Traffic Impact Analysis

DaVita Dialysis Clinic
Woodland, WA

Prepared For:
DaVita Kidney Care

Prepared By:
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Lacey, WA 98516
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December 2022

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CONSULTING SERVICES

Traffic Impact Analysis

Project Information

Project:	DaVita Dialysis Clinic
Prepared for:	DaVita Kidney Care

Reviewing Agency

Jurisdiction:	City of Woodland

Project Representative

Prepared by:	SCJ Alliance 8730 Tallon Lane NE, Suite 200 Lacey, WA 98516 360.352.1465 scjalliance.com
Contact:	Perry Shea, PE Ryan Shea, PTP, Senior Transportation Planner
Project Reference:	SCJ #22-000643
	Path: N:\Projects\5189 LDC Surveying Engineering Planning\22-000643 DaVita Clinic - Woodland\Phase 02 – Traffic Impact Analysis\04-Dels\02-TIA\2022-1214 Davita Clinic TIA.docx

Signature

The technical material and data contained in this document were prepared under the supervision and direction of the undersigned, whose seal, as a professional engineer licensed to practice as such, is affixed below.

Prepared by Ryan Shea, PTP, Senior Transportation Planner

12/27/22

Approved by Perry Shea, PE

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1 Introduction

1.1 Project Overview

A *DaVita Dialysis Clinic* is being proposed on an undeveloped parcel located at 467 Beechwood Street in Woodland, Washington, approximately 600 feet west of Pacific Avenue. The clinic is proposed to be about 7,400 square feet in size.

Figure 1 illustrates the site vicinity and the transportation network serving the project area.

Figure 1. Site Vicinity Map

1.2 Study Context

A traffic scoping letter was prepared and submitted to the City of Woodland and WSDOT for review. WSDOT determined that any state highway intersection with 10 or more project trips during the AM peak hour or PM peak hour should be included in the traffic impact analysis report.

This report has been prepared to provide the traffic analysis and project information for the City of Woodland and WSDOT in reviewing the development proposal. Project trips were assigned to the surrounding street system based on the locations of other, potentially competing dialysis clinics in the vicinity. From this analysis and based on guidance from WSDOT staff, we have identified the need to evaluate existing and forecasted operations at the following intersections:

- Pacific Avenue at Beechwood Street
- SR 503 (Lewis River Road) at I-5 Southbound Ramps/ Pacific Avenue
- SR 503 (Lewis River Road) at I-5 Northbound Ramps/Atlantic Avenue
- SR 503 (Lewis River Road) at CC Street

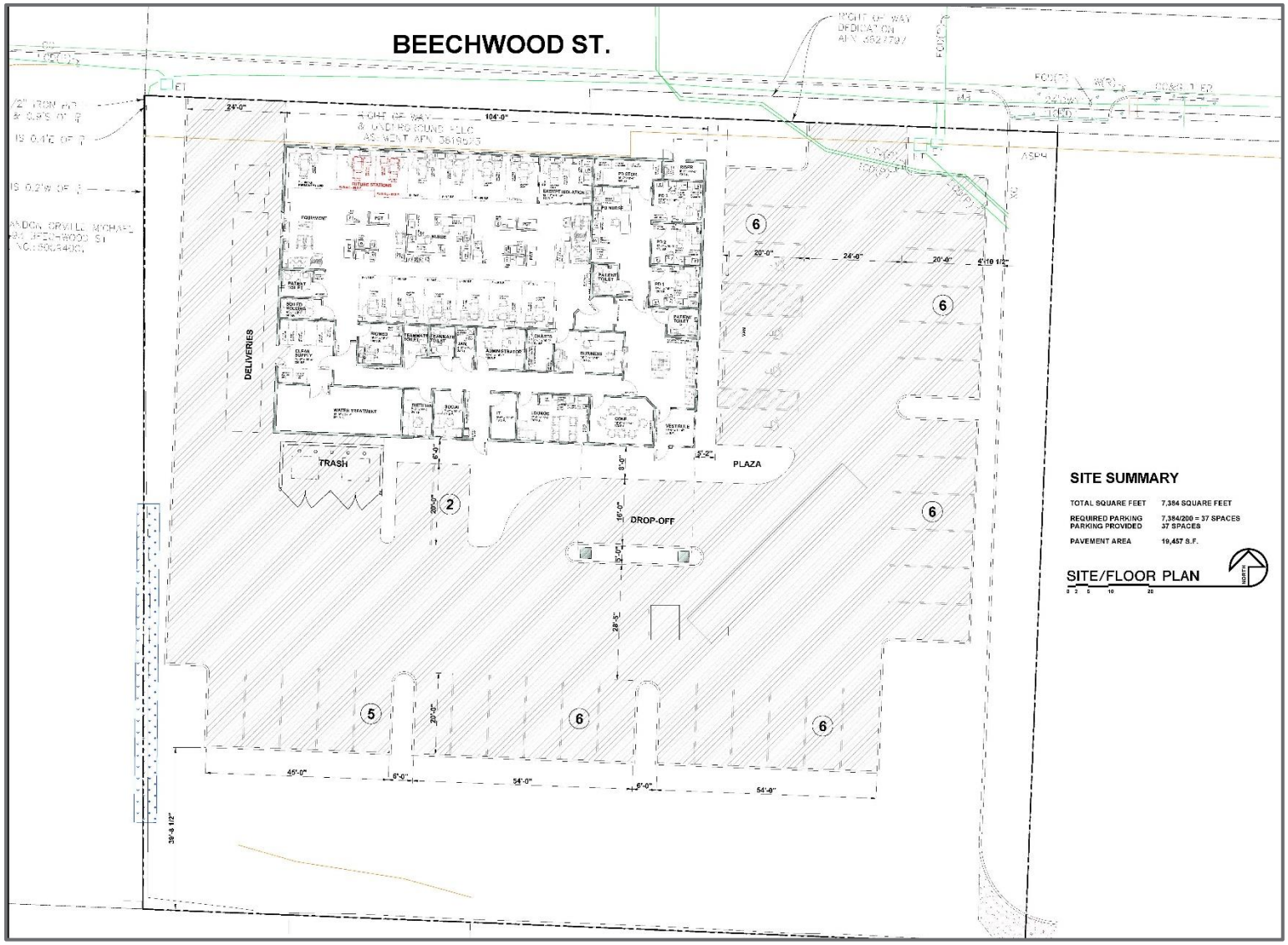
Operational analysis has been prepared for existing 2022 AM and PM peak hour conditions and forecasted 2024 AM and PM peak hour traffic conditions with and without completion of the development.

2 Project Description

2.1 Development Proposal

The proposed project would construct an approximate 7,400 square foot medical facility to be occupied by the *DaVita Dialysis Clinic*. The project is located on undeveloped land at 467 Beechwood Street in the City of Woodland. Access to the project will be provided by two full access driveways on Beechwood Street. For this analysis, all project trips have been assigned to one site driveway. The project is anticipated to open in 2024. The preliminary site plan is presented in **Figure 2**.

Figure 2. Preliminary Site Plan



3 Existing Conditions Summary

3.1 Area Land Uses

The proposed *DaVita Dialysis Clinic* site is currently undeveloped. Adjacent properties include a mix of residential, light industrial, and commercial uses.

3.2 Roadway Inventory

3.2.1 Beechwood Street

Beechwood Street is an east/west two-lane road which has been classified as a Local Access street. There is a sidewalk on the north side of the street adjacent to residential development and adjacent to a recently built coffee shop on the south side of the street to the immediate west of the project site. The street is posted for 25 mph speeds.

3.2.2 Pacific Avenue

Pacific Avenue is a two-lane road that serves as a frontage road to I-5 on the west side of the freeway. It is classified as a Minor Arterial between Scott Avenue and Lewis River Road. There is a poorly maintained sidewalk on the west side of the street near the project but there is limited connectivity to the south. There are no bicycle lanes on Pacific Avenue. The street is posted for 35 mph speeds.

3.2.3 State Route 503/Lewis River Road

State Route 503 (SR 503) provides regional access from I-5 to areas in east Cowlitz and Clark Counties, as well as parts of Skamania County. The city classifies SR 503 as a Minor Arterial. It is not part of the national highway system, nor is it classified as a Highway of Statewide Significance (HSS). Within the city, SR 503 (also known as Lewis River Road) has four travel lanes at its interchange with I-5, with additional left-turn lanes at the intersections with the on- and off-ramps and at CC Street immediately east of the interchange. East of CC Street, the roadway narrows to a three-lane cross-section, including a center, two-way, left-turn lane. Traffic signals are currently located at the I-5 southbound on-ramp, the I-5 northbound off-ramp, and the intersection with CC Street. The street is posted for 30 mph speeds through the interchange area.

3.2.4 Atlantic Avenue

Atlantic Avenue is a two-lane road that operates as a frontage road to I-5 on the east side of the freeway. It is classified as a Minor Arterial between Scott Avenue and Lewis River Road. There is a narrow, curb-tight sidewalk (unpaved for portions) along the east side of the street for about 2,500 feet north of Lewis River Road with roadway shoulders to the north. There are no bicycle lanes on Atlantic Avenue. The street is posted for 35 mph speeds.

3.2.5 CC Street

CC Street is a two-lane minor arterial street that intersects Lewis River Road immediately to the east of the I-5 northbound off-ramp/Atlantic Avenue intersection. The street provides for a bridge crossing of the North Fork of the Lewis River and connects Woodland to rural portions of northern Clark County on Pacific Highway. In Woodland, there is a curb-tight sidewalk along the east side of the street which ends just north of the Lewis River bridge. The street is posted for 25 mph speeds.

A summary of the intersection channelization and control type for each of the study intersections is provided in **Figure 3.**

3.3 Traffic Volume Data

Traffic Count Consultants Inc., a traffic data collection firm, provided evening peak period turning movement counts. The counts were conducted between 7:00 and 9:00 am and between 4:00 and 6:00 pm at the following locations on the dates listed:

- Pacific Avenue at Beechwood Street
- SR 503 (Lewis River Road) at I-5 Southbound Ramps (Exit 21)/ Pacific Avenue
- SR 503 (Lewis River Road) at I-5 Northbound Ramps (Exit 21)/ Atlantic Avenue
- SR 503 (Lewis River Road) at CC Street

With the exception of Lewis River Road at CC Street, traffic counts were taken on November 17, 2022 between the hours of 4:00 and 6:00 pm at the study area intersections. Counts at the CC Street intersection were obtained from data collected for the 2019 study of the I-5/Exit 21 interchange and adjusted for compatibility with the 2022 counts collected in the vicinity. No adjustment was made for lingering effects due to the Covid pandemic.

A growth rate of 2.0 percent was applied to the counts to reflect 2024 traffic volumes that are used as the basis for analysis of the *DaVita Dialysis Clinic* project. This rate is slightly higher than the longer-term forecasts used in the Exit 21 study.

Figure 4 shows the 2022 AM peak hour traffic volumes, while **Figure 5** presents 2022 PM peak hour volumes. The original turning movement count diagrams are provided in **Appendix A**.

3.4 Crash History

The Washington Department of Transportation provides crash data for study area roadways. The data was collected over the five-year period between January 1, 2017 and December 31, 2021 and reviewed for the study area intersections. The total crashes by severity are provided in **Table 1**.

Table 1. Existing Crash Severity By Intersection

Intersection	Fatal	Serious Injury	Minor Injury	Possible Injury	Property Damage Only	Total
Pacific Avenue at Beechwood Street	0	0	1	1	5	7
SR 503 (Lewis River Road) at I-5 SB Ramps/Pacific Avenue	0	0	2	5	10	17
SR 503 (Lewis River Road) at I-5 NB Ramps/Atlantic Avenue	0	0	2	5	31	38
SR 503 (Lewis River Road) at CC Street	0	0	0	0	6	6
Total Crashes	**0**	**0**	**5**	**11**	**52**	**68**

There were no fatal or serious injury crashes reported. Overall, approximately 75 percent of all the reported crashes were classified as property damage only (with no apparent injury).

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Figure 3
Existing Channelization and Intersection Control

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Figure 4
Existing 2022 AM Peak Hour Traffic Volumes

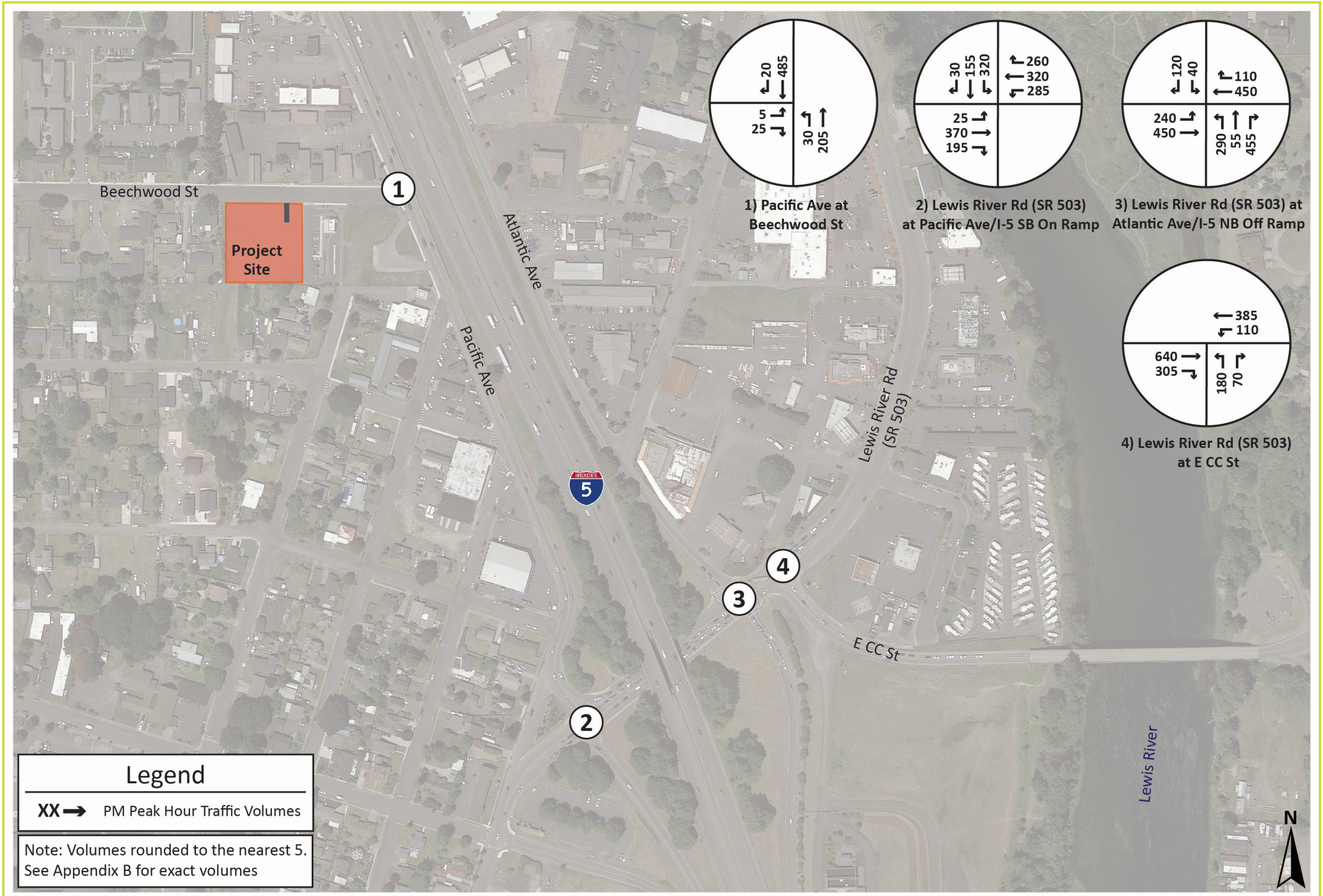

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Figure 5
Existing 2022 PM Peak Hour Traffic Volumes

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4 Project Traffic Characteristics

The two project-related characteristics having the most effect on area traffic conditions are peak hour trip generation and the directional distribution of traffic volumes on the surrounding roadway network.

4.1 Site-Generated Traffic Volumes

Vehicle trip generation was calculated using the trip generation rates contained in the 11th edition of the *Trip Generation Manual* by the Institute of Transportation Engineers (ITE). Clinic (land use code 630) land use category best matches the proposed development and has been used to calculate the trip generation.

Table 1 shows the trip generation characteristics for the land use category Clinic.

Table 2. ITE Trip Generation Rate – Clinic (Land Use Code 630)

Time Period	Variable	Trip Rate	Enter %	Exit %
AM Peak Hour	1,000-sqft	2.75	81%	19%
PM Peak Hour	1,000-sqft	3.69	30%	70%
Daily	1,000-sqft	37.60	50%	50%

The total trip generation expected from this project is calculated by applying the unit measure for each land use category to the appropriate trip generation rate. The trip generation for the proposed *DaVita Dialysis Clinic* project is shown in **Table 2** below.

Table 3. Project Trip Generation

Time Period	Size	Total Trips	Enter	Exit
AM Peak Hour	7.40	20	16	4
PM Peak Hour	7.40	27	8	19
Daily	7.40	278	139	139

4.2 Site Traffic Distribution and Assignment

For this study, the regional distribution of traffic to and from the proposed project was estimated based on locations and densities of the potential customer base. The regional traffic distribution percentages and site traffic assignment for the proposed development for the AM peak hour are shown on **Figure 6**, while PM peak hour volumes are shown in **Figure 7.** Trip distribution information for both the AM and PM peak hours is also presented in **Appendix B**.

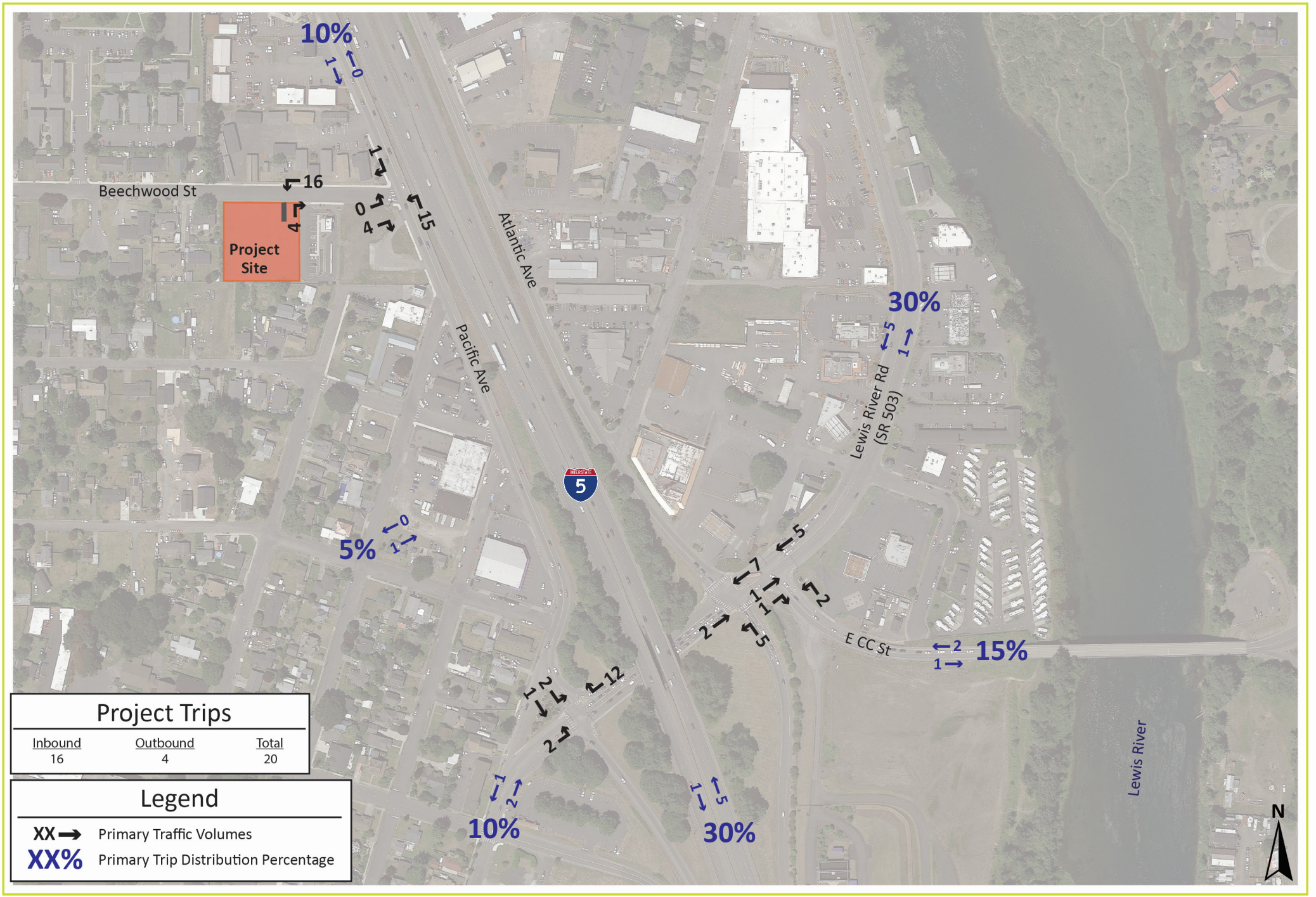

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Figure 6
Site-Generated Traffic Volumes
AM Peak Hour

