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Landing on the Cowlitz Master Plan

Development Agreement
Transportation Impact Study
Castle Rock, Washington

Date:

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11/13/2023



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Executive Summary

1. The proposed Landing on the Cowlitz (LOT) Master Plan project, located near 1955 S Huntington Avenue in Castle Rock, Washington, will include the development of residential, recreational, retail, industrial, and office space on construction of a residential subdivision on six properties (lots 308100100, 30812, 30813, 30864, 6143802, and 308640100).
2. The trip generation calculations show that the LOTC Master Plan project could generate the following:
 - a. Total Trips (Excluding Internal Capture Trips): 1,019 AM peak hour trips, 1,522 PM peak hour trips, and 16,096 average weekday trips.
 - b. Pass-by Trips (Excluding Internal Capture Trips): 164 AM peak hour trips, 368 PM peak hour trips, and 3,786 average weekday trips.
 - c. Primary Trips (Excluding Internal Capture Trips): 855 AM peak hour trips, 1,154 PM peak hour trips, and 12,310 average weekday trips.
3. Based on the results of the operational analysis, the following intersections are projected to exceed acceptable levels of operation:
 - a. SR-411 at Westside Highway
 - b. Site Access at Huntington Avenue
 - c. I-5 Northbound Ramps at Huntington Avenue

For the intersection of SR-411 at Westside Highway, mitigation is expected to be necessary regardless of whether or not the proposed project is developed. It's recommended that a proportionate share contribution mechanism be established in order to collect impact fees at the intersection from all future development applications in the area, inclusive of development that occurs outside the LOTC Master Plan area. Specific capacity-related improvements at the WSDOT intersections will require further coordination with agency staff.

For the site access intersection along Huntington Avenue, as part of the LOTC Master Plan project the intersection will be redesigned as a single lane roundabout with a northeast bound right-turn bypass lane.

4. Thresholds for determining when mitigation will be necessary at the aforementioned intersections include the following:
 - a. SR-411 at Westside Highway: 0 PM peak hour trips (collection of proportionate share fee contributions is recommended for all development in the surrounding area).
 - b. Site Access at Huntington Avenue: 657 PM peak hour trip impact to intersection.
 - c. I-5 Northbound Ramps at Huntington Avenue: 384 PM peak hour trips impact to intersection.
5. All other study intersections are currently operating acceptably and are projected to continue operating acceptably through 2043 with full buildout of the site. No operational mitigation is necessary or recommended at these study intersections.

Project Description

Introduction

This Transportation Impact Study (TIS) was prepared to provide an evaluation of transportation impacts related to the planned Landing on the Cowlitz (LOT) Master Plan project, located near 1955 S Huntington Avenue in Castle Rock, Washington. The intent of this TIS is to provide supplemental input towards the preparation of a Development Agreement (DA) for the LOTC Master Plan area and to determine if/when mitigation may be warranted to address capacity related deficiencies at intersections of significance.

Based on correspondence with the City of Castle Rock's transportation consultant, the report includes a capacity/level of service analysis at the following intersections:

1. SR-411 at Westside Highway
2. A Street at 3rd Avenue
3. Cowlitz Street at Huntington Avenue
4. A Street at Huntington Avenue
5. C Street at Huntington Avenue
6. Front Avenue at Huntington Avenue
7. Larson Lane at Huntington Avenue
8. Site Access at Huntington Avenue
9. Pleasant Hill Road at Huntington Avenue
10. Interstate 5 (I-5) Southbound Ramps at Huntington Avenue
11. I-5 Northbound Ramps at Huntington Avenue

The purpose of this study is to determine whether the transportation system within the vicinity of the site is capable of supporting the existing and proposed uses, and to determine any mitigation that may be necessary to do so. Detailed information on traffic counts, trip generation calculations, and level of service calculations is included in the appendix to this report.

Location Description

The subject site is located south of Huntington Avenue, east of the Cowlitz River, and west of I-5 in Castle Rock, Washington. The site consists of six properties (lots 308100100, 30812, 30813, 30864, 6143802, and 308640100), which encompass an approximate total of 118 acres. Lot 30812 is currently developed with a single-family detached house and several ancillary agricultural/storage buildings, while the other five lots are either undeveloped or used for agricultural purposes.

Figure 1 presents an aerial image of the nearby vicinity with the project site outlined in yellow.



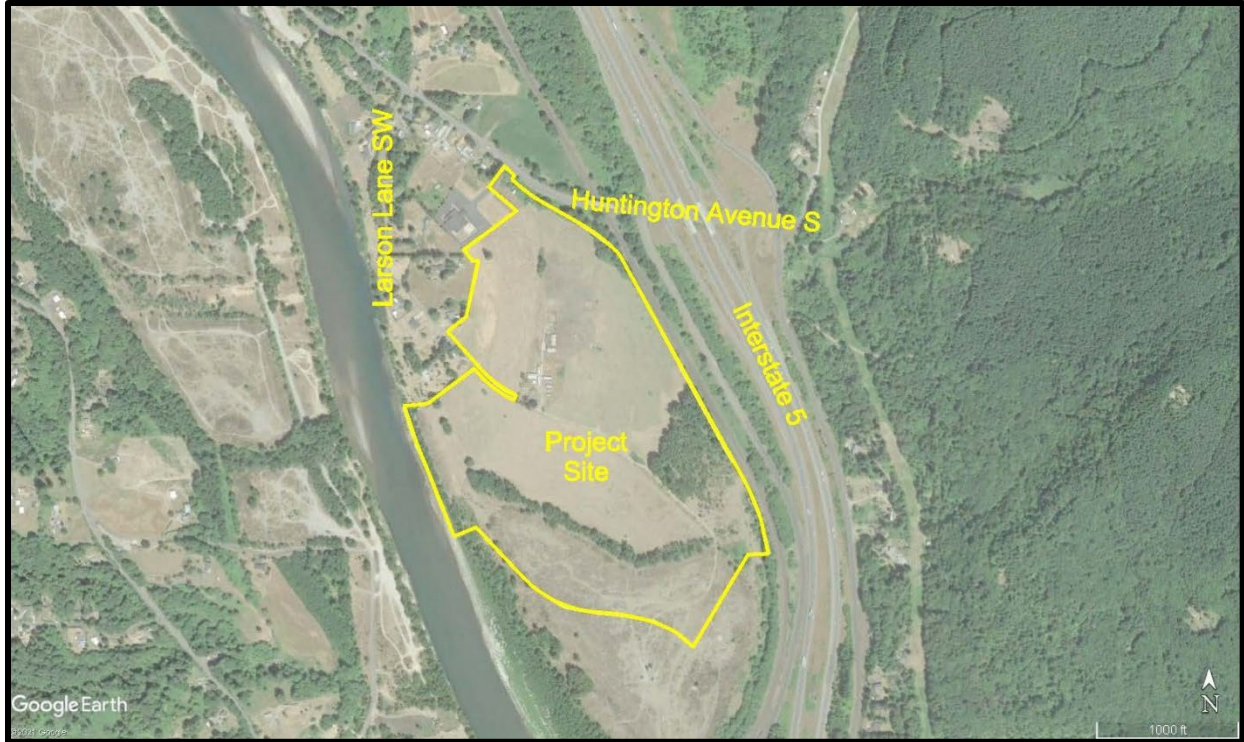


Figure 1: Aerial Photo of Site Vicinity (Image from Google Earth)

Vicinity Streets

The study area is composed of 10 roadways near the project site. Table 1 provides a description of each vicinity roadway.

Table 1: Vicinity Roadway Descriptions

Street Name	Jurisdiction	Functional Classification	Speed (MPH)	On-Street Parking	Curbs & Sidewalks	Bicycle Lanes
Cowlitz Street	Castle Rock	Minor Collector	25	Partially Permitted	Partial Both Sides	None
Ph10	Cowlitz County	Minor Collector	40	Not Permitted	None	None
A Street	Castle Rock/ WSDOT	Minor Arterial	25/35	Partially Permitted	Partial Both Sides	None
C Street	Castle Rock	Local Street	25	Permitted	Partial Both Sides	None
Front Avenue	Castle Rock	Local Street	25	Permitted	Both Sides	None

Table Notes: Functional classification based on Castle Rock Comprehensive Plan, 2006.

Statutory speed based on Washington State Code Section RCW 46.61.400.



Table 1: Vicinity Roadway Descriptions (Continued)

Street Name	Jurisdiction	Functional Classification	Speed (MPH)	On-Street Parking	Curbs & Sidewalks	Bicycle Lanes
Westside Highway	Cowlitz County /WSDOT	Minor Arterial/Major Collector	35/50	Not Permitted	None	None
3rd Avenue	Castle Rock	Local Street/Minor Collector	25	Permitted	Partial Both Sides	None
Huntington Avenue	Castle Rock/ WSDOT	Minor Arterial/Major Collector	25/40	Partially Permitted	Partial Both Sides	Partial Both Sides
Larson Lane	Castle Rock	Local Street	20	Not Permitted	None	None
Pleasant Hill Road	Castle Rock	Minor Collector	50	Not Permitted	None	None

Table Notes: Functional classification based on Castle Rock Comprehensive Plan, 2006.

Statutory speed based on Washington State Code Section RCW 46.61.400.

Study Intersections

Based on correspondence with Castle Rock’s transportation consultant, an analysis of 11 existing nearby intersections of significance was requested. A summarized description of these study intersections under their existing lane configurations is provided in Table 2.

Table 2: Study Intersection Descriptions

Number	Intersection	Geometry	Traffic Control	Phasing/Stopped Approaches
1	SR-411 at Westside Highway	Four-Legged	Stop-Controlled	All-Way Stop-Controlled
2	A Street at 3rd Avenue	Four-Legged	Stop-Controlled	Stop-Controlled NB/SB Approaches
3	Cowlitz Street at Huntington Avenue	Four-Legged	Stop-Controlled	All-Way Stop-Controlled, West Leg One-Way Westbound
4	A Street at Huntington Avenue	Three-Legged	Stop-Controlled	All-Way Stop-Controlled
5	C Street at Huntington Avenue	Four-Legged	Stop-Controlled	Stop-Controlled EB/WB Approaches
6	Front Avenue at Huntington Avenue	Three-Legged	Stop-Controlled	Stop-Controlled EB Approach



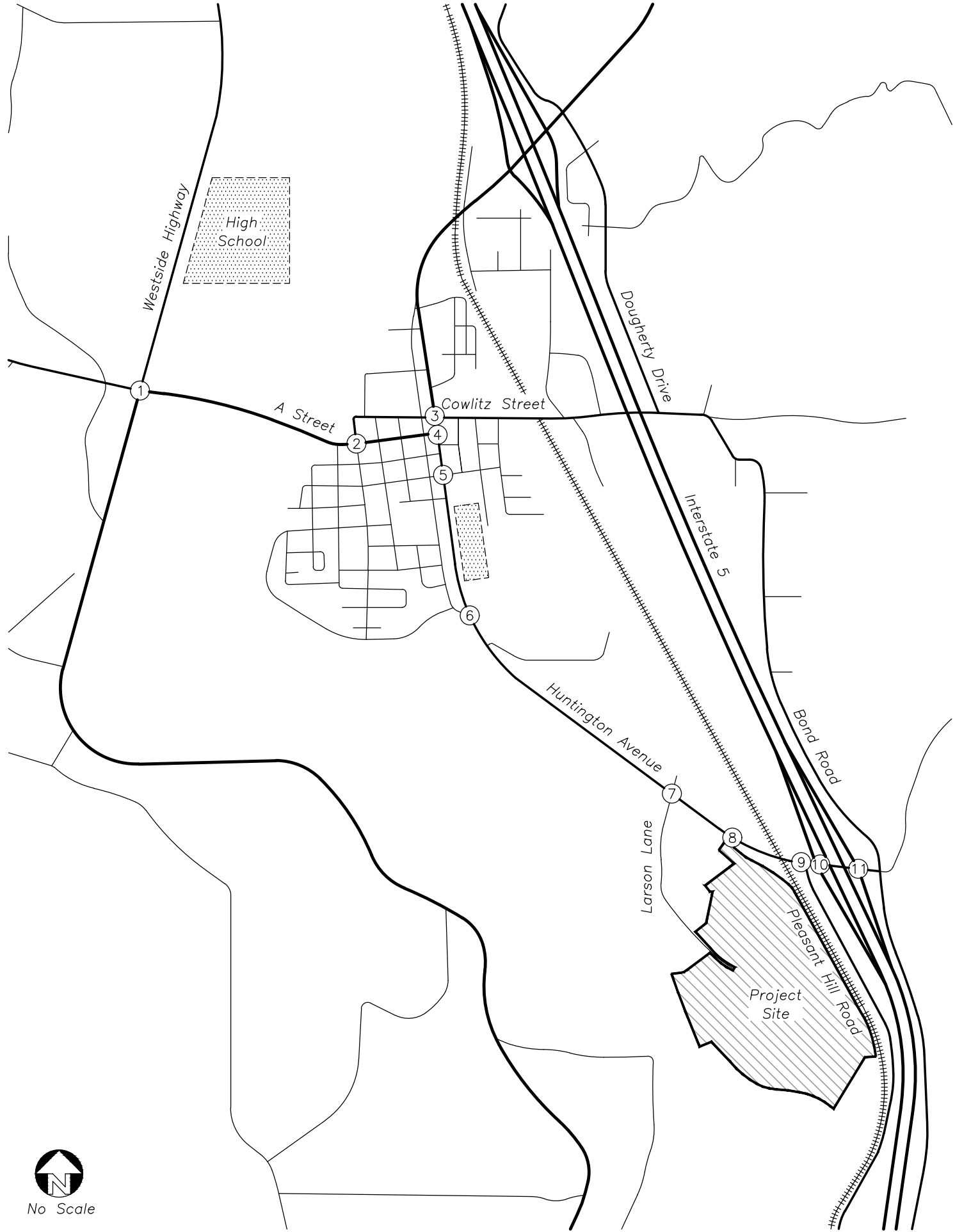
Table 2: Study Intersection Descriptions (Continued)

Number	Intersection	Geometry	Traffic Control	Phasing/Stopped Approaches
7	Larson Lane at Huntington Avenue	Four-Legged*	Stop-Controlled	Stop-Controlled NEB/SWB Approaches
8	Site Access at Huntington Avenue	Three-Legged	Stop-Controlled	Stop-Controlled NEB Approach
9	Pleasant Hill Road at Huntington Avenue	Three-Legged	Stop-Controlled	Stop-Controlled NB Approach
10	I-5 Southbound Ramps at Huntington Avenue	Four-Legged	Stop-Controlled	Stop-Controlled SB Approach
11	I-5 Northbound Ramps at Huntington Avenue	Four-Legged	Stop-Controlled	Stop-Controlled NB Approach

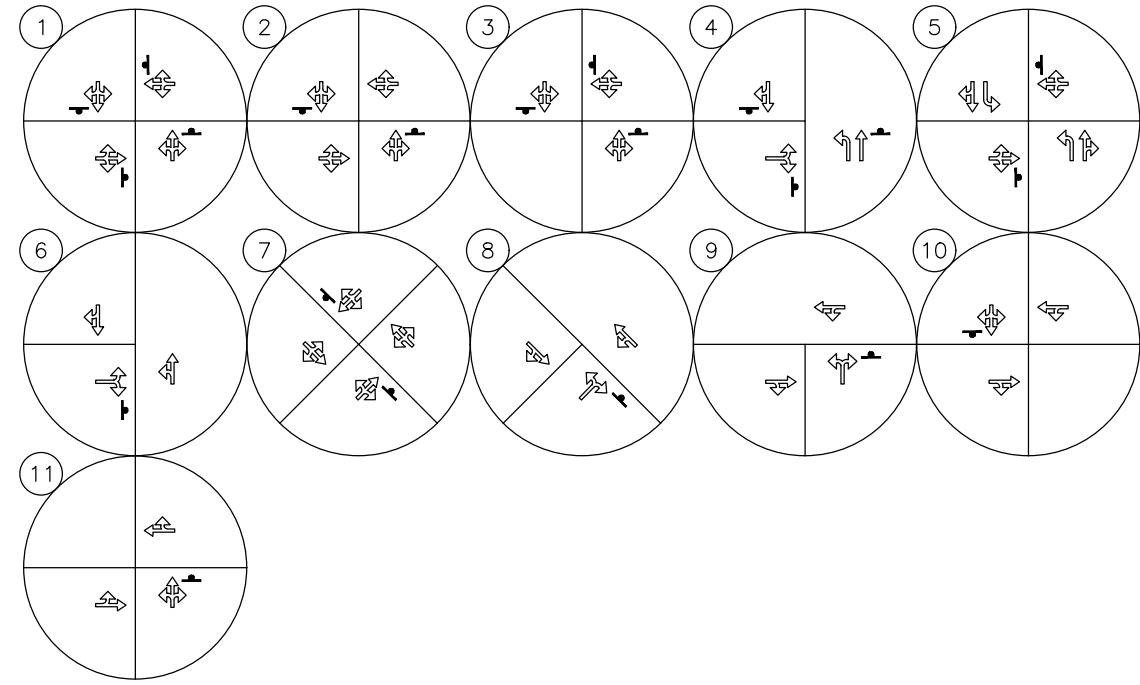
* One of the intersection legs consists of a driveway.

A vicinity map showing the project site, vicinity streets, and study intersection configurations are shown in Figure 2.





- LEGEND**
- STUDY INTERSECTION
 - ⊥ STOP SIGN
 - ▨ PROJECT SITE
 - ▤ SCHOOLS
 - ARTERIAL ROADWAY
 - COLLECTOR ROADWAY
 - LOCAL ROADWAY
 - +++ RAILROAD TRACKS



No Scale



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VICINITY MAP

Site Trips

Trip Generation

The Landing on the Cowlitz Master Plan area will include the future development of the following land uses:

- Approximately 200 residential dwelling units.
- Recreational use space consisting of a 200-vehicle capacity RV park with various amenities including a public rustic boat launch.
- Approximately 55,000 square feet of flex office space.
- Approximately 123,000 square feet of general commercial (i.e. retail) space (original approval for this and the above bulleted item was a total of 98,000 square feet of retail and commercial/professional services).
- Light industrial/flex space consisting of the following:
 - Approximately 320,000 square feet of Industrial Park space.
 - Approximately 242,000 square feet of Business Park Space.

An existing vacant single-family house and ancillary agricultural structures will be removed following future development of the project site. However, for simplicity no trip reductions associated with this house were considered.

ITE Land Use Codes

To estimate the number of trips that will be generated by the LOTC Master Plan project, trip rates/equations from the *Trip Generation Manual*¹ were used. Specifically, data from the following land uses codes were used:

- 130, *Industrial Park*, based on the square footage of the gross building floor area.
- 220, *Multifamily Housing (Low-Rise)*, based on the number of dwelling units.
- 416, *Campground/Recreational Vehicle Park*, based on the number of occupied campsites (i.e. RV spaces).
- 710, *General Office Building*, based on the square footage of the gross building floor area.
- 770, *Business Park*, based on the square footage of the gross building floor area.
- 821, *Shopping Plaza (40-150k)* subcategory *Supermarket – Yes*, based on the square footage of the gross building floor area.

Internal Trips

Given a variety of land-uses are proposed for development within the project site (including residential, commercial, industrial, and recreational uses), some trips generated within the master plan area are expected to be shared or internally captured by other land-uses within the project site. Subsequently, these internally captured trips will not impact the nearby transportation system. Using the NCHRP Report 684, internal capture

¹ Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, 2021.

rates were calculated for the proposed land uses during the AM and PM peak hours. Per the NCHRP Report 684 calculations, the following internal capture rates were determined:

- AM Peak Hour: Approximately 6% of the total site trips.
- PM Peak Hour: Approximately 13% of the total site trips.

Pass-by Trips

The retail portion of the proposed development is expected to attract pass-by and diverted trips to the site. Pass-by trips are trips that leave the adjacent roadway to patronize a land use and then continue in their original direction of travel. Similar to pass-by trips, diverted trips are trips that divert from a nearby roadway not adjacent to the site to patronize a land use before continuing to their original destination. Pass-by trips do not add additional vehicles to the surrounding transportation system; however, they do add additional turning movements at site access intersections. Diverted trips may add turning movements at both site access and other nearby intersections.

Pass-by and diverted trip rates were determined using data provided within the *Trip Generation Manual, 11th Edition*. Based on data from land use code 821 a PM peak hour pass-by rate of 40 percent was used to determine pass-by trip generation of the site, specifically for the retail portion of the master plan area. It is assumed that the AM peak hour and daily pass-by rates would approximately match the PM peak hour rate. For the purposes of this analysis, diverted trips were treated as primary trips.

Analysis Results

Based on the above methodologies and assumptions, the trip generation calculations show that the LOTC Master Plan project could generate the following:

- Total Trips (Excluding Internal Capture Trips): 1,019 AM peak hour trips, 1,522 PM peak hour trips, and 16,096 average weekday trips.
- Pass-by Trips (Excluding Internal Capture Trips): 164 AM peak hour trips, 368 PM peak hour trips, and 3,786 average weekday trips.
- Primary Trips (Excluding Internal Capture Trips): 855 AM peak hour trips, 1,154 PM peak hour trips, and 12,310 average weekday trips.

The trip generation estimates are summarized in Table 3. Detailed trip generation calculations are included in the technical appendix.

Table 3: Trip Generation Summary

Land Use	ITE Code	Size/Rate	AM Peak Hour			PM Peak Hour			Weekday Total
			Enter	Exit	Total	Enter	Exit	Total	
Industrial Park	130	320,000 SF	88	21	109	24	85	109	1,720
Residential	220	200 units	20	65	85	67	40	107	1,358
RV Park	416	200 sites	15	27	42	35	19	54	570
Flex (Office)	710	55,000 SF	88	12	100	17	84	101	690
Business Park	770	242,000 SF	267	47	314	82	235	317	3,286
Commercial Retail	821	123,000 SF	269	165	434	510	552	1,062	10,878
<i>Pass-by</i>	<i>821</i>	<i>40%</i>	<i>87</i>	<i>87</i>	<i>174</i>	<i>212</i>	<i>212</i>	<i>424</i>	<i>4,352</i>
Total Trips			747	337	1,084	735	1,015	1,750	18,502
<i>Total Pass-by Trips</i>			<i>87</i>	<i>87</i>	<i>174</i>	<i>212</i>	<i>212</i>	<i>424</i>	<i>4,352</i>
Total Primary Trips			660	250	910	523	803	1,326	14,150
<i>Internal Trip Reduction (Total Trips)</i>		<i>6% (13%)</i>	<i>45</i>	<i>20</i>	<i>65</i>	<i>96</i>	<i>132</i>	<i>228</i>	<i>2,406</i>
<i>Internal Trip Reduction (Pass-by Trips)</i>			<i>5</i>	<i>5</i>	<i>10</i>	<i>28</i>	<i>28</i>	<i>56</i>	<i>566</i>
<i>Internal Trip Reduction (Primary Trips)</i>			<i>40</i>	<i>15</i>	<i>55</i>	<i>68</i>	<i>104</i>	<i>172</i>	<i>1,840</i>
Total External Trips			702	317	1,019	639	883	1,522	16,096
<i>Total External Pass-by Trips</i>			<i>82</i>	<i>82</i>	<i>164</i>	<i>184</i>	<i>184</i>	<i>368</i>	<i>3,786</i>
Total External Primary Trips			620	235	855	455	699	1,154	12,310

Table Notes: AM and PM/ADT internal rates denoted as AM (PM/ADT).



Trip Distribution

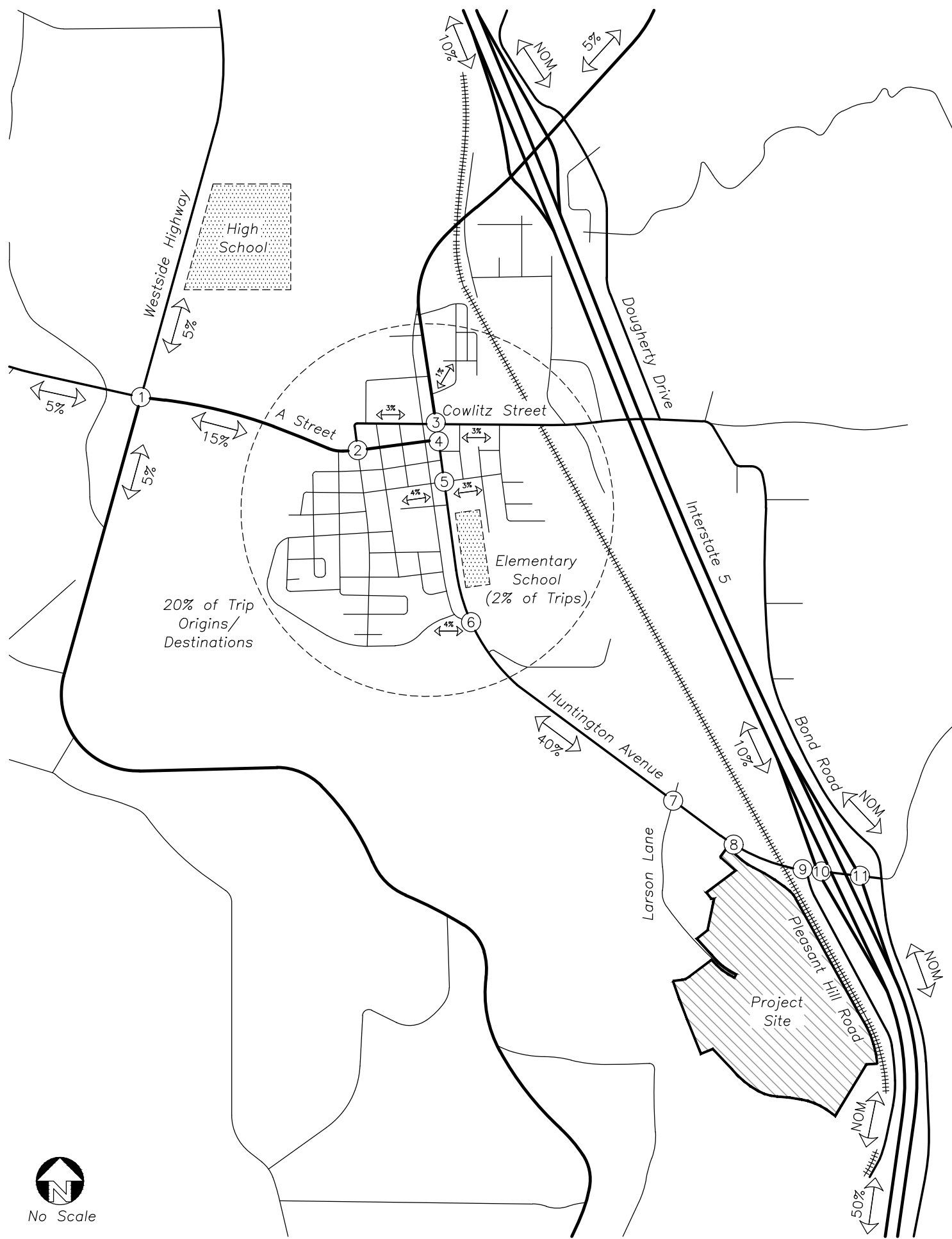
The trip distribution of site trips for the proposed development was estimated based on the geographical location of the project site, locations of likely trip origins and destinations, locations of major transportation facilities in the site vicinity, and US residential/employment census data retrieved at <https://onthemap.ces.census.gov/>.

