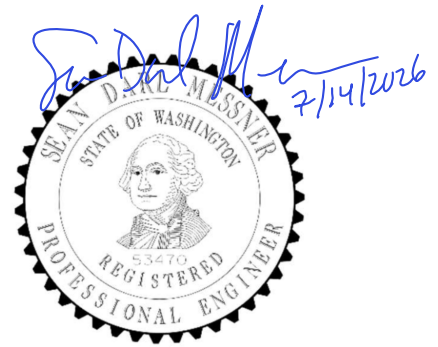




July 10, 2026

Ross Anderson, PE
Syntier
55 East Lincoln Road, Suite 101
Spokane, Washington 99208

RE: ENHANCED TRAFFIC IMPACT STATEMENT FOR URM GAS STATION PROJECT – MEDICAL LAKE, WASHINGTON

Dear Mr. Anderson:

CivTech has been retained by Syntier to provide an enhanced traffic impact statement for the proposed URM Gas Station Project in Medical Lake, Washington. Access to the site is proposed to be served by two full-movement existing accesses. Syntier had previously prepared and submitted a trip generation and distribution letter for the Project to the City of Medical Lake and to Washington State Department of Transportation (WSDOT) and WSDOT has requested additional analysis.

CivTech contacted WSDOT staff and confirmed that operational analysis and a turn lane evaluation is being requested at the SR 902 driveway. In order to evaluate the impacts of the gas station pumps to the surrounding roadway network, CivTech will also need to obtain traffic counts at the existing driveway to Lefevre – which will aid in the distribution of trips as well as documenting the phenomenon of pass-by and internal capture trips.

EXISTING CONDITIONS

STUDY ROADWAY

Lefevre Street is a north-south roadway located west of the site. Lefevre Street is a two-lane roadway, providing one travel lane in each direction. Within the vicinity of the site, Lefevre Street has curb and sidewalk on the east side of the road, along the site frontage. On the west side of the road, no curb or sidewalk facilities exist, as the land is more rural in character. The roadway starts in the north approximately ¼ mile north of the site at Ellen Avenue and terminates south of the site where it transitions into State Route 902 at California Street.

State Route 902 (SR902) is an east-west roadway making up the south frontage of the site. Within the vicinity of the site, SR902 has curb and sidewalk facilities along the site frontage. On the south side of the road, no curb or sidewalk facilities exist. SR902 is a 12-mile loop connecting the city of Medical Lake with two interchanges to Interstate 90 (I-90). The eastern interchange (Exit 272) is signed as the Medical Lake interchange. The western interchange (Exit 264) is the Salnave Road interchange, but also signed as an access to Medical Lake.

The Project Vicinity Map is shown in **Figure 1**. The Site Plan is provided in **Attachment B**.

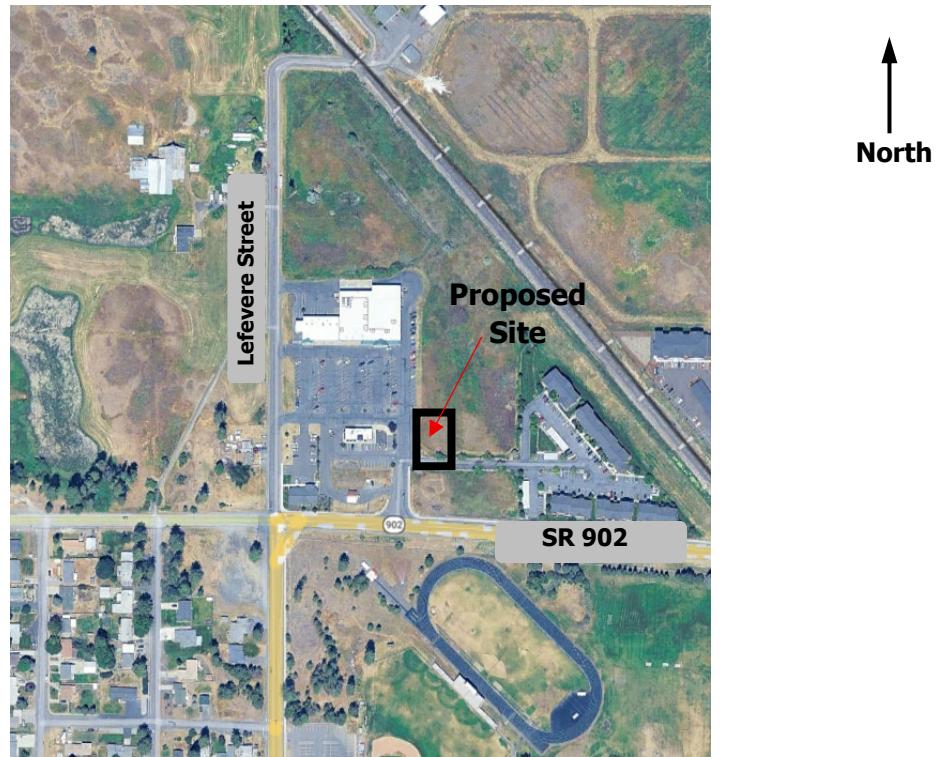


Figure 1 – Project Vicinity Map

TRAFFIC VOLUMES

CivTech engaged Quality Counts, LLC to record traffic volumes at two (2) study intersections within the project vicinity. Peak hour volume turning movement counts were performed from 6:00-9:00 AM and 4:00-7:00 PM on Thursday, June 11, 2026. Peak hour turning movement counts were conducted at the following study intersections:

- SR 902 & URM Driveway
- URM Driveway and Lefevre Street

The count locations are shown in **Figure 2**.



Figure 2 – Traffic Count Locations

The existing traffic volumes observed for this study are presented in **Figure 3** for the weekday AM and PM peak hours. Traffic volume data obtained for this study have been included in **Attachment C**.

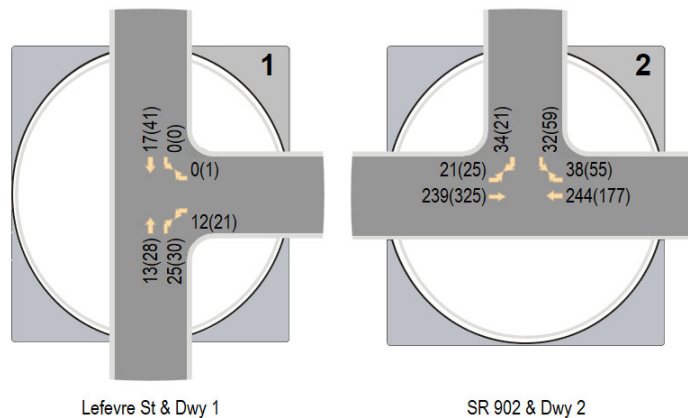


Figure 3 – Existing Traffic Volumes

METHODOLOGY

The potential trip generation for the proposed development was estimated utilizing the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 12th Edition* and *Trip Generation Handbook, 3rd Edition*. The ITE *Trip Generation Manual* contains data collected by various transportation professionals for a wide range of different land uses. The data are summarized in the report and average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized land use. The report provides information for daily and peak hour trips.

INTERNAL CAPTURE

According to data presented in the Trip Generation Handbook, 3rd Edition, trips attracted to certain land uses are often shared. This means that a single trip (vehicle) to the proposed development may visit additional attractions within the site during the same visit, an occurrence known as internal capture. This is especially true for large mixed-use developments. An example of this would be a customer who gets groceries at the Harvest Food might also put gas in their car at the new fueling locations. The activity of filling up the car is not a new trip on the roadway, since the customer was getting groceries already.

Internal capture in a mixed-use development describes the attraction of trips from one of the development's land use components by another and results in a trip that begins and ends onsite. The importance of internal capture in the qualification of traffic impact for a mixed-use development is that internally captured trips comprise a portion of the total development's trip generation without using the external road system. As a result, a mixed-use development will generally create less demand on the external road system (i.e. fewer external trips) than the sum of the trip generation potential of each of its use components when considered as single-use developments. The percentage of a mixed-use development's total trip generation that will be internally captured will depend on the strength of the attraction between its land use components. Guidance on selecting an appropriate internal capture percentage is provided in the *National Cooperative Highway Research Program (NCHRP) Report 684: Enhancing Internal Trip Capture Estimation for Mixed-Use Developments*. Using this resource, the following reductions were applied to the trip generation estimation for this mixed-use project:

- 18% of the Daily trips.
- 13% of the AM peak hour trips.
- 23% of the PM peak hour trips.

PASS-BY AND DIVERTED LINK TRIPS

Based on the published ITE data, as found in *Trip Generation Handbook, 3rd Edition*, it could be estimated that some portion of the traffic entering and exiting a commercial development would come from traffic already on the external street system. The term 'pass-by' trips refers to traffic already traveling on a study roadway from an origin to a destination that stops into the commercial development on the way. The term 'diverted link trips' refers to traffic on major roadway corridors not immediately adjacent to the site, such as SR 902, that are diverted into the development from

their original traffic path. Due to the location of this project, there are no diverted trips associated with it.

Pass-by trips were estimated and calculated per the ITE *Trip Generation Handbook*, 3rd Edition. Daily and peak hour reductions were applied to those trips generated by the gas station uses. These reductions were also applied to the study area by adjusting the number of through trips on the adjacent street system (SR 902) while maintaining the projected number of movements at each driveway location. This reduces the impact of double counting the same trip on the arterial roadway network.

The anticipated trip generation is summarized in **Table 1**. Detailed trip generation calculations are provided in **Appendix D**.