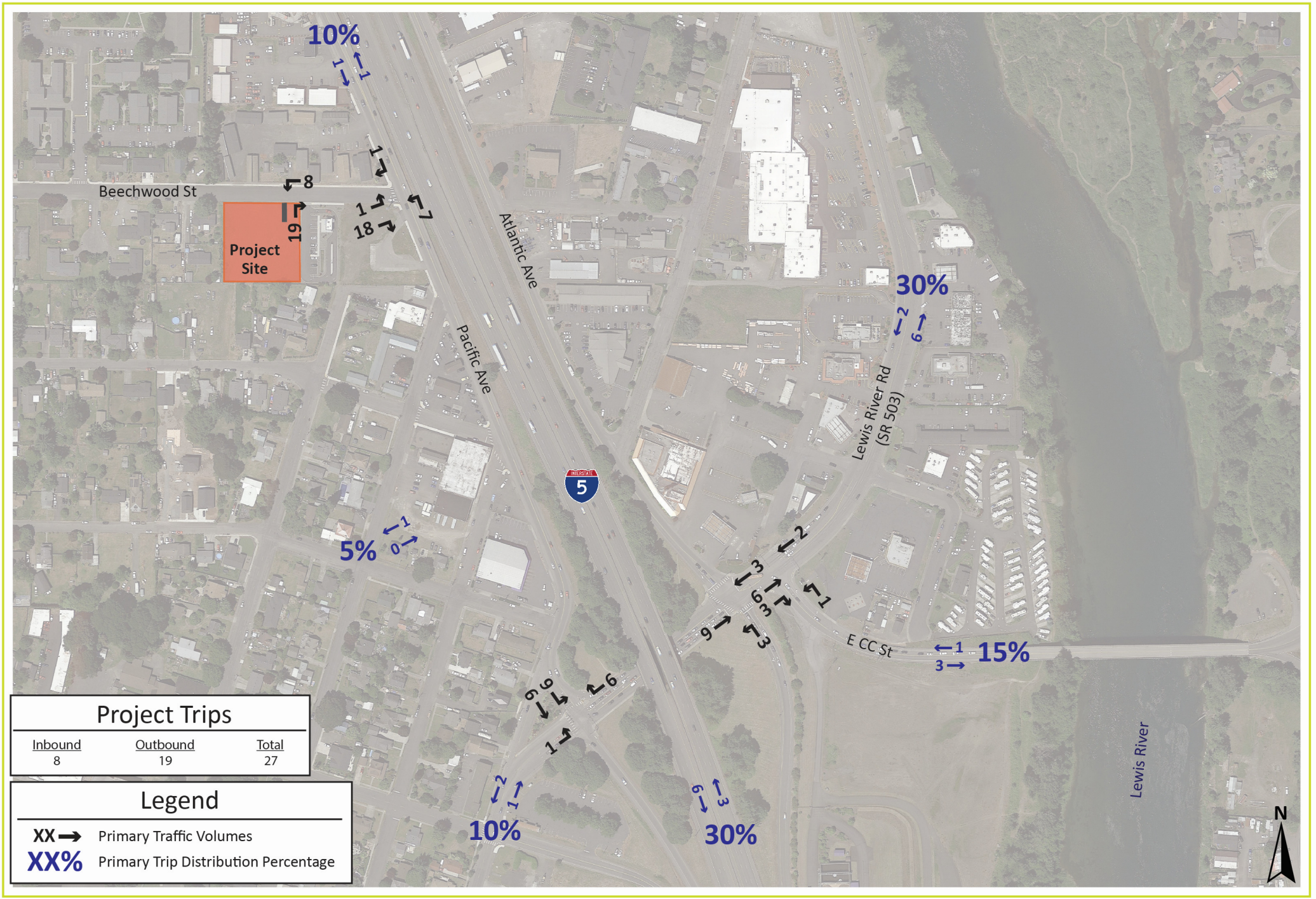

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Figure 7
Site-Generated Traffic Volumes
PM Peak Hour

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5 Future Traffic Conditions

5.1 Roadway Network Improvements

There are multiple network improvements planned within the study area. The following have been identified in the *Woodland Six Year Transportation Improvement Program (2021 to 2026):*

- **West Scott Avenue from Schurman Way to Pacific Avenue** - Full depth reclamation and sidewalks on West Scott Avenue and Guild Road from Schurman Way to Pacific Avenue. Project will also include pedestrian and water line crossing of railroad. Construction is noted as beginning in 2021 with completion in 2023.
- **I-5 at Exit 21 (SR 503)** - Exit 21 Interchange Project I-5 and SR-503 from Pacific Avenue to Atlantic Avenue – Develop designs to add capacity and enhance safety through Exit 21 on both sides of I-5. The planning study was identified for 2021.
- **Scott Avenue Transportation Study** - Conduct Scott/Atlantic/Pacific Area Transportation Study to develop redesign of Scott, Pacific, and Atlantic Avenue areas, including I-5 exits and pedestrian facilities. Planning study was identified for 2021.
- **Goerig Street Overlay and ADA Ramps** - Goerig Street from Buckeye Street to Davidson Street - Grind and overlay Goerig Street and improve seven ADA ramps. Construction is noted for 2021.
- **Lakeshore Drive** - Lakeshore Drive from Goerig Street to city limits – Pavement and pedestrian improvements to include surface repairs and/or replacement, as well as a HMA path along portion of project area. Preliminary engineering was slated for 2021 with construction for 2022.
- **CC Bridge Upgrade/Replacement** - Replace or upgrade the existing CC Street Bridge between Cowlitz and Counties.

5.2 Future Traffic Volumes

Traffic volume forecasts were prepared for AM and PM peak hour conditions for the 2024 opening year. The future traffic volume forecast includes non-specific background traffic growth, pipeline development traffic and estimated traffic generated by the proposed *DaVita Dialysis Clinic* project.

Future year non-project related traffic volumes were estimated based on a general, non-specific forecast of background traffic growth, coupled with traffic attributable to specific projects in the vicinity which have been approved but not yet constructed (“pipeline” projects). Non-specific background growth was estimated using a 2.0 percent annual (non-compounded) growth rate.

The City of Woodland has identified one pipeline development project to be included in the forecast, Kirkland Maker Space. This project would be located at 600 Mitchell Avenue in Woodland and includes a proposed light industrial business park for small individual manufacturers. The project is comprised of three small buildings with a total of about 36,500 square feet of leasable space.

The projected 2024 AM and PM peak hour traffic volumes without the *DaVita Dialysis Clinic* project are shown in **Figure 8** and **Figure 9**, respectively. The projected 2024 traffic volumes with the project are shown in **Figure 10** for the AM peak hour and **Figure 11** for the PM peak hour. The traffic volume calculations for the study intersections are included in Appendix B.

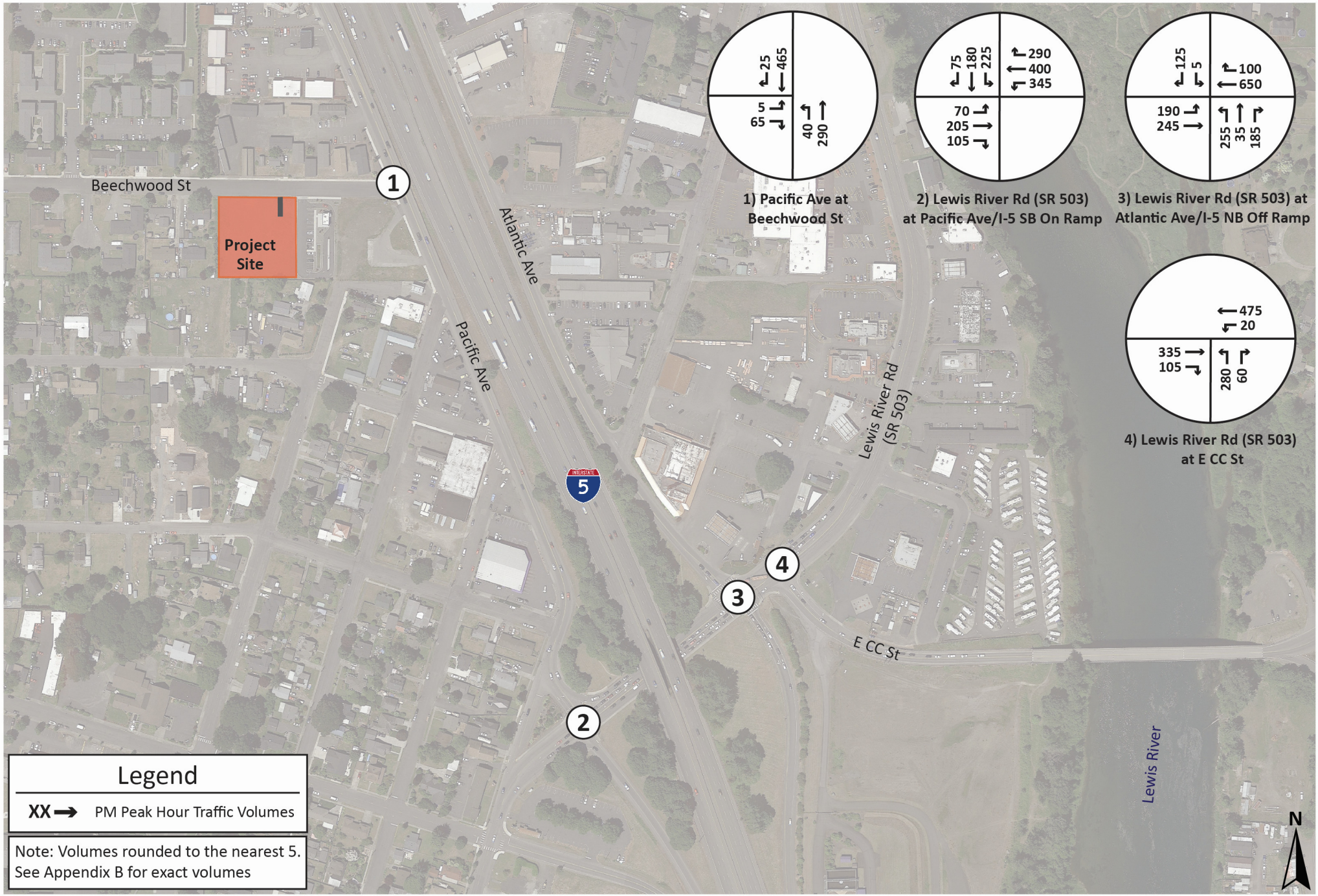

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Figure 8
Projected 2024 AM Peak Hour
Traffic Volumes Without Project

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Figure 9
Projected 2024 PM Peak Hour
Traffic Volumes Without Project

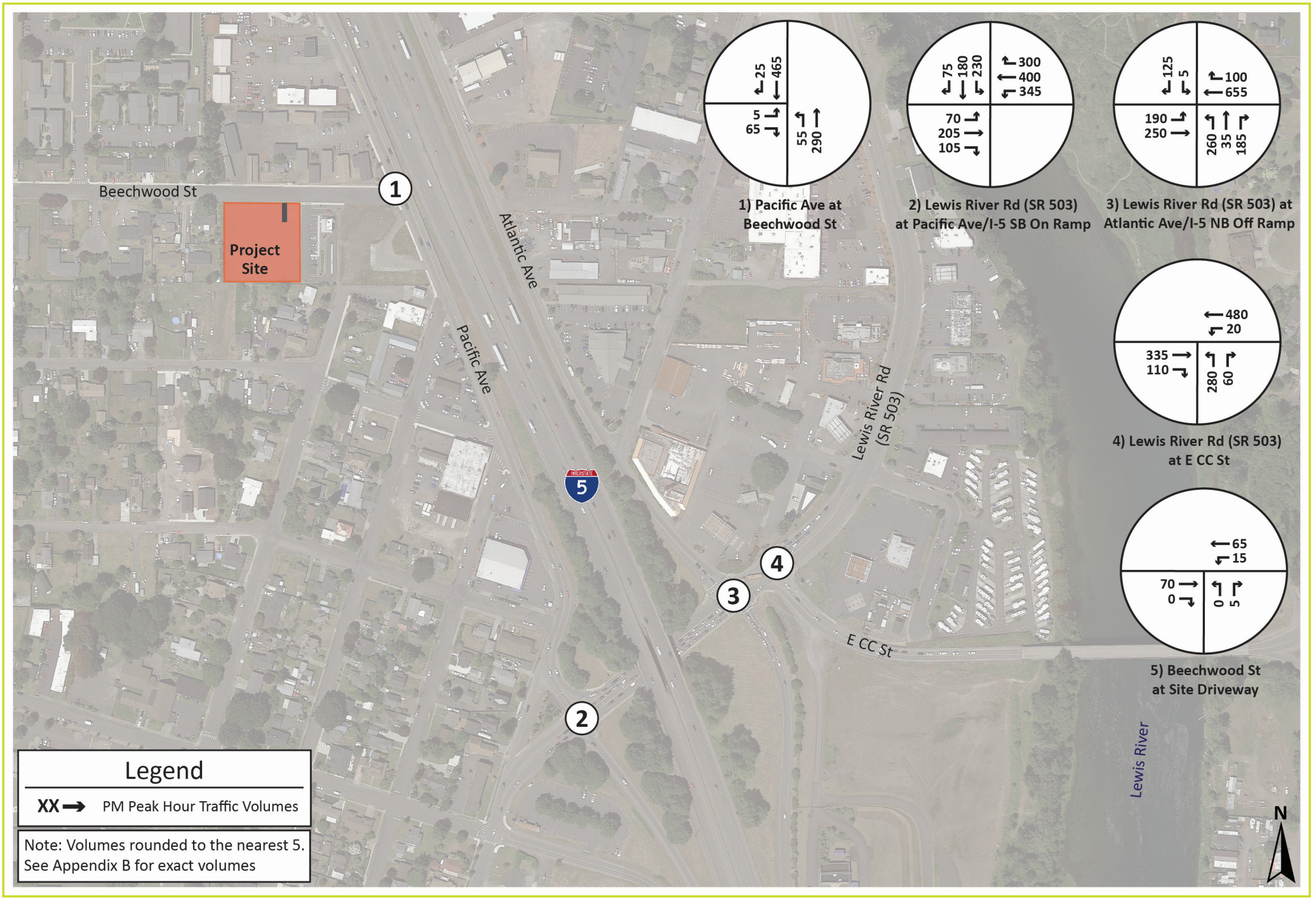

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Figure 10
Projected 2024 AM Peak Hour
Traffic Volumes With Project

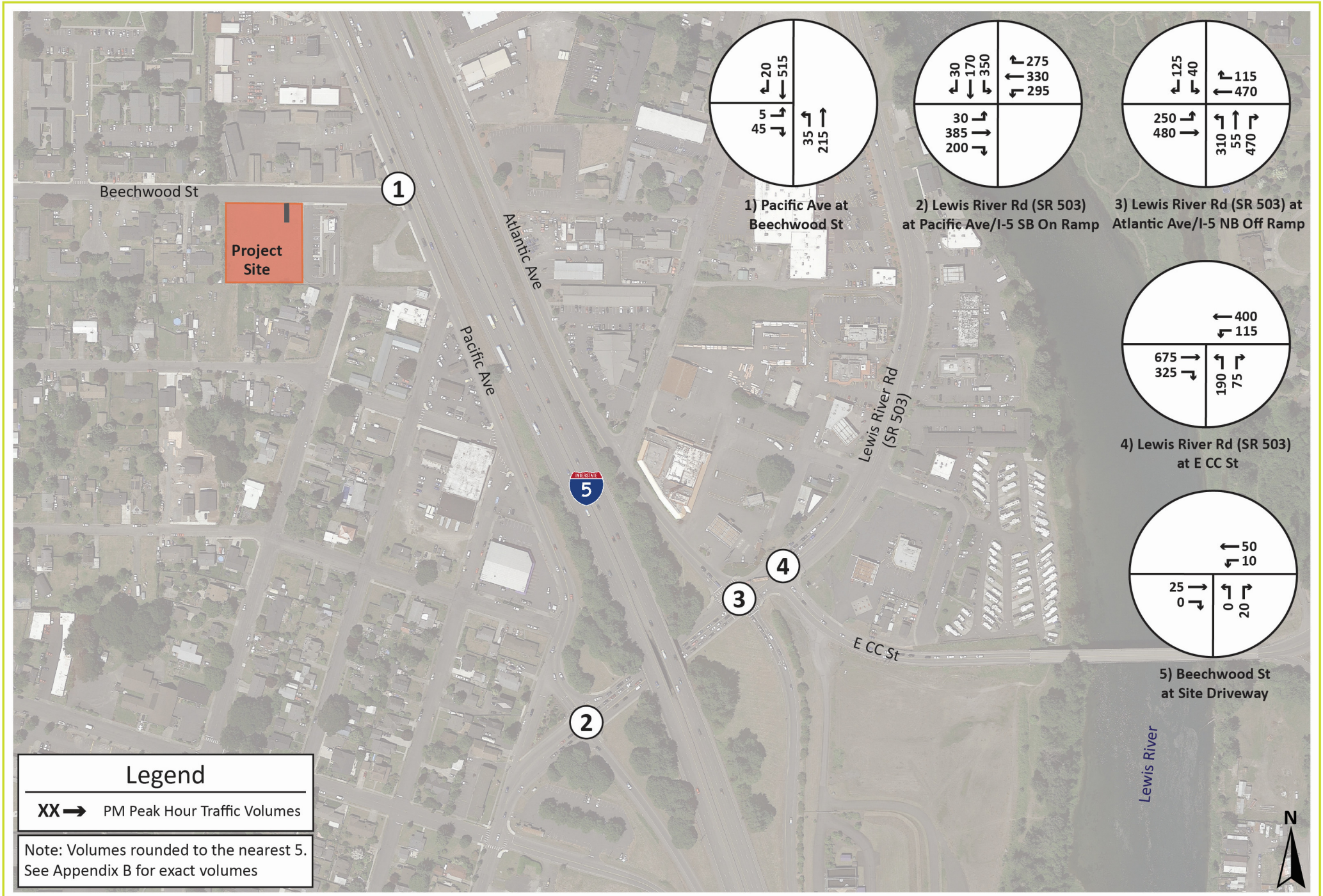

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Figure 11
Projected 2024 PM Peak Hour
Traffic Volumes With Project

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6 Traffic Operations Analysis

Traffic analyses were conducted to identify any deficiencies within the study area for the AM and PM peak hours in the 2022 base year and the 2024 project opening year.

6.1 Level of Service

The acknowledged source for determining overall capacity for arterial segments and independent intersections is the current edition of the *Highway Capacity Manual* (HCM) published by the Transportation Research Board (TRB).

Intersection analysis was performed using the Synchro software package. This software implements the methods of the 6th Edition HCM. Capacity analysis results are described in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a street or highway during a specific time interval. LOS ranges from A (very little delay) to F (long delays and congestion).

The City of Woodland and WSDOT have a LOS D standard for SR 503.

6.1.1 Intersection Operations

For intersections under minor street stop-control, the LOS of the most difficult movement (typically the minor street left-turn) represents the intersection Level of Service for purposes of assessing potential impacts. For traffic signals, the intersection average delay is used to assess potential impacts. The following table shows the Level of Service criteria for stop-controlled intersections and signalized intersections.

Table 4. Level of Service Criteria for Intersections

Level of Service	Signalized Intersection Average Control Delay (seconds/vehicle)	Stop-Controlled or Roundabout Intersection Average Control Delay (seconds/vehicle)
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	> 50

6.2 Intersection Analysis

The analysis was conducted for the following scenarios:

- Existing 2022 traffic volumes
- Projected 2024 background traffic volumes without the *DaVita Dialysis Clinic* project
- Projected 2024 traffic volumes with the *DaVita Dialysis Clinic* project

The operational analysis results of the study intersections for the AM peak hour are provided in **Table 5**, and in **Table 6** for the PM peak hour. The LOS analysis worksheets are included in **Appendix C**.

Table 5. AM Peak Hour Intersection Level of Service

	Intersection	Control Type	LOS Standard	Base Year 2022		Projected 2024			
						Without Project		With Project	
				LOS (delay)	V/C Ratio	LOS (delay)	V/C Ratio	LOS (delay)	V/C Ratio
1	Pacific Avenue at Beechwood Street	TWSC[1]	D	B (12.8)	0.13[3]	B (13.1)	0.15	B (13.2)	0.15
2	SR 503(Lewis River Road) at I-5 SB Ramps/ Pacific Avenue	Signal	D	C (22.1)	N/A	C (22.4)	N/A	C (22.7)	N/A
3	SR 503 (Lewis River Road) at I-5 Northbound Ramps Atlantic Avenue	Signal	D	D (37.0)[2]	0.60	D (37.9)[2]	0.64	D (38.1)[2]	0.64
4	SR 503 (Lewis River Road) at CC Street	Signal	D	D (38.6)[2]	0.46	D (40.4)[2]	0.48	D (40.4)[2]	0.49
5	Beechwood Street at Site Driveway	TWSC[1]	D	--	--	--	--	A (8.8)	0.01

1. Two-Way Stop-Control
2. HCM 2000 analysis output used.
3. Worst V/C ratio.

Table 6. PM Peak Hour Intersection Level of Service

	Intersection	Control Type	LOS Standard	Base Year 2022		Projected 2024			
						Without Project		With Project	
				LOS (delay)	V/C Ratio	LOS (delay)	V/C Ratio	LOS (delay)	V/C Ratio
1	Pacific Avenue at Beechwood Street	TWSC[1]	D	B (12.4)	0.06[3]	B (12.8)	0.06	B (12.9)	0.10
2	SR 503(Lewis River Road) at I-5 SB Ramps/ Pacific Avenue	Signal	D	C (27.2)	N/A	C (28.3)	N/A	C (28.8)	N/A
3	SR 503 (Lewis River Road) at I-5 Northbound Ramps Atlantic Avenue	Signal	D	D (42.5)[2]	0.62	D (44.0)[2]	0.65	D (44.1)[2]	0.65
4	SR 503 (Lewis River Road) at CC Street	Signal	D	C (31.0)[2]	0.54	C (31.6)[2]	0.57	C (31.6)[2]	0.57
5	Beechwood Street at Site Driveway	TWSC[1]	D	--	--	--	--	A (8.5)	0.02

4. Two-Way Stop-Control
5. HCM 2000 analysis output used.

6.2.1 Pacific Avenue at Beechwood Street

This is a tee-intersection which currently operates under two-way stop sign-control, with a single lane approach on all legs with no designated pedestrian crosswalk. In the 2022 AM peak hour, the intersection operates at LOS B with 12.8 seconds of average delay per vehicle. For the 2024 horizon

without the *DaVita Dialysis Clinic* project, the intersection is projected to operate at LOS B with 13.1 seconds of average delay. With the addition of project traffic, the intersection is projected to remain at LOS B with 13.2 seconds of average delay.

