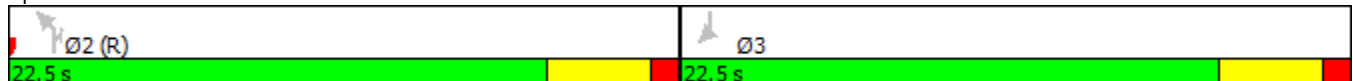


Lane Group	NBL	NBR	SBR
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	Max
Walk Time (s)	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0
Act Effect Green (s)	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40	0.40
v/c Ratio	0.58	0.33	0.53
Control Delay	12.6	3.0	12.4
Queue Delay	0.0	0.0	0.0
Total Delay	12.6	3.0	12.4
LOS	B	A	B
Approach Delay			
Approach LOS			
Queue Length 50th (m)	24.8	0.0	19.6
Queue Length 95th (m)	38.5	10.0	32.2
Internal Link Dist (m)			
Turn Bay Length (m)			
Base Capacity (vph)	1373	791	1114
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.58	0.33	0.53

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	45
Offset:	0 (0%), Referenced to phase 2:NBL, Start of Green
Natural Cycle:	45
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.58
Intersection Signal Delay:	11.0
Intersection LOS:	B
Intersection Capacity Utilization:	46.8%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 106: Garden Road Terminal & Glenmore Trail



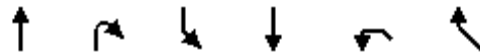
Lanes, Volumes, Timings
114: RR 284 Terminal

2040 Improved
12-01-2020

	↑	↗	↘	↓	↙	↖
Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations	↑↑					↖↖
Traffic Volume (vph)	446	0	0	0	0	931
Future Volume (vph)	446	0	0	0	0	931
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	1.00	1.00	1.00	1.00	0.88
Fr't						0.850
Flt Protected						
Satd. Flow (prot)	3539	0	0	0	0	2787
Flt Permitted						
Satd. Flow (perm)	3539	0	0	0	0	2787
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)						394
Link Speed (k/h)	50			50	50	
Link Distance (m)	61.5			109.5	73.5	
Travel Time (s)	4.4			7.9	5.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	485	0	0	0	0	1012
Shared Lane Traffic (%)						
Lane Group Flow (vph)	485	0	0	0	0	1012
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(m)	0.0			0.0	0.0	
Link Offset(m)	0.0			0.0	0.0	
Crosswalk Width(m)	4.8			4.8	4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)		15	25		25	15
Number of Detectors	2					1
Detector Template	Thru					Right
Leading Detector (m)	10.0					2.0
Trailing Detector (m)	0.0					0.0
Detector 1 Position(m)	0.0					0.0
Detector 1 Size(m)	0.6					2.0
Detector 1 Type	Cl+Ex					Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0					0.0
Detector 1 Queue (s)	0.0					0.0
Detector 1 Delay (s)	0.0					0.0
Detector 2 Position(m)	9.4					
Detector 2 Size(m)	0.6					
Detector 2 Type	Cl+Ex					
Detector 2 Channel						
Detector 2 Extend (s)	0.0					
Turn Type	NA					Perm
Protected Phases	4					
Permitted Phases						2
Detector Phase	4					2
Switch Phase						
Minimum Initial (s)	5.0					5.0

Lanes, Volumes, Timings
114: RR 284 Terminal

2040 Improved
12-01-2020

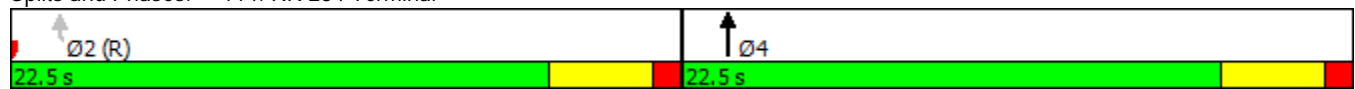


Lane Group	NBT	NBR	SBL	SBT	NWL	NWR
Minimum Split (s)	22.5					22.5
Total Split (s)	22.5					22.5
Total Split (%)	50.0%					50.0%
Maximum Green (s)	18.0					18.0
Yellow Time (s)	3.5					3.5
All-Red Time (s)	1.0					1.0
Lost Time Adjust (s)	0.0					0.0
Total Lost Time (s)	4.5					4.5
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0					3.0
Recall Mode	None					C-Max
Walk Time (s)	7.0					7.0
Flash Dont Walk (s)	11.0					11.0
Pedestrian Calls (#/hr)	0					0
Act Effect Green (s)	11.5					24.5
Actuated g/C Ratio	0.26					0.54
v/c Ratio	0.53					0.60
Control Delay	16.2					6.1
Queue Delay	0.0					0.2
Total Delay	16.2					6.2
LOS	B					A
Approach Delay	16.2				6.2	
Approach LOS	B				A	
Queue Length 50th (m)	18.1					5.7
Queue Length 95th (m)	25.5					28.4
Internal Link Dist (m)	37.5			85.5	49.5	
Turn Bay Length (m)						
Base Capacity (vph)	1415					1695
Starvation Cap Reductn	0					144
Spillback Cap Reductn	0					0
Storage Cap Reductn	0					0
Reduced v/c Ratio	0.34					0.65

Intersection Summary

Area Type: Other
 Cycle Length: 45
 Actuated Cycle Length: 45
 Offset: 0 (0%), Referenced to phase 2:NWR, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 9.5
 Intersection Capacity Utilization 52.4%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 114: RR 284 Terminal



Lanes, Volumes, Timings
115: RR 284 Terminal

2040 Improved
12-01-2020



Lane Group	NBL	NBR	SBR
Lane Configurations			
Traffic Volume (vph)	931	270	315
Future Volume (vph)	931	270	315
Ideal Flow (vphpl)	1900	1900	1900
Lane Util. Factor	0.97	1.00	0.88
Fr _t		0.850	0.850
Fl _t Protected	0.950		
Satd. Flow (prot)	3433	1583	2787
Fl _t Permitted	0.950		
Satd. Flow (perm)	3433	1583	2787
Right Turn on Red		Yes	
Satd. Flow (RTOR)		293	
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Peak Hour Factor	0.92	0.92	0.92
Adj. Flow (vph)	1012	293	342
Shared Lane Traffic (%)			
Lane Group Flow (vph)	1012	293	342
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Right	Right
Median Width(m)			
Link Offset(m)			
Crosswalk Width(m)			
Two way Left Turn Lane			
Headway Factor	1.00	1.00	1.00
Turning Speed (k/h)	25	15	15
Number of Detectors	1	1	1
Detector Template	Left	Right	Right
Leading Detector (m)	2.0	2.0	2.0
Trailing Detector (m)	0.0	0.0	0.0
Detector 1 Position(m)	0.0	0.0	0.0
Detector 1 Size(m)	2.0	2.0	2.0
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel			
Detector 1 Extend (s)	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0
Turn Type	Perm	Perm	Perm
Protected Phases			
Permitted Phases	2	2	3
Detector Phase	2	2	3
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5

Lanes, Volumes, Timings
115: RR 284 Terminal

2040 Improved
12-01-2020

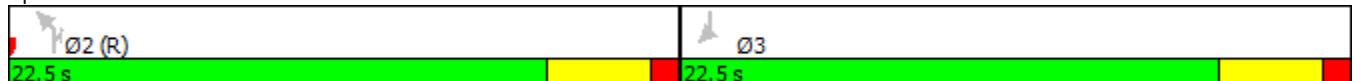


Lane Group	NBL	NBR	SBR
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	C-Max	C-Max	Max
Walk Time (s)	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0
Act Effect Green (s)	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40	0.40
v/c Ratio	0.74	0.36	0.31
Control Delay	15.5	3.0	10.2
Queue Delay	0.0	0.0	0.0
Total Delay	15.5	3.0	10.2
LOS	B	A	B
Approach Delay			
Approach LOS			
Queue Length 50th (m)	34.4	0.0	10.3
Queue Length 95th (m)	52.4	10.6	18.2
Internal Link Dist (m)			
Turn Bay Length (m)			
Base Capacity (vph)	1373	809	1114
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.74	0.36	0.31

Intersection Summary









Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	45
Offset:	0 (0%), Referenced to phase 2:NBL, Start of Green
Natural Cycle:	45
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.74
Intersection Signal Delay:	12.2
Intersection LOS:	B
Intersection Capacity Utilization:	44.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 115: RR 284 Terminal



Lanes, Volumes, Timings
129: RR 283 Terminal

2040 Improved
12-01-2020

						
Lane Group	SBL	SBR	NWL	NWR	NEL	NER
Lane Configurations						
Traffic Volume (vph)	0	0	0	313	559	0
Future Volume (vph)	0	0	0	313	559	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.88	0.97	1.00
Fr't				0.850		
Flt Protected					0.950	
Satd. Flow (prot)	0	0	0	2787	3433	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	0	0	2787	3433	0
Right Turn on Red		Yes		Yes	Yes	Yes
Satd. Flow (RTOR)				260	704	
Link Speed (k/h)	50		50		50	
Link Distance (m)	104.6		79.9		67.2	
Travel Time (s)	7.5		5.8		4.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	340	608	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	340	608	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Right
Median Width(m)	0.0		0.0		7.2	
Link Offset(m)	0.0		0.0		0.0	
Crosswalk Width(m)	4.8		4.8		4.8	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (k/h)	25	15	25	15	25	15
Turn Type				Perm	Prot	
Protected Phases					4	
Permitted Phases				2		
Minimum Split (s)				22.5	22.5	
Total Split (s)				22.5	22.5	
Total Split (%)				50.0%	50.0%	
Maximum Green (s)				18.0	18.0	
Yellow Time (s)				3.5	3.5	
All-Red Time (s)				1.0	1.0	
Lost Time Adjust (s)				0.0	0.0	
Total Lost Time (s)				4.5	4.5	
Lead/Lag						
Lead-Lag Optimize?						
Walk Time (s)				7.0	7.0	
Flash Dont Walk (s)				11.0	11.0	
Pedestrian Calls (#/hr)				0	0	
Act Effect Green (s)				18.0	18.0	
Actuated g/C Ratio				0.40	0.40	
v/c Ratio				0.27	0.34	
Control Delay				1.0	1.1	
Queue Delay				0.0	0.0	
Total Delay				1.0	1.1	

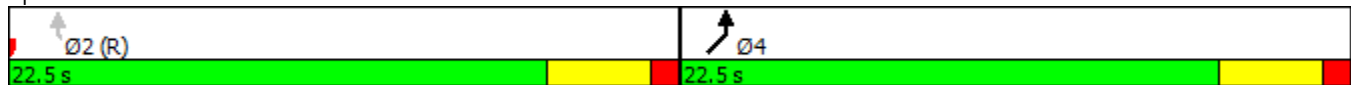


Lane Group	SBL	SBR	NWL	NWR	NEL	NER
LOS				A	A	
Approach Delay			1.0		1.1	
Approach LOS			A		A	
Queue Length 50th (m)				0.0	0.0	
Queue Length 95th (m)				0.0	4.3	
Internal Link Dist (m)	80.6		55.9		43.2	
Turn Bay Length (m)						
Base Capacity (vph)				1270	1795	
Starvation Cap Reductn				0	0	
Spillback Cap Reductn				0	0	
Storage Cap Reductn				0	0	
Reduced v/c Ratio				0.27	0.34	

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	45
Offset:	0 (0%), Referenced to phase 2:NWR, Start of Green
Natural Cycle:	45
Control Type:	Pretimed
Maximum v/c Ratio:	0.34
Intersection Signal Delay:	1.1
Intersection LOS:	A
Intersection Capacity Utilization	45.5%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 129: RR 283 Terminal