The following primary trip distribution was estimated:

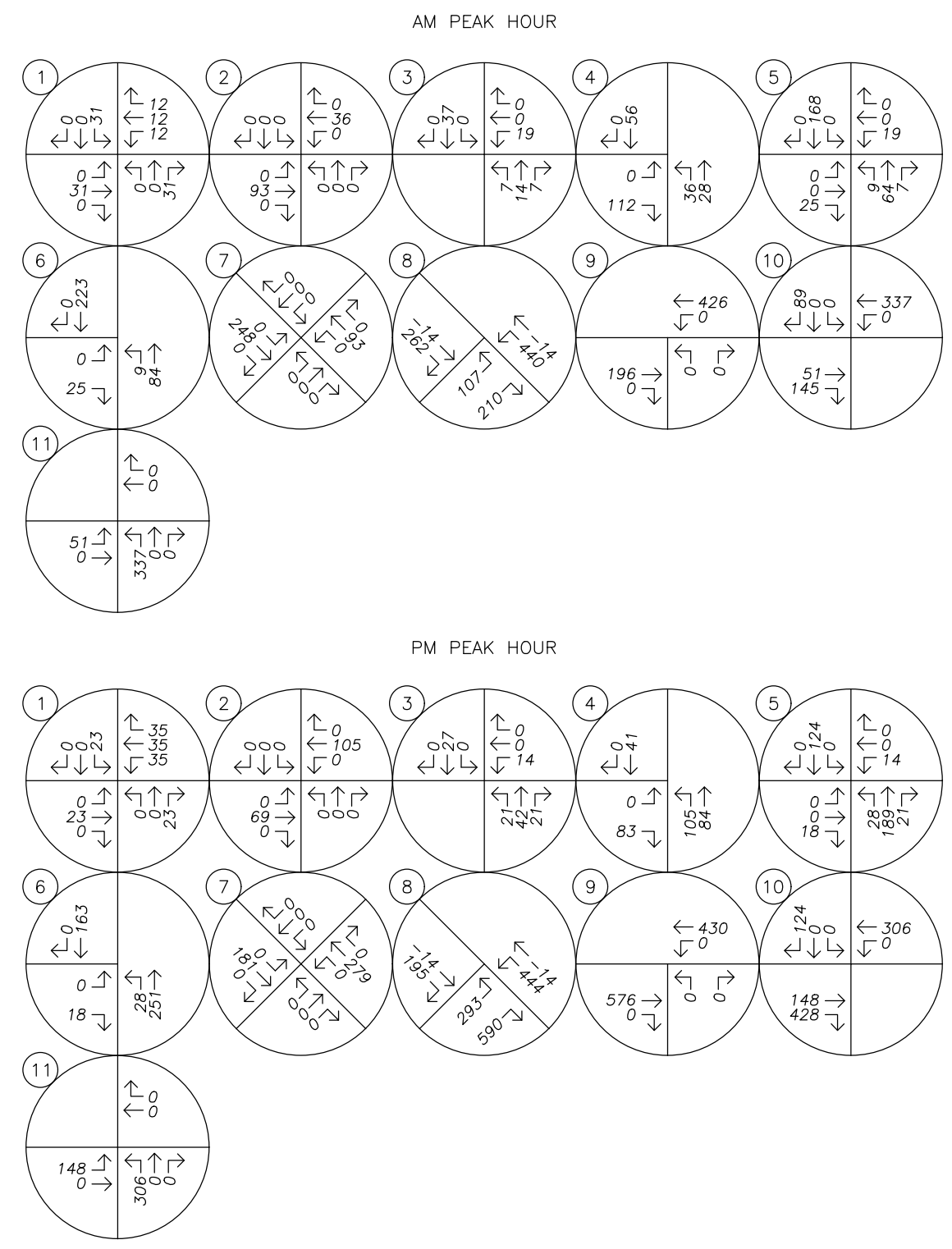
- Approximately 50% of site trips will travel to/from the south along I-5.
- Approximately 40% of site trips will travel to/from the northwest along Huntington Avenue
 - Approximately 20% of site trips will travel to/from locales within the City of Castle Rock, predominately near the city center.
 - Approximately 15% of site trips will travel to/from the west along A Street. Of these 15% of trips, approximately 5% of trips are anticipated to travel in each direction to/from the north, south, and west of the SR-411 at Ph #10 Road intersection.
 - Approximately 5% of site trips will travel to/from the north along Mt. St. Helens Way (SR-504).
- Approximately 10% of site trips will travel to/from the north along I-5.

For pass-by trip distribution, it is assumed that only 5%-10% of volumes along Huntington Avenue will be drawn as a pass-by trips. The remaining pass-by trips generated by the site were assumed to be drawn from I-5. Although I-5 isn't technically adjacent to the site, the proposed project is expected to be large enough to reasonably draw/influence traffic from the highway.

The trip distribution and assignment for the total external site trips generated during the AM and PM peak hours are shown in Figure 3. The externally generated primary and pass-by trips are shown in Figure A in the appendix.



No Scale



LEGEND

XX% PERCENT OF PRIMARY TRIPS

	EXTERNAL TRIP GENERATION			TOTAL
	PRIMARY		PASS-BY	
	IN	OUT		
AM	620	235	164	1019
PM	455	699	368	1522



SITE TRIP DISTRIBUTION & ASSIGNMENT

Proposed Development Plan - Total External Site Trips

AM & PM Peak Hours

Traffic Volumes

Existing Conditions

Traffic counts were conducted at the study intersections on the following dates from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM:

- Tuesday/Wednesday, February 14/15, 2023.
- Tuesday, October 17, 2023.

To estimate major street traffic volumes at the future site access intersection, major-street volumes were balanced with the adjacent study intersections where traffic counts were collected. The larger of the eastbound and westbound volumes with the adjacent study intersections were used to maintain a conservative evaluation of major-street volumes. For the purposes of this analysis no peak hour trips were assumed to travel to/from the minor-street approach, which is currently utilized as a driveway that serves a religious institution.

Figure 4 shows the year 2023 existing traffic volumes at the study intersections during the AM and PM peak hours.

Background Conditions

To provide an analysis of the impact of the proposed LOTC Master Plan project on the nearby transportation facilities, an estimate of future traffic volumes is required. In order to approximate the future year 2043 traffic volumes at the study intersections, a compounded growth rate of two percent per year for an assumed buildout condition of 20 years was applied to the year 2023 existing traffic volumes.

Figure 5 shows the projected year 2043 background traffic volumes at the study intersections during the AM and PM peak hours.

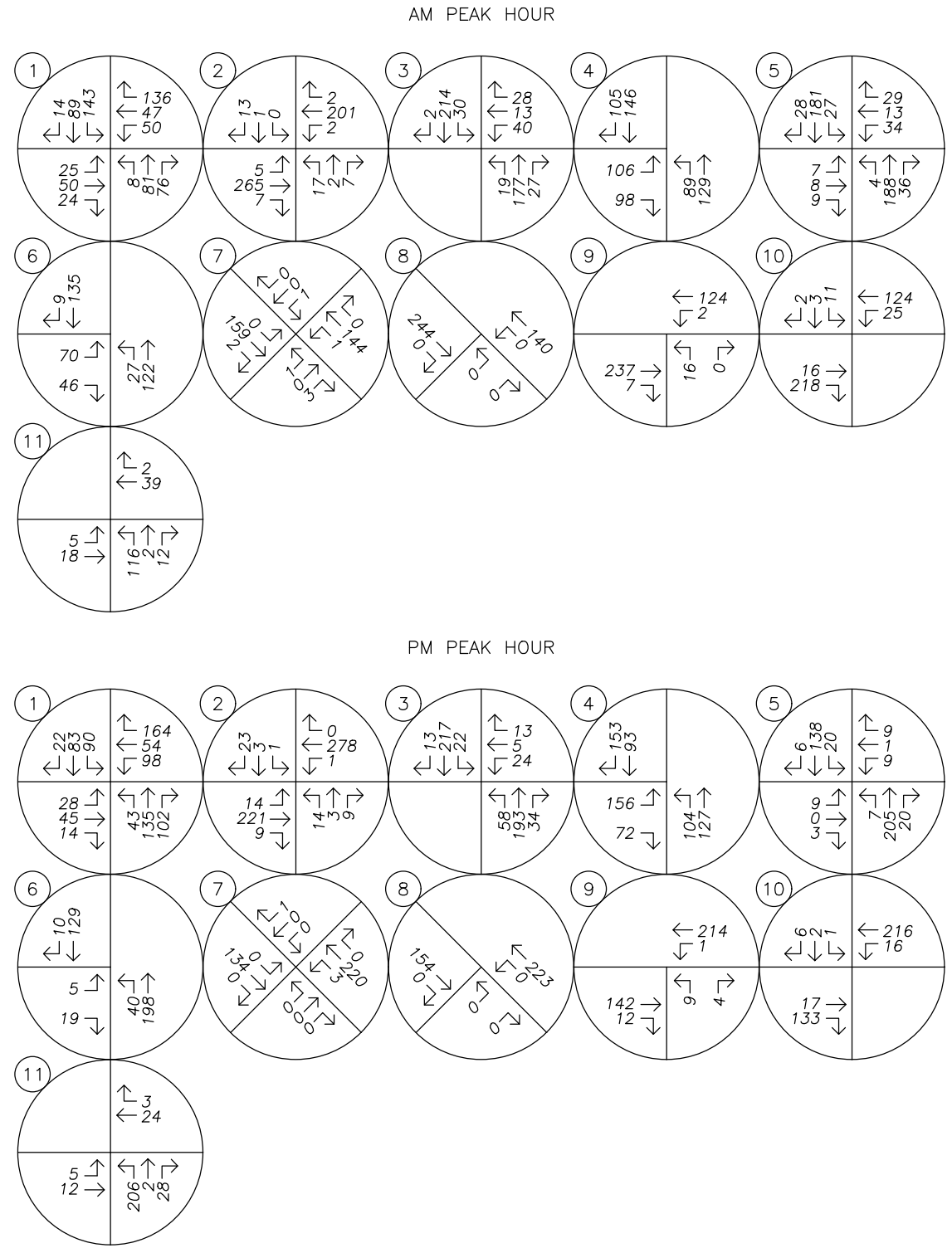
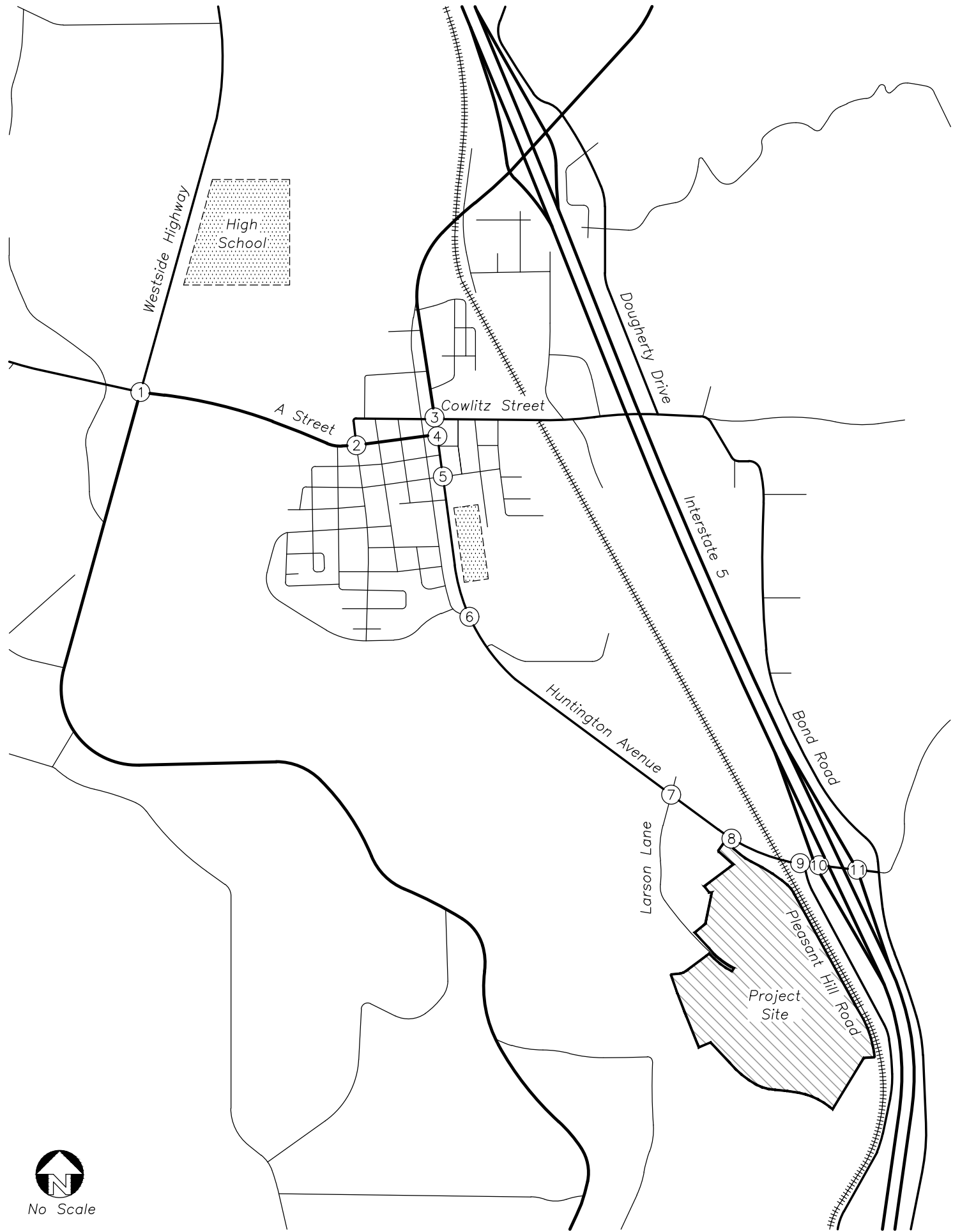
Buildout Conditions

Potential peak hour trips calculated to be generated by the proposed LOTC Master Plan project, as described earlier within the *Site Trips* section, were added to the projected year 2043 background traffic volumes to obtain the expected 2043 site buildout volumes.

Figure 6 shows the year 2043 full site buildout traffic volumes at the study intersections during the AM and PM peak hours.



No Scale

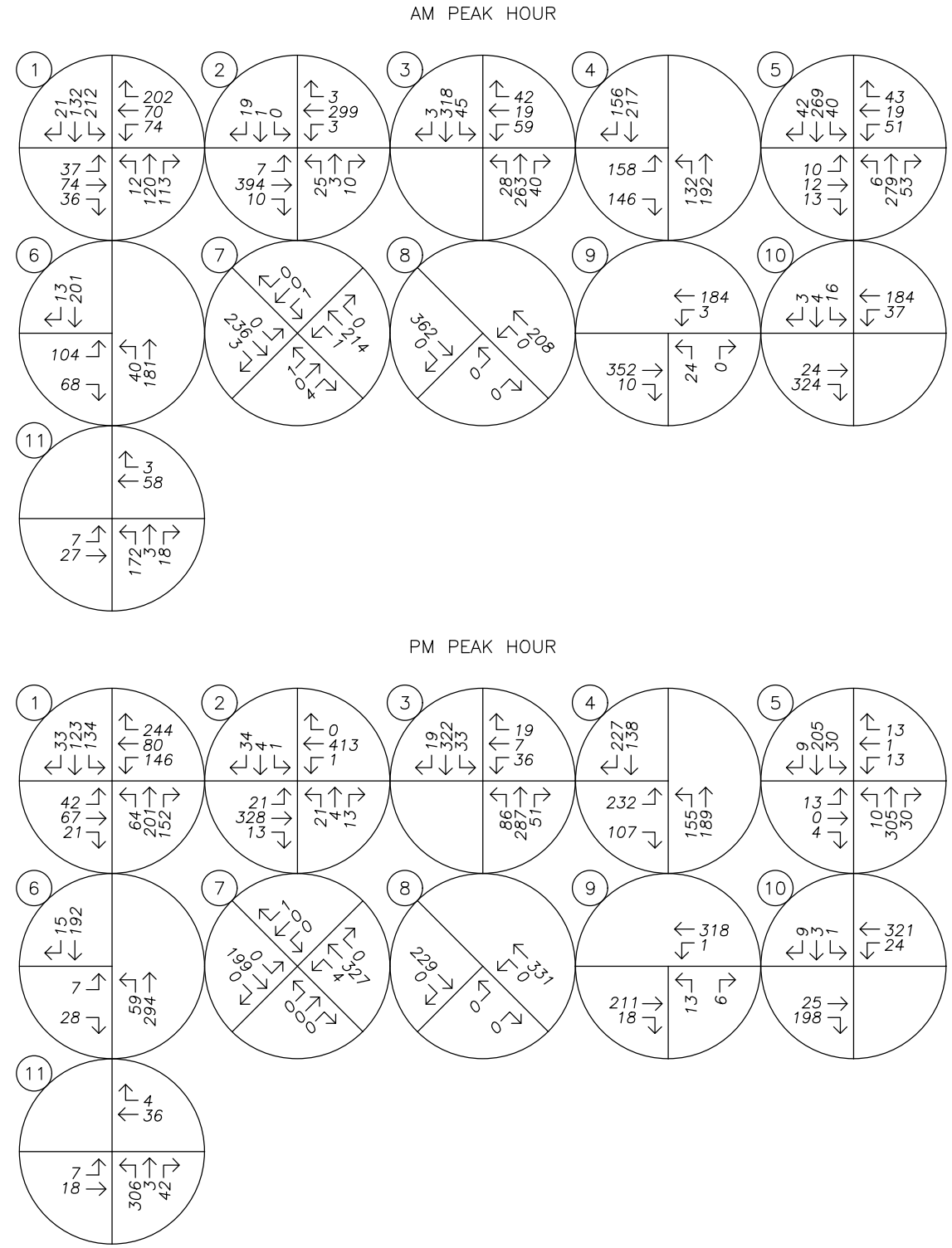
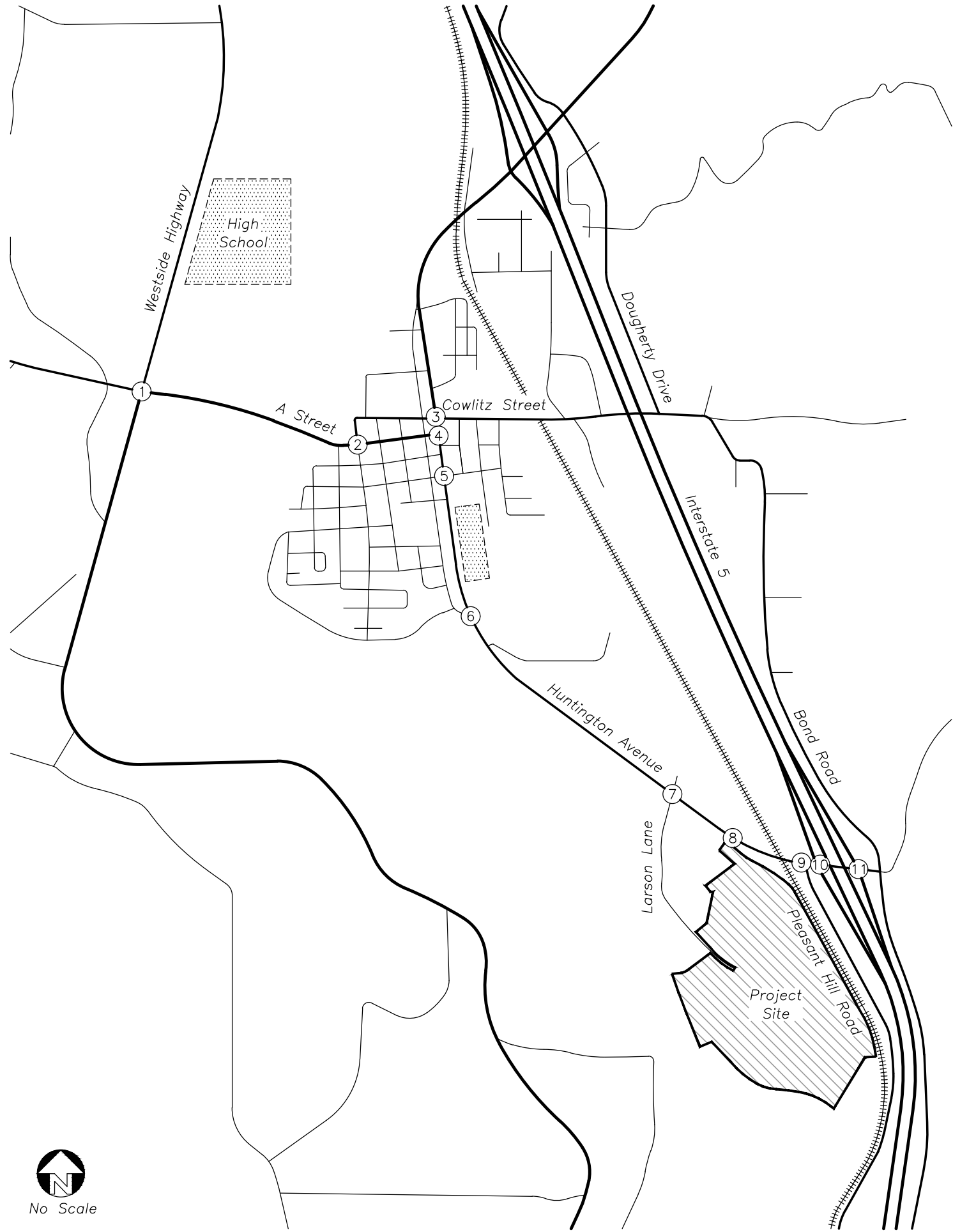


TRAFFIC VOLUMES
 Year 2023 Existing Conditions
 AM & PM Peak Hours

Figure 4
 Landing on the Cowlitz Master Plan
 11/13/2023



No Scale

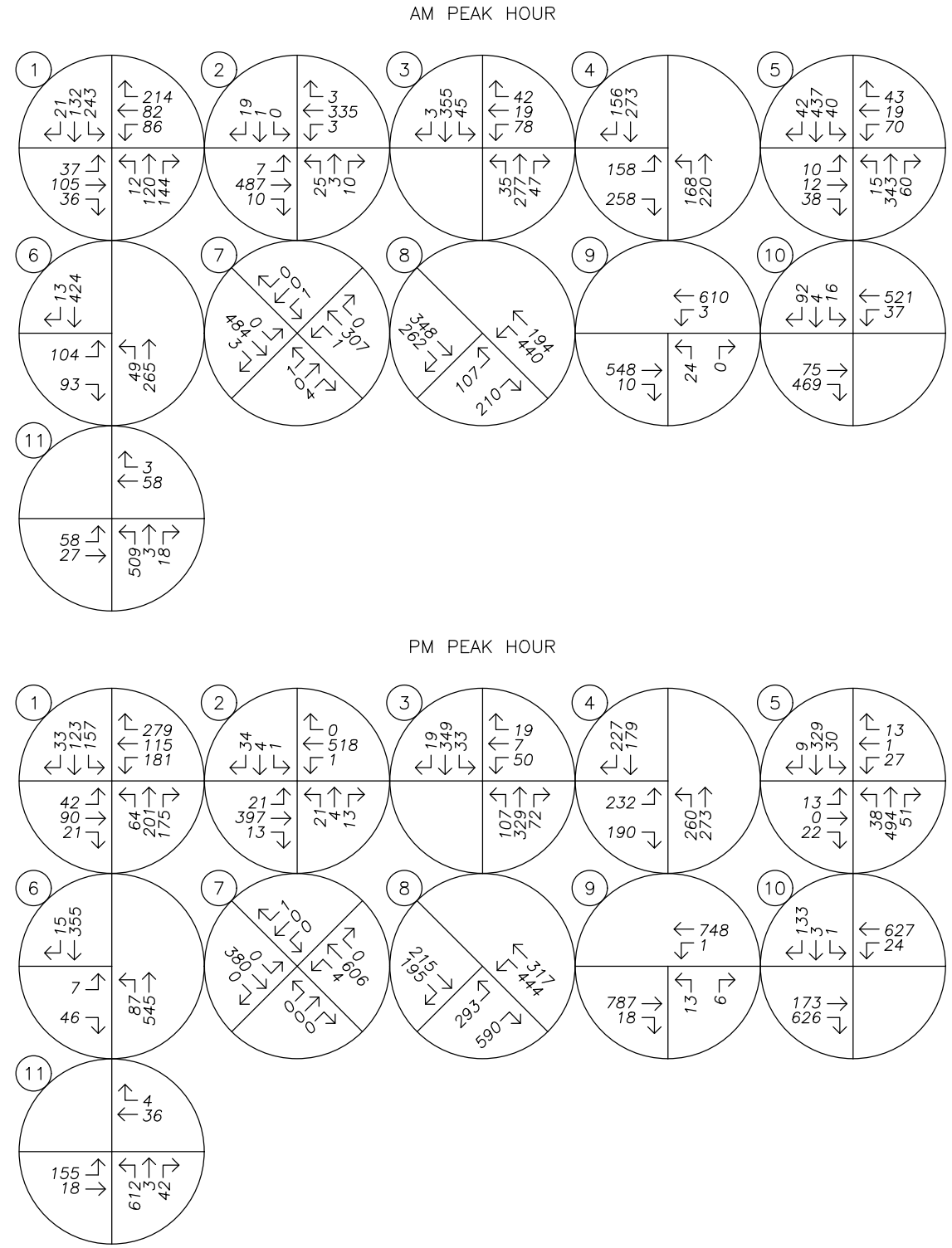
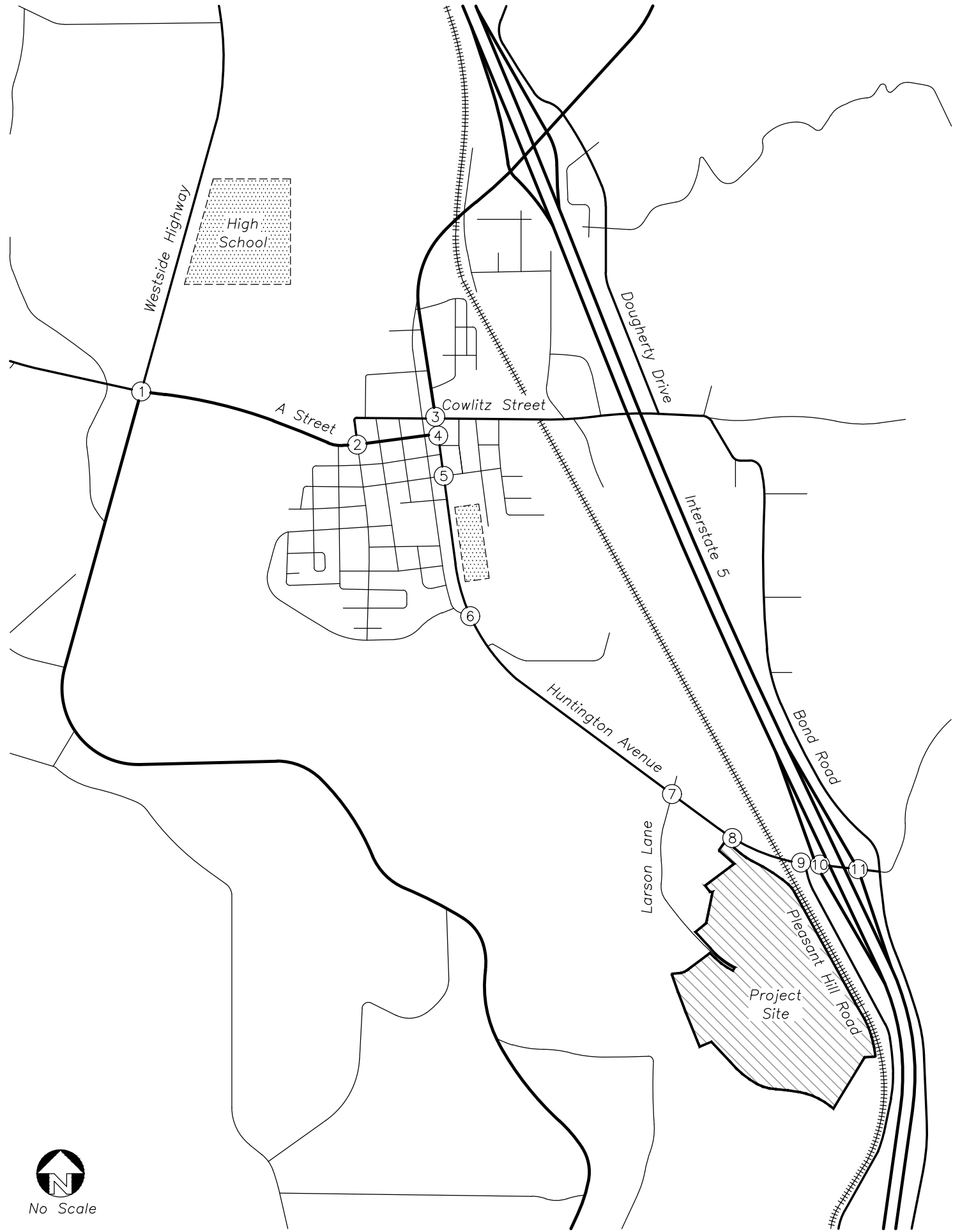


TRAFFIC VOLUMES
 Year 2043 Background Conditions
 AM & PM Peak Hours

Figure 5
 Landing on the Cowlitz Master Plan
 11/13/2023



No Scale



TRAFFIC VOLUMES
 Year 2043 Buildout Conditions
 AM & PM Peak Hours

Figure 6
 Landing on the Cowlitz Master Plan
 11/13/2023

Operational Analysis

Intersection Capacity Analysis

A capacity and delay analysis were conducted for each of the study intersections per the unsignalized intersection analysis methodologies in the *Highway Capacity Manual* (HCM)². Intersections are generally evaluated based on the average control delay experienced by vehicles and are assigned a grade according to their operation. The level of service (LOS) of an intersection can range from LOS A, which indicates very little or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay. The volume-to-capacity (v/c) ratio is a measure that compares the traffic volumes (demand) against the available capacity of an intersection.