Table 1 – Trip Generation

Land Use	Quantity	Units ⁺	ITE Code	ITE Land Use Name			AM Distribution		PM Distribution	
							In	Out	In	Out
URM Gas Station										
Gasoline/Service Station	8	FPS	944	Gasoline/Service Station			50%	50%	50%	50%
Land Use	ADT		AM Peak Hour				PM Peak Hour			
	Avg. Rate*	Total	Avg. Rate*	In	Out	Total	Avg. Rate*	In	Out	Total
URM Gas Station										
Gasoline/Service Station	172.01	1,376	11.32	46	45	91	14.23	57	57	114
Baseline Total Trips		1,376		46	45	91		57	57	114
Internal Capture Reductions	(18%)	(248)	(13%)	(6)	(6)	(12)	(23%)	(13)	(13)	(26)
Subtotal External Site Trips		1,128		40	39	79		44	44	88
Pass-By Trips		(564)		(23)	(23)	(46)		(18)	(18)	(36)
Total "New" Trips		564		17	16	33		26	26	52

Notes: *Average rate was calculated by dividing total trips generated using regression equation by the number of units. (See below.)

+ FPS = Feuling Positions

CALCULATIONS (Equations shown only where applicable)			
Land Use [Units]	Daily	AM Peak Hour	PM Peak Hour
Gas Station [8 FPS]	WA: $T=X*172.01$ [172.01]	WA: $T=X*11.32$ [11.32]	WA: $T=X*14.23$ [14.23]

The proposed development is anticipated to generate 564 new weekday daily trips, 33 new trips during the AM peak hour, and 52 new trips during the PM peak hour.

VEHICLE TRIP DISTRIBUTION AND ASSIGNMENT

A single trip distribution pattern was assumed for the proposed development. It is expected that the proposed development will generate trips based on future population within the vicinity of the project. Existing traffic patterns were consulted to develop a trip distribution. Due to the location of the gas pumps in relation to the driveways, it is assumed that only minimal traffic will use the Lefevre driveway. It is assumed that 44% of traffic is to be distributed to/from east, 48% to/from west, and

8% to/from south using the Lefevre driveway. The resulting site traffic volumes are shown in **Figure 4**.

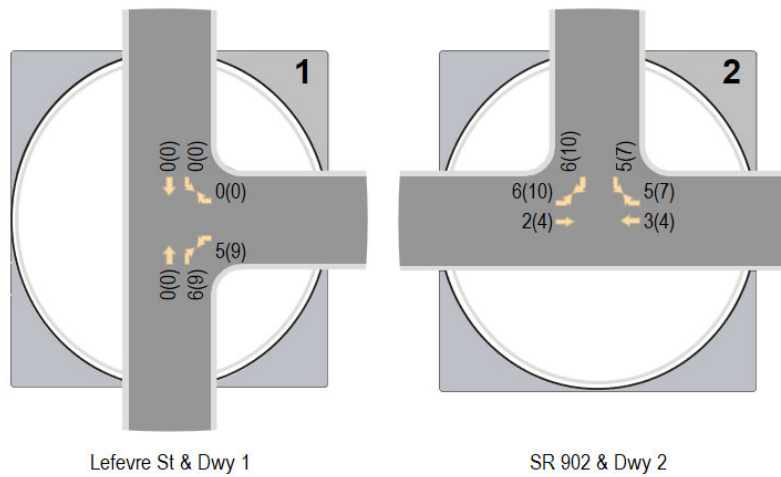


Figure 4 – Site 'New' Traffic Volumes

The pass-by volumes are as shown in in **Figure 45**.

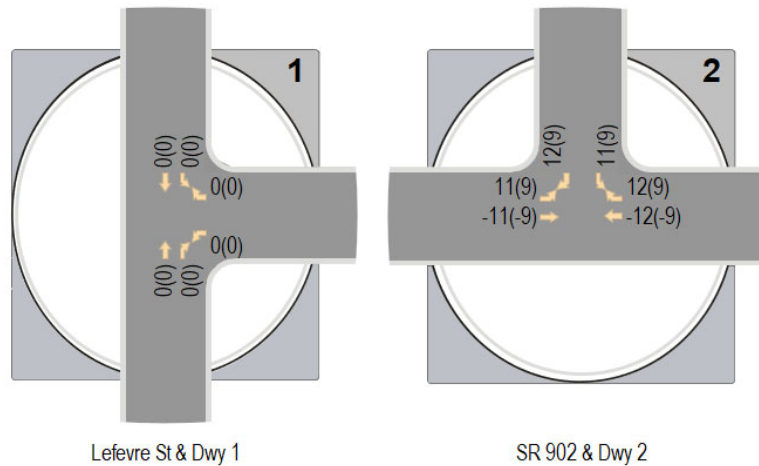


Figure 5 – Site Pass-by Traffic Volumes

FUTURE BACKGROUND TRAFFIC

CivTech has assumed an annual growth rate of 1% to grow the existing volumes. The 1% growth rate would result in a growth rate of 1.010 for the 2027 opening year. This rate was applied to the volumes at the study intersections to obtain the future background traffic volumes.

The background volumes for the opening year of 2027 are presented in **Figure 6**.

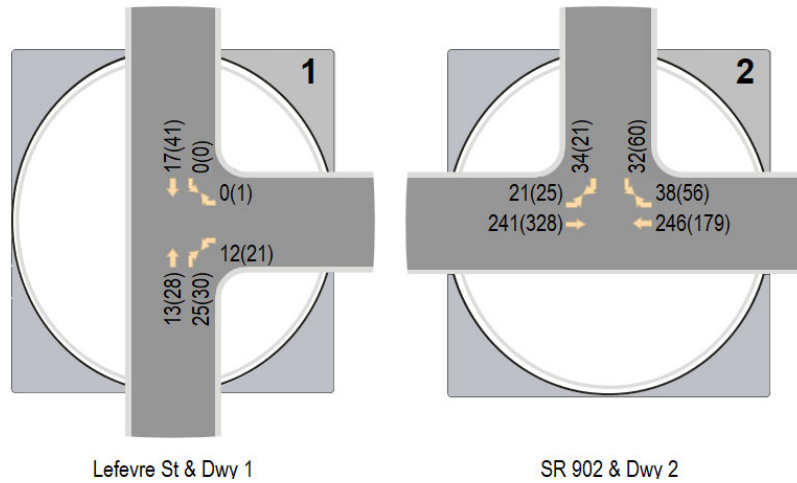


Figure 6 – 2027 Background Traffic Volumes

TOTAL TRAFFIC

Total traffic was determined by adding the site generated traffic to the estimated projected background traffic. Total peak hour traffic volumes for the opening year of 2027 are shown on **Figure 7**.

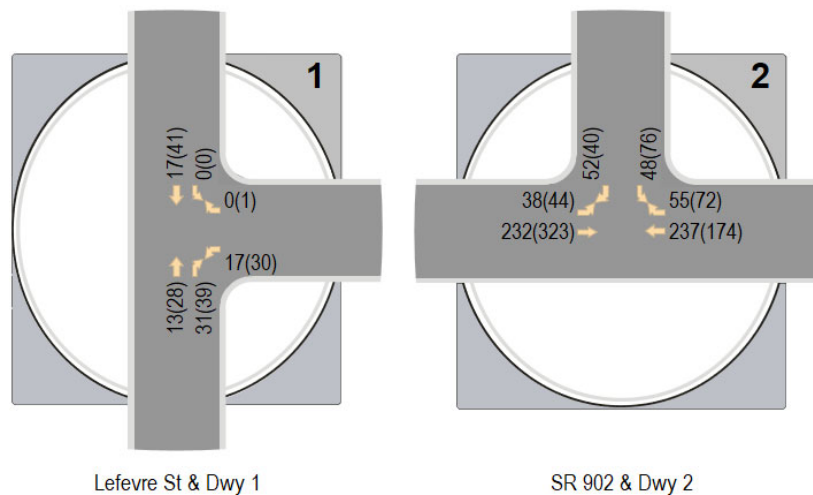


Figure 7 – 2027 Total Traffic Volumes

TURN LANE WARRANTING ANALYSIS

RIGHT-TURN LANES

The City of Medical Lake does not have specific warrants for the installation of dedicated right-turn lanes. CivTech deferred to *Chapter 1310 of the Washington State Department of Transportation (WSDOT) Design Manual*, which requires a driveway right-turn deceleration lane to be provided when peak hour right-turn volumes meet or exceed the ranges given in the exhibit 1310-24 as shown in

Chart 1. The right-turn movements were analyzed for the two (2) driveways along using the ultimate 2027 peak hour right-turn volumes.