Lanes, Volumes, Timings
131: RR 283 Terminal

2040 Improved
12-01-2020



Lane Group	NBL	NBR	SBR
Lane Configurations			
Traffic Volume (vph)	313	191	547
Future Volume (vph)	313	191	547
Ideal Flow (vphpl)	1900	1900	1900
Lane Util. Factor	0.97	1.00	0.88
Fr _t		0.850	0.850
Fl _t Protected	0.950		
Satd. Flow (prot)	3433	1583	2787
Fl _t Permitted	0.950		
Satd. Flow (perm)	3433	1583	2787
Right Turn on Red		Yes	
Satd. Flow (RTOR)		208	
Link Speed (k/h)			
Link Distance (m)			
Travel Time (s)			
Peak Hour Factor	0.92	0.92	0.92
Adj. Flow (vph)	340	208	595
Shared Lane Traffic (%)			
Lane Group Flow (vph)	340	208	595
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Right	Right
Median Width(m)			
Link Offset(m)			
Crosswalk Width(m)			
Two way Left Turn Lane			
Headway Factor	1.00	1.00	1.00
Turning Speed (k/h)	25	15	15
Turn Type	Perm	Perm	Perm
Protected Phases			
Permitted Phases	2	2	3
Minimum Split (s)	22.5	22.5	22.5
Total Split (s)	22.5	22.5	22.5
Total Split (%)	50.0%	50.0%	50.0%
Maximum Green (s)	18.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5
Lead/Lag			
Lead-Lag Optimize?			
Walk Time (s)	7.0	7.0	7.0
Flash Dont Walk (s)	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0
Act Effct Green (s)	18.0	18.0	18.0
Actuated g/C Ratio	0.40	0.40	0.40
v/c Ratio	0.25	0.27	0.53
Control Delay	9.6	2.9	12.5
Queue Delay	0.0	0.0	0.0
Total Delay	9.6	2.9	12.5

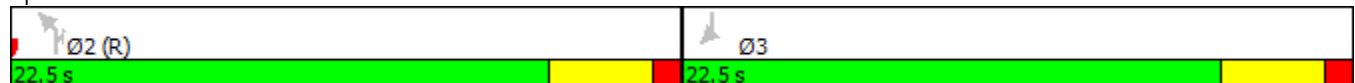


Lane Group	NBL	NBR	SBR
LOS	A	A	B
Approach Delay			
Approach LOS			
Queue Length 50th (m)	9.1	0.0	20.1
Queue Length 95th (m)	15.7	8.9	32.8
Internal Link Dist (m)			
Turn Bay Length (m)			
Base Capacity (vph)	1373	758	1114
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.25	0.27	0.53

Intersection Summary

Area Type:	Other
Cycle Length:	45
Actuated Cycle Length:	45
Offset:	0 (0%), Referenced to phase 2:NBL, Start of Green
Natural Cycle:	45
Control Type:	Pretimed
Maximum v/c Ratio:	0.53
Intersection Signal Delay:	9.9
Intersection LOS:	A
Intersection Capacity Utilization:	35.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 131: RR 283 Terminal



HCM Unsignalized Intersection Capacity Analysis
 93: RR 282 & 61 Avenue

2040 Improved
 12-01-2020



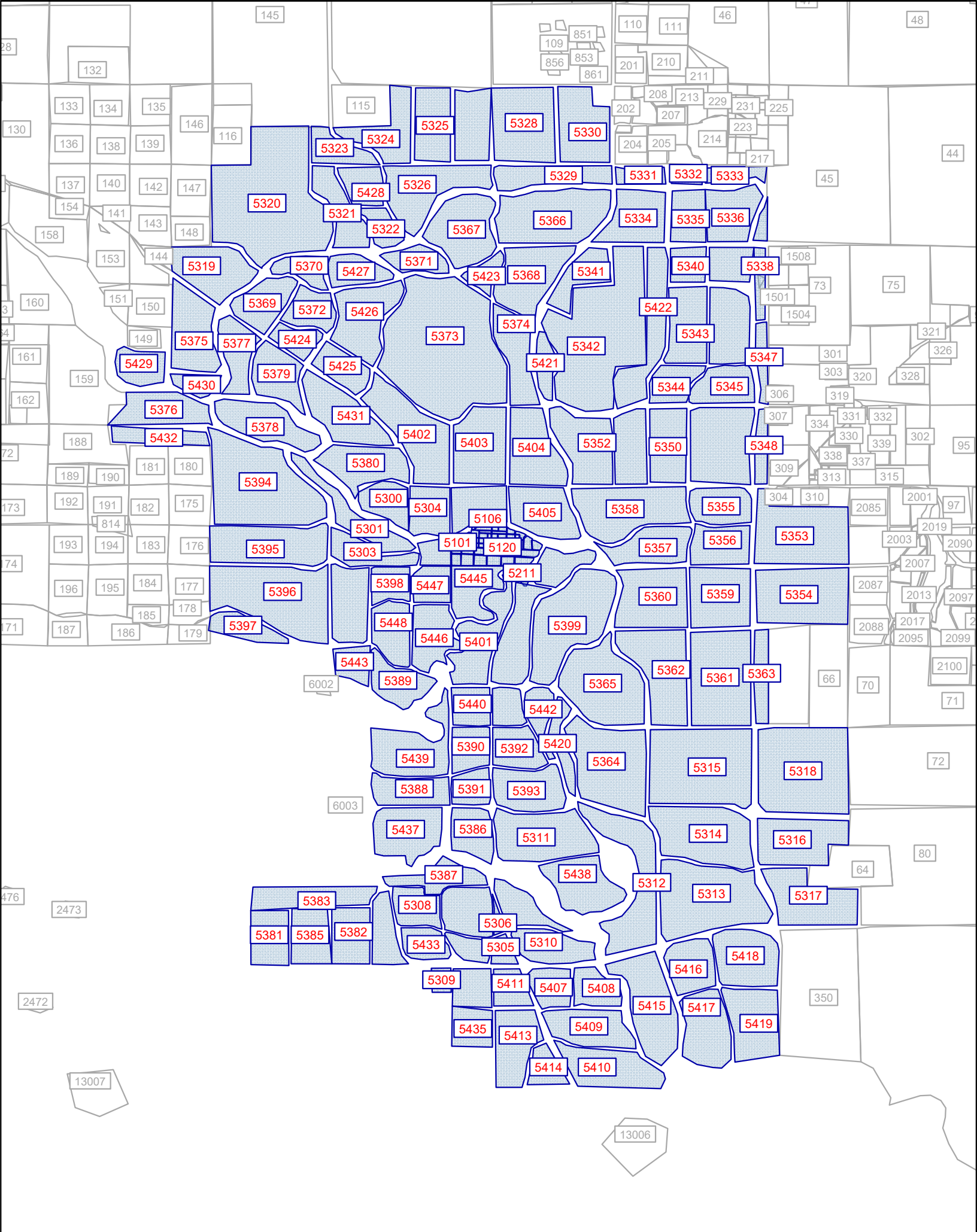
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	72	221	190	329	379	43
Future Volume (vph)	72	221	190	329	379	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	78	240	207	358	412	47

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total (vph)	78	240	207	358	459
Volume Left (vph)	78	0	207	0	0
Volume Right (vph)	0	240	0	0	47
Hadj (s)	0.53	-0.67	0.53	0.03	-0.03
Departure Headway (s)	7.7	6.5	6.8	6.3	6.1
Degree Utilization, x	0.17	0.43	0.39	0.63	0.78
Capacity (veh/h)	441	523	516	552	575
Control Delay (s)	11.0	13.1	12.9	18.0	27.0
Approach Delay (s)	12.6		16.1		27.0
Approach LOS	B		C		D

Intersection Summary					
Delay			19.0		
Level of Service			C		
Intersection Capacity Utilization			47.1%	ICU Level of Service	A
Analysis Period (min)			15		



APPENDIX D: CITY OF CALGARY MODEL ASSUMPTIONS

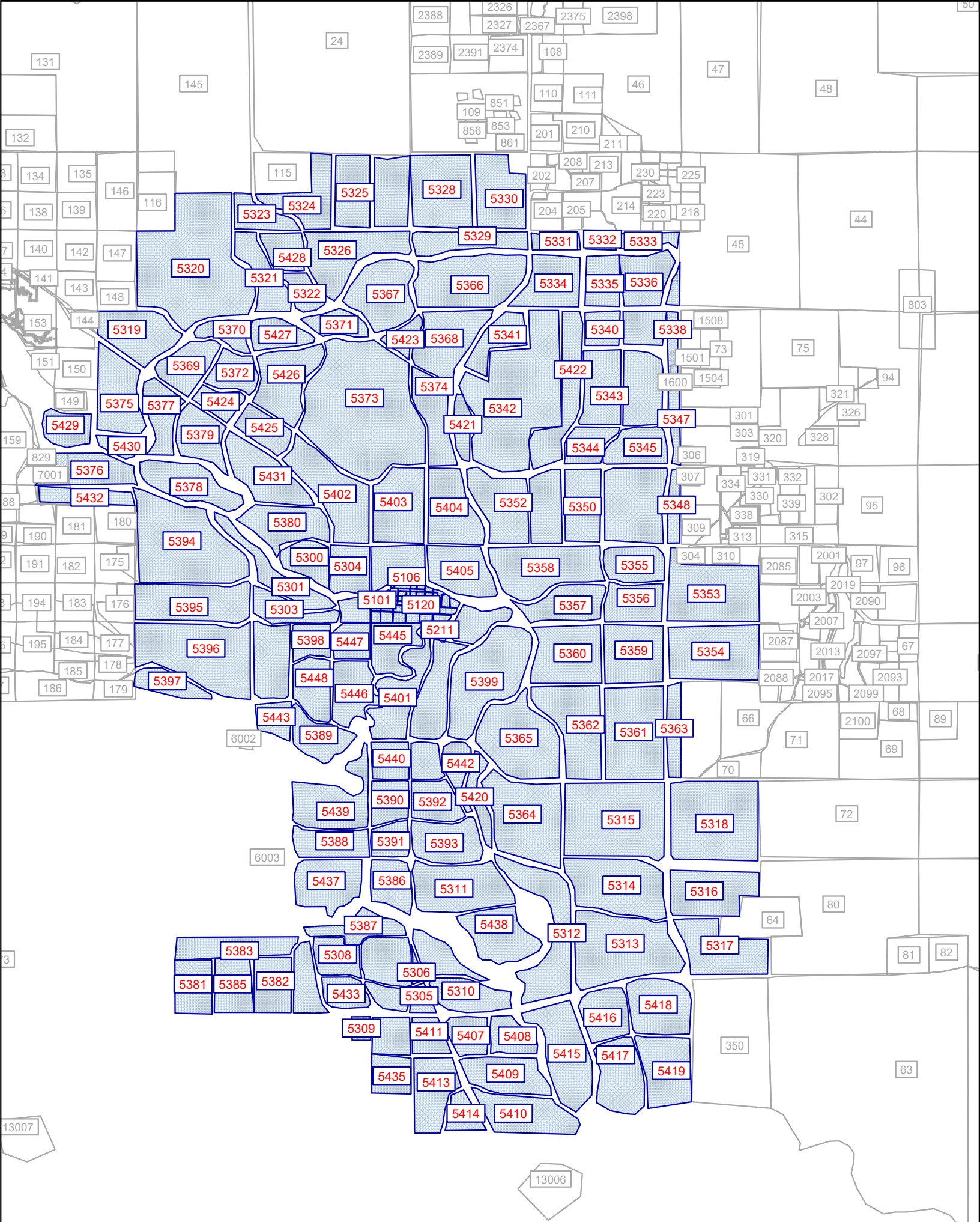


List (Zones)

