

**MEMORANDUM**

To: Andrew Brunner, Chelan County Public Works  
From: Zach Wieben, PE *ZJW*  
Brad Lincoln, PE *BLZ*  
Subject: December 2019 Update to Mission Ridge TIA  
Date: December 10, 2019  
Project: GTC #17-092

Gibson Traffic Consultants, Inc. (GTC) completed a February 2019 traffic impact analysis (TIA) for the proposed Mission Ridge development dated February 21, 2019. GTC has updated the original TIA in order to reflect updated unit numbers and square footages as well as an updated construction phasing plan. This memorandum addresses changes to the trip generation and intersection analysis.

**1. Trip Generation**

The applicant has identified changes in the number of previous proposed uses that affect the trip generation calculations. The changes from the February 2019 TIA include 23 additional residential units, 7 additional hotel rooms, 20,000 SF of shopping retail, and beds for 80 employees to sleep on-site. After review of the updated site plan, it was determined that two of the six new lifts identified in the proposal would be categorized as “surface” lifts only (i.e. tow-ropes) and would not contribute significantly to the trip generation. Therefore, the number of lifts was reduced by two. A comparison of the February 2019 and December 2019 land uses is shown in Table 1.

**Table 1: Unit/SF Comparison**

<b>Land Use</b>	<b>February 2019</b>	<b>December 2019</b>
Single Family (Detached)	260 Units	275 Units
Apartments	613 Units	621 Units
Resort Hotel	50 Rooms	57 Rooms
Snow Ski Area	6 Lifts	4 Lifts
Shopping Center <sup>1</sup>	90,000 SF	110,000 SF
Employee Housing	0 Units	80 Units

<sup>1</sup> Includes 85% internal crossover rate.

The trip generation is discussed in more detail in the revised TIA.

## 2. Construction Phasing

The applicant also provided an updated construction phasing plan. In general, the updated phasing plan shifted more units to be constructed earlier than previously assumed. Table 2 compares the February 2019 and December 2019 phasing plans.

**Table 2: Construction Phasing Comparison**

Phase	February 2019 TIA Phasing			December 2019 TIA Phasing		
	% of Total PM Peak Trips	Cumulative % of PM Peak Trips	Est. Completion Year	% of Total PM Peak Trips	Cumulative % of PM Peak Trips	Est. Completion Year
1	25%	25%	2024	37%	37%	2025
2	22%	47%	2027	25%	63%	2028
3	23%	70%	2031	17%	79%	2032
4	24%	94%	2037	16%	95%	2038
5	6%	100%	2039	5%	100%	2040
Total	100%	-	-	100%	-	-

## 3. Intersection Analysis

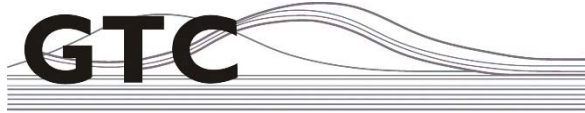
In order to accommodate the new anticipated phasing schedule, the original analysis years of 2024, 2028, and 2039 were updated to 2025, 2028, and 2040.

### 3.1. Intersection Operations Summary

The analysis found that only one study intersection is anticipated to operate below LOS D under the 2025 future conditions and assuming 65% of the development is constructed. This intersection, Okanogan Avenue at Crawford Avenue, would operate acceptably with all-way stop-control improvements. Improvements at the intersection may be warranted under 2025 baseline conditions depending on how much background growth occurs.

Two additional intersections—Methow Street at Crawford Avenue and S. Miller Street at Crawford Avenue—are anticipated to operate below LOS D under the 2028 future conditions and assuming 65% of the development is constructed. It was determined that all-way stop-control would also allow these intersections to operate acceptably.

The revised TIA also analyzed the study intersections for the 2040 future conditions and 100% build-out of the development. The analysis for the 2040 conditions found that several study intersections could operate below acceptable LOS D with 20 years of growth and 100% of the development, assuming all of the residential units are full-time occupancy. One of the intersections is S. Mission Street at Stevens Street. It was determined that this intersection would be on the verge of operating at LOS D/E after Phase II construction was complete in 2028. It is recommended that the trip generation of the development, the background growth projections and the intersection operations be re-evaluated after Phase 2 of the development.



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# Mission Ridge Traffic Impact Analysis

Jurisdiction: Chelan County

December 2019



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## 1. INTRODUCTION

Gibson Traffic Consultants (GTC) has been retained to revise the traffic impact analysis for the proposed Mission Ridge development in Chelan County based on Chelan County, WSDOT and public comments. This report addresses the development's trip generation and impacts to surrounding roadways and intersections based on increased unit numbers and amenities from the previous report (dated February 21, 2019). No additional comments have been received by GTC from Chelan County and therefore this report follows the same methodology as the February 2019 report. Zach Wieben, responsible for the traffic analysis and report, is a licensed professional engineer (Civil) in the State of Washington and a current member of the Washington State section of ITE.

## 2. PROPOSED SITE DEVELOPMENT & ACCESS

The Mission Ridge development is located northeast of the existing Mission Ridge Ski Resort. A site vicinity map is included in Figure 1. The development is proposed to ultimately consist of the following residential and commercial land uses:

- 896 residential units
- 57-room resort hotel
- 6 ski lifts (4 used for skiing/tubing and 2 used for surface transport)
- 110,000 square feet (SF) of commercial/shopping center
- 80 units of dorm-style employee housing

The development is proposed to have access via the existing Mission Ridge Ski Resort parking lot. The development is expected to be built in several phases. It is anticipated that approximately 65% of the development will be constructed by 2028 with full build-out of the development estimated by approximately 2040.

## 3. METHODOLOGY

The trip generation calculations for the Mission Ridge development is based on data contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10<sup>th</sup> Edition (2017)*. The distribution of trips generated by the Mission Ridge development is based on existing travel patterns and discussions with staff from Chelan County, City of Wenatchee, and WSDOT.

The intersections that are analyzed as part of this report, based on the scoping discussions and comments, include:

1. S. Mission Street at Stevens Street
2. S. Mission Street at Crawford Avenue
3. Methow Street at Crawford Avenue
4. Okanogan Avenue at Crawford Avenue

5. S. Miller Street at Crawford Avenue
6. Squilchuck Road at Methow Street
7. Squilchuck Road at Wenatchee Heights Road

The peak-hour level of service (LOS) analysis calculations were completed using the *Synchro 10.2, Build 0* software. This software applies the operational analysis methodology of the current *Highway Capacity Manual 6<sup>th</sup> Edition (HCM)*. Traffic congestion is generally measured in terms of level of service. In accordance with the HCM 6<sup>th</sup> Edition, road facilities and intersections are rated between LOS A and LOS F, with LOS A being free flow and LOS F being forced flow or over-capacity conditions. The level of service criteria is summarized in Table 1. The level of service at two-way stop-controlled intersections is based on the average delay of the worst approach. The level of service at signalized and all-way stop-controlled intersections is based on the average delay for all approaches. Geometric characteristics and conflicting traffic movements are taken into consideration when determining level of service values.

**Table 1: Level of Service Criteria for Intersections**

Level of <sup>1</sup> Service	Expected Delay	Intersection Control Delay (Seconds per Vehicle)	
		Unsignalized Intersections	Signalized Intersections
A	Little/No Delay	≤10	≤10
B	Short Delays	>10 and ≤15	>10 and ≤20
C	Average Delays	>15 and ≤25	>20 and ≤35
D	Long Delays	>25 and ≤35	>35 and ≤55
E	Very Long Delays	>35 and ≤50	>55 and ≤80
F	Extreme Delays <sup>2</sup>	>50	>80

The acceptable level of service for intersections within Chelan County and the City of Wenatchee is LOS D.

<sup>1</sup> **Source:** *Highway Capacity Manual 6<sup>th</sup> Edition*.

LOS A: Free-flow traffic conditions, with minimal delay to stopped vehicles (no vehicle is delayed longer than one cycle at signalized intersection).

LOS B: Generally stable traffic flow conditions.

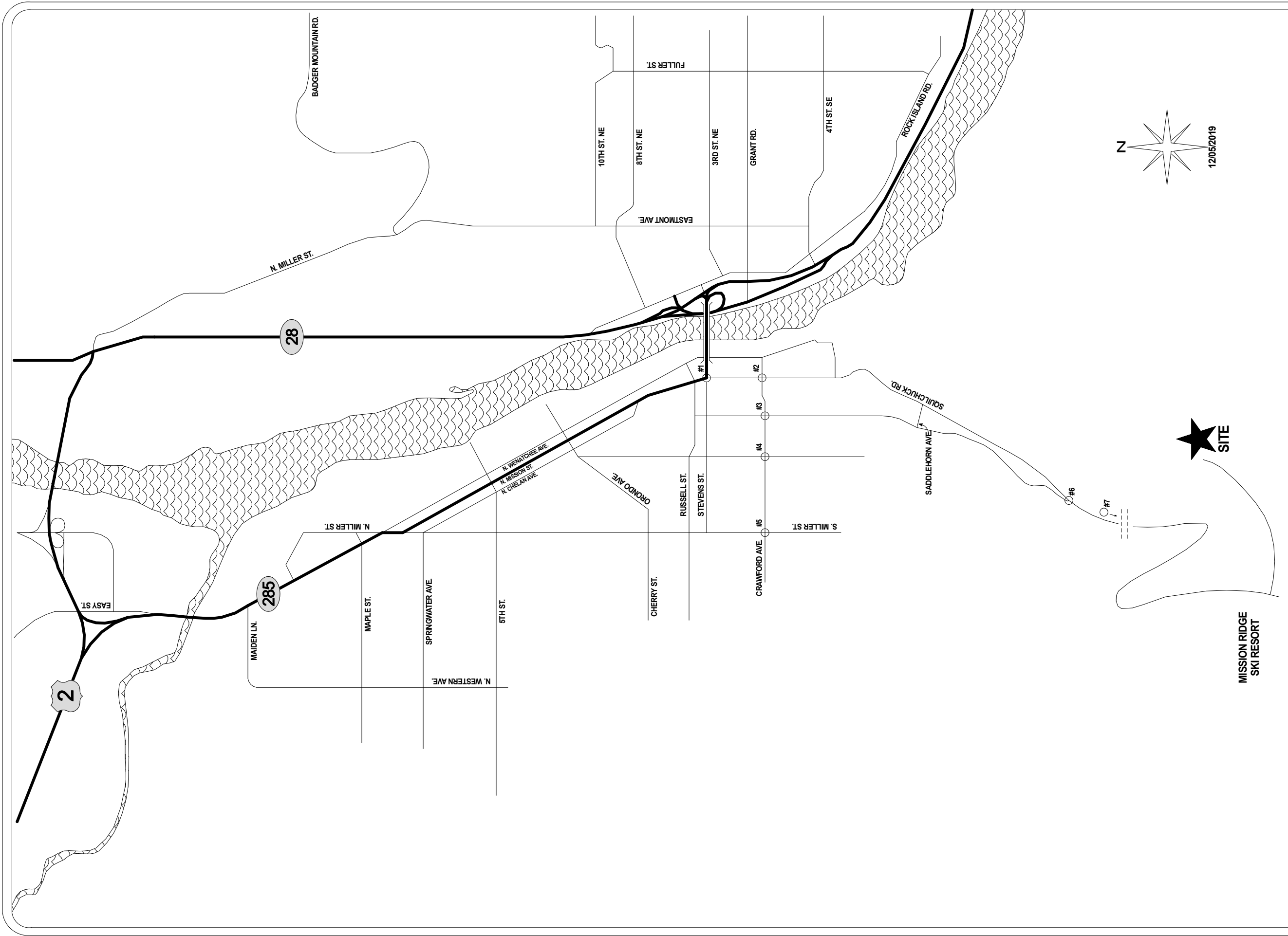
LOS C: Occasional back-ups may develop, but delay to vehicles is short term and still tolerable.

LOS D: During short periods of the peak hour, delays to approaching vehicles may be substantial but are tolerable during times of less demand (i.e. vehicles delayed one cycle or less at signal).

LOS E: Intersections operate at or near capacity, with long queues developing on all approaches and long delays.

LOS F: Jammed conditions on all approaches with excessively long delays and vehicles unable to move at times.

<sup>2</sup> When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection.



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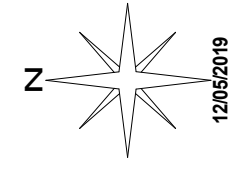
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- ★ DEVELOPMENT SITE
- ### STUDY INTERSECTION

**FIGURE 1**

**SITE VICINITY MAP**



12/05/2019



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#### 4. TRIP GENERATION

The trip generation calculations for the Mission Ridge development are based on the average trip generation rates for the following ITE Land Use Codes (LUC):

- LUC 210, Single-Family Detached Housing – 275 Units
- LUC 220, Multifamily Housing (Low-Rise) – 621 Units
- LUC 225, Off-Campus Student Apartment – 80 Units (Employee Housing)
- LUC 330, Resort Hotel – 57 Rooms
- LUC 466, Snow Ski Area – 4 Lifts (2 surface lifts not included in trip generation calcs)
- LUC 820, Shopping Center – 110,000 SF

The trip generation calculations have been performed with the assumption that all of the residential units (except for the employee housing) are full-time residents and not recreational or vacation homes. The development will be providing communal or dorm-style employee housing on-site to reduce the need for employees to travel to and from the site each day. This kind of housing is most similar to student housing because it is located within walking distance of the workers' employment and will include amenities within the building for residents. Therefore, this kind of housing is expected to have a lower vehicle trip generation rate compared to market-rate multifamily housing.

The Mission Ridge development is estimated to be fully built-out and occupied by 2040. Approximately 65% of the development is estimated to be occupied by 2028. To reflect the remote location of the development, an 85% internal crossover rate was applied to the daily and PM peak-hour trip generation calculations for the commercial/shopping center portion of the development. It is likely the commercial land uses will primarily be used by guests/residents staying in the new residential units and therefore most vehicle trips will be contained within the development. It is also important to note that a similar reduction has not been applied to the residential uses. It is anticipated that the actual trip generation of the site will be lower than what is included in this report due to the location of the development, the potential for part-time residents, and the potential for significant crossover between the uses of the development. As a result, it is recommended the actual off-site trip generation of the development would be evaluated after initial phases are complete to confirm and revise the trip generation assumptions. The trip generation of the development is summarized in Table 2.

**Table 2: Total Trip Generation Summary**

Land Use	#Units/SF	Average Daily Trips	PM Peak-Hour		
			In	Out	Total
Single Family (Detached)	275 Units	2,596	171	101	272
Apartments	621 Units	4,546	219	129	348
Employee Housing	80 Units	292	11	11	20
Resort Hotel	57 Rooms	325	10	13	23
Snow Ski Area	4 Lifts	1,086	4	100	104
Shopping Center <sup>3</sup>	110,000 SF	623	30	33	63
<b>TOTAL</b>		<b>9,468</b>	<b>446</b>	<b>387</b>	<b>833</b>

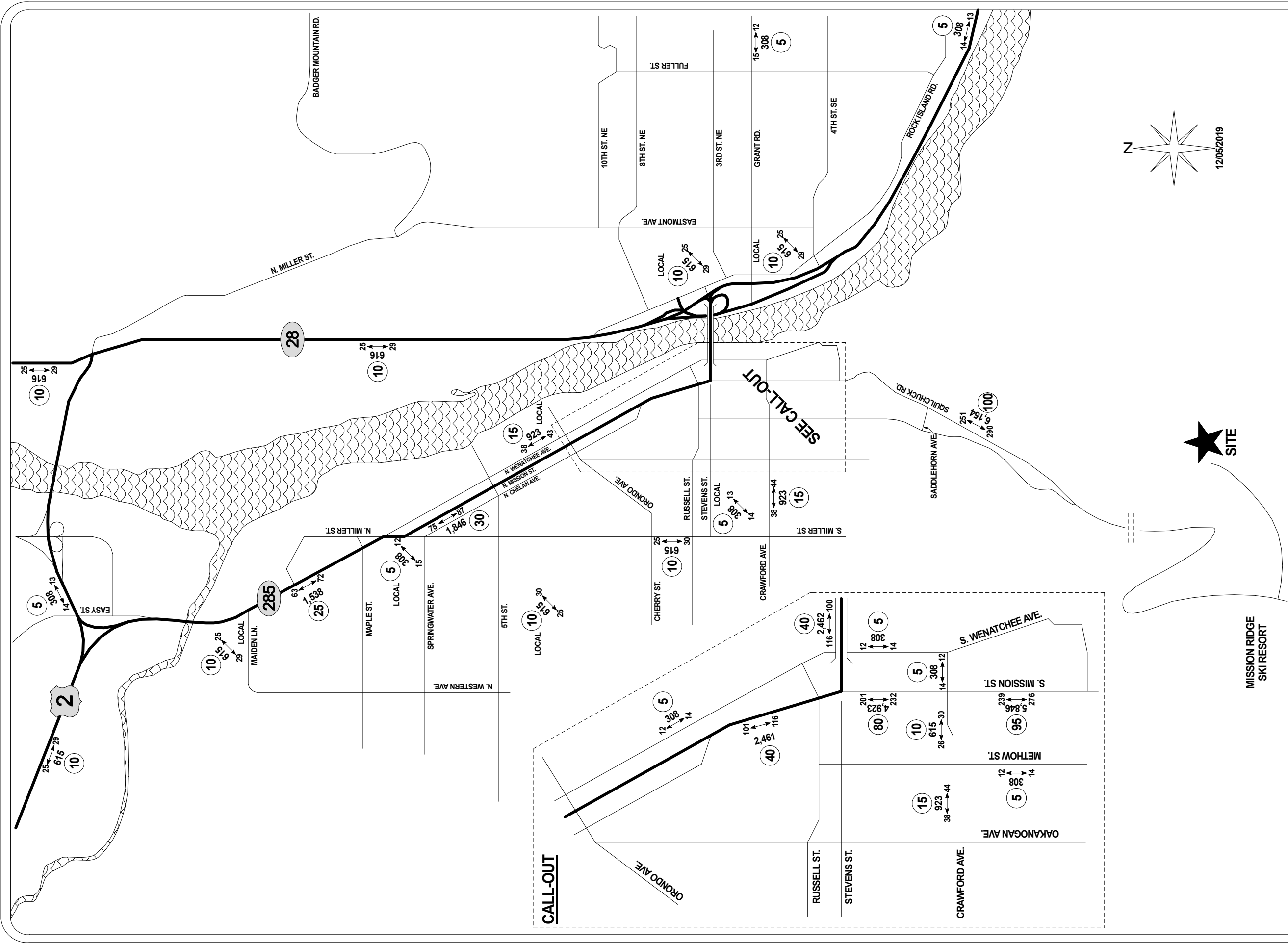
The Mission Ridge development has been analyzed to generate 9,468 average daily trips with 833 new PM peak-hour trips. This trip generation estimate is conservatively high due to the assumption that 100% of the residential units will be occupied by full-time residents. The distribution of development trips is based on scoping discussions with the City of Wenatchee and Chelan County. A 65% build-out PM peak-hour trip distribution is shown in Figure 2 and a 100% build-out PM peak-hour trip distribution is shown in Figure 3. The trip generation calculations are included in the attachments.

The Mission Ridge development is proposed to be constructed in phases. An approximate number of residential and commercial uses for each phase is outlined in Table 3.

**Table 3: Anticipated Phasing of Development**

Phase	Apartment/Condo Units	Single-Family Detached Units	Commercial SF	Hotel/Lodge Rooms	Employee Housing	Ski Lifts	% of Total PM Peak Trips	Cumulative % of PM Peak Trips	Est. Completion Year
1	172	102	60,000	-	-	3	37%	37%	2025
2	162	50	20,000	57	40	1	25%	63%	2028
3	156	41	18,500	-	-	-	17%	79%	2032
4	131	41	11,500	-	40	-	16%	95%	2038
5	-	41	-	-	-	-	5%	100%	2040
Total	621	275	110,000	57	80	4	100%	-	-

<sup>3</sup> Includes 85% internal crossover rate.



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**FIGURE 2**  
DEVELOPMENT  
TRIP DISTRIBUTION  
65% OCCUPANCY  
PM PEAK-HOUR

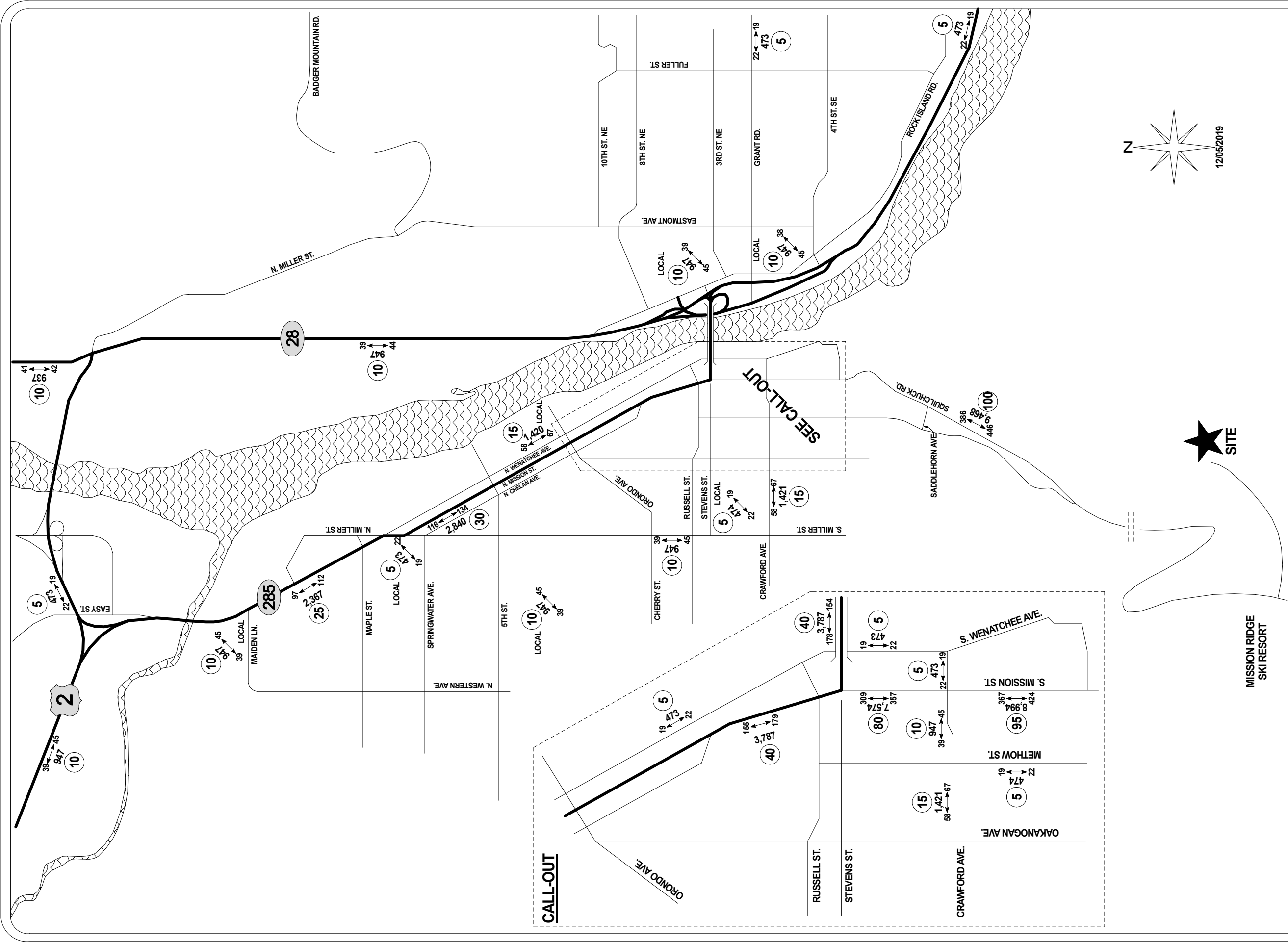
**LEGEND**

AWDT  
PM ← → PEAK  
NEW DAILY TRAFFIC  
NEW PM PEAK-HOUR TRIPS  
TRIP DISTRIBUTION %

XX



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**LEGEND**

AWDT  
PM → PEAK

NEW DAILY TRAFFIC  
NEW PM PEAK-HOUR TRIPS

TRIP DISTRIBUTION %  
XX

**FIGURE 3**  
DEVELOPMENT  
TRIP DISTRIBUTION  
100% OCCUPANCY  
PM PEAK-HOUR

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## 5. INTERSECTION LEVEL OF SERVICE ANALYSIS

The seven off-site study intersections were selected for analysis during the scoping process with the City of Wenatchee, Chelan County, and WSDOT. The study intersections are listed below:

1. S. Mission Street at Stevens Street
2. S. Mission Street at Crawford Avenue
3. Methow Street at Crawford Avenue
4. Okanogan Avenue at Crawford Avenue
5. S. Miller Street at Crawford Avenue
6. Squilchuck Road at Methow Street
7. Squilchuck Road at Wenatchee Heights Road

Future forecast years of 2025 (a standard 6-year horizon period and coincide with end of Phase I) and 2028 (a 10-year horizon period to coincide with Phase II or approximately 65% build-out) were used to analyze the expected operation of the study intersections with 65% of the development's full build-out. This percentage is based on discussions with the developer about the phasing of the units being constructed and would allow for the full construction of Phases 1 and 2 as summarized in Table 3. A preliminary analysis was also conducted for the 2040 forecast year assuming 100% build-out of the development site.

### 5.1 2018/2019 Existing Conditions

Turning movement counts for the study intersections were collected in November 2017 and February 2018. Additionally, counts were collected on a Thursday and on a Friday in February to determine if there was a significant difference in intersection volumes during different times of year (i.e. during ski season) and on different days (i.e. the standard weekday vs. Friday).

The turning movement counts showed the Thursday February counts had the highest volume of the three days when data was collected. The Thursday February counts were therefore used in the intersection level of service calculations. However, the percentage differences in the counts were within typical daily volume fluctuations for turning movement counts (0-10%) and therefore there is not anticipated to be a significant difference between seasons or weekday vs. Friday PM peak-hours. Table 4 summarizes the turning movement comparisons.

**Table 4: PM Peak-Hour Turning Movement Count Comparison**

Intersection	Nov. 2017 (Thursday)	February 2018 (Thursday)		February 2018 (Friday)		
	Total Int. Volume	Total Int. Volume	% Change vs. Nov.	Total Int. Volume	% Change vs. Nov.	% Change vs. Thurs
1 S. Mission St. @ Stevens St.	4,033	3,999	-0.84%	4,003	-0.74%	+0.10%
2 S. Mission St. @ Crawford Ave.	1,344	1,378	+2.53%	1,398	+4.02%	+1.45%
3 Methow St. @ Crawford Ave.	-	968	-	927	-	-4.24%
4 Okanogan Ave @ Crawford Ave.	-	856	-	811	-	-5.26%
5 S. Miller St @ Crawford Ave.	-	646	-	612	-	-5.26%
Total	-	7,847	-	7,751	-	-1.2%

Turning movement counts were also collected in January 2019 for additional study intersections after discussions with County staff. Figure 4 summarizes the turning movement volumes at the study intersections for the PM peak-hour.

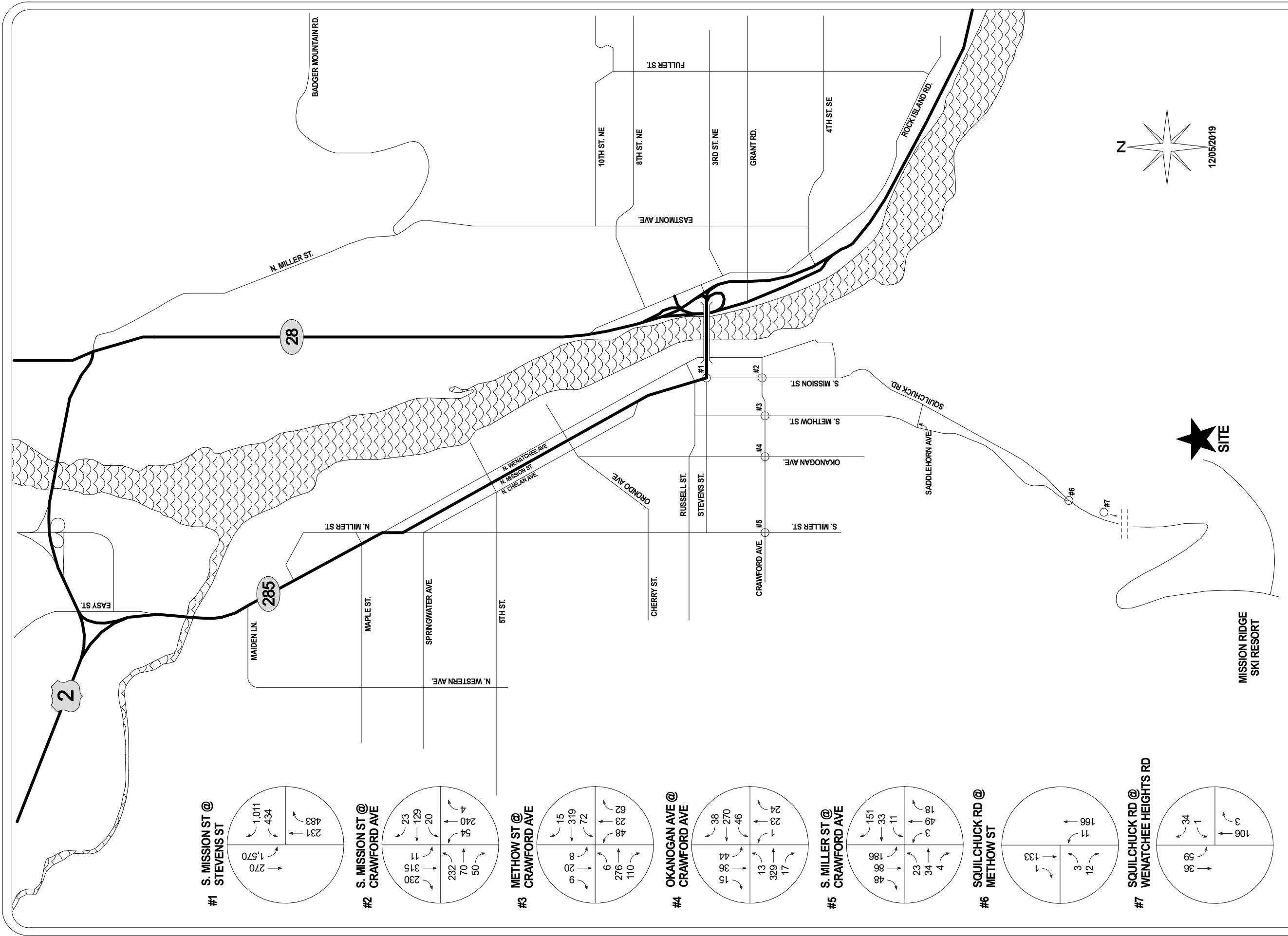
## 5.2 2025 / 2028 / 2040 Baseline Conditions

A 1.5% background annually compounding growth rate was applied to all turning movement volumes at the study intersections to account for expected growth. Figure 5, Figure 7, and Figure 9 summarize the baseline turning movement volumes at the study intersections for the 2025, 2028, and 2040 PM peak-hours, respectively.

## 5.3 2025 / 2028 Future with Development

The Mission Ridge development is expected to be approximately 63% built-out by the year 2028. For the analysis within this report, it was assumed 65% of the development's generated trips would be impacting the study intersections during the 2025 and 2028 analysis years to represent the typical 6-year horizon period as well as coincide with completions of Phase I and Phase II. This assumption is likely conservative for the 2025 analysis year as only 37% of the development is expected to be constructed by then.

The 2025 and 2028 future with development turning movements at the study intersections were calculated by adding 65% of the development's total trips to the baseline volumes at the study intersections. Figure 6 and Figure 8 summarize the 2025 and 2028 future with development turning movement volumes, respectively.



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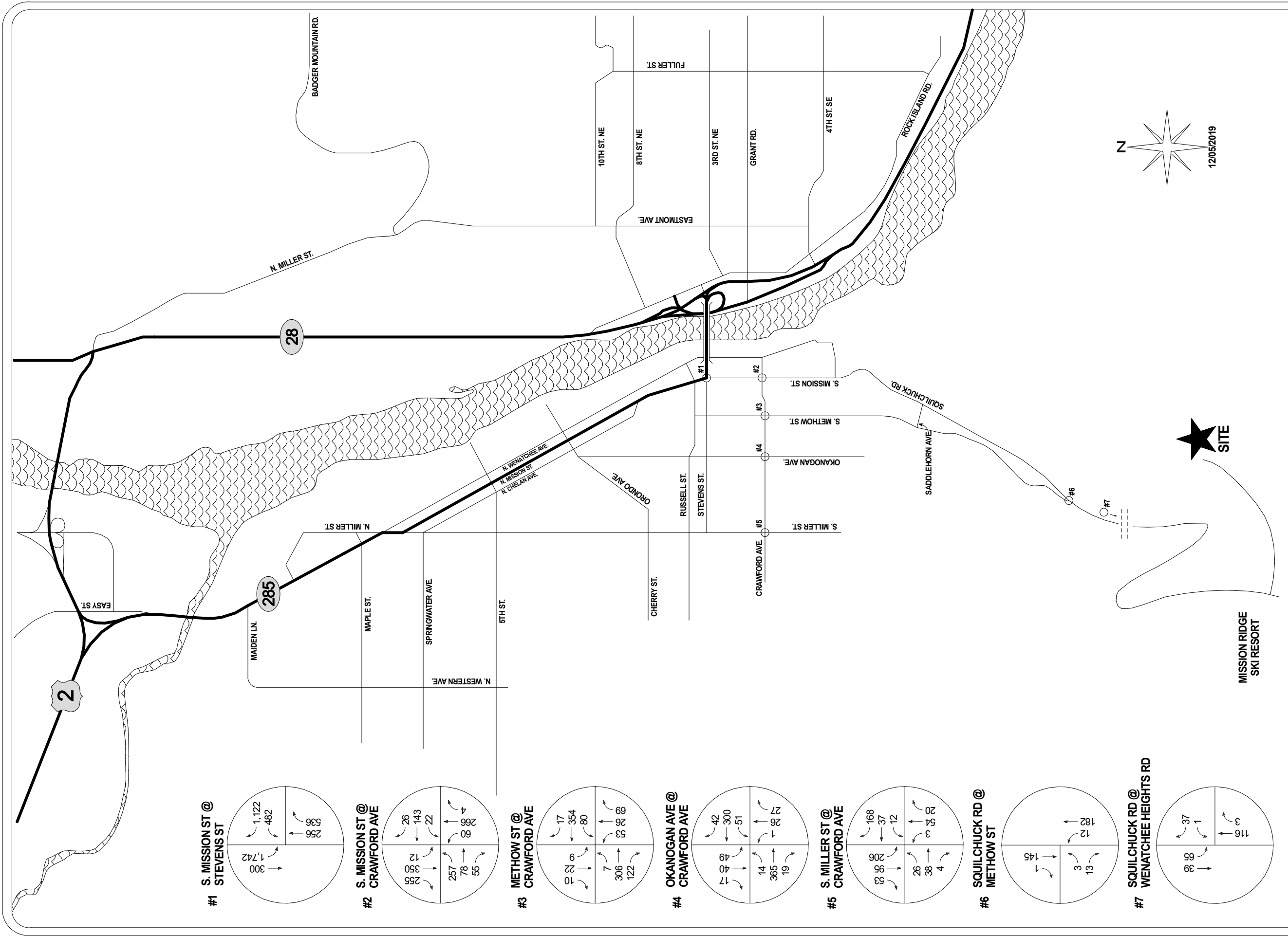
**FIGURE 4**  
2018/2019 EXISTING  
PM PEAK-HOUR  
TURNING MOVEMENTS

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**LEGEND**  
XXX →  
PEAK-HOUR  
TURNING MOVEMENT VOLUMES

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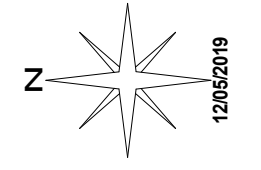
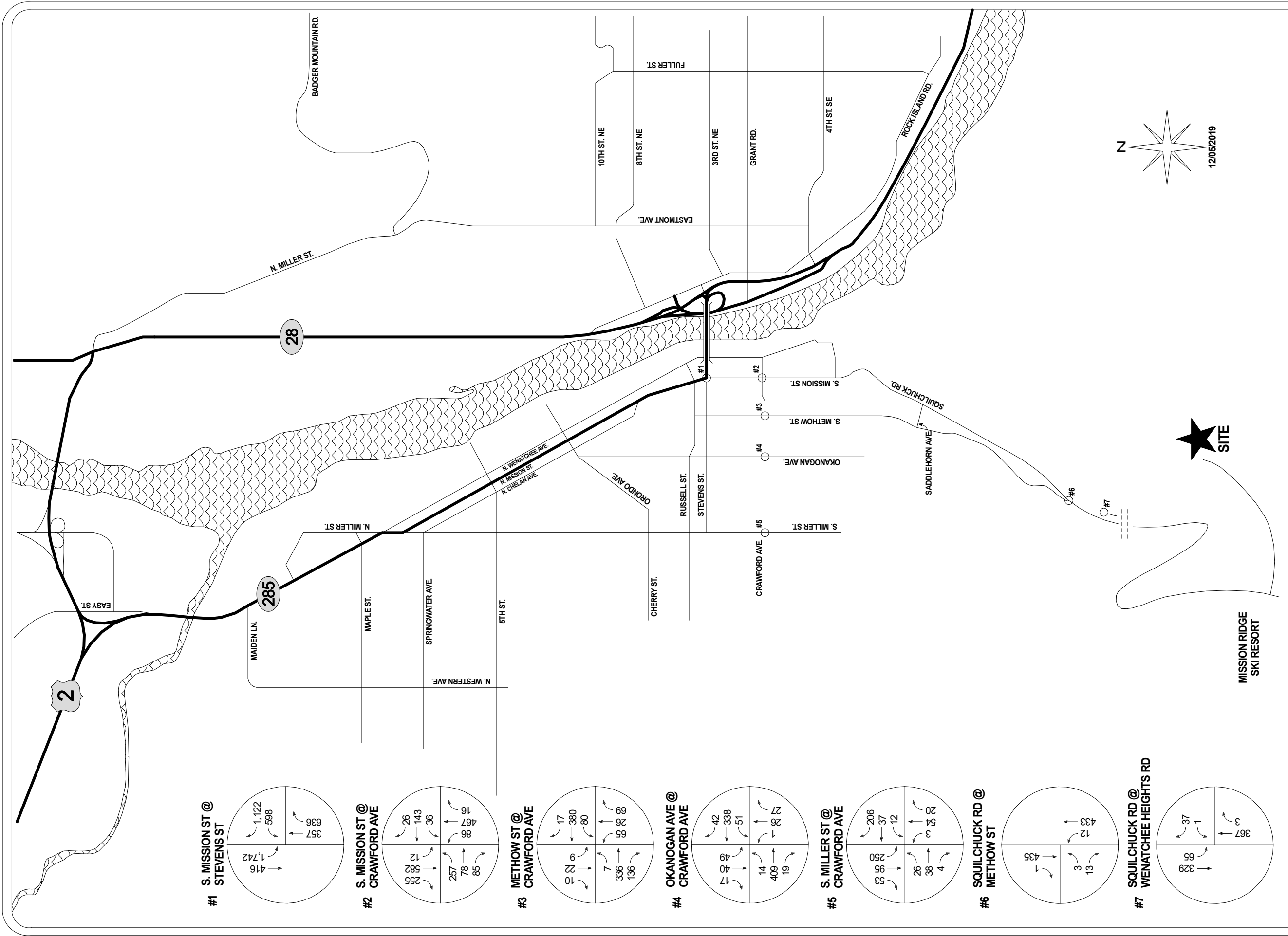
**FIGURE 5**  
2025 BASELINE  
PM PEAK-HOUR  
TURNING MOVEMENTS

**LEGEND**  
XXXX → PEAK-HOUR TURNING MOVEMENT VOLUMES

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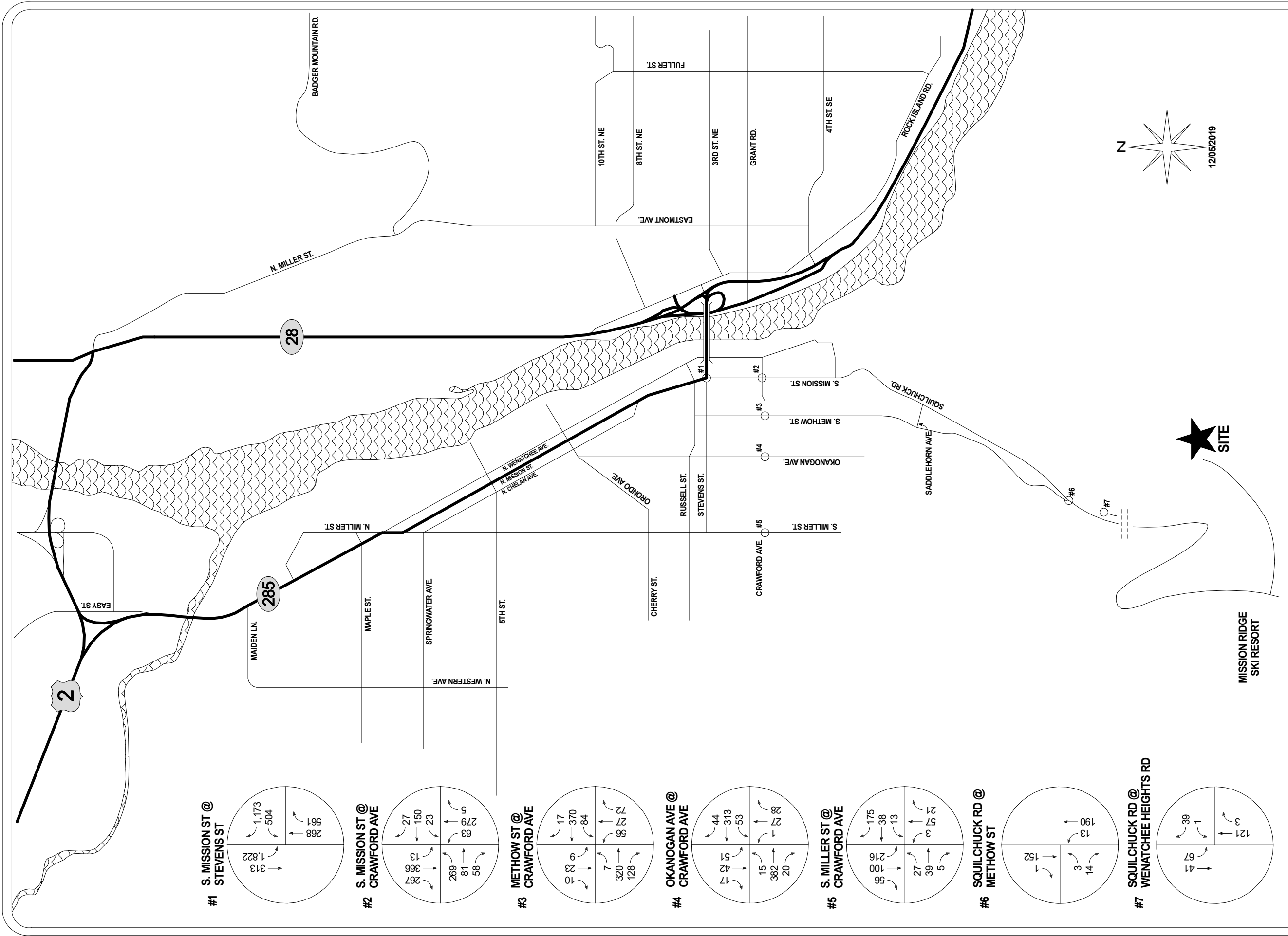
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**FIGURE 6**  
2025 FUTURE W/ DEV.  
65% OCCUPANCY  
PM PEAK-HOUR  
TURNING MOVEMENTS