In the 2022 PM peak hour, the intersection operates at LOS B with 12.4 seconds of average delay per vehicle. For the 2024 horizon without the *DaVita Dialysis Clinic* project, the intersection is projected to operate at LOS B with 12.8 seconds of average delay. With the addition of project traffic, the intersection is projected to remain at LOS B with 12.9 seconds of average delay.

6.2.2 SR 503(Lewis River Road) at Pacific Avenue/ I-5 Southbound On-Ramp

This is a four-legged intersection which currently operates under traffic signal control. The north, east and west legs provide for two directions of travel while the south leg serves as the southbound on-ramp to I-5. The westbound leg provides a separate travel lane for left turns, through movements and right turns. There is no pedestrian crossing on this leg. The eastbound leg provides for left turns, through movements and through/right movements. A crosswalk is provided on this leg. The southbound leg provides separate lanes for left and through movements and includes a crosswalk. Right turns split off before the intersection in their own lane.

In the 2022 AM peak hour, the intersection operates at LOS C with 22.1 seconds of average delay per vehicle. For the 2024 horizon without the *DaVita Dialysis Clinic* project, the intersection is projected to operate at LOS C with 22.4 seconds of average delay. With the addition of project traffic, the intersection is projected to remain at LOS C with 22.7 seconds of average delay.

In the 2022 PM peak hour, the intersection operates at LOS C with 27.2 seconds of average delay per vehicle. For the 2024 horizon without the *DaVita Dialysis Clinic* project, the intersection is projected to operate at LOS C with 28.3 seconds of average delay. With the addition of project traffic, the intersection is projected to remain at LOS C with 28.8 seconds of average delay.

6.2.3 SR 503(Lewis River Road) at Atlantic Avenue/I-5 Northbound Off-Ramp

This is a four-legged intersection which currently operates under traffic signal control. The north, east and west legs provide for two directions of travel while the south leg serves as the northbound off-ramp from I-5. The westbound leg provides separate through and through/right turn lanes. There is no pedestrian crossing on this leg. The eastbound leg provides a separate travel lane for left turns, through movements and through/right turns and includes a pedestrian crosswalk. The southbound leg includes separate left and right turns, as well as a crosswalk. The northbound leg provides two travel lanes, one for right turns only and the other a shared through/left turn lane.

In the 2022 AM peak hour, the intersection operates at LOS D with 37.0 seconds of average delay per vehicle. For the 2024 horizon without the *DaVita Dialysis Clinic* project, the intersection is projected to operate at LOS D with 37.9 seconds of average delay. With the addition of project traffic, the intersection is projected to remain at LOS D with 38.1 seconds of average delay.

In the 2022 PM peak hour, the intersection operates at LOS D with 42.5 seconds of average delay per vehicle. For the 2024 horizon without the *DaVita Dialysis Clinic* project, the intersection is projected to operate at LOS D with 44.0 seconds of average delay. With the addition of project traffic, the intersection is projected to remain at LOS D with 44.1 seconds of average delay.

6.2.4 SR 503 (Lewis River Road) at CC Street

This is a signal-controlled tee intersection that is closely coordinated with the signal at the intersection of Lewis River Road with the I-5 northbound off-ramp/Atlantic Avenue. The westbound leg provides separate lanes for left turns, through movements and through/right movements. The eastbound leg has two through lanes carried forward from the I0-5 northbound off-ramp intersection. The northbound leg provides separate lanes for right and left turn movements.

In the 2022 AM peak hour, the intersection operates at LOS D with 38.6 seconds of average delay. For the 2024 horizon without the *DaVita Dialysis Clinic* project, the intersection is projected to operate at LOS D with 40.4 seconds of average delay. With the addition of project traffic, the intersection is projected to remain at LOS D with 40.4seconds of average delay.

In the 2022 PM peak hour, the intersection operates at LOS C with 31.0 seconds of average delay. For the 2024 horizon without the *DaVita Dialysis Clinic* project, the intersection is projected to operate at LOS C with 31.6 seconds of average delay. With the addition of project traffic, the intersection is projected to remain at LOS C with 31.6 seconds of average delay.

6.2.5 Beechwood Street at Site Driveway

This is a tee intersection with stop control on the side street (project site access). Each approach leg of the intersection provides a single travel lane to accommodate all possible movements. In the 2024 AM peak hour with the project, the intersection is expected to operate at LOS A with 8.8 seconds of average delay. In the 2024 PM peak hour with the project, the intersection is expected to operate at LOS A with 8.5 seconds of average delay.

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7 Summary and Mitigation

A DaVita Dialysis Clinic is proposed on the south side of Beechwood Street to the west of Pacific Avenue in the City of Woodland, Washington. The proposed project would include an approximate 7,400 square foot medical facility to be located on undeveloped land at 467 Beechwood Street. Access to the project will be provided by two full access driveways on Beechwood Street. For this analysis, all project trips have been assigned to one site driveway. The project is anticipated to open in 2024.

At full occupancy and operation, the project is estimated to generate approximately 20 net new trip ends during the AM peak hour, and 27 net new trip ends during the PM peak hour. This report has been prepared to provide the traffic analysis and project information for the City of Woodland to use in the environmental review of the project.

Based on the analysis described in this report, all the study area intersections are projected to operate at or better than the established intersection level of service standards. As such, no off-site improvements are identified. To mitigate the projected traffic associated with the project, the proposed *DaVita Dialysis Clinic* will pay the identified City of Woodland traffic impact fees.

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Appendix A

Traffic Count Data

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

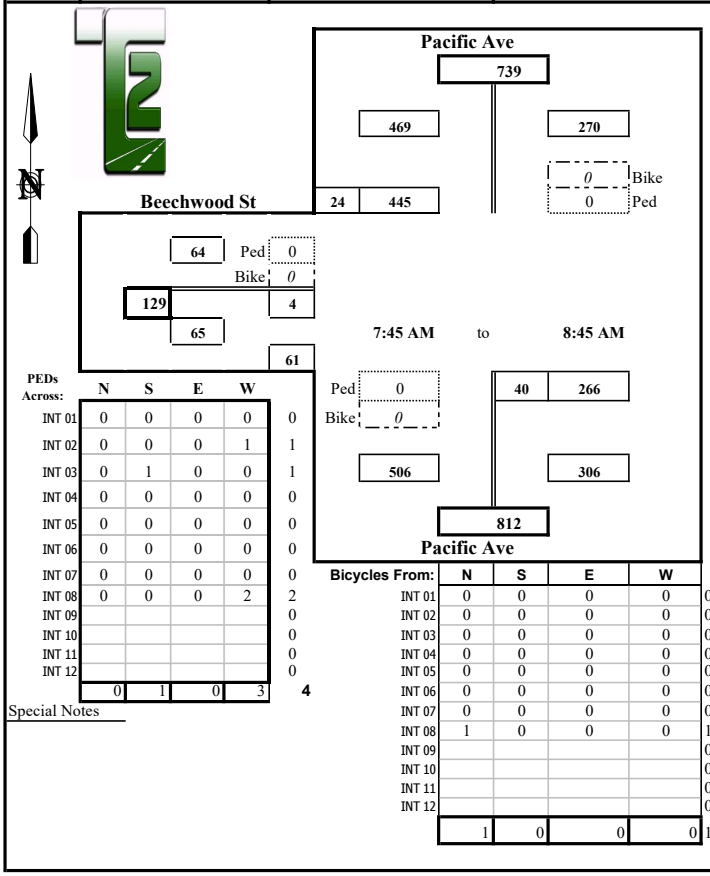
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Pacific Ave & Beechwood St **Date of Count:** Thu 11/17/2022

Location: Woodland, Washington **Checked By:** Jen

Time Interval	From North on (SB) Pacific Ave				From South on (NB) Pacific Ave				From East on (WB) 0				From West on (EB) Beechwood St				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	6	0	74	2	0	7	47	0	0	0	0	0	1	1	0	14	145
7:30 A	6	0	84	8	0	4	56	0	0	0	0	0	0	0	0	10	162
7:45 A	5	0	103	1	1	9	56	0	0	0	0	0	1	0	0	17	186
8:00 A	4	0	106	5	2	6	76	0	0	0	0	0	0	0	0	12	205
8:15 A	4	0	101	4	3	11	69	0	0	0	0	0	0	2	0	10	197
8:30 A	8	0	110	9	3	14	58	0	0	0	0	0	0	1	0	18	210
8:45 A	8	0	128	6	2	9	63	0	0	0	0	0	2	1	0	21	228
9:00 A	20	0	108	8	3	6	64	0	0	0	0	0	0	2	0	11	199
9:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	61	0	814	43	14	66	489	0	0	0	0	0	4	7	0	113	1532
Peak Hour: 7:45 AM to 8:45 AM																	
Total	24	0	445	24	10	40	266	0	0	0	0	0	2	4	0	61	840
Approach	469				306				0				65				840
%HV	5.1%				3.3%				n/a				3.1%				4.3%
PHF	0.88				0.93				n/a				0.74				0.92



PEDs Across:	N	S	E	W	
INT 01	0	0	0	0	0
INT 02	0	0	0	1	1
INT 03	0	1	0	0	1
INT 04	0	0	0	0	0
INT 05	0	0	0	0	0
INT 06	0	0	0	0	0
INT 07	0	0	0	0	0
INT 08	0	0	0	2	2
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	1	0	3	4

Bicycles From:	N	S	E	W	
INT 01	0	0	0	0	0
INT 02	0	0	0	0	0
INT 03	0	0	0	0	0
INT 04	0	0	0	0	0
INT 05	0	0	0	0	0
INT 06	0	0	0	0	0
INT 07	0	0	0	0	0
INT 08	1	0	0	0	1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	1	0	0	0	1

Special Notes

912 *1.0 PHF Peak Hour Volume*

			PHF	%HV
		EB	0.74	3.1%
Check		WB	n/a	n/a
In:	840	NB	0.93	3.3%
Out:	840	SB	0.88	5.1%
		T Int.	0.92	4.3%

Conditions:

SCJ22085M_01A

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

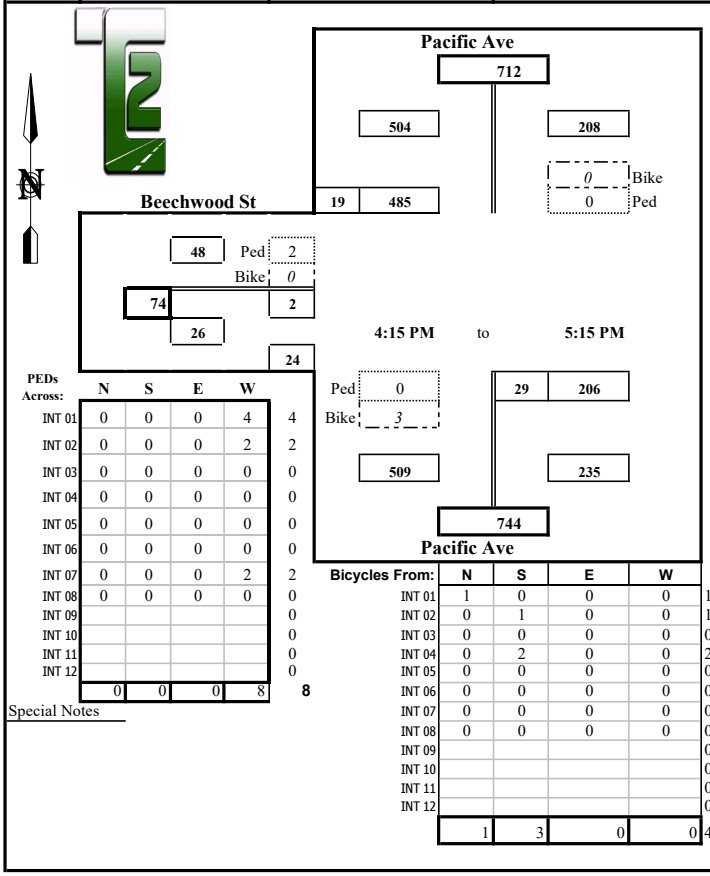
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Pacific Ave & Beechwood St **Date of Count:** Thu 11/17/2022

Location: Woodland, Washington **Checked By:** Jen

Time Interval	From North on (SB) Pacific Ave				From South on (NB) Pacific Ave				From East on (WB) 0				From West on (EB) Beechwood St				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	5	0	109	5	2	9	54	0	0	0	0	0	0	2	0	14	193
4:30 P	10	0	118	0	0	10	50	0	0	0	0	0	0	0	0	2	180
4:45 P	1	0	128	3	0	8	47	0	0	0	0	0	0	0	0	7	193
5:00 P	4	0	121	9	1	5	50	0	0	0	0	0	0	2	0	7	194
5:15 P	4	0	118	7	4	6	59	0	0	0	0	0	0	0	0	8	198
5:30 P	1	0	96	4	3	4	57	0	0	0	0	0	0	0	0	8	169
5:45 P	1	0	100	5	1	15	45	0	0	0	0	0	0	2	0	10	177
6:00 P	6	0	112	9	2	7	43	0	0	0	0	0	0	1	0	7	179
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	32	0	902	42	13	64	405	0	0	0	0	0	0	7	0	63	1483
Peak Hour: 4:15 PM to 5:15 PM																	
Total	19	0	485	19	5	29	206	0	0	0	0	0	0	2	0	24	765
Approach	504				235				0				26				765
%HV	3.8%				2.1%				n/a				n/a				3.1%
PHF	0.96				0.90				n/a				0.72				0.97



792 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.72	n/a
Check	WB	n/a	n/a
In: 765	NB	0.90	2.1%
Out: 765	SB	0.96	3.8%
	T Int.	0.97	3.1%

Conditions:

PEDs Across:

	N	S	E	W	
INT 01	0	0	0	4	4
INT 02	0	0	0	2	2
INT 03	0	0	0	0	0
INT 04	0	0	0	0	0
INT 05	0	0	0	0	0
INT 06	0	0	0	0	0
INT 07	0	0	0	2	2
INT 08	0	0	0	0	0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	0	8	8

Bicycles From:

	N	S	E	W	
INT 01	1	0	0	0	1
INT 02	0	1	0	0	1
INT 03	0	0	0	0	0
INT 04	0	2	0	0	2
INT 05	0	0	0	0	0
INT 06	0	0	0	0	0
INT 07	0	0	0	0	0
INT 08	0	0	0	0	0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	1	3	0	0	4

Special Notes

SCJ22085M_01P

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

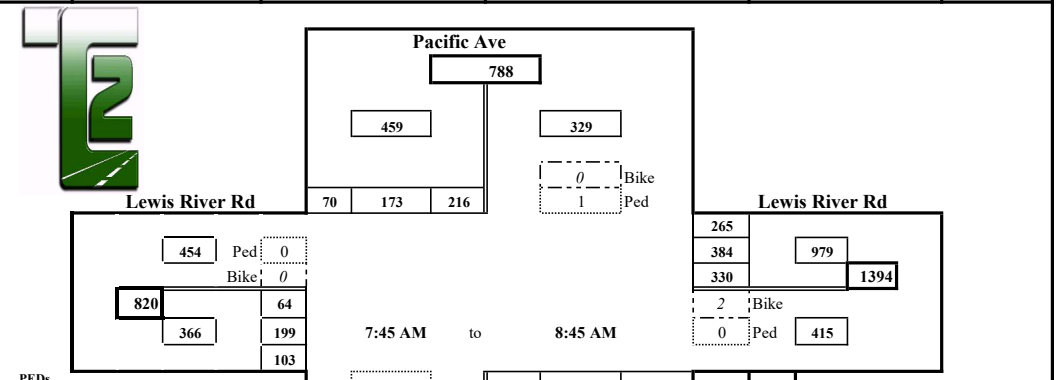
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Pacific Ave/I-5 SB On Ramp & Lewis River Rd **Date of Count:** Thu 11/17/2022

Location: Woodland, Washington **Checked By:** Jen

Time Interval	From North on (SB) Pacific Ave				From South on (NB) I-5 SB On Ramp				From East on (WB) Lewis River Rd				From West on (EB) Lewis River Rd				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	7	31	46	11	0	0	0	0	7	131	42	48	12	9	29	39	386
7:30 A	5	41	47	9	0	0	0	0	5	132	71	61	4	6	25	35	427
7:45 A	3	53	52	15	0	0	0	0	6	102	64	53	3	12	29	34	414
8:00 A	5	53	41	18	0	0	0	0	9	89	111	78	7	14	48	23	475
8:15 A	6	46	38	20	0	0	0	0	7	80	73	67	4	14	31	16	385
8:30 A	4	48	42	16	0	0	0	0	12	79	110	66	5	18	39	27	445
8:45 A	9	69	52	16	0	0	0	0	17	82	90	54	13	18	81	37	499
9:00 A	8	55	34	25	0	0	0	0	5	82	64	64	8	12	38	27	401
9:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	47	396	352	130	0	0	0	0	68	777	625	491	56	103	320	238	3432
Peak Hour: 7:45 AM to 8:45 AM																	
Total	24	216	173	70	0	0	0	0	45	330	384	265	29	64	199	103	1804
Approach	459				0				979				366				1804
%HV	5.2%				n/a				4.6%				7.9%				5.4%
PHF	0.84				n/a				0.88				0.67				0.90



1996 *1.0 PHF Peak Hour Volume*

	PHF	%HV
EB	0.67	7.9%
WB	0.88	4.6%
NB	n/a	n/a
SB	0.84	5.2%
T Int.	0.90	5.4%

Check In: 1804 Out: 1804

Conditions:

PEDs Across:

	N	S	E	W	
INT 01	0	0	0	0	0
INT 02	0	0	0	0	0
INT 03	0	0	0	0	0
INT 04	0	0	0	0	0
INT 05	0	0	0	0	0
INT 06	0	0	0	0	0
INT 07	1	0	0	0	1
INT 08	1	0	0	0	1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	2	0	0	0	2

Bicycles From:

	N	S	E	W	
INT 01	0	0	0	0	0
INT 02	0	0	0	0	0
INT 03	0	0	0	0	0
INT 04	0	0	0	0	0
INT 05	0	0	2	0	2
INT 06	0	0	0	0	0
INT 07	0	0	0	0	0
INT 08	0	0	0	0	0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	2	0	2

Special Notes

SCJ22085M_02A

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

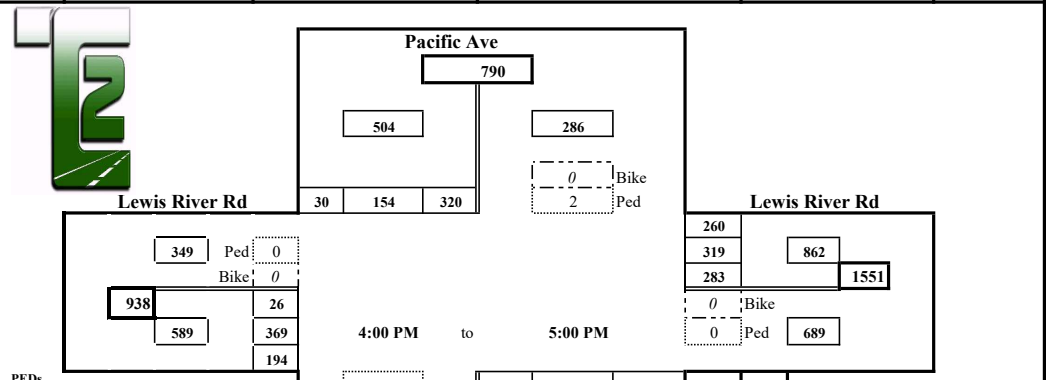
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Pacific Ave/I-5 SB On Ramp & Lewis River Rd **Date of Count:** Thu 11/17/2022

Location: Woodland, Washington **Checked By:** Jen

Time Interval	From North on (SB) Pacific Ave				From South on (NB) I-5 SB On Ramp				From East on (WB) Lewis River Rd				From West on (EB) Lewis River Rd				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	4	88	39	6	0	0	0	0	10	68	76	74	4	7	110	61	529
4:30 P	5	76	43	9	0	0	0	0	7	66	81	70	6	9	76	40	470
4:45 P	1	81	41	10	0	0	0	0	5	58	76	53	3	5	91	54	469
5:00 P	2	75	31	5	0	0	0	0	6	91	86	63	1	5	92	39	487
5:15 P	5	69	44	3	0	0	0	0	6	73	80	67	6	17	92	56	501
5:30 P	0	81	44	5	0	0	0	0	6	67	87	65	2	11	80	41	481
5:45 P	1	81	28	2	0	0	0	0	3	49	79	66	0	13	84	39	441
6:00 P	6	75	33	4	0	0	0	0	6	55	73	48	3	9	54	19	370
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	24	626	303	44	0	0	0	0	49	527	638	506	25	76	679	349	3748
Peak Hour: 4:00 PM to 5:00 PM																	
Total	12	320	154	30	0	0	0	0	28	283	319	260	14	26	369	194	1955
Approach	504				0				862				589				1955
%HV	2.4%				n/a				3.2%				2.4%				2.8%
PHF	0.95				n/a				0.90				0.83				0.92



2116 *1.0 PHF Peak Hour Volume*

	PHF	%HV
EB	0.83	2.4%
WB	0.90	3.2%
NB	n/a	n/a
SB	0.95	2.4%
T Int.	0.92	2.8%

Check In: 1955 Out: 1955

Conditions:

PEDs Across:

	N	S	E	W	
INT 01	2	0	0	0	2
INT 02	0	0	0	0	0
INT 03	0	0	0	0	0
INT 04	0	0	0	0	0
INT 05	0	0	0	0	0
INT 06	0	0	0	0	0
INT 07	0	0	0	0	0
INT 08	1	0	0	0	1
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	3	0	0	0	3

Bicycles From:

	N	S	E	W	
INT 01	0	0	0	0	0
INT 02	0	0	0	0	0
INT 03	0	0	0	0	0
INT 04	0	0	0	0	0
INT 05	0	0	0	0	0
INT 06	0	0	0	0	0
INT 07	0	0	0	1	1
INT 08	0	0	0	0	0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	0	1	1