Number: 1	No	Code	Name	Type	POP_OKOTOKS	POPULATION	Agri_Base	MINING	INDUSTRIAL	EDUCATI	GOVERN	HEALTH	OTHER SERVICE	PROFESSIONAL	RETAIL TRADE	TRANSPOR	WAR	WHOLESALE	ENTERTAINMENT	IX	XI	MethodConn	Shares	SharePrTDest	SharePrTOrig
1	5101		calgary	0	0	0	0	26	93	15	213	28	96	125	72	0	0	0	67			Default		1	1
2	5102			0	2503		0	186	191	725	148	291	405	1009	200	79	0	0	116			Default		1	1
3	5103			0	1268		11	243	103	0	41	132	274	962	6	0	0	0	43			Default		1	1
4	5104			0	2348		7	1683	603	99	163	275	650	2087	112	25	68	0	335			Default		1	1
5	5105			0	2444		0	623	281	148	37	201	596	1806	57	223	0	0	184			Default		1	1
6	5106			0	0		0	0	0	0	0	0	0	1	0	0	0	0	0			Default		1	1
7	5107			0	230		0	855	175	0	99	0	225	723	18	0	0	0	162			Default		1	1
8	5108			0	696		0	1224	507	0	152	143	741	1792	111	25	73	0	167			Default		1	1
9	5109			0	263		19	1326	247	113	810	227	1187	2174	130	74	0	0	441			Default		1	1
10	5110			0	0		0	2280	526	19	202	95	527	1617	39	68	0	0	114			Default		1	1
11	5111			0	0		0	120	396	0	0	0	182	380	21	40	0	0	113			Default		1	1
12	5112			0	0		0	423	504	0	23	4	323	491	239	0	115	0	7			Default		1	1
13	5113			0	510		0	1238	200	45	0	31	283	729	52	24	99	0	175			Default		1	1
14	5114			0	1903		0	617	358	20	364	102	728	1220	9	54	0	0	287			Default		1	1
15	5115			0	1557		0	662	179	0	0	83	274	786	131	59	0	0	170			Default		1	1
16	5116			0	279		0	1138	251	50	69	161	353	2242	58	66	225	0	521			Default		1	1
17	5117			0	0		0	1903	944	65	144	152	895	1842	98	130	51	0	430			Default		1	1
18	5118			0	0		6	1935	455	15	539	181	1274	3263	763	30	126	0	117			Default		1	1
19	5119			0	0		0	3088	447	14	34	318	1080	4005	231	1934	0	0	435			Default		1	1
20	5120			0	102		2	1643	122	33	37	89	838	2182	147	243	0	0	958			Default		1	1
21	5121			0	0		0	545	369	84	110	118	807	2777	660	90	0	0	550			Default		1	1
22	5122			0	0		49	5396	1440	38	172	106	1571	4929	159	353	32	0	223			Default		1	1
23	5123			0	0		0	3936	361	78	186	142	789	1557	55	70	93	0	630			Default		1	1
24	5124			0	400		0	29	31	18	1557	155	87	519	199	70	49	0	208			Default		1	1
25	5125			0	742		0	86	467	101	433	87	570	557	90	143	0	0	1334			Default		1	1
26	5126			0	150		0	61	229	696	3490	155	466	510	72	228	0	0	170			Default		1	1
27	5127			0	784		0	41	36	0	0	139	25	58	0	0	0	0	14			Default		1	1
28	5128			0	1363		0	67	64	0	13	0	294	203	57	39	0	0	57			Default		1	1
29	5129			0	0		0	0	0	20	0	0	20	0	0	0	0	0	0			Default		1	1
30	5130			0	320		0	116	1134	921	117	0	711	959	50	0	0	0	133			Default		1	1
31	5131			0	7		0	38	0	0	24	200	79	71	22	62	0	0	0			Default		1	1
32	5201			0	599		0	150	99	0	0	83	343	543	408	0	0	0	33			Default		1	1
33	5202			0	3810		0	35	134	27	11	32	114	200	191	6	0	0	526			Default		1	1
34	5203			0	3354		0	26	71	391	36	197	352	358	175	0	0	0	128			Default		1	1
35	5204			0	1603		0	488	1012	48	143	173	333	962	100	0	0	0	63			Default		1	1
36	5205			0	466		0	207	186	22	15	295	502	1014	485	132	123	0	678			Default		1	1
37	5206			0	4526		0	98	188	0	0	404	295	659	289	0	0	0	478			Default		1	1
38	5207			0	3023		0	80	515	52	103	901	415	308	76	34	0	0	440			Default		1	1
39	5208			0	345		2	510	583	0	63	120	1515	2783	142	0	139	0	385			Default		1	1
40	5209			0	1803		0	306	1109	36	60	205	443	1527	73	3	68	0	63			Default		1	1
41	5210			0	2878		0	242	203	114	81	669	410	590	123	0	0	0	869			Default		1	1
42	5211			0	0		13	89	16	3	0	0	176	72	140	0	0	0	1251			Default		1	1
43	5212			0	2		0	30	37	23	0	12	45	45	13	34	0	0	403			Default		1	1
44	5213			0	609		12	114	36	13	268	74	231	971	12	98	0	0	111			Default		1	1
45	5300			0	6449		7	110	452	509	70	5074	348	867	122	154	60	0	296			Default		1	1
46	5301			0	7729		0	49	308	199	52	273	361	459	222	58	0	0	317			Default		1	1
47	5302			0	4695		11	360	779	45	0	353	890	1920	506	449	217	0	252			Default		1	1
48	5303			0	10172		0	52	681	405	133	1054	586	626	1124	76	0	0	607			Default		1	1
49	5304			0	10202		5	277	781	450	196	1414	1100	1260	1279	147	26	0	763			Default		1	1
50	5305			0	3107		0	0	43	82	35	51	181	128	1574	30	25	0	435			Default		1	1
51	5306			0	213		0	10	0	0	0	44	163	147	757	40	0	0	429			Default		1	1
52	5307			0	15859		0	7	246	280	0	151	351	206	443	41	0	0	192			Default		1	1
53	5308			0	15375		0	242	119	0	115	0	145	252	96	94	0	0	53			Default		1	1
54	5309			0	0		0	2	10	6	2	9	13	10	11	1	1	0	8			Default		1	1
55	5310			0	9094		15	455	430	470	0	955	140	1259	19	30	0	0	14			Default		1	1
56	5311			0	17352		130	75	648	442	0	519	482	513	377	267	40	0	531			Default		1	1
57	5312			0	22628		0	0	341	370	0	210	213	597	389	64	55	0	346			Default		1	1
58	5313			0	38939		4	17	624	254	14	471	550	641	1272	114	8	0	532			Default		1	1
59	5314			0	0		2	247	1590	35	155	78	483	405	610	521	198	0	478			Default		1	1
60	5315			0	6		9	785	5064	14	71	45	740	681	508	1526	472	0	235			Default		1	1
61	5316			0	19		39	9	40	1	1	3	26	14	4	39	0	0	3			Default		1	1
62	5317			0	1210		0	16	18	6	1	59	44	23	15	3	0	0	8			Default		1	1
63	5318			0	126		96	85	877	1	1	12	118	116	5	249	100	0	7			Default		1	1
64	5319			0	19623		41	0	249	62	27	105	201	269	53	51	14	0	22			Each single OD pair		1	1
65	5320			0	7		71	53	224	98	484	406	153	130	602	197	125	0	38			Default		1	1
66	5321			0	6249		5	12	86	36	23	194	55	60	962	33	244	0	108			Default		1	1
67	5322			0	5961		0	0	222	26	0	163	119	0	8	0	0	0	0			Default		1	1
68	5323			0	1566		8	1	104	17	19	56	101	20	109	12	6	0	5			Default		1	1
69	5324			0	869		0	10	29	9	7	26	36	25	30	3	3	0	26			Default		1	1
70	5325			0	16		0	10	13	4	4	4	9	4	39	1	1	0	4			Default		1	1
71	5326			0	12738		0	31	195	22	18	250	103	89	133	8	7	0	52			Default		1	

List (Zones)