Exhibit 1310-24 Right-Turn Lane Guidelines

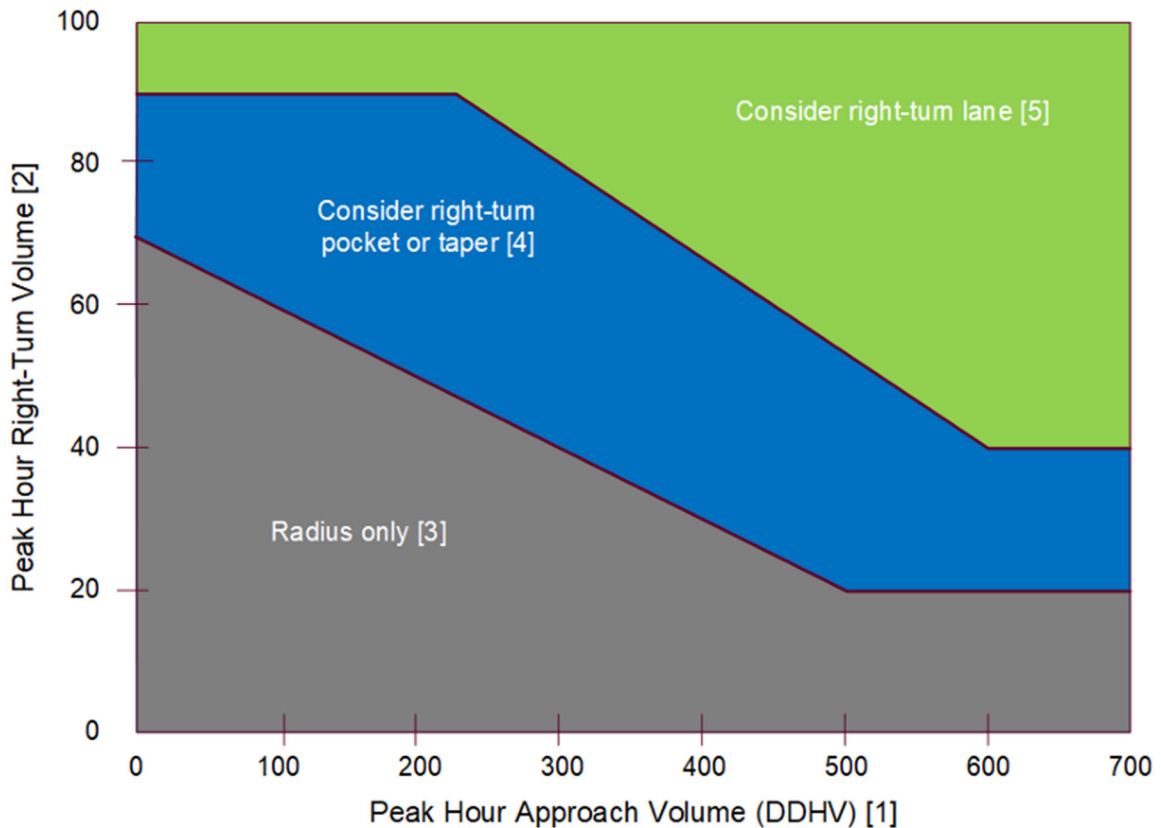


Chart 1 – WSDOT Exhibit 1310-24 Right-Turn Lane Guidelines

Table 2 is a summary of the 2027 peak hour right-turn volumes from the adjacent street onto the proposed accesses:

Table 2 – Right-turn Deceleration Lane Warranting Criteria

Access	Advancing Volumes AM (PM)	Speed (MPH)	Thru Lanes	Right-Turn Volume AM (PM)	Warrant Met?
Lefevre St & Dwy 1	13 (28)	30	1	31 (39)	No
SR 902 & Dwy 2	237 (174)	30	1	55 (72)	No

Due to the low right-turn traffic volumes on SR-902 and on Lefevre, the right-turn lane warrant criteria are not met for the two accesses.

LEFT-TURN LANES

The City of Medical Lake does not have specific warrants for the installation of dedicated left-turn lanes. CivTech deferred to *Chapter 1310 of the Washington State Department of Transportation (WSDOT) Design Manual*, which requires a left turn lane to be provided when peak hour left-turn volumes meet or exceed the ranges given in the exhibit 1310-9 as shown in **Chart 2**. The left-turn movements were analyzed for the two (2) driveways using the ultimate 2027 peak hour left-turn volumes shown on **Figure 7**.

Exhibit 1310-9 Left-Turn Storage Guidelines: Two-Lane, Unsignalized

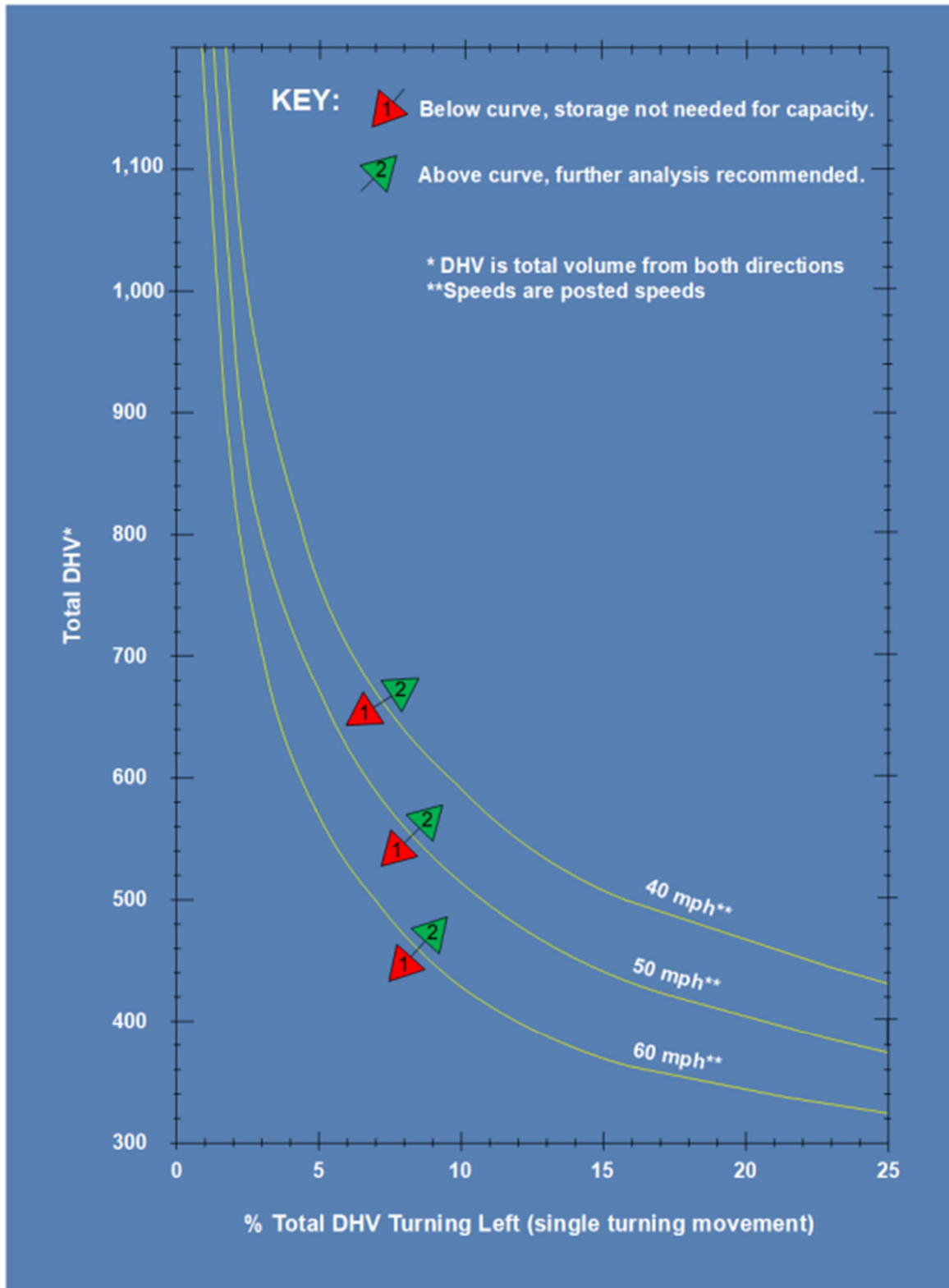


Table 3 is a summary of the 2027 peak hour left-turn volumes from the adjacent street onto the proposed accesses:

Table 2 – Left-turn Deceleration Lane Warranting Criteria

Access	DHV* AM (PM)	Speed (MPH)	Thru Lanes	Right-Turn Volume AM (PM)	% Total DHV Turning Left	Warrant Met?
Lefevre St & Dwy 1	61 (108)	30	1	0 (0)	0% (0%)	No
SR 902 & Dwy 2	562 (613)	30	1	38 (44)	6.8% (7.2%)	No

*Total traffic volumes in both directions

Due to the low left-turn traffic volumes on SR-902 and Lefevre, the left-turn lane warrant criteria are not met for the accesses.

CAPACITY ANALYSIS

INTERSECTION ANALYSIS

Peak hour capacity analyses have been conducted for the study intersections based on existing intersection configurations and traffic volumes. All intersections were analyzed using the methodologies presented in the latest (7th) edition of the *Highway Capacity Manual* (HCM) updated in 2022 and using Highway Capacity Software (HCS) 2026 Software.

The concept of level of service (LOS) uses qualitative measures that characterize operational conditions within the traffic stream. The individual levels of service are described by factors that include speed, travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels of service are defined for each type of facility for which analysis procedures are available. They are given letter designations A through F, with LOS A representing the best operating conditions and LOS F the worst. Each level of service represents a range of operating conditions. Levels of service for intersections are defined within ranges of average control delay per vehicle, the number of seconds a vehicle can expect to wait due to the presence of a traffic control device. **Table 3** lists the level of service criteria for signalized and unsignalized intersections, respectively.

The HCS 2026 software calculates the LOS per the HCM 7th edition (2022) methodology. The 7th edition HCM documents the signalized LOS calculation methodology which takes into account lane geometry, traffic volumes and cycle length/phasing to compute LOS. Results of the existing and maximum entitlement scenario level of service analyses are shown in **Table 4** for both AM and PM peak hours. All capacity analysis worksheets have been included in **Attachment E**.

Table 3 – Intersection Level of Service Criteria

Level of Service	Control Delay (sec/veh)	
	Signalized	Unsignalized
A	≤ 10	≤ 10
B	> 10-20	> 10-15
C	> 20-35	> 15-25
D	> 35-55	> 25-35
E	> 55-80	> 35-50
F	> 80 (or v/c>1)	> 50 (or v/c>1)

Source: Exhibits 19-8, 20-2, 21-8, and 22-8, Highway Capacity Manual, 7th Edition (2022)

Table 4 – Existing Peak Hour Levels of Service

ID	Intersection	Intersection Control	Approach/Movement	Existing LOS & Delay	2027 Background LOS & Delay	2027 Total LOS & Delay
				AM (PM)	AM (PM)	AM (PM)
1	Lefevre St & Dwy 1	1-way stop (WB)	WB Shared	A 8.9 (A 9.1)	A 8.9 (A 9.1)	A 8.9 (A 9.1)
2	SR 902 & Dwy 2	1-way stop (SB)	SB Left SB Right EB Shared	B 14.2 (C 16.0) B 10.2 (A 9.7) A 0.8 (A 0.8)	B 14.3 (C 16.2) B 10.2 (A 9.8) A 0.8 (A 0.8)	C 15.5 (C 18.3) B 10.4 (A 9.9) A 1.4 (A 1.3)

The results of the analysis summarized in **Table 5** indicates that the two study intersections will operate at acceptable Levels of Service (LOS D or better) for the existing, 2027 background, and 2027 total scenarios.