Special Notes

SCJ22085M_02P

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

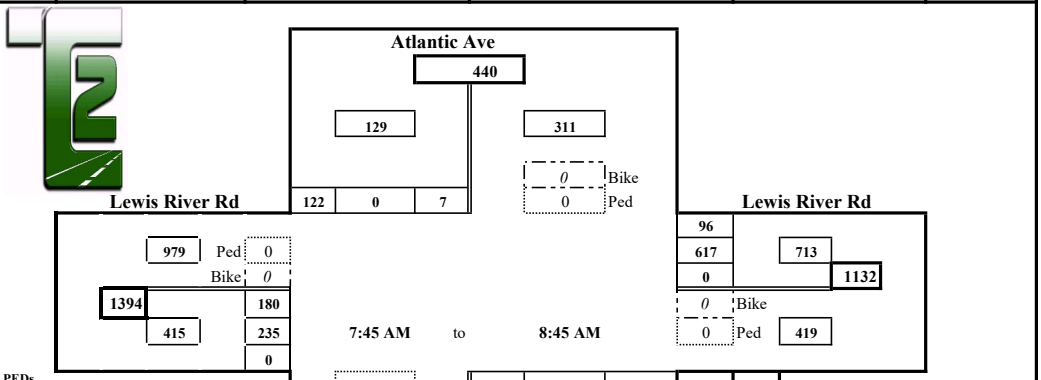
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Atlantic Ave/I-5 NB Off Ramp & Lewis River Rd **Date of Count:** Thu 11/17/2022

Location: Woodland, Washington **Checked By:** Jen

Time Interval	From North on (SB) Atlantic Ave				From South on (NB) I-5 NB Off Ramp				From East on (WB) Lewis River Rd				From West on (EB) Lewis River Rd				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
7:15 A	1	2	0	24	6	41	7	36	7	0	156	18	12	30	30	0	344
7:30 A	1	2	0	27	6	64	10	46	1	0	173	21	3	29	37	0	409
7:45 A	1	1	0	20	6	53	8	38	4	0	146	21	4	29	53	0	369
8:00 A	1	0	0	37	6	65	15	49	7	0	176	28	6	43	58	0	471
8:15 A	2	2	0	19	9	64	9	39	1	0	137	19	4	31	46	0	366
8:30 A	0	2	0	39	6	68	5	44	12	0	148	15	0	41	46	0	408
8:45 A	3	3	0	27	8	43	6	45	11	0	156	34	15	65	85	0	464
9:00 A	1	2	0	28	7	55	17	47	1	0	127	24	8	35	58	0	393
9:15 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	10	14	0	221	54	453	77	344	44	0	1219	180	52	303	413	0	3224
Peak Hour: 7:45 AM to 8:45 AM																	
Total	6	7	0	122	29	240	35	177	31	0	617	96	25	180	235	0	1709
Approach	129				452				713				415				1709
%HV	4.7%				6.4%				4.3%				6.0%				5.3%
PHF	0.79				0.88				0.87				0.69				0.91



1884 *1.0 PHF Peak Hour Volume*

		PHF	%HV
	EB	0.69	6.0%
Check	WB	0.87	4.3%
In: 1709	NB	0.88	6.4%
Out: 1709	SB	0.79	4.7%
	T Int.	0.91	5.3%

Conditions:

PEDs Across:

	N	S	E	W	
INT 01	0	0	0	0	0
INT 02	0	1	0	1	2
INT 03	0	0	0	0	0
INT 04	0	0	0	0	0
INT 05	0	0	0	0	0
INT 06	0	0	0	0	0
INT 07	0	0	0	0	0
INT 08	0	0	0	0	0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	1	0	1	2

Bicycles From:

	N	S	E	W	
INT 01					0
INT 02					0
INT 03					0
INT 04					0
INT 05					0
INT 06					0
INT 07					0
INT 08					0
INT 09					0
INT 10					0
INT 11					0
INT 12					0
	0	0	0	0	0

Special Notes

SCJ22085M_03A

Prepared for: **SCJ Alliance**

Traffic Count Consultants, Inc.

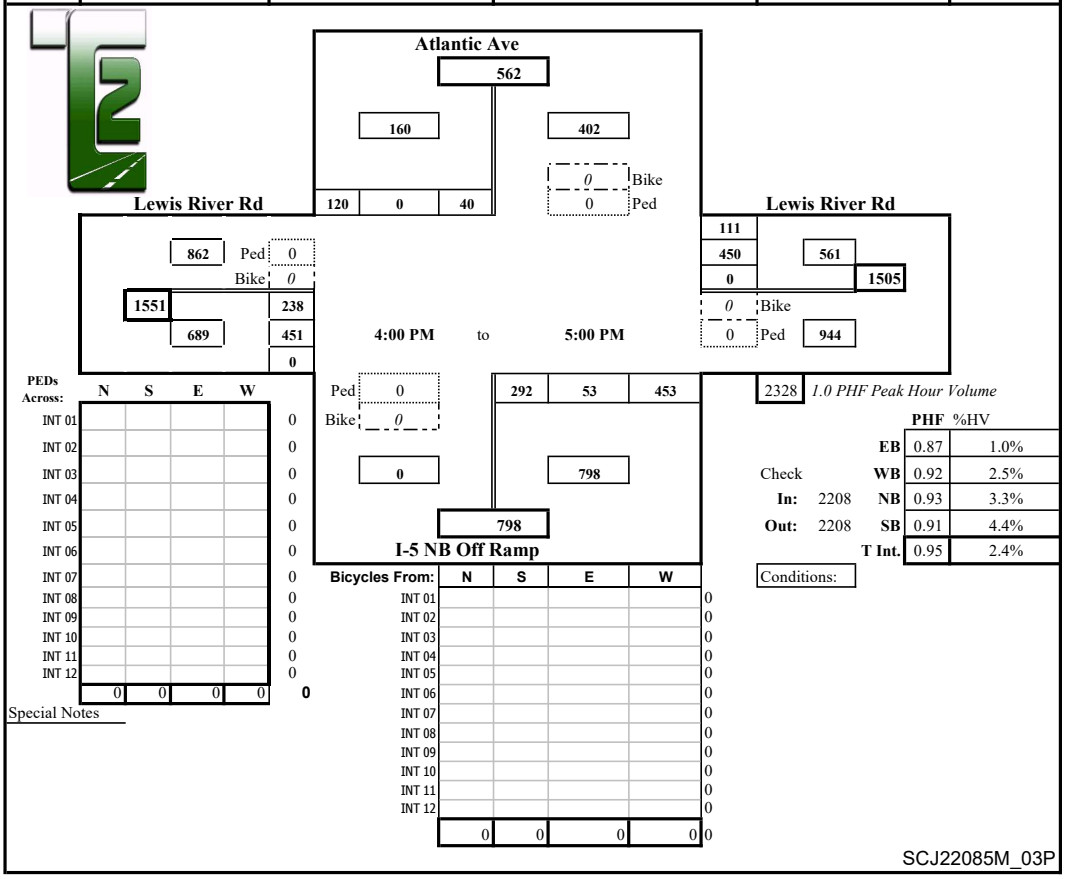
Phone: (253) 770-1407 FAX: (253) 770-1411 E-Mail: Team@TC2inc.com

WBE/DBE

Intersection: Atlantic Ave/I-5 NB Off Ramp & Lewis River Rd **Date of Count:** Thu 11/17/2022

Location: Woodland, Washington **Checked By:** Jen

Time Interval	From North on (SB) Atlantic Ave				From South on (NB) I-5 NB Off Ramp				From East on (WB) Lewis River Rd				From West on (EB) Lewis River Rd				Interval Total
Ending at	T	L	S	R	T	L	S	R	T	L	S	R	T	L	S	R	
4:15 P	3	8	0	30	8	76	13	117	6	0	112	28	2	60	138	0	582
4:30 P	3	16	0	27	5	80	13	120	2	0	110	23	5	58	94	0	541
4:45 P	1	10	0	25	4	56	15	94	4	0	106	30	0	56	116	0	508
5:00 P	0	6	0	38	9	80	12	122	2	0	122	30	0	64	103	0	577
5:15 P	0	10	0	34	9	72	15	109	2	0	114	27	2	58	103	0	542
5:30 P	0	12	0	24	4	84	7	131	2	0	111	28	4	51	110	0	558
5:45 P	0	6	0	25	3	90	12	107	2	0	79	31	0	68	97	0	515
6:00 P	3	1	0	21	3	61	13	105	0	0	94	30	4	51	78	0	454
6:15 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Survey	10	69	0	224	45	599	100	905	20	0	848	227	17	466	839	0	4277
Peak Hour:	4:00 PM to 5:00 PM																
Total	7	40	0	120	26	292	53	453	14	0	450	111	7	238	451	0	2208
Approach	160				798				561				689				2208
%HV	4.4%				3.3%				2.5%				1.0%				2.4%
PHF	0.91				0.93				0.92				0.87				0.95



2328 *1.0 PHF Peak Hour Volume*

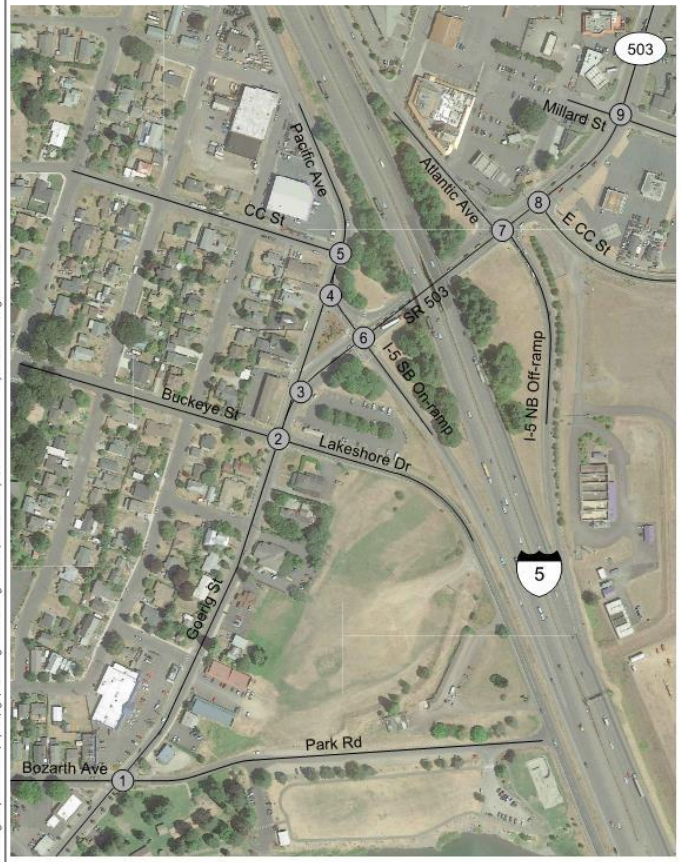
	PHF	%HV
EB	0.87	1.0%
WB	0.92	2.5%
NB	0.93	3.3%
SB	0.91	4.4%
T Int.	0.95	2.4%

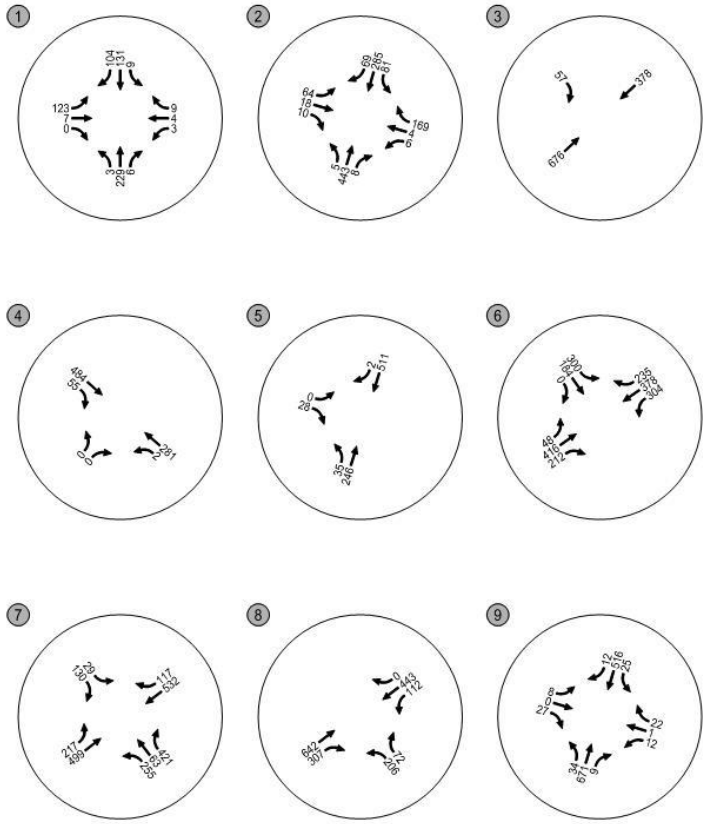
Check In: 2208 Out: 2208

Conditions:

Special Notes

SCJ22085M_03P





Existing Traffic Volumes
Weekday PM Peak Hour
Woodland, WA

Figure
04

Appendix B
Traffic Volume Worksheets

SCJ ALLIANCE
CONSULTING SERVICES

Woodland DaVita Dialysis Clinic

AM Peak Hour Volumes

Growth Rate: **2.00%**

Intersection	Movement		Existing 2022 Volumes	Historic 2019 Volumes	Existing Volume Balancing	Adjusted 2022 Volumes	Background 2024 Growth	Pipeline Volumes	Baseline 2024 Volumes	Site Generated Primary	Projected 2024 Volumes
		L	4	0	0	4	0	0	4	0	4
	EB	T	0	0	0	0	0	0	0	0	0
		R	61	0	0	61	2	0	63	4	67
1		L	0	0	0	0	0	0	0	0	0
Pacific Ave	WB	T	0	0	0	0	0	0	0	0	0
Beechwood St		R	0	0	0	0	0	0	0	0	0
		L	40	0	0	40	2	0	42	15	57
TMC Date: 11/17/2022	NB	T	266	0	0	266	11	14	291	0	291
		R	0	0	0	0	0	0	0	0	0
7:45 - 8:45		L	0	0	0	0	0	0	0	0	0
PHF: 0.92	SB	T	445	0	0	445	18	2	465	0	465
		R	24	0	0	24	1	0	25	1	26
			840						890		910
		L	64	35	0	64	3	1	68	2	70
	EB	T	199	261	0	199	8	0	207	0	207
		R	103	113	0	103	4	0	107	0	107
2		L	330	286	0	330	13	0	343	0	343
SR 503/Lewis River Rd	WB	T	384	505	0	384	15	0	399	0	399
Pacific Ave/I-5 SB On Ramp		R	265	222	0	265	11	13	289	12	301
		L	0	0	0	0	0	0	0	0	0
TMC Date: 11/17/2022	NB	T	0	0	0	0	0	0	0	0	0
		R	0	0	0	0	0	0	0	0	0
7:45 - 8:45		L	216	158	0	216	9	1	226	2	228
PHF: 0.90	SB	T	173	168	0	173	7	1	181	1	182
		R	70	1	0	70	3	0	73	0	73
			1,804	1,749					1,893		1,910
		L	180	148	0	180	7	1	188	0	188
	EB	T	235	271	0	235	9	2	246	2	248
		R	0	0	0	0	0	0	0	0	0
3		L	0	0	0	0	0	0	0	0	0
SR 503/Lewis River Rd	WB	T	617	528	0	617	25	7	649	7	656
Atlantic Ave/I-5 NB Off Ramp		R	96	118	0	96	4	0	100	0	100
		L	240	263	0	240	10	6	256	5	261
TMC Date: 11/17/2022	NB	T	35	29	0	35	1	0	36	0	36
		R	177	197	0	177	7	0	184	0	184
7:45 - 8:45		L	7	14	0	7	0	0	7	0	7
PHF: 0.91	SB	T	0	0	0	0	0	0	0	0	0
		R	122	222	0	122	5	0	127	0	127
			1,709	1,790					1,793		1,807
		L	0	0	0	0	0	0	0	0	0
	EB	T	0	365	-45	320	0	1	1	1	2
		R	0	117	-15	102	0	1	1	1	2
4		L	0	20	0	20	0	0	0	0	0
SR 503/Lewis River Rd	WB	T	0	382	70	452	0	4	4	5	9
E CC St		R	0	0	0	0	0	0	0	0	0
		L	0	264	0	264	0	3	3	2	5
TMC Date: 2019	NB	T	0	0	0	0	0	0	0	0	0
		R	0	57	0	57	0	0	0	0	0
		L	0	0	0	0	0	0	0	0	0
	SB	T	0	0	0	0	0	0	0	0	0
		R	0	0	0	0	0	0	0	0	0
			0	1,205					9		18
		L	0	0	0	0	0	0	0	0	0
	EB	T	65	0	0	65	3	0	68	0	68
		R	0	0	0	0	0	0	0	0	0
5		L	0	0	0	0	0	0	0	16	16
Site Driveway	WB	T	64	0	0	64	3	0	67	0	67
Beechwood St		R	0	0	0	0	0	0	0	0	0
		L	0	0	0	0	0	0	0	0	0
	NB	T	0	0	0	0	0	0	0	0	0
		R	0	0	0	0	0	0	0	4	4
		L	0	0	0	0	0	0	0	0	0
	SB	T	0	0	0	0	0	0	0	0	0
		R	0	0	0	0	0	0	0	0	0
			129						135		155

SCJ ALLIANCE
CONSULTING SERVICES

Woodland DaVita Dialysis Clinic

PM Peak Hour Volumes

Growth Rate: **2.00%**

Pipeline

Intersection	Movement		Existing 2022 Volumes	Historic 2019 Volumes	Existing Volume Balancing	Adjusted 2022 Volumes	Background 2024 Growth	Kirkland Maker Space Volumes	Baseline 2024 Volumes	Site Generated Primary	Projected 2024 Volumes
		L	**2**	0	0	**2**	0	0	**2**	1	**3**
	EB	T	**0**	0	0	**0**	0	0	**0**	0	**0**
		R	**24**	0	0	**24**	1	0	**25**	18	**43**
1		L	**0**	0	0	**0**	0	0	**0**	0	**0**
Pacific Ave	WB	T	**0**	0	0	**0**	0	0	**0**	0	**0**
Beechwood St		R	**0**	0	0	**0**	0	0	**0**	0	**0**
		L	**29**	0	0	**29**	1	0	**30**	7	**37**
TMC Date: 11/17/2022	NB	T	**206**	0	0	**206**	8	1	**215**	0	**215**
		R	**0**	0	0	**0**	0	0	**0**	0	**0**
4:15 - 5:15		L	**0**	0	0	**0**	0	0	**0**	0	**0**
PHF: 0.97	SB	T	**485**	0	0	**485**	19	12	**516**	0	**516**
		R	**19**	0	0	**19**	1	0	**20**	1	**21**
			765						**808**		**835**
		L	**26**	48	0	**26**	1	0	**27**	1	**28**
	EB	T	**369**	416	0	**369**	15	0	**384**	0	**384**
		R	**194**	212	0	**194**	8	0	**202**	0	**202**
2		L	**283**	304	0	**283**	11	1	**295**	0	**295**
SR 503/Lewis River Rd	WB	T	**319**	378	0	**319**	13	0	**332**	0	**332**
Pacific Ave/I-5 SB On Ramp		R	**260**	235	0	**260**	10	0	**270**	6	**276**
		L	**0**	0	0	**0**	0	0	**0**	0	**0**
TMC Date: 11/17/2022	NB	T	**0**	0	0	**0**	0	0	**0**	0	**0**
		R	**0**	0	0	**0**	0	0	**0**	0	**0**
4:00 - 5:00		L	**320**	300	0	**320**	13	6	**339**	9	**348**
PHF: 0.92	SB	T	**154**	184	0	**154**	6	5	**165**	6	**171**
		R	**30**	0	0	**30**	1	0	**31**	0	**31**
			1,955	2,077					**2,045**		**2,067**
		L	**238**	217	0	**238**	10	2	**250**	0	**250**
	EB	T	**451**	499	0	**451**	18	4	**473**	9	**482**
		R	**0**	0	0	**0**	0	0	**0**	0	**0**
3		L	**0**	0	0	**0**	0	0	**0**	0	**0**
SR 503/Lewis River Rd	WB	T	**450**	532	0	**450**	18	0	**468**	3	**471**
Atlantic Ave/I-5 NB Off Ramp		R	**111**	117	0	**111**	4	0	**115**	0	**115**
		L	**292**	255	0	**292**	12	1	**305**	3	**308**
TMC Date: 11/17/2022	NB	T	**53**	63	0	**53**	2	0	**55**	0	**55**
		R	**453**	421	0	**453**	18	0	**471**	0	**471**
4:00 - 5:00		L	**40**	29	0	**40**	2	0	**42**	0	**42**
PHF: 0.95	SB	T	**0**	0	0	**0**	0	0	**0**	0	**0**
		R	**120**	130	0	**120**	5	0	**125**	0	**125**
			2,208	2,263					**2,304**		**2,319**
		L	**0**	0	0	**0**	0	0	**0**	0	**0**
	EB	T	**0**	642	0	**642**	0	2	**2**	6	**8**
		R	**0**	307	0	**307**	0	2	**2**	3	**5**
4		L	**0**	112	0	**112**	0	0	**0**	0	**0**
SR 503/Lewis River Rd	WB	T	**0**	443	-60	**383**	0	0	**0**	2	**2**
E CC St		R	**0**	0	0	**0**	0	0	**0**	0	**0**
		L	**0**	206	-25	**181**	0	0	**0**	1	**1**
TMC Date: 2019	NB	T	**0**	0	0	**0**	0	0	**0**	0	**0**
		R	**0**	72	0	**72**	0	0	**0**	0	**0**
		L	**0**	0	0	**0**	0	0	**0**	0	**0**
	SB	T	**0**	0	0	**0**	0	0	**0**	0	**0**
		R	**0**	0	0	**0**	0	0	**0**	0	**0**
			0						**4**		**16**
		L	**0**	0	0	**0**	0	0	**0**	0	**0**
	EB	T	**26**	0	0	**26**	1	0	**27**	0	**27**
		R	**0**	0	0	**0**	0	0	**0**	0	**0**
5		L	**0**	0	0	**0**	0	0	**0**	8	**8**
Site Driveway	WB	T	**48**	0	0	**48**	2	0	**50**	0	**50**
Beechwood St		R	**0**	0	0	**0**	0	0	**0**	0	**0**
		L	**0**	0	0	**0**	0	0	**0**	0	**0**
	NB	T	**0**	0	0	**0**	0	0	**0**	0	**0**
		R	**0**	0	0	**0**	0	0	**0**	19	**19**
		L	**0**	0	0	**0**	0	0	**0**	0	**0**
	SB	T	**0**	0	0	**0**	0	0	**0**	0	**0**
		R	**0**	0	0	**0**	0	0	**0**	0	**0**
			74						**77**		**104**