Number: 1	No	Code	Name	Type	POP_OKOTOKS	POPULATION	Agri Base	MINING	INDUSTRIAL	EDUCATI	GOVERN	HEALTH	OTHER SERVICE	PROFESSIONAL	RETAIL TRADE	TRANSP	WAR	WHOLESALE	ENTERTAINMENT	IX	XI	Method	ConnShares	SharePrTDest	SharePrOrig
102	5357			0	17540		0	86	1506	707	95	916	711	872	777	160	0	441			Default		1	1	
103	5358			0	15440		83	539	4265	993	355	1354	3574	3521	3005	1721	1023	2035			Default		1	1	
104	5359			0	0		5	11	788	0	77	56	318	203	357	142	110	72			Default		1	1	
105	5360			0	23812		13	97	1577	340	32	575	588	640	913	407	290	389			Default		1	1	
106	5361			0	4		14	184	2056	0	0	32	375	531	240	655	514	256			Default		1	1	
107	5362			0	4		55	889	11013	17	30	157	1518	1280	1150	2718	1508	1083			Default		1	1	
108	5363			0	5		0	71	258	0	0	0	19	17	87	141	0	7			Default		1	1	
109	5364			0	16295		42	1108	3840	166	52	294	1142	3604	1118	303	164	766			Default		1	1	
110	5365			0	8573		67	421	4732	280	113	221	885	804	603	1187	436	391			Default		1	1	
111	5366			0	19359		0	68	471	240	94	278	444	375	605	143	149	592			Each single OD pair		1	1	
112	5367			0	27371		0	9	255	91	5	295	250	368	231	0	58	252			Default		1	1	
113	5368			0	7434		0	121	405	128	29	248	858	277	391	29	0	424			Default		1	1	
114	5369			0	11142		0	44	222	217	36	350	716	707	1910	104	95	1777			Default		1	1	
115	5370			0	9957		0	4	301	65	0	7	46	233	18	55	0	31			Default		1	1	
116	5371			0	9547		0	0	154	143	25	61	20	70	78	0	0	30			Default		1	1	
117	5372			0	9746		0	25	292	174	0	62	124	270	96	0	0	123			Default		1	1	
118	5373			0	35526		10	85	739	611	104	340	811	676	667	104	132	742			Default		1	1	
119	5374			0	14444		6	31	873	175	26	471	495	357	769	156	109	587			Default		1	1	
120	5375			0	19465		35	8	255	307	13	65	227	188	184	0	12	196			Each single OD pair		1	1	
121	5376			0	5580		1	2	46	3	31	70	172	143	23	24	0	109			Default		1	1	
122	5377			0	8476		0	33	133	156	101	201	55	229	72	0	0	33			Default		1	1	
123	5378			0	13218		4	10	859	470	137	497	539	253	432	67	37	551			Default		1	1	
124	5379			0	8921		0	23	175	42	22	39	147	125	101	25	0	60			Default		1	1	
125	5380			0	11084		35	179	1427	6470	282	10288	1090	2740	459	51	117	1268			Default		1	1	
126	5381			0	4		3	0	0	0	0	0	0	0	0	0	0	0			Default		1	1	
127	5382			0	90		7	2	2	0	0	4	0	6	0	0	0	0			Default		1	1	
128	5383			0	593		45	9	0	0	0	21	0	0	0	0	8	18			Default		1	1	
129	5384			0	454		0	11	4	0	0	25	0	12	0	0	6	14			Default		1	1	
130	5385			0	13		0	0	0	0	0	0	0	0	0	0	0	0			Default		1	1	
131	5386			0	7954		0	22	222	263	18	75	157	275	95	19	0	293			Default		1	1	
132	5387			0	7712		2	26	67	36	39	268	178	75	68	0	44	104			Default		1	1	
133	5388			0	12413		0	0	421	260	51	79	277	234	142	0	76	176			Default		1	1	
134	5389			0	6852		0	3	254	350	23	49	219	180	146	37	47	86			Default		1	1	
135	5390			0	8093		23	38	142	560	85	245	851	641	403	152	34	848			Default		1	1	
136	5391			0	6165		98	283	418	152	443	1965	487	1806	472	251	49	349			Default		1	1	
137	5392			0	10797		0	133	275	458	232	609	672	863	1450	31	80	690			Default		1	1	
138	5393			0	8081		0	73	275	241	73	434	570	635	3251	42	40	1421			Default		1	1	
139	5394			0	24387		0	14	490	439	33	172	480	515	204	0	0	366			Each single OD pair		1	1	
140	5395			0	17188		0	24	308	353	38	324	379	413	411	0	0	149			Each single OD pair		1	1	
141	5396			0	24564		9	123	318	385	16	491	879	749	2137	7	148	1172			Default		1	1	
142	5397			0	4435		0	22	23	0	0	148	0	92	19	0	0	30			Default		1	1	
143	5398			0	8654		0	61	179	396	99	201	330	256	445	109	0	586			Default		1	1	
144	5399			0	1426		7	531	8291	460	266	207	1865	2312	1799	1500	1893	999			Default		1	1	
145	5400			0	7231		29	119	1169	185	402	159	910	972	776	165	275	995			Default		1	1	
146	5401			0	13346		37	169	548	403	91	373	1202	966	3788	123	0	964			Default		1	1	
147	5402			0	20927		84	54	212	1123	80	653	964	943	1957	75	171	998			Default		1	1	
148	5403			0	18982		0	57	609	785	150	939	1034	1273	587	291	25	758			Default		1	1	
149	5404			0	9105		15	262	2518	440	827	584	1260	1213	1359	1950	376	821			Default		1	1	
150	5405			0	17141		6	325	1086	734	169	1708	1647	2189	542	197	302	1235			Default		1	1	
151	5406			0	11730		12	141	1281	3934	102	972	969	1770	755	108	33	1359			Default		1	1	
152	5407			0	9200		0	22	133	147	0	81	101	93	53	20	0	149			Default		1	1	
153	5408			0	3336		0	0	33	0	0	0	0	3	107	0	0	0			Default		1	1	
154	5409			0	5205		24	2	225	0	0	8	35	89	140	1	0	48			Default		1	1	
155	5410			0	4297		27	3	92	26	1	13	66	64	76	2	0	56			Default		1	1	
156	5411			0	2146		107	1	127	15	0	6	28	42	51	1	0	36			Default		1	1	
157	5412			0	6483		15	1	125	28	0	3	12	51	32	1	0	41			Default		1	1	
158	5413			0	3330		21	1	70	19	0	7	38	79	57	55	0	41			Default		1	1	
159	5414			0	42		0	0	0	0	0	0	0	0	1	0	0	0			Default		1	1	
160	5415			0	16944		0	3	305	36	0	97	265	253	125	34	29	134			Default		1	1	
161	5416			0	12200		0	0	304	67	0	65	71	150	107	61	221	5			Default		1	1	
162	5417			0	6789		0	0	1387	10	0	46	82	830	192	46	41	30			Default		1	1	
163	5418			0	8431		0	0	216	5	0	88	41	346	25	23	21	16			Default		1	1	
164	5419			0	2705		0	0	163	5	0	19	34	78	21	20	17	13			Default		1	1	
165	5420			0	0		0	22	380	0	0	37	102	90	367	232	46	0			Default		1	1	
166	5421			0	0		77	181	1552	6	339	59	1480	1663	1259	869	172	161			Default		1	1	
167	5422			0	62		0	21	631	9	0	111	203	114	11	146	168	19			Default		1	1	
168	5423			0	3762		11	16	429	56	11	28	230	139	233	51	35	345			Default		1	1	
169	5424			0	7936		25	12	159	210	0	251	237	131	57	0	34	130			Default		1	1	
170	5425			0	9433		0	65	206	294	39	405	425	817	703	122	0	795			Default		1	1	
171	5426			0	15878		0	14	37	277	0	218	170	150	410	42	0	313			Default		1	1	
172	5427			0	8053		0	20	84	14	0	39	61	258	59	35	130	139			Default		1	1	
173	5428			0	5935		6	1	86	54	17	56	94	98	202	42	54	35			Default		1	1	
174	5429			0	843		3	0	13	6	7														

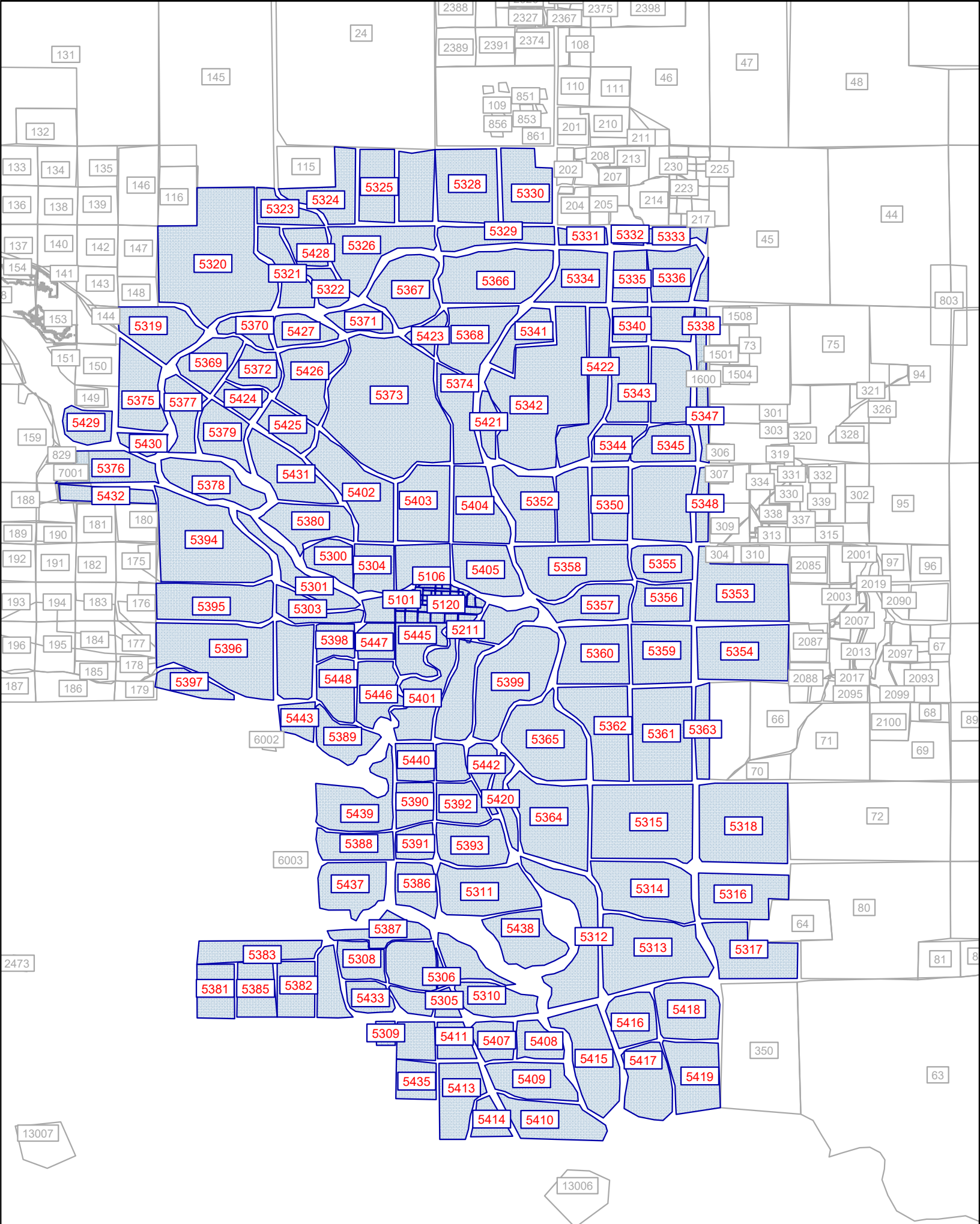


List (Zones)