Performance Standards

The City of Castle Rock does not have specific thresholds for evaluating acceptable intersection operation. For the purposes of this analysis and based on a comparison of standards in other jurisdictions throughout Clark and Cowlitz County, the following were assumed:

- Signalized intersections are required to operate at LOS D or better overall.
- Roundabouts and all-way stop-controlled intersections are to operate at LOS D or better overall with no single turn lane operating below LOS E.
- All other unsignalized intersection approach lanes are required to operate at LOS E or better.

The study intersections along SR-411 operate under the jurisdiction of WSDOT. According to the Revised Code of Washington (RCW) 47.06.140(2):

The department of transportation, in consultation with local governments, shall set level of service standards for state highways and state ferry routes of statewide significance. Although the department shall consult with local governments when setting level of service standards, the department retains authority to make final decisions regarding level of service standards for state highways and state ferry routes of statewide significance. In establishing level of service standards for state highways and state ferry routes of statewide significance, the department shall consider the necessary balance between providing for the free interjurisdictional movement of people and goods and the needs of local communities using these facilities...

Per WSDOT's online *Level of Service Standard* ArcGIS website³, the segment of SR-411 within the study area operates with as LOS C or better standard. However, in conjunction with the above code section an alternative LOS standard may be considered which better serves the local community.

² Transportation Research Board, *Highway Capacity Manual 7th Edition*, 2022.

³ [WSDOT – Level of Service Standard \(arcgis.com\)](https://arcgis.com)

Delay & Capacity Analysis

The study intersections were analyzed utilizing methodologies and parameters detailed in the *WSDOT Synchro & SimTraffic Protocol*⁴ document. Of specific note, the following peak hour factors (PHF) were incorporated in the analysis models:

- For existing year conditions, a PHF of no less than 0.80 was applied to each study intersection.
- For future year 2043 conditions the PHF was increased to 1.0.

The LOS, delay, and v/c results of the capacity analysis are shown in Table 4 for the AM and PM peak hours. Detailed calculations as well as tables showing the relationship between delay and LOS are included in the appendix to this report.

Table 4: Intersection Capacity Analysis Summary

Analysis Scenario	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
1. SR-411 at Westside Highway						
2023 Existing Conditions	B	12	0.48	B	13	0.51
2043 Background Conditions	C	16	0.62	D	28	0.84
2043 Buildout Conditions	C	21	0.74	F	60	1.11
2. A Street at 3rd Avenue						
2023 Existing Conditions	B	14	0.07	B	14	0.07
2043 Background Conditions	C	16	0.10	C	16	0.11
2043 Buildout Conditions	C	18	0.12	C	20	0.14
3. Cowlitz Steet at Huntington Avenue						
2023 Existing Conditions	B	10	0.39	B	10	0.36
2043 Background Conditions	B	11	0.48	B	12	0.53
2043 Buildout Conditions	B	13	0.54	B	14	0.65
4. A Steet at Huntington Avenue						
2023 Existing Conditions	B	11	0.43	B	10	0.35
2043 Background Conditions	B	13	0.54	B	14	0.54
2043 Buildout Conditions	C	19	0.69	C	20	0.73

Table Notes: **BOLDED** text indicates intersection operation above jurisdictional standards.

⁴ [WSDOT Synchro & SimTraffic Protocol \(wa.gov\)](#)

Table 4: Intersection Capacity Analysis Summary (Continued)

Analysis Scenario	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
5. C Street at Huntington Avenue						
2023 Existing Conditions	B	12	0.15	B	10	0.03
2043 Background Conditions	B	13	0.20	B	11	0.04
2043 Buildout Conditions	C	16	0.29	B	14	0.10
6. Front Avenue at Huntington Avenue						
2023 Existing Conditions	B	12	0.22	A	10	0.03
2043 Background Conditions	B	13	0.28	B	10	0.05
2043 Buildout Conditions	C	21	0.46	B	13	0.10
7. Larson Lane at Huntington Avenue						
2023 Existing Conditions	B	11	<0.01	A	10	<0.01
2043 Background Conditions	B	12	<0.01	B	10	<0.01
2043 Buildout Conditions	C	17	0.01	B	12	<0.01
8. Site Access at Huntington Avenue						
2023 Existing Conditions	A	0	0.00	A	0	0.00
2043 Background Conditions	A	0	0.00	A	0	0.00
2043 Buildout Conditions	F	>120	>1.20	F	>120	>1.20
9. Pleasant Hill Road at Huntington Avenue						
2023 Existing Conditions	B	12	0.04	B	11	0.02
2043 Background Conditions	B	13	0.05	B	12	0.03
2043 Buildout Conditions	C	24	0.11	D	30	0.12
10. I-5 Southbound Ramps at Huntington Avenue						
2023 Existing Conditions	B	10	0.03	A	10	0.01
2043 Background Conditions	B	10	0.03	B	10	0.02
2043 Buildout Conditions	B	14	0.22	C	15	0.28
11. I-5 Northbound Ramps at Huntington Avenue						
2023 Existing Conditions	A	10	0.18	B	10	0.28
2043 Background Conditions	B	10	0.21	B	11	0.37
2043 Buildout Conditions	C	20	0.69	F	95	1.11

Table Notes: **BOLDED** text indicates intersection operation above jurisdictional standards.



Based on the results of the operational analysis, the following intersections are projected to exceed acceptable levels of operation:

1. SR-411 at Westside Highway – 2043 Background Conditions during the PM peak hour.
8. Site Access at Huntington Avenue – 2043 Buildout Conditions during the AM and PM peak hours.
11. I-5 Northbound Ramps at Huntington Avenue – 2043 Buildout Conditions during the PM peak hour.

All other study intersections are currently operating acceptably and are projected to continue operating acceptably through 2043 with full buildout of the site. No operational mitigation is necessary or recommended at these study intersections.

SR-411 at Westside Hwy & I-5 NB Ramps at Huntington Avenue

For the intersection of SR-411 at Westside Highway, mitigation was found to be necessary by year 2043 without impacts from the proposed LOTC Master Plan project. Since mitigation is expected to be necessary regardless of whether or not the proposed project is developed, it’s recommended that a proportionate share contribution mechanism be established in order to collect impact fees at the intersection from all future development applications in the area, inclusive of development that occurs outside the LOTC Master Plan area.

Since the intersections of SR-411 at Westside Highway and the I-5 northbound ramps at Huntington Avenue operate under the jurisdiction of WSDOT, WSDOT may consider alternative mitigation more prudent than what would be provided in this DA analysis. Therefore, no specific capacity-related improvements are suggested for these intersections.

Site Access at Huntington Avenue

For the site access intersection along Huntington Avenue, as part of the LOTC Master Plan project the intersection will be redesigned as a single lane roundabout with a northeast bound right-turn bypass lane. To evaluate if the intersection will operate acceptably as a roundabout with full buildout of the LOTC Master Plan project, Sidra software was utilized and the intersection was modeled in accordance with parameters outlined in the *WSDOT Sidra Policy Settings*⁵ document. Table 5 presents operation at the site access intersection along Huntington Avenue with mitigation in place.

Table 5: Mitigation Analysis Summary

Analysis Scenario	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
8. Site Access at Huntington Avenue						
2043 Buildout Conditions	F	>120	>1.20	F	>120	>1.20
2043 Mitigated Conditions	A	8	0.57	A	7	0.64

Table Notes: **BOLDED** text indicates intersection operation above jurisdictional standards.

⁵ [WSDOT Sidra Policy Setting \(wa.gov\)](https://www.wa.gov)



Mitigation Thresholds

To determine when the proposed LOTC Master Plan project will trigger the need for mitigation at the site access and I-5 northbound ramps intersections along Huntington Avenue, site trip generation was adjusted to determine a PM peak hour trip impact threshold for when mitigation may be necessary. Table 6 presents these thresholds of when mitigation will be required at the study intersections.

Table 6: Intersection Capacity Analysis Summary

Mitigation	PM Peak Hour Impact Threshold (Total External Trips Impacting Intersection)	LOTC Master Plan Trip Generation	
		Total External PM Peak Hour Trips Generated	Percent of Master Plan Developed
1. SR-411 at Westside Highway			
TBD, Collect Proportionate Share Contributions	0	0	0.0%
8. Site Access at Huntington Avenue			
Single Lane Roundabout with a NEB Right-turn Bypass Lane	657	657	43.2%
11. I-5 NB Ramps at Huntington Avenue			
TBD	384	1,296	85.2%



Conclusions

1. The trip generation calculations show that the LOTC Master Plan project could generate the following:
 - a. Total Trips (Excluding Internal Capture Trips): 1,019 AM peak hour trips, 1,522 PM peak hour trips, and 16,096 average weekday trips.
 - b. Pass-by Trips (Excluding Internal Capture Trips): 164 AM peak hour trips, 368 PM peak hour trips, and 3,786 average weekday trips.
 - c. Primary Trips (Excluding Internal Capture Trips): 855 AM peak hour trips, 1,154 PM peak hour trips, and 12,310 average weekday trips.
2. Based on the results of the operational analysis, the following intersections are projected to exceed acceptable levels of operation:
 - a. SR-411 at Westside Highway
 - b. Site Access at Huntington Avenue
 - c. I-5 Northbound Ramps at Huntington Avenue

For the intersection of SR-411 at Westside Highway, mitigation is expected to be necessary regardless of whether or not the proposed project is developed. It's recommended that a proportionate share contribution mechanism be established in order to collect impact fees at the intersection from all future development applications in the area, inclusive of development that occurs outside the LOTC Master Plan area. Specific capacity-related improvements at the WSDOT intersections will require further coordination with agency staff.

For the site access intersection along Huntington Avenue, as part of the LOTC Master Plan project the intersection will be redesigned as a single lane roundabout with a northeast bound right-turn bypass lane.

3. Thresholds for determining when mitigation will be necessary at the aforementioned intersections include the following:
 - a. SR-411 at Westside Highway: 0 PM peak hour trips (collection of proportionate share fee contributions is recommended for all development in the surrounding area).
 - b. Site Access at Huntington Avenue: 657 PM peak hour trip impact to intersection.
 - c. I-5 Northbound Ramps at Huntington Avenue: 384 PM peak hour trips impact to intersection.

All other study intersections are currently operating acceptably and are projected to continue operating acceptably through 2043 with full buildout of the site. No operational mitigation is necessary or recommended at these study intersections.

Appendix A – Trip Generation and Distribution

Trip Generation Calculations

Pass-by Rate Data

Internal Capture Rate Calculations

U.S. Census Data Maps





TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Proposed Conditions

Land Use: Industrial Park
Land Use Code: 130
Land Use Subcategory: All Sites
Setting/Location: General Urban/Suburban
Variable: 1000 SF GFA
Trip Type: Vehicle
Variable Quantity: **320**

AM PEAK HOUR

Trip Rate: 0.34

	Enter	Exit	Total
Directional Split	81%	19%	
Trip Ends	88	21	109

PM PEAK HOUR

Trip Rate: 0.34

	Enter	Exit	Total
Directional Split	22%	78%	
Trip Ends	24	85	109

WEEKDAY

Trip Equation: $\ln(T) = 0.52\ln(X) + 4.45$

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	860	860	1,720

SATURDAY

Trip Rate: 2.54

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	406	406	812



TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Proposed Conditions

Land Use: Multifamily Housing (Low-Rise)
Land Use Code: 220
Land Use Subcategory: Not Close to Rail Transit
Setting/Location: General Urban/Suburban
Variable: Dwelling Units
Trip Type: Vehicle
Variable Quantity: 200

AM PEAK HOUR

Trip Equation: $T=0.31(X)+22.85$

	Enter	Exit	Total
Directional Split	24%	76%	
Trip Ends	20	65	85

PM PEAK HOUR

Trip Equation: $T=0.43(X)+20.55$

	Enter	Exit	Total
Directional Split	63%	37%	
Trip Ends	67	40	107

WEEKDAY

Trip Equation: $T=6.41(X)+75.31$

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	679	679	1,358



TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Proposed Conditions

Land Use: Campground/Recreational Vehicle Park
Land Use Code: 416
Land Use Subcategory: All Sites
Setting/Location: General Urban/Suburban
Variable: Occupied Campsites
Trip Type: Vehicle
Variable Quantity: 200

AM PEAK HOUR

Trip Rate: 0.21

	Enter	Exit	Total
Directional Split	36%	64%	
Trip Ends	15	27	42

PM PEAK HOUR

Trip Rate: 0.27

	Enter	Exit	Total
Directional Split	65%	35%	
Trip Ends	35	19	54

WEEKDAY

Trip Rate: 2.7

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	270	270	540

Note: Weekday trip generation assumed to be ten times the PM Peak Hour.



TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Proposed Conditions

Land Use: Campground/Recreational Vehicle Park
Land Use Code: 416
Land Use Subcategory: All Sites
Setting/Location: General Urban/Suburban
Variable: Occupied Campsites
Trip Type: Vehicle
Variable Quantity: 200

AM PEAK HOUR

Trip Rate: 0.21

	Enter	Exit	Total
Directional Split	36%	64%	
Trip Ends	15	27	42

PM PEAK HOUR

Trip Rate: 0.27

	Enter	Exit	Total
Directional Split	65%	35%	
Trip Ends	35	19	54

WEEKDAY

Trip Rate: 2.7

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	270	270	540

Note: Weekday trip generation assumed to be ten times the PM Peak Hour.



TRIP GENERATION CALCULATIONS
 Source: Trip Generation Manual, 11th Edition
 Proposed Conditions

Land Use: General Office Building
Land Use Code: 710
Land Use Subcategory: All Sites
Setting/Location: General Urban/Suburban
Variable: 1000 SF GFA
Trip Type: Vehicle
Variable Quantity: **55**

AM PEAK HOUR

Trip Equation: $\ln(T) = 0.86\ln(X) + 1.16$

	Enter	Exit	Total
Directional Split	88%	12%	
Trip Ends	88	12	100

PM PEAK HOUR

Trip Equation: $\ln(T) = 0.83\ln(X) + 1.29$

	Enter	Exit	Total
Directional Split	17%	83%	
Trip Ends	17	84	101

WEEKDAY

Trip Equation: $\ln(T) = 0.87\ln(X) + 3.05$

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	345	345	690

SATURDAY

Trip Rate: 2.21

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	61	61	122



TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Proposed Conditions

Land Use: Business Park
Land Use Code: 770
Land Use Subcategory: All Sites
Setting/Location: General Urban/Suburban
Variable: 1000 SF GFA
Trip Type: Vehicle
Variable Quantity: 242

AM PEAK HOUR

Trip Equation: $\ln(T) = 0.94\ln(X) + 0.59$

	Enter	Exit	Total
Directional Split	85%	15%	
Trip Ends	267	47	314

PM PEAK HOUR

Trip Equation: $\ln(T) = 0.88\ln(X) + 0.93$

	Enter	Exit	Total
Directional Split	26%	74%	
Trip Ends	82	235	317

WEEKDAY

Trip Equation: $T = 10.62(X) + 715.67$

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	1,643	1,643	3,286

SATURDAY

Trip Equation: $\ln(T) = 0.83\ln(X) + 1.94$

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	331	331	662



TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Proposed Conditions

Land Use: Shopping Plaza (40-150k)
Land Use Code: 821
Land Use Subcategory: Supermarket - Yes
Setting/Location: General Urban/Suburban
Variable: 1000 SF GFA
Trip Type: Vehicle
Variable Quantity: **123**

AM PEAK HOUR

Trip Rate: 3.53

	Enter	Exit	Total
Directional Split	62%	38%	
Trip Ends	269	165	434

PM PEAK HOUR

Trip Equation: $T=7.67(X)+118.86$

	Enter	Exit	Total
Directional Split	48%	52%	
Trip Ends	510	552	1,062

WEEKDAY

Trip Equation: $T=76.96(X)+1412.79$

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	5,439	5,439	10,878

SATURDAY

Trip Rate: 116.15

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	7,143	7,143	14,286

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Landing on the Cowlitz Master Plan	Organization:	Lancaster Mobley
Project Location:	Castle Rock, WA	Performed By:	Daniel Stumpf, PE
Scenario Description:		Date:	10/19/2023
Analysis Year:	Buildout Conditions	Checked By:	
Analysis Period:	AM Street Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	770	112	KSF	414	355	59
Retail	821	123	KSF	434	269	165
Restaurant				0		
Cinema/Entertainment	416	200	campsites	42	15	27
Residential	220	200	units	85	20	65
Hotel				0		
All Other Land Uses ²	130	450	KSF	109	88	21
Total				1084	747	337

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.25	0%	0%	1.25	0%	0%
Retail	1.25	0%	0%	1.25	0%	0%
Restaurant						
Cinema/Entertainment	1.25	0%	0%	1.25	0%	0%
Residential	1.25	0%	0%	1.25	0%	0%
Hotel						
All Other Land Uses ²	1.25	0%	0%	1.25	0%	0%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		21	0	0	0	0
Retail	18		0	0	1	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	0	0		0
Hotel	0	0	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	1,355	934	421
Internal Capture Percentage	6%	5%	10%
External Vehicle-Trips ³	1,014	712	302
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	5%	28%
Retail	7%	9%
Restaurant	N/A	N/A
Cinema/Entertainment	0%	0%
Residential	4%	4%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Landing on the Cowlitz Master Plan
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.25	355	444	1.25	59	74
Retail	1.25	269	336	1.25	165	206
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.25	15	19	1.25	27	34
Residential	1.25	20	25	1.25	65	81
Hotel	1.00	0	0	1.00	0	0

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		21	47	0	1	0
Retail	60		27	0	29	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	2	1	16	0		0
Hotel	0	0	0	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		108	0	0	0	0
Retail	18		0	0	1	0
Restaurant	62	27		0	1	0
Cinema/Entertainment	0	0	0		0	0
Residential	13	57	0	0		0
Hotel	13	13	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	20	424	444	339	0	0
Retail	22	314	336	251	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	19	19	15	0	0
Residential	1	24	25	19	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	110	110	88	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	21	53	74	42	0	0
Retail	19	187	206	150	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	34	34	27	0	0
Residential	3	78	81	62	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	26	26	21	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A
²Person-Trips
³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator
*Indicates computation that has been rounded to the nearest whole number.

NCHRP 8-51 Internal Trip Capture Estimation Tool			
Project Name:	Landing on the Cowlitz Master Plan	Organization:	Lancaster Mobley
Project Location:	Castle Rock, WA	Performed By:	Daniel Stumpf, PE
Scenario Description:		Date:	10/19/2023
Analysis Year:	Buildout Conditions	Checked By:	
Analysis Period:	PM Street Peak Hour	Date:	

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office	770	112	KSF	418	99	319
Retail	821	123	KSF	1062	510	552
Restaurant				0		
Cinema/Entertainment	416	200	campsites	54	35	19
Residential	220	200	units	107	67	40
Hotel				0		
All Other Land Uses ²	130	450	KSF	109	24	85
Total				1750	735	1015

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ.	% Transit	% Non-Motorized	Veh. Occ.	% Transit	% Non-Motorized
Office	1.25	0%	0%	1.25	0%	0%
Retail	1.25	0%	0%	1.25	0%	0%
Restaurant						
Cinema/Entertainment	1.25	0%	0%	1.25	0%	0%
Residential	1.25	0%	0%	1.25	0%	0%
Hotel						
All Other Land Uses ²	1.25	0%	0%	1.25	0%	0%

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		600	600		600	
Retail					600	
Restaurant						
Cinema/Entertainment					600	
Residential		600				
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		45	0	0	3	0
Retail	14		0	11	39	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	5	0		2	0
Residential	2	18	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	2,189	920	1,269
Internal Capture Percentage	13%	15%	11%
External Vehicle-Trips ³	1,529	624	905
External Transit-Trips ⁴	0	0	0
External Non-Motorized Trips ⁴	0	0	0

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	13%	12%
Retail	11%	9%
Restaurant	N/A	N/A
Cinema/Entertainment	25%	29%
Residential	52%	40%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Informational Report*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

³Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

⁴Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas Transportation Institute

Project Name:	Landing on the Cowlitz Master Plan
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.25	99	124	1.25	319	399
Retail	1.25	510	638	1.25	552	690
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.25	35	44	1.25	19	24
Residential	1.25	67	84	1.25	40	50
Hotel	1.00	0	0	1.00	0	0

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		70	14	0	8	0
Retail	14		200	28	179	35
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	5	7		2	0
Residential	2	18	11	0		2
Hotel	0	0	0	0	0	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		45	0	0	3	0
Retail	38		0	11	39	0
Restaurant	37	319		14	13	0
Cinema/Entertainment	7	26	0		3	0
Residential	71	56	0	0		0
Hotel	0	13	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	16	108	124	86	0	0
Retail	68	570	638	456	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	11	33	44	26	0	0
Residential	44	40	84	32	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	30	30	24	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	48	351	399	281	0	0
Retail	64	626	690	501	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	7	17	24	14	0	0
Residential	20	30	50	24	0	0
Hotel	0	0	0	0	0	0
All Other Land Uses ³	0	106	106	85	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site-not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

Table 7.1a Adjusted Internal Trip Capture Rates for Trip Origins within a Multi-Use Development

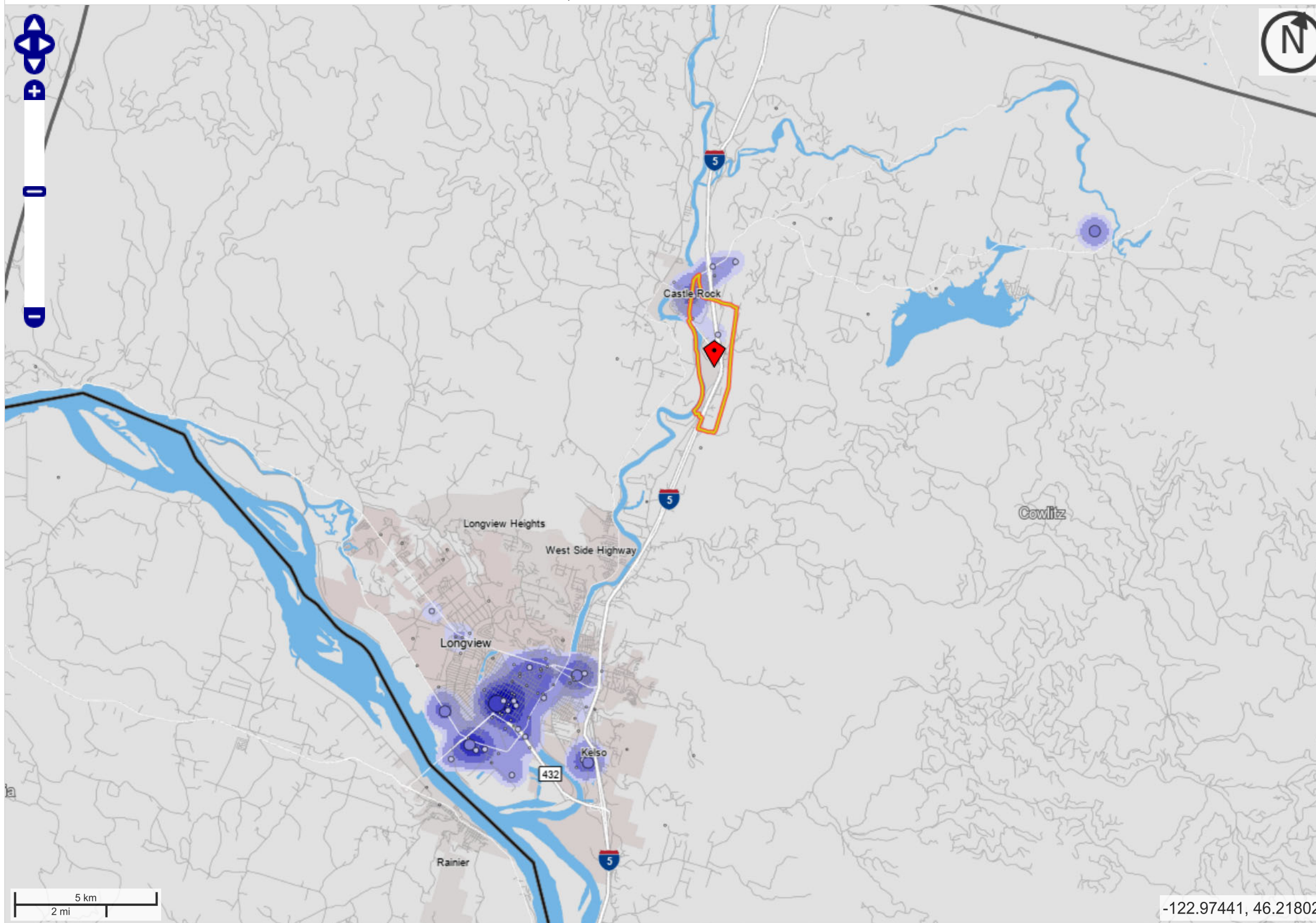
Land Use Pairs		Weekday	
		AM Peak Hour	PM Peak Hour
From OFFICE	To Office	0.0%	0.0%
	To Retail	28.0%	17.6%
	To Restaurant	63.0%	3.5%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	1.0%	2.0%
	To Hotel	0.0%	0.0%
From RETAIL	To Office	29.0%	2.0%
	To Retail	0.0%	0.0%
	To Restaurant	13.0%	29.0%
	To Cinema/Entertainment	0.0%	4.0%
	To Residential	14.0%	26.0%
	To Hotel	0.0%	5.0%
From RESTAURANT	To Office	31.0%	3.0%
	To Retail	14.0%	41.0%
	To Restaurant	0.0%	0.0%
	To Cinema/Entertainment	0.0%	8.0%
	To Residential	4.0%	18.0%
	To Hotel	3.0%	7.0%
From CINEMA/ENTERTAINMENT	To Office	0.0%	2.0%
	To Retail	0.0%	21.0%
	To Restaurant	0.0%	31.0%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	0.0%	8.0%
	To Hotel	0.0%	2.0%
From RESIDENTIAL	To Office	2.0%	4.0%
	To Retail	1.0%	37.0%
	To Restaurant	20.0%	21.0%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	0.0%	0.0%
	To Hotel	0.0%	3.0%
From HOTEL	To Office	75.0%	0.0%
	To Retail	14.0%	16.0%
	To Restaurant	9.0%	68.0%
	To Cinema/Entertainment	0.0%	0.0%
	To Residential	0.0%	2.0%
	To Hotel	0.0%	0.0%

Table 7.2a Adjusted Internal Trip Capture Rates for Trip Destinations within a Multi-Use Development

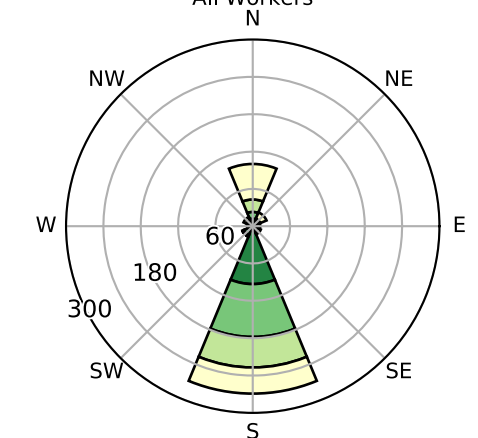
Land Use Pairs		Weekday	
		AM Peak Hour	PM Peak Hour
To OFFICE	From Office	0.0%	0.0%
	From Retail	4.0%	31.0%
	From Restaurant	14.0%	30.0%
	From Cinema/Entertainment	0.0%	6.0%
	From Residential	3.0%	57.0%
	From Hotel	3.0%	0.0%
To RETAIL	From Office	32.0%	7.0%
	From Retail	0.0%	0.0%
	From Restaurant	8.0%	50.0%
	From Cinema/Entertainment	0.0%	4.0%
	From Residential	17.0%	8.8%
	From Hotel	4.0%	2.0%
To RESTAURANT	From Office	23.0%	1.8%
	From Retail	50.0%	29.0%
	From Restaurant	0.0%	0.0%
	From Cinema/Entertainment	0.0%	3.0%
	From Residential	20.0%	14.0%
	From Hotel	6.0%	5.0%
To CINEMA/ENTERTAINMENT	From Office	0.0%	1.0%
	From Retail	0.0%	26.0%
	From Restaurant	0.0%	32.0%
	From Cinema/Entertainment	0.0%	0.0%
	From Residential	0.0%	0.0%
	From Hotel	0.0%	0.0%
To RESIDENTIAL	From Office	0.0%	4.0%
	From Retail	2.0%	46.0%
	From Restaurant	5.0%	16.0%
	From Cinema/Entertainment	0.0%	4.0%
	From Residential	0.0%	0.0%
	From Hotel	0.0%	0.0%
To HOTEL	From Office	0.0%	0.0%
	From Retail	0.0%	17.0%
	From Restaurant	4.0%	71.0%
	From Cinema/Entertainment	0.0%	1.0%
	From Residential	0.0%	12.0%
	From Hotel	0.0%	0.0%