CONCLUSIONS

From the above, the following can be concluded:

- The **Project** is anticipated to generate 564 new weekday daily trips, 33 new trips during the AM peak hour, and 52 new trips during the PM peak hour.
- CivTech deferred to *Chapter 1310 of the Washington State Department of Transportation (WSDOT) Design Manual* for the right-turn and left-turn lane warranting.
 - Due to low turning movement volumes, turn lanes are not warranted at either intersection.
 - No turn lanes are recommended.
- No geometry changes or mitigation measures are recommended due to the **Project**.

Please contact CivTech with any questions you may have on this Enhanced Traffic Impact Statement.

Sincerely,

CivTech



Sean Messner, P.E.

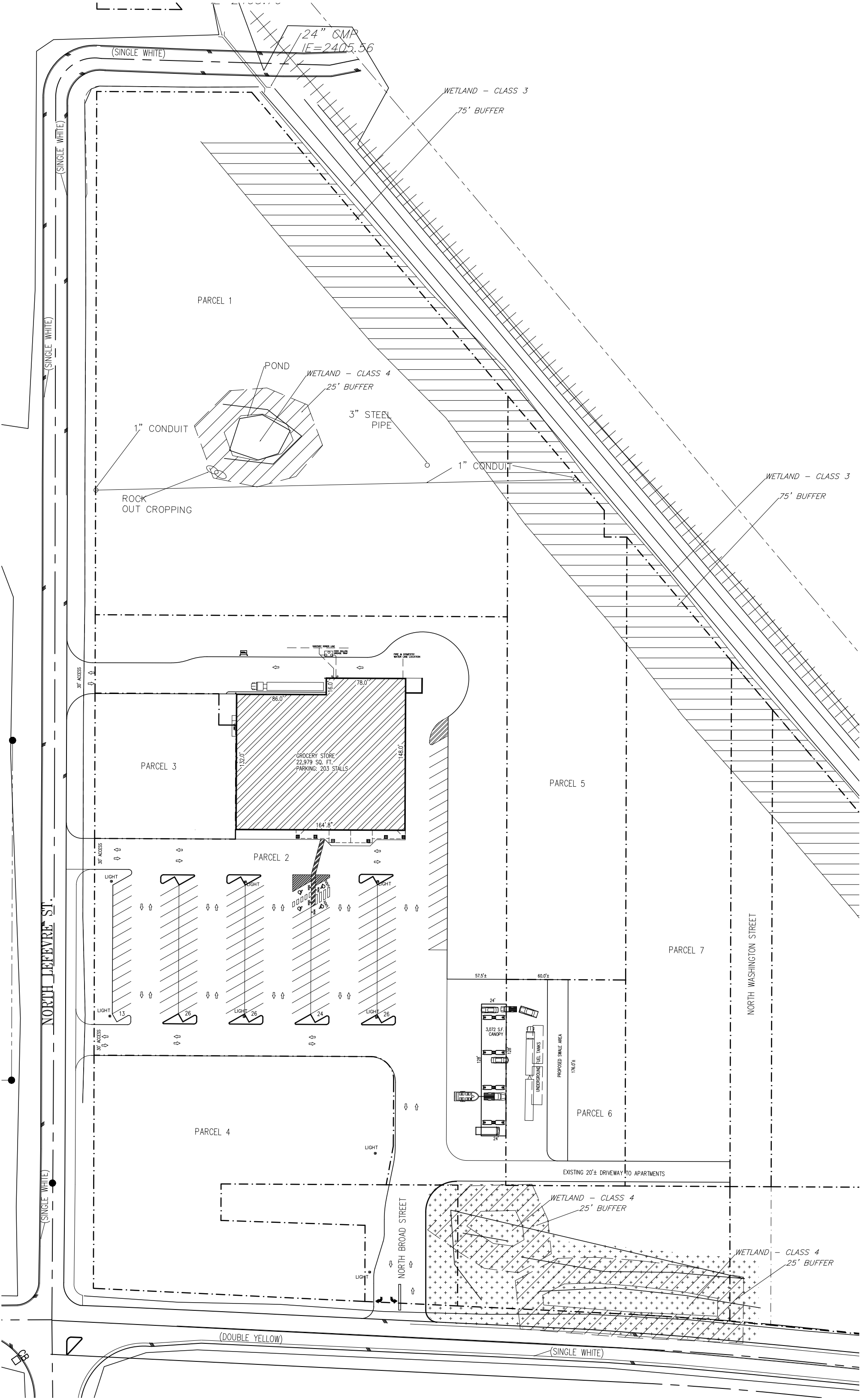
Senior Traffic Engineer / Senior Project Manager

Attachments (5)

- | | |
|---------------------------------|---------------------------------|
| A. Comment Responses (Reserved) | B. Site Plan |
| C. Existing Traffic Volume Data | D. Trip Generation Calculations |
| E. Capacity Analyses | |