**LEGEND**  
XXXX → PEAK-HOUR TURNING MOVEMENT VOLUMES

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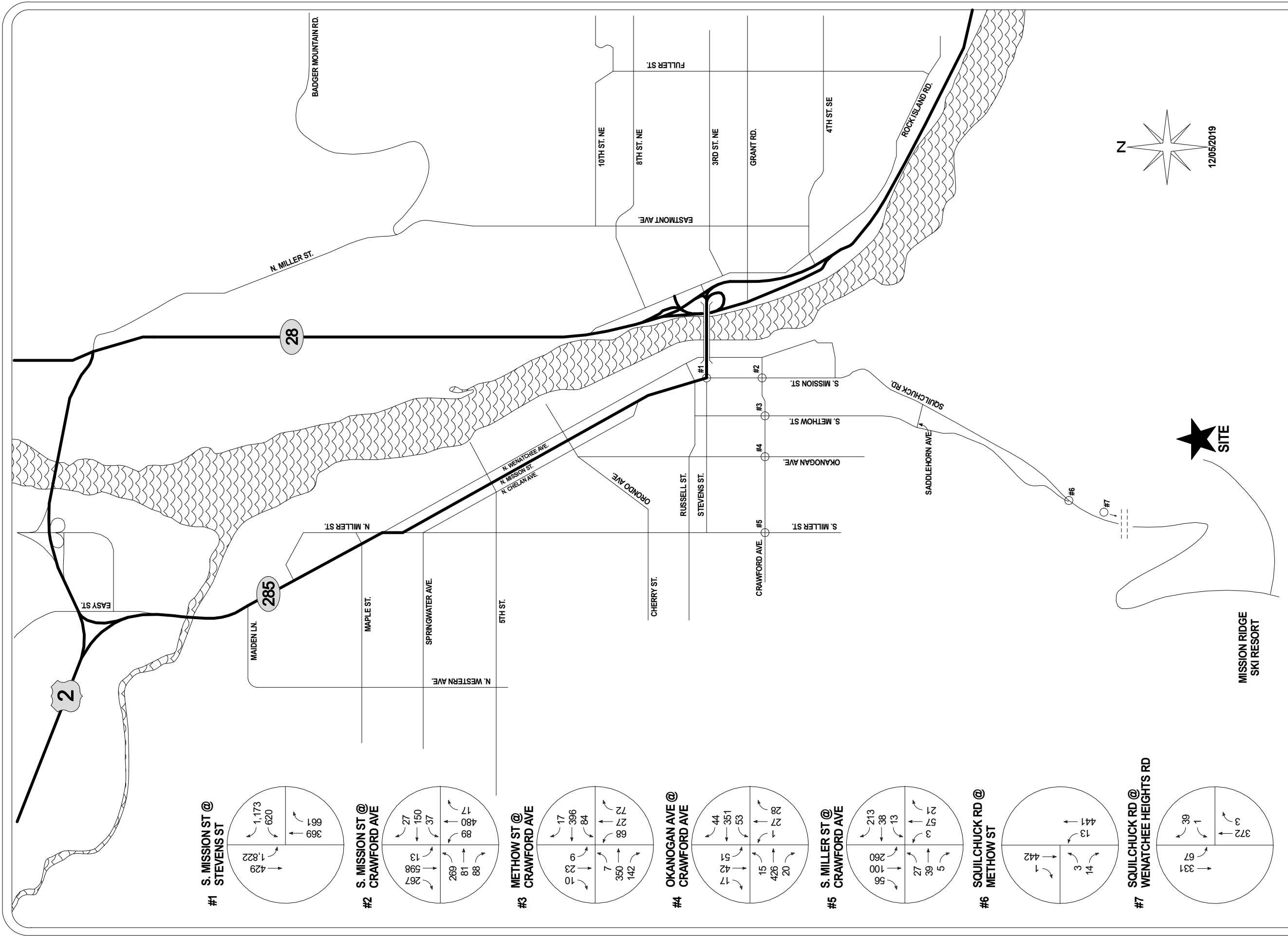
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FIGURE 7  
2028 BASELINE  
PM PEAK-HOUR  
TURNING MOVEMENTS

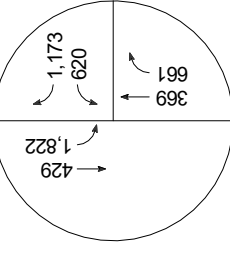
LEGEND  
XXXX → PEAK-HOUR TURNING MOVEMENT VOLUMES

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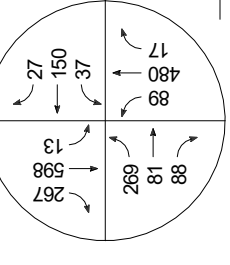
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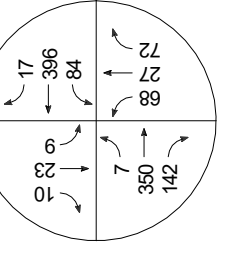
**#1 S. MISSION ST @ STEVENS ST**



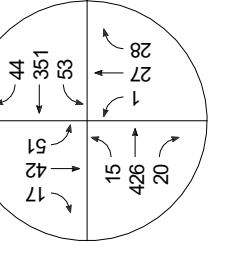
**#2 S. MISSION ST @ CRAWFORD AVE**



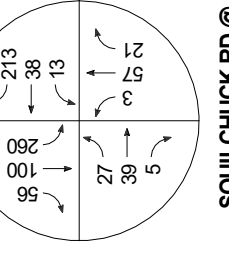
**#3 METHOW ST @ CRAWFORD AVE**



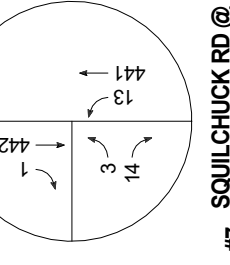
**#4 OKANOAGAN AVE @ CRAWFORD AVE**



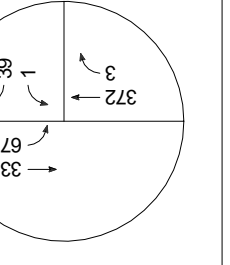
**#5 S. MILLER ST @ CRAWFORD AVE**



**#6 SQUILCHUCK RD @ METHOW ST**



**#7 SQUILCHUCK RD @ WENATCHEE HEIGHTS RD**



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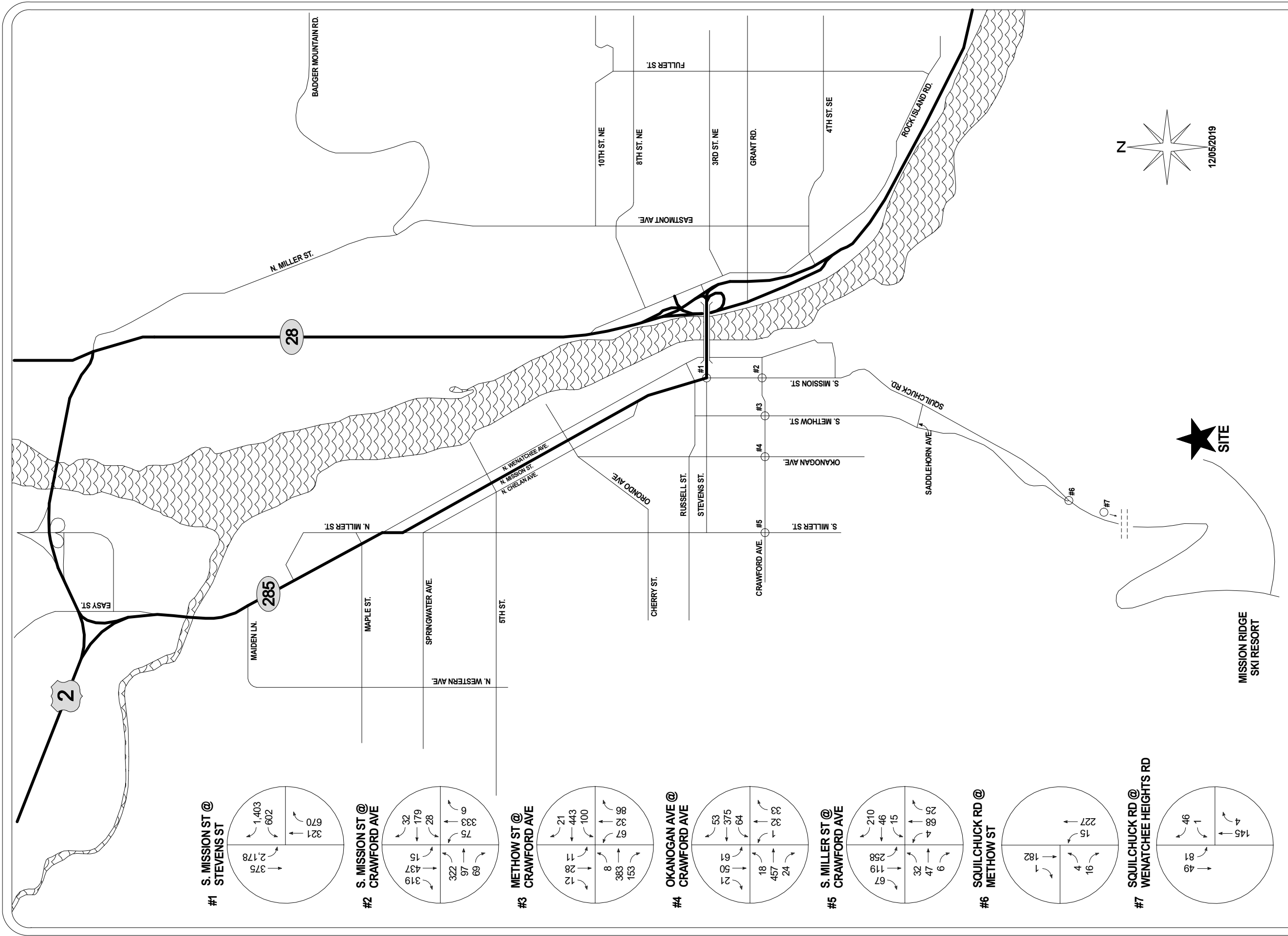
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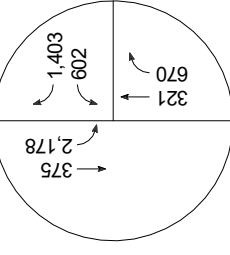
**LEGEND**  
XXX → PEAK-HOUR TURNING MOVEMENT VOLUMES

**FIGURE 8  
2028 FUTURE W/ DEV.  
65% OCCUPANCY  
PM PEAK-HOUR  
TURNING MOVEMENTS**

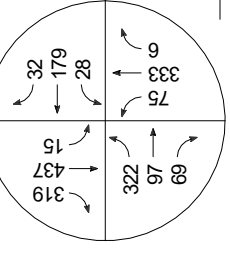
**CHELAN COUNTY**



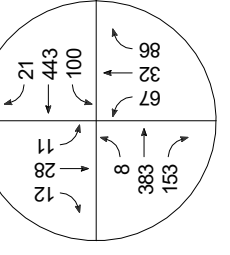
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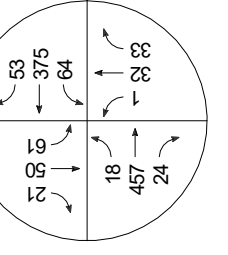
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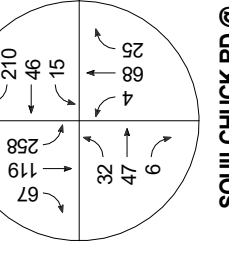
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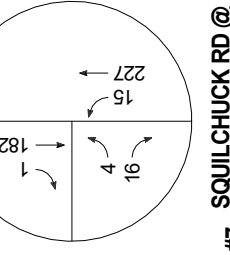
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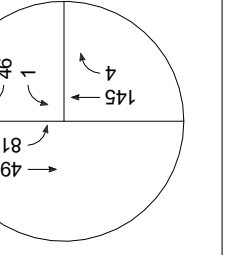
**#5 S. MILLER ST @ CRAWFORD AVE**



**#6 SQUILCHUCK RD @ METHOW ST**



**#7 SQUILCHUCK RD @ WENATCHEE HEIGHTS RD**



**GIBSON TRAFFIC CONSULTANTS**

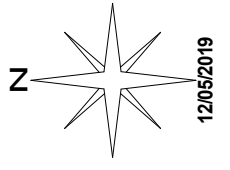
**TRAFFIC IMPACT STUDY**  
GTC #17-092

**MISSION RIDGE  
RESIDENTIAL-RESORT DEVELOPMENT**

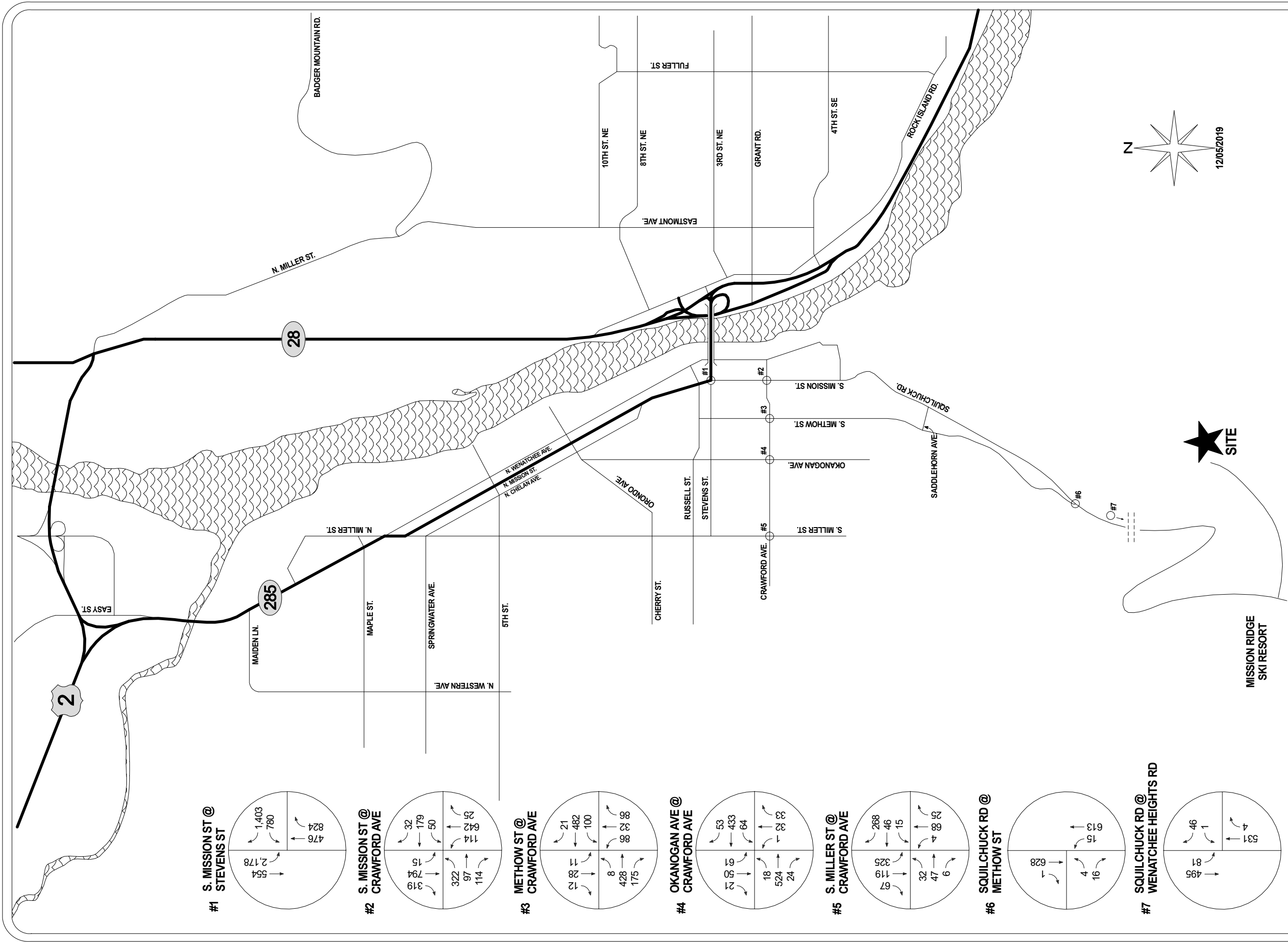
**LEGEND**  
XXX → PEAK-HOUR  
TURNING MOVEMENT VOLUMES

**FIGURE 9**  
**2040 BASELINE**  
**PM PEAK-HOUR**  
**TURNING MOVEMENTS**

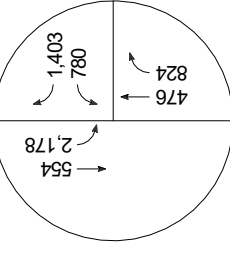
**CHELAN COUNTY**



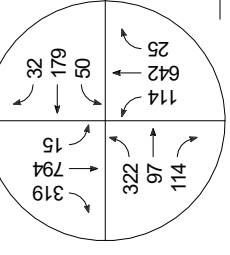
MISSION RIDGE  
SKI RESORT



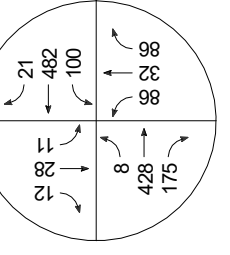
**#1 S. MISSION ST @ STEVENS ST**



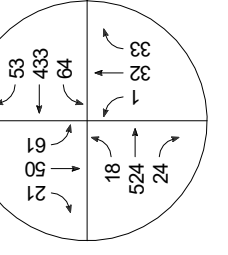
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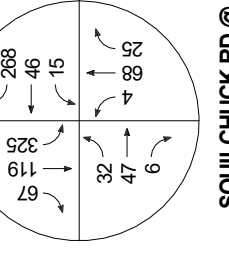
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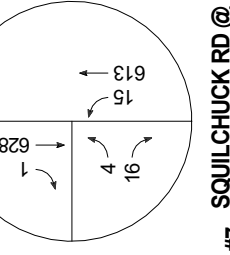
**#4 OKANOGAN AVE @ CRAWFORD AVE**



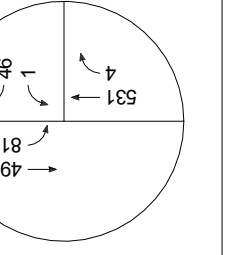
**#5 S. MILLER ST @ CRAWFORD AVE**



**#6 SQUILCHUCK RD @ METHOW ST**



**#7 SQUILCHUCK RD @ WENATCHEE HEIGHTS RD**



**GIBSON TRAFFIC CONSULTANTS**

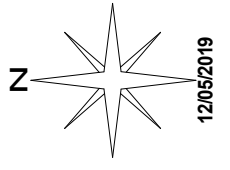
**TRAFFIC IMPACT STUDY  
GTC #17-092**

**MISSION RIDGE  
RESIDENTIAL-RESORT DEVELOPMENT**

**LEGEND**  
XXX → PEAK-HOUR TURNING MOVEMENT VOLUMES

**FIGURE 10  
2040 FUTURE W/ DEV.  
100% OCCUPANCY  
PM PEAK-HOUR  
TURNING MOVEMENTS**

**CHELAN COUNTY**



MISSION RIDGE  
SKI RESORT

#### **5.4 2040 Future with Development**

The Mission Ridge development is expected to be fully constructed and occupied by 2040. This represents a 22-year forecast of existing traffic operations. The results of the 2040 level of service analysis at the study intersection does not account for any potential changes in mobility to the City of Wenatchee and mostly replicates existing travel patterns. The results of the analysis should therefore be considered preliminary and not a condition of approval for the Mission Ridge development, as discussed in more detail later in this report. Figure 10 summarizes the 2040 future with development turning movements for the PM peak-hour.

#### **5.5 Level of Service Analysis**

Existing channelization and intersection control have been used for the 2018/2019 existing conditions and the future conditions to determine if improvements are necessary since there are no planned improvement for any of the study intersections. The study intersections are anticipated to operate at acceptable levels of service in the existing conditions for the PM peak-hour. Level of service calculations are summarized in Table 5 for the existing, 2025 and 2028 conditions. The level of service calculations for the 2040 conditions are summarized in Table 6.

Table 5: 2025 and 2028 PM Peak-Hour Level of Service Summary

Intersection	Control Type	2018/2019 Existing		2025 Baseline		2025 Future w/ Dev.		2028 Baseline		2028 Future w/ Dev.	
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1. S. Mission St. @ Stevens St.	Signal	C	24.8 sec	C	31.2 sec	D	43.0 sec	D	36.4 sec	D	49.1 sec
2. S. Mission St. @ Crawford Ave.	Signal	B	16.7 sec	B	18.1 sec	C	21.9 sec	B	19.2 sec	C	24.6 sec
3. Methow St. @ Crawford Ave.	Minor-Leg Stop-Cont.	C	20.9 sec Northbound	D	27.2 sec Northbound	E	38.8 sec Northbound	D	32.0 sec Northbound	E	48.9 sec Northbound
<i>With Improvements</i>	AWSC	-	-	-	-	C	19.3 sec	C	17.9 sec	C	20.6 sec
4. Okanogan Ave. @ Crawford Ave.	Minor-Leg Stop-Cont.	D	26.5 sec Southbound	E	36.2 sec Southbound	E	47.0 sec Southbound	E	43.5 sec Southbound	F	58.2 sec Southbound
<i>With Improvements</i>	AWSC	-	-	B	13.9 sec	C	16.0 sec	B	14.8 sec	C	16.7 sec
5. S. Miller St. @ Crawford Ave.	Minor-Leg Stop-Cont.	C	20.8 sec Eastbound	D	25.5 sec Eastbound	E	35.1 sec Eastbound	D	28.3 sec Eastbound	E	40.2 sec Eastbound
<i>With Improvements</i>	AWSC	-	-	-	-	B	12.0 sec	B	11.1 sec	B	12.0 sec
6. Squilchuck Rd @ Methow St	Minor-Leg Stop-Cont.	A	9.7 sec Eastbound	A	9.8 sec Eastbound	B	14.4 sec Eastbound	A	9.9 sec Eastbound	B	14.5 sec
7. Squilchuck Rd @ Wen. Heights Rd	Minor-Leg Stop-Cont.	B	10.9 sec Westbound	B	11.2 sec Westbound	C	21.5 sec Westbound	B	11.3 sec Westbound	C	21.9 sec

The 2025 and 2028 level of service analysis identifies three intersections that could require mitigation for development trips: Methow Street at Crawford Avenue, Okanogan Avenue at Crawford Avenue, and S. Miller Street at Crawford Avenue. At the intersections of Methow Street and Crawford Avenue as well as S. Miller Street and Crawford Avenue, an all-way stop-controlled intersection could be warranted in the 2025 future with development conditions. Additionally, the intersection of Okanogan Avenue and Crawford Avenue could require mitigation in the form of an all-way stop-controlled intersection as soon as 2025 just from background growth even if no development trips are added. As was stated earlier in this report, a 65% build-out of the site by 2025 would be considered an aggressive timeline and the portion of the development likely to be occupied before then is likely to be less. It may be appropriate to re-evaluate this intersection closer to 2025 to determine the actual number of development trips that have been added to the street network, confirm the trip distribution and growth assumptions, and re-evaluate the operations of the intersection of Okanogan Avenue and Crawford Avenue.

**Table 6: 2040 Preliminary PM Peak-Hour Level of Service Summary**

Intersection	Control Type	2040 Baseline		2040 Future w/ Dev.	
		LOS	Delay	LOS	Delay
1. S. Mission St. @ Stevens St.  <i>2040 Improvements</i>	Signal	E	72.7 sec	F	101.4 sec
	Optimized Timings	E	65.7 sec	F	96.3 sec
2. S. Mission St. @ Crawford Ave.  <i>2040 Improvements</i>	Signal	C	26.7 sec	E	82.3 sec
	Optimized Timings	-	-	D	52.4 sec
3. Methow St. @ Crawford Ave.  <i>2025/2028 Improvements</i>  <i>2040 Improvements</i>	Minor-Leg Stop-Cont.	F	95.1 sec Northbound	-	-
	AWSC	E	36.7 sec	F	57.6 sec
	Signal	A	6.8 sec	A	7.0 sec
4. Okanogan Ave. @ Crawford Ave.  <i>2025/2028 Improvements</i>  <i>2040 Improvements</i>	Minor-Leg Stop-Cont.	F	143.0 sec Southbound	-	-
	AWSC	C	23.0 sec	E	38.6 sec
	Signal	-	-	A	6.5 sec
5. S. Miller St. @ Crawford Ave.  <i>2040 Improvements</i>	Minor-Leg Stop-Cont.	F	55.7 sec Eastbound	-	-
	AWSC	B	13.9 sec	C	18.9 sec
6. Squilchuck Rd @ Methow St	Minor-Leg Stop-Cont.	B	10.3 sec Eastbound	C	21.5 sec Eastbound
7. Squilchuck Rd @ Wen. Heights Rd  <i>2040 Improvements</i>	Minor-Leg Stop-Cont.	B	12.1 sec Westbound	E	38.8 sec Westbound
	Add SB Accel Lane	-	-	C	22.2 sec Westbound

Full build-out and occupancy of the Mission Ridge development is expected to occur by the year 2040. A 2040 horizon year results in a 22-year forecast of existing traffic volumes, patterns, and behaviors. This forecast includes nearly 39% growth in the existing volumes. Typical traffic analysis forecasts usually do not extend this far due to many factors of uncertainty and the results of the 22-year forecast should be considered preliminary. It is recommended this analysis is performed again closer to the actual date the development is expected to have full-occupancy to re-evaluate the impacts of the development and what, if any, improvements may be necessary.



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### **5.5.1. S. Mission Street and Stevens Street**

The signalized intersection at S. Mission Street and Stevens Street is expected to operate at unacceptable levels of service in the 2040 baseline and future with development conditions assuming existing travel patterns and behaviors. No improvements have been identified for the intersection in the Chelan and Douglas Counties Transportation 2040 plan that would allow the intersection to operate at an acceptable level of service in the 2040 baseline scenario. Due to projected background growth volumes contributing to the intersection operating at LOS E, this intersection would be a prime candidate to be re-evaluated after Phase II of the development is complete and when the intersection is nearing the LOS D/E threshold.

### **5.5.2. Crawford Avenue Intersections**

The intersections of Methow Street and Okanogan Avenue along Crawford Avenue are expected to at least need all-way stop-control to satisfy 2040 baseline level of service requirements (potentially a signal as well at Methow Street) and a signal to satisfy 2040 future with development level of service requirements. The 2028 future with development scenario identified all-way stop-control as necessary for the intersections to operate acceptably. Whether or not signals would be required in the 2040 future with development condition should be re-evaluated closer to the expected build-out year when development traffic patterns have been established. No long-term improvements are identified in the Chelan and Douglas Counties Transportation 2040 plan for the Methow Street intersection. The Chelan and Douglas Counties Transportation 2040 plan does identify “intersection control” improvements at Okanogan Avenue. Proportionate share contributions from the development could off-set impacts if future analysis warrants such improvements.

The S. Miller Street at Crawford Avenue intersection is expected to need all-way stop-control intersection control in the 2040 baseline conditions to satisfy level of service requirements. The Chelan and Douglas Counties Transportation 2040 plan identifies improvements to “intersection control” at this intersection—which could include changing the intersection from minor-leg stop-controlled to all-way stop-controlled. The improvement to this intersection for 2040 baseline conditions are expected to allow the intersection to operate acceptably in the 2040 future with development scenario as well.

### **5.5.3. Squilchuck Road and Wenatchee Heights Road**

The intersection of Squilchuck Road and Wenatchee Heights Road had one westbound left-turn in the existing count during the PM peak-hour. The level of service reported for the westbound direction in the 2040 future with development scenario reports the average delay experienced by this one vehicle (westbound right-turns do not experience any delay because of the northbound acceleration/add lane north of the intersection and are therefore not included in the level of service calculation). This turning movement’s volume is not expected to significantly increase in the future with the proposed development. Mitigation to improve this low-volume movement could include striping a southbound acceleration/refuge lane south of the intersection to allow for two-stage turning movements. However, the cost to implement this mitigation would likely be disproportional to the benefit it would provide to the low volume of trips. It is recommended this

intersection is re-evaluated after the 2028 horizon year with construction of roughly 65% of the proposed development to determine if more westbound-left trips are present and how the intersection operates.

## 6. SQUILCHUCK ROAD CAPACITY

The viability of Squilchuck Road to remain a two-lane roadway was evaluated in the 2040 future with development conditions. In determining the adequacy of Squilchuck Road, Table 15.30-3 of the Chelan County Code refers to AASHTO or the WSDOT Design Manual for roadways with ADT's greater than 4,000 vehicles. The development was conservatively assumed to generate over 9,400 ADT, which would satisfy this condition on its own. The September 2019 WSDOT Design Manual does not contain design data for the number of lanes required based on a roadway's ADT volume. AASHTO Section 2.4.1 refers to the Highway Capacity Manual (HCM) for determining capacity design criteria of highways. The HCM 6<sup>th</sup> Edition was therefore used to determine the adequacy of existing capacity on Squilchuck Road.

November 2017 and January 2019 PM peak-hour turning movement counts on Squilchuck Road at Methow Street identified peak-hour volumes between 100 and 200 vehicles per hour per direction. A critical directional volume of 691 southbound vehicles per hour per lane was calculated after applying a 1.5% annually compounding growth rate and development trips assuming a full build-out in 2040.

Chapter 15 of the HCM 6<sup>th</sup> Edition provides methodologies for estimating the capacity of a two-lane highway. A two-way peak-hour capacity of 3,200 passenger cars per hour is assumed for base conditions in Chapter 15 along with a capacity of 1,700 passenger cars per hour as the maximum capacity in either direction. The estimated directional volume of 691 vehicles per hour was converted to a passenger car equivalent using Equation 11-2 from the HCM 6<sup>th</sup> Edition shown below:

$$V_{pc} = V / (PHF \times N \times f_{HV} \times f_p)$$

$N$  = number of lanes in critical direction

$V$  = unadjusted volume (veh/hr/ln) = 660 for southbound, 560 for northbound

$V_{pc}$  = passenger car equivalent volume = 906

$PHF$  = Peak-hour factor = 0.87 for southbound, 0.92 for northbound

$f_{HV}$  = Heavy vehicle factor = 0.985 for southbound, 0.957 for northbound

$f_p$  = Driver population factor = 0.85

Table 7 summarizes the calculation of passenger car equivalent for the directional 2040 PM peak-hour lane volumes using the 2017 and 2019 counts. HCM 6<sup>th</sup> Edition states service quality deteriorates at relatively low demand flow rates and therefore provides methods for estimating level of service besides volume-to-capacity ratios. For a Class II two-lane highway—which generally serve recreation destinations and where speed is not a primary concern—the percent of time spent following (PTSF) metric is used to estimate LOS. Table 7 also summarizes LOS for directional volumes using the 2017 and 2019 counts.

**Table 7: Squilchuck Road Volume Calculations**

Factor	November 2017 Count		January 2019 Count	
	Northbound	Southbound	Northbound	Southbound
Existing Volume [veh/hr]	107	174	177	145
2040 With Development Volume [veh/hr]	537	691	628	644
Peak-Hour Factor (PHF)	0.92	0.87	0.83	0.73
Heavy Vehicle Factor	0.957	0.985	0.957	0.985
Driver Population Factor	0.85	0.85	0.85	0.85
Passenger Car Equivalent [pc/hr]	720	950	930	1,050
Estimated PTSF [%] <sup>4</sup>	66%	73%	75%	77%
<b>LOS<sup>5</sup></b>	<b>C</b>	<b>D</b>	<b>D</b>	<b>D</b>

Table 7 estimates 1,050 passenger cars per hour in the southbound direction and 930 passenger cars in the northbound direction in the 2040 future with development scenario using the 2019 counts as a basis. These volumes are both below the critical 1,700 passenger cars per hour per lane maximum and when combined are below the 3,200 passenger cars per hour maximum for both directions. Additionally, the LOS for both directions is LOS D which meets the Chelan County standard. It's also important to note these calculations represent an assumed scenario where 100% of residential units are occupied year-round and no internal crossover reduction was taken for residential trips. These calculations should therefore be considered a conservatively high estimate of future operations for the roadway.

## 7. COLLISION ANALYSIS

Collision data was requested from WSDOT for the five study intersections as well as the extents of Squilchuck Road from Crawford Avenue to the Mission Ridge Ski Resort. Collision data was provided from January 1, 2013 through available 2018 data (data received March 23, 2018). This range represents approximately 5.2 years of collision data. Collision data for the study intersections are summarized in Table 8. Collision data is included in the attachments.

<sup>4</sup> PTSF = Percent of Time Spent Following. Estimated from Exhibit 15-2 in *HCM 6<sup>th</sup> Edition*.

<sup>5</sup> Exhibit 15-3 *HCM 6<sup>th</sup> Edition*.

**Table 8: Study Intersections Collision Data Summary (2013 to available 2018)**

Intersection	# Collisions	# Injury Collisions	Estimated Intersection ADT	Collisions Frequency [col/year]	Collisions per Million Entering Vehicles [MEV]
1. S. Mission St @ Stevens St	56	16	39,990	10.73	0.73
2. S. Mission St @ Crawford Ave	38	10	13,780	7.28	1.45
3. Methow St @ Crawford Ave	9	3	9,680	1.72	0.49
4. Okanogan Ave @ Crawford Ave	7	3 <sup>6</sup>	8,560	1.34	0.43
5. S. Miller St @ Crawford Ave	7	0	6,460	1.34	0.57

One fatality collision was included in the collision data. The collision occurred 100 feet east of the intersection at Okanogan Avenue and Crawford Avenue. A driver, who was apparently ill according to the collision data provided, struck a utility pole. The collision only involved the single vehicle and the collision did not occur in the intersection nor was it related to the intersection. It was only included in the collision data analysis because it was within the typical 100-foot buffer used to analyze intersection collision data. No improvements to the intersection are recommended due to this fatality collision occurring.

Two of the study intersections had collision frequencies or collision rates that may be considered higher than usual. The intersection of S. Mission Street at Stevens Street had a collision frequency of 10.73 collisions per year, which is higher than the typical standard of 10 collisions per year for a signalized intersection. However, the collision rate of collisions per million entering vehicles (MEV) was less than the typical threshold of 1.0 collision per MEV when safety improvements could be analyzed. Additionally, 32 of the intersection's 56 collisions were rear-end collisions (about 57%). Safety improvements for roadways are not typically identified if a high percentage of collisions are rear-end collisions because rear-end collisions are usually the result of driver error rather than correctable intersection design. With this context of the intersection data, no improvements are identified for the intersection.

The signalized intersection at S. Mission Street at Crawford Avenue had a collision rate of 1.45 collisions per MEV. This is higher than the typical threshold of 1.0 collision per MEV, but the intersection had a collision frequency of 7.28 collisions per year. Unlike the S. Mission Street at Stevens Street intersection, rear-end collisions do not make up a high percentage of total collisions (10 of 38, or about 26%). A potential factor in the existing collision rate could be the permitted left-turn phasing of the signal. Of the 38 intersection collisions, 18 involved vehicles making a left turn (about 47%). Protected left-turn phasing may be an improvement for the intersection because it would limit possible vehicle-vehicle and vehicle-ped/bike interactions and the intersection already has left-turn pockets on all approaches. Adding protected left-turn phasing to the intersection is not expected to cause the intersection to operate worse than LOS D for the 2028 future with development scenario. It should be noted that the intersection analysis included in this

<sup>6</sup> Includes one fatality collision

report for the S. Mission Street at Crawford Road intersection maintains the existing permitted left-turn phasing.

Collision data for Mission Street/Squilchuck Road/Mission Ridge Road was requested as well. The approximately 11.7 miles from the S. Mission Street at Crawford Avenue intersection to the Mission Ridge Ski resort had 68 collisions over the five-plus years of collision data analyzed (approximately 13 collisions per year). This collision frequency results in an approximate collision rate of 1.06 collisions per million vehicle-miles given the length of the corridor and the estimated ADT (2,900 vehicles). This rate is lower than the most recently published data from WSDOT for average collision rates in Chelan County<sup>7</sup> (1.76 collisions per million vehicle-miles). The collision data shows the segment performs better than an average road segment within Chelan County. No safety improvements are therefore proposed for this roadway segment.

## 8. ACCESS ANALYSIS

The Mission Ridge development is expected to have primary access to and from the site through the existing Mission Ridge grounds. The development will generate over 1,500 ADT and therefore would be required to follow the Chelan County Private Rural/Urban Class 1 roadway standards (Chelan County Code 15.30.220).

## 9. MITIGATION

Chelan County does not have a standard traffic mitigation fee identified for new developments. Therefore, the mitigation required by the Mission Ridge development should only be that identified so study intersections operate at an acceptable level of service.

The 2028 future with development conditions assumed approximately 65% of the Mission Ridge development would be constructed and occupied. This analysis year identified improvements to three intersections that may be required with the addition of 65% of the development's trips. Three intersections along Crawford Avenue (Methow Street, Okanogan Avenue, and S. Miller Street) are expected to need all-way stop-control intersection control when 65% of the development's trips are added on top of 1.5% annual traffic growth for 10 years. In the case of the intersection at Crawford Avenue and Okanogan Avenue, an all-way stop-controlled intersection may be required in the year 2028 whether development trips are present or not. Intersection control improvements have already been identified for the intersection of Crawford Avenue at Okanogan Avenue in the Chelan and Douglas Counties Transportation 2040 plan. The need and phasing of these improvements should be coordinated between Chelan County, the City of Wenatchee, and the developer.

The mitigation identified for the 2040 full build-out and occupancy scenario should be considered preliminary at this time and re-evaluated closer to the time full occupancy is expected to occur.

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<sup>7</sup> 2013 Washington State Annual Collision Summary (WSDOT)

## 10. CONCLUSIONS

The Mission Ridge development is expected to include a total of 896 residential units, 110,000 SF of commercial/retail, 4 ski lifts, a 57-room resort hotel, and housing for 80 employees on site. Using a conservatively high assumption that all residences would be occupied year-round, the development is expected to generate 9,468 new daily trips and 833 PM peak-hour trips when it is fully occupied. Mitigation in the form of all-way stop-controlled intersection control was identified for three of the five study intersections by the year 2028 (Methow Street at Crawford Avenue, Okanogan Avenue at Crawford Avenue, and S. Miller Street at Crawford Avenue). The requirement for all-way stop-control mitigation is contingent upon a 1.5% annual growth rate assumed for the intersections and 65% of the development being occupied. Further mitigation could be required by the year 2040 as identified in this report, but the analysis should be considered preliminary at this time and re-evaluated at a future date after Phase II (approximately 65% occupancy of the development). No mitigation should be required for Squilchuck Road based on the capacity and safety analysis provided in the report.

Chelan County does not have standard traffic mitigation fees and therefore the development should not be required to pay any additional fees. Mitigation improvements have been identified in the intersection analysis, but the implementation should depend on the phasing and timing of planned development occupancy. The mitigation identified for the 2040 full build-out and occupancy scenario should be considered preliminary at this time and re-evaluated closer to the time full occupancy is expected to occur.