Number: 1	No	Code	Name	TypeNo	POP OKOTO	POPULATION	Agri Base	MINING	INDUSTRIAL	EDUCATION	GOVERNMENT	HEALTH	CARE	OTHER	SERVICES	PROFESSION	RETAIL	TRADE	TRANSPORT	WHOLESALE	ENTERTAINMENT	IX	XI	Inbound	Outbound
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2	5102			0	2906		0	187	192	731	149	294		409	1019	201		80	0	0	117		446.82	573.67	
3	5103			0	1283		11	246	104	0	41	133		277	972	6		0	0	0	43		173.03	299.50	
4	5104			0	2381		7	1742	624	103	169	285		674	2161	116		26	71	0	347		513.97	865.94	
5	5105			0	2646		0	629	284	149	37	202		602	1823	58		224	0	0	185		408.90	668.80	
6	5106			0	0		0	0	0	0	0	0		0	3	0		0	0	0	0		0.09	0.47	
7	5107			0	300		0	900	186	0	112	0		231	775	18		0	0	0	167		121.03	267.09	
8	5108			0	768		0	1278	529	0	158	149		773	1871	117		26	77	0	174		329.05	680.83	
9	5109			0	323		20	1397	260	119	854	239		1251	2292	137		78	0	0	465		326.25	827.45	
10	5110			0	0		0	2302	530	19	203	96		531	1632	39		69	0	0	115		213.89	552.14	
11	5111			0	0		0	121	400	0	0	0		184	384	21		40	0	0	114		116.24	211.64	
12	5112			0	0		0	455	542	0	24	4		348	527	257		0	123	0	8		250.28	396.92	
13	5113			0	502		0	1334	215	48	0	33		305	786	56		26	107	0	188		177.88	328.21	
14	5114			0	2031		0	634	380	23	368	113		779	1284	10		55	0	0	314		349.35	595.18	
15	5115			0	1715		0	693	190	0	0	87		291	831	139		66	0	0	184		296.50	413.21	
16	5116			0	688		0	1191	257	53	72	167		367	2332	59		67	235	0	529		313.80	670.07	
17	5117			0	0		0	1963	974	67	148	156		924	1901	101		134	52	0	443		390.44	822.37	
18	5118			0	0		6	1995	468	15	556	187		1313	3364	787		31	130	0	121		610.61	1271.65	
19	5119			0	0		0	3116	451	14	34	321		1090	4041	233		1952	0	0	439		529.64	1325.21	
20	5120			0	103		2	1658	123	33	37	90		846	2202	148		245	0	0	967		323.95	730.94	
21	5121			0	0		0	598	405	92	121	130		887	3051	726		98	0	0	604		589.12	1122.65	
22	5122			0	0		50	5559	1483	39	177	110		1619	5079	164		364	33	0	229		622.13	1618.34	
23	5123			0	0		0	4038	372	82	193	146		818	1613	56		71	95	0	643		282.38	659.85	
24	5124			0	455		0	30	33	19	1644	163		92	548	210		74	52	0	219		227.23	433.92	
25	5125			0	781		0	91	496	107	460	93		606	591	96		152	0	0	1417		424.96	621.85	
26	5126			0	151		0	61	231	703	3522	156		470	514	72		230	0	0	171		237.42	651.36	
27	5127			0	1255		0	45	39	0	0	152		28	64	0		0	0	0	15		119.71	98.40	
28	5128			0	2196		0	76	72	0	15	0		333	230	65		44	0	0	65		240.83	256.67	
29	5129			0	0		0	0	0	20	0	0		20	0	0		0	0	0	0		0.85	2.70	
30	5130			0	424		0	117	1145	929	118	0		717	968	50		0	0	0	134		354.04	619.85	
31	5131			0	7		0	44	0	0	28	232		92	82	26		72	0	0	0		33.18	52.31	
32	5201			0	948		0	163	107	0	0	90		373	590	443		0	0	0	36		319.93	421.80	
33	5202			0	4077		0	38	145	29	12	35		124	216	206		7	0	0	569		521.57	479.53	
34	5203			0	3787		0	27	73	403	37	203		363	369	181		0	0	0	132		447.57	443.21	
35	5204			0	1878		0	513	1061	50	149	181		349	1009	104		0	0	0	67		454.61	651.49	
36	5205			0	663		0	213	192	23	15	303		517	1045	500		136	127	0	698		467.71	662.84	
37	5206			0	4721		0	102	197	0	0	423		309	690	302		0	0	0	500		652.41	664.29	
38	5207			0	3547		0	81	520	52	104	910		311	419	77		34	0	0	444		538.20	550.52	
39	5208			0	452		2	541	618	0	67	127		1607	2951	151		0	147	0	408		411.66	971.16	
40	5209			0	1965		0	318	1152	37	63	213		461	1587	76		3	71	0	66		492.02	765.20	
41	5210			0	3304		0	248	207	117	82	686		420	605	127		0	0	0	923		536.74	582.86	
42	5211			0	0		13	90	0	16	3	0		177	73	141		0	0	0	237.71		237.71	280.99	
43	5212			0	2		0	30	37	23	0	12		45	45	13		34	0	0	408		68.09	85.37	
44	5213			0	1162		13	124	39	14	292	80		253	1059	13		106	0	0	122		174.07	335.20	
45	5300			0	6674		11	207	810	771	125	12043		508	1629	191		229	91	0	361		541.58	1370.07	
46	5301			0	8794		0	45	317	203	64	277		372	479	189		59	0	0	284		920.11	827.42	
47	5302			0	5391		15	457	975	51	0	434		1109	2391	671		707	269	0	291		122.61	1508.30	
48	5303			0	13622		0	63	827	503	165	1359		765	830	1611		103	0	0	830		157.55	2078.03	
49	5304			0	11930		2	278	974	585	221	1658		1251	1396	1604		152	8	0	962		114.70	2202.82	
50	5305			0	3843		0	0	56	89	38	53		187	154	1692		32	26	0	480		115.47	1110.19	
51	5306			0	586		0	12	0	0	0	52		190	172	884		47	0	0	501		500.19	551.02	
52	5307			0	15912		0	8	264	318	0	162		392	230	480		42	0	0	208		577.18	1281.33	
53	5308			0	15420		0	297	297	153	0	150		311	311	104		109	0	0	54		363.44	1065.67	
54	5309			0	0		0	6	20	7	5	18		25	18	21		2	2	0	18		17.52	24.01	
55	5310			0	9119		18	540	504	531	0	1117		158	1489	20		31	0	0	15		952.21	945.45	
56	5311			0	18053		146	83	750	543	0	595		548	589	425		279	46	0	582		920.33	1669.77	
57	5312			0	22432		0	396	406	0	0	195		224	594	246		19	75	0	219		037.34	1615.23	
58	5313			0	40630		4	37	720	295	6	647		651	768	1605		150	5	750	0	199.14	3443.87		
59	5314			0	0		5	307	1682	51	256	97		482	625	623		396	286	0	413		724.89	1017.44	
60	5315			0	10		10	1246	5982	14	65	67		934	796	547		2076	541	0	100		598.36	2316.00	
61	5316			0	11		108	3	12	0	0	1		8	4	1		12	0	0	1		5.41	9.82	
62	5317			0	3116		0	6	36	11	0	33		43	34	28		7	2	0	16		273.08	207.69	
63	5318			0	118		23	40	1625	0	0	0		200	625	1125		250	77	0	5		840.80	1081.23	
64	5319			0	19661		12	0	337	129	54	153		386	313	98		139	4	0	7		705.13	1330.69	
65	5320			0	11		98	145	423	46	461	498		103	239	736		371	125	0	56		482.29	615.14	
66	5321			0	9627		13	6	122	55	43	486		91	74	1012		30	250	0	114		290.62	1099.39	
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68	5323			0	4286		13	2	97	28	31	69		75	33	110		20	10	9	0		416.80	333.80	
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70	5325																								

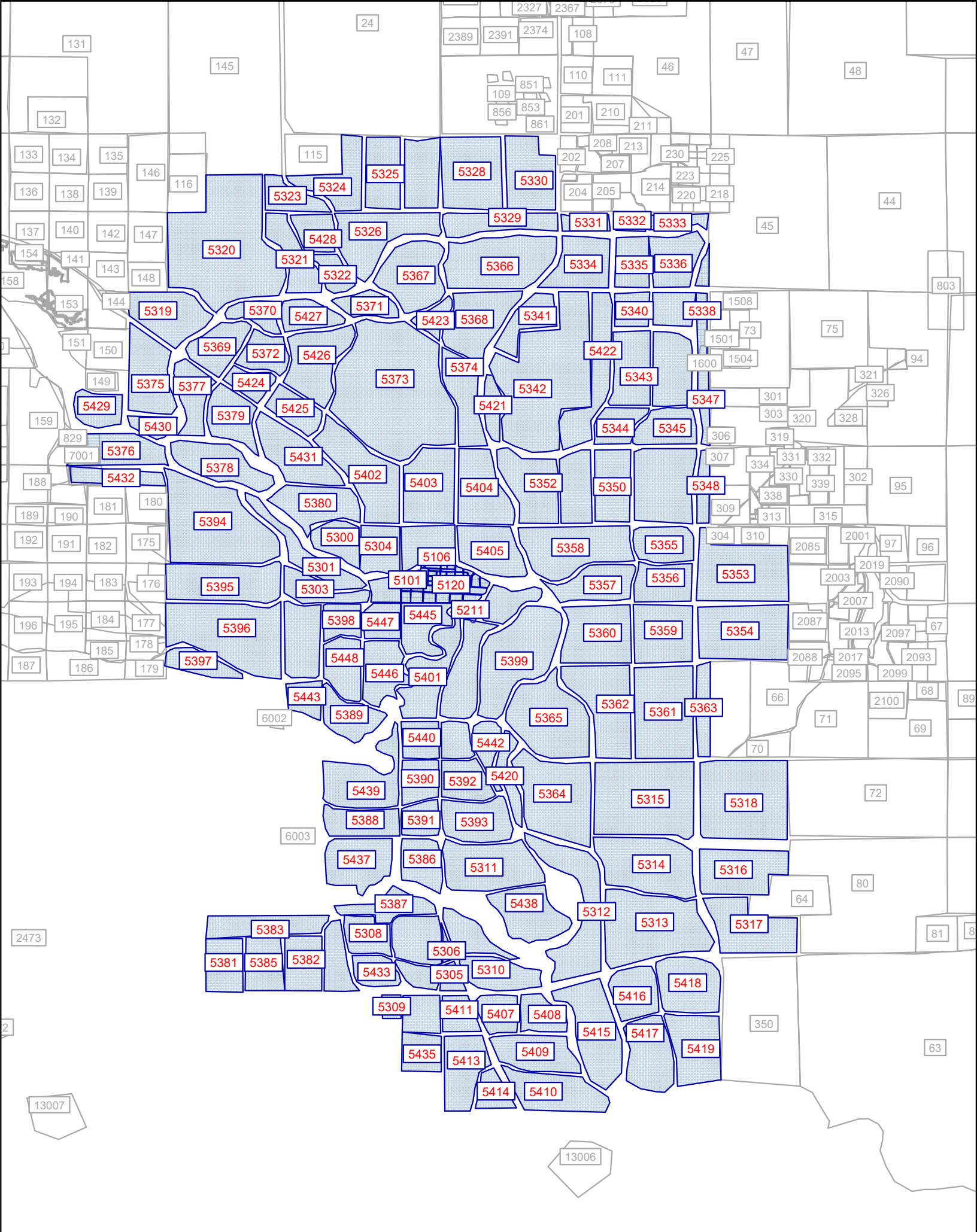
List (Zones)