ATTACHMENT A

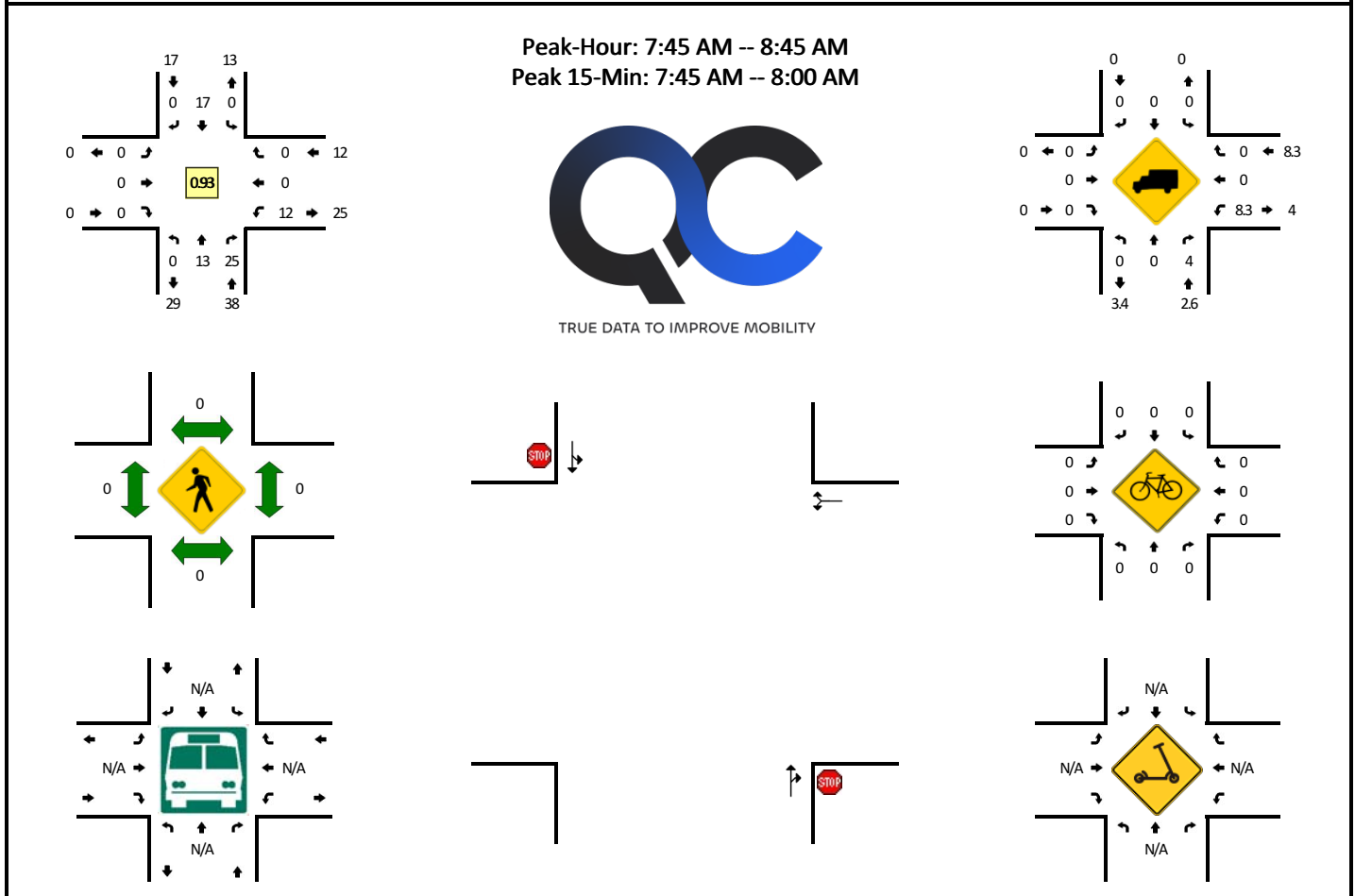
ATTACHMENT B



ATTACHMENT C

LOCATION: Lefevre St -- Dwy 1
CITY/STATE: Medical Lake, WA

QC JOB #: 17672003
DATE: Thu, Jun 11 2026

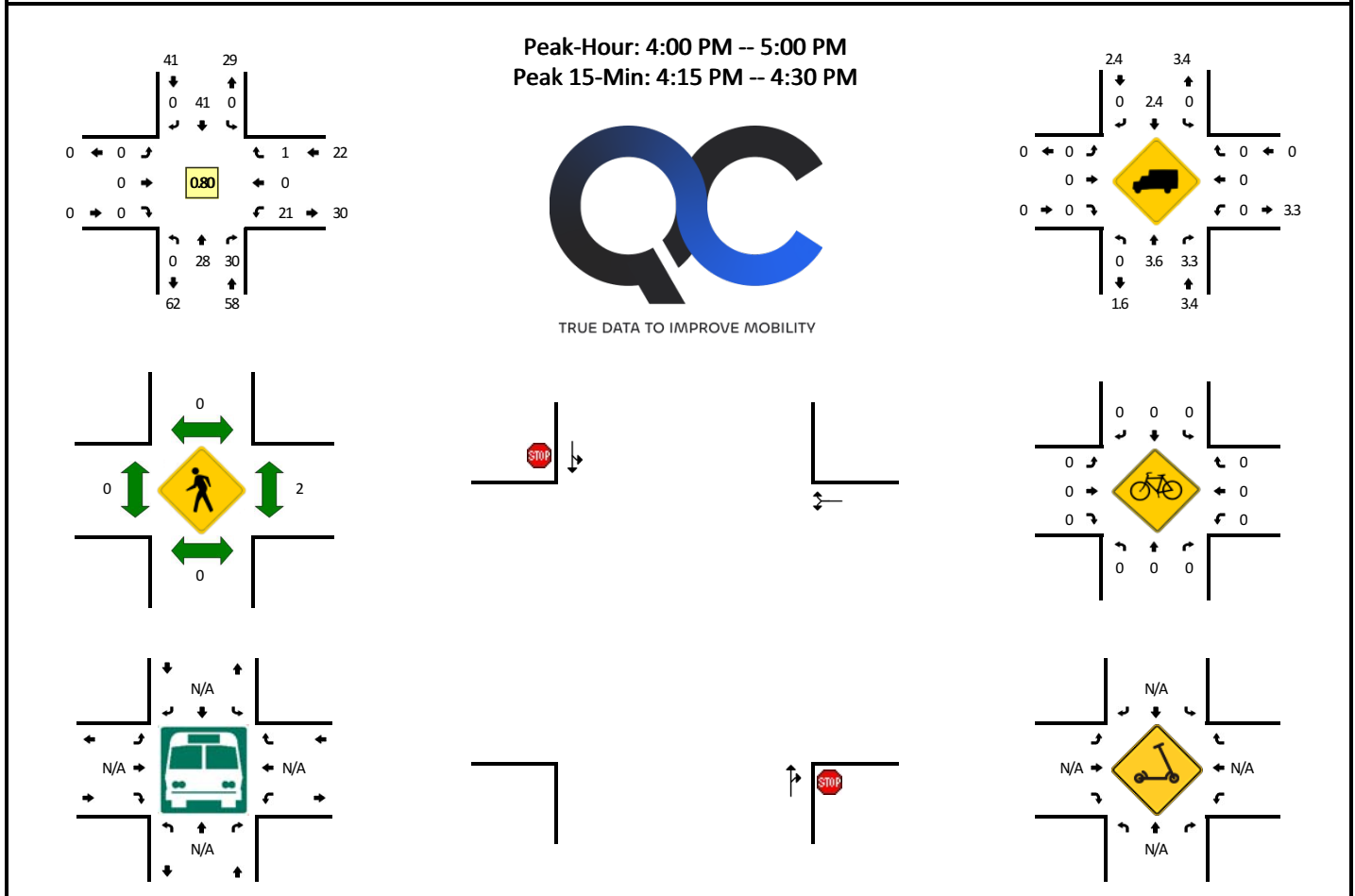


15-Min Count Period Beginning At	Lefevre St (Northbound)				Lefevre St (Southbound)				Dwy 1 (Eastbound)				Dwy 1 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	4	2	0	0	6	0	0	0	0	0	0	1	0	0	0	13	
6:15 AM	0	0	9	0	0	3	0	0	0	0	0	0	3	0	0	0	15	
6:30 AM	0	2	0	0	0	2	0	0	0	0	0	0	2	0	0	0	6	
6:45 AM	0	1	8	0	0	4	0	0	0	0	0	0	2	0	0	0	15	49
7:00 AM	0	3	7	0	1	2	0	0	0	0	0	0	2	0	0	0	15	51
7:15 AM	0	1	5	0	1	5	0	0	0	0	0	0	3	0	0	0	15	51
7:30 AM	0	1	6	0	0	2	0	0	0	0	0	0	3	0	0	0	12	57
7:45 AM	0	0	9	0	0	5	0	0	0	0	0	0	4	0	0	0	18	60
8:00 AM	0	5	7	0	0	3	0	0	0	0	0	0	2	0	0	0	17	62
8:15 AM	0	3	4	0	0	5	0	0	0	0	0	0	4	0	0	0	16	63
8:30 AM	0	5	5	0	0	4	0	0	0	0	0	0	2	0	0	0	16	67
8:45 AM	0	4	4	0	0	3	0	0	0	0	0	0	2	0	0	0	13	62
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	36	0	0	20	0	0	0	0	0	0	16	0	0	0	72	
Heavy Trucks	0	0	4		0	0	0		0	0	0		4	0	0		8	
Buses																		
Pedestrians	0	0			0	0			0	0			0	0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scooters																		

Comments:

LOCATION: Lefevre St -- Dwy 1
CITY/STATE: Medical Lake, WA

QC JOB #: 17672004
DATE: Thu, Jun 11 2026

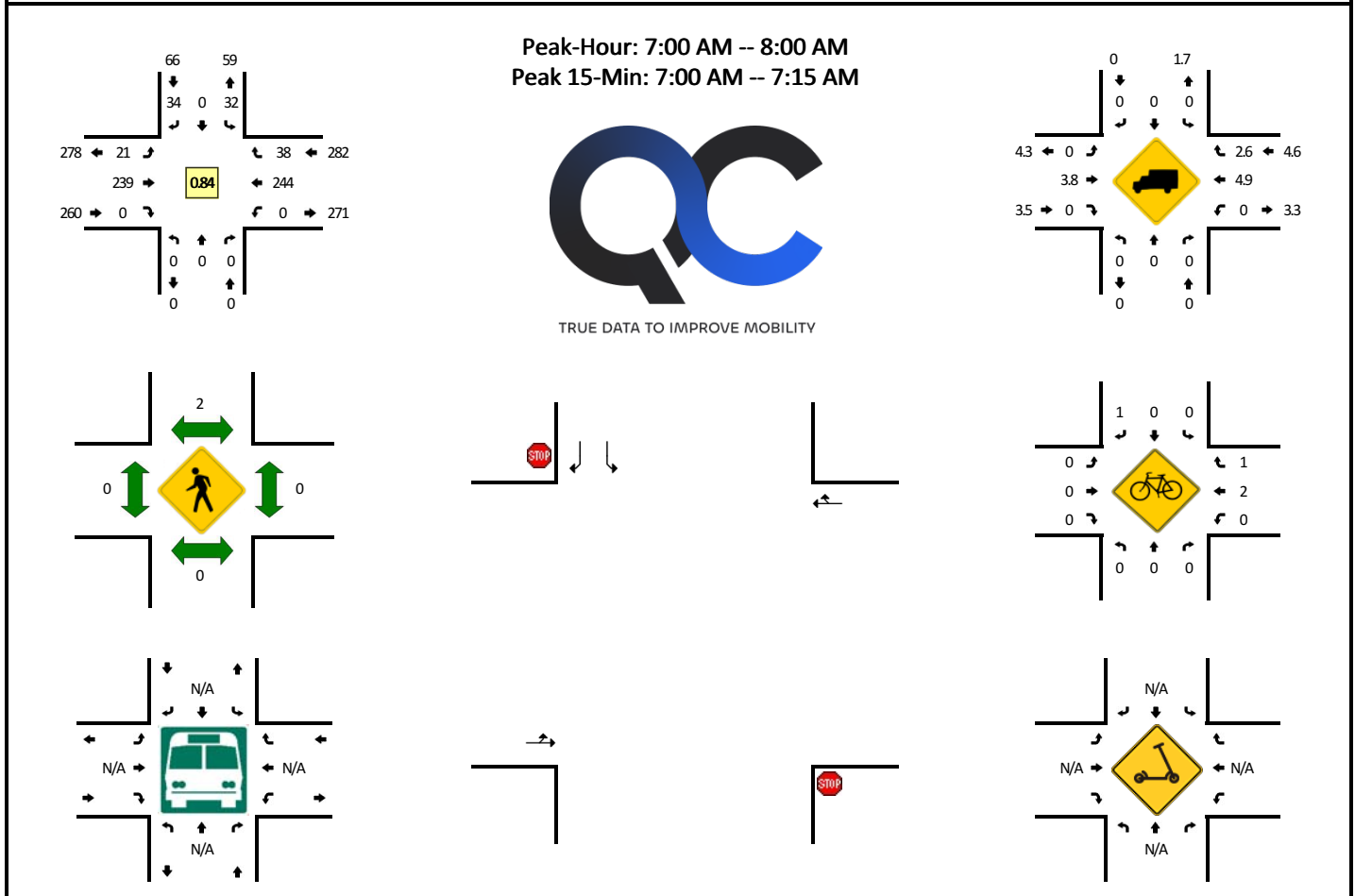


15-Min Count Period Beginning At	Lefevre St (Northbound)				Lefevre St (Southbound)				Dwy 1 (Eastbound)				Dwy 1 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	6	6	0	0	9	0	0	0	0	0	0	4	0	0	0	25	
4:15 PM	0	9	12	0	0	11	0	0	0	0	0	0	5	0	1	0	38	
4:30 PM	0	6	5	0	0	9	0	0	0	0	0	0	5	0	0	0	25	
4:45 PM	0	7	7	0	0	12	0	0	0	0	0	0	7	0	0	0	33	121
5:00 PM	0	1	11	0	0	3	0	0	0	0	0	0	4	0	0	0	19	115
5:15 PM	0	1	5	0	0	10	0	0	0	0	0	0	5	0	0	0	21	98
5:30 PM	0	5	9	0	0	3	0	0	0	0	0	0	4	0	0	0	21	94
5:45 PM	0	5	12	0	0	10	0	0	0	0	0	0	4	0	0	0	31	92
6:00 PM	0	1	5	0	0	5	0	0	0	0	0	0	10	0	0	0	21	94
6:15 PM	0	2	9	0	0	7	0	0	0	0	0	0	2	0	0	0	20	93
6:30 PM	0	2	10	0	0	4	0	0	0	0	0	0	3	0	0	0	19	91
6:45 PM	0	1	2	0	0	7	0	0	0	0	0	0	2	0	0	0	12	72
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	36	48	0	0	44	0	0	0	0	0	0	20	0	4	0	152	
Heavy Trucks	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Scooters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Comments:

LOCATION: SR 902 -- Dwy 2
CITY/STATE: Medical Lake, WA

QC JOB #: 17672005
DATE: Thu, Jun 11 2026



15-Min Count Period Beginning At	SR 902 (Northbound)				SR 902 (Southbound)				Dwy 2 (Eastbound)				Dwy 2 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	0	0	0	3	0	1	0	0	21	0	0	0	83	3	0	111	
6:15 AM	0	0	0	0	3	0	11	0	1	19	0	0	0	131	10	0	175	
6:30 AM	0	0	0	0	3	0	4	0	4	32	0	0	0	43	3	0	89	
6:45 AM	0	0	0	0	3	0	2	0	1	28	0	0	0	55	9	0	98	473
7:00 AM	0	0	0	0	8	0	12	0	7	102	0	0	0	43	10	0	182	544
7:15 AM	0	0	0	0	9	0	6	0	5	51	0	0	0	58	11	0	140	509
7:30 AM	0	0	0	0	7	0	9	0	2	50	0	0	0	71	8	0	147	567
7:45 AM	0	0	0	0	8	0	7	0	7	36	0	0	0	72	9	0	139	608
8:00 AM	0	0	0	0	10	0	7	0	0	36	0	0	0	52	7	0	112	538
8:15 AM	0	0	0	0	5	0	2	0	2	27	0	0	0	40	6	0	82	480
8:30 AM	0	0	0	0	7	0	2	0	4	27	0	0	0	15	5	0	60	393
8:45 AM	0	0	0	0	7	0	1	0	1	37	0	0	0	32	5	0	83	337
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	32	0	48	0	28	408	0	0	0	172	40	0	728	
Heavy Trucks	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	8	
Buses																		
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	
Scooters																		

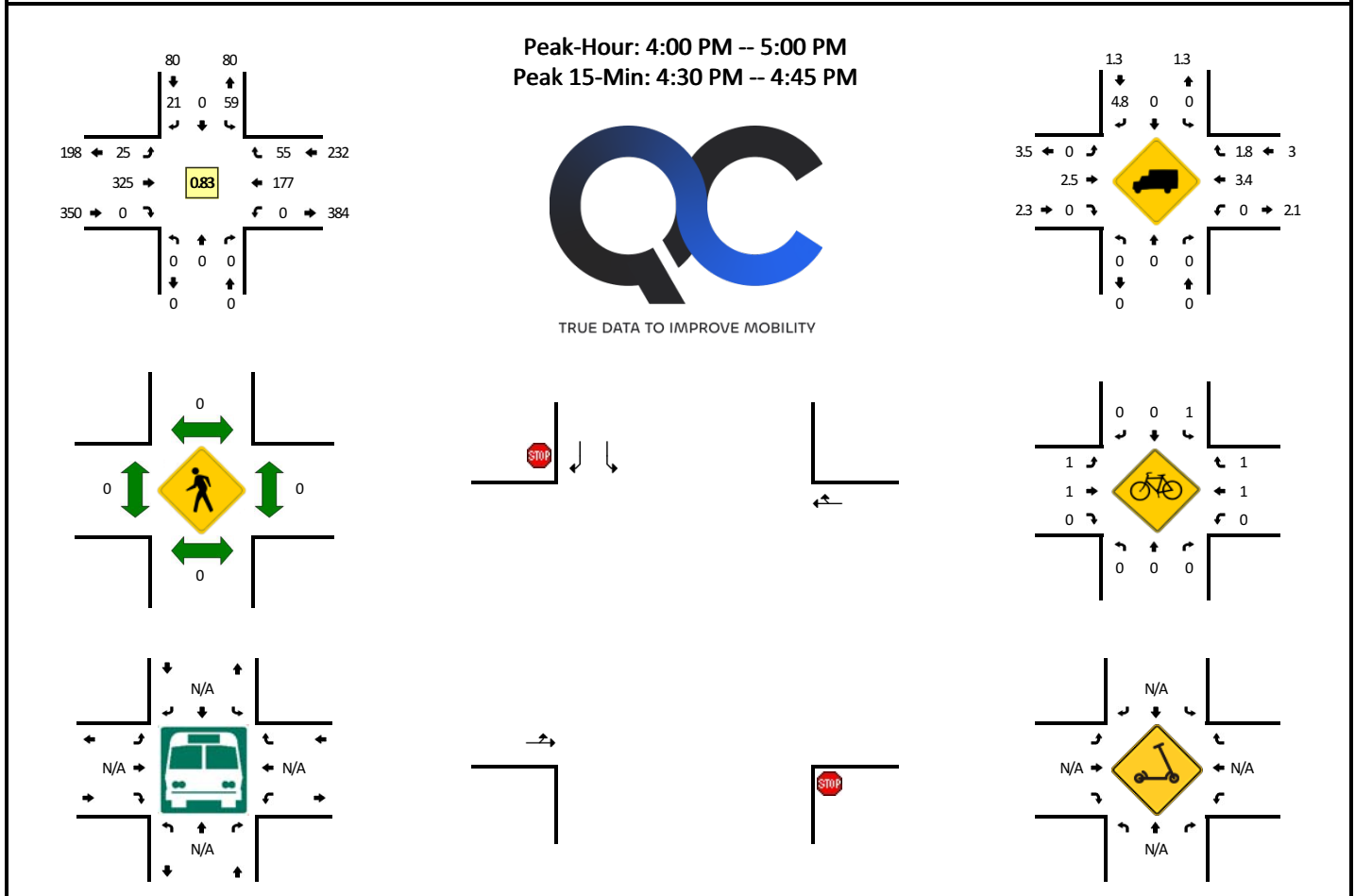
Comments:

Report generated on 6/17/2026 8:36 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

LOCATION: SR 902 -- Dwy 2
CITY/STATE: Medical Lake, WA

QC JOB #: 17672006
DATE: Thu, Jun 11 2026



15-Min Count Period Beginning At	SR 902 (Northbound)				SR 902 (Southbound)				Dwy 2 (Eastbound)				Dwy 2 (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	17	0	6	0	5	86	0	0	0	38	15	0	167	
4:15 PM	0	0	0	0	14	0	6	0	4	71	0	0	0	46	13	0	154	
4:30 PM	0	0	0	0	21	0	7	0	8	111	0	0	0	40	12	0	199	
4:45 PM	0	0	0	0	7	0	2	0	8	57	0	0	0	53	15	0	142	662
5:00 PM	0	0	0	0	12	0	9	0	7	58	0	0	0	48	14	0	148	643
5:15 PM	0	0	0	0	15	0	6	0	6	51	0	0	0	25	16	0	119	608
5:30 PM	0	0	0	0	18	0	7	0	2	48	0	0	0	39	15	0	129	538
5:45 PM	0	0	0	0	19	0	3	0	5	33	0	0	0	39	15	0	114	510
6:00 PM	0	0	0	0	12	0	5	0	8	33	0	0	0	37	16	0	111	473
6:15 PM	0	0	0	0	15	0	5	0	4	25	0	0	0	32	13	0	94	448
6:30 PM	0	0	0	0	11	0	7	0	5	24	0	0	0	23	9	0	79	398
6:45 PM	0	0	0	0	10	0	2	0	4	17	0	0	0	11	6	0	50	334
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	84	0	28	0	32	444	0	0	0	160	48	0	796	
Heavy Trucks	0	0	0	0	0	0	4	0	0	8	0	0	0	4	0	0	16	
Buses																		
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	
Scooters																		

Comments:

ATTACHMENT D

Methodology Overview

This form facilitates trip generation estimation using data within the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 12th Edition and methodology described within ITE's Trip Generation Handbook, 3rd Edition. These references will be referred to as Manual and Handbook, respectively. The Manual contains data collected by various transportation professionals for a wide range of different land uses, with each land use category represented by a land use code (LUC). Average rates and equations have been established that correlate the relationship between an independent variable that describes the development size and generated trips for each categorized LUC in various settings and time periods. The Handbook explains the methodology for how to use data contained within the Manual, such as when to use the fitted curve instead of the average rate, when adjustments to the volume of trips are appropriate, how to make them, etc. The methodology steps are represented visually in boxes in Figure 3.1. This worksheet applies calculations for each box if applicable.

Box 1 - Define Study Site Land Use Type & Site Characteristics

The analyst is to pick an appropriate LUC(s) based on the subject's zoning/land use(s)/future land use(s). The size of the land use(s) is described in reference to an independent variable(s) specific to (each) the land use (example: 1,000 square feet of building area is relatively common).

Land Use Types and Size

Zone	Proposed Use	Amount Units	ITE LUC	ITE Land Use Name
	Gasoline/Service Station	8 Fueling Positions	944	Gasoline/ Service Station

Box 2 - Define Site Context

Context assessment is to "simply determine whether the study sites is in a multimodal setting" and "could have persons accessing the site by walking, bicycling, or riding transit." This assessment is used in Box 4. The Manual separates data into 4 setting categories - Rural, General Urban/Suburban, Dense Multi-Use Urban and Center City Core. This worksheet uses the following abbreviations, respectively: R, G, D, and C. The Manual does not have data for all settings of all land use codes. See the table on the next page titled "Site Context and Time Periods" - if this table is not provided, the "General Urban/Suburban" setting is used by default.