# **Trip Generation Calculations**

Mission Ridge  
GTC #17-092

**Trip Generation for: Development Peak Weekday  
(a.k.a.): Average Weekday Daily Trips (AWDT)**

LAND USES	VARIABLE	ITE LU code	Gross Trips				Internal Crossover		NET EXTERNAL TRIPS BY TYPE						
			Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	In+Out (Total)	IN BOTH DIRECTIONS		DIRECTIONAL ASSIGNMENTS				
									TOTAL	PASS-BY	DIVERTED LINK	NEW	PASS-BY	DIVERTED LINK	NEW
			% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In	Out	In	Out	
Single-Family Deatched Housing	275 Units	210	50%	50%	2,596	0%	0	0%	0	0%	0	0	0	0	1,298
Multifamily Housing (Low-Rise)	621 Units	220	50%	50%	4,546	0%	0	0%	0	0%	0	0	0	0	2,273
Resort Hotel	57 Rooms	330	50%	50%	325	0%	0	0%	0	0%	0	0	0	0	163
Snow Ski Area	4 Lifts	466	50%	50%	1,086	0%	0	0%	0	0%	0	0	0	0	543
Shopping Center	110,000 KSF	820	50%	50%	4,153	85%	3,530	0%	0	0%	0	0	0	0	311
Employee Housing	80 Units	225	50%	50%	292	0%	0	0%	0	0%	0	0	0	0	146
<b>Total</b>					12,997		3,530		9,468		0	0	0	0	4,734

Daily PM  
Resort Hotel 5.71 0.41  
Hotel 8.36 0.6

Snow Ski Area 271.44 26  
Golf Course 30.38 2.91

% Occupied 100%



Mission Ridge  
GTC #17-092

**Trip Generation for: Development Peak Weekday, Peak Hour of Adjacent Street Traffic, One Hour between 4 and 6 PM  
(a.k.a.): Weekday PM Peak Hour**

LAND USES	VARIABLE	ITE LU code	Gross Trips				Internal Crossover		NET EXTERNAL TRIPS BY TYPE								
			Trip Rate	% IN	% OUT	In+Out (Total)	% of Gross Trips	Trips In+Out (Total)	IN BOTH DIRECTIONS		DIRECTIONAL ASSIGNMENTS						
									TOTAL	PASS-BY	DIVERTED LINK	NEW	PASS-BY	DIVERTED LINK	NEW		
								In+Out (Total)	% of Ext. Trips	In+Out (Total)	% of Ext. Trips	In	Out	In	Out		
Single-Family Deatched Housing	275 Units	210	0.99	63%	37%	272	0%	0	0%	0	0%	0	0	0	0	172	101
Multifamily Housing (Low-Rise)	621 Units	220	0.56	63%	37%	348	0%	0	0%	0	0%	0	0	0	0	219	129
Resort Hotel	57 Rooms	330	0.41	43%	57%	23	0%	0	0%	0	0%	0	0	0	0	10	13
Snow Ski Area	4 Lifts	466	26.00	4%	96%	104	0%	0	0%	0	0%	0	0	0	0	4	100
Shopping Center	110,000 KSF	820	3.81	48%	52%	419	85%	356	0%	0	0%	0	0	0	0	30	33
Employee Housing	80 Units	225	0.28	50%	50%	22	0%	0	0%	0	0%	0	0	0	0	11	11
<b>Total</b>						<b>1,189</b>		<b>356</b>		<b>833</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>446</b>	<b>386</b>

% Occupied 100%

Mission Ridge  
GTC #17-092

PM Peak-Hour

%	New ADT	New PM Peak Hour Trips		
		In	Out	Total
100%	9468	446	386	833
1%	94.68	4.46	3.86	8.33
2%	189.36	8.92	7.73	16.65
3%	284.03	13.39	11.59	24.98
4%	378.71	17.85	15.46	33.31
<b>5%</b>	<b>473.39</b>	<b>22.31</b>	<b>19.32</b>	<b>41.63</b>
6%	568.07	26.77	23.19	49.96
7%	662.75	31.23	27.05	58.28
8%	757.43	35.70	30.92	66.61
9%	852.10	40.16	34.78	74.94
<b>10%</b>	<b>946.78</b>	<b>44.62</b>	<b>38.65</b>	<b>83.26</b>
11%	1041.46	49.08	42.51	91.59
12%	1136.14	53.54	46.37	99.92
13%	1230.82	58.00	50.24	108.24
14%	1325.49	62.47	54.10	116.57
<b>15%</b>	<b>1420.17</b>	<b>66.93</b>	<b>57.97</b>	<b>124.90</b>
16%	1514.85	71.39	61.83	133.22
17%	1609.53	75.85	65.70	141.55
18%	1704.21	80.31	69.56	149.88
19%	1798.89	84.78	73.43	158.20
<b>20%</b>	<b>1893.56</b>	<b>89.24</b>	<b>77.29</b>	<b>166.53</b>
21%	1988.24	93.70	81.15	174.85
22%	2082.92	98.16	85.02	183.18
23%	2177.60	102.62	88.88	191.51
24%	2272.28	107.09	92.75	199.83
<b>25%</b>	<b>2366.96</b>	<b>111.55</b>	<b>96.61</b>	<b>208.16</b>
26%	2461.63	116.01	100.48	216.49
27%	2556.31	120.47	104.34	224.81
28%	2650.99	124.93	108.21	233.14
29%	2745.67	129.40	112.07	241.47
<b>30%</b>	<b>2840.35</b>	<b>133.86</b>	<b>115.94</b>	<b>249.79</b>
31%	2935.02	138.32	119.80	258.12
32%	3029.70	142.78	123.66	266.44
33%	3124.38	147.24	127.53	274.77
34%	3219.06	151.70	131.39	283.10
<b>35%</b>	<b>3313.74</b>	<b>156.17</b>	<b>135.26</b>	<b>291.42</b>
36%	3408.42	160.63	139.12	299.75
37%	3503.09	165.09	142.99	308.08
38%	3597.77	169.55	146.85	316.40
39%	3692.45	174.01	150.72	324.73
<b>40%</b>	<b>3787.13</b>	<b>178.48</b>	<b>154.58</b>	<b>333.06</b>
41%	3881.81	182.94	158.44	341.38
42%	3976.48	187.40	162.31	349.71
43%	4071.16	191.86	166.17	358.04
44%	4165.84	196.32	170.04	366.36
<b>45%</b>	<b>4260.52</b>	<b>200.79</b>	<b>173.90</b>	<b>374.69</b>
46%	4355.20	205.25	177.77	383.01
47%	4449.88	209.71	181.63	391.34
48%	4544.55	214.17	185.50	399.67
49%	4639.23	218.63	189.36	407.99
<b>50%</b>	<b>4733.91</b>	<b>223.10</b>	<b>193.23</b>	<b>416.32</b>

%	New ADT	New PM Peak Hour Trips		
		In	Out	Total
100%	9468	446	386	833
51%	4828.59	227.56	197.09	424.65
52%	4923.27	232.02	200.95	432.97
53%	5017.94	236.48	204.82	441.30
54%	5112.62	240.94	208.68	449.63
<b>55%</b>	<b>5207.30</b>	<b>245.40</b>	<b>212.55</b>	<b>457.95</b>
56%	5301.98	249.87	216.41	466.28
57%	5396.66	254.33	220.28	474.60
58%	5491.34	258.79	224.14	482.93
59%	5586.01	263.25	228.01	491.26
<b>60%</b>	<b>5680.69</b>	<b>267.71</b>	<b>231.87</b>	<b>499.58</b>
61%	5775.37	272.18	235.73	507.91
62%	5870.05	276.64	239.60	516.24
63%	5964.73	281.10	243.46	524.56
64%	6059.40	285.56	247.33	532.89
<b>65%</b>	<b>6154.08</b>	<b>290.02</b>	<b>251.19</b>	<b>541.22</b>
66%	6248.76	294.49	255.06	549.54
67%	6343.44	298.95	258.92	557.87
68%	6438.12	303.41	262.79	566.20
69%	6532.80	307.87	266.65	574.52
<b>70%</b>	<b>6627.47</b>	<b>312.33</b>	<b>270.52</b>	<b>582.85</b>
71%	6722.15	316.79	274.38	591.17
72%	6816.83	321.26	278.24	599.50
73%	6911.51	325.72	282.11	607.83
74%	7006.19	330.18	285.97	616.15
<b>75%</b>	<b>7100.87</b>	<b>334.64</b>	<b>289.84</b>	<b>624.48</b>
76%	7195.54	339.10	293.70	632.81
77%	7290.22	343.57	297.57	641.13
78%	7384.90	348.03	301.43	649.46
79%	7479.58	352.49	305.30	657.79
<b>80%</b>	<b>7574.26</b>	<b>356.95</b>	<b>309.16</b>	<b>666.11</b>
81%	7668.93	361.41	313.02	674.44
82%	7763.61	365.88	316.89	682.76
83%	7858.29	370.34	320.75	691.09
84%	7952.97	374.80	324.62	699.42
<b>85%</b>	<b>8047.65</b>	<b>379.26</b>	<b>328.48</b>	<b>707.74</b>
86%	8142.33	383.72	332.35	716.07
87%	8237.00	388.19	336.21	724.40
88%	8331.68	392.65	340.08	732.72
89%	8426.36	397.11	343.94	741.05
<b>90%</b>	<b>8521.04</b>	<b>401.57</b>	<b>347.81</b>	<b>749.38</b>
91%	8615.72	406.03	351.67	757.70
92%	8710.39	410.49	355.53	766.03
93%	8805.07	414.96	359.40	774.36
94%	8899.75	419.42	363.26	782.68
<b>95%</b>	<b>8994.43</b>	<b>423.88</b>	<b>367.13</b>	<b>791.01</b>
96%	9089.11	428.34	370.99	799.33
97%	9183.79	432.80	374.86	807.66
98%	9278.46	437.27	378.72	815.99
99%	9373.14	441.73	382.59	824.31
<b>100%</b>	<b>9467.82</b>	<b>446.19</b>	<b>386.45</b>	<b>832.64</b>

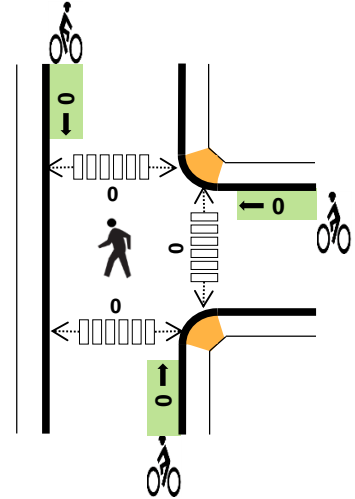
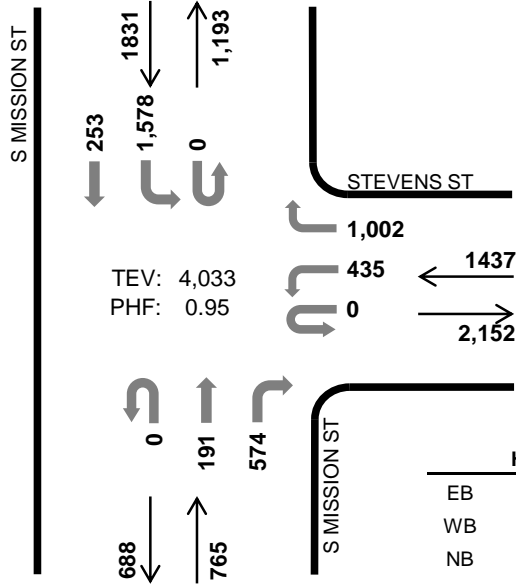
# Counts

# S MISSION ST STEVENS ST



Peak Hour

Date: Thu, Nov 16, 2017  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	-	-
WB	0.6%	0.92
NB	1.0%	0.89
SB	0.6%	0.97
TOTAL	0.7%	0.95

## Two-Hour Count Summaries

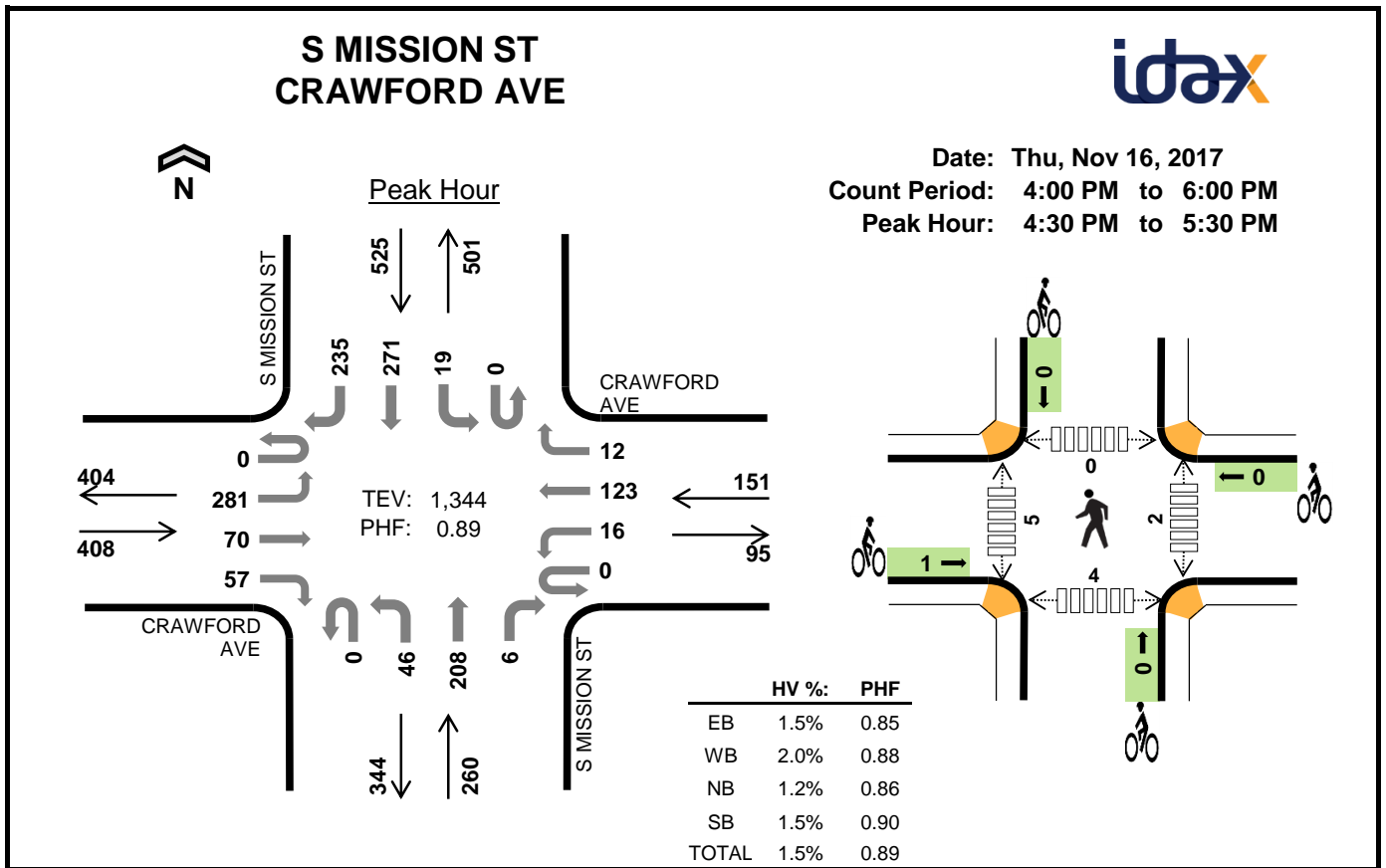
Interval Start	0				STEVENS ST				S MISSION ST				S MISSION ST				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	127	0	230	0	0	55	129	0	350	55	0	946	0
4:15 PM	0	0	0	0	0	109	0	254	0	0	49	114	0	342	71	0	939	0
4:30 PM	0	0	0	0	0	111	0	227	0	0	55	123	0	349	59	0	924	0
4:45 PM	0	0	0	0	0	100	0	254	0	0	48	115	0	404	70	0	991	3,800
5:00 PM	0	0	0	0	0	130	0	261	0	0	41	173	0	394	62	0	1,061	3,915
5:15 PM	0	0	0	0	0	118	0	267	0	0	38	152	0	402	66	0	1,043	4,019
5:30 PM	0	0	0	0	0	87	0	220	0	0	64	134	0	378	55	0	938	4,033
5:45 PM	0	0	0	0	0	96	0	261	0	0	42	100	0	361	54	0	914	3,956
Count Total	0	0	0	0	0	878	0	1,974	0	0	392	1,040	0	2,980	492	0	7,756	0
Peak Hour	0	0	0	0	0	435	0	1,002	0	0	191	574	0	1,578	253	0	4,033	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	7	5	3	15	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	4	3	3	10	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	3	1	6	10	0	0	0	0	0	0	2	0	0	2
4:45 PM	0	2	2	3	7	0	0	0	0	0	0	2	0	0	2
5:00 PM	0	4	3	4	11	0	0	0	0	0	0	1	0	0	1
5:15 PM	0	2	1	3	6	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	2	1	4	0	0	0	0	0	0	1	0	0	1
5:45 PM	0	3	2	2	7	0	0	0	0	0	0	3	0	0	3
Count Total	0	26	19	25	70	0	0	0	0	0	0	9	0	0	9
Peak Hr	0	9	8	11	28	0	0	0	0	0	0	4	0	0	4







**Two-Hour Count Summaries**

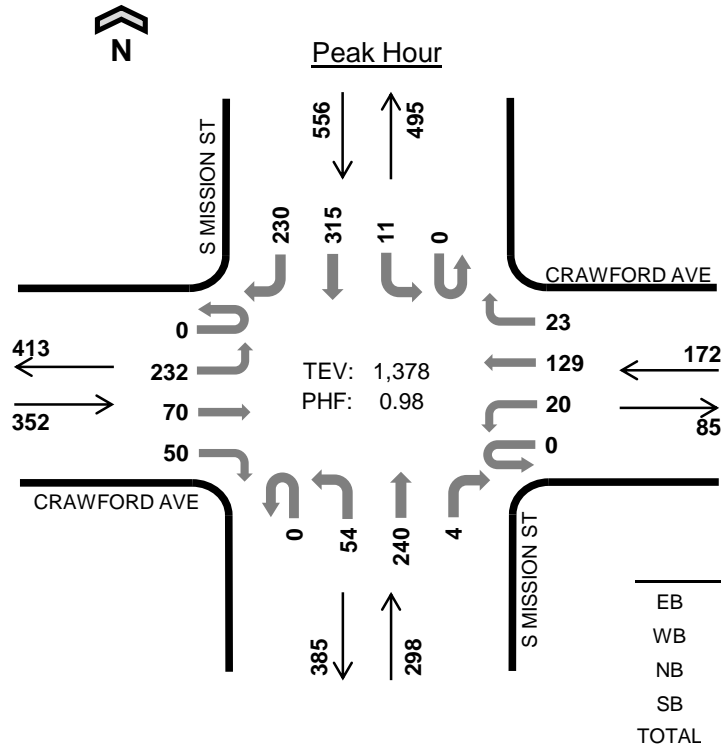
Interval Start	CRAWFORD AVE Eastbound				CRAWFORD AVE Westbound				S MISSION ST Northbound				S MISSION ST Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	54	22	12	0	0	25	3	0	7	49	1	0	4	69	59	305	0
4:15 PM	0	53	21	9	0	5	26	8	0	7	54	3	0	3	54	68	311	0
<b>4:30 PM</b>	<b>0</b>	<b>75</b>	<b>14</b>	<b>14</b>	<b>0</b>	<b>2</b>	<b>27</b>	<b>4</b>	<b>0</b>	<b>13</b>	<b>52</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>64</b>	<b>55</b>	<b>325</b>	0
4:45 PM	0	64	17	13	0	6	31	6	0	8	44	0	0	4	62	50	305	1,246
<b>5:00 PM</b>	<b>0</b>	<b>83</b>	<b>25</b>	<b>12</b>	<b>0</b>	<b>2</b>	<b>39</b>	<b>1</b>	<b>0</b>	<b>16</b>	<b>56</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>67</b>	<b>69</b>	<b>378</b>	1,319
5:15 PM	0	59	14	18	0	6	26	1	0	9	56	1	0	7	78	61	336	1,344
5:30 PM	0	78	17	8	0	2	21	2	0	14	53	1	0	2	57	48	303	1,322
5:45 PM	0	46	10	9	0	4	20	4	0	13	50	1	0	3	74	51	285	1,302
Count Total	0	512	140	95	0	27	215	29	0	87	414	12	0	31	525	461	2,548	0
<b>Peak Hour</b>	<b>0</b>	<b>281</b>	<b>70</b>	<b>57</b>	<b>0</b>	<b>16</b>	<b>123</b>	<b>12</b>	<b>0</b>	<b>46</b>	<b>208</b>	<b>6</b>	<b>0</b>	<b>19</b>	<b>271</b>	<b>235</b>	<b>1,344</b>	<b>0</b>

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

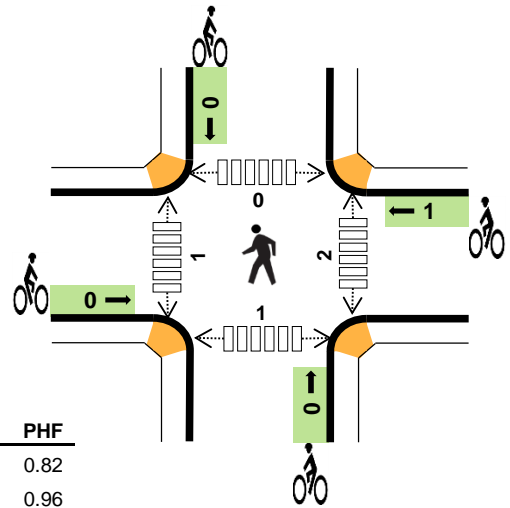
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	3	2	1	2	8	0	2	0	0	2	0	0	0	0	0
4:15 PM	0	2	2	2	6	0	0	0	0	0	0	0	0	0	0
<b>4:30 PM</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>
4:45 PM	1	1	1	1	4	0	0	0	0	0	0	0	0	1	1
<b>5:00 PM</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>6</b>
5:15 PM	1	1	1	3	6	0	0	0	0	0	0	2	0	0	2
5:30 PM	2	1	2	0	5	0	0	0	0	0	0	2	0	1	3
5:45 PM	0	0	1	0	1	0	0	0	0	0	1	0	0	0	1
Count Total	11	8	9	12	40	1	2	0	0	3	3	7	0	5	15
<b>Peak Hour</b>	<b>6</b>	<b>3</b>	<b>3</b>	<b>8</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>4</b>	<b>11</b>



### S MISSION ST CRAWFORD AVE



Date: Thu, Feb 22, 2018  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 4:45 PM to 5:45 PM



	HV %:	PHF
EB	2.0%	0.82
WB	1.7%	0.96
NB	1.3%	0.88
SB	0.7%	0.96
TOTAL	1.3%	0.98

#### Two-Hour Count Summaries

Interval Start	CRAWFORD AVE Eastbound				CRAWFORD AVE Westbound				S MISSION ST Northbound				S MISSION ST Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	56	25	16	0	2	35	7	0	12	70	2	0	1	67	62	355	0
4:15 PM	0	57	23	12	0	5	22	8	0	11	75	0	0	4	71	59	347	0
4:30 PM	0	62	13	8	0	4	31	5	0	15	58	2	0	6	63	52	319	0
<b>4:45 PM</b>	<b>0</b>	<b>56</b>	<b>15</b>	<b>7</b>	<b>0</b>	<b>2</b>	<b>33</b>	<b>4</b>	<b>0</b>	<b>16</b>	<b>68</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>82</b>	<b>59</b>	<b>346</b>	1,367
<b>5:00 PM</b>	<b>0</b>	<b>68</b>	<b>23</b>	<b>16</b>	<b>0</b>	<b>3</b>	<b>36</b>	<b>5</b>	<b>0</b>	<b>15</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>67</b>	<b>54</b>	<b>353</b>	1,365
5:15 PM	0	52	16	12	0	7	35	3	0	13	45	3	0	4	82	57	329	1,347
5:30 PM	0	56	16	15	0	8	25	11	0	10	64	0	0	1	84	60	350	1,378
5:45 PM	0	47	11	10	0	3	24	1	0	13	52	2	0	1	53	63	280	1,312
Count Total	0	454	142	96	0	34	241	44	0	105	495	10	0	23	569	466	2,679	0
Peak Hour	0	232	70	50	0	20	129	23	0	54	240	4	0	11	315	230	1,378	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

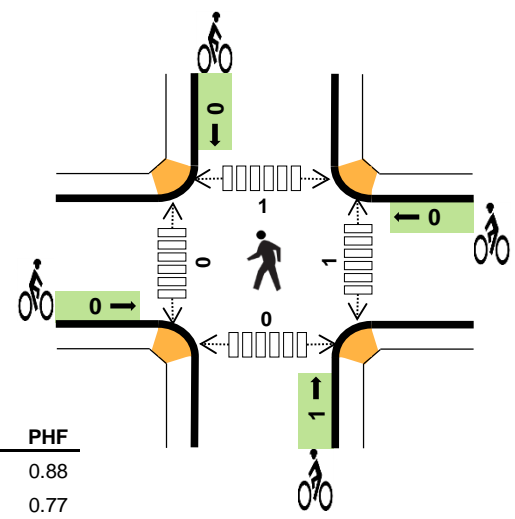
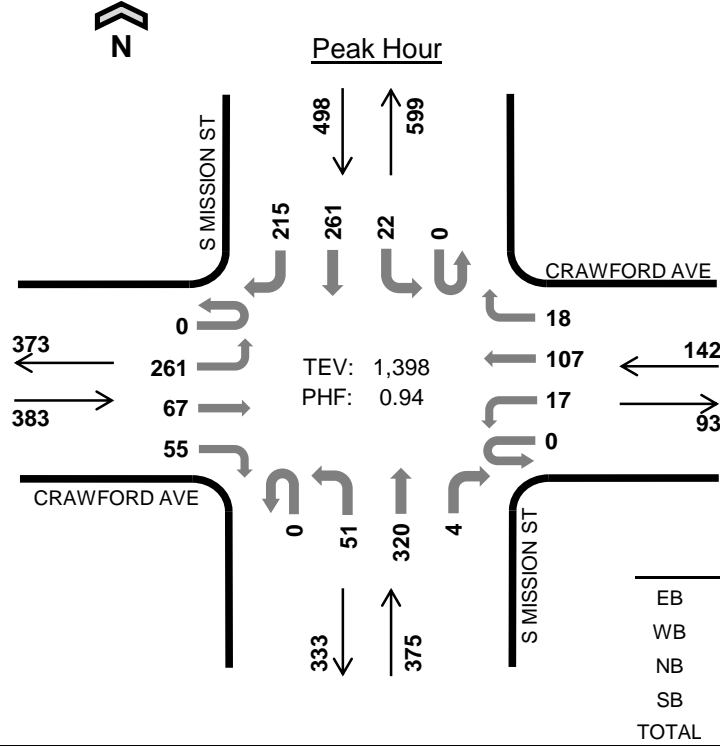
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	4	4	2	0	10	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	4	1	6	0	0	1	0	1	0	0	0	0	0
4:30 PM	1	3	0	0	4	0	0	0	0	0	0	1	0	1	2
4:45 PM	0	0	1	1	2	0	1	0	0	1	1	1	0	1	3
<b>5:00 PM</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
5:15 PM	4	1	1	1	7	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	2	2	0	4	0	0	0	0	0	1	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
Count Total	12	11	10	5	38	0	1	1	1	3	2	2	0	2	6
Peak Hour	7	3	4	4	18	0	1	0	0	1	2	1	0	1	4



# S MISSION ST CRAWFORD AVE



Date: Fri, Feb 23, 2018  
 Count Period: 4:00 PM to 6:00 PM  
 Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	0.8%	0.88
WB	0.7%	0.77
NB	1.1%	0.82
SB	0.8%	0.95
TOTAL	0.9%	0.94

## Two-Hour Count Summaries

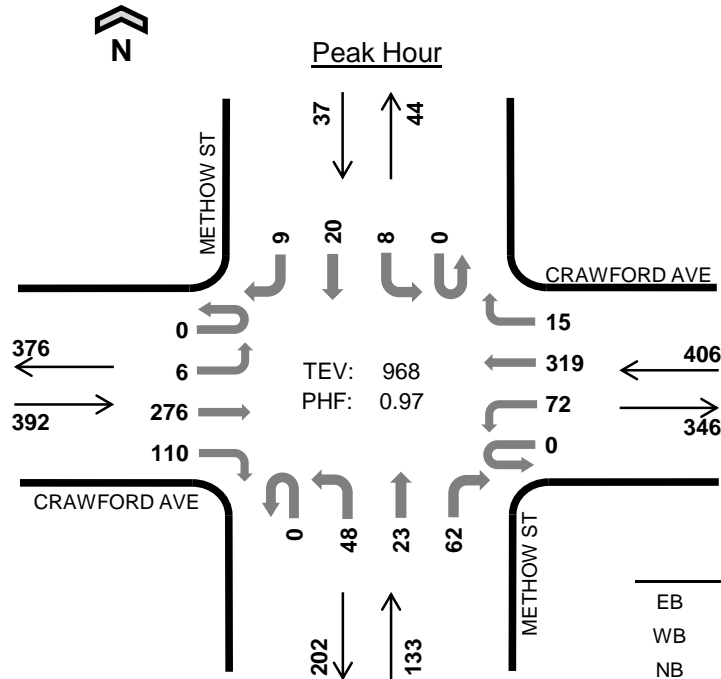
Interval Start	CRAWFORD AVE Eastbound				CRAWFORD AVE Westbound				S MISSION ST Northbound				S MISSION ST Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	48	17	13	0	4	39	9	0	14	76	1	0	5	70	45	341	0
4:15 PM	0	71	10	12	0	8	22	2	0	12	64	0	0	3	68	60	332	0
4:30 PM	0	63	22	13	0	5	35	6	0	13	86	2	0	4	58	64	371	0
4:45 PM	0	57	14	12	0	1	22	5	0	16	98	1	0	7	73	46	352	1,396
5:00 PM	0	70	21	18	0	3	28	5	0	10	72	1	0	8	62	45	343	1,398
5:15 PM	0	52	13	9	0	4	28	6	0	14	52	1	0	4	75	61	319	1,385
5:30 PM	0	51	24	10	0	7	27	6	0	13	78	1	0	6	66	61	350	1,364
5:45 PM	0	49	11	12	0	6	29	5	0	12	55	2	0	4	85	48	318	1,330
Count Total	0	461	132	99	0	38	230	44	0	104	581	9	0	41	557	430	2,726	0
Peak Hour	0	261	67	55	0	17	107	18	0	51	320	4	0	22	261	215	1,398	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	1	6	0	0	7	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	2	1	3	0	0	1	0	1	1	0	0	0	1
4:30 PM	1	1	1	1	4	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	1	1	3	0	0	0	0	0	0	0	1	0	1
5:00 PM	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0
5:15 PM	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0
5:30 PM	2	1	1	0	4	0	0	0	0	0	0	0	0	1	1
5:45 PM	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2
Count Total	8	9	5	5	27	0	0	1	0	1	1	2	1	1	5
Peak Hour	3	1	4	4	12	0	0	1	0	1	1	0	1	0	2

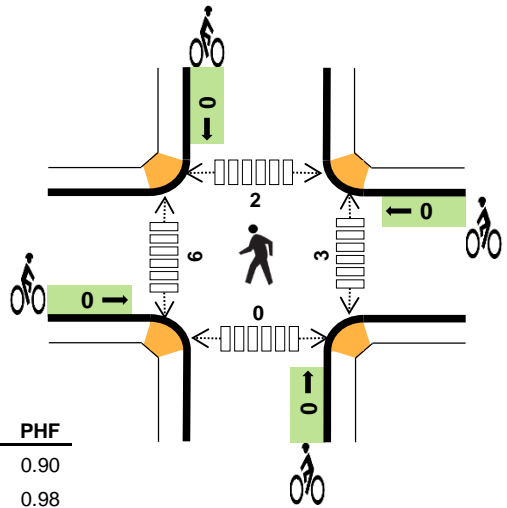


# METHOW ST CRAWFORD AVE



Date: Thu, Feb 22, 2018  
 Count Period: 4:00 PM to 6:00 PM  
 Peak Hour: 4:00 PM to 5:00 PM

	HV %:	PHF
EB	1.8%	0.90
WB	3.9%	0.98
NB	3.0%	0.81
SB	2.7%	0.77
TOTAL	2.9%	0.97



## Two-Hour Count Summaries

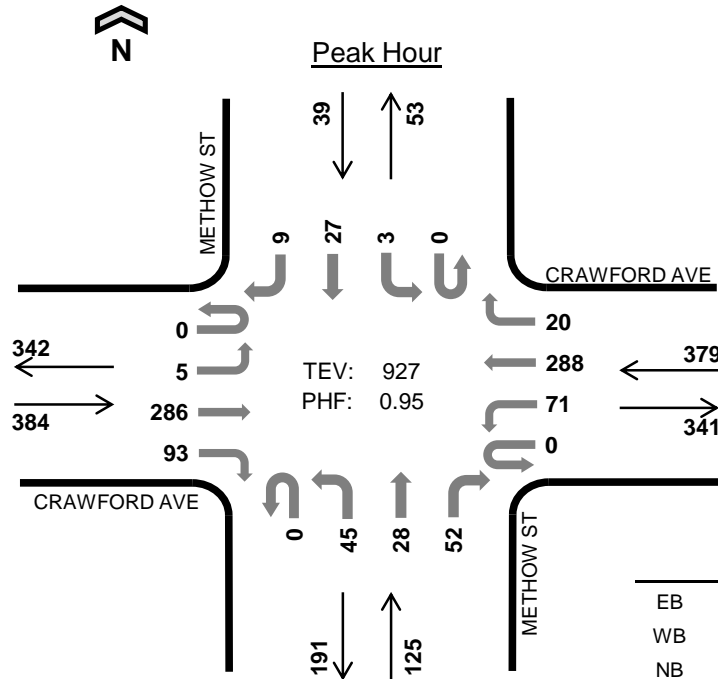
Interval Start	CRAWFORD AVE Eastbound				CRAWFORD AVE Westbound				METHOW ST Northbound				METHOW ST Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	74	25	0	26	76	2	0	12	6	13	0	1	6	2	244	0
4:15 PM	0	1	75	33	0	15	82	2	0	14	2	15	0	2	4	2	247	0
4:30 PM	0	3	69	25	0	12	85	6	0	12	12	17	0	2	4	2	249	0
4:45 PM	0	1	58	27	0	19	76	5	0	10	3	17	0	3	6	3	228	968
5:00 PM	0	6	81	17	0	19	74	9	0	8	5	15	0	3	2	1	240	964
5:15 PM	0	3	65	21	0	18	78	7	0	14	2	10	0	4	11	6	239	956
5:30 PM	0	0	75	18	0	11	80	3	0	13	7	8	0	1	4	1	221	928
5:45 PM	0	2	55	13	0	17	77	2	0	17	3	12	0	1	1	2	202	902
Count Total	0	17	552	179	0	137	628	36	0	100	40	107	0	17	38	19	1,870	0
Peak Hour	0	6	276	110	0	72	319	15	0	48	23	62	0	8	20	9	968	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

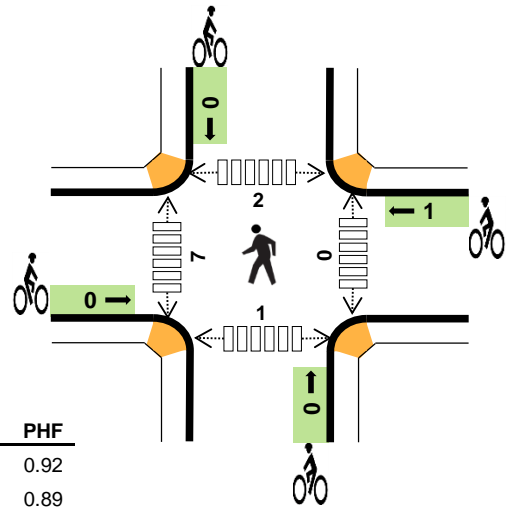
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	5	6	2	0	13	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	6	1	0	8	0	0	0	0	0	1	4	0	0	5
4:30 PM	1	3	1	0	5	0	0	0	0	0	2	0	1	0	3
4:45 PM	0	1	0	1	2	0	0	0	0	0	0	2	1	0	3
5:00 PM	2	1	1	0	4	0	0	0	0	0	2	0	0	0	2
5:15 PM	3	1	1	1	6	0	0	0	0	0	0	1	0	0	1
5:30 PM	0	2	1	0	3	0	0	0	0	0	1	0	0	0	1
5:45 PM	1	0	0	0	1	0	0	0	1	1	0	0	0	0	0
Count Total	13	20	7	2	42	0	0	0	1	1	6	7	2	0	15
Peak Hour	7	16	4	1	28	0	0	0	0	0	3	6	2	0	11



# METHOW ST CRAWFORD AVE



Date: Fri, Feb 23, 2018  
 Count Period: 4:00 PM to 6:00 PM  
 Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	0.8%	0.92
WB	3.4%	0.89
NB	2.4%	0.87
SB	2.6%	0.61
TOTAL	2.2%	0.95

## Two-Hour Count Summaries

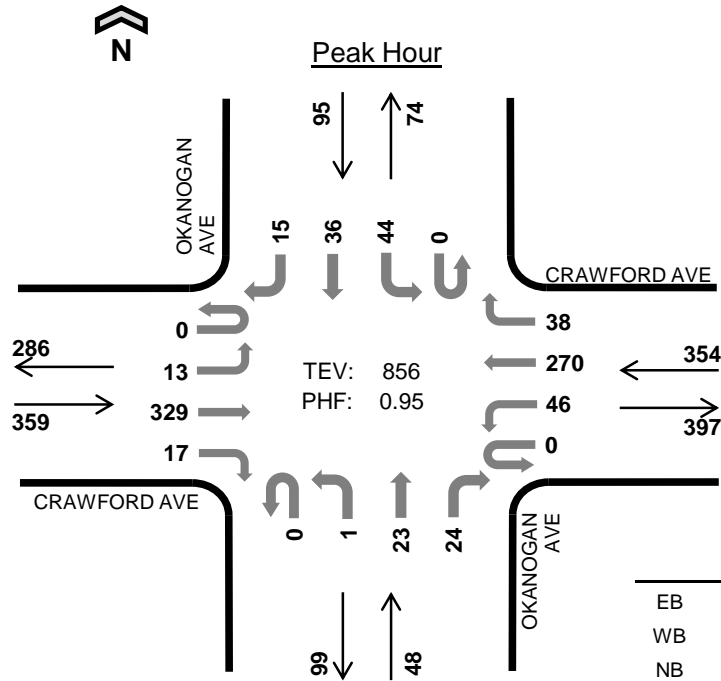
Interval Start	CRAWFORD AVE Eastbound				CRAWFORD AVE Westbound				METHOW ST Northbound				METHOW ST Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	3	66	28	0	16	75	6	0	13	9	12	0	1	13	2	244	0
4:15 PM	0	0	84	17	0	16	72	3	0	8	5	14	0	1	5	4	229	0
4:30 PM	0	1	79	24	0	21	79	6	0	12	6	10	0	0	4	1	243	0
4:45 PM	0	1	57	24	0	18	62	5	0	12	8	16	0	1	5	2	211	927
5:00 PM	0	1	80	25	0	16	63	3	0	20	5	20	0	2	5	0	240	923
5:15 PM	0	2	55	26	0	28	68	4	0	15	6	15	0	2	6	1	228	922
5:30 PM	0	2	68	12	0	21	74	7	0	19	5	14	0	1	6	2	231	910
5:45 PM	0	1	48	14	0	19	62	4	0	9	7	19	0	0	7	0	190	889
Count Total	0	11	537	170	0	155	555	38	0	108	51	120	0	8	51	12	1,816	0
Peak Hour	0	5	286	93	0	71	288	20	0	45	28	52	0	3	27	9	927	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

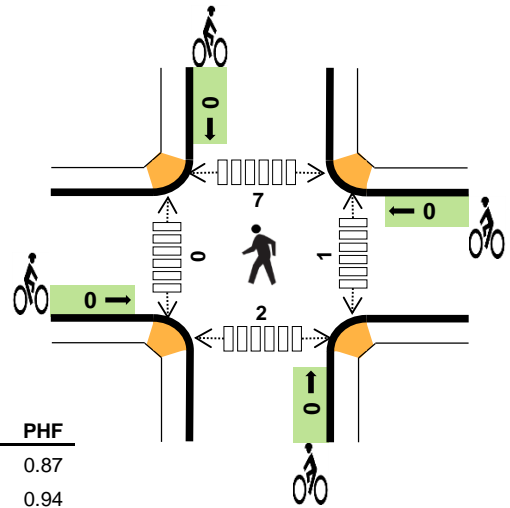
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	7	2	0	11	0	0	0	0	0	0	2	0	1	3
4:15 PM	0	3	0	0	3	0	1	0	0	1	0	4	0	0	4
4:30 PM	1	3	1	0	5	0	0	0	0	0	0	0	2	0	2
4:45 PM	0	0	0	1	1	0	0	0	0	0	0	1	0	0	1
5:00 PM	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0
5:15 PM	1	1	1	0	3	0	0	0	0	0	0	0	0	0	0
5:30 PM	2	1	1	0	4	0	0	0	0	0	0	0	0	0	0
5:45 PM	1	1	0	0	2	0	0	0	0	0	1	0	0	0	1
Count Total	8	17	6	1	32	0	1	0	0	1	1	7	2	1	11
Peak Hour	3	13	3	1	20	0	1	0	0	1	0	7	2	1	10



# OKANOGAN AVE CRAWFORD AVE



Date: Thu, Feb 22, 2018  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	1.4%	0.87
WB	4.2%	0.94
NB	2.1%	0.75
SB	0.0%	0.85
TOTAL	2.5%	0.95

## Two-Hour Count Summaries

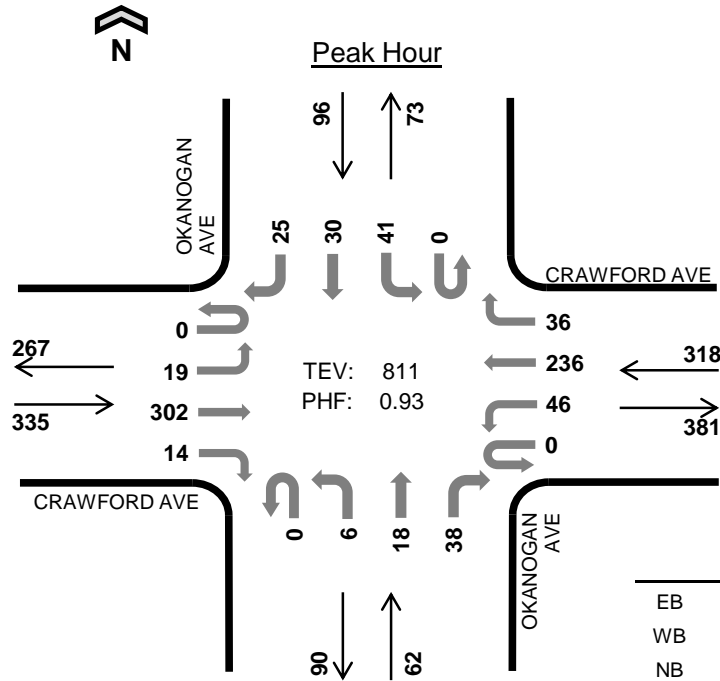
Interval Start	CRAWFORD AVE Eastbound				CRAWFORD AVE Westbound				OKANOGAN AVE Northbound				OKANOGAN AVE Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	2	81	0	0	6	74	5	0	0	3	6	0	11	5	2	195	0
<b>4:15 PM</b>	<b>0</b>	<b>3</b>	<b>93</b>	<b>7</b>	<b>0</b>	<b>7</b>	<b>77</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>0</b>	<b>13</b>	<b>7</b>	<b>3</b>	<b>226</b>	<b>0</b>
4:30 PM	0	4	84	3	0	11	72	10	0	1	8	6	0	8	6	4	217	0
4:45 PM	0	5	63	3	0	16	62	13	0	0	7	9	0	13	12	3	206	844
5:00 PM	0	1	89	4	0	12	59	5	0	0	5	6	0	10	11	5	207	856
5:15 PM	0	5	66	3	0	13	72	8	0	5	5	5	0	14	15	6	217	847
5:30 PM	0	5	80	2	0	16	57	9	0	1	5	6	0	5	7	6	199	829
5:45 PM	0	4	57	3	0	9	79	5	0	2	5	4	0	5	7	4	184	807
Count Total	0	29	613	25	0	90	552	65	0	9	41	45	0	79	70	33	1,651	0
<b>Peak Hour</b>	<b>0</b>	<b>13</b>	<b>329</b>	<b>17</b>	<b>0</b>	<b>46</b>	<b>270</b>	<b>38</b>	<b>0</b>	<b>1</b>	<b>23</b>	<b>24</b>	<b>0</b>	<b>44</b>	<b>36</b>	<b>15</b>	<b>856</b>	<b>0</b>