Appendix C
Operational Analysis Worksheets

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	60	40	265	445	25
Future Vol, veh/h	5	60	40	265	445	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	5	5
Mvmt Flow	5	65	43	288	484	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	872	498	511	0	-	0
Stage 1	498	-	-	-	-	-
Stage 2	374	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	320	570	1049	-	-	-
Stage 1	609	-	-	-	-	-
Stage 2	693	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	304	570	1049	-	-	-
Mov Cap-2 Maneuver	304	-	-	-	-	-
Stage 1	579	-	-	-	-	-
Stage 2	693	-	-	-	-	-

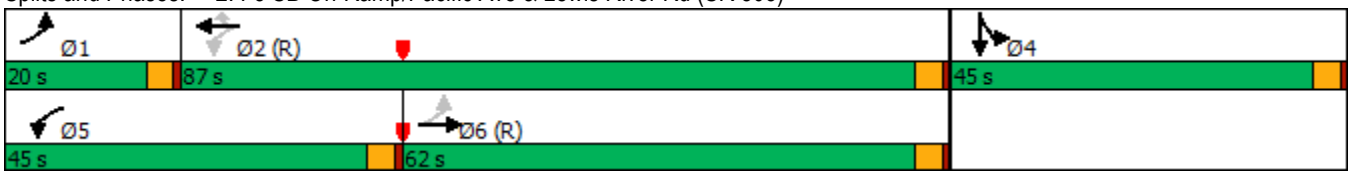
Approach	EB	NB	SB
HCM Control Delay, s	12.8	1.1	0
HCM LOS	B		

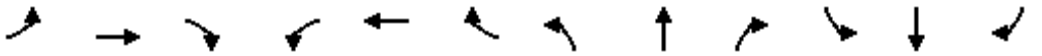
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1049	-	534	-	-
HCM Lane V/C Ratio	0.041	-	0.132	-	-
HCM Control Delay (s)	8.6	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	200	105	330	385	265	0	0	0	215	175	0
Future Volume (vph)	65	200	105	330	385	265	0	0	0	215	175	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		0	0		0	100		0
Storage Lanes	2		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		771			492			1514			1436	
Travel Time (s)		17.5			11.2			34.4			32.6	
Turn Type	pm+pt	NA		pm+pt	NA	Perm				Split	NA	
Protected Phases	1	6		5	2					4	4	
Permitted Phases	6			2		2						
Detector Phase	1	6		5	2	2				4	4	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Minimum Split (s)	9.0	18.0		9.0	22.0	22.0				32.0	32.0	
Total Split (s)	20.0	62.0		45.0	87.0	87.0				45.0	45.0	
Total Split (%)	13.2%	40.8%		29.6%	57.2%	57.2%				29.6%	29.6%	
Maximum Green (s)	16.0	58.0		41.0	83.0	83.0				41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0				1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Recall Mode	None	C-Max		None	C-Max	C-Max				Min	Min	
Walk Time (s)		7.0			7.0	7.0				7.0	7.0	
Flash Dont Walk (s)		7.0			11.0	11.0				21.0	21.0	
Pedestrian Calls (#/hr)		2			2	2				0	0	

Intersection Summary	
Area Type:	Other
Cycle Length: 152	
Actuated Cycle Length: 152	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green, Master Intersection	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: I-5 SB On-Ramp/Pacific Ave & Lewis River Rd (SR 503)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	200	105	330	385	265	0	0	0	215	175	0
Future Volume (veh/h)	65	200	105	330	385	265	0	0	0	215	175	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1826	1826	1826				1826	1826	0
Adj Flow Rate, veh/h	72	222	117	367	428	0				239	194	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	8	8	8	5	5	5				5	5	0
Cap, veh/h	713	1478	750	856	1359					263	276	
Arrive On Green	0.03	0.68	0.68	0.15	1.00	0.00				0.15	0.15	0.00
Sat Flow, veh/h	1697	2173	1103	1739	1826	1547				1739	1826	0
Grp Volume(v), veh/h	72	171	168	367	428	0				239	194	0
Grp Sat Flow(s),veh/h/ln	1697	1692	1583	1739	1826	1547				1739	1826	0
Q Serve(g_s), s	2.0	5.5	5.8	10.0	0.0	0.0				20.6	15.3	0.0
Cycle Q Clear(g_c), s	2.0	5.5	5.8	10.0	0.0	0.0				20.6	15.3	0.0
Prop In Lane	1.00		0.70	1.00		1.00				1.00		0.00
Lane Grp Cap(c), veh/h	713	1151	1077	856	1359					263	276	
V/C Ratio(X)	0.10	0.15	0.16	0.43	0.32					0.91	0.70	
Avail Cap(c_a), veh/h	848	1151	1077	1169	1359					469	493	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	6.9	8.6	8.7	4.6	0.0	0.0				63.5	61.3	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.3	0.5	0.0				12.2	3.3	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
%ile BackOfQ(50%),veh/ln	0.7	2.1	2.1	2.7	0.2	0.0				10.0	7.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.9	8.9	9.0	4.9	0.5	0.0				75.7	64.5	0.0
LnGrp LOS	A	A	A	A	A					E	E	
Approach Vol, veh/h		411			795	A					433	A
Approach Delay, s/veh		8.6			2.6						70.7	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	7.9	117.1		27.0	17.6	107.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	83.0		41.0	41.0	58.0
Max Q Clear Time (g_c+I1), s	4.0	2.0		22.6	12.0	7.8
Green Ext Time (p_c), s	0.1	1.9		0.4	1.6	1.5

Intersection Summary		
HCM 6th Ctrl Delay		22.1
HCM 6th LOS		C

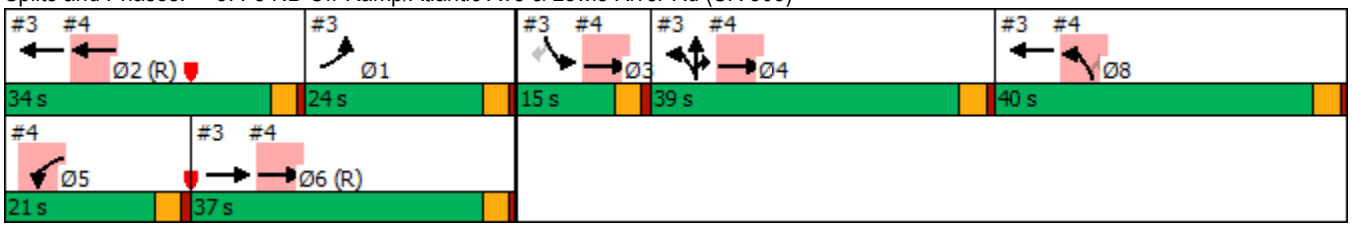
Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	235	0	0	615	95	240	35	175	5	0	120
Future Volume (vph)	180	235	0	0	615	95	240	35	175	5	0	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	0		0	75		0
Storage Lanes	1		0	0		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		492			137			823			446	
Travel Time (s)		11.2			3.1			18.7			10.1	
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Detector Phase	1	6			2 8		4	4	4	3		3
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0	5.0	5.0		5.0
Minimum Split (s)	9.0	25.0					32.0	32.0	32.0	13.0		13.0
Total Split (s)	24.0	37.0					39.0	39.0	39.0	15.0		15.0
Total Split (%)	15.8%	24.3%					25.7%	25.7%	25.7%	9.9%		9.9%
Maximum Green (s)	20.0	33.0					35.0	35.0	35.0	11.0		11.0
Yellow Time (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
All-Red Time (s)	1.0	1.0					1.0	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0						0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Lead/Lag	Lag	Lag					Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
Recall Mode	None	C-Min					None	None	None	None		None
Walk Time (s)		7.0					7.0	7.0	7.0			
Flash Dont Walk (s)		14.0					21.0	21.0	21.0			
Pedestrian Calls (#/hr)		0					0	0	0			

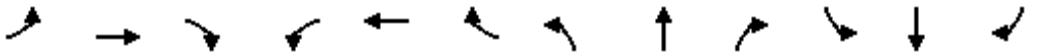
Intersection Summary	
Area Type:	Other
Cycle Length: 152	
Actuated Cycle Length: 152	
Offset: 2 (1%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-5 NB Off-Ramp/Atlantic Ave & Lewis River Rd (SR 503)



Lane Group	Ø2	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Right Turn on Red			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Turn Type			
Protected Phases	2	5	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	27.0	9.0	31.0
Total Split (s)	34.0	21.0	40.0
Total Split (%)	22%	14%	26%
Maximum Green (s)	30.0	17.0	36.0
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lead	
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	C-Min	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	16.0		20.0
Pedestrian Calls (#/hr)	0		0

Intersection Summary



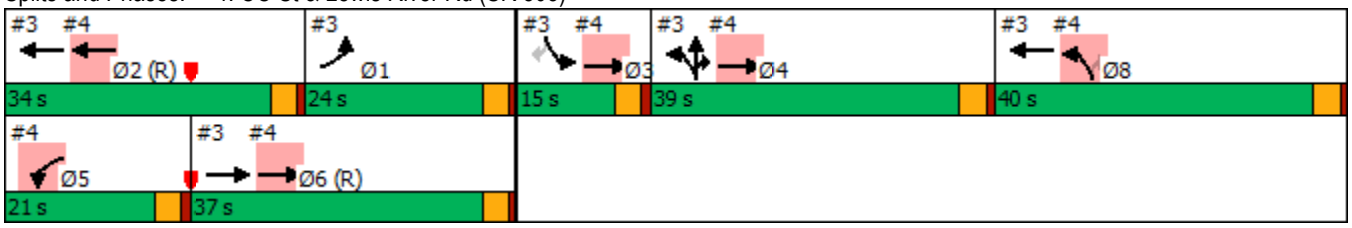
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	180	235	0	0	615	95	240	35	175	5	0	120
Future Volume (vph)	180	235	0	0	615	95	240	35	175	5	0	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.98			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (prot)	1703	3406			3402			1717	1524	1719		1538
Flt Permitted	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (perm)	1703	3406			3402			1717	1524	1719		1538
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	198	258	0	0	676	104	264	38	192	5	0	132
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	152	0	0	125
Lane Group Flow (vph)	198	258	0	0	772	0	0	302	40	5	0	7
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	6%	6%	6%	5%	5%	5%
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Actuated Green, G (s)	21.8	56.6			75.0			31.6	31.6	7.6		7.6
Effective Green, g (s)	21.8	56.6			75.0			31.6	31.6	7.6		7.6
Actuated g/C Ratio	0.14	0.37			0.49			0.21	0.21	0.05		0.05
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	244	1268			1678			356	316	85		76
v/s Ratio Prot	c0.12	0.08			c0.23			c0.18	0.03	0.00		
v/s Ratio Perm												c0.00
v/c Ratio	0.81	0.20			0.46			0.85	0.13	0.06		0.09
Uniform Delay, d1	63.1	32.4			25.2			57.9	49.0	68.8		68.9
Progression Factor	1.12	1.11			0.03			1.00	1.00	1.00		1.00
Incremental Delay, d2	17.5	0.3			0.2			16.9	0.2	0.3		0.5
Delay (s)	88.4	36.3			0.9			74.8	49.2	69.1		69.4
Level of Service	F	D			A			E	D	E		E
Approach Delay (s)		58.9			0.9			64.8			69.4	
Approach LOS		E			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	152.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø1	Ø3	Ø4	Ø6
Lane Configurations										
Traffic Volume (vph)	320	100	20	450	265	55				
Future Volume (vph)	320	100	20	450	265	55				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Storage Length (ft)		0	150		0	150				
Storage Lanes		0	2		1	1				
Taper Length (ft)			25		25					
Right Turn on Red		Yes				Yes				
Link Speed (mph)	30			30	30					
Link Distance (ft)	137			1875	856					
Travel Time (s)	3.1			42.6	19.5					
Turn Type	NA		Prot	NA	Prot	Perm				
Protected Phases	3 4 6		5	2	8		1	3	4	6
Permitted Phases						8				
Detector Phase	3 4 6		5	2	8	8				
Switch Phase										
Minimum Initial (s)			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)			9.0	27.0	31.0	31.0	9.0	13.0	32.0	25.0
Total Split (s)			21.0	34.0	40.0	40.0	24.0	15.0	39.0	37.0
Total Split (%)			13.8%	22.4%	26.3%	26.3%	16%	10%	26%	24%
Maximum Green (s)			17.0	30.0	36.0	36.0	20.0	11.0	35.0	33.0
Yellow Time (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0				
Total Lost Time (s)			4.0	4.0	4.0	4.0				
Lead/Lag			Lead	Lead			Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode			None	C-Min	None	None	None	None	None	C-Min
Walk Time (s)				7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)				16.0	20.0	20.0			21.0	14.0
Pedestrian Calls (#/hr)				0	0	0			0	0

Intersection Summary	
Area Type:	Other
Cycle Length: 152	
Actuated Cycle Length: 152	
Offset: 2 (1%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: CC St & Lewis River Rd (SR 503)



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	320	100	20	450	265	55
Future Volume (vph)	320	100	20	450	265	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3447		1770	3539	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3447		1770	3539	1752	1568
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	352	110	22	495	291	60
RTOR Reduction (vph)	15	0	0	0	0	36
Lane Group Flow (vph)	447	0	22	495	291	24
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	3 4 6		5	2	8	
Permitted Phases						8
Actuated Green, G (s)	103.8		5.1	39.9	31.1	31.1
Effective Green, g (s)	103.8		5.1	39.9	31.1	31.1
Actuated g/C Ratio	0.68		0.03	0.26	0.20	0.20
Clearance Time (s)			4.0	4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2353		59	928	358	320
v/s Ratio Prot	c0.13		0.01	c0.14	c0.17	
v/s Ratio Perm						0.02
v/c Ratio	0.19		0.37	0.53	0.81	0.08
Uniform Delay, d1	8.8		71.9	48.1	57.7	48.8
Progression Factor	0.29		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0		3.9	2.2	13.1	0.1
Delay (s)	2.6		75.8	50.3	70.8	48.9
Level of Service	A		E	D	E	D
Approach Delay (s)	2.6			51.3	67.1	
Approach LOS	A			D	E	

Intersection Summary			
HCM 2000 Control Delay	38.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	152.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	25	30	205	485	20
Future Vol, veh/h	5	25	30	205	485	20
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	97	97	97	97	97	97
Heavy Vehicles, %	0	0	2	2	4	4
Mvmt Flow	5	26	31	211	500	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	784	511	521	0	-	0
Stage 1	511	-	-	-	-	-
Stage 2	273	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	365	567	1045	-	-	-
Stage 1	606	-	-	-	-	-
Stage 2	778	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	353	567	1045	-	-	-
Mov Cap-2 Maneuver	353	-	-	-	-	-
Stage 1	585	-	-	-	-	-
Stage 2	778	-	-	-	-	-

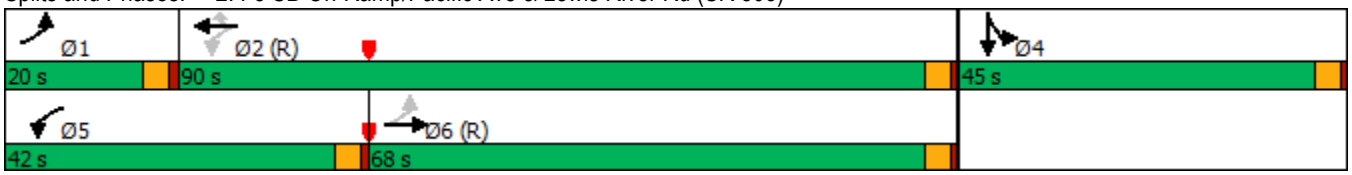
Approach	EB	NB	SB
HCM Control Delay, s	12.4	1.1	0
HCM LOS	B		

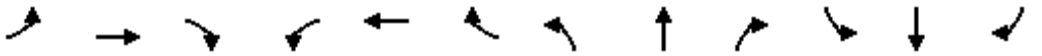
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1045	-	515	-	-
HCM Lane V/C Ratio	0.03	-	0.06	-	-
HCM Control Delay (s)	8.6	0	12.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	370	195	285	320	260	0	0	0	320	155	0
Future Volume (vph)	25	370	195	285	320	260	0	0	0	320	155	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		0	0		0	100		0
Storage Lanes	2		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		771			492			1514			1436	
Travel Time (s)		17.5			11.2			34.4			32.6	
Turn Type	pm+pt	NA		pm+pt	NA	Perm				Split	NA	
Protected Phases	1	6		5	2					4	4	
Permitted Phases	6			2		2						
Detector Phase	1	6		5	2	2				4	4	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Minimum Split (s)	9.0	18.0		9.0	22.0	22.0				32.0	32.0	
Total Split (s)	20.0	68.0		42.0	90.0	90.0				45.0	45.0	
Total Split (%)	12.9%	43.9%		27.1%	58.1%	58.1%				29.0%	29.0%	
Maximum Green (s)	16.0	64.0		38.0	86.0	86.0				41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0				1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Recall Mode	None	C-Max		None	C-Max	C-Max				Min	Min	
Walk Time (s)		7.0			7.0	7.0				7.0	7.0	
Flash Dont Walk (s)		7.0			11.0	11.0				21.0	21.0	
Pedestrian Calls (#/hr)		2			2	2				0	0	

Intersection Summary	
Area Type:	Other
Cycle Length: 155	
Actuated Cycle Length: 155	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green, Master Intersection	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: I-5 SB On-Ramp/Pacific Ave & Lewis River Rd (SR 503)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	370	195	285	320	260	0	0	0	320	155	0
Future Volume (veh/h)	25	370	195	285	320	260	0	0	0	320	155	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856				1870	1870	0
Adj Flow Rate, veh/h	27	402	212	310	348	0				348	168	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	3	3				2	2	0
Cap, veh/h	719	1419	739	635	1299					373	392	
Arrive On Green	0.01	0.63	0.63	0.14	1.00	0.00				0.21	0.21	0.00
Sat Flow, veh/h	1781	2259	1177	1767	1856	1572				1781	1870	0
Grp Volume(v), veh/h	27	315	299	310	348	0				348	168	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1659	1767	1856	1572				1781	1870	0
Q Serve(g_s), s	0.9	12.4	12.7	9.9	0.0	0.0				29.8	12.1	0.0
Cycle Q Clear(g_c), s	0.9	12.4	12.7	9.9	0.0	0.0				29.8	12.1	0.0
Prop In Lane	1.00		0.71	1.00		1.00				1.00		0.00
Lane Grp Cap(c), veh/h	719	1116	1042	635	1299					373	392	
V/C Ratio(X)	0.04	0.28	0.29	0.49	0.27					0.93	0.43	
Avail Cap(c_a), veh/h	879	1116	1042	918	1299					471	495	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.89	0.89	0.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	10.1	13.0	13.1	7.7	0.0	0.0				60.2	53.2	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.7	0.5	0.5	0.0				22.6	0.7	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
%ile BackOfQ(50%),veh/ln	0.3	5.2	5.0	3.2	0.2	0.0				15.8	5.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.1	13.7	13.8	8.3	0.5	0.0				82.8	54.0	0.0
LnGrp LOS	B	B	B	A	A					F	D	
Approach Vol, veh/h		641			658	A					516	A
Approach Delay, s/veh		13.6			4.1						73.4	
Approach LOS		B			A						E	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	6.1	112.5		36.5	17.2	101.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	86.0		41.0	38.0	64.0
Max Q Clear Time (g_c+I1), s	2.9	2.0		31.8	11.9	14.7
Green Ext Time (p_c), s	0.0	1.5		0.7	1.3	2.8

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C

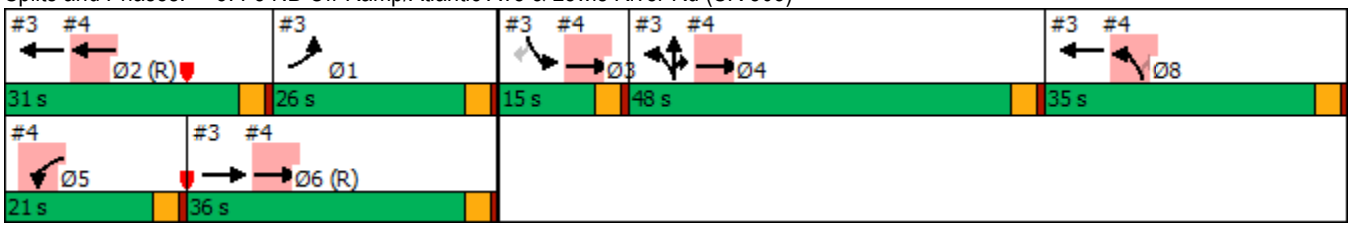
Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	450	0	0	450	110	290	55	455	40	0	120
Future Volume (vph)	240	450	0	0	450	110	290	55	455	40	0	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	0		0	75		0
Storage Lanes	1		0	0		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		492			137			823			446	
Travel Time (s)		11.2			3.1			18.7			10.1	
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Detector Phase	1	6			2 8		4	4	4	3		3
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0	5.0	5.0		5.0
Minimum Split (s)	9.0	25.0					32.0	32.0	32.0	13.0		13.0
Total Split (s)	26.0	36.0					48.0	48.0	48.0	15.0		15.0
Total Split (%)	16.8%	23.2%					31.0%	31.0%	31.0%	9.7%		9.7%
Maximum Green (s)	22.0	32.0					44.0	44.0	44.0	11.0		11.0
Yellow Time (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
All-Red Time (s)	1.0	1.0					1.0	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0						0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Lead/Lag	Lag	Lag					Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
Recall Mode	None	C-Min					None	None	None	None		None
Walk Time (s)		7.0					7.0	7.0	7.0			
Flash Dont Walk (s)		14.0					21.0	21.0	21.0			
Pedestrian Calls (#/hr)		0					0	0	0			