Box 3 - Define Analysis Objectives Types of Trips & Time Period

This tool will focus on vehicular trips for a 24-hour period on a typical weekday as well as its AM peak hour and PM peak hour. Other time period(s) may be of interest.

Site Context and Time Periods - Actual Setting, Setting Data Available for LUC, Setting Used in Analyses

Zone	Proposed Use	Setting	ADT		AM Peak Hour		PM Peak Hour	
			Available	Used	Available	Used	Available	Used
	Gasoline/Service Station	General Urban/Suburban G	R G C	G	R G C	G	R G C	G

If the desired setting is not available within the *Manual*, adjustments may be made in Boxes 6 through 8.

Box 4 - Is Study Site Multimodal?

Per the Handbook, "if the objective is to establish a local trip generation rate for a particular land use or study site, the simplified approach (Box 9) may be acceptable but the Box 5 through 8 approach is required if the study site is located in an infill setting, contains a mix of uses on-site, or is near significant transit service."

Box 5/Box 9 - Estimate Baseline Trips/Estimate Vehicular Trips (Determine Equation)

Vehicle trips are estimated using rates/equations applicable to each LUC. When the appropriate graph has a fitted curve, the Handbook has a process (Figure 4.2) to determine when to use it versus using the weighted average rate or collecting local data. The methodology requires for engineering judgement in some circumstances and permits engineering judgement to override or make adjustments when appropriate to best project (example 1: study site is expected to operate differently than data in the applicable land use code - such as restaurant that is closed in the morning or in the evening; example 2: LUC data in a localized area fails to be represented by the typically selected fitted curve/weighted average rate - a small shop/LUC 820, AM peak hour is skewed by the high y-intercept).

Equation Type: Equation Used [Equated Rate] (Type Abbreviations: Weighted Average Rate ("WA"), Fitted Curve ("FC"), or Custom ("C"))

Zone	Proposed Use	ADT	AM Peak Hour	PM Peak Hour
	Gasoline/Service Station	WA: $T=X^{*172.01}$ [172.01]	WA: $T=X^{*11.32}$ [11.32]	WA: $T=X^{*14.23}$ [14.23]

Box 5/Box 9 - Estimate Baseline Trips/Estimate Vehicular Trips (Apply Equations and in/out Distributions)

Baseline Vehicular Trips

Zone	Proposed Use	ADT				AM Peak Hour				PM Peak Hour			
		% In	In	Out	Total	% In	In	Out	Total	% In	In	Out	Total
	Gasoline/Service Station	50%	688	688	1,376	50%	46	45	91	50%	57	57	114
	Totals		688	688	1,376		46	45	91		57	57	114

If vehicle trip reductions are not applied for internal capture and alternative mode, vehicle trips may be separated into vehicle trip subsets (pass-by trips, diverted trips, truck trips, new passenger vehicle trips) as part of Box 10. If vehicle trip reductions are to be applied, continue to Box 6.

Box 6 - Convert Baseline Vehicle Trips to Person Trips

If no vehicle trip reductions are to be applied, this portion may be ignored. The Handbook states "There are not enough samples to derive precise percentages by mode...however, for all but one....the motor vehicle percentage of total person trips is at least 96 percent." and "[vehicle occupancy for] many of the most commonly analyzed land use codes are not [available]." This form assumes that the total baseline vehicle trips for all land use codes accounts for 0% of total person trips. Unless otherwise specified, this form later reverses the conversion in Box 8.

Box 7 - Estimate Internal Person Trips, External Walk/Bike Trips, Transit Person Trips, External Person Trips (Zone Internal Capture)

Internal capture occurs for mixed-use developments when a portion of the trips generated by the site are expected to have the both the origin and destination within the site. Internal capture is not dependent on mode choice. Zone internal trips specifically are trips which have the origin and destination within the same zone. Any internal trip would not travel external to the site, thus would not use external roads. A zone internal trip would not travel external to the zone, thus would not use even internal roads. The table below presents the zone internal capture percentages and trips in units of vehicle trips. CivTech can provide trips in units of persons if requested.

Adjustments for Zone Internal Trips

Zone	Proposed Use	ADT				AM Peak Hour				PM Peak Hour			
		Percent	In	Out	Total	Percent	In	Out	Total	Percent	In	Out	Total
	Gasoline/Service Station	18%	-124	-124	-248	13%	-6	-6	-12	23%	-13	-13	-26
	Totals		-124	-124	-248		-6	-6	-12		-13	-13	-26

Box 8 - Convert Person Trips to Final Vehicle Trips

The vehicle occupancy and baseline alternate mode are now factored out from the external trips in vehicles, after any adjustments for internal capture and additional alternate mode from Box 7. In Box 6, vehicle trips were considered to account for 90% of total person trips. Alternate mode trips in addition to the baseline, if any, are accounted for in Box 7. It is estimated that vehicle trips should be reduced by an additional 0% due to carpooling. The final external trips in vehicles is multiplied by 90% (= 90% - 0%) to produce the external vehicle trips.

External Vehicular Trips

Zone	Proposed Use	ADT				AM Peak Hour				PM Peak Hour			
			In	Out	Total		In	Out	Total		In	Out	Total
	Gasoline/Service Station		564	564	1,128		40	39	79		44	44	88
	Totals		564	564	1,128		40	39	79		44	44	88

Box 10 - Estimate Vehicle Trip Subsets Pass-by/Diverted Trips, Truck Trips (Pass-By Trips)

Pass-By Trips. Some trips may be classified as "pass-by" trips, where some vehicle trips generated by the study site are already traveling on an adjacent road and make a stop while passing by. These trips do not add traffic volume to the roadway. The Handbook does not specify that a 'pair' of pass-by trips must enter and exit the same driveway. The current edition of the Handbook indicates that pass-by trips should have directional distribution applied (%in/%out), though reviewers often comment when pass-by trip "pairs" do not occur within a the specified time period. This is likely due to ease of calculation and traditional methodology found in the first edition of the Handbook. As such, the analyst may ignore the direction distribution divide the total pass-by trip volume by 2 to apply pass-by "pairs". In addition, the analyst may consider pass-by rates at a reduced rate. Data is not available for all land use codes and all periods, assumptions are highlighted. The percentage is applied to total external vehicle trips.

Pass-By Trips

Zone	Proposed Use	ADT				AM Peak Hour				PM Peak Hour			
		Percent	In	Out	Total	Percent	In	Out	Total	Percent	In	Out	Total
	Gasoline/Service Station	50%	282	282	564	58%	23	23	46	42%	18	18	36
	Totals		282	282	564		23	23	46		18	18	36

Net New Trips. Pass-by trips and truck trips may be subtracted from the total external vehicle trips, if applicable/data available. Diverted link trips may also be separated, but are often (conservatively) grouped with primary trips.

Net New [Non-Truck] Trips

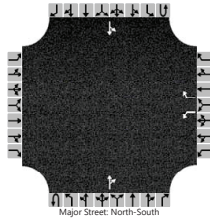
Zone	Proposed Use	ADT				AM Peak Hour				PM Peak Hour			
			In	Out	Total		In	Out	Total		In	Out	Total
	Gasoline/Service Station		282	282	564		17	16	33		26	26	52
	Totals		282	282	564		17	16	33		26	26	52

ATTACHMENT E

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	Lefevre St & Driveway 1
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 1
Analysis Year	2026	North/South Street	Lefevre Street
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Existing		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	0	1	0
Configuration						L		R				TR		LT		
Volume (veh/h)						12		0			13	25		0	17	
Percent Heavy Vehicles (%)						8		0						0		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1		
Critical Headway (sec)						6.48		6.20							4.10		
Base Follow-Up Headway (sec)						3.5		3.3							2.2		
Follow-Up Headway (sec)						3.57		3.30							2.20		

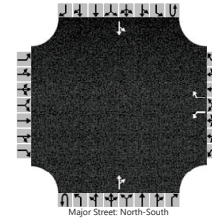
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						13		0							0		
Capacity, c (veh/h)						947		1053							1580		
v/c Ratio						0.01		0.00							0.00		
95% Queue Length, Q ₉₅ (veh)						0.0		0.0							0.0		
Control Delay (s/veh)						8.9		8.4							7.3		
Level of Service (LOS)						A		A							A		
Approach Delay (s/veh)				8.9							0.0						
Approach LOS				A													

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	Lefevre St & Driveway 1
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 1
Analysis Year	2026	North/South Street	Lefevre Street
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.80
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Existing		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	0	1	0
Configuration						L		R				TR		LT		
Volume (veh/h)						21		1			28	30		0	41	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1		
Critical Headway (sec)						6.40		6.20							4.10		
Base Follow-Up Headway (sec)						3.5		3.3							2.2		
Follow-Up Headway (sec)						3.50		3.30							2.20		

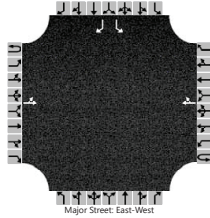
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						26		1							0		
Capacity, c (veh/h)						898		1019							1540		
v/c Ratio						0.03		0.00							0.00		
95% Queue Length, Q ₉₅ (veh)						0.1		0.0							0.0		
Control Delay (s/veh)						9.1		8.5							7.3		
Level of Service (LOS)						A		A							A		
Approach Delay (s/veh)				9.1							0.0						
Approach LOS				A													

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	SR 902 & Driveway 2
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 2
Analysis Year	2026	North/South Street	SR 902
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.84
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Existing		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		1	0	1	
Configuration		LT						TR						L		R
Volume (veh/h)		21	239				244	38						32		34
Percent Heavy Vehicles (%)		0												0		0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.40		6.20
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.30

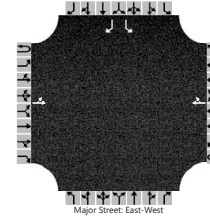
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		25												38		40
Capacity, c (veh/h)		1235												428		732
v/c Ratio		0.02												0.09		0.06
95% Queue Length, Q ₉₅ (veh)		0.1												0.3		0.2
Control Delay (s/veh)		8.0												14.2		10.2
Level of Service (LOS)		A												B		B
Approach Delay (s/veh)	0.8												12.2			
Approach LOS													B			