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

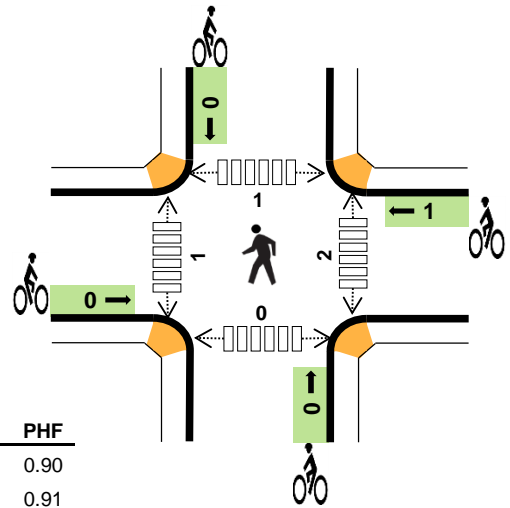
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	4	7	1	0	12	0	0	0	0	0	0	0	0	0	0
<b>4:15 PM</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>
4:30 PM	1	4	0	0	5	0	0	0	0	0	0	0	2	0	2
4:45 PM	1	2	1	0	4	0	0	0	0	0	1	0	0	0	1
5:00 PM	2	2	0	0	4	0	0	0	0	0	0	0	1	2	3
5:15 PM	3	2	0	0	5	0	0	0	0	0	3	0	0	0	3
5:30 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
5:45 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Count Total	14	27	2	0	43	0	0	0	0	0	4	0	7	2	13
<b>Peak Hour</b>	<b>5</b>	<b>15</b>	<b>1</b>	<b>0</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>10</b>



# OKANOGAN AVE CRAWFORD AVE



Date: Fri, Feb 23, 2018  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 4:15 PM to 5:15 PM



	HV %:	PHF
EB	1.2%	0.90
WB	3.1%	0.91
NB	0.0%	0.86
SB	0.0%	0.92
TOTAL	1.7%	0.93

## Two-Hour Count Summaries

Interval Start	CRAWFORD AVE Eastbound				CRAWFORD AVE Westbound				OKANOGAN AVE Northbound				OKANOGAN AVE Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	4	91	0	0	4	65	14	0	1	7	5	0	9	3	5	208	0
<b>4:15 PM</b>	<b>0</b>	<b>9</b>	<b>76</b>	<b>5</b>	<b>0</b>	<b>12</b>	<b>63</b>	<b>12</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>9</b>	<b>0</b>	<b>11</b>	<b>8</b>	<b>6</b>	<b>217</b>	0
4:30 PM	0	4	86	3	0	11	54	12	0	2	0	12	0	11	5	10	210	0
4:45 PM	0	4	54	3	0	11	54	6	0	1	7	10	0	10	6	3	169	804
5:00 PM	0	2	86	3	0	12	65	6	0	1	7	7	0	9	11	6	215	811
5:15 PM	0	3	64	3	0	7	63	10	0	3	7	4	0	13	16	6	199	793
5:30 PM	0	4	72	3	0	16	66	6	0	3	6	3	0	9	5	3	196	779
5:45 PM	0	2	50	1	0	10	48	13	0	2	1	4	0	6	5	4	146	756
Count Total	0	32	579	21	0	83	478	79	0	15	39	54	0	78	59	43	1,560	0
<b>Peak Hour</b>	<b>0</b>	<b>19</b>	<b>302</b>	<b>14</b>	<b>0</b>	<b>46</b>	<b>236</b>	<b>36</b>	<b>0</b>	<b>6</b>	<b>18</b>	<b>38</b>	<b>0</b>	<b>41</b>	<b>30</b>	<b>25</b>	<b>811</b>	<b>0</b>

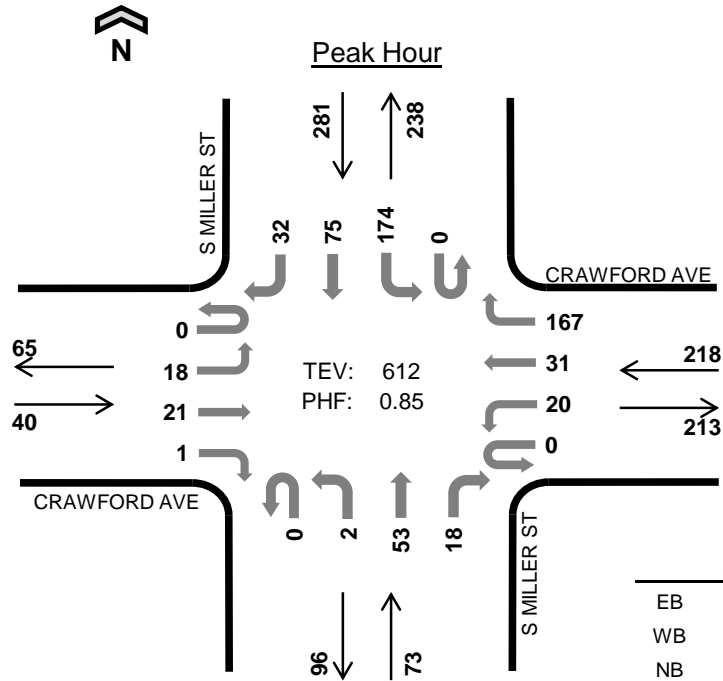
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	2	7	0	0	9	0	0	0	0	0	0	1	1	2	4
<b>4:15 PM</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
4:30 PM	1	4	0	0	5	0	0	0	0	0	2	1	0	0	3
4:45 PM	1	1	0	0	2	0	1	0	0	1	0	0	1	0	1
5:00 PM	1	2	0	0	3	0	0	0	0	0	0	0	0	0	0
5:15 PM	1	2	0	0	3	0	0	0	0	0	0	0	0	1	1
5:30 PM	2	2	0	0	4	0	0	0	0	0	0	0	0	0	0
5:45 PM	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0
Count Total	11	21	0	0	32	0	1	0	0	1	2	2	2	3	9
<b>Peak Hour</b>	<b>4</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>4</b>



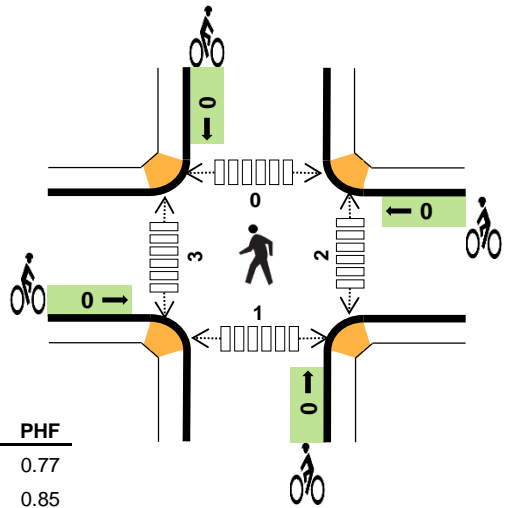


### S MILLER ST CRAWFORD AVE



Date: Fri, Feb 23, 2018  
 Count Period: 4:00 PM to 6:00 PM  
 Peak Hour: 4:45 PM to 5:45 PM

	HV %:	PHF
EB	0.0%	0.77
WB	2.8%	0.85
NB	0.0%	0.87
SB	1.4%	0.82
TOTAL	1.6%	0.85



#### Two-Hour Count Summaries

Interval Start	CRAWFORD AVE Eastbound				CRAWFORD AVE Westbound				S MILLER ST Northbound				S MILLER ST Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	3	8	0	0	3	10	36	0	0	10	6	0	58	13	4	151	0
4:15 PM	0	1	5	0	0	4	4	36	0	0	10	4	0	42	14	9	129	0
4:30 PM	0	6	7	0	0	1	7	44	0	0	12	7	0	48	10	8	150	0
<b>4:45 PM</b>	<b>0</b>	<b>7</b>	<b>5</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>4</b>	<b>38</b>	<b>0</b>	<b>1</b>	<b>11</b>	<b>4</b>	<b>0</b>	<b>31</b>	<b>15</b>	<b>8</b>	<b>130</b>	<b>560</b>
<b>5:00 PM</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>12</b>	<b>44</b>	<b>0</b>	<b>1</b>	<b>16</b>	<b>4</b>	<b>0</b>	<b>59</b>	<b>20</b>	<b>7</b>	<b>179</b>	<b>588</b>
5:15 PM	0	4	7	0	0	4	5	37	0	0	16	4	0	49	21	5	152	611
5:30 PM	0	3	5	0	0	3	10	48	0	0	10	6	0	35	19	12	151	612
5:45 PM	0	7	8	0	0	4	10	26	0	0	11	3	0	28	12	8	117	599
Count Total	0	35	49	1	0	32	62	309	0	2	96	38	0	350	124	61	1,159	0
<b>Peak Hour</b>	<b>0</b>	<b>18</b>	<b>21</b>	<b>1</b>	<b>0</b>	<b>20</b>	<b>31</b>	<b>167</b>	<b>0</b>	<b>2</b>	<b>53</b>	<b>18</b>	<b>0</b>	<b>174</b>	<b>75</b>	<b>32</b>	<b>612</b>	<b>0</b>

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

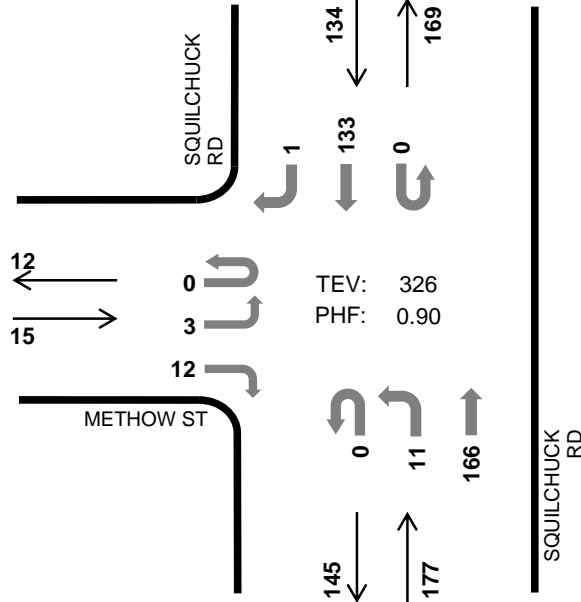
Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	7	1	1	9	1	0	0	0	1	0	1	0	1	2
4:15 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	4	0	1	5	0	0	0	0	0	0	0	0	0	0
<b>4:45 PM</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>5:00 PM</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
5:15 PM	0	1	0	0	1	0	0	0	0	0	2	2	0	1	5
5:30 PM	0	3	0	3	6	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	20	1	6	27	1	0	0	0	1	2	4	0	2	8
<b>Peak Hour</b>	<b>0</b>	<b>6</b>	<b>0</b>	<b>4</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>6</b>

# SQUILCHUCK RD METHOW ST

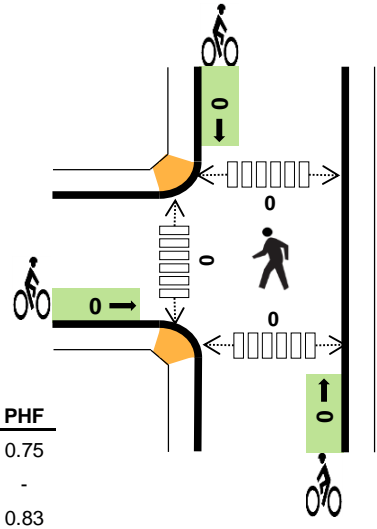


Peak Hour

Date: Thu, Jan 24, 2019  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 4:00 PM to 5:00 PM



TEV: 326  
PHF: 0.90



	HV %:	PHF
EB	0.0%	0.75
WB	-	-
NB	2.8%	0.83
SB	0.7%	0.73
TOTAL	1.8%	0.90

## Two-Hour Count Summaries

Interval Start	METHOW ST				0				SQUILCHUCK RD				SQUILCHUCK RD				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	1	0	4	0	0	0	0	0	0	40	0	0	0	46	0	91	0
4:15 PM	0	1	0	2	0	0	0	0	0	3	32	0	0	0	30	0	68	0
4:30 PM	0	1	0	4	0	0	0	0	0	3	50	0	0	0	29	1	88	0
4:45 PM	0	0	0	2	0	0	0	0	0	5	44	0	0	0	28	0	79	326
5:00 PM	0	1	0	2	0	0	0	0	0	2	32	0	0	0	33	2	72	307
5:15 PM	0	2	0	3	0	0	0	0	0	2	23	0	0	0	39	1	70	309
5:30 PM	0	1	0	1	0	0	0	0	0	1	21	0	0	0	28	2	54	275
5:45 PM	0	1	0	5	0	0	0	0	0	1	17	0	0	0	26	1	51	247
Count Total	0	8	0	23	0	0	0	0	0	17	259	0	0	0	259	7	573	0
Peak Hour	0	3	0	12	0	0	0	0	0	11	166	0	0	0	133	1	326	0

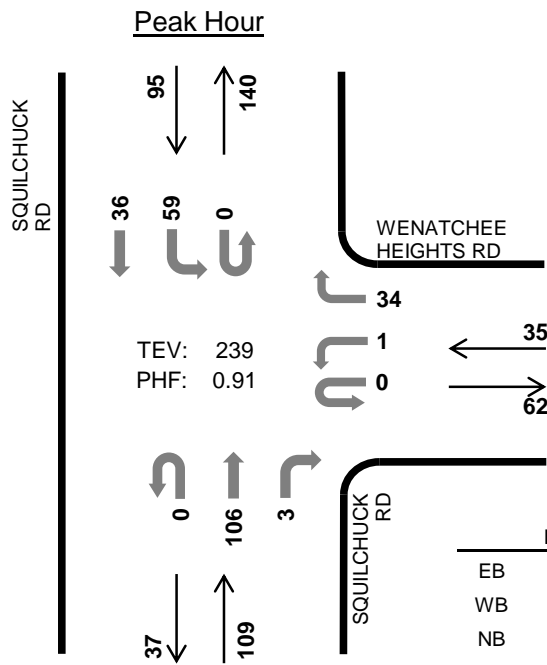
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	1	1	0	0	0	0	0	2	0	0	0	2
4:30 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	
4:45 PM	0	0	2	0	2	0	0	0	0	0	0	0	0	0	
5:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	
5:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Count Total	0	0	6	3	9	0	0	0	0	0	2	0	0	0	2
Peak Hr	0	0	5	1	6	0	0	0	0	0	2	0	0	0	2





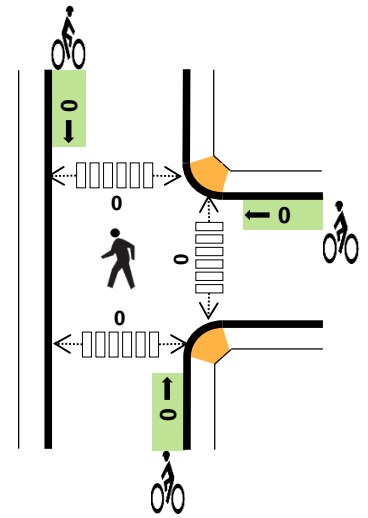
# SQUILCHUCK RD WENATCHEE HEIGHTS RD



Peak Hour

TEV: 239  
PHF: 0.91

Date: Thu, Jan 24, 2019  
Count Period: 4:00 PM to 6:00 PM  
Peak Hour: 4:00 PM to 5:00 PM



	HV %:	PHF
EB	-	-
WB	5.7%	0.73
NB	2.8%	0.76
SB	0.0%	0.77
TOTAL	2.1%	0.91

## Two-Hour Count Summaries

Interval Start	0				WENATCHEE HEIGHTS RD				SQUILCHUCK RD				SQUILCHUCK RD				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:00 PM	0	0	0	0	0	0	0	8	0	0	25	1	0	15	16	0	65	0
4:15 PM	0	0	0	0	0	1	0	11	0	0	21	0	0	16	8	0	57	0
4:30 PM	0	0	0	0	0	0	0	9	0	0	36	0	0	14	7	0	66	0
4:45 PM	0	0	0	0	0	0	0	6	0	0	24	2	0	14	5	0	51	239
5:00 PM	0	0	0	0	0	0	0	5	0	0	29	0	0	14	16	0	64	238
5:15 PM	0	0	0	0	0	0	0	2	0	0	11	0	0	15	12	0	40	221
5:30 PM	0	0	0	0	0	0	0	1	0	0	8	0	0	7	6	0	22	177
5:45 PM	0	0	0	0	0	0	0	7	0	0	8	1	0	10	14	0	40	166
Count Total	0	0	0	0	0	1	0	49	0	0	162	4	0	105	84	0	405	0
Peak Hour	0	0	0	0	0	1	0	34	0	0	106	3	0	59	36	0	239	0

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Count Total	0	2	3	2	7	0	0	0	0	0	0	0	0	0	0
Peak Hr	0	2	3	0	5	0	0	0	0	0	0	0	0	0	0



Chelan-Douglas Transportation Council  
11 Spokane St  
#301

Wenatchee, Washington, United States 98801  
509.663.9059 david@chelan-douglas.org

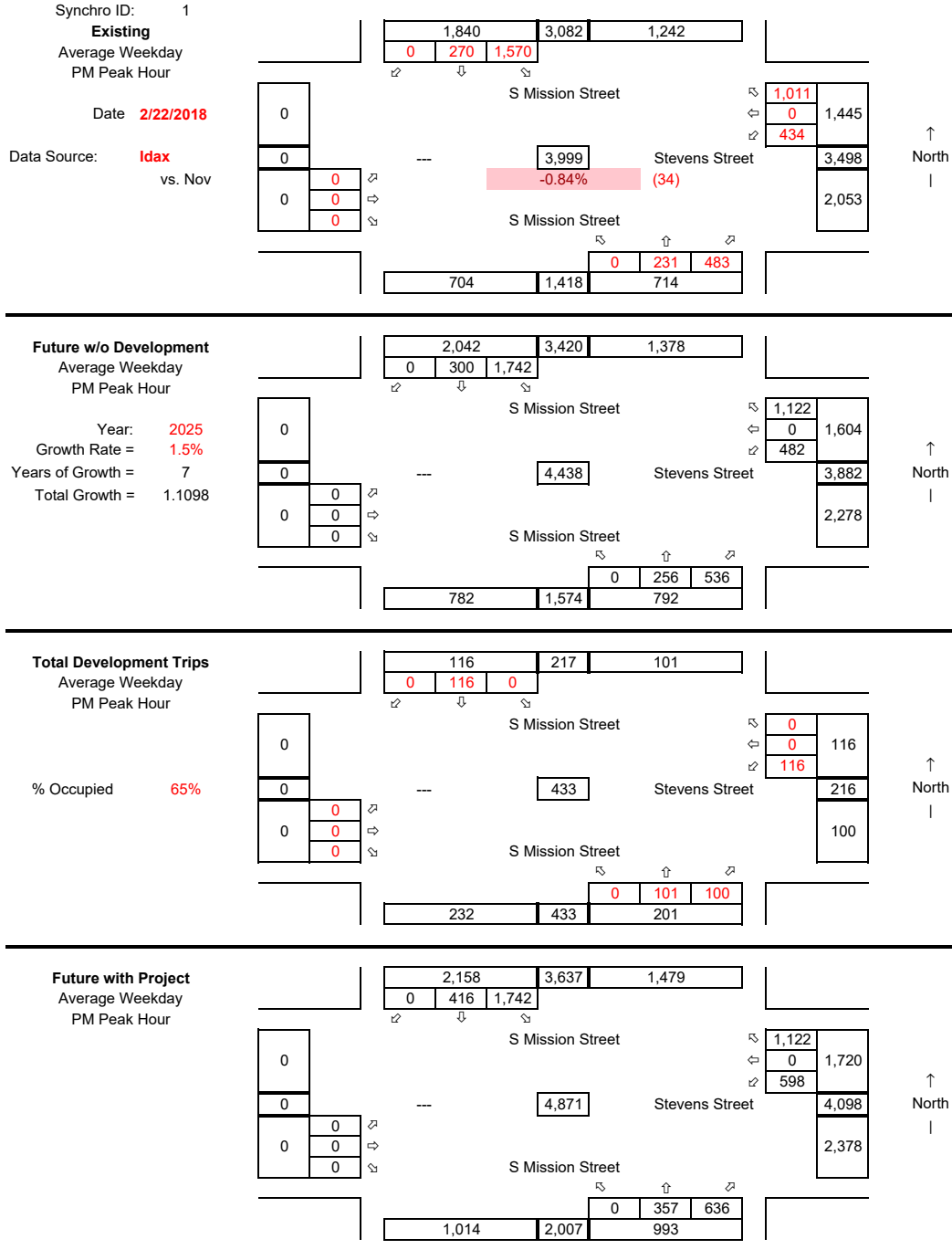
Count Name: Squilchuck Rd / Methow St  
Site Code:  
Start Date: 11/09/2017  
Page No: 6

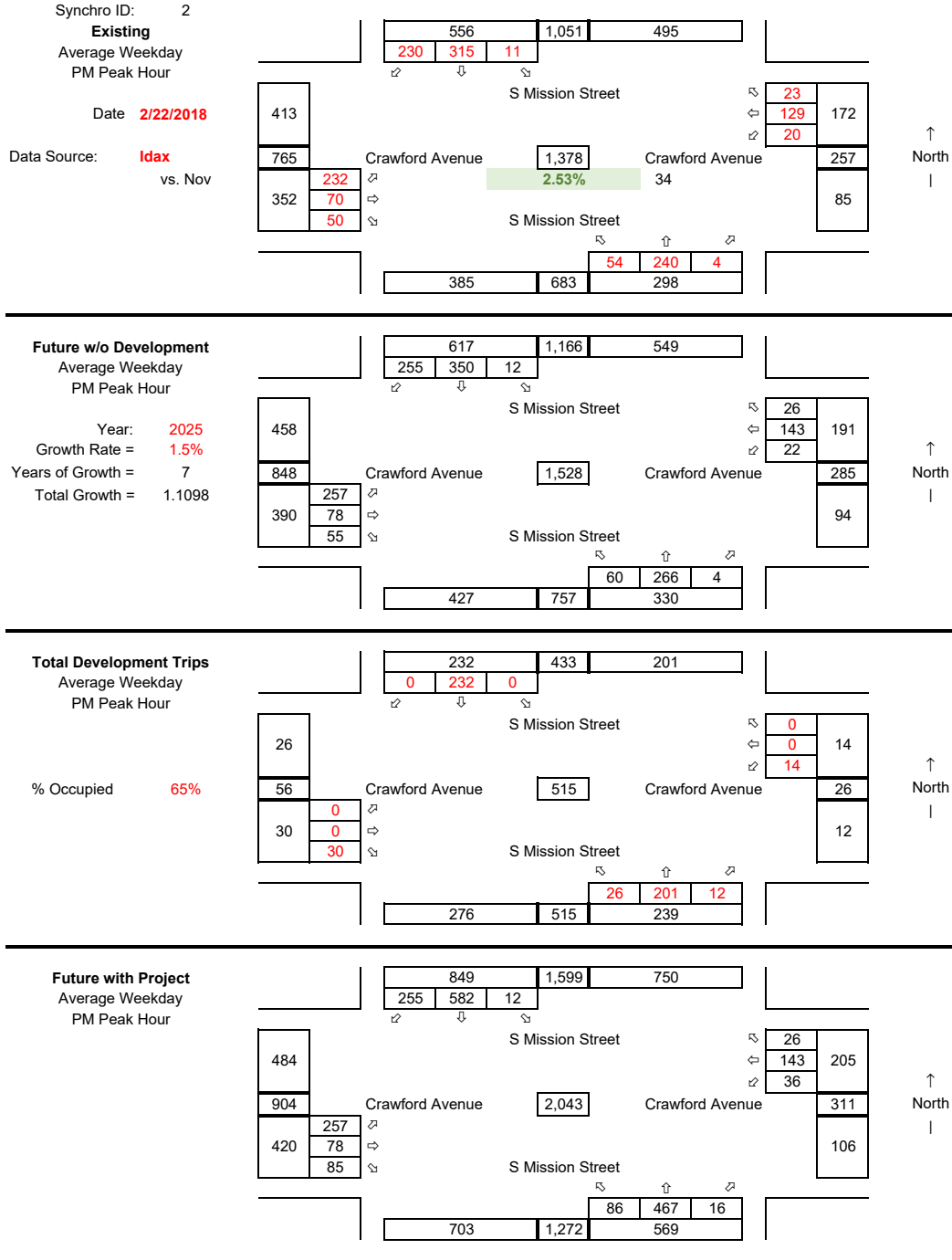
### Turning Movement Peak Hour Data (5:15 PM)

Start Time	Squilchuck Rd Southbound			Squilchuck Rd Northbound			Methow St Eastbound			Int. Total			
	Right	Thru	U-Turn	App. Total	Thru	Left	U-Turn	App. Total	Right		Left	U-Turn	App. Total
5:15 PM	2	37	0	39	23	3	0	26	8	1	0	9	74
5:30 PM	0	29	0	29	23	4	0	27	6	0	0	6	62
5:45 PM	0	44	0	44	29	0	0	29	4	1	0	5	78
6:00 PM	1	40	0	41	23	2	0	25	6	0	0	6	72
Total	3	150	0	153	98	9	0	107	24	2	0	26	286
Approach %	2.0	98.0	0.0	-	91.6	8.4	0.0	-	92.3	7.7	0.0	-	-
Total %	1.0	52.4	0.0	53.5	34.3	3.1	0.0	37.4	8.4	0.7	0.0	9.1	-
PHF	0.375	0.852	0.000	0.869	0.845	0.563	0.000	0.922	0.750	0.500	0.000	0.722	0.917
Lights	3	148	0	151	96	8	0	104	24	2	0	26	281
% Lights	100.0	98.7	-	98.7	98.0	88.9	-	97.2	100.0	100.0	-	100.0	98.3
Mediums	0	2	0	2	2	1	0	3	0	0	0	0	5
% Mediums	0.0	1.3	-	1.3	2.0	11.1	-	2.8	0.0	0.0	-	0.0	1.7
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Articulated Trucks	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0



# **2025 Turning Movement Calculations**



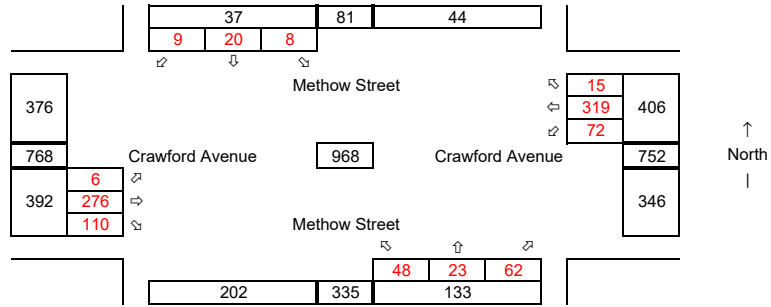


Synchro ID: 3

**Existing**  
Average Weekday  
PM Peak Hour

Date **2/22/2018**

Data Source: **Idax**



**Future w/o Development**  
Average Weekday  
PM Peak Hour

Year: **2025**  
Growth Rate = **1.5%**  
Years of Growth = **7**  
Total Growth = **1.1098**



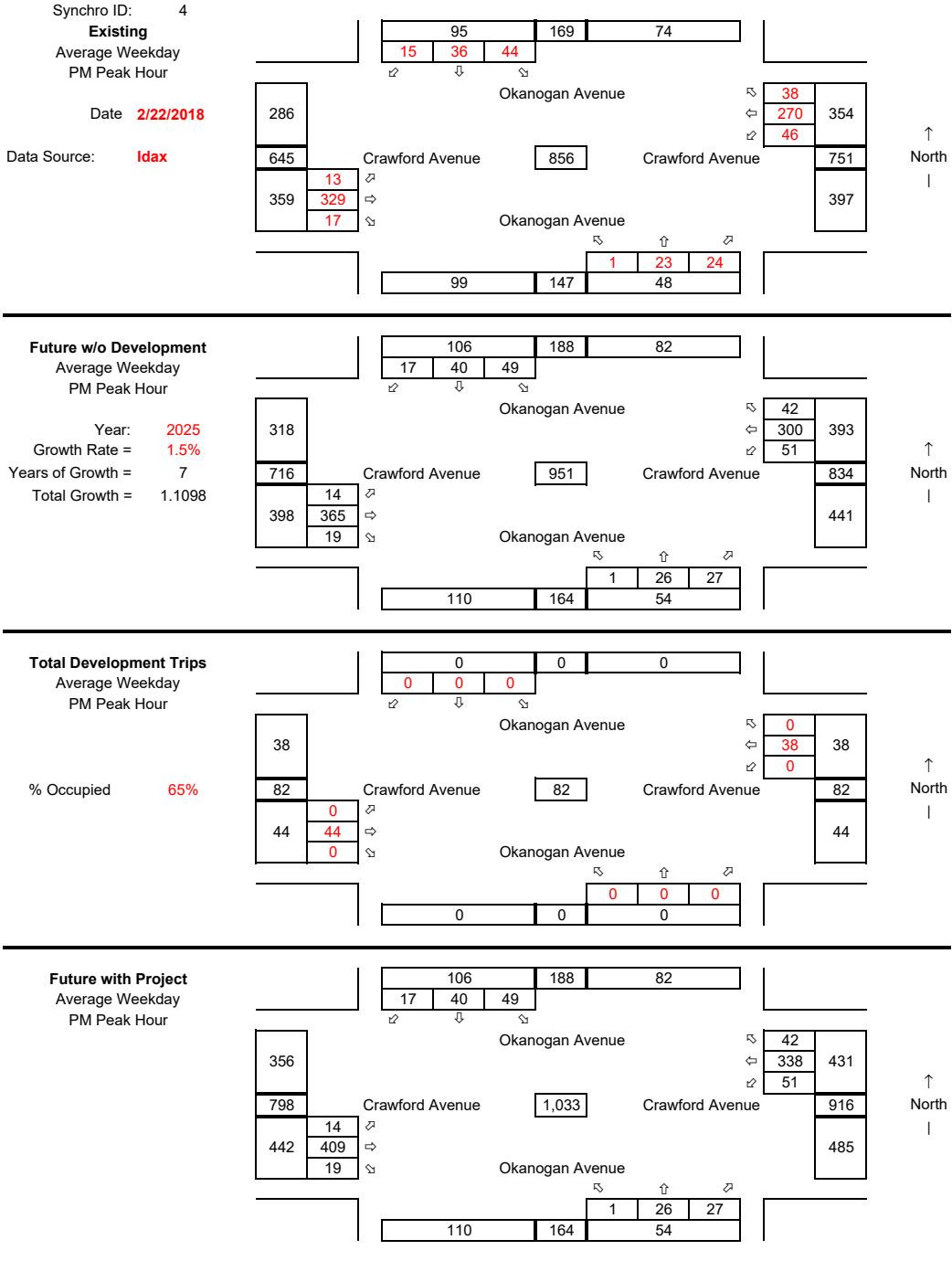
**Total Development Trips**  
Average Weekday  
PM Peak Hour

% Occupied **65%**

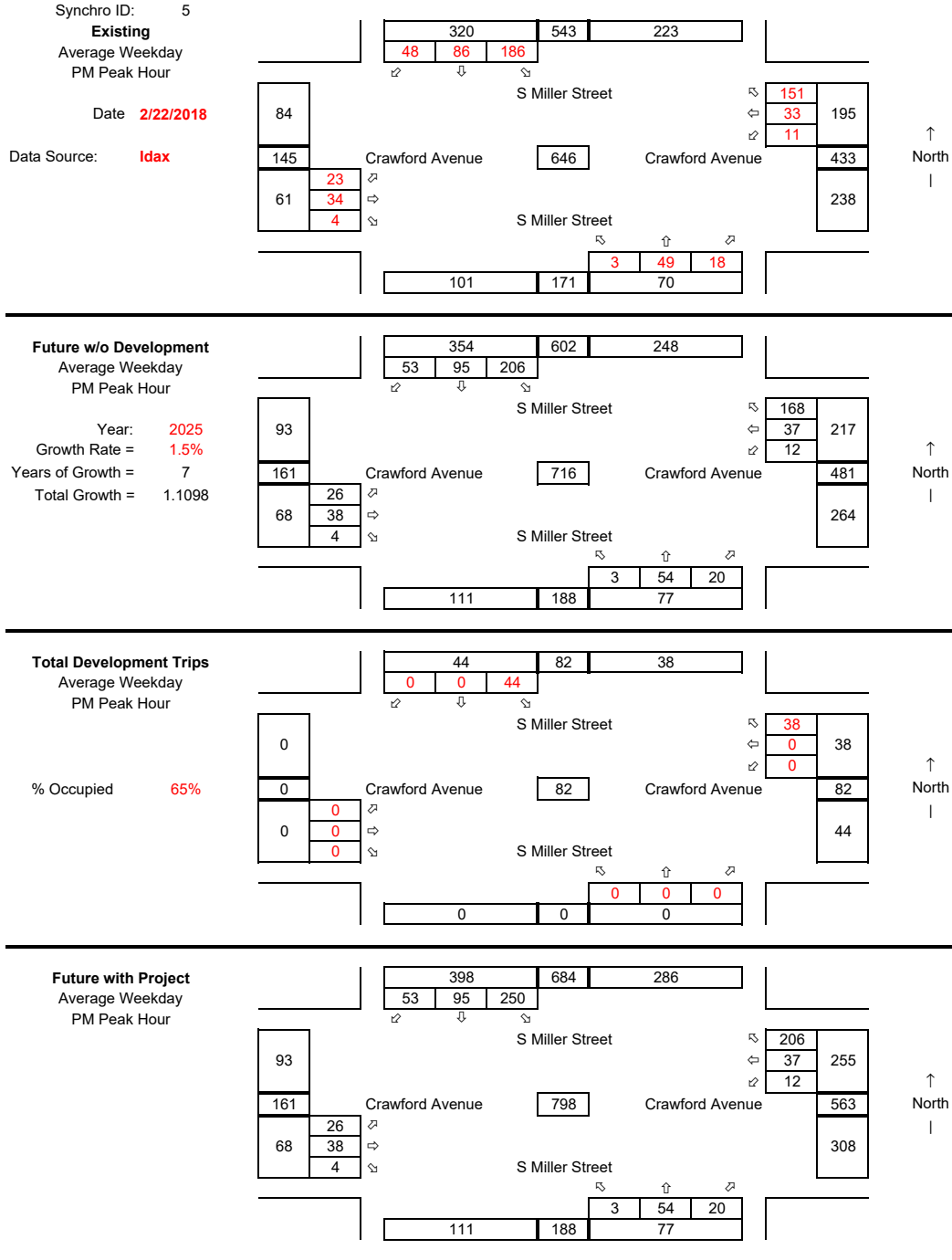


**Future with Project**  
Average Weekday  
PM Peak Hour

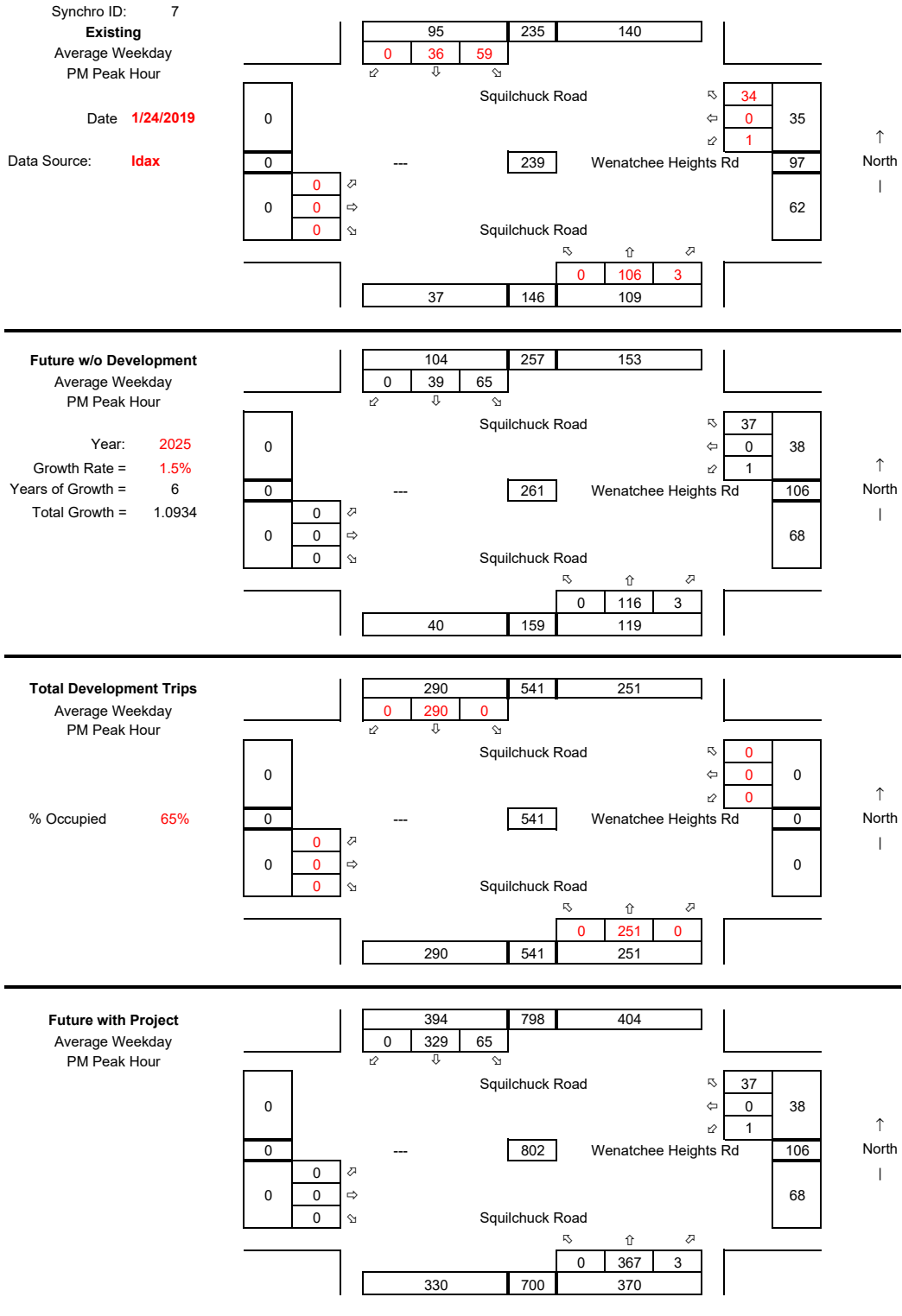




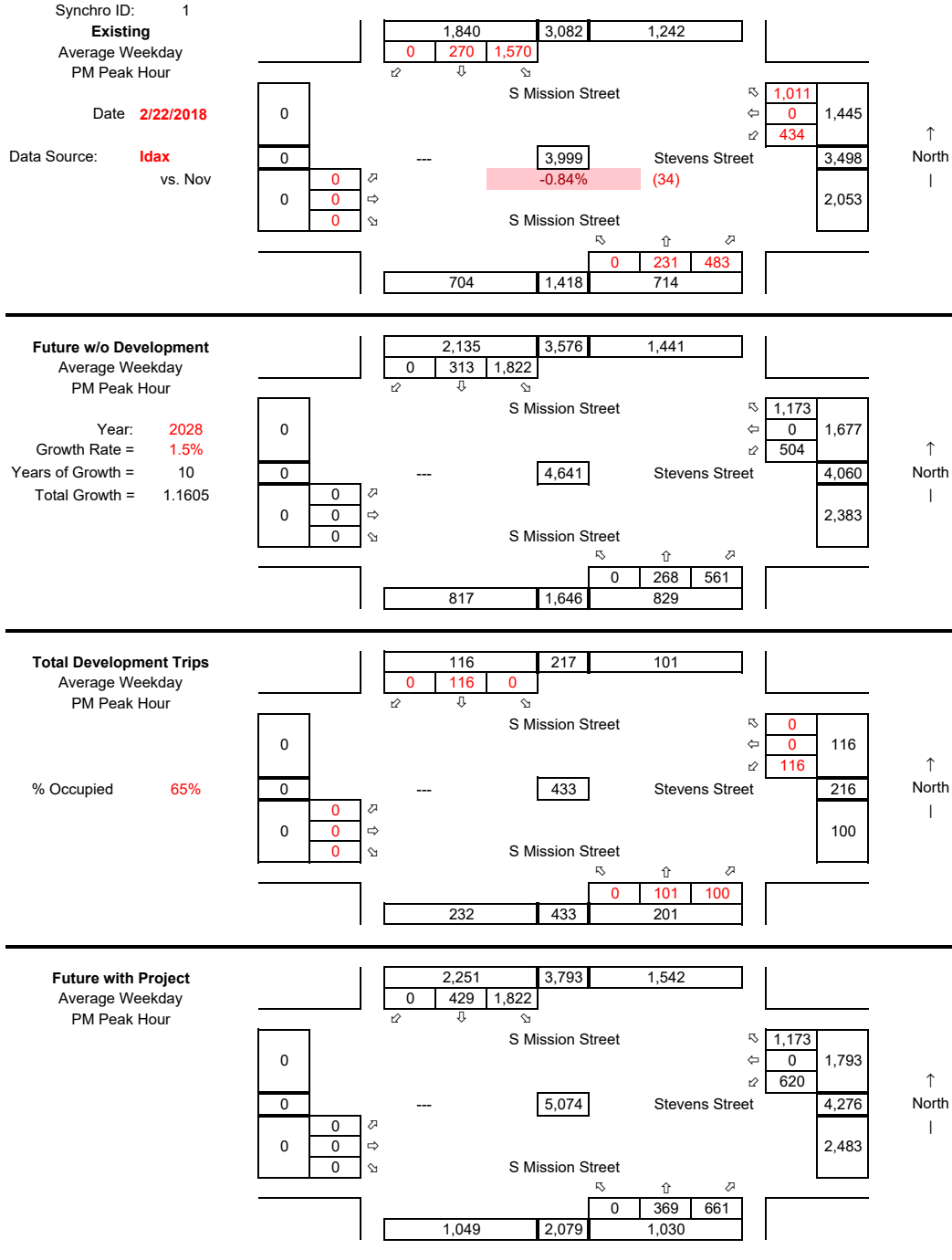


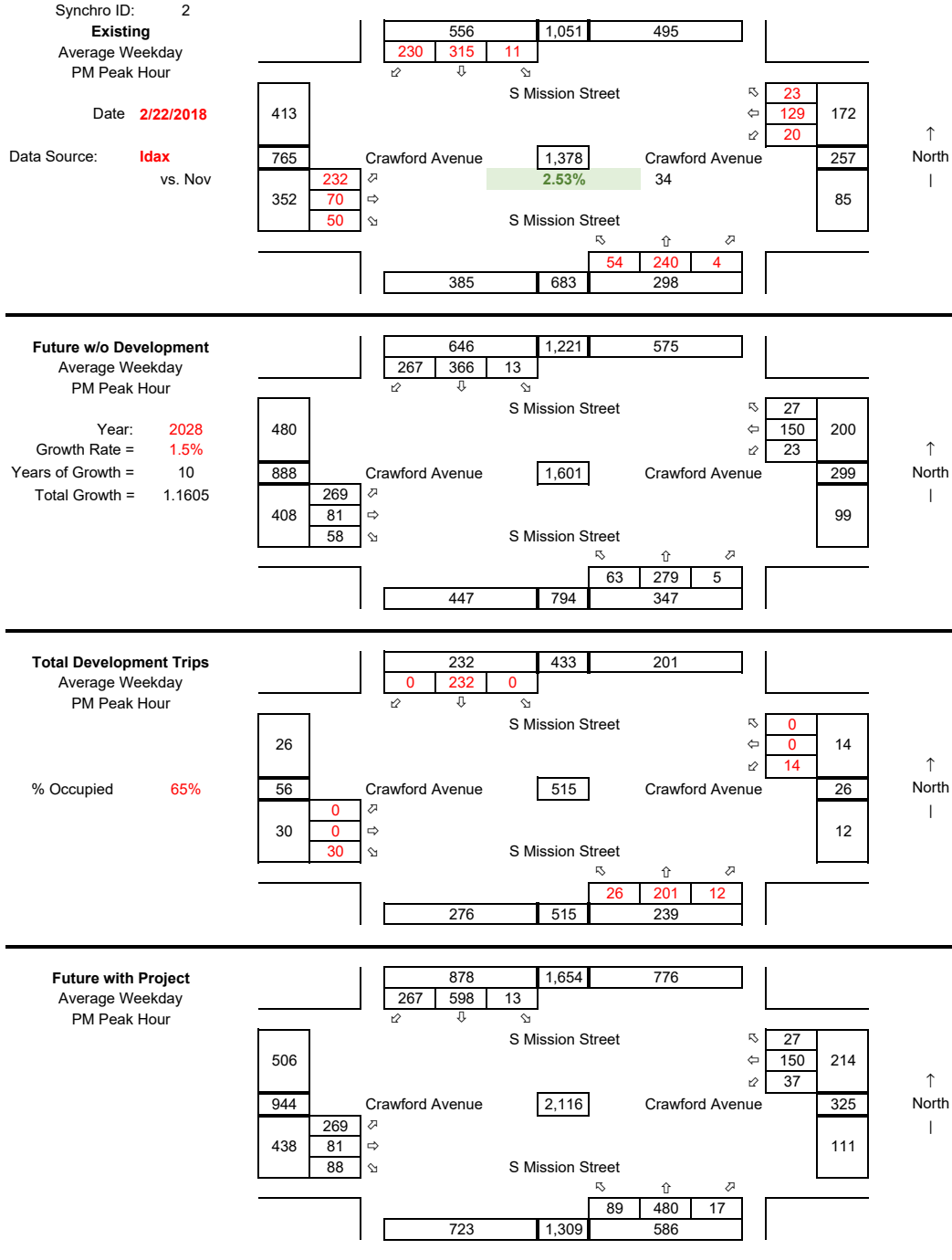






# **2028 Turning Movement Calculations**



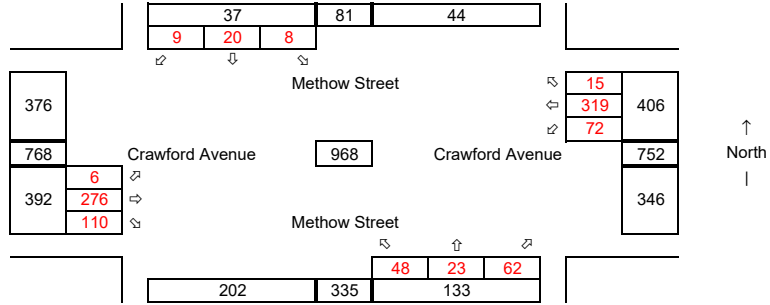


Synchro ID: 3

**Existing**  
Average Weekday  
PM Peak Hour

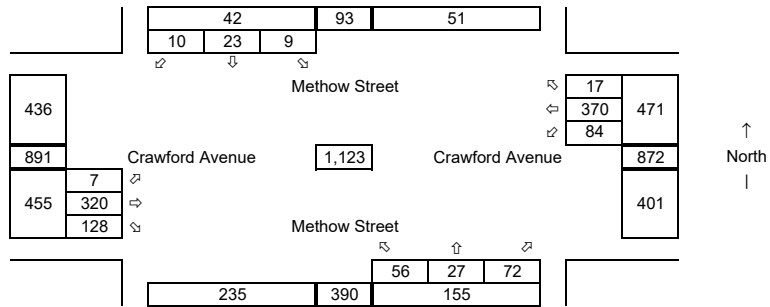
Date **2/22/2018**

Data Source: **Idax**



**Future w/o Development**  
Average Weekday  
PM Peak Hour

Year: **2028**  
Growth Rate = **1.5%**  
Years of Growth = 10  
Total Growth = 1.1605