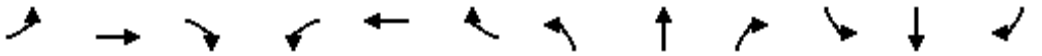
Intersection Summary	
Area Type:	Other
Cycle Length: 155	
Actuated Cycle Length: 155	
Offset: 3 (2%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-5 NB Off-Ramp/Atlantic Ave & Lewis River Rd (SR 503)



Lane Group	Ø2	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Right Turn on Red			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Turn Type			
Protected Phases	2	5	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	27.0	9.0	31.0
Total Split (s)	31.0	21.0	35.0
Total Split (%)	20%	14%	23%
Maximum Green (s)	27.0	17.0	31.0
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lead	
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	C-Min	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	16.0		20.0
Pedestrian Calls (#/hr)	0		0

Intersection Summary



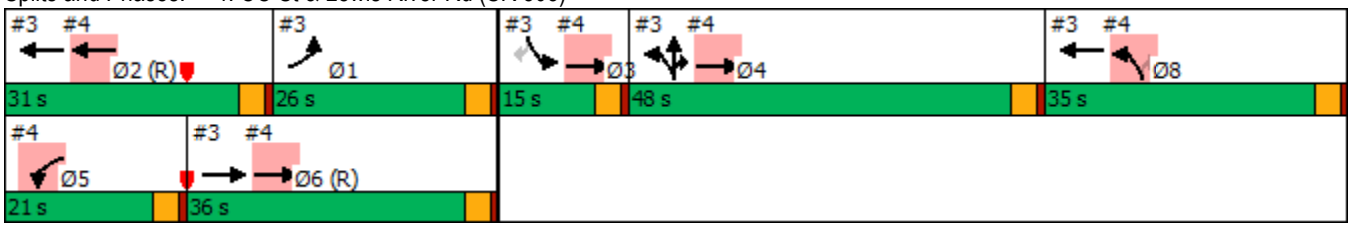
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	240	450	0	0	450	110	290	55	455	40	0	120
Future Volume (vph)	240	450	0	0	450	110	290	55	455	40	0	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.97			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (prot)	1787	3574			3435			1770	1568	1736		1553
Flt Permitted	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (perm)	1787	3574			3435			1770	1568	1736		1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	253	474	0	0	474	116	305	58	479	42	0	126
RTOR Reduction (vph)	0	0	0	0	14	0	0	0	348	0	0	118
Lane Group Flow (vph)	253	474	0	0	576	0	0	363	131	42	0	8
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Actuated Green, G (s)	26.0	44.2			62.1			40.5	40.5	10.4		10.4
Effective Green, g (s)	26.0	44.2			62.1			40.5	40.5	10.4		10.4
Actuated g/C Ratio	0.17	0.29			0.40			0.26	0.26	0.07		0.07
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	299	1019			1376			462	409	116		104
v/s Ratio Prot	c0.14	c0.13			c0.17			c0.21	0.08	c0.02		
v/s Ratio Perm												0.01
v/c Ratio	0.85	0.47			0.42			0.79	0.32	0.36		0.08
Uniform Delay, d1	62.6	45.7			33.5			53.2	46.2	69.1		67.8
Progression Factor	1.01	0.98			0.01			1.00	1.00	1.00		1.00
Incremental Delay, d2	17.3	1.3			0.2			8.6	0.5	1.9		0.3
Delay (s)	80.3	46.2			0.7			61.8	46.6	71.1		68.2
Level of Service	F	D			A			E	D	E		E
Approach Delay (s)		58.1			0.7			53.1			68.9	
Approach LOS		E			A			D			E	

Intersection Summary			
HCM 2000 Control Delay	42.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	155.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø1	Ø3	Ø4	Ø6
Lane Configurations										
Traffic Volume (vph)	640	305	110	385	180	70				
Future Volume (vph)	640	305	110	385	180	70				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Storage Length (ft)		0	150		0	150				
Storage Lanes		0	2		1	1				
Taper Length (ft)			25		25					
Right Turn on Red		Yes				Yes				
Link Speed (mph)	30			30	30					
Link Distance (ft)	137			1875	856					
Travel Time (s)	3.1			42.6	19.5					
Turn Type	NA		Prot	NA	Prot	Perm				
Protected Phases	3 4 6		5	2	8		1	3	4	6
Permitted Phases						8				
Detector Phase	3 4 6		5	2	8	8				
Switch Phase										
Minimum Initial (s)			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)			9.0	27.0	31.0	31.0	9.0	13.0	32.0	25.0
Total Split (s)			21.0	31.0	35.0	35.0	26.0	15.0	48.0	36.0
Total Split (%)			13.5%	20.0%	22.6%	22.6%	17%	10%	31%	23%
Maximum Green (s)			17.0	27.0	31.0	31.0	22.0	11.0	44.0	32.0
Yellow Time (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0				
Total Lost Time (s)			4.0	4.0	4.0	4.0				
Lead/Lag			Lead	Lead			Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode			None	C-Min	None	None	None	None	None	C-Min
Walk Time (s)				7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)				16.0	20.0	20.0			21.0	14.0
Pedestrian Calls (#/hr)				0	0	0			0	0

Intersection Summary	
Area Type:	Other
Cycle Length: 155	
Actuated Cycle Length: 155	
Offset: 3 (2%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: CC St & Lewis River Rd (SR 503)



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	640	305	110	385	180	70
Future Volume (vph)	640	305	110	385	180	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.95		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3401		1770	3539	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3401		1770	3539	1752	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	674	321	116	405	189	74
RTOR Reduction (vph)	32	0	0	0	0	62
Lane Group Flow (vph)	963	0	116	405	189	12
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	3 4 6		5	2	8	
Permitted Phases						8
Actuated Green, G (s)	103.1		14.6	32.8	25.3	25.3
Effective Green, g (s)	103.1		14.6	32.8	25.3	25.3
Actuated g/C Ratio	0.67		0.09	0.21	0.16	0.16
Clearance Time (s)			4.0	4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2262		166	748	285	255
v/s Ratio Prot	c0.28		c0.07	c0.11	c0.11	
v/s Ratio Perm						0.01
v/c Ratio	0.43		0.70	0.54	0.66	0.05
Uniform Delay, d1	12.1		68.1	54.4	60.9	54.7
Progression Factor	0.50		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1		12.1	2.8	5.7	0.1
Delay (s)	6.2		80.2	57.2	66.6	54.8
Level of Service	A		F	E	E	D
Approach Delay (s)	6.2			62.3	63.2	
Approach LOS	A			E	E	

Intersection Summary			
HCM 2000 Control Delay	31.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	155.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	65	40	290	465	25
Future Vol, veh/h	5	65	40	290	465	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	5	5
Mvmt Flow	5	71	43	315	505	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	920	519	532	0	-	0
Stage 1	519	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	299	555	1030	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	674	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	284	555	1030	-	-	-
Mov Cap-2 Maneuver	284	-	-	-	-	-
Stage 1	565	-	-	-	-	-
Stage 2	674	-	-	-	-	-

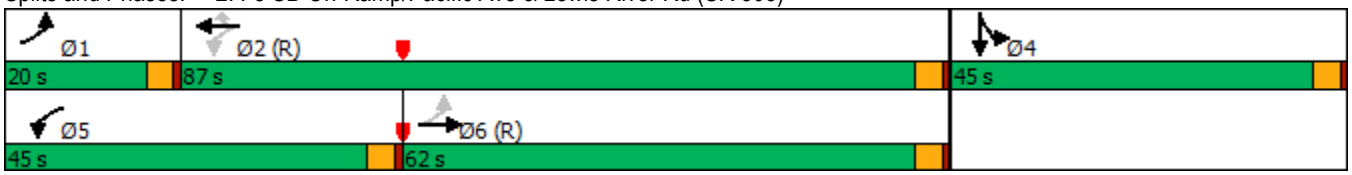
Approach	EB	NB	SB
HCM Control Delay, s	13.1	1	0
HCM LOS	B		

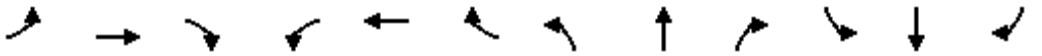
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1030	-	520	-	-
HCM Lane V/C Ratio	0.042	-	0.146	-	-
HCM Control Delay (s)	8.6	0	13.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	205	105	345	400	290	0	0	0	225	180	0
Future Volume (vph)	70	205	105	345	400	290	0	0	0	225	180	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		0	0		0	100		0
Storage Lanes	2		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		771			492			1514			1436	
Travel Time (s)		17.5			11.2			34.4			32.6	
Turn Type	pm+pt	NA		pm+pt	NA	Perm				Split	NA	
Protected Phases	1	6		5	2					4	4	
Permitted Phases	6			2		2						
Detector Phase	1	6		5	2	2				4	4	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Minimum Split (s)	9.0	18.0		9.0	22.0	22.0				32.0	32.0	
Total Split (s)	20.0	62.0		45.0	87.0	87.0				45.0	45.0	
Total Split (%)	13.2%	40.8%		29.6%	57.2%	57.2%				29.6%	29.6%	
Maximum Green (s)	16.0	58.0		41.0	83.0	83.0				41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0				1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Recall Mode	None	C-Max		None	C-Max	C-Max				Min	Min	
Walk Time (s)		7.0			7.0	7.0				7.0	7.0	
Flash Dont Walk (s)		7.0			11.0	11.0				21.0	21.0	
Pedestrian Calls (#/hr)		2			2	2				0	0	

Intersection Summary	
Area Type:	Other
Cycle Length: 152	
Actuated Cycle Length: 152	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green, Master Intersection	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: I-5 SB On-Ramp/Pacific Ave & Lewis River Rd (SR 503)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	205	105	345	400	290	0	0	0	225	180	0
Future Volume (veh/h)	70	205	105	345	400	290	0	0	0	225	180	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1826	1826	1826				1826	1826	0
Adj Flow Rate, veh/h	78	228	117	383	444	0				250	200	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	8	8	8	5	5	5				5	5	0
Cap, veh/h	695	1463	724	849	1343					274	288	
Arrive On Green	0.03	0.67	0.67	0.16	1.00	0.00				0.16	0.16	0.00
Sat Flow, veh/h	1697	2193	1086	1739	1826	1547				1739	1826	0
Grp Volume(v), veh/h	78	174	171	383	444	0				250	200	0
Grp Sat Flow(s),veh/h/ln	1697	1692	1586	1739	1826	1547				1739	1826	0
Q Serve(g_s), s	2.2	5.8	6.1	11.0	0.0	0.0				21.5	15.8	0.0
Cycle Q Clear(g_c), s	2.2	5.8	6.1	11.0	0.0	0.0				21.5	15.8	0.0
Prop In Lane	1.00		0.68	1.00		1.00				1.00		0.00
Lane Grp Cap(c), veh/h	695	1129	1058	849	1343					274	288	
V/C Ratio(X)	0.11	0.15	0.16	0.45	0.33					0.91	0.70	
Avail Cap(c_a), veh/h	827	1129	1058	1150	1343					469	493	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	7.4	9.4	9.4	5.0	0.0	0.0				63.0	60.6	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.3	0.6	0.0				13.7	3.0	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
%ile BackOfQ(50%),veh/ln	0.8	2.3	2.2	3.0	0.2	0.0				10.6	7.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	9.7	9.8	5.3	0.6	0.0				76.7	63.6	0.0
LnGrp LOS	A	A	A	A	A					E	E	
Approach Vol, veh/h		423			827	A					450	A
Approach Delay, s/veh		9.3			2.7						70.9	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	8.2	115.8		27.9	18.7	105.4
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	83.0		41.0	41.0	58.0
Max Q Clear Time (g_c+I1), s	4.2	2.0		23.5	13.0	8.1
Green Ext Time (p_c), s	0.2	2.0		0.4	1.7	1.5

Intersection Summary		
HCM 6th Ctrl Delay		22.4
HCM 6th LOS		C

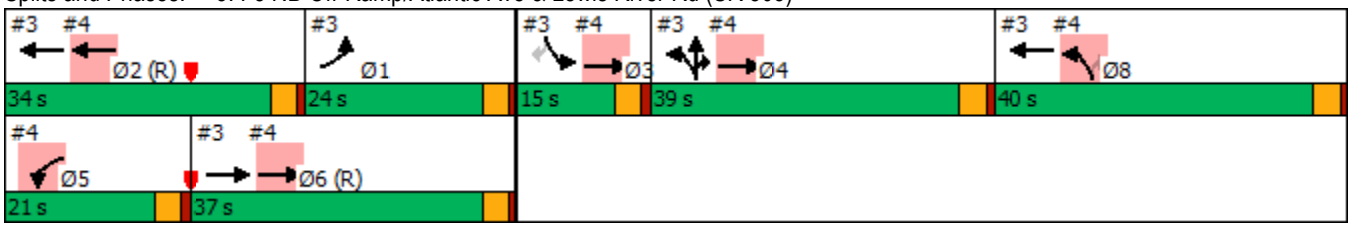
Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	245	0	0	650	100	255	35	185	5	0	125
Future Volume (vph)	190	245	0	0	650	100	255	35	185	5	0	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	0		0	75		0
Storage Lanes	1		0	0		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		492			137			823			446	
Travel Time (s)		11.2			3.1			18.7			10.1	
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Detector Phase	1	6			2 8		4	4	4	3		3
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0	5.0	5.0		5.0
Minimum Split (s)	9.0	25.0					32.0	32.0	32.0	13.0		13.0
Total Split (s)	24.0	37.0					39.0	39.0	39.0	15.0		15.0
Total Split (%)	15.8%	24.3%					25.7%	25.7%	25.7%	9.9%		9.9%
Maximum Green (s)	20.0	33.0					35.0	35.0	35.0	11.0		11.0
Yellow Time (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
All-Red Time (s)	1.0	1.0					1.0	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0						0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Lead/Lag	Lag	Lag					Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
Recall Mode	None	C-Min					None	None	None	None		None
Walk Time (s)		7.0					7.0	7.0	7.0			
Flash Dont Walk (s)		14.0					21.0	21.0	21.0			
Pedestrian Calls (#/hr)		0					0	0	0			

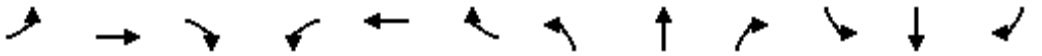
Intersection Summary	
Area Type:	Other
Cycle Length: 152	
Actuated Cycle Length: 152	
Offset: 2 (1%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-5 NB Off-Ramp/Atlantic Ave & Lewis River Rd (SR 503)



Lane Group	Ø2	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Right Turn on Red			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Turn Type			
Protected Phases	2	5	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	27.0	9.0	31.0
Total Split (s)	34.0	21.0	40.0
Total Split (%)	22%	14%	26%
Maximum Green (s)	30.0	17.0	36.0
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lead	
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	C-Min	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	16.0		20.0
Pedestrian Calls (#/hr)	0		0

Intersection Summary



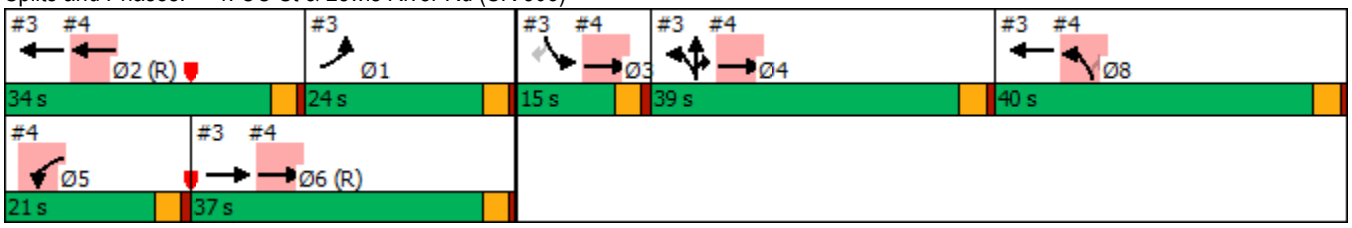
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	245	0	0	650	100	255	35	185	5	0	125
Future Volume (vph)	190	245	0	0	650	100	255	35	185	5	0	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.98			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (prot)	1703	3406			3402			1717	1524	1719		1538
Flt Permitted	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (perm)	1703	3406			3402			1717	1524	1719		1538
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	209	269	0	0	714	110	280	38	203	5	0	137
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	159	0	0	130
Lane Group Flow (vph)	209	269	0	0	816	0	0	318	44	5	0	7
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	6%	6%	6%	5%	5%	5%
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Actuated Green, G (s)	22.3	53.9			73.1			32.7	32.7	7.9		7.9
Effective Green, g (s)	22.3	53.9			73.1			32.7	32.7	7.9		7.9
Actuated g/C Ratio	0.15	0.35			0.48			0.22	0.22	0.05		0.05
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	249	1207			1636			369	327	89		79
v/s Ratio Prot	c0.12	0.08			c0.24			c0.19	0.03	0.00		
v/s Ratio Perm												c0.00
v/c Ratio	0.84	0.22			0.50			0.86	0.13	0.06		0.09
Uniform Delay, d1	63.1	34.4			26.9			57.5	48.2	68.5		68.6
Progression Factor	1.13	1.12			0.05			1.00	1.00	1.00		1.00
Incremental Delay, d2	20.4	0.4			0.2			18.2	0.2	0.3		0.5
Delay (s)	91.4	38.9			1.5			75.7	48.4	68.8		69.1
Level of Service	F	D			A			E	D	E		E
Approach Delay (s)		61.9			1.5			65.1			69.1	
Approach LOS		E			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	152.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø1	Ø3	Ø4	Ø6
Lane Configurations										
Traffic Volume (vph)	335	105	20	475	280	60				
Future Volume (vph)	335	105	20	475	280	60				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Storage Length (ft)		0	150		0	150				
Storage Lanes		0	2		1	1				
Taper Length (ft)			25		25					
Right Turn on Red		Yes				Yes				
Link Speed (mph)	30			30	30					
Link Distance (ft)	137			1875	856					
Travel Time (s)	3.1			42.6	19.5					
Turn Type	NA		Prot	NA	Prot	Perm				
Protected Phases	3 4 6		5	2	8		1	3	4	6
Permitted Phases						8				
Detector Phase	3 4 6		5	2	8	8				
Switch Phase										
Minimum Initial (s)			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)			9.0	27.0	31.0	31.0	9.0	13.0	32.0	25.0
Total Split (s)			21.0	34.0	40.0	40.0	24.0	15.0	39.0	37.0
Total Split (%)			13.8%	22.4%	26.3%	26.3%	16%	10%	26%	24%
Maximum Green (s)			17.0	30.0	36.0	36.0	20.0	11.0	35.0	33.0
Yellow Time (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0				
Total Lost Time (s)			4.0	4.0	4.0	4.0				
Lead/Lag			Lead	Lead			Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode			None	C-Min	None	None	None	None	None	C-Min
Walk Time (s)				7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)				16.0	20.0	20.0			21.0	14.0
Pedestrian Calls (#/hr)				0	0	0			0	0

Intersection Summary	
Area Type:	Other
Cycle Length: 152	
Actuated Cycle Length: 152	
Offset: 2 (1%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: CC St & Lewis River Rd (SR 503)



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	335	105	20	475	280	60
Future Volume (vph)	335	105	20	475	280	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3447		1770	3539	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3447		1770	3539	1752	1568
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	368	115	22	522	308	66
RTOR Reduction (vph)	15	0	0	0	0	37
Lane Group Flow (vph)	468	0	22	522	308	29
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	3 4 6		5	2	8	
Permitted Phases						8
Actuated Green, G (s)	102.5		5.1	36.7	32.4	32.4
Effective Green, g (s)	102.5		5.1	36.7	32.4	32.4
Actuated g/C Ratio	0.67		0.03	0.24	0.21	0.21
Clearance Time (s)			4.0	4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2324		59	854	373	334
v/s Ratio Prot	c0.14		0.01	c0.15	c0.18	
v/s Ratio Perm						0.02
v/c Ratio	0.20		0.37	0.61	0.83	0.09
Uniform Delay, d1	9.3		71.9	51.3	57.1	47.9
Progression Factor	0.30		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0		3.9	3.3	13.8	0.1
Delay (s)	2.8		75.8	54.6	70.9	48.1
Level of Service	A		E	D	E	D
Approach Delay (s)	2.8			55.4	66.9	
Approach LOS	A			E	E	

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	152.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	25	30	215	515	20
Future Vol, veh/h	5	25	30	215	515	20
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	97	97	97	97	97	97
Heavy Vehicles, %	0	0	2	2	4	4
Mvmt Flow	5	26	31	222	531	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	826	542	552	0	-	0
Stage 1	542	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	345	544	1018	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	333	544	1018	-	-	-
Mov Cap-2 Maneuver	333	-	-	-	-	-
Stage 1	566	-	-	-	-	-
Stage 2	769	-	-	-	-	-