Save Load Feedback Previous Extent Show Tabs Hide Chart/Report



Job Counts by Distance/Direction in 2019
All Workers



Views: Table Radial Chart

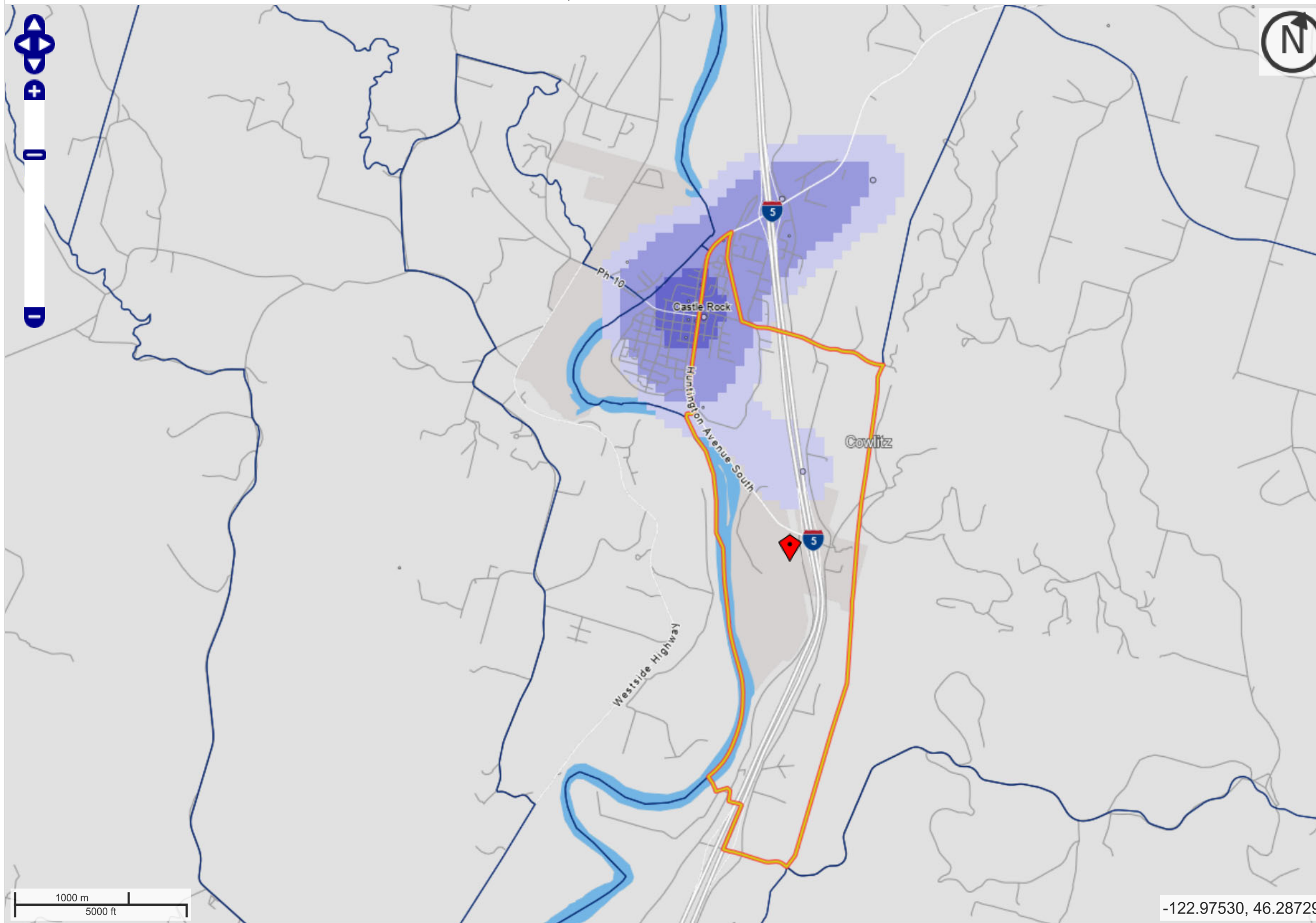
Jobs by Distance - Home Census Block to Work Census Block

	2019	
	Count	Share
Total All Jobs	462	100.0%
<input type="checkbox"/> Less than 10 miles	143	31.0%
<input type="checkbox"/> 10 to 24 miles	101	21.9%
<input type="checkbox"/> 25 to 50 miles	87	18.8%
<input type="checkbox"/> Greater than 50 miles	131	28.4%

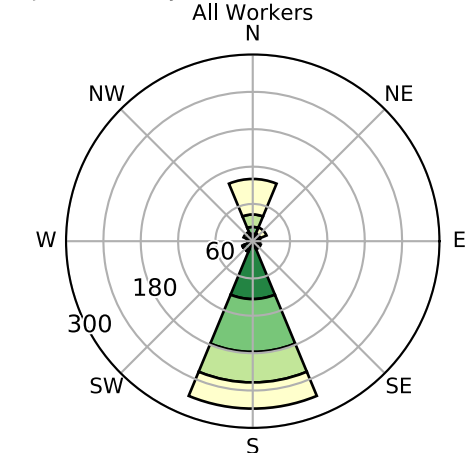
Note: The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY21-249.



Save Load Feedback Previous Extent Show Tabs Hide Chart/Report



Job Counts by Distance/Direction in 2019



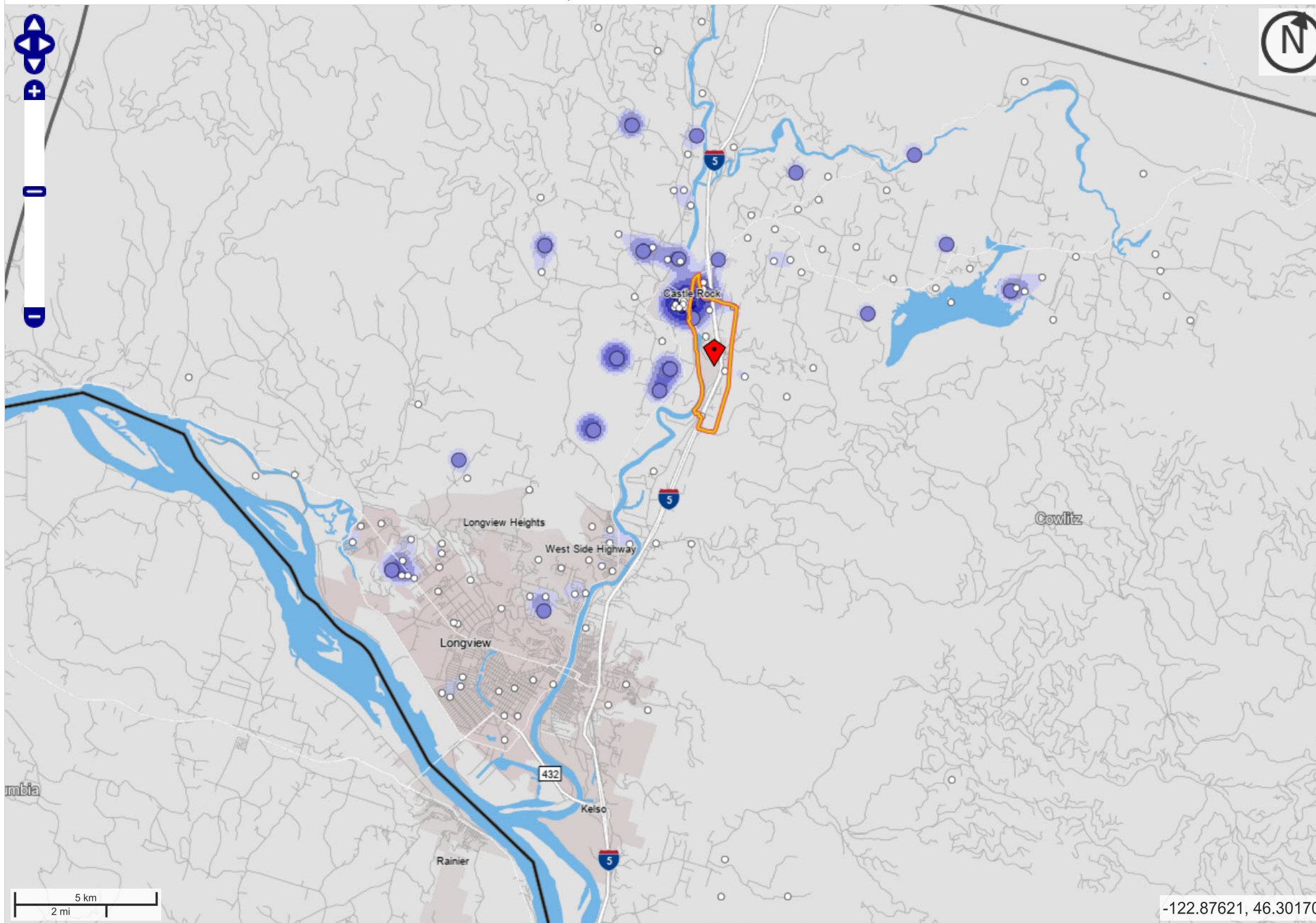
Views: Radial Chart

Jobs by Distance - Home Census Block to Work Census Block

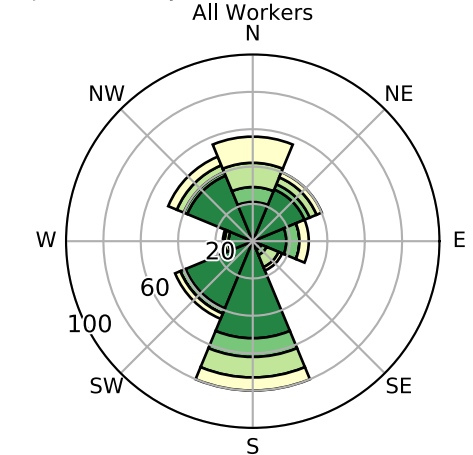
	2019	
	Count	Share
Total All Jobs	462	100.0%
<input type="checkbox"/> Less than 10 miles	143	31.0%
<input type="checkbox"/> 10 to 24 miles	101	21.9%
<input type="checkbox"/> 25 to 50 miles	87	18.8%
<input type="checkbox"/> Greater than 50 miles	131	28.4%



Save Load Feedback Previous Extent Show Tabs Hide Chart/Report



Job Counts by Distance/Direction in 2019
All Workers



Views: Map Radial Chart

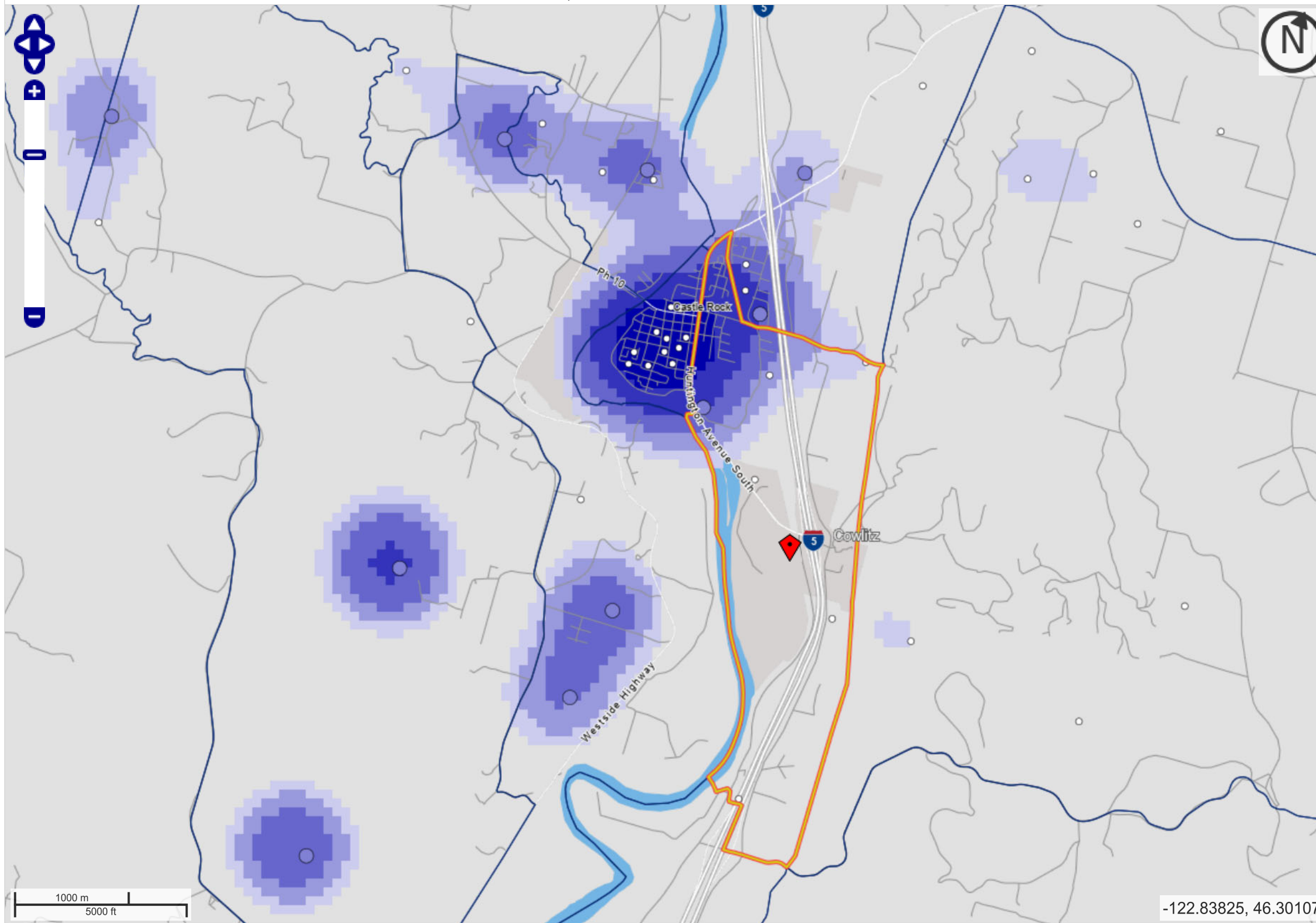
Jobs by Distance - Work Census Block to Home Census Block

	2019	
	Count	Share
Total All Jobs	333	100.0%
<input type="checkbox"/> Less than 10 miles	216	64.9%
<input type="checkbox"/> 10 to 24 miles	36	10.8%
<input type="checkbox"/> 25 to 50 miles	41	12.3%
<input type="checkbox"/> Greater than 50 miles	40	12.0%

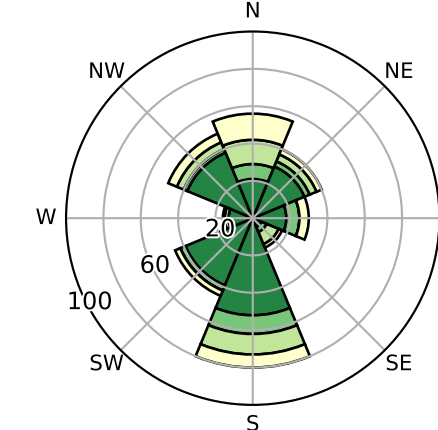
Note: The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY21-249.



Save Load Feedback Previous Extent Show Tabs Hide Chart/Report



Job Counts by Distance/Direction in 2019
All Workers



Views Radial Chart

Jobs by Distance - Work Census Block to Home Census Block

	2019	
	Count	Share
Total All Jobs	333	100.0%
<input type="checkbox"/> Less than 10 miles	216	64.9%
<input type="checkbox"/> 10 to 24 miles	36	10.8%
<input type="checkbox"/> 25 to 50 miles	41	12.3%
<input type="checkbox"/> Greater than 50 miles	40	12.0%

Appendix B – Traffic Volumes

Traffic Counts





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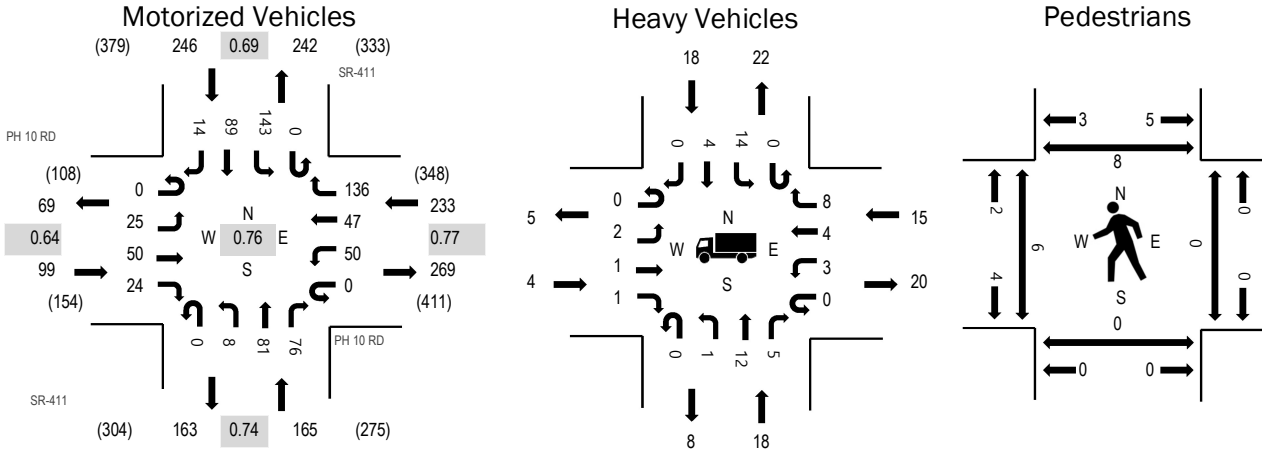
Location: 1 SR-411 & PH 10 RD AM

Date: Tuesday, October 17, 2023

Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.0%	0.64
WB	6.4%	0.77
NB	10.9%	0.74
SB	7.3%	0.69
All	7.4%	0.76

Traffic Counts - Motorized Vehicles

Interval Start Time	PH 10 RD Eastbound				PH 10 RD Westbound				SR-411 Northbound			SR-411 Southbound				Total	Rolling Hour	
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right
7:00 AM	0	0	1	1	0	2	0	3	0	0	4	6	0	4	8	1	30	683
7:05 AM	0	0	2	0	0	3	0	2	0	0	4	8	0	5	5	1	30	712
7:10 AM	0	1	4	0	0	1	3	3	0	0	1	2	0	6	5	0	26	728
7:15 AM	0	2	6	3	0	2	2	5	0	1	4	6	0	2	8	0	41	743
7:20 AM	0	4	4	2	0	3	1	4	0	1	1	7	0	7	5	3	42	737
7:25 AM	0	3	6	1	0	1	1	14	0	1	10	6	0	11	1	2	57	735
7:30 AM	0	3	11	3	0	10	3	8	0	1	10	7	0	25	10	1	92	724
7:35 AM	0	4	4	4	0	3	1	14	0	1	7	11	0	17	8	1	75	659
7:40 AM	0	2	3	2	0	4	5	14	0	1	9	9	0	16	11	1	77	625
7:45 AM	0	1	0	1	0	2	8	17	0	1	8	8	0	14	7	1	68	579
7:50 AM	0	2	7	1	0	4	11	14	0	1	12	3	0	12	12	2	81	549
7:55 AM	0	3	2	2	0	4	3	16	0	0	10	3	0	8	12	1	64	502
8:00 AM	0	0	3	2	0	7	5	13	0	0	7	5	0	13	2	2	59	473
8:05 AM	0	0	1	3	0	6	2	7	0	0	1	5	0	14	7	0	46	
8:10 AM	0	1	3	0	0	4	5	10	0	0	2	6	0	4	6	0	41	
8:15 AM	0	1	3	2	0	7	2	3	0	0	3	5	0	4	5	0	35	
8:20 AM	0	2	4	2	0	5	2	3	0	0	3	6	0	4	8	1	40	
8:25 AM	0	1	1	2	0	1	7	12	0	2	2	8	0	2	5	3	46	
8:30 AM	0	0	0	1	0	7	1	1	0	1	3	6	0	4	3	0	27	
8:35 AM	0	1	2	3	0	7	0	0	0	1	5	9	0	3	9	1	41	
8:40 AM	0	0	2	2	0	2	4	2	0	0	4	3	0	2	9	1	31	
8:45 AM	0	1	1	1	0	7	1	5	0	0	3	7	0	7	4	1	38	
8:50 AM	0	1	6	1	0	1	1	5	0	0	4	4	0	3	7	1	34	
8:55 AM	0	1	1	4	0	4	4	4	0	0	3	3	0	4	7	0	35	
Count Total	0	34	77	43	0	97	72	179	0	12	120	143	0	191	164	24	1,156	
Peak Hour	0	25	50	24	0	50	47	136	0	8	81	76	0	143	89	14	743	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	1	0	1	2	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	1	1	1	3	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	1	0	0	1	2	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	2	1	0	3	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	1	0	1	1	3	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	1	1	0	0	2	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	2	2
7:30 AM	1	4	2	2	9	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	1	0	5	6	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	4	1	0	5	7:40 AM	0	0	0	0	0	7:40 AM	1	0	0	1	2
7:45 AM	0	0	3	2	5	7:45 AM	0	0	0	0	0	7:45 AM	1	0	0	1	2
7:50 AM	0	0	0	3	3	7:50 AM	0	0	0	0	0	7:50 AM	2	0	0	1	3
7:55 AM	0	2	2	3	7	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	1	1
8:00 AM	0	1	2	0	3	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	0	1	1	2	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	1	1
8:10 AM	1	3	2	1	7	8:10 AM	0	0	0	0	0	8:10 AM	2	0	0	1	3
8:15 AM	0	0	2	0	2	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	2	0	0	0	2	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	1	2	0	3	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	1	1	0	2	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	1	0	2	0	3	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	1	2	1	1	5	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	0	1	2	1	4	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	1	0	3	2	6	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	1	1	2	0	4	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	11	26	31	25	93	Count Total	0	0	0	0	0	Count Total	6	0	0	8	14
Peak Hour	4	18	15	18	55	Peak Hour	0	0	0	0	0	Peak Hour	6	0	0	8	14



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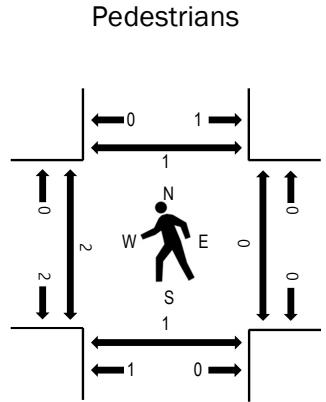
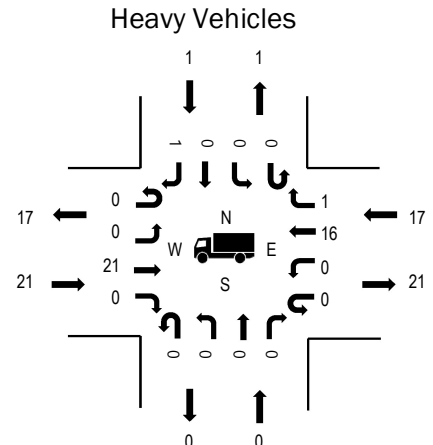
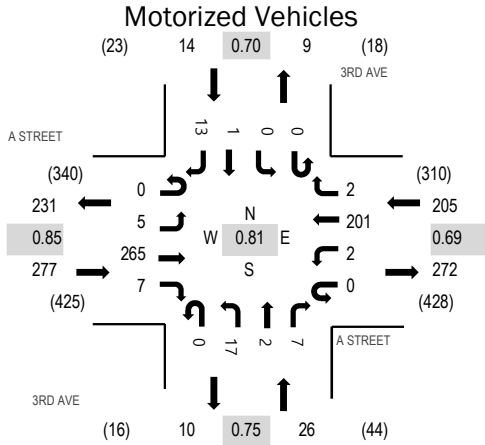
Location: 2 3RD AVE & A STREET AM

Date: Tuesday, October 17, 2023

Peak Hour: 07:25 AM - 08:25 AM

Peak 15-Minutes: 07:50 AM - 08:05 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	7.6%	0.85
WB	8.3%	0.69
NB	0.0%	0.75
SB	7.1%	0.70
All	7.5%	0.81

Traffic Counts - Motorized Vehicles

Interval Start Time	A STREET Eastbound				A STREET Westbound				3RD AVE Northbound			3RD AVE Southbound				Total	Rolling Hour	
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right
7:00 AM	0	0	10	0	0	1	4	0	0	0	0	2	0	0	0	1	18	461
7:05 AM	0	0	21	0	0	1	9	0	0	0	0	0	0	0	0	0	31	495
7:10 AM	0	1	14	0	0	0	7	0	0	0	0	2	0	0	0	1	25	500
7:15 AM	0	0	12	0	0	0	10	0	0	1	0	2	0	0	0	0	25	505
7:20 AM	0	0	8	0	0	0	6	0	0	0	1	1	0	0	0	1	17	511
7:25 AM	0	0	24	0	0	0	15	0	0	0	0	0	0	0	0	2	41	522
7:30 AM	0	1	26	1	0	0	16	0	0	0	1	2	0	0	0	1	48	502
7:35 AM	0	1	24	1	0	1	17	0	0	1	1	1	0	0	0	0	47	475
7:40 AM	0	0	26	1	0	1	19	0	0	4	0	0	0	0	0	2	53	460
7:45 AM	0	1	25	0	0	0	19	0	0	1	0	0	0	0	0	1	47	426
7:50 AM	0	0	25	2	0	0	25	0	0	3	0	0	0	0	0	2	57	409
7:55 AM	0	1	23	0	0	0	23	0	0	2	0	1	0	0	0	2	52	368
8:00 AM	0	1	21	0	0	0	26	0	0	2	0	1	0	0	0	1	52	341
8:05 AM	0	0	21	0	0	0	11	0	0	3	0	0	0	0	1	0	36	
8:10 AM	0	0	18	0	0	0	11	0	0	0	0	1	0	0	0	0	30	
8:15 AM	0	0	15	2	0	0	12	0	0	1	0	0	0	0	0	1	31	
8:20 AM	0	0	17	0	0	0	7	2	0	0	0	1	0	0	0	1	28	
8:25 AM	0	1	6	1	0	0	12	0	0	0	0	1	0	0	0	0	21	
8:30 AM	0	0	12	0	0	0	7	0	0	1	0	1	0	0	0	0	21	
8:35 AM	0	0	18	0	0	0	10	1	0	0	0	2	0	0	1	0	32	
8:40 AM	0	1	5	0	0	0	10	1	0	1	0	0	0	0	0	1	19	
8:45 AM	0	0	19	0	0	1	6	1	0	0	1	0	0	0	0	2	30	
8:50 AM	0	1	5	0	0	0	8	0	0	0	0	1	0	0	0	1	16	
8:55 AM	0	0	13	0	0	0	10	0	0	0	0	1	0	0	1	0	25	
Count Total	0	9	408	8	0	5	300	5	0	20	4	20	0	0	3	20	802	
Peak Hour	0	5	265	7	0	2	201	2	0	17	2	7	0	0	1	13	522	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	1	0	1	7:00 AM	0	0	0	0	0	7:00 AM	1	1	0	0	2
7:05 AM	0	0	1	0	1	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0	7:10 AM	1	0	0	0	1
7:15 AM	1	0	1	0	2	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	0	1	0	1	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	1	0	0	0	1	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	1	0	3	0	4	7:30 AM	0	0	0	0	0	7:30 AM	0	1	0	0	1
7:35 AM	3	0	0	0	3	7:35 AM	0	0	0	0	0	7:35 AM	2	0	0	0	2
7:40 AM	3	0	1	0	4	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	4	0	2	0	6	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	1	0	1	0	2	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	3	0	3	0	6	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	2	0	1	0	3	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	1	0	1	0	2	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	1	1
8:10 AM	0	0	1	0	1	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	2	0	2	1	5	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	0	2	0	2	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	1	0	0	0	1	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	2	0	2	0	4	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	1	0	1	0	2	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	2	0	3	0	5	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	0	2	0	2	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	3	0	1	0	4	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	31	0	31	1	63	Count Total	0	0	0	0	0	Count Total	4	2	0	1	7
Peak Hour	21	0	17	1	39	Peak Hour	0	0	0	0	0	Peak Hour	2	1	0	1	4