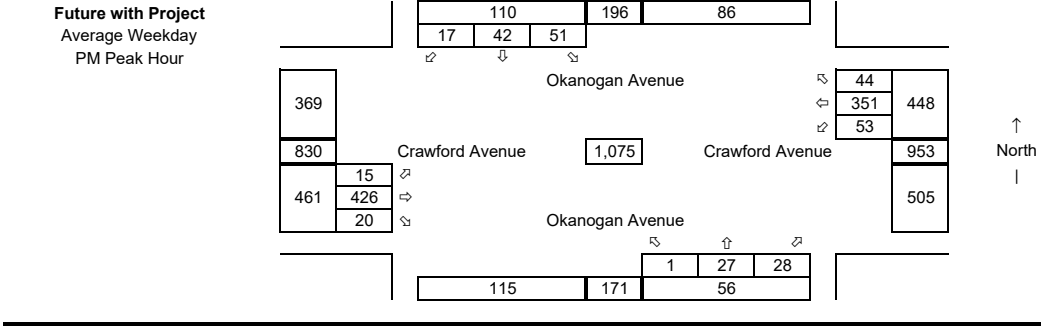
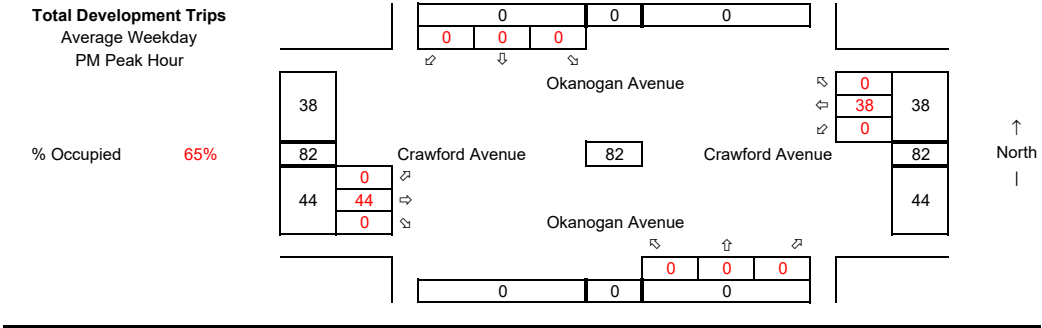
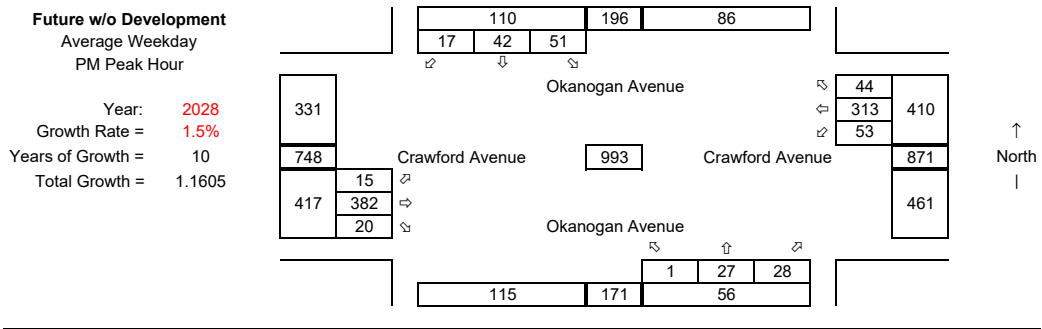
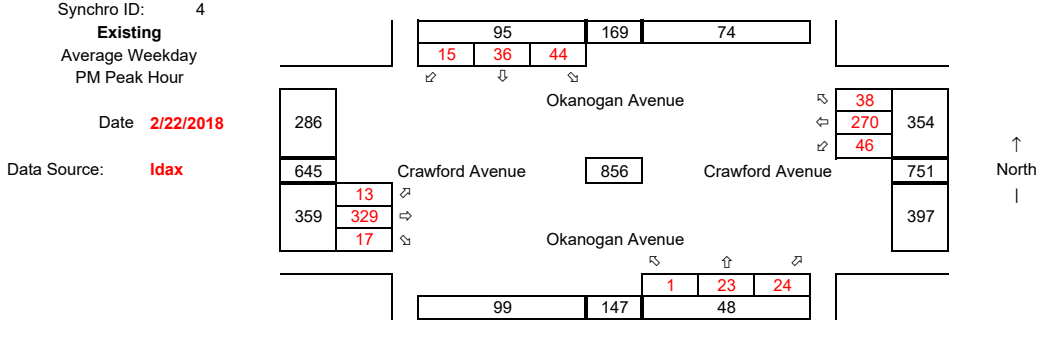
**Total Development Trips**  
Average Weekday  
PM Peak Hour

% Occupied **65%**

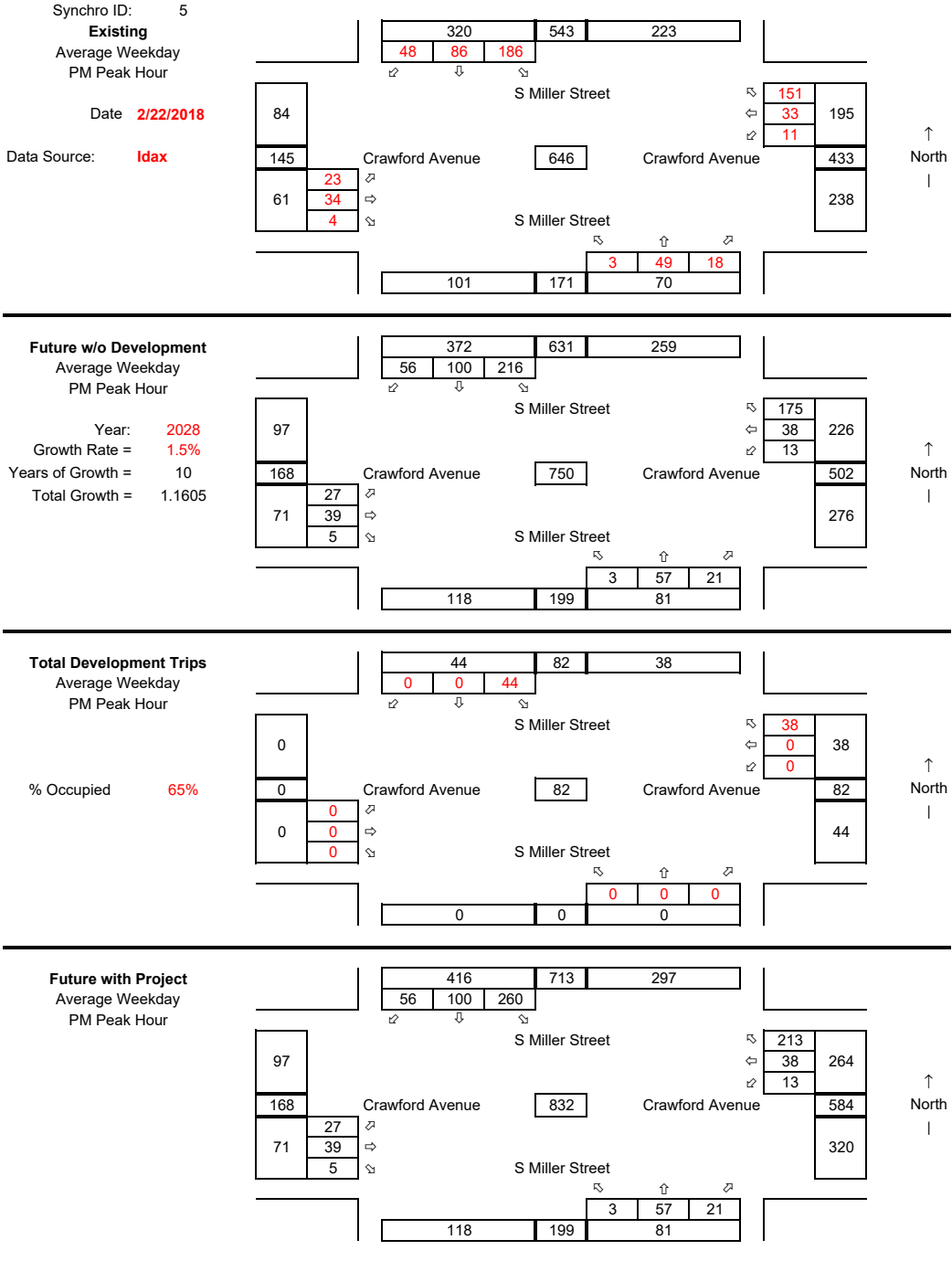


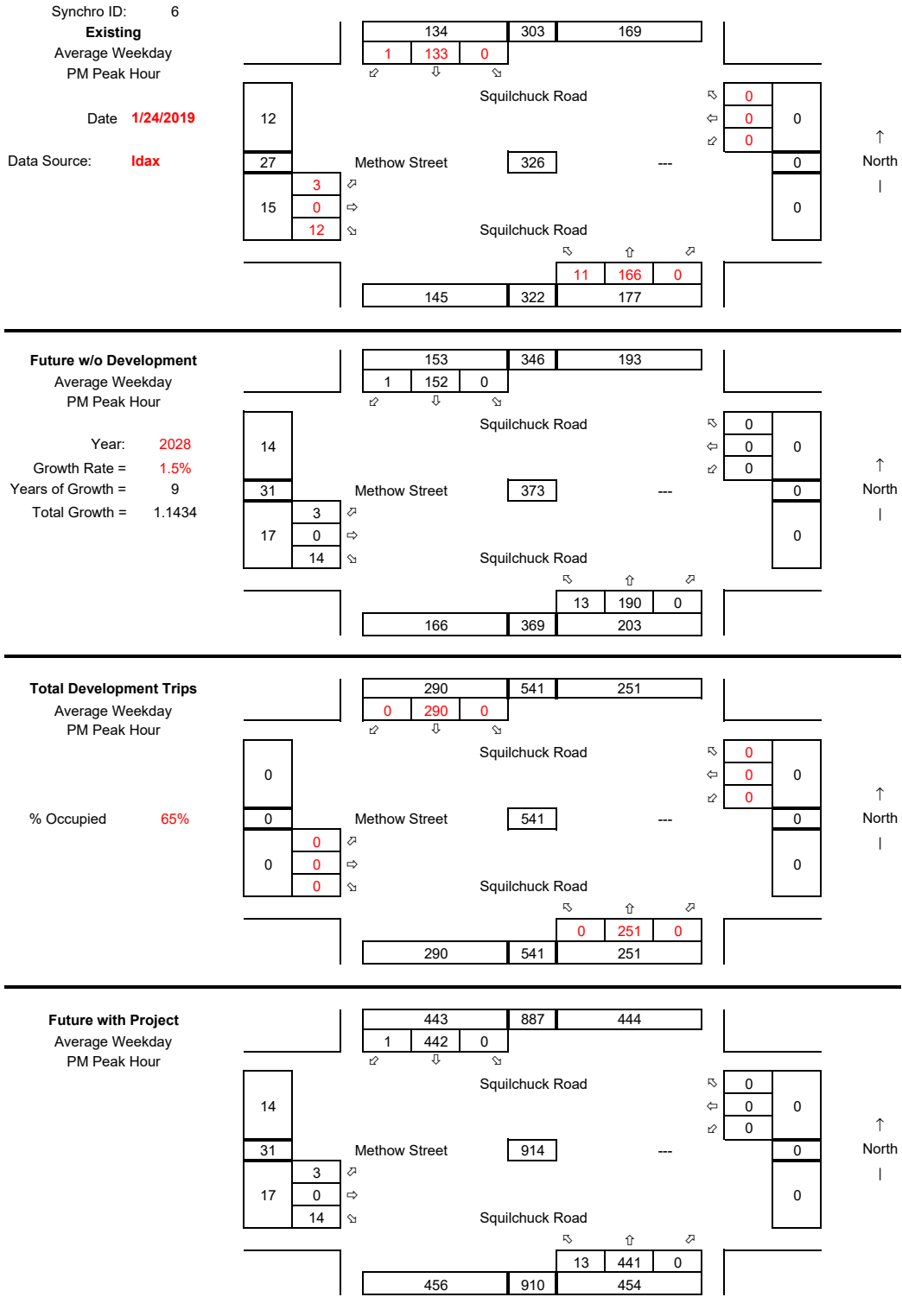
**Future with Project**  
Average Weekday  
PM Peak Hour

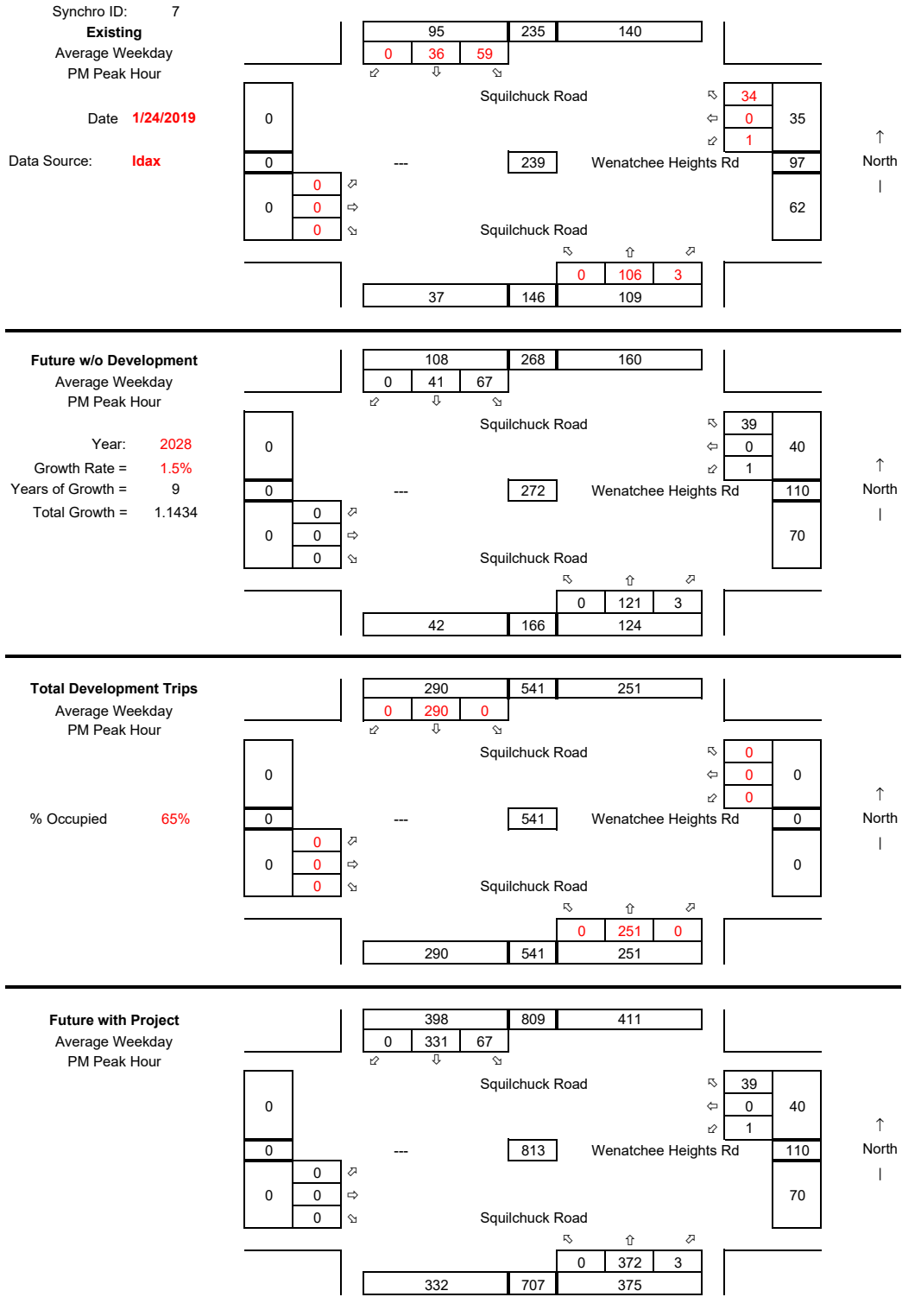




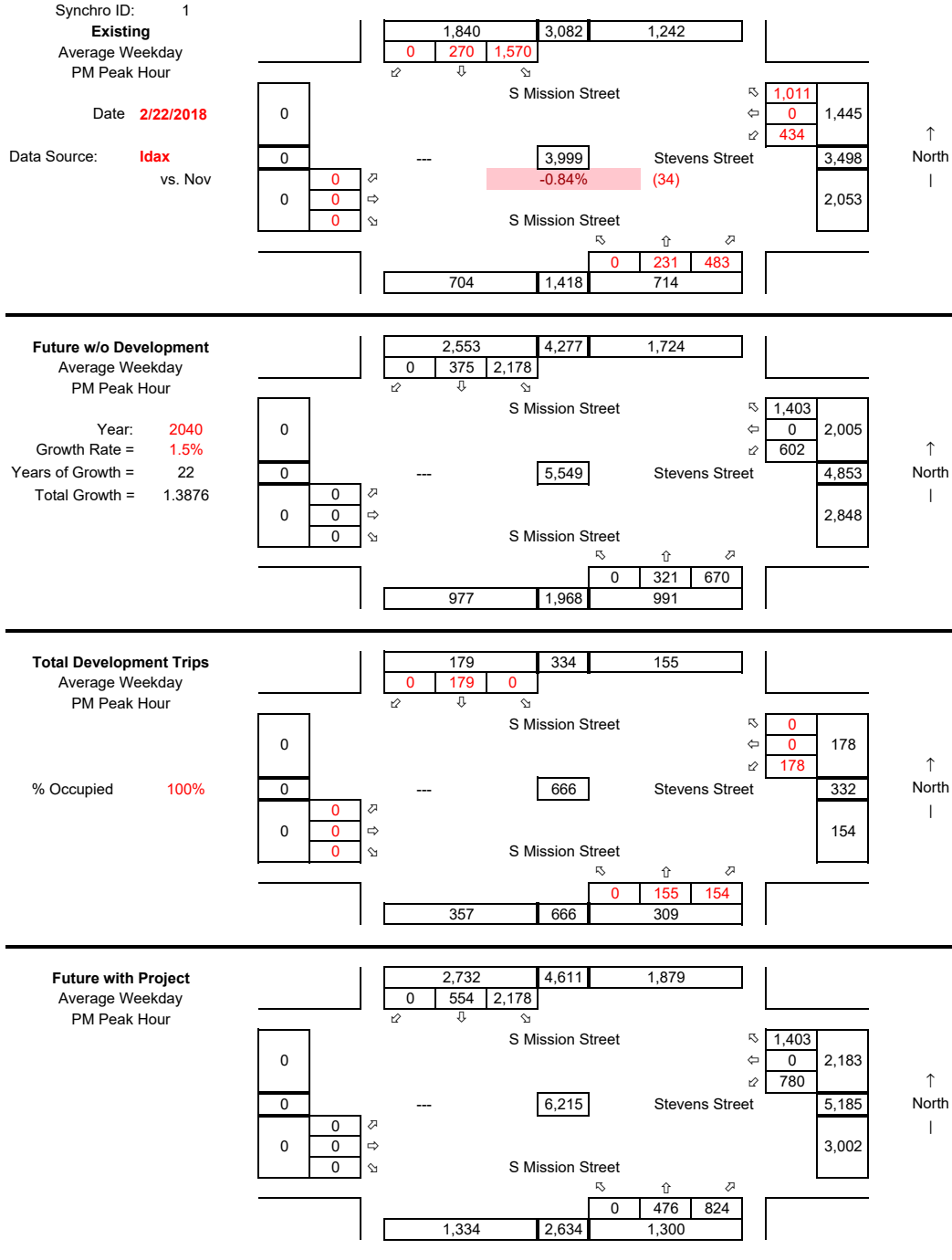




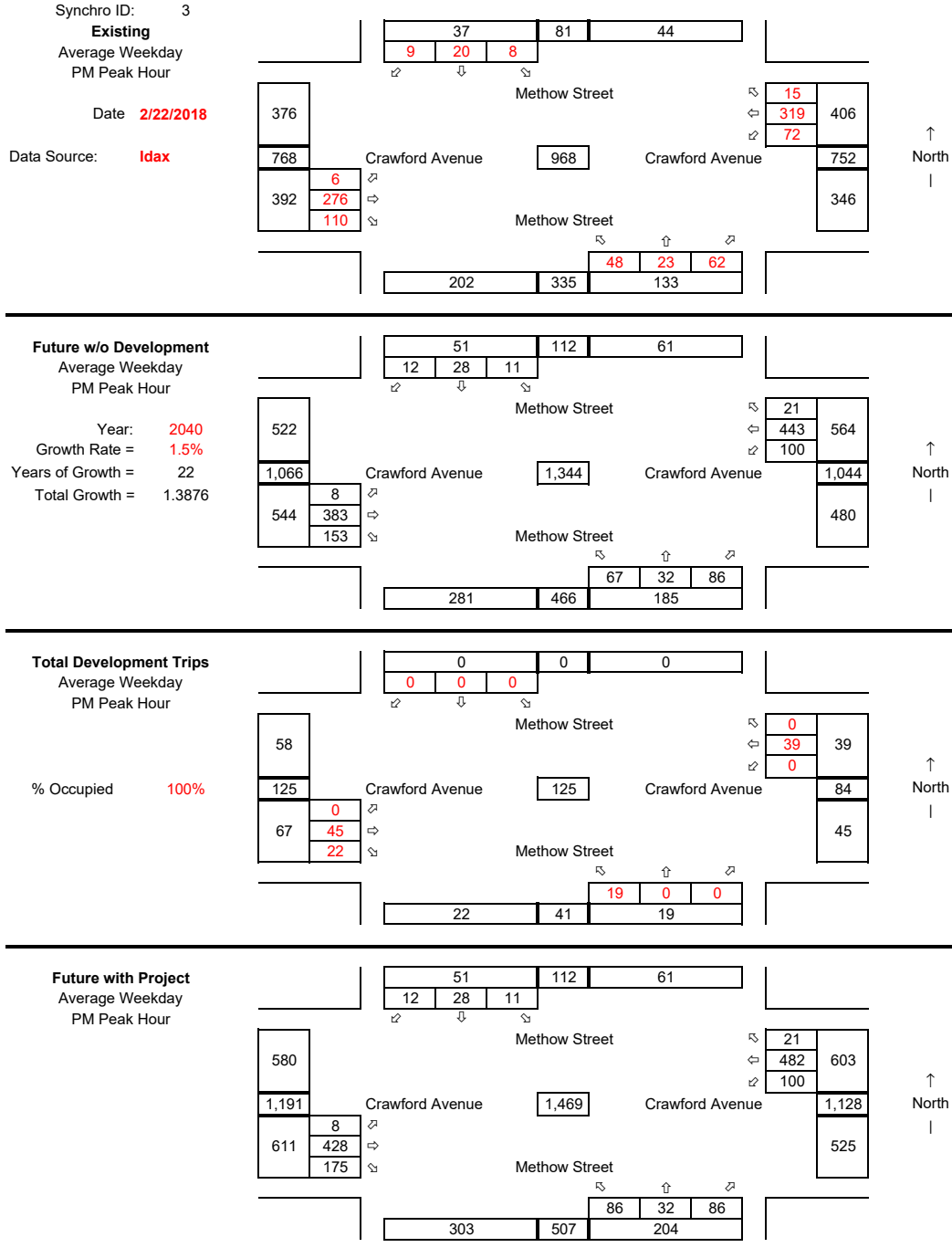


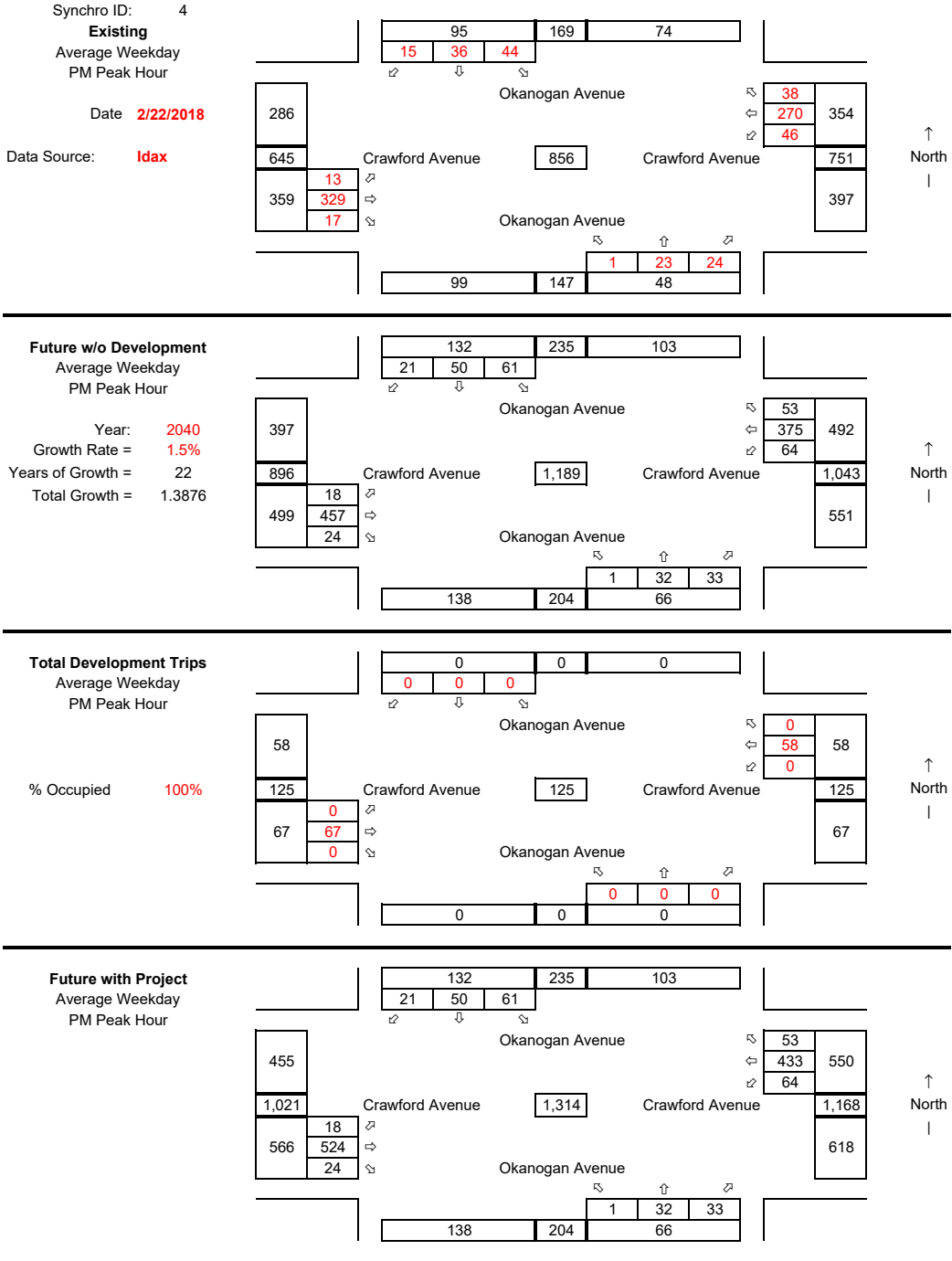


# **2040 Turning Movement Calculations**

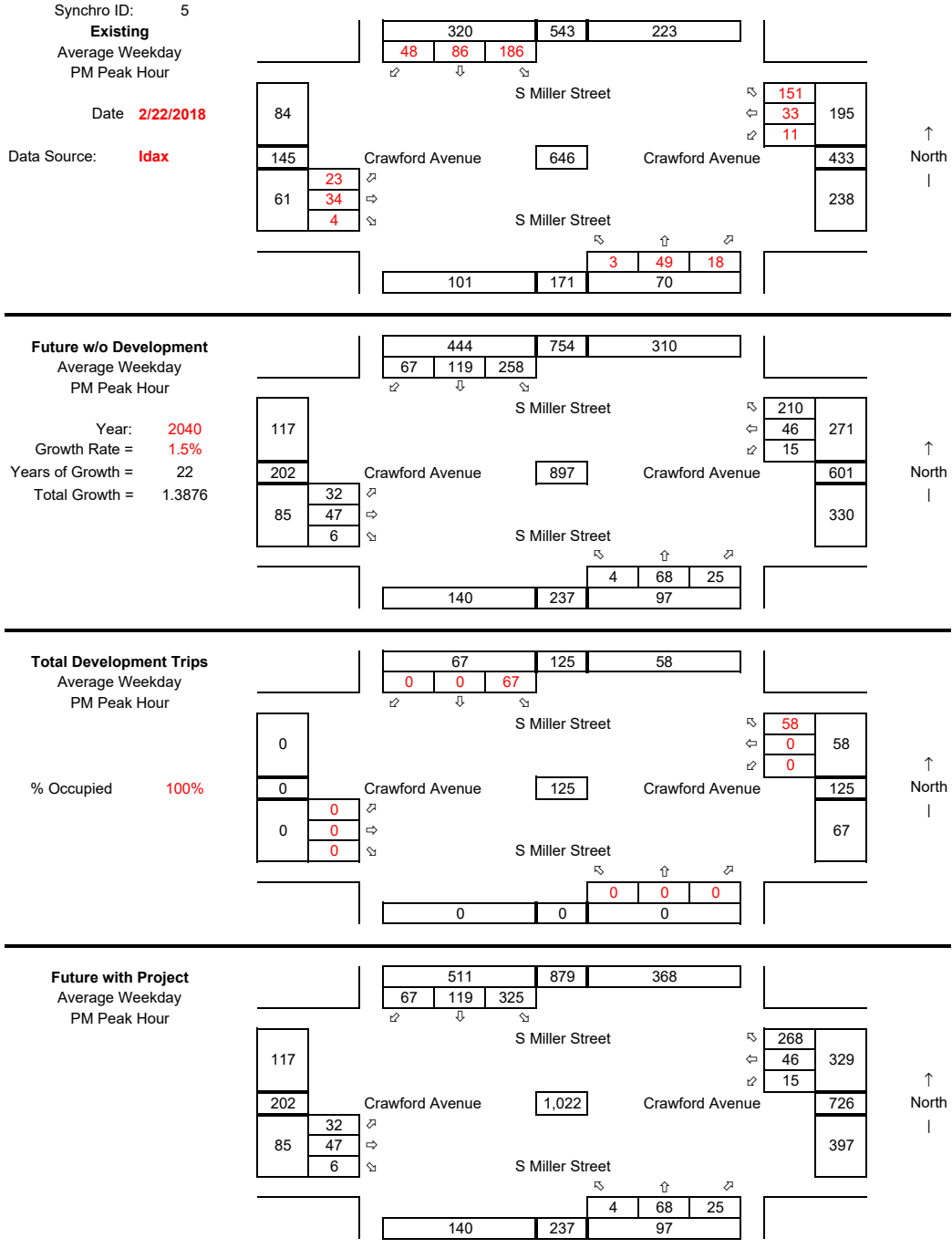










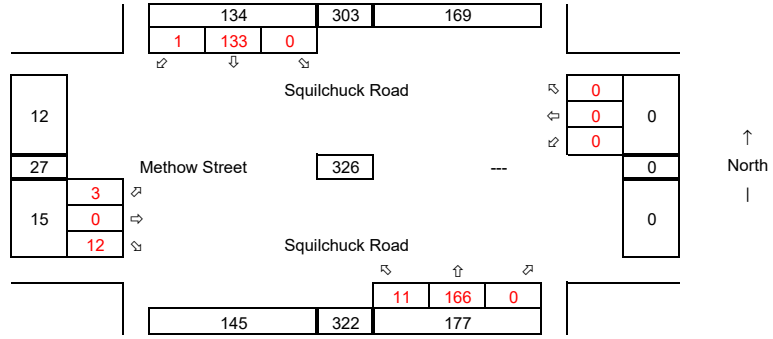


Synchro ID: 6

**Existing**  
Average Weekday  
PM Peak Hour

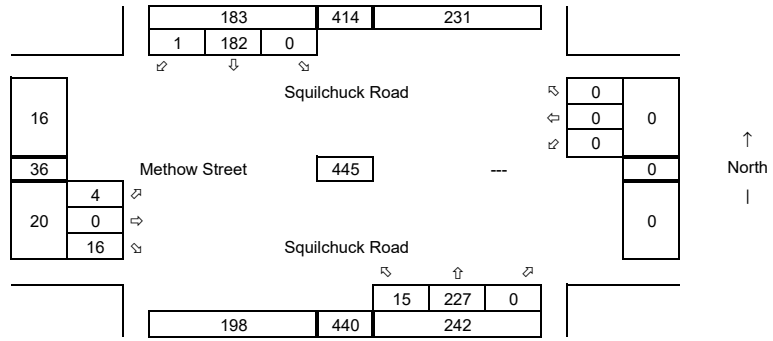
Date **1/24/2019**

Data Source: **Idax**



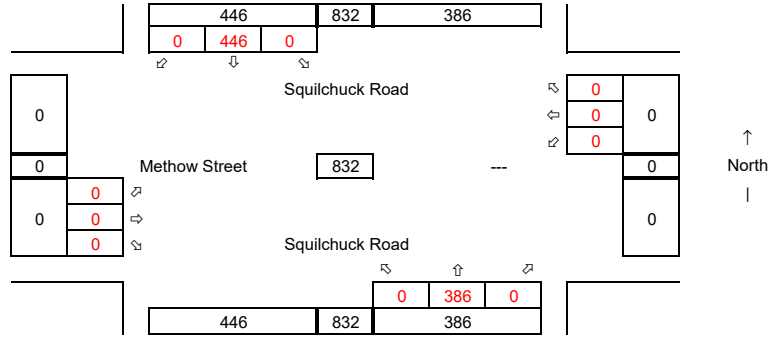
**Future w/o Development**  
Average Weekday  
PM Peak Hour

Year: **2040**  
Growth Rate = **1.5%**  
Years of Growth = 21  
Total Growth = 1.3671

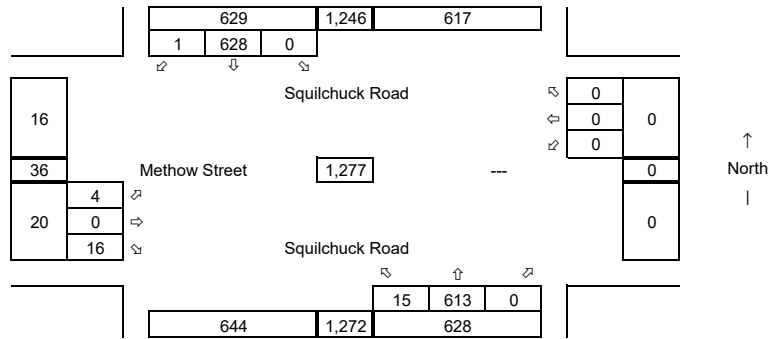


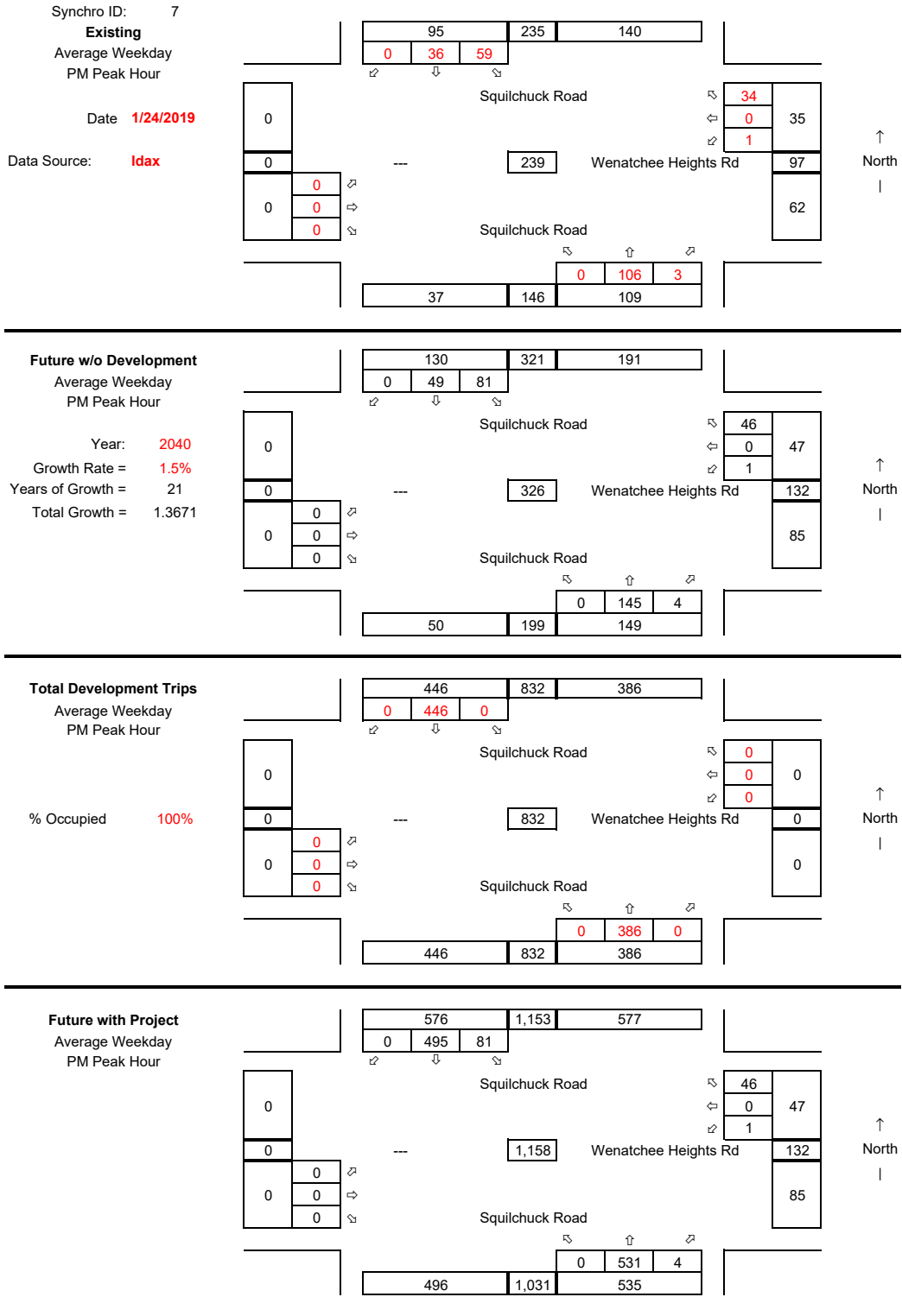
**Total Development Trips**  
Average Weekday  
PM Peak Hour

% Occupied **100%**



**Future with Project**  
Average Weekday  
PM Peak Hour





















# **2018 Level of Service Calculations**

# HCM 2010 Signalized Intersection Summary

## 1: S Mission Street & Stevens Street

Mission Ridge

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	 	 		 	 			
Traffic Volume (veh/h)	434	1011	231	483	1570	270		
Future Volume (veh/h)	434	1011	231	483	1570	270		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881		
Adj Flow Rate, veh/h	447	1042	238	498	1619	278		
Adj No. of Lanes	2	2	1	2	2	1		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	1	1	1	1	1	1		
Cap, veh/h	701	1993	294	1004	1760	1332		
Arrive On Green	0.20	0.20	0.16	0.16	0.51	0.71		
Sat Flow, veh/h	3476	2814	1881	2796	3476	1881		
Grp Volume(v), veh/h	447	1042	238	498	1619	278		
Grp Sat Flow(s),veh/h/ln	1738	1407	1881	1398	1738	1881		
Q Serve(g_s), s	11.7	17.1	12.1	13.8	42.7	5.0		
Cycle Q Clear(g_c), s	11.7	17.1	12.1	13.8	42.7	5.0		
Prop In Lane	1.00	1.00		1.00	1.00			
Lane Grp Cap(c), veh/h	701	1993	294	1004	1760	1332		
V/C Ratio(X)	0.64	0.52	0.81	0.50	0.92	0.21		
Avail Cap(c_a), veh/h	717	2006	294	1004	1942	1332		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	36.3	6.7	40.5	24.9	22.6	5.0		
Incr Delay (d2), s/veh	1.8	0.2	21.1	1.8	7.2	0.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.8	6.6	8.0	7.0	22.2	2.7		
LnGrp Delay(d),s/veh	38.2	7.0	61.6	26.7	29.9	5.3		
LnGrp LOS	D	A	E	C	C	A		
Approach Vol, veh/h	1489		736			1897		
Approach Delay, s/veh	16.3		38.0			26.3		
Approach LOS	B		D			C		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	54.8	20.0				74.8		24.5
Change Period (Y+Rc), s	4.5	4.5				4.5		4.5
Max Green Setting (Gmax), s	55.5	15.5				15.5		20.5
Max Q Clear Time (g_c+I1), s	44.7	15.8				7.0		19.1
Green Ext Time (p_c), s	5.6	0.0				1.0		1.0
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			24.8					
HCM 2010 LOS			C					
<b>Notes</b>								






















2018 Existing Conditions - Thursday  
PM Peak-Hour

Gibson Traffic Consultants, Inc. [ZJW #17-092]  
2018 Existing Conditions - Thursday PM.syn

User approved changes to right turn type.