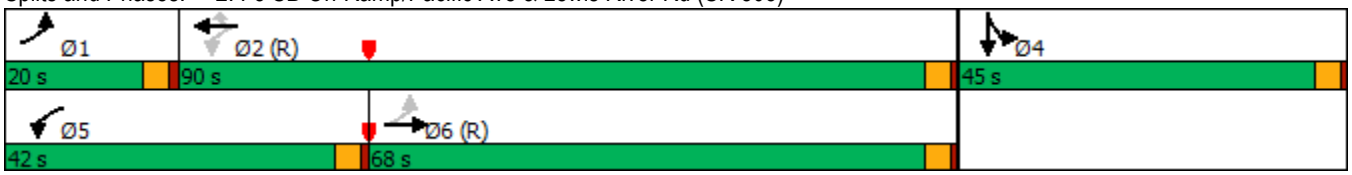
Approach	EB	NB	SB
HCM Control Delay, s	12.8	1.1	0
HCM LOS	B		

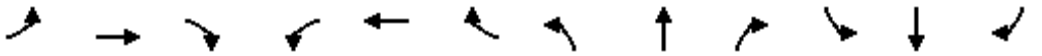
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1018	-	492	-	-
HCM Lane V/C Ratio	0.03	-	0.063	-	-
HCM Control Delay (s)	8.6	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	385	200	295	330	270	0	0	0	340	165	0
Future Volume (vph)	25	385	200	295	330	270	0	0	0	340	165	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		0	0		0	100		0
Storage Lanes	2		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		771			492			1514			1436	
Travel Time (s)		17.5			11.2			34.4			32.6	
Turn Type	pm+pt	NA		pm+pt	NA	Perm				Split	NA	
Protected Phases	1	6		5	2					4	4	
Permitted Phases	6			2		2						
Detector Phase	1	6		5	2	2				4	4	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Minimum Split (s)	9.0	18.0		9.0	22.0	22.0				32.0	32.0	
Total Split (s)	20.0	68.0		42.0	90.0	90.0				45.0	45.0	
Total Split (%)	12.9%	43.9%		27.1%	58.1%	58.1%				29.0%	29.0%	
Maximum Green (s)	16.0	64.0		38.0	86.0	86.0				41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0				1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Recall Mode	None	C-Max		None	C-Max	C-Max				Min	Min	
Walk Time (s)		7.0			7.0	7.0				7.0	7.0	
Flash Dont Walk (s)		7.0			11.0	11.0				21.0	21.0	
Pedestrian Calls (#/hr)		2			2	2				0	0	

Intersection Summary	
Area Type:	Other
Cycle Length: 155	
Actuated Cycle Length: 155	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green, Master Intersection	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: I-5 SB On-Ramp/Pacific Ave & Lewis River Rd (SR 503)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	385	200	295	330	270	0	0	0	340	165	0
Future Volume (veh/h)	25	385	200	295	330	270	0	0	0	340	165	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856				1870	1870	0
Adj Flow Rate, veh/h	27	418	217	321	359	0				370	179	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	3	3				2	2	0
Cap, veh/h	694	1385	712	617	1276					395	414	
Arrive On Green	0.01	0.61	0.61	0.15	1.00	0.00				0.22	0.22	0.00
Sat Flow, veh/h	1781	2271	1166	1767	1856	1572				1781	1870	0
Grp Volume(v), veh/h	27	326	309	321	359	0				370	179	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1660	1767	1856	1572				1781	1870	0
Q Serve(g_s), s	0.9	13.6	13.8	10.8	0.0	0.0				31.6	12.8	0.0
Cycle Q Clear(g_c), s	0.9	13.6	13.8	10.8	0.0	0.0				31.6	12.8	0.0
Prop In Lane	1.00		0.70	1.00		1.00				1.00		0.00
Lane Grp Cap(c), veh/h	694	1084	1013	617	1276					395	414	
V/C Ratio(X)	0.04	0.30	0.30	0.52	0.28					0.94	0.43	
Avail Cap(c_a), veh/h	854	1084	1013	889	1276					471	495	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	11.2	14.4	14.5	8.6	0.0	0.0				59.3	51.9	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.8	0.6	0.5	0.0				24.4	0.7	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
%ile BackOfQ(50%),veh/ln	0.4	5.8	5.5	3.5	0.2	0.0				17.0	6.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	15.1	15.3	9.2	0.5	0.0				83.7	52.7	0.0
LnGrp LOS	B	B	B	A	A					F	D	
Approach Vol, veh/h		662			680	A					549	A
Approach Delay, s/veh		15.0			4.6						73.6	
Approach LOS		B			A						E	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	6.1	110.6		38.3	18.1	98.6
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	86.0		41.0	38.0	64.0
Max Q Clear Time (g_c+I1), s	2.9	2.0		33.6	12.8	15.8
Green Ext Time (p_c), s	0.0	1.5		0.7	1.3	2.9

Intersection Summary			
HCM 6th Ctrl Delay		28.3	
HCM 6th LOS		C	

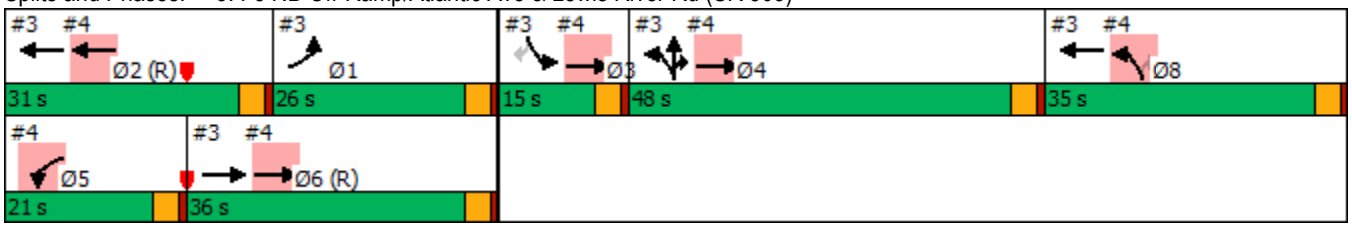
Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	475	0	0	470	115	305	55	470	40	0	125
Future Volume (vph)	250	475	0	0	470	115	305	55	470	40	0	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	0		0	75		0
Storage Lanes	1		0	0		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		492			137			823			446	
Travel Time (s)		11.2			3.1			18.7			10.1	
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Detector Phase	1	6			2 8		4	4	4	3		3
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0	5.0	5.0		5.0
Minimum Split (s)	9.0	25.0					32.0	32.0	32.0	13.0		13.0
Total Split (s)	26.0	36.0					48.0	48.0	48.0	15.0		15.0
Total Split (%)	16.8%	23.2%					31.0%	31.0%	31.0%	9.7%		9.7%
Maximum Green (s)	22.0	32.0					44.0	44.0	44.0	11.0		11.0
Yellow Time (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
All-Red Time (s)	1.0	1.0					1.0	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0						0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Lead/Lag	Lag	Lag					Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
Recall Mode	None	C-Min					None	None	None	None		None
Walk Time (s)		7.0					7.0	7.0	7.0			
Flash Dont Walk (s)		14.0					21.0	21.0	21.0			
Pedestrian Calls (#/hr)		0					0	0	0			

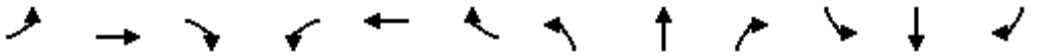
Intersection Summary	
Area Type:	Other
Cycle Length: 155	
Actuated Cycle Length: 155	
Offset: 3 (2%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-5 NB Off-Ramp/Atlantic Ave & Lewis River Rd (SR 503)



Lane Group	Ø2	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Right Turn on Red			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Turn Type			
Protected Phases	2	5	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	27.0	9.0	31.0
Total Split (s)	31.0	21.0	35.0
Total Split (%)	20%	14%	23%
Maximum Green (s)	27.0	17.0	31.0
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lead	
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	C-Min	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	16.0		20.0
Pedestrian Calls (#/hr)	0		0

Intersection Summary



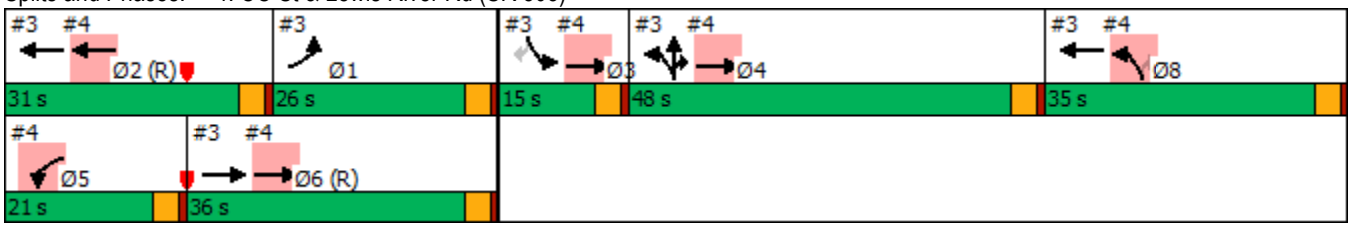
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	475	0	0	470	115	305	55	470	40	0	125
Future Volume (vph)	250	475	0	0	470	115	305	55	470	40	0	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.97			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (prot)	1787	3574			3435			1770	1568	1736		1553
Flt Permitted	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (perm)	1787	3574			3435			1770	1568	1736		1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	263	500	0	0	495	121	321	58	495	42	0	132
RTOR Reduction (vph)	0	0	0	0	14	0	0	0	342	0	0	123
Lane Group Flow (vph)	263	500	0	0	602	0	0	379	153	42	0	9
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Actuated Green, G (s)	25.3	42.2			61.9			41.3	41.3	10.5		10.5
Effective Green, g (s)	25.3	42.2			61.9			41.3	41.3	10.5		10.5
Actuated g/C Ratio	0.16	0.27			0.40			0.27	0.27	0.07		0.07
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	291	973			1371			471	417	117		105
v/s Ratio Prot	c0.15	c0.14			c0.18			c0.21	0.10	c0.02		
v/s Ratio Perm												0.01
v/c Ratio	0.90	0.51			0.44			0.80	0.37	0.36		0.09
Uniform Delay, d1	63.7	47.7			33.9			53.1	46.2	69.0		67.7
Progression Factor	1.00	0.97			0.01			1.00	1.00	1.00		1.00
Incremental Delay, d2	26.0	1.7			0.2			9.6	0.6	1.9		0.4
Delay (s)	89.4	48.1			0.7			62.7	46.8	70.9		68.1
Level of Service	F	D			A			E	D	E		E
Approach Delay (s)		62.3			0.7			53.7			68.8	
Approach LOS		E			A			D			E	

Intersection Summary			
HCM 2000 Control Delay	44.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	155.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø1	Ø3	Ø4	Ø6
Lane Configurations										
Traffic Volume (vph)	670	320	115	400	190	75				
Future Volume (vph)	670	320	115	400	190	75				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Storage Length (ft)		0	150		0	150				
Storage Lanes		0	2		1	1				
Taper Length (ft)			25		25					
Right Turn on Red		Yes				Yes				
Link Speed (mph)	30			30	30					
Link Distance (ft)	137			1875	856					
Travel Time (s)	3.1			42.6	19.5					
Turn Type	NA		Prot	NA	Prot	Perm				
Protected Phases	3 4 6		5	2	8		1	3	4	6
Permitted Phases						8				
Detector Phase	3 4 6		5	2	8	8				
Switch Phase										
Minimum Initial (s)			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)			9.0	27.0	31.0	31.0	9.0	13.0	32.0	25.0
Total Split (s)			21.0	31.0	35.0	35.0	26.0	15.0	48.0	36.0
Total Split (%)			13.5%	20.0%	22.6%	22.6%	17%	10%	31%	23%
Maximum Green (s)			17.0	27.0	31.0	31.0	22.0	11.0	44.0	32.0
Yellow Time (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0				
Total Lost Time (s)			4.0	4.0	4.0	4.0				
Lead/Lag			Lead	Lead			Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode			None	C-Min	None	None	None	None	None	C-Min
Walk Time (s)				7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)				16.0	20.0	20.0			21.0	14.0
Pedestrian Calls (#/hr)				0	0	0			0	0

Intersection Summary	
Area Type:	Other
Cycle Length: 155	
Actuated Cycle Length: 155	
Offset: 3 (2%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: CC St & Lewis River Rd (SR 503)



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	670	320	115	400	190	75
Future Volume (vph)	670	320	115	400	190	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.95		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3401		1770	3539	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3401		1770	3539	1752	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	705	337	121	421	200	79
RTOR Reduction (vph)	33	0	0	0	0	66
Lane Group Flow (vph)	1009	0	121	421	200	13
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	3 4 6		5	2	8	
Permitted Phases						8
Actuated Green, G (s)	102.0		14.9	31.8	26.1	26.1
Effective Green, g (s)	102.0		14.9	31.8	26.1	26.1
Actuated g/C Ratio	0.66		0.10	0.21	0.17	0.17
Clearance Time (s)			4.0	4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2238		170	726	295	264
v/s Ratio Prot	c0.30		c0.07	c0.12	c0.11	
v/s Ratio Perm						0.01
v/c Ratio	0.45		0.71	0.58	0.68	0.05
Uniform Delay, d1	12.9		68.0	55.6	60.5	54.1
Progression Factor	0.49		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1		13.2	3.4	6.1	0.1
Delay (s)	6.5		81.1	58.9	66.6	54.1
Level of Service	A		F	E	E	D
Approach Delay (s)	6.5			63.9	63.0	
Approach LOS	A			E	E	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	155.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	65	55	290	465	25
Future Vol, veh/h	5	65	55	290	465	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	5	5
Mvmt Flow	5	71	60	315	505	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	954	519	532	0	-	0
Stage 1	519	-	-	-	-	-
Stage 2	435	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	286	555	1030	-	-	-
Stage 1	595	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	266	555	1030	-	-	-
Mov Cap-2 Maneuver	266	-	-	-	-	-
Stage 1	553	-	-	-	-	-
Stage 2	650	-	-	-	-	-

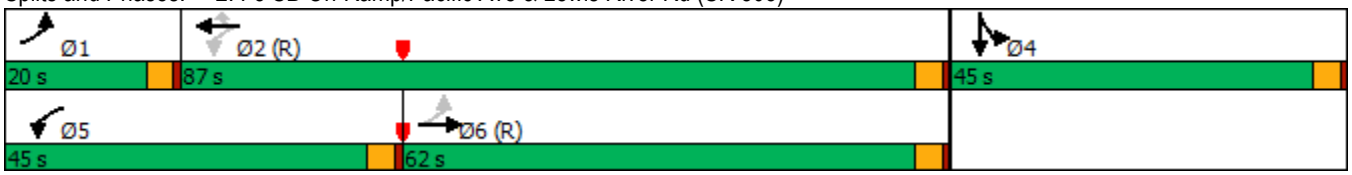
Approach	EB	NB	SB
HCM Control Delay, s	13.2	1.4	0
HCM LOS	B		

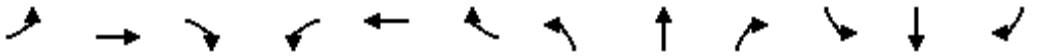
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1030	-	515	-	-
HCM Lane V/C Ratio	0.058	-	0.148	-	-
HCM Control Delay (s)	8.7	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.5	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	205	105	345	400	300	0	0	0	230	180	0
Future Volume (vph)	70	205	105	345	400	300	0	0	0	230	180	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		0	0		0	100		0
Storage Lanes	2		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		771			492			1514			1436	
Travel Time (s)		17.5			11.2			34.4			32.6	
Turn Type	pm+pt	NA		pm+pt	NA	Perm				Split	NA	
Protected Phases	1	6		5	2					4	4	
Permitted Phases	6			2		2						
Detector Phase	1	6		5	2	2				4	4	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Minimum Split (s)	9.0	18.0		9.0	22.0	22.0				32.0	32.0	
Total Split (s)	20.0	62.0		45.0	87.0	87.0				45.0	45.0	
Total Split (%)	13.2%	40.8%		29.6%	57.2%	57.2%				29.6%	29.6%	
Maximum Green (s)	16.0	58.0		41.0	83.0	83.0				41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0				1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Recall Mode	None	C-Max		None	C-Max	C-Max				Min	Min	
Walk Time (s)		7.0			7.0	7.0				7.0	7.0	
Flash Dont Walk (s)		7.0			11.0	11.0				21.0	21.0	
Pedestrian Calls (#/hr)		2			2	2				0	0	

Intersection Summary	
Area Type:	Other
Cycle Length: 152	
Actuated Cycle Length: 152	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green, Master Intersection	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: I-5 SB On-Ramp/Pacific Ave & Lewis River Rd (SR 503)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	205	105	345	400	300	0	0	0	230	180	0
Future Volume (veh/h)	70	205	105	345	400	300	0	0	0	230	180	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1826	1826	1826				1826	1826	0
Adj Flow Rate, veh/h	78	228	117	383	444	0				256	200	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	8	8	8	5	5	5				5	5	0
Cap, veh/h	692	1453	719	846	1337					280	294	
Arrive On Green	0.03	0.66	0.66	0.16	1.00	0.00				0.16	0.16	0.00
Sat Flow, veh/h	1697	2193	1086	1739	1826	1547				1739	1826	0
Grp Volume(v), veh/h	78	174	171	383	444	0				256	200	0
Grp Sat Flow(s),veh/h/ln	1697	1692	1586	1739	1826	1547				1739	1826	0
Q Serve(g_s), s	2.3	5.9	6.2	11.1	0.0	0.0				22.0	15.7	0.0
Cycle Q Clear(g_c), s	2.3	5.9	6.2	11.1	0.0	0.0				22.0	15.7	0.0
Prop In Lane	1.00		0.68	1.00		1.00				1.00		0.00
Lane Grp Cap(c), veh/h	692	1121	1051	846	1337					280	294	
V/C Ratio(X)	0.11	0.16	0.16	0.45	0.33					0.91	0.68	
Avail Cap(c_a), veh/h	823	1121	1051	1145	1337					469	493	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.84	0.84	0.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	7.6	9.6	9.7	5.1	0.0	0.0				62.7	60.1	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.3	0.6	0.0				14.4	2.8	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
%ile BackOfQ(50%),veh/ln	0.8	2.3	2.3	3.0	0.2	0.0				10.9	7.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	9.9	10.0	5.4	0.6	0.0				77.1	62.8	0.0
LnGrp LOS	A	A	B	A	A					E	E	
Approach Vol, veh/h		423			827	A					456	A
Approach Delay, s/veh		9.6			2.8						70.9	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	8.3	115.3		28.5	18.8	104.7
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	83.0		41.0	41.0	58.0
Max Q Clear Time (g_c+I1), s	4.3	2.0		24.0	13.1	8.2
Green Ext Time (p_c), s	0.2	2.0		0.5	1.7	1.5

Intersection Summary		
HCM 6th Ctrl Delay		22.7
HCM 6th LOS		C

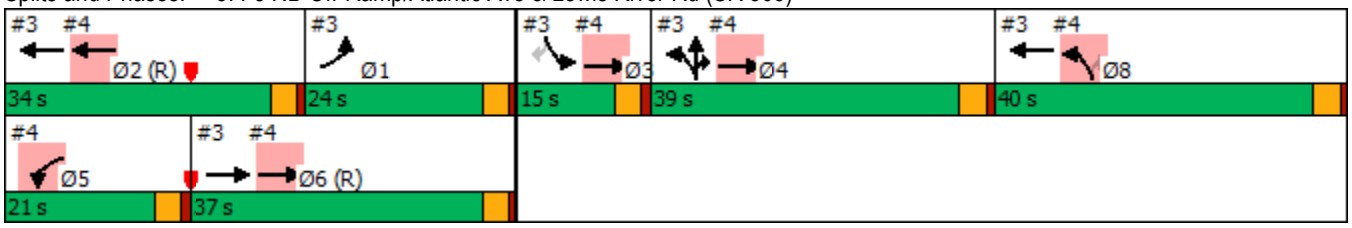
Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	250	0	0	655	100	260	35	185	5	0	125
Future Volume (vph)	190	250	0	0	655	100	260	35	185	5	0	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	0		0	75		0
Storage Lanes	1		0	0		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		492			137			823			446	
Travel Time (s)		11.2			3.1			18.7			10.1	
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Detector Phase	1	6			2 8		4	4	4	3		3
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0	5.0	5.0		5.0
Minimum Split (s)	9.0	25.0					32.0	32.0	32.0	13.0		13.0
Total Split (s)	24.0	37.0					39.0	39.0	39.0	15.0		15.0
Total Split (%)	15.8%	24.3%					25.7%	25.7%	25.7%	9.9%		9.9%
Maximum Green (s)	20.0	33.0					35.0	35.0	35.0	11.0		11.0
Yellow Time (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
All-Red Time (s)	1.0	1.0					1.0	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0						0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Lead/Lag	Lag	Lag					Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
Recall Mode	None	C-Min					None	None	None	None		None
Walk Time (s)		7.0					7.0	7.0	7.0			
Flash Dont Walk (s)		14.0					21.0	21.0	21.0			
Pedestrian Calls (#/hr)		0					0	0	0			

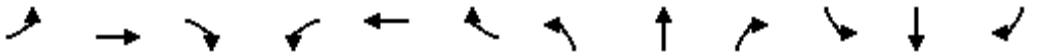
Intersection Summary	
Area Type:	Other
Cycle Length: 152	
Actuated Cycle Length: 152	
Offset: 2 (1%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-5 NB Off-Ramp/Atlantic Ave & Lewis River Rd (SR 503)



Lane Group	Ø2	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Right Turn on Red			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Turn Type			
Protected Phases	2	5	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	27.0	9.0	31.0
Total Split (s)	34.0	21.0	40.0
Total Split (%)	22%	14%	26%
Maximum Green (s)	30.0	17.0	36.0
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lead	
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	C-Min	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	16.0		20.0
Pedestrian Calls (#/hr)	0		0