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	SR 902 & Driveway 2
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 2
Analysis Year	2026	North/South Street	SR 902
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.83
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Existing		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		1	0	1	
Configuration		LT						TR						L		R
Volume (veh/h)		25	325				177	55						59		21
Percent Heavy Vehicles (%)		0												0		5
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.10												6.40		6.25
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.20												3.50		3.34

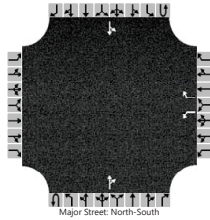
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		30												71		25
Capacity, c (veh/h)		1295												397		786
v/c Ratio		0.02												0.18		0.03
95% Queue Length, Q ₉₅ (veh)		0.1												0.7		0.1
Control Delay (s/veh)		7.8												16.0		9.7
Level of Service (LOS)		A												C		A
Approach Delay (s/veh)	0.8												14.4			
Approach LOS													B			

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	Lefevre St & Driveway 1
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 1
Analysis Year	2027	North/South Street	Lefevre Street
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Background		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	0	1	0
Configuration						L		R				TR		LT		
Volume (veh/h)						12		0				13	25		0	17
Percent Heavy Vehicles (%)						8		0						0		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1		
Critical Headway (sec)						6.48		6.20							4.10		
Base Follow-Up Headway (sec)						3.5		3.3							2.2		
Follow-Up Headway (sec)						3.57		3.30							2.20		

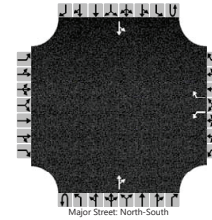
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						13		0							0		
Capacity, c (veh/h)						947		1053							1580		
v/c Ratio						0.01		0.00							0.00		
95% Queue Length, Q ₉₅ (veh)						0.0		0.0							0.0		
Control Delay (s/veh)						8.9		8.4							7.3		
Level of Service (LOS)						A		A							A		
Approach Delay (s/veh)				8.9							0.0						
Approach LOS				A													

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	Lefevre St & Driveway 1
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 1
Analysis Year	2027	North/South Street	Lefevre Street
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.80
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Background		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	0	1	0
Configuration						L		R				TR		LT		
Volume (veh/h)						21		1			28	30		0	41	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1		
Critical Headway (sec)						6.40		6.20							4.10		
Base Follow-Up Headway (sec)						3.5		3.3							2.2		
Follow-Up Headway (sec)						3.50		3.30							2.20		

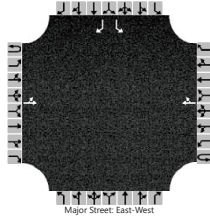
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						26		1							0		
Capacity, c (veh/h)						898		1019							1540		
v/c Ratio						0.03		0.00							0.00		
95% Queue Length, Q ₉₅ (veh)						0.1		0.0							0.0		
Control Delay (s/veh)						9.1		8.5							7.3		
Level of Service (LOS)						A		A							A		
Approach Delay (s/veh)				9.1							0.0						
Approach LOS				A													

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	SR 902 & Driveway 2
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 2
Analysis Year	2027	North/South Street	SR 902
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.84
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Background		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		1	0	1	
Configuration		LT						TR					L			R
Volume (veh/h)		21	241				246	38					32		34	
Percent Heavy Vehicles (%)		0											0		0	
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1											7.1			6.2
Critical Headway (sec)		4.10											6.40			6.20
Base Follow-Up Headway (sec)		2.2											3.5			3.3
Follow-Up Headway (sec)		2.20											3.50			3.30

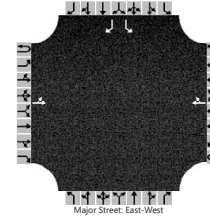
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		25											38			40
Capacity, c (veh/h)		1232											425			730
v/c Ratio		0.02											0.09			0.06
95% Queue Length, Q ₉₅ (veh)		0.1											0.3			0.2
Control Delay (s/veh)		8.0											14.3			10.2
Level of Service (LOS)		A											B			B
Approach Delay (s/veh)	0.8												12.2			
Approach LOS													B			

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	SR 902 & Driveway 2
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 2
Analysis Year	2027	North/South Street	SR 902
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.83
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Background		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		1	0	1	
Configuration		LT						TR					L			R
Volume (veh/h)		25	328				179	56					60		21	
Percent Heavy Vehicles (%)		0											0		5	
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1											7.1			6.2
Critical Headway (sec)		4.10											6.40			6.25
Base Follow-Up Headway (sec)		2.2											3.5			3.3
Follow-Up Headway (sec)		2.20											3.50			3.34

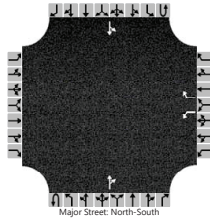
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		30											72			25
Capacity, c (veh/h)		1291											394			782
v/c Ratio		0.02											0.18			0.03
95% Queue Length, Q ₉₅ (veh)		0.1											0.7			0.1
Control Delay (s/veh)		7.9											16.2			9.8
Level of Service (LOS)		A											C			A
Approach Delay (s/veh)	0.8												14.5			
Approach LOS													B			

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	Lefevre St & Driveway 1
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 1
Analysis Year	2027	North/South Street	Lefevre Street
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.90
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Total		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	0	1	0
Configuration						L		R				TR		LT		
Volume (veh/h)						17		0			13	31		0	17	
Percent Heavy Vehicles (%)						8		0						0		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1		
Critical Headway (sec)						6.48		6.20							4.10		
Base Follow-Up Headway (sec)						3.5		3.3							2.2		
Follow-Up Headway (sec)						3.57		3.30							2.20		

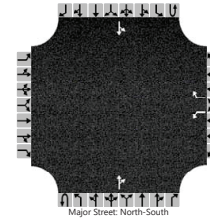
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						19		0							0		
Capacity, c (veh/h)						943		1048							1571		
v/c Ratio						0.02		0.00							0.00		
95% Queue Length, Q ₉₅ (veh)						0.1		0.0							0.0		
Control Delay (s/veh)						8.9		8.4							7.3		
Level of Service (LOS)						A		A							A		
Approach Delay (s/veh)						8.9									0.0		
Approach LOS						A											

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	Lefevre St & Driveway 1
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 1
Analysis Year	2027	North/South Street	Lefevre Street
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.80
Intersection Orientation	North-South	Analysis Time Period (hrs)	1.00
Project Description	Background		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	0	1	0
Configuration						L		R				TR		LT		
Volume (veh/h)						21		1			28	30		0	41	
Percent Heavy Vehicles (%)						0		0						0		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2							4.1		
Critical Headway (sec)						6.40		6.20							4.10		
Base Follow-Up Headway (sec)						3.5		3.3							2.2		
Follow-Up Headway (sec)						3.50		3.30							2.20		

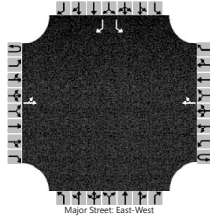
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						26		1							0		
Capacity, c (veh/h)						898		1019							1540		
v/c Ratio						0.03		0.00							0.00		
95% Queue Length, Q ₉₅ (veh)						0.1		0.0							0.0		
Control Delay (s/veh)						9.1		8.5							7.3		
Level of Service (LOS)						A		A							A		
Approach Delay (s/veh)						9.1									0.0		
Approach LOS						A											

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	SR 902 & Driveway 2
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 2
Analysis Year	2027	North/South Street	SR 902
Time Analyzed	AM Peak Hour	Peak Hour Factor	0.84
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Total		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		1	0	1	
Configuration		LT						TR					L			R
Volume (veh/h)		38	232					237	55				48			52
Percent Heavy Vehicles (%)		0											0			0
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1											7.1			6.2
Critical Headway (sec)		4.10											6.40			6.20
Base Follow-Up Headway (sec)		2.2											3.5			3.3
Follow-Up Headway (sec)		2.20											3.50			3.30

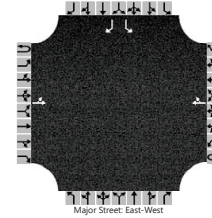
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		45											57			62
Capacity, c (veh/h)		1223											400			730
v/c Ratio		0.04											0.14			0.08
95% Queue Length, Q ₉₅ (veh)		0.1											0.5			0.3
Control Delay (s/veh)		8.1											15.5			10.4
Level of Service (LOS)		A											C			B
Approach Delay (s/veh)	1.4												12.8			
Approach LOS													B			

HCS7 Two-Way Stop-Control Report

General Information		Site Information	
Analyst	CivTech Inc.	Intersection	SR 902 & Driveway 2
Agency/Co.	WSDOT	Jurisdiction	City of Medical Lake
Date Performed	7/10/2026	East/West Street	Driveway 2
Analysis Year	2027	North/South Street	SR 902
Time Analyzed	PM Peak Hour	Peak Hour Factor	0.83
Intersection Orientation	East-West	Analysis Time Period (hrs)	1.00
Project Description	Total		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		1	0	1	
Configuration		LT						TR					L			R
Volume (veh/h)		44	323					174	72				76			40
Percent Heavy Vehicles (%)		0											0			5
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized													No			
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1											7.1			6.2
Critical Headway (sec)		4.10											6.40			6.25
Base Follow-Up Headway (sec)		2.2											3.5			3.3
Follow-Up Headway (sec)		2.20											3.50			3.34

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		53											92			48
Capacity, c (veh/h)		1277											363			779
v/c Ratio		0.04											0.25			0.06
95% Queue Length, Q ₉₅ (veh)		0.1											1.0			0.2
Control Delay (s/veh)		7.9											18.3			9.9
Level of Service (LOS)		A											C			A
Approach Delay (s/veh)	1.3												15.4			
Approach LOS													C			