HCM 2010 Signalized Intersection Summary  
 2: S Mission Street & Crawford Ave

Mission Ridge

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	232	70	50	20	129	23	54	240	4	11	315	230
Future Volume (veh/h)	232	70	50	20	129	23	54	240	4	11	315	230
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1881	1881	1900	1881	1881	1900
Adj Flow Rate, veh/h	237	71	51	20	132	23	55	245	4	11	321	235
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	370	296	212	394	453	79	435	1093	18	694	592	434
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	1225	1009	725	1263	1545	269	858	1846	30	1136	1000	732
Grp Volume(v), veh/h	237	0	122	20	0	155	55	0	249	11	0	556
Grp Sat Flow(s),veh/h/ln	1225	0	1733	1263	0	1815	858	0	1876	1136	0	1732
Q Serve(g_s), s	14.5	0.0	4.2	1.0	0.0	5.2	3.2	0.0	4.9	0.4	0.0	15.1
Cycle Q Clear(g_c), s	19.7	0.0	4.2	5.2	0.0	5.2	18.4	0.0	4.9	5.3	0.0	15.1
Prop In Lane	1.00		0.42	1.00		0.15	1.00		0.02	1.00		0.42
Lane Grp Cap(c), veh/h	370	0	508	394	0	532	435	0	1111	694	0	1026
V/C Ratio(X)	0.64	0.00	0.24	0.05	0.00	0.29	0.13	0.00	0.22	0.02	0.00	0.54
Avail Cap(c_a), veh/h	549	0	762	579	0	798	435	0	1111	694	0	1026
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	21.1	23.1	0.0	21.5	15.1	0.0	7.5	8.8	0.0	9.6
Incr Delay (d2), s/veh	1.9	0.0	0.2	0.1	0.0	0.3	0.6	0.0	0.5	0.0	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	2.0	0.3	0.0	2.6	0.8	0.0	2.6	0.1	0.0	7.7
LnGrp Delay(d),s/veh	30.9	0.0	21.3	23.1	0.0	21.8	15.7	0.0	8.0	8.8	0.0	11.7
LnGrp LOS	C		C	C		C	B		A	A		B
Approach Vol, veh/h		359			175			304			567	
Approach Delay, s/veh		27.7			21.9			9.4			11.6	
Approach LOS		C			C			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		27.5		51.0		27.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5		46.5		34.5				
Max Q Clear Time (g_c+I1), s		20.4		21.7		17.1		7.2				
Green Ext Time (p_c), s		1.8		1.3		4.3		0.9				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			16.5									
HCM 2010 LOS			B									

HCM 2010 TWSC  
3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	6	276	110	72	319	15	48	23	62	8	20	9
Future Vol, veh/h	6	276	110	72	319	15	48	23	62	8	20	9
Conflicting Peds, #/hr	2	0	0	0	0	2	6	0	3	3	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	145	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	98	98	98	81	81	81	77	77	77
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	7	307	122	73	326	15	59	28	77	10	26	12

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	343	0	0	429	0	0	887	871	371	920	925	342
Stage 1	-	-	-	-	-	-	382	382	-	482	482	-
Stage 2	-	-	-	-	-	-	505	489	-	438	443	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1216	-	-	1120	-	-	264	288	673	250	268	698
Stage 1	-	-	-	-	-	-	638	611	-	564	552	-
Stage 2	-	-	-	-	-	-	548	548	-	595	574	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1214	-	-	1120	-	-	221	262	671	189	244	693
Mov Cap-2 Maneuver	-	-	-	-	-	-	221	262	-	189	244	-
Stage 1	-	-	-	-	-	-	633	606	-	558	506	-
Stage 2	-	-	-	-	-	-	467	503	-	497	569	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.5			20.9			21.2		
HCM LOS							C			C		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	233	671	1214	-	-	1120	-	-	270
HCM Lane V/C Ratio	0.376	0.114	0.005	-	-	0.066	-	-	0.178
HCM Control Delay (s)	29.5	11.1	8	0	-	8.4	0	-	21.2
HCM Lane LOS	D	B	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	1.7	0.4	0	-	-	0.2	-	-	0.6



HCM 2010 TWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	13	329	17	46	270	38	1	23	24	44	36	15
Future Vol, veh/h	13	329	17	46	270	38	1	23	24	44	36	15
Conflicting Peds, #/hr	7	0	2	2	0	7	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	94	94	94	75	75	75	85	85	85
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	15	378	20	49	287	40	1	31	32	52	42	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	334	0	0	400	0	0	855	852	391	863	842	314
Stage 1	-	-	-	-	-	-	420	420	-	412	412	-
Stage 2	-	-	-	-	-	-	435	432	-	451	430	-
Critical Hdwy	4.11	-	-	4.14	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.236	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1231	-	-	1148	-	-	278	297	658	277	303	731
Stage 1	-	-	-	-	-	-	611	589	-	621	598	-
Stage 2	-	-	-	-	-	-	600	582	-	592	587	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1223	-	-	1146	-	-	227	274	656	227	280	726
Mov Cap-2 Maneuver	-	-	-	-	-	-	227	274	-	227	280	-
Stage 1	-	-	-	-	-	-	600	578	-	607	562	-
Stage 2	-	-	-	-	-	-	513	547	-	524	576	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.1			16.2			26.5		
HCM LOS							C			D		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	384	1223	-	-	1146	-	-	277
HCM Lane V/C Ratio	0.167	0.012	-	-	0.043	-	-	0.403
HCM Control Delay (s)	16.2	8	0	-	8.3	0	-	26.5
HCM Lane LOS	C	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	0.6	0	-	-	0.1	-	-	1.9

HCM 2010 TWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	8.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	23	34	4	11	33	151	3	49	18	186	86	48
Future Vol, veh/h	23	34	4	11	33	151	3	49	18	186	86	48
Conflicting Peds, #/hr	2	0	1	1	0	2	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	80	80	80	92	92	92	94	94	94
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	32	47	5	14	41	189	3	53	20	198	91	51

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	700	594	119	610	609	66	143	0	0	74	0	0
Stage 1	514	514	-	70	70	-	-	-	-	-	-	-
Stage 2	186	80	-	540	539	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	357	421	938	405	408	995	1452	-	-	1532	-	-
Stage 1	547	539	-	937	835	-	-	-	-	-	-	-
Stage 2	820	832	-	524	520	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	234	360	936	323	349	992	1451	-	-	1531	-	-
Mov Cap-2 Maneuver	234	360	-	323	349	-	-	-	-	-	-	-
Stage 1	545	462	-	934	832	-	-	-	-	-	-	-
Stage 2	629	830	-	402	446	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.8	13	0.3	4.5
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1451	-	-	310	694	1531	-
HCM Lane V/C Ratio	0.002	-	-	0.27	0.351	0.129	-
HCM Control Delay (s)	7.5	0	-	20.8	13	7.7	0
HCM Lane LOS	A	A	-	C	B	A	A
HCM 95th %tile Q(veh)	0	-	-	1.1	1.6	0.4	-




HCM 2010 TWSC  
 6: Squilchuck Rd & Methow Street

Mission Ridge

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	3	12	11	166	133	1
Future Vol, veh/h	3	12	11	166	133	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	83	83	73	73
Heavy Vehicles, %	0	0	3	3	1	1
Mvmt Flow	4	16	13	200	182	1

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	409	183	183	0	-	0
Stage 1	183	-	-	-	-	-
Stage 2	226	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	602	865	1386	-	-	-
Stage 1	853	-	-	-	-	-
Stage 2	816	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	595	865	1386	-	-	-
Mov Cap-2 Maneuver	595	-	-	-	-	-
Stage 1	844	-	-	-	-	-
Stage 2	816	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	9.7	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	1386	-	793	-	-
HCM Lane V/C Ratio	0.01	-	0.025	-	-
HCM Control Delay (s)	7.6	0	9.7	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 2010 TWSC  
 7: Squilchuck Rd & Wenatchee Heights Rd

Mission Ridge

Intersection

Int Delay, s/veh 2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	1	34	106	3	59	36
Future Vol, veh/h	1	34	106	3	59	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	100	-	75	105	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-5	-	-	5
Peak Hour Factor	73	73	76	76	77	77
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	1	47	139	4	77	47

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	340	-	0
Stage 1	139	-	-
Stage 2	201	-	-
Critical Hdwy	6.46	-	-
Critical Hdwy Stg 1	5.46	-	-
Critical Hdwy Stg 2	5.46	-	-
Follow-up Hdwy	3.554	-	-
Pot Cap-1 Maneuver	648	0	-
Stage 1	878	0	-
Stage 2	823	0	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	614	-	-
Mov Cap-2 Maneuver	614	-	-
Stage 1	831	-	-
Stage 2	823	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	4.7
HCM LOS	B		













Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	-	614	-
HCM Lane V/C Ratio	-	-	0.002	-
HCM Control Delay (s)	-	-	10.9	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	-

# **2025 Level of Service Calculations**

# HCM 6th Signalized Intersection Summary

## 1: S Mission Street & Stevens Street

Mission Ridge

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	482	1122	256	536	1742	300
Future Volume (veh/h)	482	1122	256	536	1742	300
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	497	1157	264	553	1796	309
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	681	2034	279	963	1838	1355
Arrive On Green	0.20	0.20	0.15	0.15	0.53	0.72
Sat Flow, veh/h	3483	2812	1885	2793	3483	1885
Grp Volume(v), veh/h	497	1157	264	553	1796	309
Grp Sat Flow(s),veh/h/ln	1742	1406	1885	1396	1742	1885
Q Serve(g_s), s	14.0	20.3	14.5	15.5	52.7	5.8
Cycle Q Clear(g_c), s	14.0	20.3	14.5	15.5	52.7	5.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	681	2034	279	963	1838	1355
V/C Ratio(X)	0.73	0.57	0.95	0.57	0.98	0.23
Avail Cap(c_a), veh/h	681	2034	279	963	1844	1355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	6.8	44.3	27.7	24.1	5.0
Incr Delay (d2), s/veh	4.0	0.4	41.9	2.5	15.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	4.7	10.0	7.6	24.2	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	43.5	7.2	86.2	30.2	39.9	5.4
LnGrp LOS	D	A	F	C	D	A
Approach Vol, veh/h	1654		817			2105
Approach Delay, s/veh	18.1		48.3			34.8
Approach LOS	B		D			C
Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	59.8	20.0				79.8
Change Period (Y+Rc), s	4.5	4.5				4.5
Max Green Setting (Gmax), s	55.5	15.5				15.5
Max Q Clear Time (g_c+I1), s	54.7	17.5				7.8
Green Ext Time (p_c), s	0.6	0.0				1.1
0.0						0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			31.2			
HCM 6th LOS			C			

# HCM 6th Signalized Intersection Summary

## 2: S Mission Street & Crawford Ave

Mission Ridge

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	78	55	22	143	26	60	266	4	12	350	255
Future Volume (veh/h)	257	78	55	22	143	26	60	266	4	12	350	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	262	80	56	22	146	27	61	271	4	12	357	260
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	388	327	229	416	490	91	359	1057	16	641	572	417
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1211	1024	716	1252	1535	284	812	1853	27	1112	1003	731
Grp Volume(v), veh/h	262	0	136	22	0	173	61	0	275	12	0	617
Grp Sat Flow(s),veh/h/ln	1211	0	1740	1252	0	1819	812	0	1880	1112	0	1734
Q Serve(g_s), s	16.9	0.0	4.7	1.1	0.0	5.8	4.4	0.0	6.0	0.4	0.0	19.4
Cycle Q Clear(g_c), s	22.8	0.0	4.7	5.8	0.0	5.8	23.8	0.0	6.0	6.4	0.0	19.4
Prop In Lane	1.00		0.41	1.00		0.16	1.00		0.01	1.00		0.42
Lane Grp Cap(c), veh/h	388	0	556	416	0	581	359	0	1072	641	0	989
V/C Ratio(X)	0.67	0.00	0.24	0.05	0.00	0.30	0.17	0.00	0.26	0.02	0.00	0.62
Avail Cap(c_a), veh/h	514	0	736	546	0	770	359	0	1072	641	0	989
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	20.5	22.6	0.0	20.9	19.6	0.0	8.8	10.4	0.0	11.7
Incr Delay (d2), s/veh	2.2	0.0	0.2	0.1	0.0	0.3	1.0	0.0	0.6	0.1	0.0	3.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	1.9	0.3	0.0	2.4	0.9	0.0	2.4	0.1	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	0.0	20.7	22.7	0.0	21.2	20.6	0.0	9.4	10.5	0.0	14.7
LnGrp LOS	C	A	C	C	A	C	C	A	A	B	A	B
Approach Vol, veh/h		398			195			336			629	
Approach Delay, s/veh		27.9			21.3			11.4			14.6	
Approach LOS		C			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		30.5		51.0		30.5				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5		46.5		34.5				
Max Q Clear Time (g_c+I1), s		25.8		24.8		21.4		7.8				
Green Ext Time (p_c), s		1.9		1.3		4.8		1.1				

### Intersection Summary

HCM 6th Ctrl Delay	18.1
HCM 6th LOS	B

HCM 6th TWSC  
3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	7	306	122	80	354	17	53	26	69	9	22	10
Future Vol, veh/h	7	306	122	80	354	17	53	26	69	9	22	10
Conflicting Peds, #/hr	2	0	0	0	0	2	6	0	3	3	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	145	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	98	98	98	81	81	81	77	77	77
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	8	340	136	82	361	17	65	32	85	12	29	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	380	0	0	476	0	0	985	968	411	1022	1028	378
Stage 1	-	-	-	-	-	-	424	424	-	536	536	-
Stage 2	-	-	-	-	-	-	561	544	-	486	492	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1178	-	-	1076	-	-	226	253	639	213	233	667
Stage 1	-	-	-	-	-	-	606	585	-	527	522	-
Stage 2	-	-	-	-	-	-	510	517	-	561	546	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1176	-	-	1076	-	-	181	226	637	151	208	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	181	226	-	151	208	-
Stage 1	-	-	-	-	-	-	601	580	-	521	470	-
Stage 2	-	-	-	-	-	-	422	466	-	454	541	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.5			27.2			25.7		
HCM LOS							D			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	194	637	1176	-	-	1076	-	-	227
HCM Lane V/C Ratio	0.503	0.134	0.007	-	-	0.076	-	-	0.235
HCM Control Delay (s)	41	11.5	8.1	0	-	8.6	0	-	25.7
HCM Lane LOS	E	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	2.5	0.5	0	-	-	0.2	-	-	0.9



HCM 6th TWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	365	19	51	300	42	1	26	27	49	40	17
Future Vol, veh/h	14	365	19	51	300	42	1	26	27	49	40	17
Conflicting Peds, #/hr	7	0	2	2	0	7	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	94	94	94	75	75	75	85	85	85
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	16	420	22	54	319	45	1	35	36	58	47	20

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	371	0	0	444	0	0	948	944	434	957	933	349
Stage 1	-	-	-	-	-	-	465	465	-	457	457	-
Stage 2	-	-	-	-	-	-	483	479	-	500	476	-
Critical Hdwy	4.11	-	-	4.14	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.236	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1193	-	-	1106	-	-	241	262	622	239	268	699
Stage 1	-	-	-	-	-	-	578	563	-	587	571	-
Stage 2	-	-	-	-	-	-	565	555	-	557	560	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1185	-	-	1104	-	-	187	239	620	187	245	694
Mov Cap-2 Maneuver	-	-	-	-	-	-	187	239	-	187	245	-
Stage 1	-	-	-	-	-	-	566	552	-	572	532	-
Stage 2	-	-	-	-	-	-	469	517	-	482	549	-

Approach	EB		WB		NB		SB
HCM Control Delay, s	0.3		1.1		18.3		36.2
HCM LOS					C		E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	342	1185	-	-	1104	-	-	236
HCM Lane V/C Ratio	0.211	0.014	-	-	0.049	-	-	0.528
HCM Control Delay (s)	18.3	8.1	0	-	8.4	0	-	36.2
HCM Lane LOS	C	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	0.8	0	-	-	0.2	-	-	2.8

HCM 6th AWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh	13.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	14	365	19	51	300	42	1	26	27	49	40	17
Future Vol, veh/h	14	365	19	51	300	42	1	26	27	49	40	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	15	384	20	54	316	44	1	27	28	52	42	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	14.7			14.6			9.6			10.5		
HCM LOS	B			B			A			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	4%	13%	46%
Vol Thru, %	48%	92%	76%	38%
Vol Right, %	50%	5%	11%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	398	393	106
LT Vol	1	14	51	49
Through Vol	26	365	300	40
RT Vol	27	19	42	17
Lane Flow Rate	57	419	414	112
Geometry Grp	1	1	1	1
Degree of Util (X)	0.094	0.581	0.575	0.187
Departure Headway (Hd)	5.927	4.993	5.005	6.041
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	603	729	720	594
Service Time	3.977	2.993	3.034	4.087
HCM Lane V/C Ratio	0.095	0.575	0.575	0.189
HCM Control Delay	9.6	14.7	14.6	10.5
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.3	3.8	3.7	0.7

HCM 6th TWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	9.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	26	38	4	12	37	168	3	54	20	206	95	53
Future Vol, veh/h	26	38	4	12	37	168	3	54	20	206	95	53
Conflicting Peds, #/hr	2	0	1	1	0	2	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	80	80	80	92	92	92	94	94	94
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	36	52	5	15	46	210	3	59	22	219	101	56

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	774	656	131	674	673	73	158	0	0	82	0	0
Stage 1	568	568	-	77	77	-	-	-	-	-	-	-
Stage 2	206	88	-	597	596	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	318	388	924	367	375	986	1434	-	-	1522	-	-
Stage 1	511	510	-	929	829	-	-	-	-	-	-	-
Stage 2	801	826	-	488	490	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	195	325	922	281	314	983	1433	-	-	1521	-	-
Mov Cap-2 Maneuver	195	325	-	281	314	-	-	-	-	-	-	-
Stage 1	509	428	-	926	827	-	-	-	-	-	-	-
Stage 2	592	824	-	358	412	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	25.5		14.3			0.3			4.5		
HCM LOS	D		B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1433	-	-	267	655	1521	-	-
HCM Lane V/C Ratio	0.002	-	-	0.349	0.414	0.144	-	-
HCM Control Delay (s)	7.5	0	-	25.5	14.3	7.8	0	-
HCM Lane LOS	A	A	-	D	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.5	2	0.5	-	-




HCM 6th TWSC  
6: Squilchuck Rd & Methow Street

Mission Ridge

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	3	13	12	182	145	1
Future Vol, veh/h	3	13	12	182	145	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	83	83	73	73
Heavy Vehicles, %	0	0	3	3	1	1
Mvmt Flow	4	17	14	219	199	1

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	447	200	200	0	-	0
Stage 1	200	-	-	-	-	-
Stage 2	247	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	573	846	1366	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	799	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	566	846	1366	-	-	-
Mov Cap-2 Maneuver	566	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	799	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	9.8	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
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Capacity (veh/h)	1366	-	774	-	-
HCM Lane V/C Ratio	0.011	-	0.028	-	-
HCM Control Delay (s)	7.7	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC  
 7: Squilchuck Rd & Wenatchee Heights Rd

Mission Ridge

Intersection

Int Delay, s/veh 2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	1	37	116	3	65	39
Future Vol, veh/h	1	37	116	3	65	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	100	-	75	105	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-5	-	-	5
Peak Hour Factor	73	73	76	76	77	77
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	1	51	153	4	84	51

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	372	-	0
Stage 1	153	-	-
Stage 2	219	-	-
Critical Hdwy	6.46	-	-
Critical Hdwy Stg 1	5.46	-	-
Critical Hdwy Stg 2	5.46	-	-
Follow-up Hdwy	3.554	-	-
Pot Cap-1 Maneuver	621	0	-
Stage 1	865	0	-
Stage 2	808	0	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	584	-	-
Mov Cap-2 Maneuver	584	-	-
Stage 1	814	-	-
Stage 2	808	-	-













Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	4.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	584	-	1435	-
HCM Lane V/C Ratio	-	-	0.002	-	0.059	-
HCM Control Delay (s)	-	-	11.2	0	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	-	0.2	-

# HCM 6th Signalized Intersection Summary





















## 1: S Mission Street & Stevens Street

Mission Ridge

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	598	1122	357	636	1742	416
Future Volume (veh/h)	598	1122	357	636	1742	416
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	616	1157	368	656	1796	429
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	681	2034	279	963	1838	1355
Arrive On Green	0.20	0.20	0.15	0.15	0.53	0.72
Sat Flow, veh/h	3483	2812	1885	2793	3483	1885
Grp Volume(v), veh/h	616	1157	368	656	1796	429
Grp Sat Flow(s),veh/h/ln	1742	1406	1885	1396	1742	1885
Q Serve(g_s), s	18.1	20.3	15.5	15.5	52.7	8.7
Cycle Q Clear(g_c), s	18.1	20.3	15.5	15.5	52.7	8.7
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	681	2034	279	963	1838	1355
V/C Ratio(X)	0.90	0.57	1.32	0.68	0.98	0.32
Avail Cap(c_a), veh/h	681	2034	279	963	1844	1355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	6.8	44.7	27.7	24.1	5.4
Incr Delay (d2), s/veh	15.6	0.4	167.1	3.9	15.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.0	4.7	20.1	9.1	24.2	3.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	56.8	7.2	211.8	31.6	39.9	6.0
LnGrp LOS	E	A	F	C	D	A
Approach Vol, veh/h	1773		1024			2225
Approach Delay, s/veh	24.4		96.3			33.4
Approach LOS	C		F			C
Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	59.8	20.0				79.8
Change Period (Y+Rc), s	4.5	4.5				4.5
Max Green Setting (Gmax), s	55.5	15.5				15.5
Max Q Clear Time (g_c+I1), s	54.7	17.5				10.7
Green Ext Time (p_c), s	0.6	0.0				1.1
Green Ext Time (p_c), s						0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			43.0			
HCM 6th LOS			D			

HCM 6th Signalized Intersection Summary  
 2: S Mission Street & Crawford Ave

Mission Ridge

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	257	78	85	36	143	26	86	467	16	12	582	255
Future Volume (veh/h)	257	78	85	36	143	26	86	467	16	12	582	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	262	80	87	37	146	27	88	477	16	12	594	260
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	390	262	285	389	492	91	198	1032	35	467	702	307
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	1211	818	890	1217	1535	284	651	1813	61	911	1234	540
Grp Volume(v), veh/h	262	0	167	37	0	173	88	0	493	12	0	854
Grp Sat Flow(s),veh/h/ln	1211	0	1709	1217	0	1819	651	0	1874	911	0	1773
Q Serve(g_s), s	16.9	0.0	6.0	1.9	0.0	5.8	10.6	0.0	12.6	0.6	0.0	32.7
Cycle Q Clear(g_c), s	22.8	0.0	6.0	7.9	0.0	5.8	43.3	0.0	12.6	13.2	0.0	32.7
Prop In Lane	1.00		0.52	1.00		0.16	1.00		0.03	1.00		0.30
Lane Grp Cap(c), veh/h	390	0	548	389	0	583	198	0	1067	467	0	1009
V/C Ratio(X)	0.67	0.00	0.30	0.10	0.00	0.30	0.44	0.00	0.46	0.03	0.00	0.85
Avail Cap(c_a), veh/h	513	0	722	513	0	768	198	0	1067	467	0	1009
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	0.0	20.9	23.9	0.0	20.8	32.6	0.0	10.3	14.1	0.0	14.6
Incr Delay (d2), s/veh	2.2	0.0	0.3	0.1	0.0	0.3	7.0	0.0	1.4	0.1	0.0	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	2.4	0.6	0.0	2.4	2.0	0.0	5.0	0.1	0.0	13.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.6	0.0	21.2	24.0	0.0	21.1	39.6	0.0	11.7	14.2	0.0	23.3
LnGrp LOS	C	A	C	C	A	C	D	A	B	B	A	C
Approach Vol, veh/h		429			210			581			866	
Approach Delay, s/veh		27.5			21.6			16.0			23.2	
Approach LOS		C			C			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		30.7		51.0		30.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5		46.5		34.5				
Max Q Clear Time (g_c+I1), s		45.3		24.8		34.7		9.9				
Green Ext Time (p_c), s		0.5		1.4		5.2		1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			21.9									
HCM 6th LOS			C									

HCM 6th TWSC  
3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	7.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	7	336	136	80	380	17	65	26	69	9	22	10
Future Vol, veh/h	7	336	136	80	380	17	65	26	69	9	22	10
Conflicting Peds, #/hr	2	0	0	0	0	2	6	0	3	3	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	145	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	98	98	98	81	81	81	77	77	77
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	8	373	151	82	388	17	80	32	85	12	29	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	407	0	0	524	0	0	1053	1036	452	1089	1103	405
Stage 1	-	-	-	-	-	-	465	465	-	563	563	-
Stage 2	-	-	-	-	-	-	588	571	-	526	540	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1152	-	-	1032	-	-	203	231	605	192	210	644
Stage 1	-	-	-	-	-	-	576	561	-	509	507	-
Stage 2	-	-	-	-	-	-	493	503	-	533	520	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1150	-	-	1032	-	-	160	205	603	132	186	639
Mov Cap-2 Maneuver	-	-	-	-	-	-	160	205	-	132	186	-
Stage 1	-	-	-	-	-	-	570	555	-	503	454	-
Stage 2	-	-	-	-	-	-	404	450	-	426	515	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.5			38.8			28.9		
HCM LOS							E			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	171	603	1150	-	-	1032	-	-	203
HCM Lane V/C Ratio	0.657	0.141	0.007	-	-	0.079	-	-	0.262
HCM Control Delay (s)	59.2	12	8.2	0	-	8.8	0	-	28.9
HCM Lane LOS	F	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	3.8	0.5	0	-	-	0.3	-	-	1



HCM 6th AWSC  
3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh 19.3  
Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	7	336	136	80	380	17	65	26	69	9	22	10
Future Vol, veh/h	7	336	136	80	380	17	65	26	69	9	22	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	7	346	140	82	392	18	67	27	71	9	23	10
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	20.1			21.9			11.2			10.6		
HCM LOS	C			C			B			B		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	71%	0%	1%	17%	22%
Vol Thru, %	29%	0%	70%	80%	54%
Vol Right, %	0%	100%	28%	4%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	91	69	479	477	41
LT Vol	65	0	7	80	9
Through Vol	26	0	336	380	22
RT Vol	0	69	136	17	10
Lane Flow Rate	94	71	494	492	42
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.195	0.126	0.712	0.735	0.081
Departure Headway (Hd)	7.471	6.388	5.187	5.38	6.928
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	478	558	696	669	513
Service Time	5.244	4.16	3.235	3.428	5.024
HCM Lane V/C Ratio	0.197	0.127	0.71	0.735	0.082
HCM Control Delay	12.1	10.1	20.1	21.9	10.6
HCM Lane LOS	B	B	C	C	B
HCM 95th-tile Q	0.7	0.4	6	6.4	0.3

HCM 6th TWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	14	409	19	51	338	42	1	26	27	49	40	17
Future Vol, veh/h	14	409	19	51	338	42	1	26	27	49	40	17
Conflicting Peds, #/hr	7	0	2	2	0	7	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	94	94	94	75	75	75	85	85	85
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	16	470	22	54	360	45	1	35	36	58	47	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	412	0	0	494	0	0	1039	1035	484	1048	1024	390
Stage 1	-	-	-	-	-	-	515	515	-	498	498	-
Stage 2	-	-	-	-	-	-	524	520	-	550	526	-
Critical Hdwy	4.11	-	-	4.14	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.236	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1152	-	-	1059	-	-	209	232	583	208	237	663
Stage 1	-	-	-	-	-	-	543	535	-	558	548	-
Stage 2	-	-	-	-	-	-	537	532	-	523	532	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1144	-	-	1057	-	-	158	211	581	159	215	659
Mov Cap-2 Maneuver	-	-	-	-	-	-	158	211	-	159	215	-
Stage 1	-	-	-	-	-	-	532	524	-	543	508	-
Stage 2	-	-	-	-	-	-	441	493	-	449	521	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1			20.3			47		
HCM LOS							C			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	307	1144	-	-	1057	-	-	204
HCM Lane V/C Ratio	0.235	0.014	-	-	0.051	-	-	0.611
HCM Control Delay (s)	20.3	8.2	0	-	8.6	0	-	47
HCM Lane LOS	C	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	0.9	0	-	-	0.2	-	-	3.5

HCM 6th AWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh	16
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	409	19	51	338	42	1	26	27	49	40	17
Future Vol, veh/h	14	409	19	51	338	42	1	26	27	49	40	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	15	431	20	54	356	44	1	27	28	52	42	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	17.1			16.9			9.9			10.8		
HCM LOS	C			C			A			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	3%	12%	46%
Vol Thru, %	48%	93%	78%	38%
Vol Right, %	50%	4%	10%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	442	431	106
LT Vol	1	14	51	49
Through Vol	26	409	338	40
RT Vol	27	19	42	17
Lane Flow Rate	57	465	454	112
Geometry Grp	1	1	1	1
Degree of Util (X)	0.097	0.653	0.642	0.194
Departure Headway (Hd)	6.171	5.051	5.097	6.267
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	579	717	708	571
Service Time	4.229	3.083	3.129	4.32
HCM Lane V/C Ratio	0.098	0.649	0.641	0.196
HCM Control Delay	9.9	17.1	16.9	10.8
HCM Lane LOS	A	C	C	B
HCM 95th-tile Q	0.3	4.9	4.7	0.7

HCM 6th TWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	11.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	26	38	4	12	37	206	3	54	20	250	95	53
Future Vol, veh/h	26	38	4	12	37	206	3	54	20	250	95	53
Conflicting Peds, #/hr	2	0	1	1	0	2	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	80	80	80	92	92	92	94	94	94
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	36	52	5	15	46	258	3	59	22	266	101	56

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	892	750	131	768	767	73	158	0	0	82	0	0
Stage 1	662	662	-	77	77	-	-	-	-	-	-	-
Stage 2	230	88	-	691	690	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	265	342	924	317	331	986	1434	-	-	1522	-	-
Stage 1	454	462	-	929	829	-	-	-	-	-	-	-
Stage 2	777	826	-	433	445	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	144	275	922	230	266	983	1433	-	-	1521	-	-
Mov Cap-2 Maneuver	144	275	-	230	266	-	-	-	-	-	-	-
Stage 1	453	372	-	926	827	-	-	-	-	-	-	-
Stage 2	539	824	-	298	359	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	35.1		16.2			0.3		4.9		
HCM LOS	E		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1433	-	-	210	636	1521	-	-
HCM Lane V/C Ratio	0.002	-	-	0.444	0.501	0.175	-	-
HCM Control Delay (s)	7.5	0	-	35.1	16.2	7.9	0	-
HCM Lane LOS	A	A	-	E	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	2.1	2.8	0.6	-	-

HCM 6th AWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	26	38	4	12	37	206	3	54	20	250	95	53
Future Vol, veh/h	26	38	4	12	37	206	3	54	20	250	95	53
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	27	39	4	12	38	212	3	56	21	258	98	55
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	9.3			10.5			8.9			14		
HCM LOS	A			B			A			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	38%	5%	63%
Vol Thru, %	70%	56%	15%	24%
Vol Right, %	26%	6%	81%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	77	68	255	398
LT Vol	3	26	12	250
Through Vol	54	38	37	95
RT Vol	20	4	206	53
Lane Flow Rate	79	70	263	410
Geometry Grp	1	1	1	1
Degree of Util (X)	0.115	0.109	0.349	0.555
Departure Headway (Hd)	5.21	5.619	4.778	4.867
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	691	641	744	730
Service Time	3.215	3.625	2.869	2.958
HCM Lane V/C Ratio	0.114	0.109	0.353	0.562
HCM Control Delay	8.9	9.3	10.5	14
HCM Lane LOS	A	A	B	B
HCM 95th-tile Q	0.4	0.4	1.6	3.4

HCM 6th TWSC  
6: Squilchuck Rd & Methow Street

Mission Ridge

Intersection

Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	13	12	433	435	1
Future Vol, veh/h	3	13	12	433	435	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	83	83	73	73
Heavy Vehicles, %	0	0	3	3	1	1
Mvmt Flow	4	17	14	522	596	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1147	597	597	0	0
Stage 1	597	-	-	-	-
Stage 2	550	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-
Pot Cap-1 Maneuver	222	507	975	-	-
Stage 1	554	-	-	-	-
Stage 2	582	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	218	507	975	-	-
Mov Cap-2 Maneuver	218	-	-	-	-
Stage 1	543	-	-	-	-
Stage 2	582	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	975	-	406	-	-
HCM Lane V/C Ratio	0.015	-	0.053	-	-
HCM Control Delay (s)	8.7	0	14.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

HCM 6th TWSC  
 7: Squilchuck Rd & Wenatchee Heights Rd

Mission Ridge

Intersection

Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	1	37	367	3	65	329
Future Vol, veh/h	1	37	367	3	65	329
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	100	-	75	105	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-5	-	-	5
Peak Hour Factor	73	73	76	76	77	77
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	1	51	483	4	84	427

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1078	-	0	0	487
Stage 1	483	-	-	-	-
Stage 2	595	-	-	-	-
Critical Hdwy	6.46	-	-	-	4.1
Critical Hdwy Stg 1	5.46	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-
Follow-up Hdwy	3.554	-	-	-	2.2
Pot Cap-1 Maneuver	238	0	-	-	1086
Stage 1	612	0	-	-	-
Stage 2	543	0	-	-	-
Platoon blocked, %		-	-	-	-
Mov Cap-1 Maneuver	220	-	-	-	1086
Mov Cap-2 Maneuver	220	-	-	-	-
Stage 1	565	-	-	-	-
Stage 2	543	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.5	0	1.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	220	-	1086	-
HCM Lane V/C Ratio	-	-	0.006	-	0.078	-
HCM Control Delay (s)	-	-	21.5	0	8.6	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	0	-	0.3	-













# **2028 Level of Service Calculations**



# HCM 6th Signalized Intersection Summary

## 1: S Mission Street & Stevens Street





















Mission Ridge

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	504	1173	268	561	1822	313
Future Volume (veh/h)	504	1173	268	561	1822	313
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	520	1209	276	578	1878	323
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	680	2035	278	961	1841	1356
Arrive On Green	0.20	0.20	0.15	0.15	0.53	0.72
Sat Flow, veh/h	3483	2812	1885	2793	3483	1885
Grp Volume(v), veh/h	520	1209	276	578	1878	323
Grp Sat Flow(s),veh/h/ln	1742	1406	1885	1396	1742	1885
Q Serve(g_s), s	14.8	20.5	15.4	15.5	55.5	6.1
Cycle Q Clear(g_c), s	14.8	20.5	15.4	15.5	55.5	6.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	680	2035	278	961	1841	1356
V/C Ratio(X)	0.76	0.59	0.99	0.60	1.02	0.24
Avail Cap(c_a), veh/h	680	2035	278	961	1841	1356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	7.0	44.7	27.8	24.7	5.0
Incr Delay (d2), s/veh	5.2	0.5	51.9	2.8	26.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	5.1	11.1	8.0	27.9	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.1	7.5	96.6	30.5	50.9	5.4
LnGrp LOS	D	A	F	C	F	A
Approach Vol, veh/h	1729		854			2201
Approach Delay, s/veh	18.8		51.9			44.2
Approach LOS	B		D			D
Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	60.0	20.0				80.0
Change Period (Y+Rc), s	4.5	4.5				4.5
Max Green Setting (Gmax), s	55.5	15.5				15.5
Max Q Clear Time (g_c+I1), s	57.5	17.5				8.1
Green Ext Time (p_c), s	0.0	0.0				1.1
0.0						0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			36.4			
HCM 6th LOS			D			

# HCM 6th Signalized Intersection Summary

## 2: S Mission Street & Crawford Ave

Mission Ridge

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	269	81	58	23	150	27	63	279	5	13	366	267
Future Volume (veh/h)	269	81	58	23	150	27	63	279	5	13	366	267
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	274	83	59	23	153	28	64	285	5	13	373	272
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	397	337	240	426	510	93	324	1034	18	613	561	409
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.56	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	1202	1016	723	1245	1538	281	792	1847	32	1097	1003	731
Grp Volume(v), veh/h	274	0	142	23	0	181	64	0	290	13	0	645
Grp Sat Flow(s),veh/h/ln	1202	0	1739	1245	0	1819	792	0	1879	1097	0	1734
Q Serve(g_s), s	18.2	0.0	4.9	1.1	0.0	6.1	5.1	0.0	6.7	0.5	0.0	21.6
Cycle Q Clear(g_c), s	24.3	0.0	4.9	6.1	0.0	6.1	26.8	0.0	6.7	7.2	0.0	21.6
Prop In Lane	1.00		0.42	1.00		0.15	1.00		0.02	1.00		0.42
Lane Grp Cap(c), veh/h	397	0	577	426	0	603	324	0	1052	613	0	971
V/C Ratio(X)	0.69	0.00	0.25	0.05	0.00	0.30	0.20	0.00	0.28	0.02	0.00	0.66
Avail Cap(c_a), veh/h	497	0	723	530	0	756	324	0	1052	613	0	971
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.6	0.0	20.2	22.4	0.0	20.6	22.2	0.0	9.5	11.4	0.0	12.8
Incr Delay (d2), s/veh	2.9	0.0	0.2	0.1	0.0	0.3	1.4	0.0	0.6	0.1	0.0	3.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	2.0	0.3	0.0	2.6	1.0	0.0	2.7	0.1	0.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.6	0.0	20.4	22.5	0.0	20.9	23.5	0.0	10.2	11.4	0.0	16.4
LnGrp LOS	C	A	C	C	A	C	C	A	B	B	A	B
Approach Vol, veh/h		416			204			354			658	
Approach Delay, s/veh		28.4			21.1			12.6			16.3	
Approach LOS		C			C			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		32.0		51.0		32.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5		46.5		34.5				
Max Q Clear Time (g_c+I1), s		28.8		26.3		23.6		8.1				
Green Ext Time (p_c), s		2.0		1.2		5.0		1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			19.2									
HCM 6th LOS			B									