Number: 1	No	Code	Name	TypeNo	POP	OKOTO	POPULATION	Agri Base	MINING	INDUSTRIAL	EDUCATION	GOVERNMENT	HEALTH	CAF	OTHER	SER	PROFESSION	RETAIL	TRA	TRANSP	W	WHOLESALE	ENTERTAINM	IX	XI	Inbound	Outbound
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104	5359			0	0			2	11	603	0	80	55		265	169	140	143			72	48			209.50	309.46	
105	5360			0	24179			14	44	1350	400	38	623		729	497	1119	335			305	481			827.32	2488.52	
106	5361			0	4			14	197	2744	0	0	32		484	663	288	708			554	367			812.30	1167.64	
107	5362			0	4			72	1088	12605	21	29	177		1627	1471	1300	3061			1794	1255			515.37	4881.17	
108	5363			0	2			0	168	647	0	0	0		53	47	39	302			0	19			162.12	234.37	
109	5364			0	19778			60	1525	4639	183	70	368		1361	4573	1376	386			177	854			348.70	3940.34	
110	5365			0	10113			93	319	4640	316	149	225		942	859	758	1125			282	443			210.07	2548.70	
111	5366			0	19367			0	153	651	227	118	342		553	479	868	214			216	705			196.02	1915.77	
112	5367			0	27535			0	3	308	150	2	243		324	478	288	0			77	357			455.53	1895.32	
113	5368			0	7295			0	106	664	178	14	417		1748	379	404	23			0	480			008.23	1077.55	
114	5369			0	11654			0	69	264	199	40	479		881	949	2226	116			110	2084			266.38	2263.97	
115	5370			0	9820			0	12	369	94	0	19		43	222	28	84			0	86			888.64	710.36	
116	5371			0	9408			0	0	210	168	29	71		24	104	91	0			0	48			844.38	646.94	
117	5372			0	9773			0	17	271	191	0	68		78	346	107	0			0	100			906.06	737.97	
118	5373			0	35884			10	91	866	706	106	397		905	803	853	108			117	832			564.37	2959.27	
119	5374			0	14590			17	46	1257	153	27	454		596	403	870	213			166	752			937.18	1793.91	
120	5375			0	19483			96	8	277	345	4	80		264	213	174	0			32	233			729.64	1329.12	
121	5376			0	5956			3	3	68	8	42	83		222	175	33	28			1	164			537.37	442.33	
122	5377			0	8549			0	41	154	153	172	219		55	271	59	0			0	10			763.05	613.52	
123	5378			0	14836			10	11	1061	557	78	582		689	303	711	92			39	730			844.75	1668.64	
124	5379			0	8976			0	7	225	78	55	56		224	206	211	60			0	141			883.30	736.82	
125	5380			0	13517			28	131	1062	6672	158	6178		1055	1971	479	19			76	1496			225.24	2202.30	
126	5381			0	3			1	0	0	0	0	0		0	0	0	0			0	0			0.24	0.19	
127	5382			0	208			19	6	6	0	0	12		0	17	0	0			0	0			18.97	16.51	
128	5383			0	1613			14	24	0	0	0	57		0	0	0	0			21	50			139.70	99.70	
129	5384			0	1237			0	30	10	0	0	68		1	32	0	0			16	39			111.33	84.71	
130	5385			0	12			1	0	0	0	0	0		0	0	0	0			0	0.69			0.96	0.69	
131	5386			0	8196			0	25	251	287	21	83		169	288	97	20			0	303			802.07	675.95	
132	5387			0	8337			1	35	74	39	45	321		196	86	67	0			54	128			751.81	578.57	
133	5388			0	12750			0	0	462	287	60	85		318	254	150	0			82	184			221.07	1008.06	
134	5389			0	7016			0	3	300	382	34	55		246	183	156	101			48	116			728.59	634.85	
135	5390			0	8566			27	42	152	601	90	286		985	727	474	172			35	1010			121.02	1131.52	
136	5391			0	6903			109	307	461	171	479	2144		529	1980	510	255			53	380			116.83	1288.77	
137	5392			0	11153			0	152	305	545	264	664		767	983	1664	36			86	792			857.84	1852.51	
138	5393			0	9315			0	83	289	258	77	477		609	657	3630	43			41	1478			590.66	2615.66	
139	5394			0	26096			0	18	505	545	39	192		532	548	218	0			0	349			350.49	1869.45	
140	5395			0	18261			0	26	342	406	47	371		414	466	462	0			0	167			783.10	1462.03	
141	5396			0	27072			13	152	387	314	17	631		1081	921	2579	4			142	1502			586.36	3222.90	
142	5397			0	4387			0	23	24	0	0	151		0	94	20	0			0	31			376.77	279.73	
143	5398			0	9073			0	69	229	442	118	242		414	357	533	129			0	660			124.80	1030.06	
144	5399			0	1610			7	553	8666	468	260	233		1959	2379	2016	1650			1973	1075			174.31	4343.19	
145	5400			0	10098			39	151	938	211	482	228		1026	1133	1032	134			252	1211			681.14	1805.78	
146	5401			0	15240			40	303	615	446	113	413		1326	1076	4391	136			0	1079			428.67	3475.60	
147	5402			0	24585			104	58	241	1266	85	717		1049	1001	2203	78			175	851			176.40	2871.21	
148	5403			0	20331			0	57	644	939	165	918		1164	1486	705	312			26	920			309.41	2178.16	
149	5404			0	10282			15	298	2752	462	870	825		1392	1254	1443	2087			414	997			370.75	2791.47	
150	5405			0	19408			6	338	1172	865	183	1786		1764	1931	588	236			284	1222			414.70	2424.01	
151	5406			0	12973			18	235	1686	4939	101	1573		1312	2709	1001	132			92	1730			307.65	2595.28	
152	5407			0	9225			0	21	81	183	0	75		111	129	57	19			0	174			810.06	618.74	
153	5408			0	3536			0	0	92	0	0	0		9	181	0	0			0	0			376.18	301.24	
154	5409			0	10785			64	5	446	60	0	22		95	156	276	4			0	129			083.66	885.37	
155	5410			0	11203			73	7	245	69	0	29		138	169	201	6			0	147			051.14	833.75	
156	5411			0	5872			66	2	156	35	0	12		60	92	112	2			0	80			559.96	447.82	
157	5412			0	6844			19	0	276	58	0	1		4	96	33	0			0	73			623.72	488.52	
158	5413			0	9125			54	4	180	50	0	18		95	131	147	107			0	107			849.71	674.44	
159	5414			0	41			0	0	0	0	0	0		0	0	3	0			0	0			4.55	3.62	
160	5415			0	19764			0	2	473	89	0	138		322	315	128	54			70	161			767.64	1387.00	
161	5416			0	14134			0	0	303	23	0	33		153	259	143	160			215	11			286.12	1019.44	
162	5417			0	18671			0	1	2037	25	0	101		178	1060	256	101			91	67			032.53	1865.92	
163	5418			0	18533			0	0	534	14	0	236		101	646	63	57			53	39			646.01	1316.69	
164	5419			0	7438			0	0	286	11	0	44		79	177	48	45			41	30			685.09	553.84	
165	5420			0	0			0	22	393	0	0	37		108	105	395	268			46	0			270.64	342.93	
166	5421			0	0			88	281	2015	16	374	81		1479	2019	1645	1090			322	217			307.83	1960.23	
167	5422			0	61			0	6	646	9	0	114														



List (Zones)

Number: 1	No	Code	Name	TypeNo	POP OKOTO	POPULATION	Agri Base	MINING	INDUSTRIAL	EDUCATION	GOVERNMENT	HEALTH	CARE	OTHER	SERVICES	PROFESSION	RETAIL	TRADE	TRANSPORT	WHOLESALE	ENTERTAINMENT	IX	XI	Inbound	Outbound
1	5101		calgary	0	0	0	0	26	95	15	219	28	98	128	74	0	0	0	0	0	69			67.89	116.58
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3	5103			0	1290	0	11	250	105	0	42	135	282	988	6	0	0	0	0	0	44			173.70	297.62
4	5104			0	2461	0	7	1789	641	105	173	292	692	2220	119	26	73	0	0	0	356			521.79	869.96
5	5105			0	2732	0	0	640	288	151	38	206	611	1853	59	228	0	0	0	0	188			415.66	668.44
6	5106			0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0			0.12	0.61
7	5107			0	376	0	0	930	193	0	118	0	237	807	18	0	0	0	0	0	171			127.73	273.12
8	5108			0	802	0	0	1317	546	0	163	154	797	1928	120	26	79	0	0	0	179			332.72	683.49
9	5109			0	353	0	20	1445	269	124	884	247	1294	2371	142	81	0	0	0	0	481			330.60	832.95
10	5110			0	0	0	0	2340	539	19	207	97	540	1658	40	70	0	0	0	0	116			211.35	544.99
11	5111			0	0	0	0	122	406	0	0	0	187	390	21	41	0	0	0	0	115			114.55	208.57
12	5112			0	0	0	0	474	565	0	25	4	362	550	268	0	129	0	0	0	8			253.76	402.09
13	5113			0	505	0	0	1392	224	50	0	35	318	820	59	27	111	0	0	0	196			180.63	332.76
14	5114			0	2333	0	0	649	395	24	374	118	811	1328	10	56	0	0	0	0	329			377.12	616.14
15	5115			0	1815	0	0	715	198	0	0	89	302	861	144	70	0	0	0	0	192			307.61	422.61
16	5116			0	980	0	0	1228	262	55	74	172	378	2400	61	69	242	0	0	0	540			337.10	685.41
17	5117			0	0	0	0	2014	999	69	152	160	948	1950	103	138	54	0	0	0	454			389.12	819.09
18	5118			0	0	0	6	2046	480	15	570	191	1346	3449	807	32	133	0	0	0	123			608.30	1265.85
19	5119			0	0	0	0	3167	458	14	34	326	1107	4106	237	1983	0	0	0	0	445			522.80	1307.14
20	5120			0	103	0	2	1685	124	33	38	91	859	2238	150	249	0	0	0	0	983			319.73	720.86
21	5121			0	0	0	0	629	426	96	128	137	932	3208	763	103	0	0	0	0	635			601.90	1146.09
22	5122			0	0	0	52	5698	1521	41	181	112	1660	5206	168	374	34	0	0	0	235			620.00	1610.99
23	5123			0	23	0	0	4132	382	84	199	150	840	1657	57	72	97	0	0	0	656			282.79	658.20
24	5124			0	493	0	0	31	35	19	1702	169	95	567	218	76	54	0	0	0	227			232.28	439.11
25	5125			0	827	0	0	94	514	111	478	96	629	613	100	158	0	0	0	0	1470			432.55	629.69
26	5126			0	151	0	0	62	235	715	3580	158	478	522	73	234	0	0	0	0	173			234.66	643.28
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28	5128			0	2981	0	0	81	76	0	16	0	354	245	69	47	0	0	0	0	69			308.07	306.44
29	5129			0	0	0	0	0	0	17	0	0	17	0	0	0	0	0	0	0	0			0.70	2.22
30	5130			0	484	0	0	118	1163	944	119	0	729	984	51	0	0	0	0	0	136			355.37	615.74
31	5131			0	7	0	0	48	0	0	30	249	98	88	27	77	0	0	0	0	0			34.14	53.98
32	5201			0	1225	0	0	170	112	0	0	94	391	617	464	0	0	0	0	0	38			347.48	444.26
33	5202			0	4241	0	0	39	152	30	12	36	130	226	216	7	0	0	0	0	594			541.87	495.97
34	5203			0	4066	0	0	27	75	413	37	208	373	379	185	0	0	0	0	0	135			472.64	460.37
35	5204			0	2154	0	0	529	1095	52	154	187	361	1042	107	0	0	0	0	0	69			479.51	669.85
36	5205			0	911	0	0	219	196	23	15	311	530	1071	512	139	130	0	0	0	716			486.39	673.96
37	5206			0	4928	0	0	105	204	0	0	436	319	712	312	0	0	0	0	0	515			674.27	680.48
38	5207			0	3985	0	0	82	528	53	105	925	426	316	78	34	0	0	0	0	452			573.34	572.86
39	5208			0	606	0	2	561	641	0	69	132	1666	3060	157	0	152	0	0	0	423			427.47	986.38
40	5209			0	2148	0	0	327	1186	38	65	219	474	1633	78	3	73	0	0	0	68			508.70	776.60
41	5210			0	3581	0	0	254	212	119	84	702	429	620	131	0	0	0	0	0	957			562.40	600.43
42	5211			0	0	0	13	91	0	16	3	0	180	74	143	0	0	0	0	0	1283			234.59	277.16
43	5212			0	391	0	0	30	38	23	0	12	46	46	13	35	0	0	0	0	415			98.64	106.20
44	5213			0	1599	0	13	130	41	15	306	84	265	1110	13	111	0	0	0	0	127			211.41	364.80
45	5300			0	6919	0	14	261	995	918	162	15361	600	2024	235	277	112	0	0	0	410			785.39	1590.86
46	5301			0	9546	0	0	46	319	207	72	277	383	493	200	59	0	0	0	0	291			989.00	876.49
47	5302			0	6132	0	18	512	1077	55	0	470	1222	2616	775	887	291	0	0	0	308			254.97	1662.33
48	5303			0	16261	0	0	72	899	582	188	1579	913	978	2028	118	0	0	0	0	1004			579.13	2468.21
49	5304			0	13010	0	0	292	1084	660	239	1837	1357	1486	1788	157	0	0	0	0	1088			306.12	2383.57
50	5305			0	4608	0	0	0	77	99	42	57	190	190	1819	34	26	0	0	0	550			224.51	1206.91
51	5306			0	984	0	0	14	0	0	0	56	206	186	998	55	0	0	0	0	563			576.24	621.75
52	5307			0	15932	0	0	8	274	338	0	166	414	242	499	42	0	0	0	0	217			596.81	1299.53
53	5308			0	15439	0	0	168	323	168	0	166	183	338	107	117	0	0	0	0	55			383.86	1086.89
54	5309			0	0	0	0	8	25	7	6	23	31	22	26	3	2	0	0	0	23			21.19	28.96
55	5310			0	9131	0	20	591	549	567	0	1216	169	1629	20	31	0	0	0	0	15			973.47	977.70
56	5311			0	18455	0	155	86	808	604	0	638	583	629	448	285	49	0	0	0	607			984.69	1727.50
57	5312			0	22347	0	0	430	429	0	193	236	599	188	0	87	0	0	0	0	172			021.83	1595.59
58	5313			0	41355	0	5	46	790	334	3	736	710	843	1845	171	4	0	0	0	885			404.45	3641.59
59	5314			0	0	0	7	400	1818	64	294	119	521	839	790	335	282	0	0	0	440			807.93	1134.37
60	5315			0	12	0	10	1549	6643	14	68	77	1045	874	582	2439	577	0	0	0	42			714.25	2495.57
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62	5317			0	4783	0	0	59	0	18	0	31	122	70	47	11	4	0	0	0	26			425.53	331.60
63	5318			0	236	0	46	80	3250	0	0	0	400	1250	2250	500	154	0	0	0	10			634.16	2100.63
64	5319			0	19677	0	0	376	0	159	66	174	468	334	118	178	0	0	0	0	0			740.71	1374.29
65	5320			0	54	0	120	246	647	26	462	556	84	359	884	583	126	0	0	0	70			594.93	765.48
66	5321			0	11169																				