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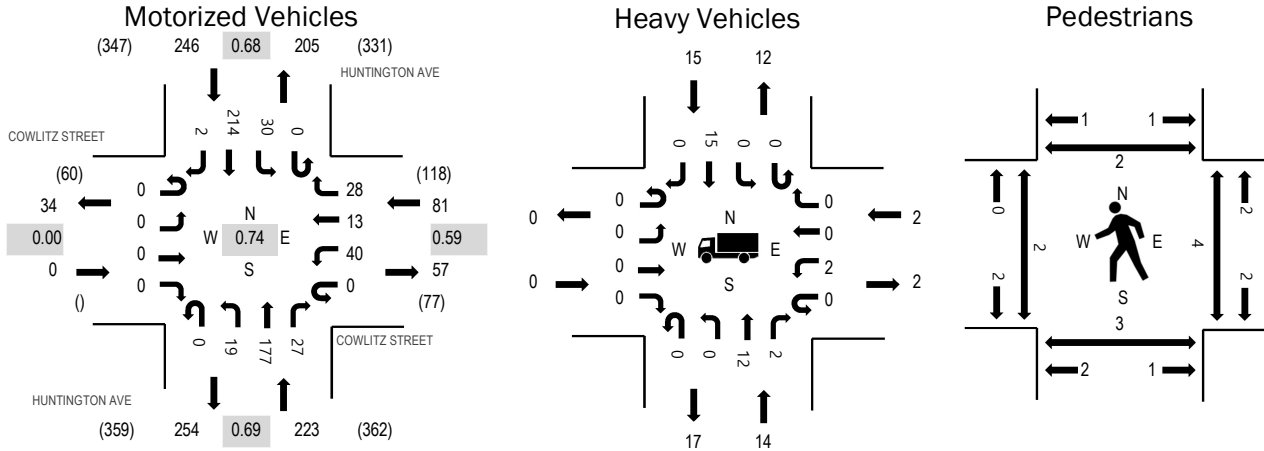
Location: 3 HUNTINGTON AVE & COWLITZ STREET AM

Date: Tuesday, October 17, 2023

Peak Hour: 07:20 AM - 08:20 AM

Peak 15-Minutes: 07:35 AM - 07:50 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	2.5%	0.59
NB	6.3%	0.69
SB	6.1%	0.68
All	5.6%	0.74

Traffic Counts - Motorized Vehicles

Interval Start Time	COWLITZ STREET Eastbound				COWLITZ STREET Westbound				HUNTINGTON AVE Northbound				HUNTINGTON AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	0	0	0	0	0	1	0	0	3	0	0	1	5	0	10	484
7:05 AM	0	0	0	0	0	1	0	2	0	1	7	0	0	1	5	0	17	509
7:10 AM	0	0	0	0	0	1	0	1	0	1	11	1	0	0	8	0	23	531
7:15 AM	0	0	0	0	0	2	1	1	0	0	12	1	0	0	4	1	22	544
7:20 AM	0	0	0	0	0	4	0	2	0	0	10	1	0	2	17	0	36	550
7:25 AM	0	0	0	0	0	4	0	1	0	0	3	0	0	3	18	0	29	548
7:30 AM	0	0	0	0	0	2	1	3	0	0	11	2	0	2	22	0	43	542
7:35 AM	0	0	0	0	0	4	1	2	0	2	11	0	0	4	32	1	57	528
7:40 AM	0	0	0	0	0	12	2	3	0	2	18	2	0	2	21	0	62	494
7:45 AM	0	0	0	0	0	3	3	4	0	4	20	3	0	6	24	0	67	464
7:50 AM	0	0	0	0	0	2	3	3	0	2	21	3	0	6	14	0	54	414
7:55 AM	0	0	0	0	0	3	1	4	0	2	24	6	0	3	20	1	64	391
8:00 AM	0	0	0	0	0	1	0	4	0	2	17	4	0	2	5	0	35	343
8:05 AM	0	0	0	0	0	2	0	0	0	1	17	4	0	0	15	0	39	
8:10 AM	0	0	0	0	0	1	2	1	0	4	11	1	0	0	16	0	36	
8:15 AM	0	0	0	0	0	2	0	1	0	0	14	1	0	0	10	0	28	
8:20 AM	0	0	0	0	0	4	0	1	0	0	12	3	0	0	14	0	34	
8:25 AM	0	0	0	0	0	1	0	3	0	1	9	1	0	0	7	1	23	
8:30 AM	0	0	0	0	0	2	0	2	0	1	7	1	0	0	15	1	29	
8:35 AM	0	0	0	0	0	0	1	1	0	1	12	0	0	1	6	1	23	
8:40 AM	0	0	0	0	0	2	2	1	0	5	9	3	0	1	9	0	32	
8:45 AM	0	0	0	0	0	2	0	2	0	4	4	0	0	1	4	0	17	
8:50 AM	0	0	0	0	0	0	1	0	0	1	14	4	0	1	10	0	31	
8:55 AM	0	0	0	0	0	0	1	1	0	0	10	0	0	0	3	1	16	
Count Total	0	0	0	0	0	55	19	44	0	34	287	41	0	36	304	7	827	
Peak Hour	0	0	0	0	0	40	13	28	0	19	177	27	0	30	214	2	550	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	1	1	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0	7:05 AM	0	1	0	0	1
7:10 AM	0	1	0	0	1	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	1	1	2	4	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	1	1
7:25 AM	0	0	0	1	1	7:25 AM	0	0	0	0	0	7:25 AM	0	0	1	1	2
7:30 AM	0	2	0	2	4	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	0	0	1	1	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	0	0	1	1	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	0	4	0	0	4	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	0	3	0	1	4	7:50 AM	0	0	0	0	0	7:50 AM	0	1	2	0	3
7:55 AM	0	0	0	2	2	7:55 AM	0	0	0	0	0	7:55 AM	0	1	1	0	2
8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0	8:00 AM	2	0	0	0	2
8:05 AM	0	1	0	3	4	8:05 AM	0	0	0	0	0	8:05 AM	0	1	0	0	1
8:10 AM	0	0	1	2	3	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	3	0	0	3	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	0	0	2	2	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	1	0	1	2	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	1	0	4	5	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	0	1	0	1	2	8:35 AM	0	0	0	0	0	8:35 AM	1	0	0	0	1
8:40 AM	0	2	0	1	3	8:40 AM	0	0	0	0	0	8:40 AM	2	0	0	0	2
8:45 AM	0	0	0	1	1	8:45 AM	0	0	0	0	0	8:45 AM	0	0	1	2	3
8:50 AM	0	0	0	1	1	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	1	0	0	1	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	0	21	2	27	50	Count Total	0	0	0	0	0	Count Total	5	4	5	4	18
Peak Hour	0	14	2	15	31	Peak Hour	0	0	0	0	0	Peak Hour	2	3	4	2	11



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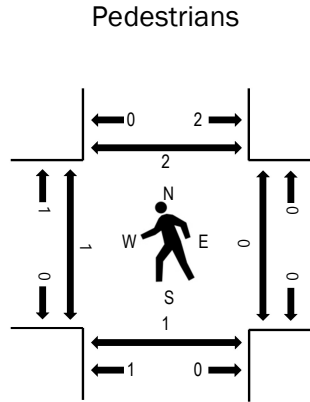
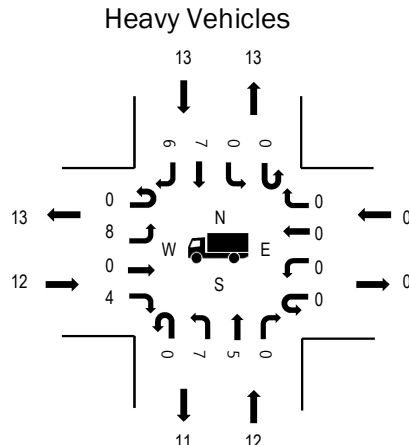
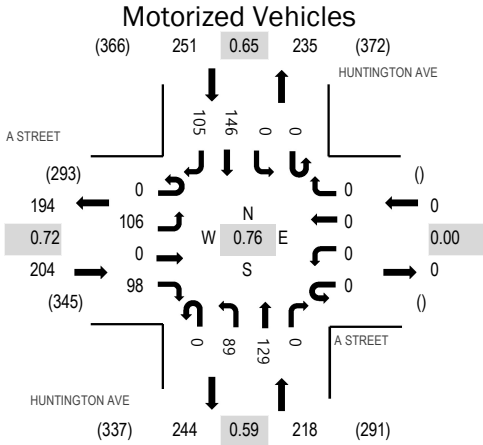
Location: 4 HUNTINGTON AVE & A STREET AM

Date: Tuesday, October 17, 2023

Peak Hour: 07:25 AM - 08:25 AM

Peak 15-Minutes: 07:40 AM - 07:55 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	5.9%	0.72
WB	0.0%	0.00
NB	5.5%	0.59
SB	5.2%	0.65
All	5.5%	0.76

Traffic Counts - Motorized Vehicles

Interval Start Time	A STREET Eastbound				A STREET Westbound				HUNTINGTON AVE Northbound				HUNTINGTON AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	6	0	5	0	0	0	0	0	2	1	0	0	0	1	5	20	581
7:05 AM	0	5	0	2	0	0	0	0	0	2	3	0	0	0	2	4	18	614
7:10 AM	0	7	0	8	0	0	0	0	0	3	6	0	0	0	5	4	33	644
7:15 AM	0	12	0	5	0	0	0	0	0	2	1	0	0	0	6	3	29	655
7:20 AM	0	7	0	4	0	0	0	0	0	4	4	0	0	0	7	11	37	666
7:25 AM	0	2	0	6	0	0	0	0	0	6	3	0	0	0	12	8	37	673
7:30 AM	0	9	0	10	0	0	0	0	0	9	5	0	0	0	17	7	57	661
7:35 AM	0	9	0	6	0	0	0	0	0	9	3	0	0	0	23	14	64	636
7:40 AM	0	10	0	7	0	0	0	0	0	15	16	0	0	0	22	10	80	599
7:45 AM	0	8	0	4	0	0	0	0	0	10	17	0	0	0	16	11	66	551
7:50 AM	0	11	0	15	0	0	0	0	0	15	19	0	0	0	12	4	76	509
7:55 AM	0	10	0	10	0	0	0	0	0	5	18	0	0	0	13	8	64	463
8:00 AM	0	13	0	12	0	0	0	0	0	6	14	0	0	0	4	4	53	421
8:05 AM	0	7	0	10	0	0	0	0	0	3	12	0	0	0	9	7	48	
8:10 AM	0	8	0	7	0	0	0	0	0	4	8	0	0	0	6	11	44	
8:15 AM	0	8	0	6	0	0	0	0	0	3	10	0	0	0	5	8	40	
8:20 AM	0	11	0	5	0	0	0	0	0	4	4	0	0	0	7	13	44	
8:25 AM	0	3	0	4	0	0	0	0	0	2	4	0	0	0	4	8	25	
8:30 AM	0	6	0	4	0	0	0	0	0	1	4	0	0	0	5	12	32	
8:35 AM	0	12	0	5	0	0	0	0	0	2	2	0	0	0	3	3	27	
8:40 AM	0	12	0	2	0	0	0	0	0	2	4	0	0	0	5	7	32	
8:45 AM	0	5	0	3	0	0	0	0	0	4	5	0	0	0	2	5	24	
8:50 AM	0	11	0	0	0	0	0	0	0	2	7	0	0	0	3	7	30	
8:55 AM	0	8	0	5	0	0	0	0	0	4	2	0	0	0	3	0	22	
Count Total	0	200	0	145	0	0	0	0	0	119	172	0	0	0	192	174	1,002	
Peak Hour	0	106	0	98	0	0	0	0	0	89	129	0	0	0	146	105	673	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	2	2	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	1	1
7:05 AM	0	1	0	0	1	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	1	0	0	0	1	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	1	0	2	3	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	1	0	1	2	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	1	0	2	3	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	1	0	1	2	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	1	1
7:40 AM	0	3	0	1	4	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	2	2	0	0	4	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	2	3	0	0	5	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	2	0	0	0	2	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	2	0	0	2	4	8:00 AM	0	0	0	0	0	8:00 AM	1	1	0	2	4
8:05 AM	1	0	0	3	4	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	0	0	0	2	2	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	3	1	0	0	4	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	0	0	1	1	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	4	4	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	2	0	0	3	5	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	1	0	0	1	2	8:35 AM	0	0	0	0	0	8:35 AM	0	1	0	0	1
8:40 AM	2	1	0	2	5	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	0	1	0	1	2	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	1	0	1	2	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	2	0	0	0	2	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	20	17	0	29	66	Count Total	0	0	0	0	0	Count Total	1	2	0	4	7
Peak Hour	12	12	0	13	37	Peak Hour	0	0	0	0	0	Peak Hour	1	1	0	3	5



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Location: 5 HUNTINGTON AVE & C STREET AM

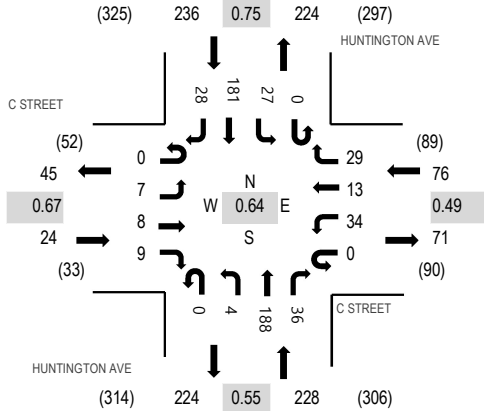
Date: Tuesday, October 17, 2023

Peak Hour: 07:20 AM - 08:20 AM

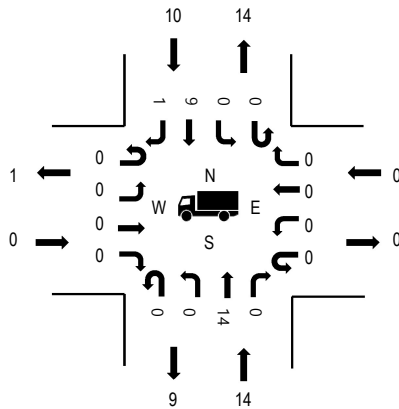
Peak 15-Minutes: 07:40 AM - 07:55 AM

Peak Hour

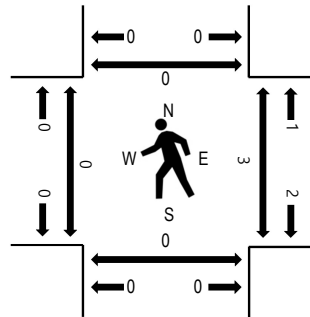
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.67
WB	0.0%	0.49
NB	6.1%	0.55
SB	4.2%	0.75
All	4.3%	0.64

Traffic Counts - Motorized Vehicles

Interval Start Time	C STREET Eastbound				C STREET Westbound				HUNTINGTON AVE Northbound				HUNTINGTON AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	1	0	0	1	0	0	0	0	3	0	0	2	3	0	10	493
7:05 AM	0	0	0	0	0	1	0	0	0	0	4	0	0	0	3	2	10	523
7:10 AM	0	0	0	0	0	1	0	0	0	0	9	1	0	1	10	2	24	549
7:15 AM	0	0	1	1	0	0	0	0	0	0	3	1	0	2	9	0	17	555
7:20 AM	0	1	0	2	0	0	1	0	0	0	8	3	0	1	9	1	26	564
7:25 AM	0	0	1	0	0	3	2	1	0	1	9	3	0	0	14	3	37	558
7:30 AM	0	2	1	1	0	3	1	2	0	0	9	3	0	4	21	4	51	539
7:35 AM	0	0	0	1	0	3	0	1	0	0	12	2	0	4	18	1	42	504
7:40 AM	0	0	0	0	0	7	0	4	0	0	32	7	0	3	14	10	77	474
7:45 AM	0	0	2	0	0	2	1	4	0	1	19	13	0	1	12	6	61	414
7:50 AM	0	0	1	1	0	7	6	8	0	0	28	3	0	8	19	1	82	370
7:55 AM	0	2	3	0	0	3	2	5	0	1	18	0	0	5	16	1	56	299
8:00 AM	0	1	0	0	0	3	0	2	0	1	16	1	0	0	16	0	40	260
8:05 AM	0	1	0	0	0	1	0	1	0	0	14	0	0	0	19	0	36	
8:10 AM	0	0	0	2	0	2	0	1	0	0	11	0	0	1	13	0	30	
8:15 AM	0	0	0	2	0	0	0	0	0	0	12	1	0	0	10	1	26	
8:20 AM	0	1	0	0	0	0	0	0	0	0	7	1	0	0	11	0	20	
8:25 AM	0	0	0	0	0	1	0	0	0	0	6	2	0	1	8	0	18	
8:30 AM	0	0	0	0	0	1	0	1	0	0	5	1	0	0	8	0	16	
8:35 AM	0	0	0	0	0	4	0	0	0	0	4	0	0	0	4	0	12	
8:40 AM	0	3	0	0	0	1	0	0	0	0	4	1	0	0	8	0	17	
8:45 AM	0	0	0	1	0	0	0	0	0	1	8	0	0	1	5	1	17	
8:50 AM	0	1	0	0	0	1	0	0	0	0	7	0	0	0	2	0	11	
8:55 AM	0	0	0	0	0	1	0	0	0	1	7	2	0	1	5	0	17	
Count Total	0	12	10	11	0	46	13	30	0	6	255	45	0	35	257	33	753	
Peak Hour	0	7	8	9	0	34	13	29	0	4	188	36	0	27	181	28	564	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	1	0	0	1	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	0	0	1	1	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	1	0	0	1	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	2	0	1	3	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	1	0	1	2	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	1	0	1	2	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	3	0	1	4	7:40 AM	0	0	0	0	0	7:40 AM	0	0	2	0	2
7:45 AM	0	2	0	0	2	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	0	3	0	0	3	7:50 AM	0	0	0	0	0	7:50 AM	0	0	1	0	1
7:55 AM	0	0	0	2	2	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	0	0	1	1	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	0	0	2	2	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	0	0	0	1	1	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	1	0	0	1	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	1	1	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	0	1	0	0	1	8:40 AM	0	0	0	0	0	8:40 AM	0	0	1	0	1
8:45 AM	0	2	0	0	2	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	0	0	1	1	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	0	18	0	14	32	Count Total	0	0	0	0	0	Count Total	0	0	4	0	4
Peak Hour	0	14	0	10	24	Peak Hour	0	0	0	0	0	Peak Hour	0	0	3	0	3



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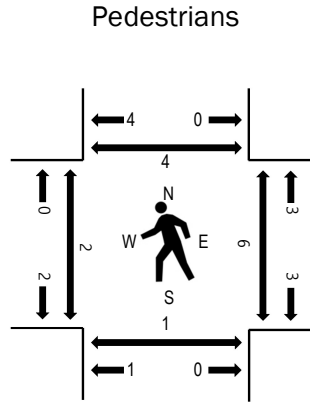
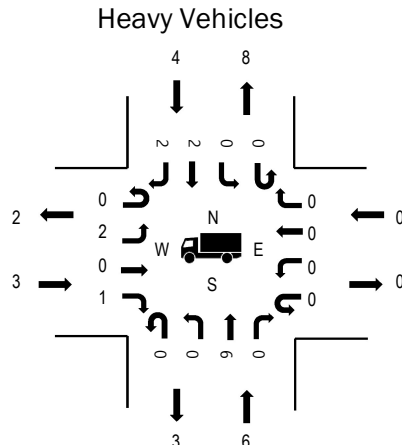
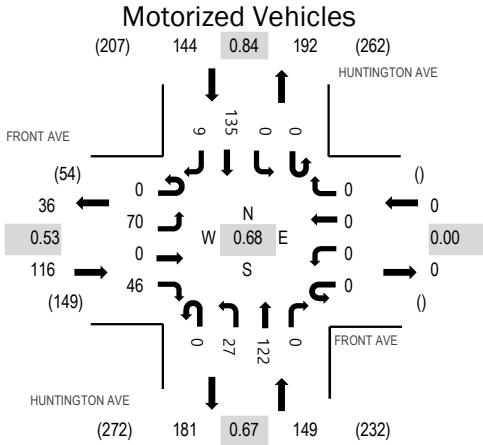
Location: 6 HUNTINGTON AVE & FRONT AVE AM

Date: Tuesday, October 17, 2023

Peak Hour: 07:25 AM - 08:25 AM

Peak 15-Minutes: 07:35 AM - 07:50 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	2.6%	0.53
WB	0.0%	0.00
NB	4.0%	0.67
SB	2.8%	0.84
All	3.2%	0.68

Traffic Counts - Motorized Vehicles

Interval Start Time	FRONT AVE Eastbound				FRONT AVE Westbound				HUNTINGTON AVE Northbound				HUNTINGTON AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	0	0	0	0	0	0	0	1	3	0	0	0	3	0	7	360
7:05 AM	0	0	0	2	0	0	0	0	0	3	5	0	0	0	2	0	12	376
7:10 AM	0	1	0	1	0	0	0	0	0	1	7	0	0	0	7	0	17	391
7:15 AM	0	0	0	4	0	0	0	0	0	4	6	0	0	0	3	0	17	398
7:20 AM	0	0	0	3	0	0	0	0	0	0	10	0	0	0	7	0	20	405
7:25 AM	0	0	0	7	0	0	0	0	0	5	15	0	0	0	14	2	43	409
7:30 AM	0	7	0	6	0	0	0	0	0	1	11	0	0	0	7	0	32	382
7:35 AM	0	8	0	7	0	0	0	0	0	5	17	0	0	0	10	2	49	365
7:40 AM	0	15	0	8	0	0	0	0	0	5	13	0	0	0	12	1	54	335
7:45 AM	0	15	0	2	0	0	0	0	0	4	14	0	0	0	13	0	48	297
7:50 AM	0	7	0	3	0	0	0	0	0	1	10	0	0	0	16	1	38	260
7:55 AM	0	8	0	0	0	0	0	0	0	0	9	0	0	0	6	0	23	234
8:00 AM	0	1	0	1	0	0	0	0	0	0	6	0	0	0	13	2	23	228
8:05 AM	0	0	0	4	0	0	0	0	0	1	10	0	0	0	12	0	27	
8:10 AM	0	1	0	4	0	0	0	0	0	2	4	0	0	0	13	0	24	
8:15 AM	0	4	0	1	0	0	0	0	0	1	7	0	0	0	10	1	24	
8:20 AM	0	4	0	3	0	0	0	0	0	2	6	0	0	0	9	0	24	
8:25 AM	0	1	0	5	0	0	0	0	0	0	4	0	0	0	6	0	16	
8:30 AM	0	0	0	4	0	0	0	0	0	1	4	0	0	0	6	0	15	
8:35 AM	0	1	0	2	0	0	0	0	0	3	2	0	0	0	11	0	19	
8:40 AM	0	0	0	4	0	0	0	0	0	2	3	0	0	0	7	0	16	
8:45 AM	0	0	0	1	0	0	0	0	0	0	6	0	0	0	4	0	11	
8:50 AM	0	0	0	0	0	0	0	0	0	1	8	0	0	0	2	1	12	
8:55 AM	0	1	0	3	0	0	0	0	0	1	8	0	0	0	4	0	17	
Count Total	0	74	0	75	0	0	0	0	0	44	188	0	0	0	197	10	588	
Peak Hour	0	70	0	46	0	0	0	0	0	27	122	0	0	0	135	9	409	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	1	0	0	1	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	2	0	1	3	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	1	2	0	0	3	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	1	0	0	1	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	0	0	3	3	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	1	0	0	1	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	1	0	0	0	1	7:45 AM	0	0	0	0	0	7:45 AM	0	1	1	0	2
7:50 AM	0	1	0	0	1	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	2	2
7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0	7:55 AM	0	0	3	0	3
8:00 AM	1	0	0	0	1	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	0	0	1	1	8:05 AM	0	0	0	0	0	8:05 AM	0	0	2	0	2
8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0	8:10 AM	1	0	0	1	2
8:15 AM	0	1	0	0	1	8:15 AM	0	0	0	0	0	8:15 AM	1	0	0	1	2
8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	0	1	0	0	1	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	1	0	0	0	1	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	0	2	0	0	2	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	4	12	0	6	22	Count Total	0	0	0	0	0	Count Total	2	1	6	4	13
Peak Hour	3	6	0	4	13	Peak Hour	0	0	0	0	0	Peak Hour	2	1	6	4	13



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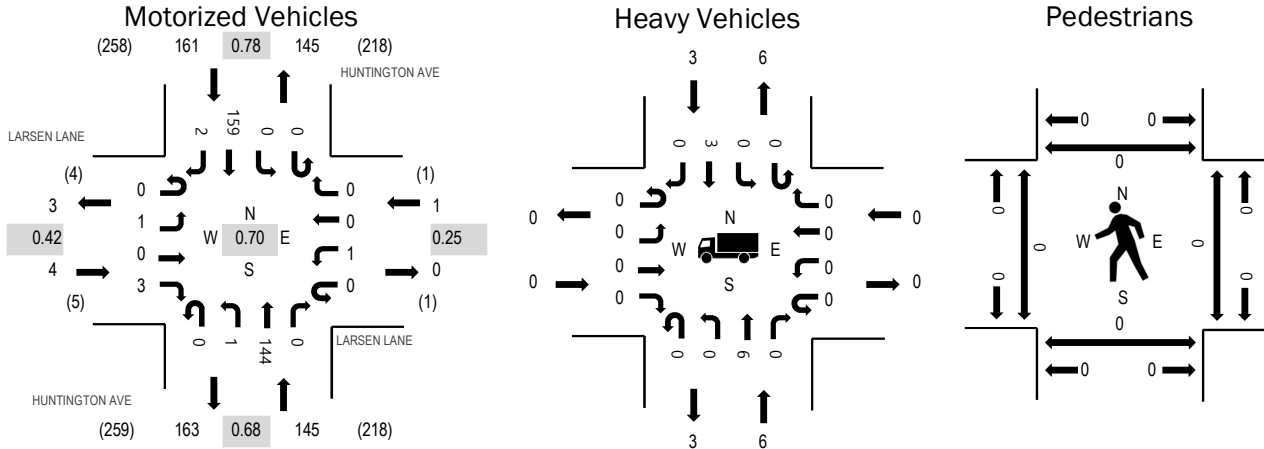
Location: 7 HUNTINGTON AVE & LARSEN LANE AM

Date: Tuesday, October 17, 2023

Peak Hour: 07:20 AM - 08:20 AM

Peak 15-Minutes: 07:35 AM - 07:50 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.42
WB	0.0%	0.25
NB	4.1%	0.68
SB	1.9%	0.78
All	2.9%	0.70

Traffic Counts - Motorized Vehicles

Interval Start Time	LARSEN LANE Eastbound				LARSEN LANE Westbound				HUNTINGTON AVE Northbound				HUNTINGTON AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	7	270
7:05 AM	0	1	0	0	0	0	0	0	0	0	10	0	0	0	4	0	15	285
7:10 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	7	0	10	292
7:15 AM	0	0	0	0	0	0	0	0	0	0	11	0	0	0	8	0	19	306
7:20 AM	0	0	0	1	0	0	0	0	0	0	14	0	0	0	8	1	24	311
7:25 AM	0	0	0	0	0	0	0	0	0	0	17	0	0	0	17	0	34	309
7:30 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	10	0	20	285
7:35 AM	0	1	0	0	0	0	0	0	0	0	21	0	0	0	17	0	39	278
7:40 AM	0	0	0	2	0	0	0	0	0	0	15	0	0	0	19	0	36	259
7:45 AM	0	0	0	0	0	0	0	0	0	1	17	0	0	0	18	0	36	236
7:50 AM	0	0	0	0	0	0	0	0	0	0	12	0	0	0	5	0	17	212
7:55 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	7	0	13	206
8:00 AM	0	0	0	0	0	1	0	0	0	0	9	0	0	0	12	0	22	212
8:05 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	15	0	22	
8:10 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	17	1	24	
8:15 AM	0	0	0	0	0	0	0	0	0	0	10	0	0	0	14	0	24	
8:20 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	16	0	22	
8:25 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	9	0	10	
8:30 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	9	0	13	
8:35 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	13	0	20	
8:40 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	9	0	13	
8:45 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	5	0	12	
8:50 AM	0	0	0	0	0	0	0	0	0	0	7	0	0	0	4	0	11	
8:55 AM	0	0	0	0	0	0	0	0	0	0	9	1	0	0	8	1	19	
Count Total	0	2	0	3	0	1	0	0	0	1	216	1	0	0	255	3	482	
Peak Hour	0	1	0	3	0	1	0	0	0	1	144	0	0	0	159	2	311	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	1	0	0	1	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	2	0	1	3	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	3	0	1	4	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	0	0	1	1	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	1	0	0	1	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	0	1	0	0	1	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	0	0	1	1	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	0	1	0	0	1	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	0	0	1	1	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	0	1	0	0	1	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	0	1	0	0	1	8:40 AM	0	0	0	0	0	8:40 AM	1	0	0	0	1
8:45 AM	0	2	0	1	3	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	0	13	0	6	19	Count Total	0	0	0	0	0	Count Total	1	0	0	0	1
Peak Hour	0	6	0	3	9	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	1	0	0	0	1	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	1	0	0	0	1	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	0	1	0	1	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	0	1	0	1	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	1	0	0	0	1	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	1	0	0	0	1	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	1	0	0	0	1	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	2	1	0	0	3	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	1	0	1	0	2	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	0	0	1	0	1	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	1	0	2	0	3	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	1	0	0	0	1	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	10	1	6	0	17	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	2	0	2	0	4	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0