HCM 6th TWSC  
3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	7	320	128	84	370	17	56	27	72	9	23	10
Future Vol, veh/h	7	320	128	84	370	17	56	27	72	9	23	10
Conflicting Peds, #/hr	2	0	0	0	0	2	6	0	3	3	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	145	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	98	98	98	81	81	81	77	77	77
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	8	356	142	86	378	17	69	33	89	12	30	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	397	0	0	498	0	0	1029	1012	430	1068	1075	395
Stage 1	-	-	-	-	-	-	443	443	-	561	561	-
Stage 2	-	-	-	-	-	-	586	569	-	507	514	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1162	-	-	1056	-	-	211	238	623	199	219	652
Stage 1	-	-	-	-	-	-	592	574	-	510	508	-
Stage 2	-	-	-	-	-	-	495	504	-	546	534	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1160	-	-	1056	-	-	166	210	621	136	194	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	166	210	-	136	194	-
Stage 1	-	-	-	-	-	-	586	568	-	504	454	-
Stage 2	-	-	-	-	-	-	403	450	-	435	529	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.6			32			28.1		
HCM LOS							D			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	178	621	1160	-	-	1056	-	-	210
HCM Lane V/C Ratio	0.576	0.143	0.007	-	-	0.081	-	-	0.26
HCM Control Delay (s)	49.6	11.8	8.1	0	-	8.7	0	-	28.1
HCM Lane LOS	E	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	3.1	0.5	0	-	-	0.3	-	-	1

HCM 6th AWSC  
 3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh 17.9  
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	7	320	128	84	370	17	56	27	72	9	23	10
Future Vol, veh/h	7	320	128	84	370	17	56	27	72	9	23	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	7	330	132	87	381	18	58	28	74	9	24	10
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	18.1			20.7			10.9			10.5		
HCM LOS	C			C			B			B		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	67%	0%	2%	18%	21%
Vol Thru, %	33%	0%	70%	79%	55%
Vol Right, %	0%	100%	28%	4%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	72	455	471	42
LT Vol	56	0	7	84	9
Through Vol	27	0	320	370	23
RT Vol	0	72	128	17	10
Lane Flow Rate	86	74	469	486	43
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.175	0.13	0.67	0.716	0.082
Departure Headway (Hd)	7.366	6.304	5.142	5.312	6.805
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	486	566	699	680	523
Service Time	5.131	4.068	3.188	3.357	4.889
HCM Lane V/C Ratio	0.177	0.131	0.671	0.715	0.082
HCM Control Delay	11.7	10	18.1	20.7	10.5
HCM Lane LOS	B	A	C	C	B
HCM 95th-tile Q	0.6	0.4	5.2	6	0.3

HCM 6th TWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	382	20	53	313	44	1	27	28	51	42	17
Future Vol, veh/h	15	382	20	53	313	44	1	27	28	51	42	17
Conflicting Peds, #/hr	7	0	2	2	0	7	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	94	94	94	75	75	75	85	85	85
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	17	439	23	56	333	47	1	36	37	60	49	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	387	0	0	464	0	0	990	986	454	998	974	364
Stage 1	-	-	-	-	-	-	487	487	-	476	476	-
Stage 2	-	-	-	-	-	-	503	499	-	522	498	-
Critical Hdwy	4.11	-	-	4.14	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.236	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1177	-	-	1087	-	-	225	248	606	224	254	685
Stage 1	-	-	-	-	-	-	562	550	-	574	560	-
Stage 2	-	-	-	-	-	-	551	544	-	542	548	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1169	-	-	1085	-	-	171	225	604	171	230	680
Mov Cap-2 Maneuver	-	-	-	-	-	-	171	225	-	171	230	-
Stage 1	-	-	-	-	-	-	550	538	-	559	519	-
Stage 2	-	-	-	-	-	-	452	504	-	465	536	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.1			19.4			43.5		
HCM LOS							C			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	325	1169	-	-	1085	-	-	217
HCM Lane V/C Ratio	0.23	0.015	-	-	0.052	-	-	0.596
HCM Control Delay (s)	19.4	8.1	0	-	8.5	0	-	43.5
HCM Lane LOS	C	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	0.9	0	-	-	0.2	-	-	3.4

HCM 6th AWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh	14.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	15	382	20	53	313	44	1	27	28	51	42	17
Future Vol, veh/h	15	382	20	53	313	44	1	27	28	51	42	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	16	402	21	56	329	46	1	28	29	54	44	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	15.7			15.7			9.8			10.7		
HCM LOS	C			C			A			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	4%	13%	46%
Vol Thru, %	48%	92%	76%	38%
Vol Right, %	50%	5%	11%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	417	410	110
LT Vol	1	15	53	51
Through Vol	27	382	313	42
RT Vol	28	20	44	17
Lane Flow Rate	59	439	432	116
Geometry Grp	1	1	1	1
Degree of Util (X)	0.099	0.613	0.608	0.198
Departure Headway (Hd)	6.053	5.029	5.069	6.157
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	590	720	712	581
Service Time	4.108	3.06	3.1	4.206
HCM Lane V/C Ratio	0.1	0.61	0.607	0.2
HCM Control Delay	9.8	15.7	15.7	10.7
HCM Lane LOS	A	C	C	B
HCM 95th-tile Q	0.3	4.2	4.2	0.7

HCM 6th TWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	10.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	27	39	5	13	38	175	3	57	21	216	100	56
Future Vol, veh/h	27	39	5	13	38	175	3	57	21	216	100	56
Conflicting Peds, #/hr	2	0	1	1	0	2	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	80	80	80	92	92	92	94	94	94
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	37	53	7	16	48	219	3	62	23	230	106	60

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	812	689	138	708	708	77	167	0	0	86	0	0
Stage 1	597	597	-	81	81	-	-	-	-	-	-	-
Stage 2	215	92	-	627	627	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	300	371	916	348	358	981	1423	-	-	1517	-	-
Stage 1	493	495	-	925	826	-	-	-	-	-	-	-
Stage 2	792	823	-	470	475	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	178	308	914	261	297	978	1422	-	-	1516	-	-
Mov Cap-2 Maneuver	178	308	-	261	297	-	-	-	-	-	-	-
Stage 1	492	411	-	922	824	-	-	-	-	-	-	-
Stage 2	577	821	-	337	395	-	-	-	-	-	-	-

Approach	EB		WB			NB			SB		
HCM Control Delay, s	28.3		15.2			0.3			4.5		
HCM LOS	D		C								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1422	-	-	250	634	1516	-	-
HCM Lane V/C Ratio	0.002	-	-	0.389	0.446	0.152	-	-
HCM Control Delay (s)	7.5	0	-	28.3	15.2	7.8	0	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.8	2.3	0.5	-	-

HCM 6th AWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	39	5	13	38	175	3	57	21	216	100	56
Future Vol, veh/h	27	39	5	13	38	175	3	57	21	216	100	56
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	28	40	5	13	39	180	3	59	22	223	103	58
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	9.1			9.9			8.7			12.8		
HCM LOS	A			A			A			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	38%	6%	58%
Vol Thru, %	70%	55%	17%	27%
Vol Right, %	26%	7%	77%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	81	71	226	372
LT Vol	3	27	13	216
Through Vol	57	39	38	100
RT Vol	21	5	175	56
Lane Flow Rate	84	73	233	384
Geometry Grp	1	1	1	1
Degree of Util (X)	0.115	0.109	0.306	0.51
Departure Headway (Hd)	4.977	5.376	4.729	4.784
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	711	659	753	748
Service Time	3.074	3.474	2.804	2.854
HCM Lane V/C Ratio	0.118	0.111	0.309	0.513
HCM Control Delay	8.7	9.1	9.9	12.8
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.4	0.4	1.3	2.9



HCM 6th TWSC  
6: Squilchuck Rd & Methow Street

Mission Ridge

Intersection

Int Delay, s/veh 0.7

Movement EBL EBR NBL NBT SBT SBR

Lane Configurations						
Traffic Vol, veh/h	3	14	13	190	152	1
Future Vol, veh/h	3	14	13	190	152	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	83	83	73	73
Heavy Vehicles, %	0	0	3	3	1	1
Mvmt Flow	4	19	16	229	208	1

Major/Minor Minor2 Major1 Major2

Conflicting Flow All	470	209	209	0	-	0
Stage 1	209	-	-	-	-	-
Stage 2	261	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-	-
Pot Cap-1 Maneuver	556	836	1356	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	787	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	548	836	1356	-	-	-
Mov Cap-2 Maneuver	548	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	787	-	-	-	-	-

Approach EB NB SB

HCM Control Delay, s	9.9	0.5	0
HCM LOS	A		

Minor Lane/Major Mvmt NBL NBT EBLn1 SBT SBR

Capacity (veh/h)	1356	-	765	-	-
HCM Lane V/C Ratio	0.012	-	0.03	-	-
HCM Control Delay (s)	7.7	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC  
 7: Squilchuck Rd & Wenatchee Heights Rd

Mission Ridge

Intersection

Int Delay, s/veh 2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	1	39	121	3	67	41
Future Vol, veh/h	1	39	121	3	67	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	100	-	75	105	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-5	-	-	5
Peak Hour Factor	73	73	76	76	77	77
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	1	53	159	4	87	53

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	386	-	0
Stage 1	159	-	-
Stage 2	227	-	-
Critical Hdwy	6.46	-	-
Critical Hdwy Stg 1	5.46	-	-
Critical Hdwy Stg 2	5.46	-	-
Follow-up Hdwy	3.554	-	-
Pot Cap-1 Maneuver	609	0	-
Stage 1	860	0	-
Stage 2	801	0	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	572	-	-
Mov Cap-2 Maneuver	572	-	-
Stage 1	808	-	-
Stage 2	801	-	-













Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	4.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	572	-	1428	-
HCM Lane V/C Ratio	-	-	0.002	-	0.061	-
HCM Control Delay (s)	-	-	11.3	0	7.7	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	-	0.2	-

# HCM 6th Signalized Intersection Summary






















## 1: S Mission Street & Stevens Street

Mission Ridge

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	620	1173	369	661	1822	429
Future Volume (veh/h)	620	1173	369	661	1822	429
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	639	1209	380	681	1878	442
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	680	2035	278	961	1841	1356
Arrive On Green	0.20	0.20	0.15	0.15	0.53	0.72
Sat Flow, veh/h	3483	2812	1885	2793	3483	1885
Grp Volume(v), veh/h	639	1209	380	681	1878	442
Grp Sat Flow(s),veh/h/ln	1742	1406	1885	1396	1742	1885
Q Serve(g_s), s	19.0	20.5	15.5	15.5	55.5	9.0
Cycle Q Clear(g_c), s	19.0	20.5	15.5	15.5	55.5	9.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	680	2035	278	961	1841	1356
V/C Ratio(X)	0.94	0.59	1.37	0.71	1.02	0.33
Avail Cap(c_a), veh/h	680	2035	278	961	1841	1356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	7.0	44.8	27.8	24.7	5.4
Incr Delay (d2), s/veh	21.0	0.5	185.9	4.4	26.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	5.1	21.5	9.5	27.9	3.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	62.7	7.5	230.6	32.2	50.9	6.1
LnGrp LOS	E	A	F	C	F	A
Approach Vol, veh/h	1848		1061			2320
Approach Delay, s/veh	26.6		103.2			42.4
Approach LOS	C		F			D
Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	60.0	20.0				80.0
Change Period (Y+Rc), s	4.5	4.5				4.5
Max Green Setting (Gmax), s	55.5	15.5				15.5
Max Q Clear Time (g_c+I1), s	57.5	17.5				11.0
Green Ext Time (p_c), s	0.0	0.0				1.1
						0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			49.1			
HCM 6th LOS			D			





















HCM 6th Signalized Intersection Summary  
 2: S Mission Street & Crawford Ave

Mission Ridge

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	269	81	88	37	150	27	89	480	17	13	598	267
Future Volume (veh/h)	269	81	88	37	150	27	89	480	17	13	598	267
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	274	83	90	38	153	28	91	490	17	13	610	272
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	398	273	296	398	512	94	164	1012	35	442	685	306
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.56	0.56	0.56	0.56	0.56	0.56
Sat Flow, veh/h	1202	820	889	1211	1538	281	634	1811	63	899	1226	546
Grp Volume(v), veh/h	274	0	173	38	0	181	91	0	507	13	0	882
Grp Sat Flow(s),veh/h/ln	1202	0	1709	1211	0	1819	634	0	1874	899	0	1772
Q Serve(g_s), s	18.2	0.0	6.3	2.0	0.0	6.1	10.2	0.0	13.6	0.7	0.0	36.3
Cycle Q Clear(g_c), s	24.3	0.0	6.3	8.3	0.0	6.1	46.5	0.0	13.6	14.3	0.0	36.3
Prop In Lane	1.00		0.52	1.00		0.15	1.00		0.03	1.00		0.31
Lane Grp Cap(c), veh/h	398	0	569	398	0	605	164	0	1048	442	0	991
V/C Ratio(X)	0.69	0.00	0.30	0.10	0.00	0.30	0.55	0.00	0.48	0.03	0.00	0.89
Avail Cap(c_a), veh/h	497	0	709	498	0	755	164	0	1048	442	0	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.6	0.0	20.6	23.7	0.0	20.6	37.3	0.0	11.1	15.4	0.0	16.1
Incr Delay (d2), s/veh	2.9	0.0	0.3	0.1	0.0	0.3	12.9	0.0	1.6	0.1	0.0	11.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	2.5	0.6	0.0	2.6	2.4	0.0	5.5	0.2	0.0	16.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.5	0.0	20.9	23.8	0.0	20.8	50.1	0.0	12.7	15.5	0.0	28.0
LnGrp LOS	C	A	C	C	A	C	D	A	B	B	A	C
Approach Vol, veh/h		447			219			598			895	
Approach Delay, s/veh		28.0			21.3			18.4			27.8	
Approach LOS		C			C			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		32.2		51.0		32.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5		46.5		34.5				
Max Q Clear Time (g_c+I1), s		48.5		26.3		38.3		10.3				
Green Ext Time (p_c), s		0.0		1.3		4.2		1.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			24.6									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary  
 2: S Mission Street & Crawford Ave

Mission Ridge

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	269	81	88	37	150	27	89	480	17	13	598	267
Future Volume (veh/h)	269	81	88	37	150	27	89	480	17	13	598	267
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	274	83	90	38	153	28	91	490	17	13	610	272
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	287	206	223	57	187	34	108	960	33	27	594	265
Arrive On Green	0.16	0.25	0.25	0.03	0.12	0.12	0.06	0.53	0.53	0.02	0.48	0.48
Sat Flow, veh/h	1781	820	889	1781	1537	281	1795	1811	63	1795	1225	546
Grp Volume(v), veh/h	274	0	173	38	0	181	91	0	507	13	0	882
Grp Sat Flow(s),veh/h/ln	1781	0	1708	1781	0	1818	1795	0	1874	1795	0	1772
Q Serve(g_s), s	16.0	0.0	8.8	2.2	0.0	10.2	5.3	0.0	18.3	0.8	0.0	50.8
Cycle Q Clear(g_c), s	16.0	0.0	8.8	2.2	0.0	10.2	5.3	0.0	18.3	0.8	0.0	50.8
Prop In Lane	1.00		0.52	1.00		0.15	1.00		0.03	1.00		0.31
Lane Grp Cap(c), veh/h	287	0	429	57	0	221	108	0	993	27	0	859
V/C Ratio(X)	0.95	0.00	0.40	0.67	0.00	0.82	0.84	0.00	0.51	0.48	0.00	1.03
Avail Cap(c_a), veh/h	287	0	462	112	0	312	108	0	993	86	0	859
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.5	0.0	32.7	50.2	0.0	44.9	48.7	0.0	15.9	51.2	0.0	27.0
Incr Delay (d2), s/veh	40.5	0.0	0.6	12.7	0.0	10.9	42.2	0.0	1.9	12.7	0.0	37.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.2	0.0	3.7	1.2	0.0	5.2	3.6	0.0	8.0	0.4	0.0	29.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.1	0.0	33.3	62.8	0.0	55.8	90.9	0.0	17.7	63.9	0.0	64.6
LnGrp LOS	F	A	C	E	A	E	F	A	B	E	A	F
Approach Vol, veh/h		447			219			598			895	
Approach Delay, s/veh		64.4			57.0			28.9			64.6	
Approach LOS		E			E			C			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	60.0	7.8	30.8	10.8	55.3	21.4	17.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.0	52.1	6.6	28.3	6.3	50.8	16.9	18.0				
Max Q Clear Time (g_c+I1), s	2.8	20.3	4.2	10.8	7.3	52.8	18.0	12.2				
Green Ext Time (p_c), s	0.0	3.6	0.0	0.9	0.0	0.0	0.0	0.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			53.9									
HCM 6th LOS			D									

HCM 6th TWSC  
3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	9.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	7	350	142	84	396	17	68	27	72	9	23	10
Future Vol, veh/h	7	350	142	84	396	17	68	27	72	9	23	10
Conflicting Peds, #/hr	2	0	0	0	0	2	6	0	3	3	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	145	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	98	98	98	81	81	81	77	77	77
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	8	389	158	86	404	17	84	33	89	12	30	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	423	0	0	547	0	0	1096	1079	471	1135	1150	421
Stage 1	-	-	-	-	-	-	484	484	-	587	587	-
Stage 2	-	-	-	-	-	-	612	595	-	548	563	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1136	-	-	1012	-	-	190	217	591	179	197	630
Stage 1	-	-	-	-	-	-	562	550	-	494	495	-
Stage 2	-	-	-	-	-	-	479	491	-	519	507	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1134	-	-	1012	-	-	146	191	589	119	173	625
Mov Cap-2 Maneuver	-	-	-	-	-	-	146	191	-	119	173	-
Stage 1	-	-	-	-	-	-	556	545	-	488	439	-
Stage 2	-	-	-	-	-	-	386	436	-	408	502	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.5			48.9			32		
HCM LOS							E			D		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	156	589	1134	-	-	1012	-	-	187
HCM Lane V/C Ratio	0.752	0.151	0.007	-	-	0.085	-	-	0.292
HCM Control Delay (s)	76.8	12.2	8.2	0	-	8.9	0	-	32
HCM Lane LOS	F	B	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	4.6	0.5	0	-	-	0.3	-	-	1.2

HCM 6th AWSC  
3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh	21.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	7	350	142	84	396	17	68	27	72	9	23	10
Future Vol, veh/h	7	350	142	84	396	17	68	27	72	9	23	10
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	7	361	146	87	408	18	70	28	74	9	24	10
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	22.7			25			11.5			10.9		
HCM LOS	C			C			B			B		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	72%	0%	1%	17%	21%
Vol Thru, %	28%	0%	70%	80%	55%
Vol Right, %	0%	100%	28%	3%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	72	499	497	42
LT Vol	68	0	7	84	9
Through Vol	27	0	350	396	23
RT Vol	0	72	142	17	10
Lane Flow Rate	98	74	514	512	43
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.207	0.134	0.753	0.777	0.087
Departure Headway (Hd)	7.599	6.514	5.269	5.462	7.211
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	470	547	684	661	500
Service Time	5.383	4.296	3.33	3.524	5.211
HCM Lane V/C Ratio	0.209	0.135	0.751	0.775	0.086
HCM Control Delay	12.4	10.3	22.7	25	10.9
HCM Lane LOS	B	B	C	C	B
HCM 95th-tile Q	0.8	0.5	6.9	7.4	0.3

HCM 6th TWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	8.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	15	426	20	53	351	44	1	27	28	51	42	17
Future Vol, veh/h	15	426	20	53	351	44	1	27	28	51	42	17
Conflicting Peds, #/hr	7	0	2	2	0	7	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	94	94	94	75	75	75	85	85	85
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	17	490	23	56	373	47	1	36	37	60	49	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	427	0	0	515	0	0	1081	1077	505	1089	1065	404
Stage 1	-	-	-	-	-	-	538	538	-	516	516	-
Stage 2	-	-	-	-	-	-	543	539	-	573	549	-
Critical Hdwy	4.11	-	-	4.14	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.236	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1138	-	-	1040	-	-	195	219	567	195	224	651
Stage 1	-	-	-	-	-	-	527	522	-	546	538	-
Stage 2	-	-	-	-	-	-	524	522	-	508	520	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1130	-	-	1038	-	-	143	197	565	145	202	647
Mov Cap-2 Maneuver	-	-	-	-	-	-	143	197	-	145	202	-
Stage 1	-	-	-	-	-	-	515	510	-	531	496	-
Stage 2	-	-	-	-	-	-	425	481	-	431	508	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1			21.7			58.2		
HCM LOS							C			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	289	1130	-	-	1038	-	-	188
HCM Lane V/C Ratio	0.258	0.015	-	-	0.054	-	-	0.688
HCM Control Delay (s)	21.7	8.2	0	-	8.7	0	-	58.2
HCM Lane LOS	C	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	1	0	-	-	0.2	-	-	4.2



HCM 6th AWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh	17.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	15	426	20	53	351	44	1	27	28	51	42	17
Future Vol, veh/h	15	426	20	53	351	44	1	27	28	51	42	17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	16	448	21	56	369	46	1	28	29	54	44	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	18.8			18.3			10.1			11.1		
HCM LOS	C			C			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	3%	12%	46%
Vol Thru, %	48%	92%	78%	38%
Vol Right, %	50%	4%	10%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	461	448	110
LT Vol	1	15	53	51
Through Vol	27	426	351	42
RT Vol	28	20	44	17
Lane Flow Rate	59	485	472	116
Geometry Grp	1	1	1	1
Degree of Util (X)	0.103	0.689	0.676	0.205
Departure Headway (Hd)	6.3	5.115	5.163	6.385
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	566	704	698	560
Service Time	4.369	3.154	3.202	4.447
HCM Lane V/C Ratio	0.104	0.689	0.676	0.207
HCM Control Delay	10.1	18.8	18.3	11.1
HCM Lane LOS	B	C	C	B
HCM 95th-tile Q	0.3	5.5	5.3	0.8

HCM 6th TWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	12.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	39	5	13	38	213	3	57	21	260	100	56
Future Vol, veh/h	27	39	5	13	38	213	3	57	21	260	100	56
Conflicting Peds, #/hr	2	0	1	1	0	2	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	80	80	80	92	92	92	94	94	94
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	37	53	7	16	48	266	3	62	23	277	106	60

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	930	783	138	802	802	77	167	0	0	86	0	0
Stage 1	691	691	-	81	81	-	-	-	-	-	-	-
Stage 2	239	92	-	721	721	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	250	328	916	301	316	981	1423	-	-	1517	-	-
Stage 1	438	449	-	925	826	-	-	-	-	-	-	-
Stage 2	769	823	-	417	430	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	131	260	914	213	251	978	1422	-	-	1516	-	-
Mov Cap-2 Maneuver	131	260	-	213	251	-	-	-	-	-	-	-
Stage 1	437	357	-	922	824	-	-	-	-	-	-	-
Stage 2	525	821	-	280	342	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	40.2		17.5			0.3		4.9		
HCM LOS	E		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1422	-	-	196	614	1516	-	-
HCM Lane V/C Ratio	0.002	-	-	0.496	0.537	0.182	-	-
HCM Control Delay (s)	7.5	0	-	40.2	17.5	7.9	0	-
HCM Lane LOS	A	A	-	E	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	2.5	3.2	0.7	-	-

HCM 6th AWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh	12.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	27	39	5	13	38	213	3	57	21	260	100	56
Future Vol, veh/h	27	39	5	13	38	213	3	57	21	260	100	56
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	28	40	5	13	39	220	3	59	22	268	103	58
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	9.5			10.9			9.1			15.2		
HCM LOS	A			B			A			C		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	38%	5%	62%
Vol Thru, %	70%	55%	14%	24%
Vol Right, %	26%	7%	81%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	81	71	264	416
LT Vol	3	27	13	260
Through Vol	57	39	38	100
RT Vol	21	5	213	56
Lane Flow Rate	84	73	272	429
Geometry Grp	1	1	1	1
Degree of Util (X)	0.123	0.116	0.374	0.597
Departure Headway (Hd)	5.293	5.71	4.949	5.011
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	676	627	727	725
Service Time	3.33	3.75	2.973	3.026
HCM Lane V/C Ratio	0.124	0.116	0.374	0.592
HCM Control Delay	9.1	9.5	10.9	15.2
HCM Lane LOS	A	A	B	C
HCM 95th-tile Q	0.4	0.4	1.7	4

HCM 6th TWSC  
6: Squilchuck Rd & Methow Street

Mission Ridge

Intersection

Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	14	13	441	442	1
Future Vol, veh/h	3	14	13	441	442	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	83	83	73	73
Heavy Vehicles, %	0	0	3	3	1	1
Mvmt Flow	4	19	16	531	605	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1169	606	606	0	0
Stage 1	606	-	-	-	-
Stage 2	563	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-
Pot Cap-1 Maneuver	215	501	967	-	-
Stage 1	548	-	-	-	-
Stage 2	574	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	210	501	967	-	-
Mov Cap-2 Maneuver	210	-	-	-	-
Stage 1	535	-	-	-	-
Stage 2	574	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	0.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	967	-	403	-	-
HCM Lane V/C Ratio	0.016	-	0.056	-	-
HCM Control Delay (s)	8.8	0	14.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.2	-	-

HCM 6th TWSC  
 7: Squilchuck Rd & Wenatchee Heights Rd

Mission Ridge

Intersection

Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	1	39	372	3	67	331
Future Vol, veh/h	1	39	372	3	67	331
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	100	-	75	105	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-5	-	-	5
Peak Hour Factor	73	73	76	76	77	77
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	1	53	489	4	87	430

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1093	-	0	0	493
Stage 1	489	-	-	-	-
Stage 2	604	-	-	-	-
Critical Hdwy	6.46	-	-	-	4.1
Critical Hdwy Stg 1	5.46	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-
Follow-up Hdwy	3.554	-	-	-	2.2
Pot Cap-1 Maneuver	233	0	-	-	1081
Stage 1	608	0	-	-	-
Stage 2	538	0	-	-	-
Platoon blocked, %		-	-	-	-
Mov Cap-1 Maneuver	214	-	-	-	1081
Mov Cap-2 Maneuver	214	-	-	-	-
Stage 1	559	-	-	-	-
Stage 2	538	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.9	0	1.5
HCM LOS	C		













Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	214	-	1081
HCM Lane V/C Ratio	-	-	0.006	-	0.08
HCM Control Delay (s)	-	-	21.9	0	8.6
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0	-	0.3

# **2040 Level of Service Calculations**

# HCM 6th Signalized Intersection Summary

## 1: S Mission Street & Stevens Street













Mission Ridge

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	602	1403	321	670	2178	375
Future Volume (veh/h)	602	1403	321	670	2178	375
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	621	1446	331	691	2245	387
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	680	2035	278	961	1841	1356
Arrive On Green	0.20	0.20	0.15	0.15	0.53	0.72
Sat Flow, veh/h	3483	2812	1885	2793	3483	1885
Grp Volume(v), veh/h	621	1446	331	691	2245	387
Grp Sat Flow(s),veh/h/ln	1742	1406	1885	1396	1742	1885
Q Serve(g_s), s	18.3	20.5	15.5	15.5	55.5	7.6
Cycle Q Clear(g_c), s	18.3	20.5	15.5	15.5	55.5	7.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	680	2035	278	961	1841	1356
V/C Ratio(X)	0.91	0.71	1.19	0.72	1.22	0.29
Avail Cap(c_a), veh/h	680	2035	278	961	1841	1356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	8.2	44.8	27.8	24.7	5.2
Incr Delay (d2), s/veh	16.8	1.2	115.3	4.6	103.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	7.3	16.1	9.7	47.8	2.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.2	9.4	160.0	32.4	128.6	5.7
LnGrp LOS	E	A	F	C	F	A
Approach Vol, veh/h	2067		1022			2632
Approach Delay, s/veh	24.1		73.7			110.6
Approach LOS	C		E			F
Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	60.0	20.0				80.0
Change Period (Y+Rc), s	4.5	4.5				4.5
Max Green Setting (Gmax), s	55.5	15.5				15.5
Max Q Clear Time (g_c+I1), s	57.5	17.5				9.6
Green Ext Time (p_c), s	0.0	0.0				1.2
						0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			72.7			
HCM 6th LOS			E			

# HCM 6th Signalized Intersection Summary

## 1: S Mission Street & Stevens Street

Mission Ridge





















						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	602	1403	321	670	2178	375
Future Volume (veh/h)	602	1403	321	670	2178	375
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	621	1446	331	691	2245	387
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	560	2069	316	921	2003	1461
Arrive On Green	0.16	0.16	0.17	0.17	0.57	0.77
Sat Flow, veh/h	3483	2812	1885	2795	3483	1885
Grp Volume(v), veh/h	621	1446	331	691	2245	387
Grp Sat Flow(s),veh/h/ln	1742	1406	1885	1398	1742	1885
Q Serve(g_s), s	22.5	22.5	23.5	23.5	80.5	8.1
Cycle Q Clear(g_c), s	22.5	22.5	23.5	23.5	80.5	8.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	560	2069	316	921	2003	1461
V/C Ratio(X)	1.11	0.70	1.05	0.75	1.12	0.26
Avail Cap(c_a), veh/h	560	2069	316	921	2003	1461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.8	10.1	58.3	39.4	29.7	4.5
Incr Delay (d2), s/veh	71.6	1.1	63.1	5.6	61.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.3	10.6	16.8	13.2	49.3	3.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	130.4	11.1	121.4	45.0	91.5	4.9
LnGrp LOS	F	B	F	D	F	A
Approach Vol, veh/h	2067		1022			2632
Approach Delay, s/veh	47.0		69.8			78.8
Approach LOS	D		E			E
Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	85.0	28.0				113.0
Change Period (Y+Rc), s	4.5	4.5				4.5
Max Green Setting (Gmax), s	80.5	23.5				108.5
Max Q Clear Time (g_c+I1), s	82.5	25.5				10.1
Green Ext Time (p_c), s	0.0	0.0				2.7
Green Ext Time (p_c), s						0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			65.7			
HCM 6th LOS			E			



# HCM 6th Signalized Intersection Summary

## 2: S Mission Street & Crawford Ave

Mission Ridge

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	97	69	28	179	32	75	333	6	15	437	319
Future Volume (veh/h)	322	97	69	28	179	32	75	333	6	15	437	319
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	329	99	70	29	183	33	77	340	6	15	446	326
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	428	389	275	464	589	106	172	956	17	506	518	379
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1165	1019	721	1215	1542	278	703	1847	33	1042	1001	732
Grp Volume(v), veh/h	329	0	169	29	0	216	77	0	346	15	0	772
Grp Sat Flow(s),veh/h/ln	1165	0	1740	1215	0	1820	703	0	1879	1042	0	1733
Q Serve(g_s), s	24.8	0.0	6.0	1.5	0.0	7.5	9.6	0.0	9.8	0.8	0.0	34.8
Cycle Q Clear(g_c), s	32.3	0.0	6.0	7.5	0.0	7.5	44.4	0.0	9.8	10.6	0.0	34.8
Prop In Lane	1.00		0.41	1.00		0.15	1.00		0.02	1.00		0.42
Lane Grp Cap(c), veh/h	428	0	665	464	0	696	172	0	973	506	0	897
V/C Ratio(X)	0.77	0.00	0.25	0.06	0.00	0.31	0.45	0.00	0.36	0.03	0.00	0.86
Avail Cap(c_a), veh/h	431	0	668	466	0	699	172	0	973	506	0	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	19.0	21.5	0.0	19.5	38.2	0.0	12.8	15.9	0.0	18.8
Incr Delay (d2), s/veh	8.1	0.0	0.2	0.1	0.0	0.3	8.2	0.0	1.0	0.1	0.0	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	2.4	0.4	0.0	3.1	2.0	0.0	4.2	0.2	0.0	15.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	0.0	19.2	21.6	0.0	19.7	46.4	0.0	13.8	16.0	0.0	29.4
LnGrp LOS	D	A	B	C	A	B	D	A	B	B	A	C
Approach Vol, veh/h		498			245			423			787	
Approach Delay, s/veh		32.2			19.9			19.8			29.2	
Approach LOS		C			B			B			C	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		38.8		51.0		38.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5		46.5		34.5				
Max Q Clear Time (g_c+I1), s		46.4		34.3		36.8		9.5				
Green Ext Time (p_c), s		0.0		0.1		4.1		1.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				26.7								
HCM 6th LOS				C								

HCM 6th TWSC  
3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	17.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	8	383	153	100	443	21	67	32	86	11	28	12
Future Vol, veh/h	8	383	153	100	443	21	67	32	86	11	28	12
Conflicting Peds, #/hr	2	0	0	0	0	2	6	0	3	3	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	145	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	98	98	98	81	81	81	77	77	77
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	9	426	170	102	452	21	83	40	106	14	36	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	475	0	0	596	0	0	1228	1208	514	1274	1283	471
Stage 1	-	-	-	-	-	-	529	529	-	669	669	-
Stage 2	-	-	-	-	-	-	699	679	-	605	614	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1087	-	-	971	-	-	154	182	558	143	164	591
Stage 1	-	-	-	-	-	-	531	526	-	445	454	-
Stage 2	-	-	-	-	-	-	429	450	-	483	481	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1085	-	-	971	-	-	105	154	556	82	138	587
Mov Cap-2 Maneuver	-	-	-	-	-	-	105	154	-	82	138	-
Stage 1	-	-	-	-	-	-	524	519	-	438	388	-
Stage 2	-	-	-	-	-	-	322	385	-	355	475	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.6			95.1			50.2		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	117	556	1085	-	-	971	-	-	143
HCM Lane V/C Ratio	1.045	0.191	0.008	-	-	0.105	-	-	0.463
HCM Control Delay (s)	166.5	13	8.3	0	-	9.1	0	-	50.2
HCM Lane LOS	F	B	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	7.1	0.7	0	-	-	0.4	-	-	2.1

HCM 6th AWSC  
3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh	36.7
Intersection LOS	E


















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	383	153	100	443	21	67	32	86	11	28	12
Future Vol, veh/h	8	383	153	100	443	21	67	32	86	11	28	12
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	8	395	158	103	457	22	69	33	89	11	29	12
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	36.7			46.8			12.4			11.9		
HCM LOS	E			E			B			B		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	68%	0%	1%	18%	22%
Vol Thru, %	32%	0%	70%	79%	55%
Vol Right, %	0%	100%	28%	4%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	86	544	564	51
LT Vol	67	0	8	100	11
Through Vol	32	0	383	443	28
RT Vol	0	86	153	21	12
Lane Flow Rate	102	89	561	581	53
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.229	0.173	0.883	0.94	0.114
Departure Headway (Hd)	8.094	7.023	5.667	5.821	7.781
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	443	510	639	628	459
Service Time	5.849	4.778	3.685	3.84	5.855
HCM Lane V/C Ratio	0.23	0.175	0.878	0.925	0.115
HCM Control Delay	13.3	11.3	36.7	46.8	11.9
HCM Lane LOS	B	B	E	E	B
HCM 95th-tile Q	0.9	0.6	10.6	12.6	0.4

# HCM 6th Signalized Intersection Summary

## 3: Methow Street & Crawford Ave

Mission Ridge

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	383	153	100	443	21	67	32	86	11	28	12
Future Volume (veh/h)	8	383	153	100	443	21	67	32	86	11	28	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1841	1841	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	8	395	158	103	457	22	69	33	89	11	29	12
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	3	3	3
Cap, veh/h	133	608	240	242	680	30	381	140	309	191	224	78
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	7	1266	499	190	1415	63	832	701	1549	179	1121	390
Grp Volume(v), veh/h	561	0	0	582	0	0	102	0	89	52	0	0
Grp Sat Flow(s),veh/h/ln	1772	0	0	1669	0	0	1533	0	1549	1691	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.1	0.0	0.0	0.5	0.0	1.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.7	0.0	0.0	6.9	0.0	0.0	1.4	0.0	1.4	0.7	0.0	0.0
Prop In Lane	0.01		0.28	0.18		0.04	0.68		1.00	0.21		0.23
Lane Grp Cap(c), veh/h	981	0	0	952	0	0	520	0	309	492	0	0
V/C Ratio(X)	0.57	0.00	0.00	0.61	0.00	0.00	0.20	0.00	0.29	0.11	0.00	0.00
Avail Cap(c_a), veh/h	2167	0	0	1975	0	0	1195	0	1019	1233	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.5	0.0	0.0	5.6	0.0	0.0	9.5	0.0	9.6	9.3	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.5	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	1.2	0.0	0.0	0.4	0.0	0.4	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.1	0.0	0.0	6.2	0.0	0.0	9.7	0.0	10.1	9.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	B	A	A	A
Approach Vol, veh/h		561			582			191				52
Approach Delay, s/veh		6.1			6.2			9.9				9.4
Approach LOS		A			A			A				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		10.1		18.0		10.1		18.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5		32.5		18.5		32.5				
Max Q Clear Time (g_c+I1), s		3.4		8.7		2.7		8.9				
Green Ext Time (p_c), s		0.7		4.0		0.2		4.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			6.8									
HCM 6th LOS			A									

HCM 6th TWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	18.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	457	24	64	375	53	1	32	33	61	50	21
Future Vol, veh/h	18	457	24	64	375	53	1	32	33	61	50	21
Conflicting Peds, #/hr	7	0	2	2	0	7	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	94	94	94	75	75	75	85	85	85
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	21	525	28	68	399	56	1	43	44	72	59	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	462	0	0	555	0	0	1188	1181	542	1196	1167	434
Stage 1	-	-	-	-	-	-	583	583	-	570	570	-
Stage 2	-	-	-	-	-	-	605	598	-	626	597	-
Critical Hdwy	4.11	-	-	4.14	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.236	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1104	-	-	1005	-	-	165	190	540	164	195	626
Stage 1	-	-	-	-	-	-	498	499	-	510	509	-
Stage 2	-	-	-	-	-	-	485	491	-	475	495	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1097	-	-	1003	-	-	106	166	538	110	171	622
Mov Cap-2 Maneuver	-	-	-	-	-	-	106	166	-	110	171	-
Stage 1	-	-	-	-	-	-	483	484	-	493	459	-
Stage 2	-	-	-	-	-	-	369	443	-	386	480	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.2			27			143		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	250	1097	-	-	1003	-	-	150
HCM Lane V/C Ratio	0.352	0.019	-	-	0.068	-	-	1.035
HCM Control Delay (s)	27	8.3	0	-	8.8	0	-	143
HCM Lane LOS	D	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	1.5	0.1	-	-	0.2	-	-	8

HCM 6th AWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh	23
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	18	457	24	64	375	53	1	32	33	61	50	21
Future Vol, veh/h	18	457	24	64	375	53	1	32	33	61	50	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	19	481	25	67	395	56	1	34	35	64	53	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	25.3			25.1			10.9			12.2		
HCM LOS	D			D			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %		2%	4%	13%
Vol Thru, %		48%	92%	76%
Vol Right, %		50%	5%	11%
Sign Control		Stop	Stop	Stop
Traffic Vol by Lane		66	499	492
LT Vol		1	18	64
Through Vol		32	457	375
RT Vol		33	24	53
Lane Flow Rate		69	525	518
Geometry Grp		1	1	1
Degree of Util (X)		0.132	0.784	0.779
Departure Headway (Hd)		6.815	5.374	5.413
Convergence, Y/N		Yes	Yes	Yes
Cap		529	667	663
Service Time		4.823	3.454	3.494
HCM Lane V/C Ratio		0.13	0.787	0.781
HCM Control Delay		10.9	25.3	25.1
HCM Lane LOS		B	D	D
HCM 95th-tile Q		0.5	7.6	7.5

HCM 6th TWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	15.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	32	47	6	15	46	210	4	68	25	258	119	67
Future Vol, veh/h	32	47	6	15	46	210	4	68	25	258	119	67
Conflicting Peds, #/hr	2	0	1	1	0	2	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	80	80	80	92	92	92	94	94	94
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	44	64	8	19	58	263	4	74	27	274	127	71

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	970	822	165	845	844	91	199	0	0	102	0	0
Stage 1	712	712	-	97	97	-	-	-	-	-	-	-
Stage 2	258	110	-	748	747	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	235	311	885	282	299	964	1385	-	-	1496	-	-
Stage 1	427	439	-	907	813	-	-	-	-	-	-	-
Stage 2	751	808	-	403	419	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	117	245	883	188	236	961	1384	-	-	1495	-	-
Mov Cap-2 Maneuver	117	245	-	188	236	-	-	-	-	-	-	-
Stage 1	425	347	-	903	810	-	-	-	-	-	-	-
Stage 2	505	805	-	257	331	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB		
HCM Control Delay, s	55.7		21.5			0.3		4.6		
HCM LOS	F		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1384	-	-	180	549	1495	-	-
HCM Lane V/C Ratio	0.003	-	-	0.647	0.617	0.184	-	-
HCM Control Delay (s)	7.6	0	-	55.7	21.5	7.9	0	-
HCM Lane LOS	A	A	-	F	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	3.7	4.2	0.7	-	-

HCM 6th AWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh 13.9  
Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	47	6	15	46	210	4	68	25	258	119	67
Future Vol, veh/h	32	47	6	15	46	210	4	68	25	258	119	67
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	33	48	6	15	47	216	4	70	26	266	123	69
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	9.9			11.6			9.5			17.1		
HCM LOS	A			B			A			C		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	38%	6%	58%
Vol Thru, %	70%	55%	17%	27%
Vol Right, %	26%	7%	77%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	85	271	444
LT Vol	4	32	15	258
Through Vol	68	47	46	119
RT Vol	25	6	210	67
Lane Flow Rate	100	88	279	458
Geometry Grp	1	1	1	1
Degree of Util (X)	0.152	0.143	0.398	0.649
Departure Headway (Hd)	5.456	5.891	5.133	5.105
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	656	607	698	709
Service Time	3.501	3.944	3.175	3.135
HCM Lane V/C Ratio	0.152	0.145	0.4	0.646
HCM Control Delay	9.5	9.9	11.6	17.1
HCM Lane LOS	A	A	B	C
HCM 95th-tile Q	0.5	0.5	1.9	4.8



HCM 6th TWSC  
6: Squilchuck Rd & Methow Street

Mission Ridge

Intersection

Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	16	15	227	182	1
Future Vol, veh/h	4	16	15	227	182	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	83	83	73	73
Heavy Vehicles, %	0	0	3	3	1	1
Mvmt Flow	5	21	18	273	249	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	559	250	250	0	0
Stage 1	250	-	-	-	-
Stage 2	309	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-
Pot Cap-1 Maneuver	494	794	1310	-	-
Stage 1	796	-	-	-	-
Stage 2	749	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	486	794	1310	-	-
Mov Cap-2 Maneuver	486	-	-	-	-
Stage 1	783	-	-	-	-
Stage 2	749	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1310	-	705	-	-
HCM Lane V/C Ratio	0.014	-	0.038	-	-
HCM Control Delay (s)	7.8	0	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

HCM 6th TWSC  
 7: Squilchuck Rd & Wenatchee Heights Rd

Mission Ridge

Intersection

Int Delay, s/veh 2.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	1	46	145	4	81	49
Future Vol, veh/h	1	46	145	4	81	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	100	-	75	105	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-5	-	-	5
Peak Hour Factor	73	73	76	76	77	77
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	1	63	191	5	105	64