List (Zones)

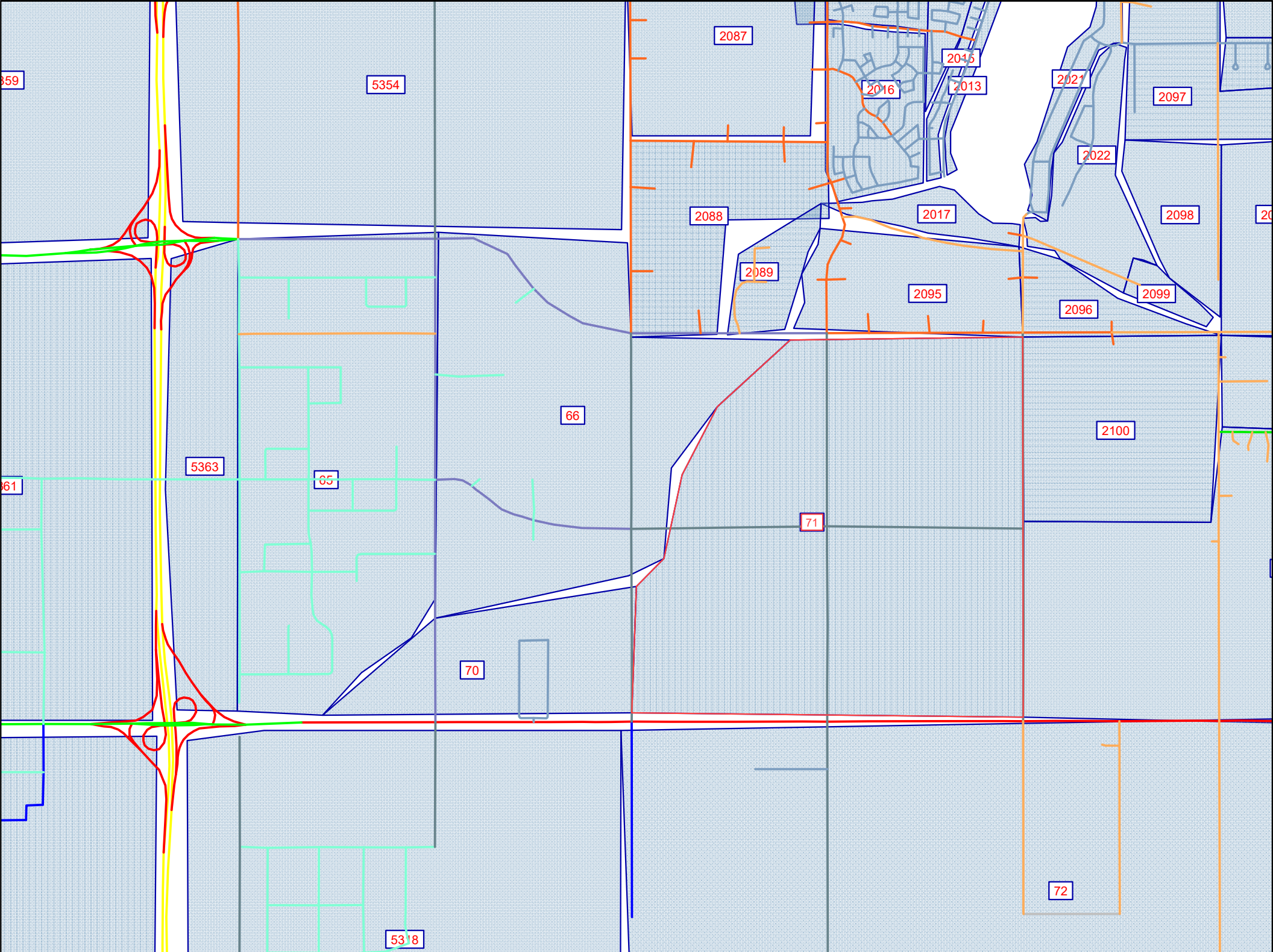
Number: 1	No	Code	Name	TypeNo	POP OKOTO	POPULATION	Agri Base	MINING	INDUSTRIAL	EDUCATION	GOVERNMENT	HEALTH	CARE	OTHER	SERVICES	PROFESSION	RETAIL	TRADE	TRANSPORT	WHOLESALE	ENTERTAINMENT	IX	XI	Inbound	Outbound	
1	5101		calgary	0	0	0	0	28	100	16	231	30	104	135	78	135	78	0	0	0	72			68.61	118.30	
2	5102			0	4562	0	0	201	206	784	159	315	438	1093	216	85	85	0	0	0	124			588.24	674.14	
3	5103			0	1290	0	11	266	113	0	44	143	300	1050	6	0	0	0	0	0	46			176.60	304.01	
4	5104			0	2782	0	8	1897	680	112	184	310	734	2354	127	28	77	28	77	377			557.04	906.29		
5	5105			0	2766	0	0	674	304	159	40	217	645	1955	61	241	0	241	0	198			423.64	680.53		
6	5106			0	0	0	0	1	0	0	0	0	1	6	0	0	0	0	0	0			0	0	0.19	1.00
7	5107			0	592	0	0	982	205	0	126	0	250	853	19	0	0	0	0	181			147.43	290.40		
8	5108			0	821	0	0	1409	583	0	174	164	853	2063	129	28	84	28	84	192			342.34	704.10		
9	5109			0	374	0	22	1537	287	132	940	263	1377	2523	150	86	0	86	0	512			338.52	853.09		
10	5110			0	0	0	0	2469	569	20	218	103	570	1750	42	73	0	73	0	122			213.84	553.10		
11	5111			0	0	0	0	130	434	0	0	0	199	416	22	43	0	43	0	123			117.30	214.15		
12	5112			0	0	0	0	504	600	0	27	5	385	584	285	0	137	0	137	9			258.94	411.44		
13	5113			0	535	0	0	1492	240	53	0	38	340	879	63	29	119	29	119	210			187.55	344.33		
14	5114			0	3491	0	0	685	420	26	394	126	863	1411	11	58	0	58	0	352			478.75	695.69		
15	5115			0	1975	0	0	764	215	0	95	95	326	931	155	81	0	81	0	212			329.57	447.57		
16	5116			0	1514	0	0	1308	277	59	77	182	402	2549	64	73	256	73	256	570			385.67	729.29		
17	5117			0	0	0	0	2148	1066	73	162	171	1011	2080	110	147	57	147	57	484			398.29	840.67		
18	5118			0	0	0	6	2171	510	17	605	202	1429	3660	856	34	141	34	141	131			619.11	1292.20		
19	5119			0	0	0	0	3347	484	15	36	345	1171	4340	250	2096	0	2096	0	471			529.76	1328.79		
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21	5121			0	0	0	0	664	449	102	135	144	983	3386	805	109	0	109	0	670			609.06	1163.29		
22	5122			0	0	0	55	6045	1613	43	192	119	1761	5523	178	396	36	396	36	249			630.68	1643.57		
23	5123			0	125	0	0	4363	403	89	210	158	887	1750	61	76	103	76	103	694			295.18	674.87		
24	5124			0	561	0	0	33	37	21	1803	179	601	1750	231	80	57	80	57	240			241.51	451.66		
25	5125			0	970	0	0	102	554	120	514	104	676	660	108	169	0	169	0	1582			457.54	659.99		
26	5126			0	151	0	0	65	247	754	3778	167	503	551	77	246	0	246	0	183			237.33	653.05		
27	5127			0	1463	0	0	53	45	0	177	0	33	74	0	0	0	0	0	18			141.07	115.16		
28	5128			0	5010	0	0	91	86	0	18	0	399	276	78	53	0	53	0	78			483.47	437.63		
29	5129			0	0	0	0	0	0	7	0	0	7	0	0	0	0	0	0	0			0.28	0.88		
30	5130			0	558	0	0	125	1227	996	126	0	769	1038	54	0	0	0	0	143			366.08	629.71		
31	5131			0	8	0	0	57	0	0	37	300	119	107	33	93	0	93	0	0			39.64	63.06		
32	5201			0	1831	0	0	189	124	0	105	432	682	513	0	0	0	0	0	42			413.75	504.29		
33	5202			0	4508	0	0	42	163	33	13	39	140	243	233	8	0	8	0	640			575.92	525.77		
34	5203			0	4525	0	0	29	80	440	39	221	397	404	198	0	0	0	0	143			518.71	497.33		
35	5204			0	2900	0	0	568	1178	56	166	201	389	1121	115	0	0	0	0	74			553.22	734.61		
36	5205			0	1675	0	0	233	209	24	16	331	564	1140	546	148	138	148	138	762			559.11	734.18		
37	5206			0	5531	0	0	113	218	0	0	468	341	762	334	0	0	0	0	552			737.34	732.81		
38	5207			0	4988	0	0	87	560	56	113	981	452	335	82	36	0	36	0	479			664.43	641.86		
39	5208			0	1123	0	2	599	684	0	74	141	1778	3266	167	0	162	0	162	451			479.07	1041.25		
40	5209			0	2682	0	0	351	1271	41	69	235	508	1749	83	3	78	3	78	73			564.44	829.80		
41	5210			0	4042	0	0	268	225	126	89	743	454	656	139	0	0	0	0	1024			610.23	639.87		
42	5211			0	0	0	14	97	0	17	3	0	191	78	152	0	0	0	0	1360			238.88	283.15		
43	5212			0	2176	0	0	32	40	25	0	13	49	49	14	37	0	37	0	437			245.98	210.01		
44	5213			0	2566	0	15	143	45	17	335	92	290	1219	15	123	0	123	0	140			297.20	437.52		
45	5300			0	7665	0	16	320	1143	1078	223	16901	710	2340	297	352	150	352	150	506			961.14	1781.18		
46	5301			0	10966	0	0	60	313	223	83	275	413	520	312	59	0	59	0	388			164.60	1021.92		
47	5302			0	8658	0	21	571	1161	60	0	476	1311	2727	927	1199	292	1199	292	310			536.69	1908.93		
48	5303			0	21767	0	0	92	944	748	229	1983	1232	1254	2965	133	0	133	0	1357			454.68	3280.55		
49	5304			0	14875	0	0	356	1208	740	271	2181	1550	1636	1994	169	0	169	0	1280			576.76	2638.41		
50	5305			0	6783	0	0	0	142	130	55	69	191	302	2167	38	26	38	26	783			554.67	1510.77		
51	5306			0	2222	0	0	21	0	0	0	63	222	204	1274	81	0	81	0	708			787.68	814.14		
52	5307			0	16038	0	0	8	285	359	0	167	434	250	514	42	0	42	0	228			623.52	1323.16		
53	5308			0	15439	0	0	0	334	175	0	172	191	351	110	121	0	121	0	57			402.50	1104.27		
54	5309			0	0	0	0	10	28	9	7	26	35	25	29	3	3	3	3	26			22.86	31.40		
55	5310			0	9275	0	22	666	613	614	0	1357	181	1825	21	31	0	31	0	15			012.43	1029.89		
56	5311			0	18955	0	165	88	874	686	0	689	619	663	457	289	52	289	52	621			052.29	1785.85		
57	5312			0	22432	0	0	0	475	467	0	216	267	633	201	0	102	0	102	207			070.32	1645.16		
58	5313			0	41355	0	11	47	923	436	3	796	787	942	2288	196	5	196	5	1075			645.07	3910.65		
59	5314			0	0	0	14	706	2274	92	271	181	703	1387	1514	300	93	300	93	690			176.34	1617.86		
60	5315			0	12	0	11	2062	7945	14	99	85	1185	1011	669	3042	610	3042	610	42			955.94	2863.60		
61	5316			0	286	0	2	14	103	1	1	2	27	18	2	59	7	59	7	3			47.77	54.73		
62	5317			0	8803	0	0	4	145	41	0	71	487	212	109	27	10	27	10	60			816.12	674.73		
63	5318			0	155	0	91	160	6500	0	0	0	800	2500	4500	998	306	998	306	21			109.36	4026.10		
64	5319			0	19677	0	0	0	389	166	68	181	484	347	122	184	0	184	0	0			765.28	1396.85		
65	5320			0	459	0	172	528	1284	37	533	660	97	697	1306	1210	132	132	107	107			940.86	1228.29		
66	5321			0	11598	0	18	3	143	65	53	638	111	83	1081	29	265	29	265	121			479.23	1238.16		
67	5322			0	7420																					