Intersection Summary



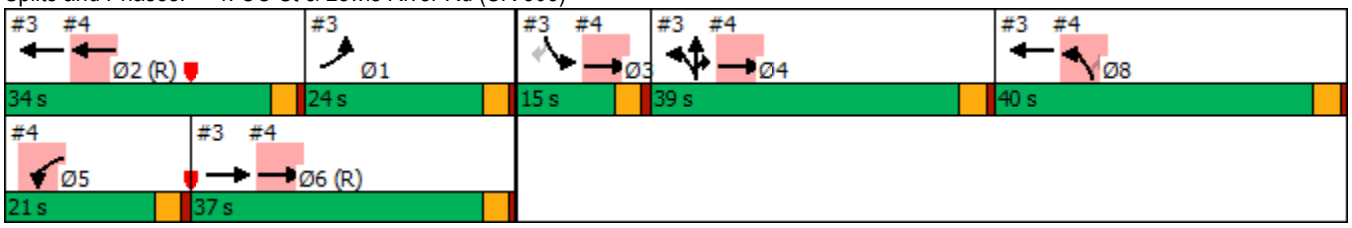
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	250	0	0	655	100	260	35	185	5	0	125
Future Volume (vph)	190	250	0	0	655	100	260	35	185	5	0	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.98			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (prot)	1703	3406			3402			1717	1524	1719		1538
Flt Permitted	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (perm)	1703	3406			3402			1717	1524	1719		1538
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	209	275	0	0	720	110	286	38	203	5	0	137
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	159	0	0	130
Lane Group Flow (vph)	209	275	0	0	822	0	0	324	44	5	0	7
Heavy Vehicles (%)	6%	6%	6%	4%	4%	4%	6%	6%	6%	5%	5%	5%
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Actuated Green, G (s)	22.2	53.5			72.8			33.1	33.1	7.9		7.9
Effective Green, g (s)	22.2	53.5			72.8			33.1	33.1	7.9		7.9
Actuated g/C Ratio	0.15	0.35			0.48			0.22	0.22	0.05		0.05
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	248	1198			1629			373	331	89		79
v/s Ratio Prot	c0.12	0.08			c0.24			c0.19	0.03	0.00		
v/s Ratio Perm												c0.00
v/c Ratio	0.84	0.23			0.50			0.87	0.13	0.06		0.09
Uniform Delay, d1	63.2	34.7			27.2			57.4	47.9	68.5		68.6
Progression Factor	1.13	1.12			0.05			1.00	1.00	1.00		1.00
Incremental Delay, d2	21.1	0.4			0.2			18.8	0.2	0.3		0.5
Delay (s)	92.2	39.3			1.6			76.1	48.1	68.8		69.1
Level of Service	F	D			A			E	D	E		E
Approach Delay (s)		62.2			1.6			65.3			69.1	
Approach LOS		E			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	38.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	152.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø1	Ø3	Ø4	Ø6
Lane Configurations										
Traffic Volume (vph)	335	110	20	480	280	60				
Future Volume (vph)	335	110	20	480	280	60				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Storage Length (ft)		0	150		0	150				
Storage Lanes		0	2		1	1				
Taper Length (ft)			25		25					
Right Turn on Red		Yes				Yes				
Link Speed (mph)	30			30	30					
Link Distance (ft)	137			1875	856					
Travel Time (s)	3.1			42.6	19.5					
Turn Type	NA		Prot	NA	Prot	Perm				
Protected Phases	3 4 6		5	2	8		1	3	4	6
Permitted Phases						8				
Detector Phase	3 4 6		5	2	8	8				
Switch Phase										
Minimum Initial (s)			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)			9.0	27.0	31.0	31.0	9.0	13.0	32.0	25.0
Total Split (s)			21.0	34.0	40.0	40.0	24.0	15.0	39.0	37.0
Total Split (%)			13.8%	22.4%	26.3%	26.3%	16%	10%	26%	24%
Maximum Green (s)			17.0	30.0	36.0	36.0	20.0	11.0	35.0	33.0
Yellow Time (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0				
Total Lost Time (s)			4.0	4.0	4.0	4.0				
Lead/Lag			Lead	Lead			Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode			None	C-Min	None	None	None	None	None	C-Min
Walk Time (s)				7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)				16.0	20.0	20.0			21.0	14.0
Pedestrian Calls (#/hr)				0	0	0			0	0

Intersection Summary	
Area Type:	Other
Cycle Length: 152	
Actuated Cycle Length: 152	
Offset: 2 (1%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: CC St & Lewis River Rd (SR 503)



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	335	110	20	480	280	60
Future Volume (vph)	335	110	20	480	280	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3442		1770	3539	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3442		1770	3539	1752	1568
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	368	121	22	527	308	66
RTOR Reduction (vph)	16	0	0	0	0	37
Lane Group Flow (vph)	473	0	22	527	308	29
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	3 4 6		5	2	8	
Permitted Phases						8
Actuated Green, G (s)	102.5		5.1	36.4	32.4	32.4
Effective Green, g (s)	102.5		5.1	36.4	32.4	32.4
Actuated g/C Ratio	0.67		0.03	0.24	0.21	0.21
Clearance Time (s)			4.0	4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2321		59	847	373	334
v/s Ratio Prot	c0.14		0.01	c0.15	c0.18	
v/s Ratio Perm						0.02
v/c Ratio	0.20		0.37	0.62	0.83	0.09
Uniform Delay, d1	9.3		71.9	51.7	57.1	47.9
Progression Factor	0.29		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0		3.9	3.4	13.8	0.1
Delay (s)	2.8		75.8	55.1	70.9	48.1
Level of Service	A		E	E	E	D
Approach Delay (s)	2.8			55.9	66.9	
Approach LOS	A			E	E	

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	152.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	70	1	15	65	1	5
Future Vol, veh/h	70	1	15	65	1	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	1	16	71	1	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	77	0	180	77
Stage 1	-	-	-	-	77	-
Stage 2	-	-	-	-	103	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1522	-	810	984
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	921	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1522	-	801	984
Mov Cap-2 Maneuver	-	-	-	-	801	-
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	911	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	948	-	-	1522	-
HCM Lane V/C Ratio	0.007	-	-	0.011	-
HCM Control Delay (s)	8.8	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	45	35	215	515	20
Future Vol, veh/h	5	45	35	215	515	20
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	97	97	97	97	97	97
Heavy Vehicles, %	0	0	2	2	4	4
Mvmt Flow	5	46	36	222	531	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	836	542	552	0	-	0
Stage 1	542	-	-	-	-	-
Stage 2	294	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.12	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.218	-	-	-
Pot Cap-1 Maneuver	340	544	1018	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	326	544	1018	-	-	-
Mov Cap-2 Maneuver	326	-	-	-	-	-
Stage 1	564	-	-	-	-	-
Stage 2	761	-	-	-	-	-

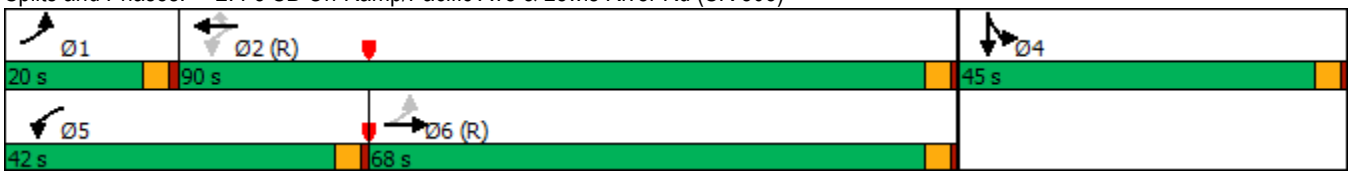
Approach	EB	NB	SB
HCM Control Delay, s	12.9	1.2	0
HCM LOS	B		

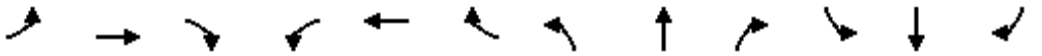
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1018	-	510	-	-
HCM Lane V/C Ratio	0.035	-	0.101	-	-
HCM Control Delay (s)	8.7	0	12.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	385	200	295	330	275	0	0	0	350	170	0
Future Volume (vph)	30	385	200	295	330	275	0	0	0	350	170	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		0	0		0	100		0
Storage Lanes	2		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		771			492			1514			1436	
Travel Time (s)		17.5			11.2			34.4			32.6	
Turn Type	pm+pt	NA		pm+pt	NA	Perm				Split	NA	
Protected Phases	1	6		5	2					4	4	
Permitted Phases	6			2		2						
Detector Phase	1	6		5	2	2				4	4	
Switch Phase												
Minimum Initial (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Minimum Split (s)	9.0	18.0		9.0	22.0	22.0				32.0	32.0	
Total Split (s)	20.0	68.0		42.0	90.0	90.0				45.0	45.0	
Total Split (%)	12.9%	43.9%		27.1%	58.1%	58.1%				29.0%	29.0%	
Maximum Green (s)	16.0	64.0		38.0	86.0	86.0				41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0				1.0	1.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0	4.0				4.0	4.0	
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0				3.0	3.0	
Recall Mode	None	C-Max		None	C-Max	C-Max				Min	Min	
Walk Time (s)		7.0			7.0	7.0				7.0	7.0	
Flash Dont Walk (s)		7.0			11.0	11.0				21.0	21.0	
Pedestrian Calls (#/hr)		2			2	2				0	0	

Intersection Summary	
Area Type:	Other
Cycle Length: 155	
Actuated Cycle Length: 155	
Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green, Master Intersection	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	

Splits and Phases: 2: I-5 SB On-Ramp/Pacific Ave & Lewis River Rd (SR 503)





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	385	200	295	330	275	0	0	0	350	170	0
Future Volume (veh/h)	30	385	200	295	330	275	0	0	0	350	170	0
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856				1870	1870	0
Adj Flow Rate, veh/h	33	418	217	321	359	0				380	185	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	3	3	3				2	2	0
Cap, veh/h	691	1370	704	613	1262					404	424	
Arrive On Green	0.02	0.60	0.60	0.15	1.00	0.00				0.23	0.23	0.00
Sat Flow, veh/h	1781	2271	1166	1767	1856	1572				1781	1870	0
Grp Volume(v), veh/h	33	326	309	321	359	0				380	185	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1660	1767	1856	1572				1781	1870	0
Q Serve(g_s), s	1.1	13.8	14.0	11.0	0.0	0.0				32.5	13.2	0.0
Cycle Q Clear(g_c), s	1.1	13.8	14.0	11.0	0.0	0.0				32.5	13.2	0.0
Prop In Lane	1.00		0.70	1.00		1.00				1.00		0.00
Lane Grp Cap(c), veh/h	691	1072	1002	613	1262					404	424	
V/C Ratio(X)	0.05	0.30	0.31	0.52	0.28					0.94	0.44	
Avail Cap(c_a), veh/h	847	1072	1002	883	1262					471	495	
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	11.5	14.9	15.0	8.9	0.0	0.0				58.9	51.4	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.8	0.6	0.5	0.0				25.2	0.7	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
%ile BackOfQ(50%),veh/ln	0.5	5.9	5.6	3.6	0.2	0.0				17.5	6.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	15.7	15.8	9.5	0.5	0.0				84.1	52.1	0.0
LnGrp LOS	B	B	B	A	A					F	D	
Approach Vol, veh/h		668			680	A					565	A
Approach Delay, s/veh		15.5			4.7						73.6	
Approach LOS		B			A						E	

Timer - Assigned Phs	1	2		4	5	6
Phs Duration (G+Y+Rc), s	6.4	109.4		39.2	18.3	97.5
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	86.0		41.0	38.0	64.0
Max Q Clear Time (g_c+I1), s	3.1	2.0		34.5	13.0	16.0
Green Ext Time (p_c), s	0.0	1.5		0.7	1.3	2.9

Intersection Summary			
HCM 6th Ctrl Delay		28.8	
HCM 6th LOS		C	

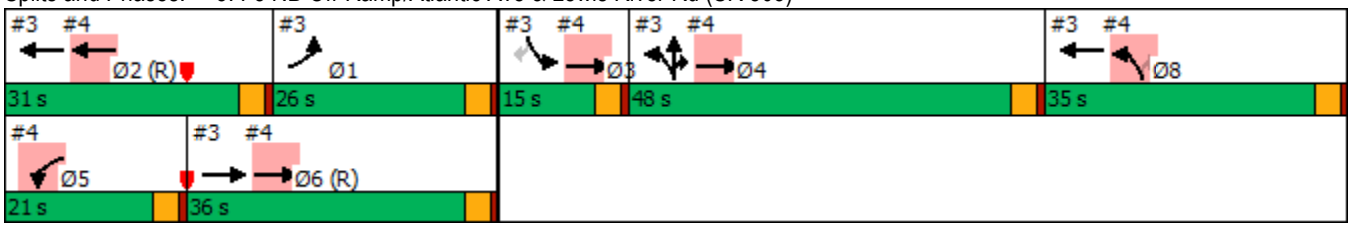
Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	480	0	0	470	115	310	55	470	40	0	125
Future Volume (vph)	250	480	0	0	470	115	310	55	470	40	0	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	0		0	75		0
Storage Lanes	1		0	0		0	0		1	1		1
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		492			137			823			446	
Travel Time (s)		11.2			3.1			18.7			10.1	
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Detector Phase	1	6			2 8		4	4	4	3		3
Switch Phase												
Minimum Initial (s)	5.0	5.0					5.0	5.0	5.0	5.0		5.0
Minimum Split (s)	9.0	25.0					32.0	32.0	32.0	13.0		13.0
Total Split (s)	26.0	36.0					48.0	48.0	48.0	15.0		15.0
Total Split (%)	16.8%	23.2%					31.0%	31.0%	31.0%	9.7%		9.7%
Maximum Green (s)	22.0	32.0					44.0	44.0	44.0	11.0		11.0
Yellow Time (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
All-Red Time (s)	1.0	1.0					1.0	1.0	1.0	1.0		1.0
Lost Time Adjust (s)	0.0	0.0						0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Lead/Lag	Lag	Lag					Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0					3.0	3.0	3.0	3.0		3.0
Recall Mode	None	C-Min					None	None	None	None		None
Walk Time (s)		7.0					7.0	7.0	7.0			
Flash Dont Walk (s)		14.0					21.0	21.0	21.0			
Pedestrian Calls (#/hr)		0					0	0	0			

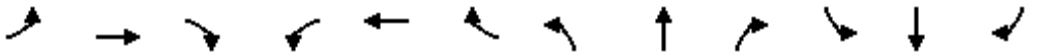
Intersection Summary	
Area Type:	Other
Cycle Length: 155	
Actuated Cycle Length: 155	
Offset: 3 (2%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 3: I-5 NB Off-Ramp/Atlantic Ave & Lewis River Rd (SR 503)



Lane Group	Ø2	Ø5	Ø8
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Storage Length (ft)			
Storage Lanes			
Taper Length (ft)			
Right Turn on Red			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Turn Type			
Protected Phases	2	5	8
Permitted Phases			
Detector Phase			
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	27.0	9.0	31.0
Total Split (s)	31.0	21.0	35.0
Total Split (%)	20%	14%	23%
Maximum Green (s)	27.0	17.0	31.0
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	1.0	1.0	1.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lead	
Lead-Lag Optimize?			
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	C-Min	None	None
Walk Time (s)	7.0		7.0
Flash Dont Walk (s)	16.0		20.0
Pedestrian Calls (#/hr)	0		0

Intersection Summary



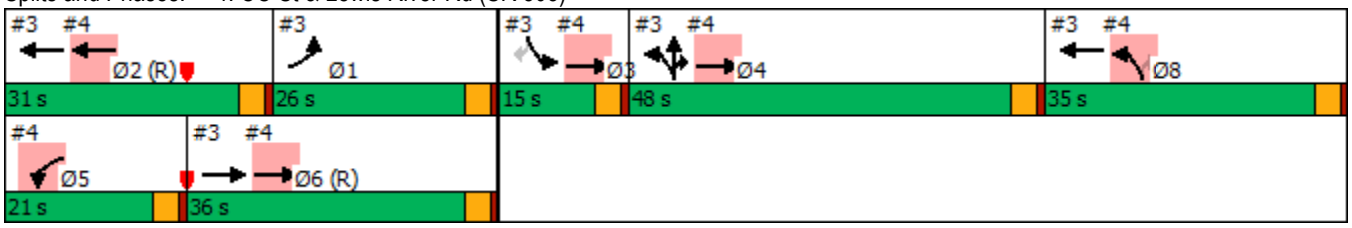
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	250	480	0	0	470	115	310	55	470	40	0	125
Future Volume (vph)	250	480	0	0	470	115	310	55	470	40	0	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0			4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	0.95			0.95			1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.97			1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (prot)	1787	3574			3435			1770	1568	1736		1553
Flt Permitted	0.95	1.00			1.00			0.96	1.00	0.95		1.00
Satd. Flow (perm)	1787	3574			3435			1770	1568	1736		1553
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	263	505	0	0	495	121	326	58	495	42	0	132
RTOR Reduction (vph)	0	0	0	0	14	0	0	0	337	0	0	123
Lane Group Flow (vph)	263	505	0	0	602	0	0	384	158	42	0	9
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	3%	3%	3%	4%	4%	4%
Turn Type	Prot	NA			NA		Split	NA	Prot	Prot		Perm
Protected Phases	1	6			2 8		4	4	4	3		
Permitted Phases												3
Actuated Green, G (s)	25.4	42.0			61.6			41.5	41.5	10.5		10.5
Effective Green, g (s)	25.4	42.0			61.6			41.5	41.5	10.5		10.5
Actuated g/C Ratio	0.16	0.27			0.40			0.27	0.27	0.07		0.07
Clearance Time (s)	4.0	4.0						4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0						3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	292	968			1365			473	419	117		105
v/s Ratio Prot	c0.15	c0.14			c0.18			c0.22	0.10	c0.02		
v/s Ratio Perm												0.01
v/c Ratio	0.90	0.52			0.44			0.81	0.38	0.36		0.09
Uniform Delay, d1	63.6	48.0			34.1			53.1	46.2	69.0		67.7
Progression Factor	0.99	0.97			0.01			1.00	1.00	1.00		1.00
Incremental Delay, d2	25.2	1.7			0.2			10.2	0.6	1.9		0.4
Delay (s)	88.4	48.3			0.7			63.3	46.8	70.9		68.1
Level of Service	F	D			A			E	D	E		E
Approach Delay (s)		62.1			0.7			54.0			68.8	
Approach LOS		E			A			D			E	

Intersection Summary			
HCM 2000 Control Delay	44.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	155.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR	Ø1	Ø3	Ø4	Ø6
Lane Configurations										
Traffic Volume (vph)	675	325	115	400	190	75				
Future Volume (vph)	675	325	115	400	190	75				
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900				
Storage Length (ft)		0	150		0	150				
Storage Lanes		0	2		1	1				
Taper Length (ft)			25		25					
Right Turn on Red		Yes				Yes				
Link Speed (mph)	30			30	30					
Link Distance (ft)	137			1875	856					
Travel Time (s)	3.1			42.6	19.5					
Turn Type	NA		Prot	NA	Prot	Perm				
Protected Phases	3 4 6		5	2	8		1	3	4	6
Permitted Phases						8				
Detector Phase	3 4 6		5	2	8	8				
Switch Phase										
Minimum Initial (s)			5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)			9.0	27.0	31.0	31.0	9.0	13.0	32.0	25.0
Total Split (s)			21.0	31.0	35.0	35.0	26.0	15.0	48.0	36.0
Total Split (%)			13.5%	20.0%	22.6%	22.6%	17%	10%	31%	23%
Maximum Green (s)			17.0	27.0	31.0	31.0	22.0	11.0	44.0	32.0
Yellow Time (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)			1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)			0.0	0.0	0.0	0.0				
Total Lost Time (s)			4.0	4.0	4.0	4.0				
Lead/Lag			Lead	Lead			Lag	Lead	Lag	Lag
Lead-Lag Optimize?										
Vehicle Extension (s)			3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode			None	C-Min	None	None	None	None	None	C-Min
Walk Time (s)				7.0	7.0	7.0			7.0	7.0
Flash Dont Walk (s)				16.0	20.0	20.0			21.0	14.0
Pedestrian Calls (#/hr)				0	0	0			0	0

Intersection Summary	
Area Type:	Other
Cycle Length: 155	
Actuated Cycle Length: 155	
Offset: 3 (2%), Referenced to phase 2:WBT and 6:EBT, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	

Splits and Phases: 4: CC St & Lewis River Rd (SR 503)



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	675	325	115	400	190	75
Future Volume (vph)	675	325	115	400	190	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.95		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3400		1770	3539	1752	1568
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	3400		1770	3539	1752	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	711	342	121	421	200	79
RTOR Reduction (vph)	33	0	0	0	0	66
Lane Group Flow (vph)	1020	0	121	421	200	13
Heavy Vehicles (%)	1%	1%	2%	2%	3%	3%
Turn Type	NA		Prot	NA	Prot	Perm
Protected Phases	3 4 6		5	2	8	
Permitted Phases						8
Actuated Green, G (s)	102.0		14.9	31.5	26.1	26.1
Effective Green, g (s)	102.0		14.9	31.5	26.1	26.1
Actuated g/C Ratio	0.66		0.10	0.20	0.17	0.17
Clearance Time (s)			4.0	4.0	4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2237		170	719	295	264
v/s Ratio Prot	c0.30		c0.07	c0.12	c0.11	
v/s Ratio Perm						0.01
v/c Ratio	0.46		0.71	0.59	0.68	0.05
Uniform Delay, d1	12.9		68.0	55.8	60.5	54.1
Progression Factor	0.49		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1		13.2	3.5	6.1	0.1
Delay (s)	6.5		81.1	59.3	66.6	54.1
Level of Service	A		F	E	E	D
Approach Delay (s)	6.5			64.2	63.0	
Approach LOS	A			E	E	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	155.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	25	1	10	50	1	20
Future Vol, veh/h	25	1	10	50	1	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	1	11	54	1	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	28	0	104	28
Stage 1	-	-	-	-	28	-
Stage 2	-	-	-	-	76	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1585	-	894	1047
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	947	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1585	-	888	1047
Mov Cap-2 Maneuver	-	-	-	-	888	-
Stage 1	-	-	-	-	995	-
Stage 2	-	-	-	-	940	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	8.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1038	-	-	1585	-
HCM Lane V/C Ratio	0.022	-	-	0.007	-
HCM Control Delay (s)	8.5	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-