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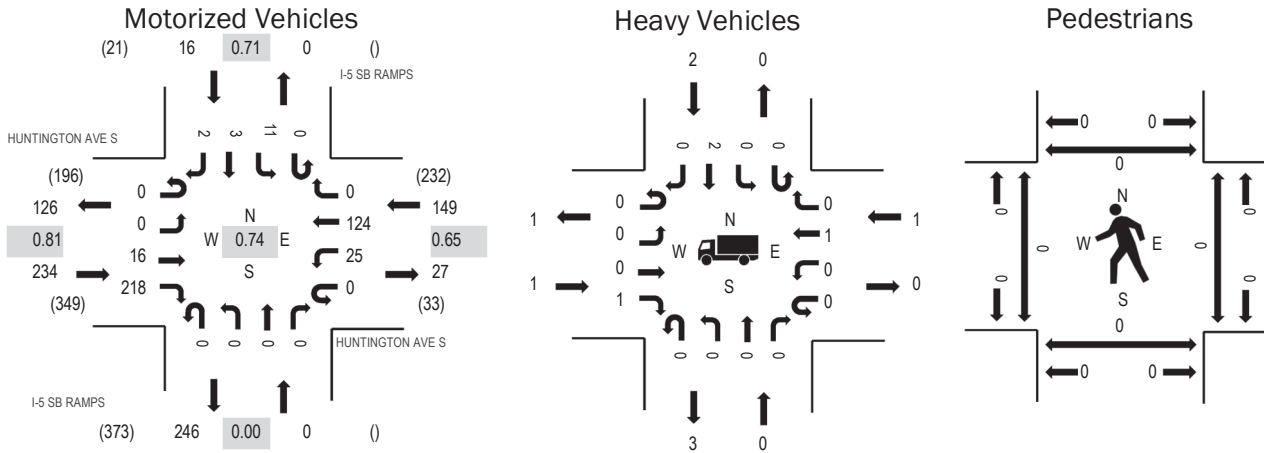
Location: 2 I-5 SB RAMPS & HUNTINGTON AVE S AM

Date: Wednesday, February 15, 2023

Peak Hour: 07:20 AM - 08:20 AM

Peak 15-Minutes: 07:35 AM - 07:50 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.4%	0.81
WB	0.7%	0.65
NB	0.0%	0.00
SB	12.5%	0.71
All	1.0%	0.74

Traffic Counts - Motorized Vehicles

Interval Start Time	HUNTINGTON AVE S Eastbound				HUNTINGTON AVE S Westbound				I-5 SB RAMPS Northbound				I-5 SB RAMPS Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	0	10	0	0	4	0	0	0	0	0	0	0	0	0	14	361
7:05 AM	0	0	2	8	0	1	3	0	0	0	0	0	0	0	0	0	14	378
7:10 AM	0	0	0	12	0	0	2	0	0	0	0	0	0	0	0	0	14	391
7:15 AM	0	0	0	6	0	3	8	0	0	0	0	0	0	0	0	0	17	396
7:20 AM	0	0	1	12	0	1	15	0	0	0	0	0	0	0	0	0	29	399
7:25 AM	0	0	1	16	0	2	8	0	0	0	0	0	0	1	2	0	30	387
7:30 AM	0	0	4	14	0	2	17	0	0	0	0	0	0	0	0	0	37	368
7:35 AM	0	0	0	24	0	4	20	0	0	0	0	0	0	1	0	0	49	352
7:40 AM	0	0	2	24	0	2	13	0	0	0	0	0	0	1	0	1	43	327
7:45 AM	0	0	2	20	0	3	14	0	0	0	0	0	0	2	1	0	42	309
7:50 AM	0	0	0	21	0	1	15	0	0	0	0	0	0	1	0	0	38	286
7:55 AM	0	0	1	22	0	3	7	0	0	0	0	0	0	1	0	0	34	264
8:00 AM	0	0	3	21	0	4	2	0	0	0	0	0	0	1	0	0	31	241
8:05 AM	0	0	1	22	0	0	3	0	0	0	0	0	0	0	0	1	27	
8:10 AM	0	0	0	13	0	1	3	0	0	0	0	0	0	2	0	0	19	
8:15 AM	0	0	1	9	0	2	7	0	0	0	0	0	0	1	0	0	20	
8:20 AM	0	0	0	6	0	1	9	0	0	0	0	0	0	0	1	0	17	
8:25 AM	0	0	0	8	0	2	0	0	0	0	0	0	0	0	1	0	11	
8:30 AM	0	0	0	14	0	1	5	0	0	0	0	0	0	0	0	1	21	
8:35 AM	0	0	1	13	0	0	9	0	0	0	0	0	0	1	0	0	24	
8:40 AM	0	0	2	15	0	4	4	0	0	0	0	0	0	0	0	0	25	
8:45 AM	0	0	0	11	0	0	7	0	0	0	0	0	0	0	0	1	19	
8:50 AM	0	0	0	4	0	3	9	0	0	0	0	0	0	0	0	0	16	
8:55 AM	0	0	0	3	0	0	8	0	0	0	0	0	0	0	0	0	11	
Count Total	0	0	21	328	0	40	192	0	0	0	0	0	0	12	5	4	602	
Peak Hour	0	0	16	218	0	25	124	0	0	0	0	0	0	11	3	2	399	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	1	0	0	0	1	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	1	0	0	0	1	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	0	1	0	1	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	0	0	1	1	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	0	0	0	1	1	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	1	0	0	0	1	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	0	0	0	0	8:05 AM	0	0	1	0	1	8:05 AM	0	0	0	0	0
8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	0	0	1	1	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	1	1	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	0	0	1	1	2	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	0	0	2	0	2	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	3	0	4	5	12	Count Total	0	0	1	0	1	Count Total	0	0	0	0	0
Peak Hour	1	0	1	2	4	Peak Hour	0	0	1	0	1	Peak Hour	0	0	0	0	0



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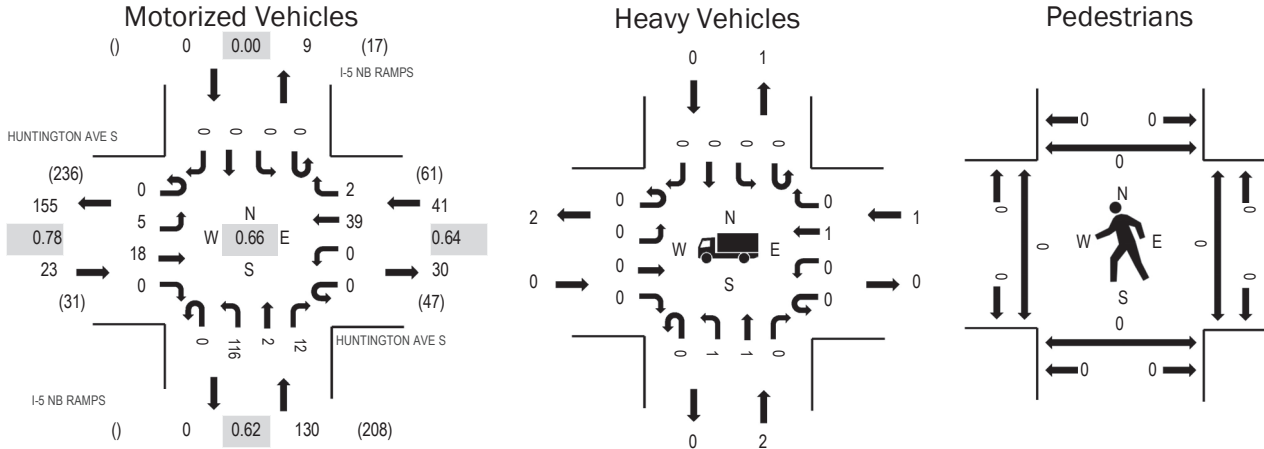
Location: 3 I-5 NB RAMPS & HUNTINGTON AVE S AM

Date: Wednesday, February 15, 2023

Peak Hour: 07:15 AM - 08:15 AM

Peak 15-Minutes: 07:30 AM - 07:45 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.78
WB	2.4%	0.64
NB	1.5%	0.62
SB	0.0%	0.00
All	1.5%	0.66

Traffic Counts - Motorized Vehicles

Interval Start Time	HUNTINGTON AVE S Eastbound				HUNTINGTON AVE S Westbound				I-5 NB RAMPS Northbound				I-5 NB RAMPS Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	0	0	0	0	1	0	0	3	1	1	0	0	0	0	6	186
7:05 AM	0	0	2	0	0	0	1	0	0	3	0	1	0	0	0	0	7	192
7:10 AM	0	0	0	0	0	0	0	0	0	2	0	3	0	0	0	0	5	190
7:15 AM	0	0	0	0	0	0	4	0	0	7	0	1	0	0	0	0	12	194
7:20 AM	0	0	1	0	0	0	4	0	0	11	1	1	0	0	0	0	18	193
7:25 AM	0	0	2	0	0	0	2	0	0	9	0	0	0	0	0	0	13	187
7:30 AM	0	2	2	0	0	0	3	0	0	19	0	2	0	0	0	0	28	177
7:35 AM	0	1	0	0	0	0	6	0	0	20	0	1	0	0	0	0	28	154
7:40 AM	0	0	3	0	0	0	2	1	0	11	0	0	0	0	0	0	17	138
7:45 AM	0	2	2	0	0	0	7	0	0	13	0	0	0	0	0	0	24	133
7:50 AM	0	0	0	0	0	0	1	0	0	12	0	2	0	0	0	0	15	116
7:55 AM	0	0	1	0	0	0	3	1	0	7	0	1	0	0	0	0	13	117
8:00 AM	0	0	3	0	0	0	4	0	0	2	0	3	0	0	0	0	12	114
8:05 AM	0	0	1	0	0	0	1	0	0	2	1	0	0	0	0	0	5	
8:10 AM	0	0	3	0	0	0	2	0	0	3	0	1	0	0	0	0	9	
8:15 AM	0	0	2	0	0	0	2	0	0	7	0	0	0	0	0	0	11	
8:20 AM	0	0	0	0	0	0	2	1	0	8	1	0	0	0	0	0	12	
8:25 AM	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	3	
8:30 AM	0	0	0	0	0	0	1	0	0	4	0	0	0	0	0	0	5	
8:35 AM	0	1	1	0	0	0	1	0	0	8	1	0	0	0	0	0	12	
8:40 AM	0	1	1	0	0	0	4	0	0	5	0	1	0	0	0	0	12	
8:45 AM	0	0	0	0	0	0	0	1	0	6	0	0	0	0	0	0	7	
8:50 AM	0	0	0	0	0	0	3	1	0	10	0	2	0	0	0	0	16	
8:55 AM	0	0	0	0	0	0	0	0	0	8	0	2	0	0	0	0	10	
Count Total	0	7	24	0	0	0	56	5	0	180	5	23	0	0	0	0	300	
Peak Hour	0	5	18	0	0	0	39	2	0	116	2	12	0	0	0	0	194	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	1	0	0	1	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	0	1	1	0	2	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	0	1	0	0	1	8:05 AM	0	0	1	0	1	8:05 AM	0	0	0	0	0
8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	1	0	0	0	1	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	0	1	0	0	1	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0	8:25 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	1	2	0	0	3	8:35 AM	0	0	0	0	0	8:35 AM	0	0	0	0	0
8:40 AM	0	2	0	0	2	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1	8:45 AM	0	0	0	0	0	8:45 AM	0	0	0	0	0
8:50 AM	0	0	1	0	1	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	2	9	2	0	13	Count Total	0	0	1	0	1	Count Total	0	0	0	0	0
Peak Hour	0	2	1	0	3	Peak Hour	0	0	1	0	1	Peak Hour	0	0	0	0	0



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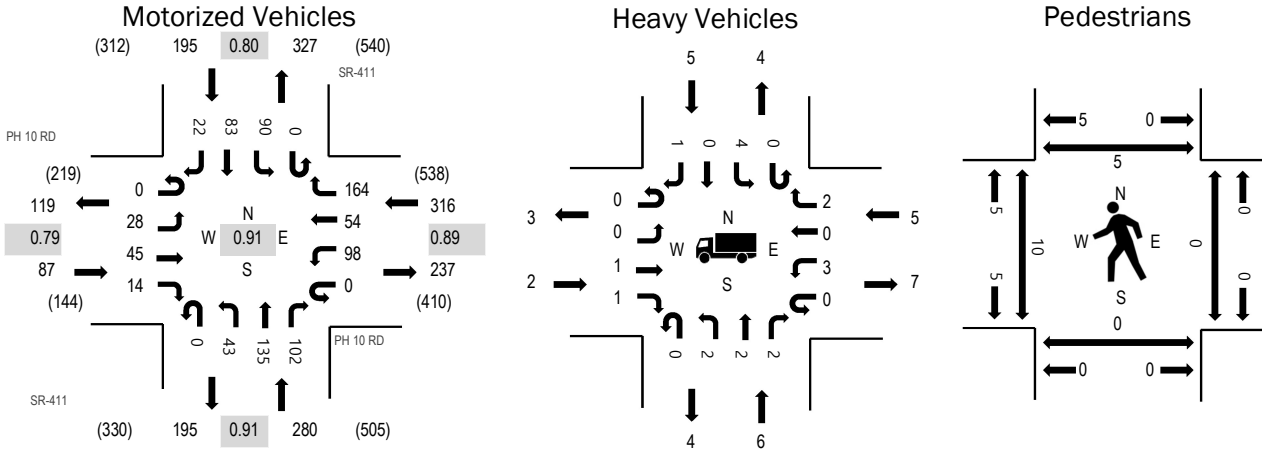
Location: 1 SR-411 & PH 10 RD PM

Date: Tuesday, October 17, 2023

Peak Hour: 04:20 PM - 05:20 PM

Peak 15-Minutes: 04:30 PM - 04:45 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	2.3%	0.79
WB	1.6%	0.89
NB	2.1%	0.91
SB	2.6%	0.80
All	2.1%	0.91

Traffic Counts - Motorized Vehicles

Interval Start Time	PH 10 RD Eastbound				PH 10 RD Westbound				SR-411 Northbound			SR-411 Southbound				Total	Rolling Hour	
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right
4:00 PM	0	0	2	0	0	8	5	5	0	4	3	5	0	5	5	1	43	828
4:05 PM	0	1	5	1	0	6	8	8	0	3	12	11	0	4	4	1	64	854
4:10 PM	0	0	8	2	0	12	9	8	0	3	3	11	0	6	3	1	66	857
4:15 PM	0	3	2	1	0	7	6	7	0	3	9	7	0	1	4	1	51	860
4:20 PM	0	1	5	1	0	10	4	11	0	3	11	8	0	7	7	2	70	878
4:25 PM	0	4	5	1	0	9	5	10	0	5	10	12	0	4	5	2	72	864
4:30 PM	0	3	3	2	0	10	4	13	0	1	13	7	0	9	9	3	77	840
4:35 PM	0	4	4	1	0	11	7	7	0	8	14	5	0	11	8	1	81	821
4:40 PM	0	5	7	1	0	9	3	13	0	7	10	12	0	9	8	0	84	782
4:45 PM	0	1	4	0	0	6	5	10	0	0	8	7	0	12	11	0	64	744
4:50 PM	0	2	2	3	0	6	2	15	0	1	12	9	0	11	5	4	72	729
4:55 PM	0	1	3	1	0	9	4	23	0	2	15	8	0	6	11	1	84	707
5:00 PM	0	1	4	1	0	6	2	21	0	1	10	11	0	5	4	3	69	671
5:05 PM	0	3	6	0	0	7	5	12	0	6	8	9	0	5	5	1	67	
5:10 PM	0	1	0	1	0	9	8	15	0	4	9	6	0	7	7	2	69	
5:15 PM	0	2	2	2	0	6	5	14	0	5	15	8	0	4	3	3	69	
5:20 PM	0	1	1	0	0	11	4	7	0	4	9	7	0	4	3	5	56	
5:25 PM	0	1	2	1	0	8	3	4	0	2	13	5	0	4	3	2	48	
5:30 PM	0	2	3	2	0	8	5	9	0	2	9	10	0	3	5	0	58	
5:35 PM	0	0	2	0	0	2	4	6	0	1	16	4	0	3	3	1	42	
5:40 PM	0	2	1	1	0	3	1	10	0	1	9	6	0	6	5	1	46	
5:45 PM	0	0	1	0	0	3	3	5	0	1	11	10	0	12	2	1	49	
5:50 PM	0	1	3	4	0	4	3	12	0	2	7	4	0	5	3	2	50	
5:55 PM	0	1	3	0	0	7	4	7	0	2	12	4	0	3	4	1	48	
Count Total	0	40	78	26	0	177	109	252	0	71	248	186	0	146	127	39	1,499	
Peak Hour	0	28	45	14	0	98	54	164	0	43	135	102	0	90	83	22	878	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	1	0	0	2	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	1	0	0	0	1	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	1	0	1	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0	4:15 PM	0	0	2	0	2	4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	2	2	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	1	0	0	1	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	1	1
4:30 PM	0	1	1	0	2	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	1	1	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	1	0	1	2	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	2	0	0	2	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	2	0	0	0	2	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	2	0	2	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	1	0	1	2	5:05 PM	0	0	0	0	0	5:05 PM	5	0	0	5	10
5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	2	0	2	5:15 PM	0	0	0	0	0	5:15 PM	5	0	0	0	5
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	1	0	1	5:50 PM	0	0	0	0	0	5:50 PM	1	0	0	1	2
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	1	0	0	1	2
Count Total	4	7	7	5	23	Count Total	0	0	2	0	2	Count Total	12	0	0	8	20
Peak Hour	2	6	5	5	18	Peak Hour	0	0	0	0	0	Peak Hour	10	0	0	6	16



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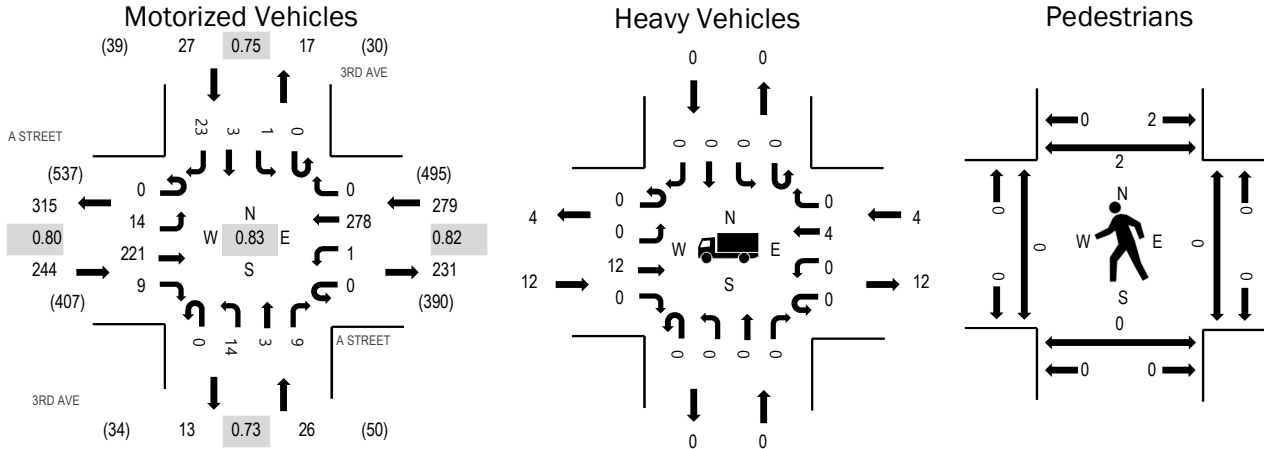
Location: 2 3RD AVE & A STREET PM

Date: Tuesday, October 17, 2023

Peak Hour: 04:15 PM - 05:15 PM

Peak 15-Minutes: 04:40 PM - 04:55 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.9%	0.80
WB	1.4%	0.82
NB	0.0%	0.73
SB	0.0%	0.75
All	2.8%	0.83

Traffic Counts - Motorized Vehicles

Interval Start Time	A STREET Eastbound				A STREET Westbound				3RD AVE Northbound			3RD AVE Southbound				Total	Rolling Hour	
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru			Right
4:00 PM	0	3	13	2	0	0	25	0	0	0	0	0	0	0	2	0	45	557
4:05 PM	0	0	17	0	0	0	27	0	0	2	1	0	0	0	0	0	47	558
4:10 PM	0	0	12	2	0	0	25	0	0	0	0	2	0	0	0	1	42	569
4:15 PM	0	0	23	1	0	0	19	0	0	1	1	0	0	0	1	1	47	576
4:20 PM	0	0	11	0	0	0	19	0	0	1	0	2	0	0	0	2	35	560
4:25 PM	0	2	18	0	0	0	24	0	0	1	0	1	0	0	0	1	47	561
4:30 PM	0	2	21	0	0	0	21	0	0	0	0	0	0	1	0	1	46	548
4:35 PM	0	3	14	1	0	0	22	0	0	0	0	0	0	0	0	2	42	527
4:40 PM	0	0	25	1	0	1	37	0	0	2	0	2	0	0	0	2	70	522
4:45 PM	0	1	21	0	0	0	25	0	0	1	0	0	0	0	0	3	51	479
4:50 PM	0	3	24	1	0	0	19	0	0	2	0	0	0	0	0	3	52	467
4:55 PM	0	0	9	1	0	0	16	0	0	3	0	1	0	0	1	2	33	443
5:00 PM	0	1	17	2	0	0	21	0	0	1	1	1	0	0	0	2	46	434
5:05 PM	0	2	20	1	0	0	29	0	0	1	1	1	0	0	1	2	58	
5:10 PM	0	0	18	1	0	0	26	0	0	1	0	1	0	0	0	2	49	
5:15 PM	0	1	10	2	0	1	16	0	0	0	0	1	0	0	0	0	31	
5:20 PM	0	0	14	2	0	0	19	0	0	1	0	0	0	0	0	0	36	
5:25 PM	0	1	6	1	0	0	19	0	0	1	0	2	0	0	0	4	34	
5:30 PM	0	0	12	0	0	0	10	0	0	1	0	2	0	0	0	0	25	
5:35 PM	0	0	14	1	0	1	15	1	0	1	1	3	0	0	0	0	37	
5:40 PM	0	0	9	1	0	2	13	0	0	0	1	0	0	1	0	0	27	
5:45 PM	0	2	19	0	0	2	14	0	0	0	0	0	0	0	2	0	39	
5:50 PM	0	1	12	0	0	0	14	0	0	0	0	1	0	0	0	0	28	
5:55 PM	0	0	6	0	0	0	12	0	0	0	1	3	0	0	0	2	24	
Count Total	0	22	365	20	0	7	487	1	0	20	7	23	0	2	7	30	991	
Peak Hour	0	14	221	9	0	1	278	0	0	14	3	9	0	1	3	23	576	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	0	1	0	2	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	2	0	1	0	3	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	1	0	1	0	2	4:10 PM	0	0	0	0	0	4:10 PM	0	1	0	0	1
4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	1	0	0	0	1	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	2	2
4:25 PM	1	0	0	0	1	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	2	0	2	4:30 PM	1	0	0	0	1	4:30 PM	0	0	0	0	0
4:35 PM	1	0	0	0	1	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	1	0	0	0	1	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	2	0	0	0	2	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	1	1
4:50 PM	1	0	0	0	1	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	1	0	1	4:55 PM	1	0	0	0	1	4:55 PM	0	0	0	0	0
5:00 PM	1	0	1	0	2	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	1	0	0	0	1	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	3	0	0	0	3	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	1	0	1	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	1	1
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	3	1	4
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	1	0	0	0	1	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	2	2
5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0	5:35 PM	0	0	1	1	2
5:40 PM	1	0	1	0	2	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	18	0	9	0	27	Count Total	2	0	0	0	2	Count Total	0	1	4	8	13
Peak Hour	12	0	4	0	16	Peak Hour	2	0	0	0	2	Peak Hour	0	0	0	3	3



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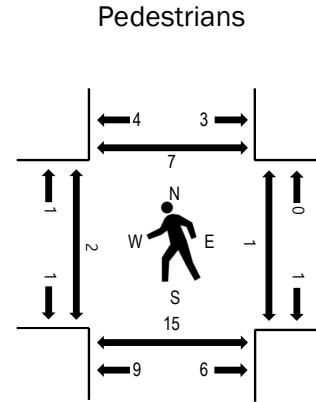
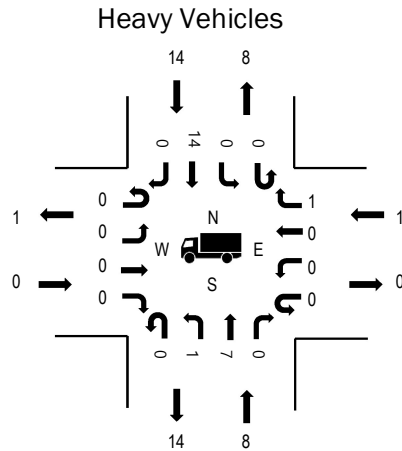
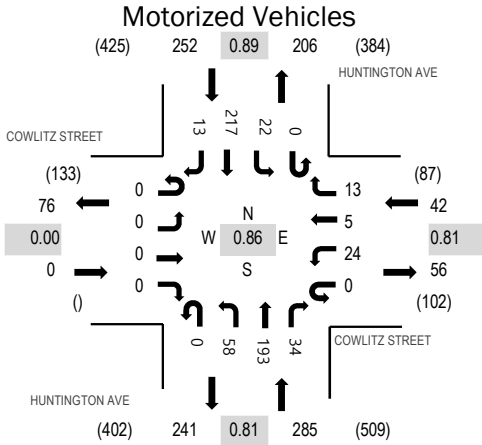
Location: 3 HUNTINGTON AVE & COWLITZ STREET PM

Date: Tuesday, October 17, 2023

Peak Hour: 04:05 PM - 05:05 PM

Peak 15-Minutes: 04:10 PM - 04:25 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	2.4%	0.81
NB	2.8%	0.81
SB	5.6%	0.89
All	4.0%	0.86