List (Zones)

Number: 14	No	Code	Name	TypeNo	POP	OKOTO	POPULATION	Agri	Base	MINING	INDUSTRIAL	EDUCATION	GOVERNMENT	HEALTH	CAF	OTHER	SERVICES	PROFESSION	RETAIL	TRADE	TRANSPORT	WHOLESALE	ENTERTAINMENT	IX	XI	Inbound	Outbound
102	5357			0	20849			0	0	145	2233	1176	184	1615	933	1345	1361	215	0	529					867.00	2748.18	
103	5358			0	18111			78	847	5492	1295	456	1434	4523	5422	3575	2223	1322	2638						733.52	5872.44	
104	5359			0	21			0	11	389	0	69	58	230	142	48	93	58	42						116.81	185.52	
105	5360			0	26059			16	23	1371	494	47	713	887	487	1355	334	327	606						096.58	2709.38	
106	5361			0	4			14	256	4331	0	0	32	954	1057	551	897	668	861						239.31	1775.37	
107	5362			0	10			81	1247	13938	22	30	193	1739	1626	1443	3351	1988	1419						638.57	5058.33	
108	5363			0	0			0	238	1016	0	0	0	72	67	11	434	0	27						214.57	316.18	
109	5364			0	25633			75	1933	5449	207	84	426	1597	5803	1953	475	187	982						182.52	4797.69	
110	5365			0	14903			119	353	4804	414	195	228	1029	1261	1264	1012	213	461						764.65	3024.31	
111	5366			0	19349			0	276	880	229	286	402	681	576	1115	302	295	877						375.39	2140.34	
112	5367			0	27558			0	345	184	0	0	239	371	548	324	0	87	418						532.39	1973.36	
113	5368			0	7220			0	208	1309	308	8	661	3967	612	530	20	0	667						235.25	1533.05	
114	5369			0	15063			0	85	333	206	49	579	1122	1197	2816	151	141	2535						797.61	2764.35	
115	5370			0	9751			0	15	422	107	0	24	41	223	32	98	0	109						912.20	733.43	
116	5371			0	9310			0	0	242	179	31	75	25	156	100	0	0	59						862.89	672.13	
117	5372			0	9991			0	14	273	221	0	75	58	400	121	0	0	91						943.65	768.43	
118	5373			0	36744			10	96	965	772	103	436	994	895	1002	112	111	902						758.84	3134.66	
119	5374			0	15899			25	58	1622	165	27	491	712	497	1087	265	211	939						209.52	2070.01	
120	5375			0	19491			128	8	298	378	0	91	291	233	176	0	43	258						772.05	1367.88	
121	5376			0	8848			13	3	121	30	72	103	291	242	67	30	4	240						819.32	668.22	
122	5377			0	8703			0	44	173	161	217	243	55	324	57	0	0	0						793.70	644.57	
123	5378			0	17155			19	13	1534	812	70	747	1035	425	1216	119	43	1279						391.65	2229.16	
124	5379			0	9252			0	0	260	97	73	65	270	254	268	78	0	186						952.41	807.72	
125	5380			0	23455			26	110	946	7132	111	4776	1108	1748	512	6	61	1693						933.48	2654.02	
126	5381			0	236			27	0	0	0	0	0	0	0	0	0	0	0						19.45	14.09	
127	5382			0	3588			338	62	55	2	0	128	6	171	0	0	0	0						316.30	254.98	
128	5383			0	5023			32	73	0	0	0	176	0	0	0	0	66	153						443.06	317.22	
129	5384			0	3861			2	119	65	2	0	262	7	203	0	0	40	97						360.76	289.46	
130	5385			0	394			46	38	33	1	0	76	3	103	0	0	0	0						45.06	49.05	
131	5386			0	8476			0	27	268	311	22	87	181	302	100	20	0	310						839.12	703.34	
132	5387			0	11141			0	42	115	249	97	353	244	196	170	0	60	204						061.14	841.41	
133	5388			0	13149			0	0	491	317	64	91	345	280	156	0	87	199						279.66	1055.08	
134	5389			0	7357			0	4	367	428	50	65	294	185	173	222	48	160						793.34	701.28	
135	5390			0	10088			32	46	162	637	100	319	1151	828	556	199	36	1198						300.08	1288.21	
136	5391			0	8392			132	365	670	204	610	2613	647	2496	1031	467	64	521						529.75	1749.73	
137	5392			0	12058			0	177	344	652	306	743	891	1143	1942	43	95	921						037.81	2033.92	
138	5393			0	13127			0	89	319	274	104	564	695	753	4365	49	43	1699						129.41	3087.01	
139	5394			0	26839			0	22	538	615	49	213	586	620	232	0	0	355						468.34	1968.25	
140	5395			0	18808			0	28	372	450	53	443	445	498	498	0	0	187						873.66	1534.83	
141	5396			0	30755			19	167	435	285	27	785	1305	1084	3471	3	146	1791						257.80	3841.87	
142	5397			0	4370			0	23	24	0	0	153	0	95	20	0	0	31						383.16	284.87	
143	5398			0	10525			0	85	364	585	161	338	609	484	724	169	0	677						355.63	1262.91	
144	5399			0	2254			7	610	9697	505	220	275	2190	2576	2653	1994	2215	1253						537.05	4758.21	
145	5400			0	17793			47	401	1079	280	536	336	1284	1793	2407	67	62	1577						896.17	2950.34	
146	5401			0	18883			47	453	737	503	146	499	1538	1233	5648	162	0	1329						175.16	4186.87	
147	5402			0	30068			134	66	279	1409	117	871	1262	1208	2550	85	178	918						768.32	3358.40	
148	5403			0	24364			0	60	620	1079	182	1051	1328	1628	793	335	26	1145						710.45	2484.08	
149	5404			0	13550			15	381	3405	541	953	1155	1691	1460	1753	2363	512	1505						906.16	3317.74	
150	5405			0	25701			7	429	1425	1128	274	2520	2197	731	295	354	1471							110.57	3017.89	
151	5406			0	17053			30	301	2214	6264	103	2216	1662	3672	1479	167	117	2212						016.36	3346.32	
152	5407			0	9236			0	22	60	208	0	75	119	151	60	20	0	196						827.36	633.70	
153	5408			0	3621			0	0	122	0	0	0	0	12	221	0	0	0						405.85	330.56	
154	5409			0	16630			123	10	687	115	0	43	179	276	450	8	0	243						700.70	1393.18	
155	5410			0	14162			98	9	326	91	0	37	216	223	267	7	0	194						356.18	1079.39	
156	5411			0	7486			0	50	3	174	45	0	16	77	119	144	3	104						718.60	569.60	
157	5412			0	6998			8	0	355	73	0	0	0	119	35	0	0	89						663.31	527.88	
158	5413			0	18147			93	7	307	86	0	32	202	208	251	429	0	183						693.58	1336.74	
159	5414			0	3030			3	10	45	12	7	31	46	36	69	3	3	37						291.58	229.48	
160	5415			0	20973			0	2	569	117	0	162	364	359	134	64	92	177						924.29	1517.13	
161	5416			0	14963			0	0	315	4	0	21	197	317	165	212	222	13						390.29	1109.45	
162	5417			0	30118			0	1	3943	45	0	176	310	1922	465	177	160	118						425.74	3189.50	
163	5418			0	22862			0	0	699	19	0	312	132	808	83	75	68	50						077.81	1660.25	
164	5419			0	24297			0	1	885	39	0	145	254	574	158	146	131	97						257.63	1808.71	
165	5420			0	0			0	22	416	0	0	38	120	125	444	316	47	0						279.81	356.78	
166	5421			0	0			96	340	2297	20	402	93	1540	2241	1912	1230	410	255						405.49	2	



APPENDIX E: TRIP GENERATION & ASSIGNMENT INFORMATION



List (Zones)

Number: 4	No	Code	Name	TypeNo	POP_OKOTC	POPULATION	Agri Base	MINING	INDUSTRIAL	EDUCATION	GOVERNMENT	HEALTH CA	OTHER SER	PROFESSIO	RETAIL TRA	TRANSPOR	WHOLESALE	ENTERTAIN	IX	XI	Inbound	Outbound
1	65		Janet	0		10	154	130	5000	52	46	156	384	1000	1500	210	10	594			599.76	2103.23
2	66		Janet	0		222	30	10	6480	8	4	36	56	3840	2000	2	480	36			110.07	2995.92
3	70		Janet	0		21	2	8	300	6	4	30	46	500	1000	2	0	30			473.02	577.15
4	71		Janet	0		333	45	15	11200	12	6	54	84	3360	4480	3	806	60			939.92	5108.91

TZ	SOURCE	LAND USE	NET DEV AREA (ACRES)	TRIP GEN. RATE	AM PEAK HOUR TRIPS			PM PEAK HOUR TRIPS		
					IN	OUT	TOTAL	IN	OUT	TOTAL
TZ 3553	EMCOR TIA	Light Industrial	169.53	ITE Equation	712	146	858	189	669	858
		Comm.	30.53	ITE Rate	198	121	319	592	641	1,233
		Rail Yard Access	37.1	EMCOR TIA Trip Gen Study	28	42	70	42	28	70
TZ 3553	Janet ASP	Light Industrial	541	ITE Equation	1,750	358	2,108	464	1,644	2,108
Sub-Total:					2,688	667	3,355	1,287	2,982	4,269
TZ 1660	Janet ASP	Comm.	72	ITE Equation	340	209	549	1,146	1,241	2,387
Sub-Total:					340	209	549	1,146	1,241	2,387
TZ 3552	Janet ASP	Comm.	15	ITE Rate	79	48	127	236	256	492
		Light Industrial	91	ITE Equation	376	77	453	100	353	453
		Heavy Industrial	46	ITE Rate	75	15	90	22	77	99
Sub-Total:					530	140	670	358	686	1,044
TZ 3519	Janet ASP	Comm.	215	ITE Equation	652	400	1052	2270	2459	4729
		Light Industrial	870	ITE Equation	2745	562	3307	728	2580	3307
		Heavy Industrial	475	ITE Rate	780	160	940	226	800	1026
Sub-Total:					4,176	1,122	5,299	3,224	5,839	9,062
Total Trips:					7,734	2,138	9,873	6,015	10,748	16,762
Total Internal Trips (10%):					773	214	987	601	1075	1676
Total Trips (without Internal Trips):					6,961	1,925	8,886	5,413	9,673	15,085