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	465	-	0
Stage 1	191	-	-
Stage 2	274	-	-
Critical Hdwy	6.46	-	-
Critical Hdwy Stg 1	5.46	-	-
Critical Hdwy Stg 2	5.46	-	-
Follow-up Hdwy	3.554	-	-
Pot Cap-1 Maneuver	548	0	-
Stage 1	832	0	-
Stage 2	763	0	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	506	-	-
Mov Cap-2 Maneuver	506	-	-
Stage 1	769	-	-
Stage 2	763	-	-













Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	4.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	506	-	1389	-
HCM Lane V/C Ratio	-	-	0.003	-	0.076	-
HCM Control Delay (s)	-	-	12.1	0	7.8	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %tile Q(veh)	-	-	0	-	0.2	-

# HCM 6th Signalized Intersection Summary

## 1: S Mission Street & Stevens Street













Mission Ridge

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	780	1403	476	824	2178	554
Future Volume (veh/h)	780	1403	476	824	2178	554
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	804	1446	491	849	2245	571
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	680	2035	278	961	1841	1356
Arrive On Green	0.20	0.20	0.15	0.15	0.53	0.72
Sat Flow, veh/h	3483	2812	1885	2793	3483	1885
Grp Volume(v), veh/h	804	1446	491	849	2245	571
Grp Sat Flow(s),veh/h/ln	1742	1406	1885	1396	1742	1885
Q Serve(g_s), s	20.5	20.5	15.5	15.5	55.5	12.8
Cycle Q Clear(g_c), s	20.5	20.5	15.5	15.5	55.5	12.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	680	2035	278	961	1841	1356
V/C Ratio(X)	1.18	0.71	1.76	0.88	1.22	0.42
Avail Cap(c_a), veh/h	680	2035	278	961	1841	1356
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.3	8.2	44.8	27.8	24.7	5.9
Incr Delay (d2), s/veh	96.6	1.2	358.3	11.6	103.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.6	7.3	34.9	12.7	47.8	4.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	138.9	9.4	403.0	39.4	128.6	6.9
LnGrp LOS	F	A	F	D	F	A
Approach Vol, veh/h	2250		1340			2816
Approach Delay, s/veh	55.7		172.6			104.0
Approach LOS	E		F			F
Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	60.0	20.0				80.0
Change Period (Y+Rc), s	4.5	4.5				4.5
Max Green Setting (Gmax), s	55.5	15.5				15.5
Max Q Clear Time (g_c+I1), s	57.5	17.5				14.8
Green Ext Time (p_c), s	0.0	0.0				0.3
Green Ext Time (p_c), s						0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			101.4			
HCM 6th LOS			F			

# HCM 6th Signalized Intersection Summary

## 1: S Mission Street & Stevens Street





















Mission Ridge

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	780	1403	476	824	2178	554
Future Volume (veh/h)	780	1403	476	824	2178	554
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	804	1446	491	849	2245	571
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	1	1	1
Cap, veh/h	708	2099	308	1031	1892	1389
Arrive On Green	0.20	0.20	0.16	0.16	0.54	0.74
Sat Flow, veh/h	3483	2812	1885	2812	3483	1885
Grp Volume(v), veh/h	804	1446	491	849	2245	571
Grp Sat Flow(s),veh/h/ln	1742	1406	1885	1406	1742	1885
Q Serve(g_s), s	30.5	30.5	24.5	24.5	81.5	17.2
Cycle Q Clear(g_c), s	30.5	30.5	24.5	24.5	81.5	17.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	708	2099	308	1031	1892	1389
V/C Ratio(X)	1.14	0.69	1.59	0.82	1.19	0.41
Avail Cap(c_a), veh/h	708	2099	308	1031	1892	1389
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.8	9.9	62.8	37.8	34.3	7.5
Incr Delay (d2), s/veh	77.6	1.0	282.4	7.4	89.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.9	11.0	35.9	17.5	57.0	7.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	137.3	10.9	345.2	45.3	123.7	8.4
LnGrp LOS	F	B	F	D	F	A
Approach Vol, veh/h	2250		1340			2816
Approach Delay, s/veh	56.1		155.2			100.3
Approach LOS	E		F			F
Timer - Assigned Phs	1	2				6
Phs Duration (G+Y+Rc), s	86.0	29.0				115.0
Change Period (Y+Rc), s	4.5	4.5				4.5
Max Green Setting (Gmax), s	81.5	24.5				110.5
Max Q Clear Time (g_c+I1), s	83.5	26.5				19.2
Green Ext Time (p_c), s	0.0	0.0				4.4
Green Ext Time (p_c), s						0.0
<b>Intersection Summary</b>						
HCM 6th Ctrl Delay			96.3			
HCM 6th LOS			F			

# HCM 6th Signalized Intersection Summary





















## 2: S Mission Street & Crawford Ave

Mission Ridge

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	97	114	50	179	32	114	642	25	15	794	319
Future Volume (veh/h)	322	97	114	50	179	32	114	642	25	15	794	319
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	329	99	116	51	183	33	116	655	26	15	810	326
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	428	300	351	422	589	106	80	932	37	265	657	264
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1165	784	919	1166	1542	278	499	1801	71	765	1269	511
Grp Volume(v), veh/h	329	0	215	51	0	216	116	0	681	15	0	1136
Grp Sat Flow(s),veh/h/ln	1165	0	1704	1166	0	1820	499	0	1872	765	0	1779
Q Serve(g_s), s	24.8	0.0	8.0	2.9	0.0	7.5	0.0	0.0	24.8	1.4	0.0	46.5
Cycle Q Clear(g_c), s	32.3	0.0	8.0	10.9	0.0	7.5	46.5	0.0	24.8	26.1	0.0	46.5
Prop In Lane	1.00		0.54	1.00		0.15	1.00		0.04	1.00		0.29
Lane Grp Cap(c), veh/h	428	0	651	422	0	696	80	0	969	265	0	921
V/C Ratio(X)	0.77	0.00	0.33	0.12	0.00	0.31	1.45	0.00	0.70	0.06	0.00	1.23
Avail Cap(c_a), veh/h	430	0	654	424	0	699	80	0	969	265	0	921
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.8	0.0	19.6	23.5	0.0	19.5	44.9	0.0	16.4	26.3	0.0	21.7
Incr Delay (d2), s/veh	8.1	0.0	0.3	0.1	0.0	0.3	258.1	0.0	4.3	0.4	0.0	114.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	3.1	0.8	0.0	3.1	7.5	0.0	10.9	0.3	0.0	46.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.9	0.0	19.9	23.6	0.0	19.7	303.0	0.0	20.7	26.7	0.0	136.2
LnGrp LOS	D	A	B	C	A	B	F	A	C	C	A	F
Approach Vol, veh/h		544			267			797			1151	
Approach Delay, s/veh		31.4			20.4			61.8			134.8	
Approach LOS		C			C			E			F	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		38.8		51.0		38.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		46.5		34.5		46.5		34.5				
Max Q Clear Time (g_c+I1), s		48.5		34.3		48.5		12.9				
Green Ext Time (p_c), s		0.0		0.1		0.0		1.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			82.3									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary  
 2: S Mission Street & Crawford Ave

Mission Ridge

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	97	114	50	179	32	114	642	25	15	794	319
Future Volume (veh/h)	322	97	114	50	179	32	114	642	25	15	794	319
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1885	1885	1885	1885	1885	1885
Adj Flow Rate, veh/h	329	99	116	51	183	33	116	655	26	15	810	326
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	1	1	1	1	1	1
Cap, veh/h	330	223	262	322	439	79	111	1039	41	367	732	295
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.58	0.58	0.58	0.58	0.58	0.58
Sat Flow, veh/h	1164	784	919	1165	1542	278	499	1801	71	765	1269	511
Grp Volume(v), veh/h	329	0	215	51	0	216	116	0	681	15	0	1136
Grp Sat Flow(s),veh/h/ln	1164	0	1703	1165	0	1820	499	0	1872	765	0	1779
Q Serve(g_s), s	12.2	0.0	6.7	2.4	0.0	6.3	0.0	0.0	15.7	0.9	0.0	37.5
Cycle Q Clear(g_c), s	18.5	0.0	6.7	9.2	0.0	6.3	37.5	0.0	15.7	16.6	0.0	37.5
Prop In Lane	1.00		0.54	1.00		0.15	1.00		0.04	1.00		0.29
Lane Grp Cap(c), veh/h	330	0	485	322	0	518	111	0	1080	367	0	1027
V/C Ratio(X)	1.00	0.00	0.44	0.16	0.00	0.42	1.05	0.00	0.63	0.04	0.00	1.11
Avail Cap(c_a), veh/h	330	0	485	322	0	518	111	0	1080	367	0	1027
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.4	0.0	19.0	22.8	0.0	18.9	32.5	0.0	9.1	14.7	0.0	13.8
Incr Delay (d2), s/veh	48.7	0.0	0.6	0.2	0.0	0.5	98.8	0.0	2.8	0.2	0.0	62.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.0	2.6	0.7	0.0	2.5	4.7	0.0	5.9	0.2	0.0	29.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.2	0.0	19.7	23.0	0.0	19.4	131.3	0.0	11.9	14.9	0.0	75.8
LnGrp LOS	E	A	B	C	A	B	F	A	B	B	A	F
Approach Vol, veh/h		544			267			797			1151	
Approach Delay, s/veh		54.4			20.1			29.3			75.0	
Approach LOS		D			C			C			E	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		42.0		23.0		42.0		23.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		37.5		18.5		37.5		18.5				
Max Q Clear Time (g_c+I1), s		39.5		20.5		39.5		11.2				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			52.4									
HCM 6th LOS			D									

HCM 6th TWSC  
3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	38.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	8	428	175	100	482	21	86	32	86	11	28	12
Future Vol, veh/h	8	428	175	100	482	21	86	32	86	11	28	12
Conflicting Peds, #/hr	2	0	0	0	0	2	6	0	3	3	0	6
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	145	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	98	98	98	81	81	81	77	77	77
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	9	476	194	102	492	21	106	40	106	14	36	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	515	0	0	670	0	0	1330	1310	576	1376	1397	511
Stage 1	-	-	-	-	-	-	591	591	-	709	709	-
Stage 2	-	-	-	-	-	-	739	719	-	667	688	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.218	-	-	2.236	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1051	-	-	911	-	-	131	158	515	122	140	561
Stage 1	-	-	-	-	-	-	492	493	-	423	436	-
Stage 2	-	-	-	-	-	-	408	431	-	447	445	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1049	-	-	911	-	-	~ 84	131	514	65	116	557
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 84	131	-	65	116	-
Stage 1	-	-	-	-	-	-	485	486	-	416	367	-
Stage 2	-	-	-	-	-	-	299	362	-	320	439	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.1			1.6			225.5			68.9		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	93	514	1049	-	-	911	-	-	118
HCM Lane V/C Ratio	1.566	0.207	0.008	-	-	0.112	-	-	0.561
HCM Control Delay (s)	\$ 379.8	13.8	8.5	0	-	9.4	0	-	68.9
HCM Lane LOS	F	B	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	11.4	0.8	0	-	-	0.4	-	-	2.7

Notes

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

HCM 6th AWSC  
3: Methow Street & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh 57.6  
Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	8	428	175	100	482	21	86	32	86	11	28	12
Future Vol, veh/h	8	428	175	100	482	21	86	32	86	11	28	12
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	2	2	2	4	4	4	3	3	3	3	3	3
Mvmt Flow	8	441	180	103	497	22	89	33	89	11	29	12
Number of Lanes	0	1	0	0	1	0	0	1	1	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	63.6			70.3			13.3			12.5		
HCM LOS	F			F			B			B		


















Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	73%	0%	1%	17%	22%
Vol Thru, %	27%	0%	70%	80%	55%
Vol Right, %	0%	100%	29%	3%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	118	86	611	603	51
LT Vol	86	0	8	100	11
Through Vol	32	0	428	482	28
RT Vol	0	86	175	21	12
Lane Flow Rate	122	89	630	622	53
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.282	0.178	1.012	1.033	0.119
Departure Headway (Hd)	8.499	7.397	5.911	6.108	8.383
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	426	488	617	597	430
Service Time	6.199	5.097	3.911	4.108	6.383
HCM Lane V/C Ratio	0.286	0.182	1.021	1.042	0.123
HCM Control Delay	14.5	11.7	63.6	70.3	12.5
HCM Lane LOS	B	B	F	F	B
HCM 95th-tile Q	1.1	0.6	15.7	16.4	0.4



# HCM 6th Signalized Intersection Summary

## 3: Methow Street & Crawford Ave

Mission Ridge

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	428	175	100	482	21	86	32	86	11	28	12
Future Volume (veh/h)	8	428	175	100	482	21	86	32	86	11	28	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	0.99		0.98	0.99		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1841	1841	1841	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	8	441	180	103	497	22	89	33	89	11	29	12
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	3	3	3
Cap, veh/h	127	631	254	233	722	30	389	111	297	183	215	75
Arrive On Green	0.50	0.50	0.50	0.50	0.50	0.50	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	6	1258	507	179	1440	59	919	579	1548	180	1120	390
Grp Volume(v), veh/h	629	0	0	622	0	0	122	0	89	52	0	0
Grp Sat Flow(s),veh/h/ln	1771	0	0	1679	0	0	1498	0	1548	1690	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	1.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.0	0.0	0.0	7.5	0.0	0.0	2.0	0.0	1.4	0.7	0.0	0.0
Prop In Lane	0.01		0.29	0.17		0.04	0.73		1.00	0.21		0.23
Lane Grp Cap(c), veh/h	1012	0	0	985	0	0	500	0	297	473	0	0
V/C Ratio(X)	0.62	0.00	0.00	0.63	0.00	0.00	0.24	0.00	0.30	0.11	0.00	0.00
Avail Cap(c_a), veh/h	2075	0	0	1894	0	0	1134	0	976	1181	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.6	0.0	0.0	5.5	0.0	0.0	10.3	0.0	10.2	9.9	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.7	0.0	0.0	0.3	0.0	0.6	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	0.0	1.3	0.0	0.0	0.5	0.0	0.4	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.3	0.0	0.0	6.2	0.0	0.0	10.6	0.0	10.7	10.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	B	A	B	A	A	A
Approach Vol, veh/h		629			622			211				52
Approach Delay, s/veh		6.3			6.2			10.6				10.0
Approach LOS		A			A			B				A
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		10.1		19.2		10.1		19.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5		32.5		18.5		32.5				
Max Q Clear Time (g_c+I1), s		4.0		10.0		2.7		9.5				
Green Ext Time (p_c), s		0.8		4.6		0.2		5.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			7.0									
HCM 6th LOS			A									

HCM 6th TWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	31.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	18	524	24	64	433	53	1	32	33	61	50	21
Future Vol, veh/h	18	524	24	64	433	53	1	32	33	61	50	21
Conflicting Peds, #/hr	7	0	2	2	0	7	0	0	1	1	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	94	94	94	75	75	75	85	85	85
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	21	602	28	68	461	56	1	43	44	72	59	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	524	0	0	632	0	0	1327	1320	619	1335	1306	496
Stage 1	-	-	-	-	-	-	660	660	-	632	632	-
Stage 2	-	-	-	-	-	-	667	660	-	703	674	-
Critical Hdwy	4.11	-	-	4.14	-	-	7.12	6.52	6.22	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.236	-	-	3.518	4.018	3.318	3.5	4	3.3
Pot Cap-1 Maneuver	1048	-	-	941	-	-	132	157	489	132	161	578
Stage 1	-	-	-	-	-	-	452	460	-	472	477	-
Stage 2	-	-	-	-	-	-	448	460	-	431	457	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1041	-	-	939	-	-	77	135	488	81	139	574
Mov Cap-2 Maneuver	-	-	-	-	-	-	77	135	-	81	139	-
Stage 1	-	-	-	-	-	-	437	445	-	455	425	-
Stage 2	-	-	-	-	-	-	331	410	-	343	442	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			1.1			34.4			274		
HCM LOS							D			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	208	1041	-	-	939	-	-	115
HCM Lane V/C Ratio	0.423	0.02	-	-	0.073	-	-	1.35
HCM Control Delay (s)	34.4	8.5	0	-	9.1	0	-	274
HCM Lane LOS	D	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	1.9	0.1	-	-	0.2	-	-	10.6

HCM 6th AWSC  
4: Okanogan Ave & Crawford Ave

Mission Ridge

Intersection

















Intersection Delay, s/veh	38.6
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	18	524	24	64	433	53	1	32	33	61	50	21
Future Vol, veh/h	18	524	24	64	433	53	1	32	33	61	50	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	1	1	1	4	4	4	2	2	2	0	0	0
Mvmt Flow	19	552	25	67	456	56	1	34	35	64	53	22
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	44.6			41.7			11.5			13.1		
HCM LOS	E			E			B			B		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	2%	3%	12%	46%
Vol Thru, %	48%	93%	79%	38%
Vol Right, %	50%	4%	10%	16%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	566	550	132
LT Vol	1	18	64	61
Through Vol	32	524	433	50
RT Vol	33	24	53	21
Lane Flow Rate	69	596	579	139
Geometry Grp	1	1	1	1
Degree of Util (X)	0.14	0.933	0.915	0.278
Departure Headway (Hd)	7.277	5.635	5.69	7.215
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	491	643	637	497
Service Time	5.344	3.653	3.708	5.274
HCM Lane V/C Ratio	0.141	0.927	0.909	0.28
HCM Control Delay	11.5	44.6	41.7	13.1
HCM Lane LOS	B	E	E	B
HCM 95th-tile Q	0.5	12.5	11.7	1.1

HCM 6th Signalized Intersection Summary  
 4: Okanogan Ave & Crawford Ave

Mission Ridge

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	524	24	64	433	53	1	32	33	61	50	21
Future Volume (veh/h)	18	524	24	64	433	53	1	32	33	61	50	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1841	1841	1841	1870	1870	1870	1900	1900	1900
Adj Flow Rate, veh/h	19	552	25	67	456	56	1	34	35	64	53	22
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	1	1	1	4	4	4	2	2	2	0	0	0
Cap, veh/h	146	849	38	199	692	80	135	157	159	300	144	48
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	22	1747	77	109	1424	164	11	844	855	585	774	256
Grp Volume(v), veh/h	596	0	0	579	0	0	70	0	0	139	0	0
Grp Sat Flow(s),veh/h/ln	1847	0	0	1696	0	0	1709	0	0	1615	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Cycle Q Clear(g_c), s	6.6	0.0	0.0	6.6	0.0	0.0	1.0	0.0	0.0	2.0	0.0	0.0
Prop In Lane	0.03		0.04	0.12		0.10	0.01		0.50	0.46		0.16
Lane Grp Cap(c), veh/h	1033	0	0	971	0	0	451	0	0	492	0	0
V/C Ratio(X)	0.58	0.00	0.00	0.60	0.00	0.00	0.16	0.00	0.00	0.28	0.00	0.00
Avail Cap(c_a), veh/h	2295	0	0	2078	0	0	1283	0	0	1255	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	5.3	0.0	0.0	5.3	0.0	0.0	9.5	0.0	0.0	9.9	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	1.0	0.0	0.0	0.3	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	5.8	0.0	0.0	5.9	0.0	0.0	9.6	0.0	0.0	10.2	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	B	A	A
Approach Vol, veh/h		596			579			70				139
Approach Delay, s/veh		5.8			5.9			9.6				10.2
Approach LOS		A			A			A				B
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		9.6		17.8		9.6		17.8				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		18.5		32.5		18.5		32.5				
Max Q Clear Time (g_c+I1), s		3.0		8.6		4.0		8.6				
Green Ext Time (p_c), s		0.2		4.3		0.6		4.4				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			6.5									
HCM 6th LOS			A									

HCM 6th TWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Int Delay, s/veh	29.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	32	47	6	15	46	268	4	68	25	325	119	67
Future Vol, veh/h	32	47	6	15	46	268	4	68	25	325	119	67
Conflicting Peds, #/hr	2	0	1	1	0	2	1	0	1	1	0	1
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	80	80	80	92	92	92	94	94	94
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	44	64	8	19	58	335	4	74	27	346	127	71

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1150	966	165	989	988	91	199	0	0	102	0	0
Stage 1	856	856	-	97	97	-	-	-	-	-	-	-
Stage 2	294	110	-	892	891	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.13	6.53	6.23	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.527	4.027	3.327	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	177	257	885	225	246	964	1385	-	-	1496	-	-
Stage 1	355	377	-	907	813	-	-	-	-	-	-	-
Stage 2	719	808	-	335	359	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	70	189	883	132	181	961	1384	-	-	1495	-	-
Mov Cap-2 Maneuver	70	189	-	132	181	-	-	-	-	-	-	-
Stage 1	354	278	-	903	810	-	-	-	-	-	-	-
Stage 2	433	805	-	188	265	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	145.9	35.5	0.3	5.2
HCM LOS	F	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1384	-	-	119	509	1495	-
HCM Lane V/C Ratio	0.003	-	-	0.978	0.808	0.231	-
HCM Control Delay (s)	7.6	0	-	145.9	35.5	8.1	0
HCM Lane LOS	A	A	-	F	E	A	A
HCM 95th %tile Q(veh)	0	-	-	6.5	7.7	0.9	-

HCM 6th AWSC  
5: S Miller Street & Crawford Ave

Mission Ridge

Intersection

Intersection Delay, s/veh	18.9
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	47	6	15	46	268	4	68	25	325	119	67
Future Vol, veh/h	32	47	6	15	46	268	4	68	25	325	119	67
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles, %	0	0	0	3	3	3	0	0	0	1	1	1
Mvmt Flow	33	48	6	15	47	276	4	70	26	335	123	69
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			1			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			1			1			1		
HCM Control Delay	10.6			13.9			10.1			25.1		
HCM LOS	B			B			B			D		

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	38%	5%	64%
Vol Thru, %	70%	55%	14%	23%
Vol Right, %	26%	7%	81%	13%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	85	329	511
LT Vol	4	32	15	325
Through Vol	68	47	46	119
RT Vol	25	6	268	67
Lane Flow Rate	100	88	339	527
Geometry Grp	1	1	1	1
Degree of Util (X)	0.163	0.154	0.507	0.783
Departure Headway (Hd)	5.851	6.308	5.377	5.353
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	609	564	668	674
Service Time	3.929	4.393	3.44	3.403
HCM Lane V/C Ratio	0.164	0.156	0.507	0.782
HCM Control Delay	10.1	10.6	13.9	25.1
HCM Lane LOS	B	B	B	D
HCM 95th-tile Q	0.6	0.5	2.9	7.6

HCM 6th TWSC  
6: Squilchuck Rd & Methow Street

Mission Ridge

Intersection

Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	16	15	613	628	1
Future Vol, veh/h	4	16	15	613	628	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	83	83	73	73
Heavy Vehicles, %	0	0	3	3	1	1
Mvmt Flow	5	21	18	739	860	1

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1636	861	861	0	0
Stage 1	861	-	-	-	-
Stage 2	775	-	-	-	-
Critical Hdwy	6.4	6.2	4.13	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.227	-	-
Pot Cap-1 Maneuver	112	358	776	-	-
Stage 1	417	-	-	-	-
Stage 2	458	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	108	358	776	-	-
Mov Cap-2 Maneuver	108	-	-	-	-
Stage 1	401	-	-	-	-
Stage 2	458	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.5	0.2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	776	-	245	-	-
HCM Lane V/C Ratio	0.023	-	0.109	-	-
HCM Control Delay (s)	9.8	0	21.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

HCM 6th TWSC  
7: Squilchuck Rd & Wenatchee Heights Rd

Mission Ridge

Intersection

Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	1	46	531	4	81	495
Future Vol, veh/h	1	46	531	4	81	495
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	100	-	75	105	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	-5	-	-	5
Peak Hour Factor	73	73	76	76	77	77
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	1	63	699	5	105	643

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1552	-	0	0	704
Stage 1	699	-	-	-	-
Stage 2	853	-	-	-	-
Critical Hdwy	6.46	-	-	-	4.1
Critical Hdwy Stg 1	5.46	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-
Follow-up Hdwy	3.554	-	-	-	2.2
Pot Cap-1 Maneuver	122	0	-	-	903
Stage 1	486	0	-	-	-
Stage 2	411	0	-	-	-
Platoon blocked, %		-	-	-	-
Mov Cap-1 Maneuver	108	-	-	-	903
Mov Cap-2 Maneuver	108	-	-	-	-
Stage 1	430	-	-	-	-
Stage 2	411	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	38.8	0	1.3
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	108	-	903
HCM Lane V/C Ratio	-	-	0.013	-	0.116
HCM Control Delay (s)	-	-	38.8	0	9.5
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	0	-	0.4



HCM 6th TWSC  
 7: Squilchuck Rd & Wenatchee Heights Rd

Mission Ridge

Intersection

Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑	↗	↘	↑
Traffic Vol, veh/h	1	46	531	4	81	495
Future Vol, veh/h	1	46	531	4	81	495
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	0	100	-	75	105	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	-5	-	-	5
Peak Hour Factor	73	73	76	76	77	77
Heavy Vehicles, %	6	6	3	3	0	0
Mvmt Flow	1	63	699	5	105	643

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1552	-	0	0	704
Stage 1	699	-	-	-	-
Stage 2	853	-	-	-	-
Critical Hdwy	6.46	-	-	-	4.1
Critical Hdwy Stg 1	5.46	-	-	-	-
Critical Hdwy Stg 2	5.46	-	-	-	-
Follow-up Hdwy	3.554	-	-	-	2.2
Pot Cap-1 Maneuver	122	0	-	-	903
Stage 1	486	0	-	-	-
Stage 2	411	0	-	-	-
Platoon blocked, %		-	-	-	-
Mov Cap-1 Maneuver	108	-	-	-	903
Mov Cap-2 Maneuver	211	-	-	-	-
Stage 1	430	-	-	-	-
Stage 2	411	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.2	0	1.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 211	- 903	-
HCM Lane V/C Ratio	-	- 0.006	- 0.116	-
HCM Control Delay (s)	-	- 22.2	0 9.5	-
HCM Lane LOS	-	- C	A A	-
HCM 95th %tile Q(veh)	-	- 0	- 0.4	-

# **Transportation 2040 References**

# Transportation 2040 System Improvements: Urban Area Detail

Active Transportation Projects



Map date: 05 Aug 2015

Phase 1: 2016-2027  
Phase 2: 2028-2040  
Vision

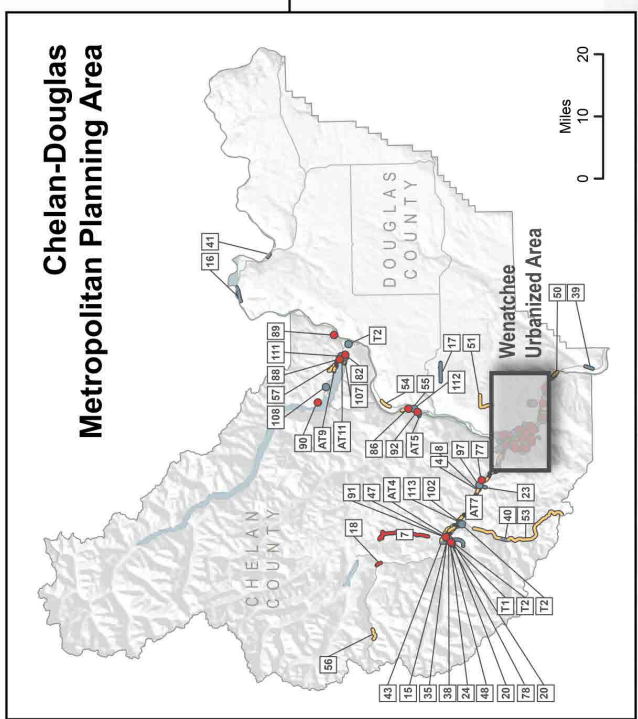
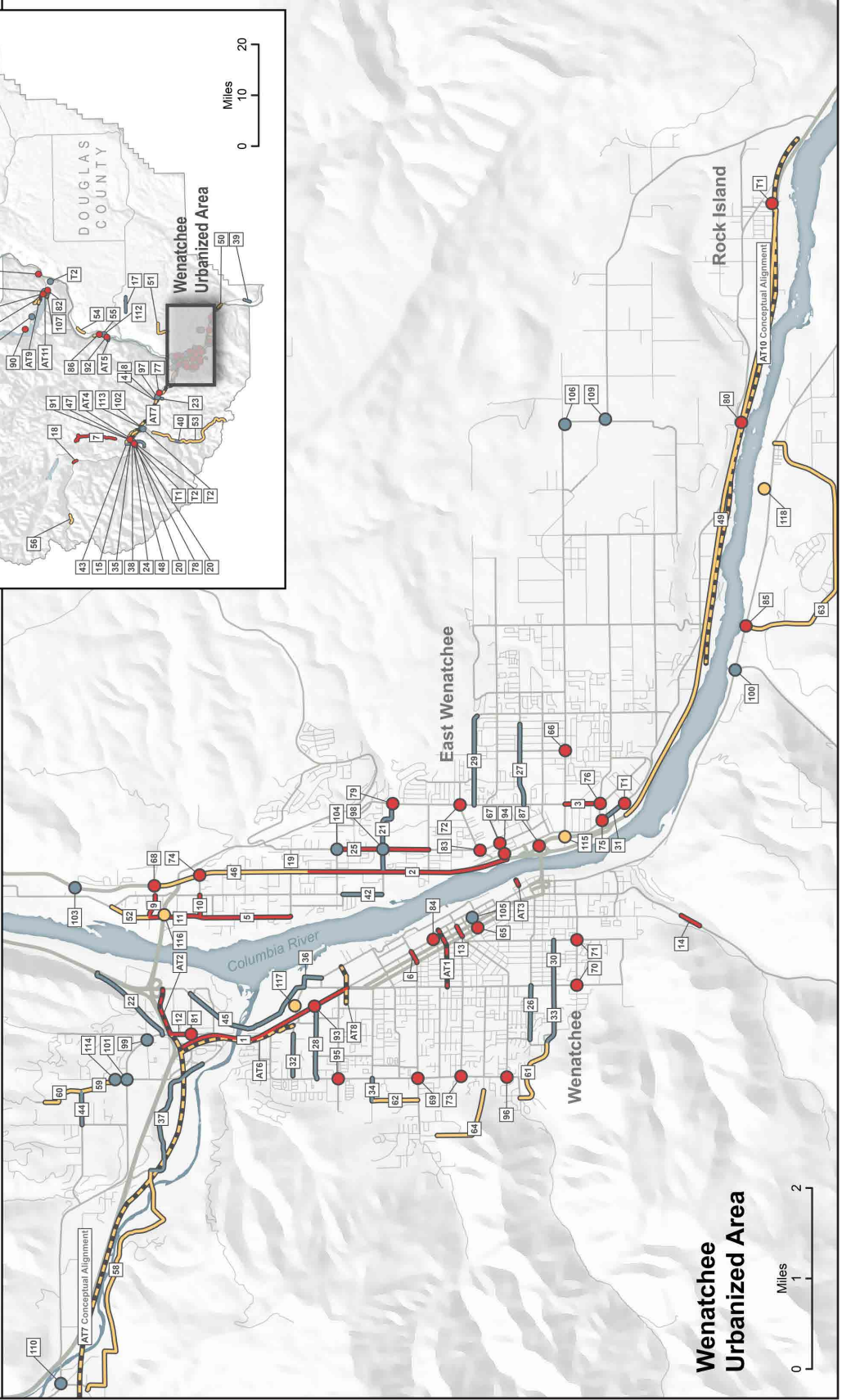


Figure 3-2: Transportation 2040 Projects, Urban Area Detail

## Phase 1 Projects: Year of Expenditure 2016-2027

Map Ref.	Project	Description	YOE Cost
1	N Wenatchee Area Improvements	Corridor improvements	\$41,000,000
2	SR 28: Phases 3 and 4	Widen to four lanes	\$58,500,000
3	Highline Dr: 3rd St SE to Grant Rd	Reconstruction	\$2,088,000
4	Goodwin Bridge Replacement	Replace bridge	\$20,880,000
5	NW Empire Ave: 27th St NW to 35th St NW	Reconstruction	\$3,444,040
6	5th St: Wenatchee Ave to Chelan Ave	Freight improvements	\$146,160
7	Chumstick Hwy	Reconstruction	\$11,936,400
8	Goodwin Rd Reconstruction	Reconstruction	\$3,480,000
9	38th St Extension	Construct a new roadway	\$8,352,000
10	35th St Extension	Construct a new roadway	\$3,480,000
11	Empire Ave Extension - Phase 1	Construct a new roadway	\$4,872,000
12	Easy St: Penny Rd to US 2	Widen roadway	\$11,008,400
13	Orondo Ave: Wenatchee Ave to Chelan Ave	Freight improvements	\$203,000
14	Squilchuck Rd	Reconstruction	\$3,897,600
15	Pine Street - Phase 1	Reconstruction	\$3,480,000
18	US 2 at Coles Corner	Construct Two Left Turn Lane	\$812,000
19	27th St NE Bridge Replacement	Replace bridge	\$116,000
25	Baker Ave: 15th St NE to 23rd St NE	Reconstruction	\$5,220,000



Map Ref.	Project	Description	YOE Cost
65	Chelan Ave & Kittitas St	Traffic signal	\$333,500
66	Grant Rd & James Ave	Intersection control	\$464,000
67	Baker Ave & 9th Street NE	Traffic signal or roundabout	\$464,000
68	US 2 & 38th St	Traffic signal	\$580,000
69	5th St & Western Ave	Intersection improvements	\$464,000
70	Crawford Ave & Miller St	Intersection control	\$464,000
71	Crawford Ave & Okanogan Ave	Intersection control	\$464,000
72	Eastmont Ave & 11th St	Traffic signal	\$464,000
73	Western Ave & Washington St	Intersection control	\$464,000
74	SR 28 & 35th St	Traffic signal	\$812,000
75	3rd St SE & Rock Island Rd	Traffic signal	\$464,000
76	3rd St SE & Highline Dr	Traffic signal	\$986,000
77	US 2 & Coflets Way Roundabout	Roundabout	\$4,640,000
78	US 2 & Ski Hill Dr	Traffic signal or roundabout	\$580,000
79	Eastmont Ave & 19th St	Traffic signal	\$464,000
80	SR 28 & Rock Island Ave Roundabout	Roundabout	\$1,392,000
81	Easy St & Penny Rd	Intersection improvements	\$661,200
82	SR 97A & Farnham St	Intersection improvements	\$580,000
83	Baker Ave & 11th St	Intersection control	\$464,000
84	Wenatchee Ave & 2nd St	Freight improvements	\$174,000



# Collision Data







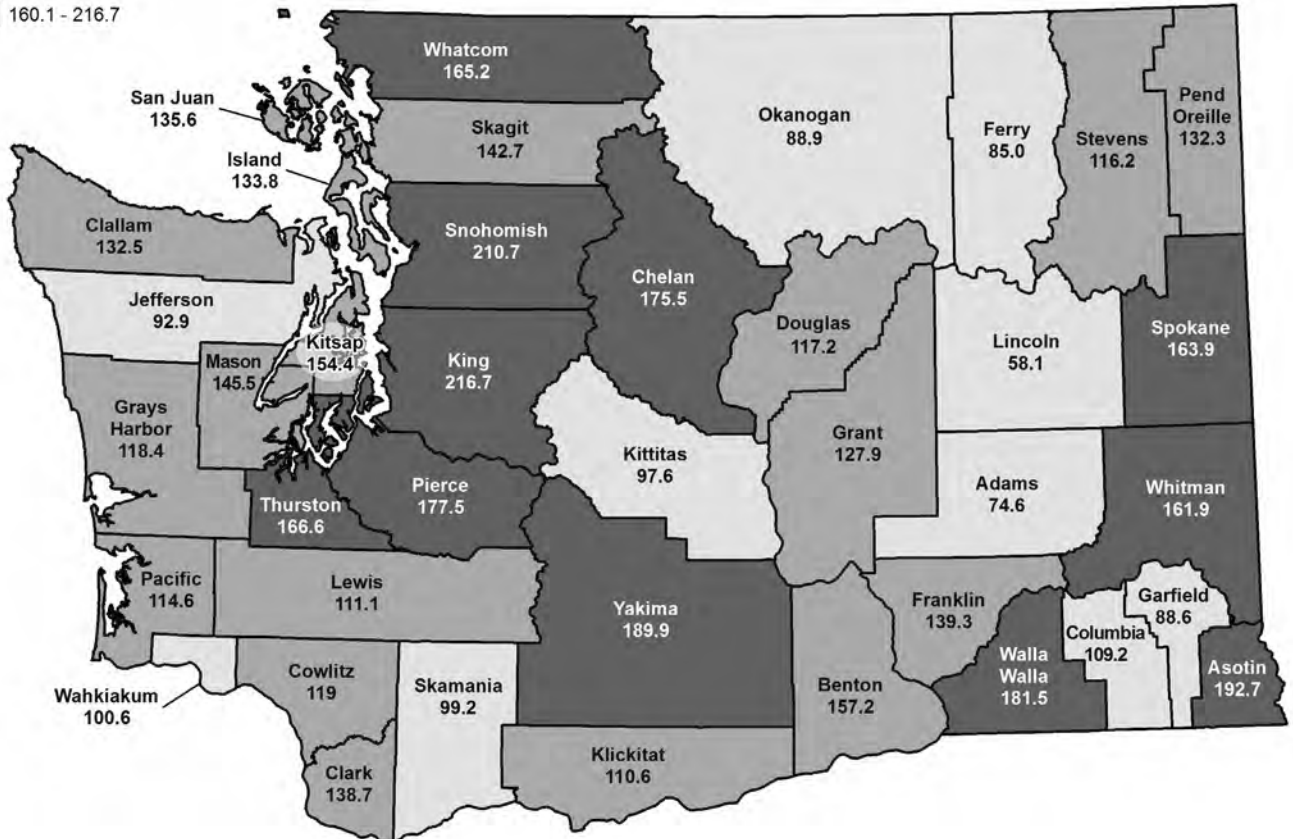
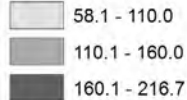
# OVERVIEW OF STATEWIDE COLLISIONS

## Statewide Collision Rates by County

### Statewide Collision Rates by County

(per 100 Million Vehicle Miles Traveled)

#### Collisions per 100M VMT



Source: CLAS (WSDOT) and FARS (WTSC). See Appendix A for more information.

- Ten counties had collision rates under 110 per 100M VMT.
- Eleven counties had collision rates over 160 per 100M VMT.
- Lincoln County had the lowest overall collision rate (58.1 per 100M VMT).
- King County had the highest overall collision rate (216.7 per 100M VMT).

# Transit Data

## Route 40 • To Mission Ridge

Leave Olds Station Park & Ride	Leave Columbia Station	Leave Lincoln Park	Arrive Mission Ridge
6:45	7:05	7:10	7:35
--	8:25	8:30	8:55
--	9:45	9:50	10:15
--	11:45	11:50	12:15
--	1:05	1:10	1:35
--	2:25	2:30	2:55
--	3:45	3:50	4:15

## Route 40 • To Wenatchee

Leave Mission Ridge	Arrive Lincoln Park	Arrive Columbia Station	Arrive Olds Station Park & Ride
7:55	8:15	8:20	--
9:15	9:35	9:40	--
10:35	10:55	11:00	--
12:35	12:55	1:00	--
1:55	2:15	2:20	--
3:15	3:35	3:40	--
4:35	4:55	5:00	5:20

■ SkiLink operates on the days shaded at right. There is no service on Christmas Day or New Years Day. Times shown for travel between Mission Ridge and Wenatchee are subject to weather and road conditions and may change.

**On the days that SkiLink operates, Mission Ridge passholders may ride any Link Transit route for no charge just by showing their Mission Ridge Season Pass.**

### November 2017

S	M	T	W	T	F	S
19	20	21	22	23	24	25
26	27	28	29	30		

### January 2018

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

### March 2018

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

### December 2017

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

### February 2018

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

### April 2018

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Late April weekends will be dependant on snow coverage, forecast, and skier visits.

## SkiLink Fares

- There is no fare required to ride SkiLink.

## How to Ride SkiLink

- Be ready to load your equipment as the bus approaches.
- Skis, poles, snowboards and boots will be carried in the bus. You can place everything but boots in the rack inside the bus.
- Link Transit is not responsible for damages incurred to or caused by other ski equipment loaded on transit system property and is not liable for damage to ski equipment that is loaded improperly. Link Transit is not responsible for lost or stolen items.
- Unruly and disruptive behavior will not be tolerated, and may result in loss of skiing privileges. Please act responsibly.

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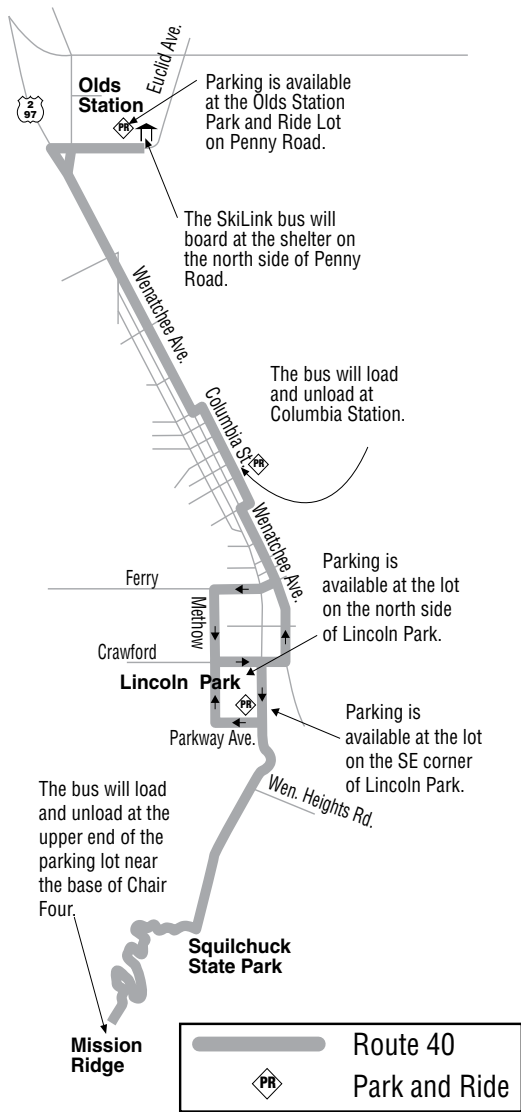
RIDE FOR **FREE**



**Route and Schedules**

Effective

**November 24, 2017**



Pickups and dropoffs will be made at regular Link bus stops along the route displaying the SkiLink sign.



**SKI LINK**