Traffic Counts - Motorized Vehicles

Interval Start Time	COWLITZ STREET Eastbound				COWLITZ STREET Westbound				HUNTINGTON AVE Northbound				HUNTINGTON AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	0	0	0	2	0	1	0	1	19	3	0	2	18	2	48	575
4:05 PM	0	0	0	0	0	1	1	0	0	3	13	1	0	0	20	4	43	579
4:10 PM	0	0	0	0	0	0	0	2	0	3	21	3	0	1	21	2	53	571
4:15 PM	0	0	0	0	0	6	2	0	0	9	19	3	0	3	14	1	57	568
4:20 PM	0	0	0	0	0	3	0	3	0	6	21	4	0	2	19	0	58	550
4:25 PM	0	0	0	0	0	1	0	2	0	5	18	0	0	4	21	1	52	524
4:30 PM	0	0	0	0	0	0	0	0	0	6	13	4	0	2	22	1	48	508
4:35 PM	0	0	0	0	0	2	0	1	0	5	16	2	0	0	21	0	47	502
4:40 PM	0	0	0	0	0	0	0	0	0	3	15	3	0	4	15	1	41	501
4:45 PM	0	0	0	0	0	5	1	1	0	4	10	4	0	1	15	1	42	485
4:50 PM	0	0	0	0	0	1	0	1	0	3	17	3	0	1	15	1	42	477
4:55 PM	0	0	0	0	0	3	1	2	0	5	13	0	0	1	19	0	44	470
5:00 PM	0	0	0	0	0	2	0	1	0	6	17	7	0	3	15	1	52	446
5:05 PM	0	0	0	0	0	2	1	0	0	5	14	1	0	0	8	4	35	
5:10 PM	0	0	0	0	0	2	1	1	0	3	18	3	0	1	16	5	50	
5:15 PM	0	0	0	0	0	1	1	1	0	2	9	2	0	2	19	2	39	
5:20 PM	0	0	0	0	0	4	1	0	0	2	13	1	0	2	7	2	32	
5:25 PM	0	0	0	0	0	3	0	3	0	4	13	2	0	0	11	0	36	
5:30 PM	0	0	0	0	0	0	2	2	0	4	17	2	0	3	12	0	42	
5:35 PM	0	0	0	0	0	4	1	1	0	3	18	1	0	2	16	0	46	
5:40 PM	0	0	0	0	0	1	0	2	0	1	10	2	0	3	6	0	25	
5:45 PM	0	0	0	0	0	0	0	0	0	2	18	3	0	1	10	0	34	
5:50 PM	0	0	0	0	0	3	0	3	0	0	10	4	0	1	12	2	35	
5:55 PM	0	0	0	0	0	1	1	0	0	5	5	4	0	1	3	0	20	
Count Total	0	0	0	0	0	47	13	27	0	90	357	62	0	40	355	30	1,021	
Peak Hour	0	0	0	0	0	24	5	13	0	58	193	34	0	22	217	13	579	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	1	1	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	3	3	4:05 PM	0	0	0	0	0	4:05 PM	2	1	0	0	3
4:10 PM	0	2	0	0	2	4:10 PM	0	0	0	0	0	4:10 PM	0	1	0	0	1
4:15 PM	0	0	0	2	2	4:15 PM	0	0	0	0	0	4:15 PM	0	1	0	1	2
4:20 PM	0	1	0	0	1	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	2	2
4:25 PM	0	1	0	2	3	4:25 PM	0	0	0	0	0	4:25 PM	0	2	0	0	2
4:30 PM	0	2	0	3	5	4:30 PM	0	0	0	0	0	4:30 PM	0	1	0	1	2
4:35 PM	0	0	0	1	1	4:35 PM	0	0	0	0	0	4:35 PM	0	1	1	0	2
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	1	1	4:45 PM	0	0	0	0	0	4:45 PM	0	2	0	2	4
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	3	0	0	3
4:55 PM	0	1	1	1	3	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	1	1
5:00 PM	0	1	0	1	2	5:00 PM	0	0	0	0	0	5:00 PM	0	4	0	0	4
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	1	0	1	2
5:10 PM	0	3	0	1	4	5:10 PM	0	0	0	0	0	5:10 PM	1	0	0	3	4
5:15 PM	0	0	0	1	1	5:15 PM	0	0	0	0	0	5:15 PM	1	3	0	0	4
5:20 PM	0	0	0	2	2	5:20 PM	0	0	0	0	0	5:20 PM	1	1	0	2	4
5:25 PM	0	1	0	0	1	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	1	0	0	1	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	1	0	0	1	5:35 PM	0	0	0	0	0	5:35 PM	0	1	1	0	2
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	0	0	1	0	1
5:45 PM	0	1	0	0	1	5:45 PM	0	0	0	0	0	5:45 PM	0	1	2	0	3
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	4	4
Count Total	0	15	1	19	35	Count Total	0	0	0	0	0	Count Total	5	23	5	17	50
Peak Hour	0	8	1	14	23	Peak Hour	0	0	0	0	0	Peak Hour	2	16	1	7	26



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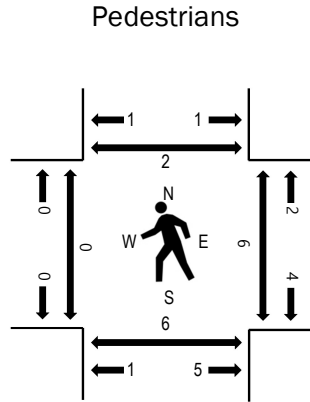
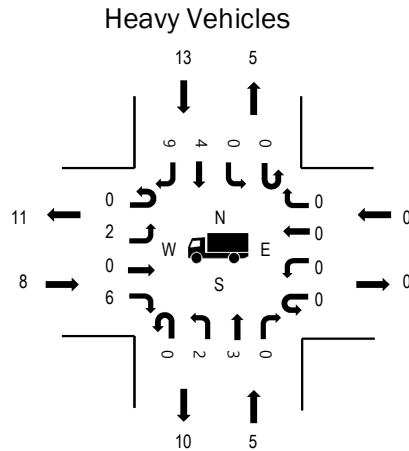
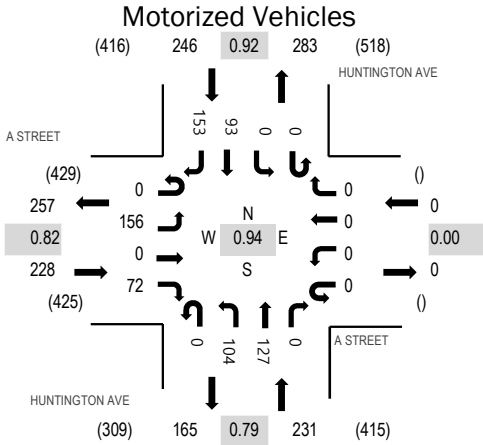
Location: 4 HUNTINGTON AVE & A STREET PM

Date: Tuesday, October 17, 2023

Peak Hour: 04:00 PM - 05:00 PM

Peak 15-Minutes: 04:10 PM - 04:25 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	3.5%	0.82
WB	0.0%	0.00
NB	2.2%	0.79
SB	5.3%	0.92
All	3.7%	0.94

Traffic Counts - Motorized Vehicles

Interval Start Time	A STREET Eastbound				A STREET Westbound				HUNTINGTON AVE Northbound				HUNTINGTON AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	13	0	5	0	0	0	0	0	11	10	0	0	0	6	13	58	705
4:05 PM	0	8	0	3	0	0	0	0	0	14	9	0	0	0	4	15	53	703
4:10 PM	0	16	0	1	0	0	0	0	0	10	13	0	0	0	6	15	61	692
4:15 PM	0	16	0	4	0	0	0	0	0	9	18	0	0	0	11	11	69	685
4:20 PM	0	13	0	3	0	0	0	0	0	6	15	0	0	0	8	13	58	666
4:25 PM	0	13	0	4	0	0	0	0	0	8	11	0	0	0	9	15	60	646
4:30 PM	0	13	0	8	0	0	0	0	0	7	11	0	0	0	11	11	61	626
4:35 PM	0	10	0	9	0	0	0	0	0	4	12	0	0	0	7	14	56	612
4:40 PM	0	16	0	12	0	0	0	0	0	6	6	0	0	0	9	10	59	610
4:45 PM	0	10	0	12	0	0	0	0	0	10	10	0	0	0	8	12	62	586
4:50 PM	0	17	0	3	0	0	0	0	0	8	7	0	0	0	6	10	51	578
4:55 PM	0	11	0	8	0	0	0	0	0	11	5	0	0	0	8	14	57	569
5:00 PM	0	13	0	6	0	0	0	0	0	6	12	0	0	0	11	8	56	551
5:05 PM	0	10	0	2	0	0	0	0	0	8	12	0	0	0	2	8	42	
5:10 PM	0	15	0	1	0	0	0	0	0	7	12	0	0	0	13	6	54	
5:15 PM	0	8	0	5	0	0	0	0	0	7	5	0	0	0	10	15	50	
5:20 PM	0	9	0	3	0	0	0	0	0	7	7	0	0	0	4	8	38	
5:25 PM	0	11	0	3	0	0	0	0	0	4	8	0	0	0	4	10	40	
5:30 PM	0	11	0	8	0	0	0	0	0	7	10	0	0	0	6	5	47	
5:35 PM	0	11	0	9	0	0	0	0	0	4	10	0	0	0	10	10	54	
5:40 PM	0	6	0	11	0	0	0	0	0	4	7	0	0	0	2	5	35	
5:45 PM	0	15	0	10	0	0	0	0	0	8	10	0	0	0	7	4	54	
5:50 PM	0	11	0	3	0	0	0	0	0	7	5	0	0	0	4	12	42	
5:55 PM	0	8	0	8	0	0	0	0	0	8	9	0	0	0	2	4	39	
Count Total	0	284	0	141	0	0	0	0	0	181	234	0	0	0	168	248	1,256	
Peak Hour	0	156	0	72	0	0	0	0	0	104	127	0	0	0	93	153	705	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	2	0	0	1	3	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	1	2	0	2	5	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	1	1
4:10 PM	1	0	0	1	2	4:10 PM	0	0	0	0	0	4:10 PM	0	0	2	0	2
4:15 PM	0	0	0	2	2	4:15 PM	0	0	0	0	0	4:15 PM	0	0	1	0	1
4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	1	1
4:25 PM	1	0	0	2	3	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	1	0	1	2	4:30 PM	0	0	0	0	0	4:30 PM	1	0	0	0	1
4:35 PM	0	0	0	1	1	4:35 PM	0	0	0	0	0	4:35 PM	0	5	1	0	6
4:40 PM	1	0	0	1	2	4:40 PM	0	0	0	0	0	4:40 PM	0	1	1	0	2
4:45 PM	2	0	0	0	2	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	1	0	1	2	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	1	0	1	2	4:55 PM	0	0	0	0	0	4:55 PM	0	0	1	0	1
5:00 PM	0	0	0	1	1	5:00 PM	0	0	0	0	0	5:00 PM	0	2	0	0	2
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	3	0	0	0	3	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	2	2
5:15 PM	0	1	0	1	2	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	1	1	5:20 PM	0	0	0	0	0	5:20 PM	0	1	1	1	3
5:25 PM	1	0	0	0	1	5:25 PM	0	0	0	0	0	5:25 PM	0	4	0	0	4
5:30 PM	1	0	0	0	1	5:30 PM	0	0	0	0	0	5:30 PM	0	2	0	0	2
5:35 PM	1	1	0	0	2	5:35 PM	0	0	0	0	0	5:35 PM	0	1	1	0	2
5:40 PM	1	2	0	0	3	5:40 PM	0	0	0	0	0	5:40 PM	0	0	1	0	1
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	2	0	2
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	1	0	0	1	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	15	10	0	16	41	Count Total	0	0	0	0	0	Count Total	1	16	11	5	33
Peak Hour	8	5	0	13	26	Peak Hour	0	0	0	0	0	Peak Hour	1	6	6	2	15



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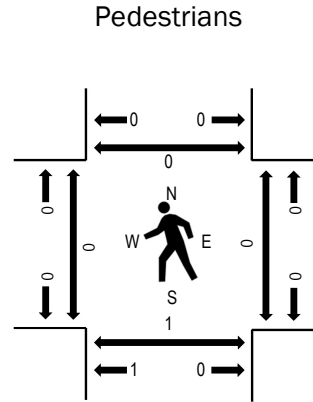
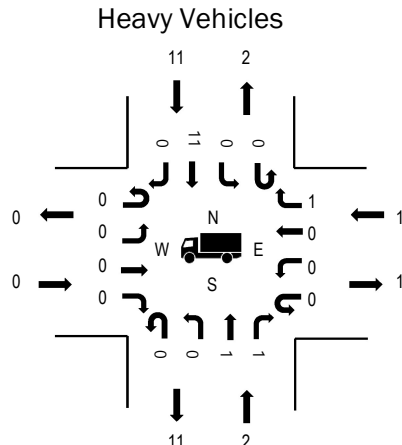
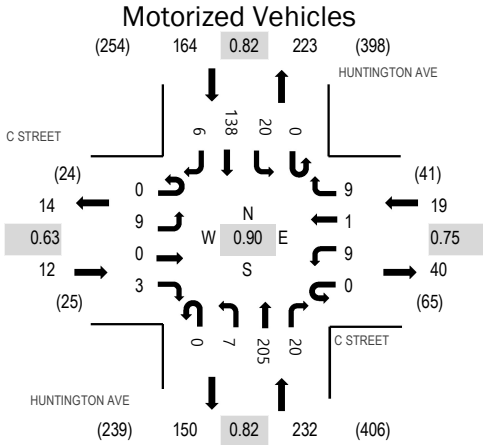
Location: 5 HUNTINGTON AVE & C STREET PM

Date: Tuesday, October 17, 2023

Peak Hour: 04:05 PM - 05:05 PM

Peak 15-Minutes: 04:20 PM - 04:35 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.63
WB	5.3%	0.75
NB	0.9%	0.82
SB	6.7%	0.82
All	3.3%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	C STREET Eastbound				C STREET Westbound				HUNTINGTON AVE Northbound				HUNTINGTON AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	0	1	0	0	1	0	0	1	23	0	0	1	6	2	35	418
4:05 PM	0	2	0	0	0	1	0	2	0	0	21	2	0	3	6	0	37	427
4:10 PM	0	0	0	0	0	0	0	0	0	0	22	2	0	1	9	1	35	419
4:15 PM	0	0	0	1	0	1	0	0	0	0	22	0	0	0	10	0	34	415
4:20 PM	0	3	0	0	0	0	0	0	0	2	21	3	0	2	9	1	41	402
4:25 PM	0	0	0	1	0	2	0	2	0	2	21	1	0	3	9	1	42	388
4:30 PM	0	0	0	0	0	1	0	0	0	1	13	3	0	3	14	1	36	368
4:35 PM	0	1	0	0	0	1	0	1	0	1	12	0	0	0	15	0	31	358
4:40 PM	0	1	0	0	0	0	0	0	0	0	11	3	0	0	17	0	32	348
4:45 PM	0	0	0	0	0	0	0	1	0	0	17	1	0	4	14	0	37	334
4:50 PM	0	1	0	0	0	0	0	0	0	0	17	3	0	1	7	0	29	327
4:55 PM	0	0	0	0	0	0	1	2	0	1	10	0	0	1	13	1	29	320
5:00 PM	0	1	0	1	0	3	0	1	0	0	18	2	0	2	15	1	44	308
5:05 PM	0	0	0	2	0	1	0	0	0	0	16	2	0	1	7	0	29	
5:10 PM	0	0	1	0	0	2	0	0	0	0	15	1	0	1	10	1	31	
5:15 PM	0	1	0	0	0	0	0	2	0	0	9	2	0	1	5	1	21	
5:20 PM	0	1	0	1	0	1	0	1	0	0	11	2	0	0	8	2	27	
5:25 PM	0	0	1	0	0	0	0	0	0	0	13	4	0	0	3	1	22	
5:30 PM	0	1	0	2	0	1	0	2	0	0	11	1	0	0	8	0	26	
5:35 PM	0	0	0	0	0	0	1	1	0	0	15	0	0	0	4	0	21	
5:40 PM	0	1	0	0	0	0	0	0	0	0	8	2	0	1	6	0	18	
5:45 PM	0	1	0	0	0	3	0	4	0	0	13	0	0	0	9	0	30	
5:50 PM	0	0	0	0	0	1	0	0	0	0	9	0	0	4	8	0	22	
5:55 PM	0	0	0	0	0	0	0	1	0	0	16	0	0	0	0	0	17	
Count Total	0	14	2	9	0	18	3	20	0	8	364	34	0	29	212	13	726	
Peak Hour	0	9	0	3	0	9	1	9	0	7	205	20	0	20	138	6	427	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	1	1	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	1	0	2	3	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	1	0	0	1	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	2	2	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	1	1	4:35 PM	0	0	0	0	0	4:35 PM	0	1	0	0	1
4:40 PM	0	0	0	3	3	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	2	2	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	1	0	1	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	1	1	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	1	0	0	1	5:10 PM	0	0	0	0	0	5:10 PM	0	0	2	0	2
5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0	5:15 PM	0	0	1	0	1
5:20 PM	0	0	0	2	2	5:20 PM	0	0	0	0	0	5:20 PM	0	0	1	0	1
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	1	1	5:30 PM	0	0	0	0	0	5:30 PM	0	0	1	0	1
5:35 PM	0	1	0	0	1	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	4	4	2	0	10
5:45 PM	0	1	0	0	1	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	1	0	0	1	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	6	1	15	22	Count Total	0	0	0	0	0	Count Total	4	5	7	0	16
Peak Hour	0	2	1	11	14	Peak Hour	0	0	0	0	0	Peak Hour	0	1	0	0	1



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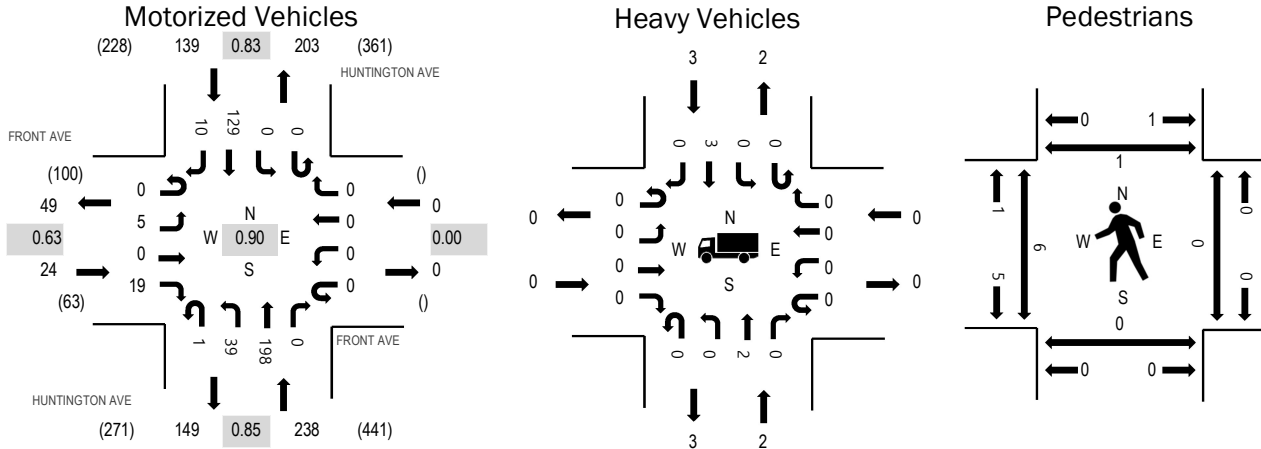
Location: 6 HUNTINGTON AVE & FRONT AVE PM

Date: Tuesday, October 17, 2023

Peak Hour: 04:10 PM - 05:10 PM

Peak 15-Minutes: 04:25 PM - 04:40 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.63
WB	0.0%	0.00
NB	0.8%	0.85
SB	2.2%	0.83
All	1.2%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	FRONT AVE Eastbound				FRONT AVE Westbound				HUNTINGTON AVE Northbound				HUNTINGTON AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	0	4	0	0	0	0	0	3	20	0	0	0	6	1	34	394
4:05 PM	0	1	0	2	0	0	0	0	0	3	11	0	0	0	7	0	24	393
4:10 PM	0	2	0	2	0	0	0	0	0	3	21	0	0	0	11	1	40	401
4:15 PM	0	1	0	0	0	0	0	0	0	3	19	0	0	0	12	0	35	398
4:20 PM	0	0	0	2	0	0	0	0	0	3	18	0	0	0	7	0	30	393
4:25 PM	0	0	0	1	0	0	0	0	0	4	23	0	0	0	9	2	39	388
4:30 PM	0	0	0	1	0	0	0	0	0	3	16	0	0	0	11	3	34	375
4:35 PM	0	0	0	1	0	0	0	0	0	6	14	0	0	0	16	1	38	368
4:40 PM	0	0	0	2	0	0	0	0	0	2	11	0	0	0	11	0	26	359
4:45 PM	0	1	0	3	0	0	0	0	0	2	16	0	0	0	8	2	32	355
4:50 PM	0	0	0	1	0	0	0	0	0	3	18	0	0	0	9	0	31	354
4:55 PM	0	1	0	4	0	0	0	0	1	2	11	0	0	0	12	0	31	352
5:00 PM	0	0	0	1	0	0	0	0	0	4	14	0	0	0	13	1	33	338
5:05 PM	0	0	0	1	0	0	0	0	0	4	17	0	0	0	10	0	32	
5:10 PM	0	0	0	3	0	0	0	0	0	6	18	0	0	0	9	1	37	
5:15 PM	0	0	0	5	0	0	0	0	0	6	10	0	0	0	9	0	30	
5:20 PM	0	0	0	3	0	0	0	0	0	3	11	0	0	0	8	0	25	
5:25 PM	0	0	0	6	0	0	0	0	0	3	13	0	0	0	4	0	26	
5:30 PM	0	0	0	0	0	0	0	0	0	2	17	0	0	0	8	0	27	
5:35 PM	0	0	0	2	0	0	0	0	0	7	10	0	0	0	9	1	29	
5:40 PM	0	0	0	1	0	0	0	0	0	4	14	0	0	0	3	0	22	
5:45 PM	0	0	0	3	0	0	0	0	0	3	14	0	0	0	11	0	31	
5:50 PM	0	1	0	4	0	0	0	0	0	4	11	0	0	0	8	1	29	
5:55 PM	0	0	0	4	0	0	0	0	0	3	7	0	0	0	3	0	17	
Count Total	0	7	0	56	0	0	0	0	1	86	354	0	0	0	214	14	732	
Peak Hour	0	5	0	19	0	0	0	0	1	39	198	0	0	0	129	10	401	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	1	0	0	1	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	1	0	1	2	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	5	0	0	0	5
4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	1	1	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	1	1	5:05 PM	0	0	0	0	0	5:05 PM	1	0	0	1	2
5:10 PM	0	1	0	0	1	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	1	0	0	1	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	2	0	0	2	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0	5:35 PM	1	0	0	2	3
5:40 PM	0	1	0	0	1	5:40 PM	0	0	0	0	0	5:40 PM	2	0	0	7	9
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	1	0	0	0	1	5:50 PM	0	0	0	0	0	5:50 PM	1	0	0	1	2
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	1	8	0	3	12	Count Total	0	0	0	0	0	Count Total	10	0	0	11	21
Peak Hour	0	2	0	3	5	Peak Hour	0	0	0	0	0	Peak Hour	6	0	0	1	7



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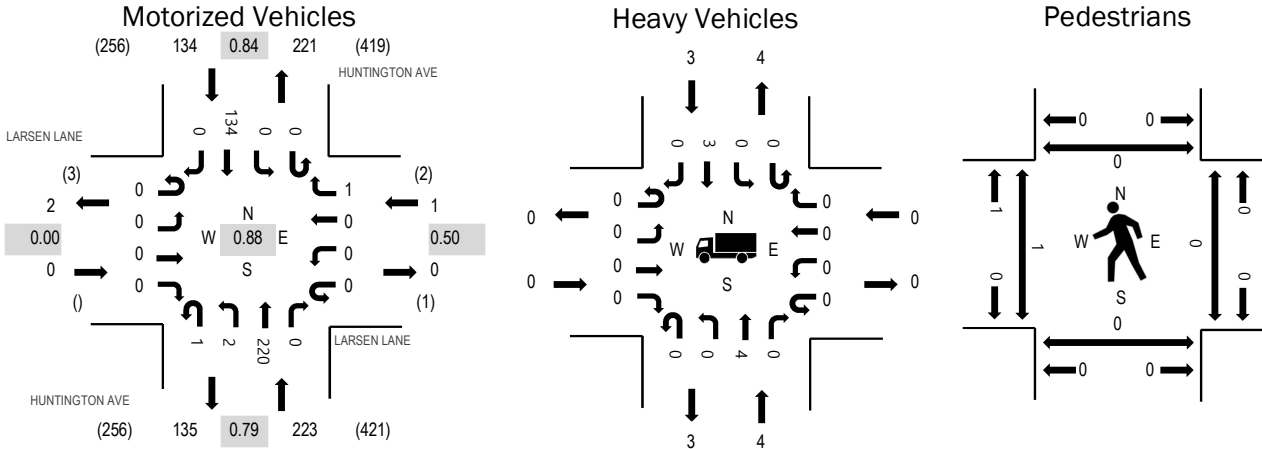
Location: 7 HUNTINGTON AVE & LARSEN LANE PM

Date: Tuesday, October 17, 2023

Peak Hour: 04:10 PM - 05:10 PM

Peak 15-Minutes: 04:10 PM - 04:25 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	0.0%	0.50
NB	1.8%	0.79
SB	2.2%	0.84
All	2.0%	0.88

Traffic Counts - Motorized Vehicles

Interval Start Time	LARSEN LANE Eastbound				LARSEN LANE Westbound				HUNTINGTON AVE Northbound				HUNTINGTON AVE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	0	0	0	0	0	0	0	0	18	0	0	0	11	0	29	357
4:05 PM	0	0	0	0	0	0	0	0	0	0	22	0	0	0	14	0	36	357
4:10 PM	0	0	0	0	0	0	0	0	0	1	25	0	0	0	13	0	39	358
4:15 PM	0	0	0	0	0	0	0	0	1	0	20	0	0	0	10	0	31	350
4:20 PM	0	0	0	0	0	0	0	0	0	1	23	0	0	0	8	0	32	347
4:25 PM	0	0	0	0	0	0	0	0	0	0	21	0	0	0	12	0	33	341
4:30 PM	0	0	0	0	0	0	0	0	0	0	17	0	0	0	7	0	24	334
4:35 PM	0	0	0	0	0	0	0	1	0	0	18	0	0	0	14	0	33	336
4:40 PM	0	0	0	0	0	0	0	0	0	0	11	0	0	0	12	0	23	324
4:45 PM	0	0	0	0	0	0	0	0	0	0	19	0	0	0	8	0	27	325
4:50 PM	0	0	0	0	0	0	0	0	0	0	14	0	0	0	10	0	24	326
4:55 PM	0	0	0	0	0	0	0	0	0	0	13	0	0	0	13	0	26	328
5:00 PM	0	0	0	0	0	0	0	0	0	0	18	0	0	0	11	0	29	322
5:05 PM	0	0	0	0	0	0	0	0	0	0	21	0	0	0	16	0	37	
5:10 PM	0	0	0	0	0	0	0	0	0	0	21	0	0	0	10	0	31	
5:15 PM	0	0	0	0	0	0	0	0	0	0	15	0	0	0	12	1	28	
5:20 PM	0	0	0	0	0	0	0	0	0	0	18	0	0	0	8	0	26	
5:25 PM	0	0	0	0	0	0	0	0	0	0	14	0	0	0	12	0	26	
5:30 PM	0	0	0	0	0	1	0	0	0	0	18	0	0	0	7	0	26	
5:35 PM	0	0	0	0	0	0	0	0	0	0	12	0	0	0	9	0	21	
5:40 PM	0	0	0	0	0	0	0	0	0	0	19	0	0	0	5	0	24	
5:45 PM	0	0	0	0	0	0	0	0	0	0	17	0	0	0	11	0	28	
5:50 PM	0	0	0	0	0	0	0	0	0	0	13	0	0	0	13	0	26	
5:55 PM	0	0	0	0	0	0	0	0	0	0	11	0	0	1	8	0	20	
Count Total	0	0	0	0	0	1	0	1	1	2	418	0	0	1	254	1	679	
Peak Hour	0	0	0	0	0	0	0	1	1	2	220	0	0	0	134	0	358	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	1	0	0	1	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	1	0	1	2	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	1	0	1	2	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	1	0	0	0	1
5:05 PM	0	0	0	1	1	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	1	0	0	1	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	1	0	0	1	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	1	0	0	1	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	1	0	0	1	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	9	0	3	12	Count Total	0	0	0	0	0	Count Total	1	0	0	0	1
Peak Hour	0	4	0	3	7	Peak Hour	0	0	0	0	0	Peak Hour	1	0	0	0	1



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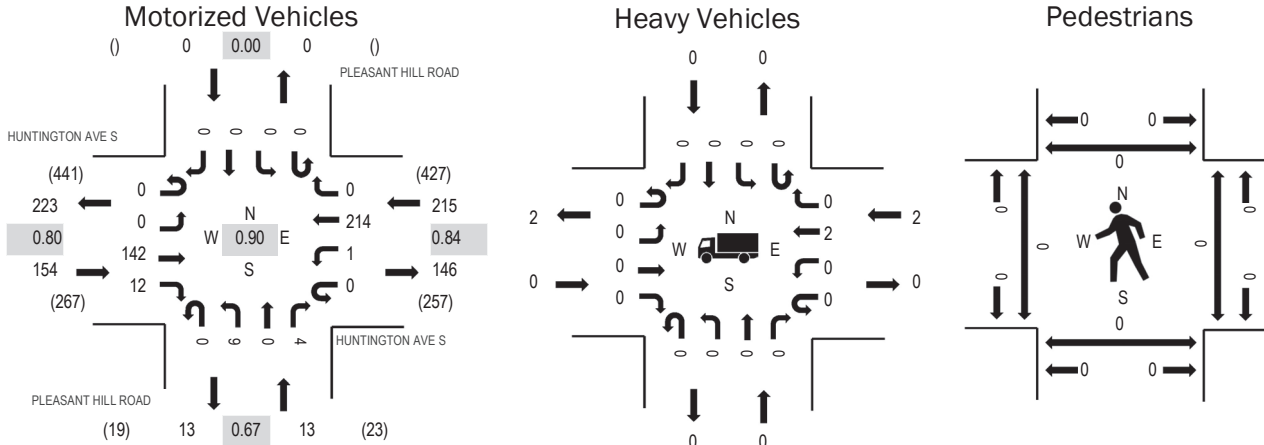
Location: 1 PLEASANT HILL ROAD & HUNTINGTON AVE S PM

Date: Tuesday, February 14, 2023

Peak Hour: 04:25 PM - 05:25 PM

Peak 15-Minutes: 04:35 PM - 04:50 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.80
WB	0.9%	0.84
NB	0.0%	0.67
SB	0.0%	0.00
All	0.5%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	HUNTINGTON AVE S				HUNTINGTON AVE S				PLEASANT HILL ROAD				PLEASANT HILL ROAD				Total	Rolling Hour
	Eastbound				Westbound				Northbound				Southbound					
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	13	1	0	0	23	0	0	0	0	0	0	0	0	0	37	381
4:05 PM	0	0	14	0	0	0	14	0	0	0	0	0	0	0	0	0	28	373
4:10 PM	0	0	13	0	0	0	17	0	0	2	0	0	0	0	0	0	32	376
4:15 PM	0	0	9	0	0	0	23	0	0	1	0	0	0	0	0	0	33	381
4:20 PM	0	0	12	2	0	0	12	0	0	1	0	0	0	0	0	0	27	379
4:25 PM	0	0	11	1	0	0	23	0	0	0	0	0	0	0	0	0	35	382
4:30 PM	0	0	7	0	0	0	21	0	0	1	0	0	0	0	0	0	29	369
4:35 PM	0	0	17	3	0	0	20	0	0	1	0	0	0	0	0	0	41	367
4:40 PM	0	0	12	3	0	0	13	0	0	0	0	0	0	0	0	0	28	354
4:45 PM	0	0	14	0	0	0	23	0	0	0	0	0	0	0	0	0	37	346
4:50 PM	0	0	13	0	0	0	12	0	0	2	0	1	0	0	0	0	28	335
4:55 PM	0	0	8	3	0	0	14	0	0	1	0	0	0	0	0	0	26	337
5:00 PM	0	0	8	0	0	0	19	0	0	2	0	0	0	0	0	0	29	336
5:05 PM	0	0	17	0	0	1	12	0	0	0	0	1	0	0	0	0	31	
5:10 PM	0	0	14	1	0	0	20	0	0	1	0	1	0	0	0	0	37	
5:15 PM	0	0	11	0	0	0	19	0	0	0	0	1	0	0	0	0	31	
5:20 PM	0	0	10	1	0	0	18	0	0	1	0	0	0	0	0	0	30	
5:25 PM	0	0	6	0	0	0	15	0	0	0	0	1	0	0	0	0	22	
5:30 PM	0	0	8	0	0	0	18	0	0	1	0	0	0	0	0	0	27	
5:35 PM	0	0	9	1	0	0	18	0	0	0	0	0	0	0	0	0	28	
5:40 PM	0	0	4	1	0	0	13	0	1	0	0	1	0	0	0	0	20	
5:45 PM	0	0	6	0	0	0	19	0	0	0	0	1	0	0	0	0	26	
5:50 PM	0	0	10	0	0	0	20	0	0	0	0	0	0	0	0	0	30	
5:55 PM	0	0	4	0	0	0	20	0	0	1	0	0	0	0	0	0	25	
Count Total	0	0	250	17	0	1	426	0	1	15	0	7	0	0	0	0	717	
Peak Hour	0	0	142	12	0	1	214	0	0	9	0	4	0	0	0	0	382	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	2	0	0	0	2	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	2	0	2	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	1	0	1	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	0	1	0	1	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	1	0	1	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	2	0	2	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	1	0	1	0	2	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	3	0	8	0	11	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	0	0	2	0	2	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0



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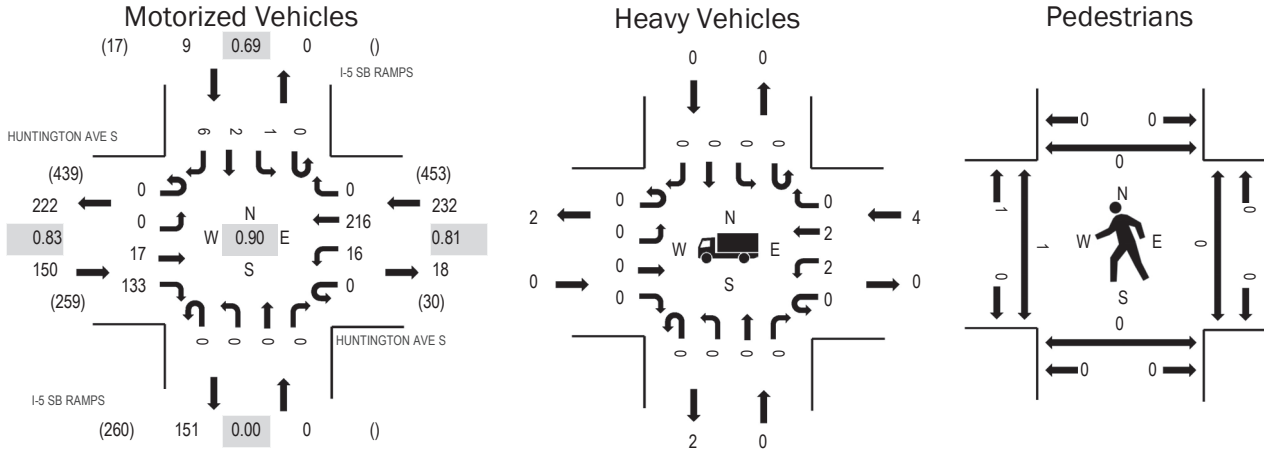
Location: 2 I-5 SB RAMPS & HUNTINGTON AVE S PM

Date: Tuesday, February 14, 2023

Peak Hour: 04:25 PM - 05:25 PM

Peak 15-Minutes: 04:25 PM - 04:40 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.83
WB	1.7%	0.81
NB	0.0%	0.00
SB	0.0%	0.69
All	1.0%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	HUNTINGTON AVE S Eastbound				HUNTINGTON AVE S Westbound				I-5 SB RAMPS Northbound				I-5 SB RAMPS Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	0	13	0	0	23	0	0	0	0	0	0	0	0	0	36	382
4:05 PM	0	0	1	13	0	1	14	0	0	0	0	0	0	1	0	0	30	375
4:10 PM	0	0	1	12	0	0	18	0	0	0	0	0	0	0	0	0	31	383
4:15 PM	0	0	0	9	0	1	23	0	0	0	0	0	0	0	0	1	34	388
4:20 PM	0	0	2	11	0	1	11	0	0	0	0	0	0	1	0	0	26	386
4:25 PM	0	0	2	8	0	2	23	0	0	0	0	0	0	0	0	0	35	391
4:30 PM	0	0	0	9	0	2	21	0	0	0	0	0	0	0	0	0	32	379
4:35 PM	0	0	2	15	0	3	21	0	0	0	0	0	0	0	0	1	42	374
4:40 PM	0	0	1	12	0	1	14	0	0	0	0	0	0	0	0	0	28	360
4:45 PM	0	0	1	13	0	0	21	0	0	0	0	0	0	0	0	2	37	352
4:50 PM	0	0	3	11	0	3	11	0	0	0	0	0	0	0	0	0	28	342
4:55 PM	0	0	0	8	0	0	15	0	0	0	0	0	0	0	0	0	23	344
5:00 PM	0	0	2	6	0	1	19	0	0	0	0	0	0	0	0	1	29	347
5:05 PM	0	0	3	17	0	3	14	0	0	0	0	0	0	0	1	0	38	
5:10 PM	0	0	1	13	0	0	20	0	0	0	0	0	0	0	1	1	36	
5:15 PM	0	0	1	11	0	0	19	0	0	0	0	0	0	0	0	1	32	
5:20 PM	0	0	1	10	0	1	18	0	0	0	0	0	0	1	0	0	31	
5:25 PM	0	0	0	6	0	2	15	0	0	0	0	0	0	0	0	0	23	
5:30 PM	0	0	0	8	0	1	18	0	0	0	0	0	0	0	0	0	27	
5:35 PM	0	0	0	9	0	2	17	0	0	0	0	0	0	0	0	0	28	
5:40 PM	0	0	1	4	0	0	14	0	0	0	0	0	0	0	1	0	20	
5:45 PM	0	0	3	4	0	0	18	0	0	0	0	0	0	0	0	2	27	
5:50 PM	0	0	2	7	0	0	21	0	0	0	0	0	0	0	0	0	30	
5:55 PM	0	0	0	3	0	1	20	0	0	0	0	0	0	0	0	2	26	
Count Total	0	0	27	232	0	25	428	0	0	0	0	0	0	3	3	11	729	
Peak Hour	0	0	17	133	0	16	216	0	0	0	0	0	0	1	2	6	391	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	1	0	0	0	1	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	1	0	1	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	1	0	1	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0	4:30 PM	1	0	0	0	1
4:35 PM	0	0	3	0	3	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	1	0	0	0	1	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	2	0	5	0	7	Count Total	0	0	0	0	0	Count Total	1	0	0	0	1
Peak Hour	0	0	4	0	4	Peak Hour	0	0	0	0	0	Peak Hour	1	0	0	0	1



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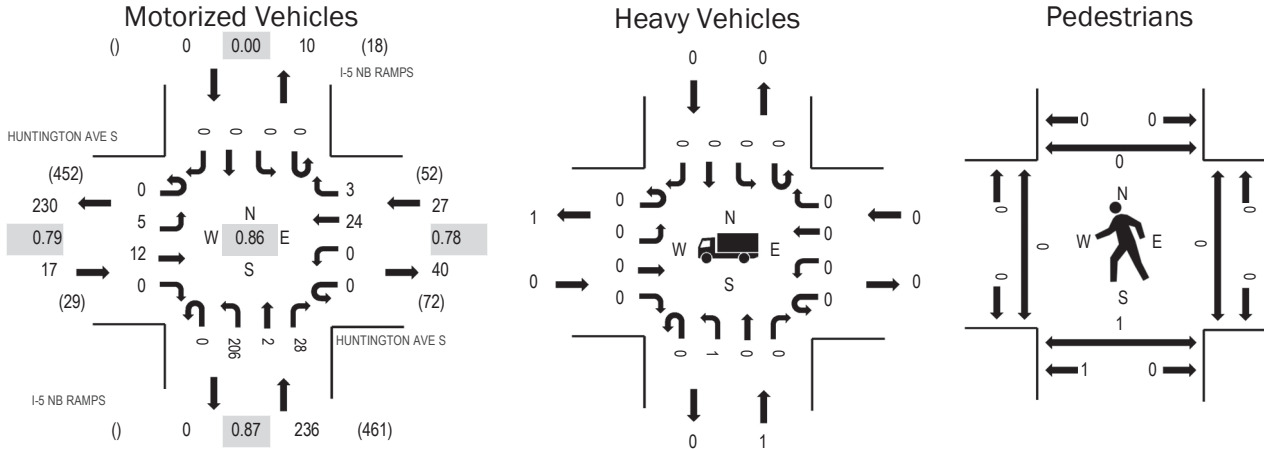
Location: 3 I-5 NB RAMPS & HUNTINGTON AVE S PM

Date: Tuesday, February 14, 2023

Peak Hour: 04:25 PM - 05:25 PM

Peak 15-Minutes: 04:25 PM - 04:40 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.79
WB	0.0%	0.78
NB	0.4%	0.87
SB	0.0%	0.00
All	0.4%	0.86

Traffic Counts - Motorized Vehicles

Interval Start Time	HUNTINGTON AVE S Eastbound				HUNTINGTON AVE S Westbound				I-5 NB RAMPS Northbound				I-5 NB RAMPS Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	0	0	0	0	3	0	0	20	0	1	0	0	0	0	24	268
4:05 PM	0	1	0	0	0	0	2	1	0	12	0	4	0	0	0	0	20	273
4:10 PM	0	1	0	0	0	0	3	0	0	16	0	1	0	0	0	0	21	272
4:15 PM	0	0	0	0	0	0	3	0	0	21	0	0	0	0	0	0	24	273
4:20 PM	0	0	3	0	0	0	2	0	0	10	0	2	0	0	0	0	17	275
4:25 PM	0	1	1	0	0	0	4	0	0	22	0	2	0	0	0	0	30	280
4:30 PM	0	0	0	0	0	0	3	1	0	21	0	2	0	0	0	0	27	270
4:35 PM	0	0	2	0	0	0	1	0	0	19	0	2	0	0	0	0	24	267
4:40 PM	0	0	1	0	0	0	1	0	0	13	0	2	0	0	0	0	17	264
4:45 PM	0	0	1	0	0	0	1	1	0	22	0	0	0	0	0	0	25	267
4:50 PM	0	0	3	0	0	0	3	0	0	12	1	2	0	0	0	0	21	263
4:55 PM	0	0	0	0	0	0	0	0	0	14	1	3	0	0	0	0	18	270
5:00 PM	0	1	1	0	0	0	3	0	0	19	0	5	0	0	0	0	29	274
5:05 PM	0	1	2	0	0	0	5	0	0	9	0	2	0	0	0	0	19	
5:10 PM	0	0	1	0	0	0	0	0	0	21	0	0	0	0	0	0	22	
5:15 PM	0	1	0	0	0	0	0	0	0	20	0	5	0	0	0	0	26	
5:20 PM	0	1	0	0	0	0	3	1	0	14	0	3	0	0	0	0	22	
5:25 PM	0	0	0	0	0	0	3	0	0	16	0	1	0	0	0	0	20	
5:30 PM	0	0	0	0	0	0	1	1	0	18	0	4	0	0	0	0	24	
5:35 PM	0	0	0	0	0	0	2	1	0	16	0	2	0	0	0	0	21	
5:40 PM	0	1	1	0	0	0	0	0	0	14	0	4	0	0	0	0	20	
5:45 PM	0	1	1	0	0	0	0	0	0	18	0	1	0	0	0	0	21	
5:50 PM	0	0	3	0	0	0	1	1	0	21	0	2	0	0	0	0	28	
5:55 PM	0	0	0	0	0	0	1	0	0	19	0	2	0	0	0	0	22	
Count Total	0	9	20	0	0	0	45	7	0	407	2	52	0	0	0	0	542	
Peak Hour	0	5	12	0	0	0	24	3	0	206	2	28	0	0	0	0	280	

Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	1	0	1	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	1	0	0	1	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	1	0	0	1	4:25 PM	0	0	1	0	1	4:25 PM	0	1	0	0	1
4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	0	1	0	0	1	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	0	0	1	0	1	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	3	2	0	5	Count Total	0	0	1	0	1	Count Total	0	1	0	0	1
Peak Hour	0	1	0	0	1	Peak Hour	0	0	1	0	1	Peak Hour	0	1	0	0	1

Appendix C – Operation Analysis

Level of Service Descriptions

Synchro Capacity Reports

Sidra (Roundabout) Capacity Analysis





Level of Service Definitions

Level of service is used to describe the quality of traffic flow. Levels of service A to C are considered good, and rural roads are usually designed for level of service C. Urban streets and signalized intersections are typically designed for level of service D. Level of service E is considered to be the limit of acceptable delay. For unsignalized intersections, level of service E is generally considered acceptable. Here is a more complete description of levels of service:

- *Level of service A:* Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.
- *Level of service B:* Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.
- *Level of service C:* Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.
- *Level of service D:* Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.
- *Level of service E:* Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.
- *Level of service F:* Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.



Level of Service Criteria
For Signalized Intersections

Level of Service (LOS)	Control Delay per Vehicle (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

Level of Service Criteria
For Unsignalized Intersections

Level of Service (LOS)	Control Delay per Vehicle (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	25	50	24	50	47	136	8	81	76	143	89	14
Future Vol, veh/h	25	50	24	50	47	136	8	81	76	143	89	14
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	4	4	4	6	6	6	11	11	11	7	7	7
Mvmt Flow	31	63	30	63	59	170	10	101	95	179	111	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.4	12.5	11.1	13.8
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	25%	21%	58%
Vol Thru, %	49%	51%	20%	36%
Vol Right, %	46%	24%	58%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	165	99	233	246
LT Vol	8	25	50	143
Through Vol	81	50	47	89
RT Vol	76	24	136	14
Lane Flow Rate	206	124	291	308
Geometry Grp	1	1	1	1
Degree of Util (X)	0.316	0.201	0.433	0.48
Departure Headway (Hd)	5.516	5.835	5.358	5.614
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	650	611	670	640
Service Time	3.574	3.902	3.413	3.664
HCM Lane V/C Ratio	0.317	0.203	0.434	0.481
HCM Control Delay, s/veh	11.1	10.4	12.5	13.8
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	1.4	0.7	2.2	2.6

HCM 7th TWSC
2: 3rd Avenue & A Street

11/07/2023

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	265	7	2	201	2	17	2	7	0	1	13
Future Vol, veh/h	5	265	7	2	201	2	17	2	7	0	1	13
Conflicting Peds, #/hr	1	0	1	1	0	1	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	81	81	81	81	81	81	81	81	81	81	81
Heavy Vehicles, %	8	8	8	8	8	8	0	0	0	7	7	7
Mvmt Flow	6	327	9	2	248	2	21	2	9	0	1	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	252	0	0	337	0	0	601	601	332	596	604	252
Stage 1	-	-	-	-	-	-	345	345	-	255	255	-
Stage 2	-	-	-	-	-	-	256	257	-	341	349	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.1	6.5	6.2	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.5	4	3.3	3.563	4.063	3.363
Pot Cap-1 Maneuver	1279	-	-	1190	-	-	415	417	714	408	406	774
Stage 1	-	-	-	-	-	-	675	640	-	738	687	-
Stage 2	-	-	-	-	-	-	753	699	-	664	625	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1278	-	-	1188	-	-	401	412	713	397	401	772
Mov Cap-2 Maneuver	-	-	-	-	-	-	401	412	-	397	401	-
Stage 1	-	-	-	-	-	-	670	635	-	736	685	-
Stage 2	-	-	-	-	-	-	733	697	-	649	620	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	0.14	0.08	13.5	10.09
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	456	32	-	-	18	-	-	724
HCM Lane V/C Ratio	0.07	0.005	-	-	0.002	-	-	0.024
HCM Control Delay (s/veh)	13.5	7.8	0	-	8	0	-	10.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.1

Intersection	
Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	40	13	28	19	177	27	30	214	2
Future Vol, veh/h	0	0	0	40	13	28	19	177	27	30	214	2
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	0	0	0	3	3	3	6	6	6	6	6	6
Mvmt Flow	0	0	0	50	16	35	24	221	34	38	268	3
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay, s/veh	9.1	10.1	10.6
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	9%	49%	12%
Vol Thru, %	79%	16%	87%
Vol Right, %	12%	35%	1%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	223	81	246
LT Vol	19	40	30
Through Vol	177	13	214
RT Vol	27	28	2
Lane Flow Rate	279	101	308
Geometry Grp	1	1	1
Degree of Util (X)	0.352	0.145	0.392
Departure Headway (Hd)	4.548	5.151	4.589
Convergence, Y/N	Yes	Yes	Yes
Cap	789	694	784
Service Time	2.583	3.2	2.623
HCM Lane V/C Ratio	0.354	0.146	0.393
HCM Control Delay, s/veh	10.1	9.1	10.6
HCM Lane LOS	B	A	B
HCM 95th-tile Q	1.6	0.5	1.9

Intersection

Intersection Delay, s/veh 11.1
 Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	106	98	89	129	146	105
Future Vol, veh/h	106	98	89	129	146	105
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	6	6	6	6	5	5
Mvmt Flow	133	123	111	161	183	131
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	1
HCM Control Delay, s/veh	1.3	10.3	11.5
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	52%	0%
Vol Thru, %	0%	100%	0%	58%
Vol Right, %	0%	0%	48%	42%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	129	204	251
LT Vol	89	0	106	0
Through Vol	0	129	0	146
RT Vol	0	0	98	105
Lane Flow Rate	111	161	255	314
Geometry Grp	7	7	2	5
Degree of Util (X)	0.188	0.25	0.368	0.424
Departure Headway (Hd)	6.084	5.579	5.197	4.862
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	584	637	686	731
Service Time	3.881	3.375	3.284	2.949
HCM Lane V/C Ratio	0.19	0.253	0.372	0.43
HCM Control Delay, s/veh	10.3	10.3	11.3	11.5
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.7	1	1.7	2.1

HCM 7th TWSC
5: Huntington Avenue & C Street

11/07/2023

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	7	8	9	34	13	29	4	188	36	27	181	28
Future Vol, veh/h	7	8	9	34	13	29	4	188	36	27	181	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0	6	6	6	4	4	4
Mvmt Flow	9	10	11	43	16	36	5	235	45	34	226	35

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	564	604	244	569	599	261	261	0	0	283	0	0
Stage 1	311	311	-	271	271	-	-	-	-	-	-	-
Stage 2	253	293	-	299	329	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.16	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.254	-	-	2.236	-	-
Pot Cap-1 Maneuver	439	415	800	436	418	783	1280	-	-	1268	-	-
Stage 1	703	662	-	740	689	-	-	-	-	-	-	-
Stage 2	756	674	-	714	650	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	394	401	800	408	404	781	1280	-	-	1264	-	-
Mov Cap-2 Maneuver	552	532	-	570	540	-	-	-	-	-	-	-
Stage 1	685	644	-	735	685	-	-	-	-	-	-	-
Stage 2	701	669	-	675	633	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v11.15		11.74	0.14	0.91
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1280	-	-	616	629	1264	-
HCM Lane V/C Ratio	0.004	-	-	0.049	0.151	0.027	-
HCM Control Delay (s/veh)	7.8	-	-	11.1	11.7	7.9	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.5	0.1	-

HCM 7th TWSC
6: Huntington Avenue & Front Avenue

11/07/2023

Intersection						
Int Delay, s/veh	3.9					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	70	46	27	122	135	9
Future Vol, veh/h	70	46	27	122	135	9
Conflicting Peds, #/hr	4	1	2	0	0	2
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	80	80	80	80	80	80
Heavy Vehicles, %	3	3	4	4	3	3
Mvmt Flow	88	58	34	153	169	11

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	400	177	182	0	0
Stage 1	176	-	-	-	-
Stage 2	224	-	-	-	-
Critical Hdwy	6.43	6.23	4.14	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.236	-	-
Pot Cap-1 Maneuver	604	863	1381	-	-
Stage 1	852	-	-	-	-
Stage 2	811	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	585	861	1379	-	-
Mov Cap-2 Maneuver	585	-	-	-	-
Stage 1	827	-	-	-	-
Stage 2	809	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	11.85	1.39	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	326	-	670	-	-
HCM Lane V/C Ratio	0.024	-	0.216	-	-
HCM Control Delay (s/veh)	7.7	0	11.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	-	-

HCM 7th TWSC
7: Larson Lane & Huntington Avenue

11/07/2023

Intersection												
Int Delay, s/veh	0.2											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	3	1	0	0	0	159	2	1	144	0
Future Vol, veh/h	1	0	3	1	0	0	0	159	2	1	144	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	4	4	4
Mvmt Flow	1	0	4	1	0	0	0	199	3	1	180	0

Major/Minor	Minor1		Minor2		Major1		Major2					
Conflicting Flow All	383	383	200	381	384	180	180	0	0	201	0	0
Stage 1	200	200	-	183	183	-	-	-	-	-	-	-
Stage 2	183	183	-	199	201	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	579	554	846	580	553	868	1396	-	-	1359	-	-
Stage 1	806	739	-	824	752	-	-	-	-	-	-	-
Stage 2	824	752	-	808	739	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	579	553	846	577	552	868	1396	-	-	1359	-	-
Mov Cap-2 Maneuver	579	553	-	577	552	-	-	-	-	-	-	-
Stage 1	806	739	-	823	752	-	-	-	-	-	-	-
Stage 2	823	752	-	804	739	-	-	-	-	-	-	-

Approach	NB		SB		SE		NW	
HCM Control Delay, s/v	9.78		11.25		0		0.05	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	NWR	SEL	SET	SER	SBLn1
Capacity (veh/h)	758	12	-	-	1396	-	-	577
HCM Lane V/C Ratio	0.007	0.001	-	-	-	-	-	0.002
HCM Control Delay (s/veh)	9.8	7.7	0	-	0	-	-	11.3
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

HCM 7th TWSC
8: Site Access & Huntington Avenue

11/07/2023

Intersection						
Int Delay, s/veh	0					
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations	Y		P			4
Traffic Vol, veh/h	0	0	244	0	0	140
Future Vol, veh/h	0	0	244	0	0	140
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	80	80	80	80	80	80
Heavy Vehicles, %	2	2	1	1	2	2
Mvmt Flow	0	0	305	0	0	175

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	480	305	0	0	305	0
Stage 1	305	-	-	-	-	-
Stage 2	175	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	545	735	-	-	1256	-
Stage 1	748	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	545	735	-	-	1256	-
Mov Cap-2 Maneuver	545	-	-	-	-	-
Stage 1	748	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	-	1256	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	-	0	-	-	-

HCM 7th TWSC
 9: Pleasant Hill Road & Huntington Avenue

11/07/2023

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	237	7	2	124	16	0
Future Vol, veh/h	237	7	2	124	16	0
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	80	80	80	80	80	80
Heavy Vehicles, %	1	1	2	2	0	0
Mvmt Flow	296	9	3	155	20	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	305	0	461
Stage 1	-	-	-	-	301
Stage 2	-	-	-	-	160
Critical Hdwy	-	-	4.12	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.218	-	3.5
Pot Cap-1 Maneuver	-	-	1256	-	563
Stage 1	-	-	-	-	756
Stage 2	-	-	-	-	874
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1256	-	561
Mov Cap-2 Maneuver	-	-	-	-	561
Stage 1	-	-	-	-	756
Stage 2	-	-	-	-	872

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.12	11.65
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	561	-	-	29	-
HCM Lane V/C Ratio	0.036	-	-	0.002	-
HCM Control Delay (s/veh)	11.6	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 7th TWSC
 10: I-5 SB Ramps & Huntington Avenue

11/07/2023

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔	
Traffic Vol, veh/h	0	16	218	25	124	0	0	0	0	11	3	2
Future Vol, veh/h	0	16	218	25	124	0	0	0	0	11	3	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	13	13	13
Mvmt Flow	0	20	273	31	155	0	0	0	0	14	4	3

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	293	0	0		238	510	155
Stage 1	-	-	-	-	-	-		218	218	-
Stage 2	-	-	-	-	-	-		20	293	-
Critical Hdwy	-	-	-	4.11	-	-		6.53	6.63	6.33
Critical Hdwy Stg 1	-	-	-	-	-	-		5.53	5.63	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.53	5.63	-
Follow-up Hdwy	-	-	-	2.209	-	-		3.617	4.117	3.417
Pot Cap-1 Maneuver	0	-	-	1275	-	0		727	451	863
Stage 1	0	-	-	-	-	0		793	703	-
Stage 2	0	-	-	-	-	0		975	651	-
Platoon blocked, %		-	-	-						
Mov Cap-1 Maneuver	-	-	-	1275	-	-		708	0	863
Mov Cap-2 Maneuver	-	-	-	-	-	-		708	0	-
Stage 1	-	-	-	-	-	-		793	0	-
Stage 2	-	-	-	-	-	-		949	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	1.32	10.09
HCM LOS			B

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	302	-	728
HCM Lane V/C Ratio	-	-	0.025	-	0.027
HCM Control Delay (s/veh)	-	-	7.9	0	10.1
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0.1	-	0.1

HCM 7th TWSC
 11: I-5 NB Ramps & Huntington Avenue

11/07/2023

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Vol, veh/h	5	18	0	0	39	2	116	2	12	0	0	0
Future Vol, veh/h	5	18	0	0	39	2	116	2	12	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	2	2	2	2	2	2	0	0	0
Mvmt Flow	6	23	0	0	49	3	145	3	15	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	51	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	1568	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1568	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	1.59	0	9.71
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	926	391	-	-	-
HCM Lane V/C Ratio	0.176	0.004	-	-	-
HCM Control Delay (s/veh)	9.7	7.3	0	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.6	0	-	-	-

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	28	45	14	98	54	164	43	135	102	90	83	22
Future Vol, veh/h	28	45	14	98	54	164	43	135	102	90	83	22
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	3	3
Mvmt Flow	31	49	15	108	59	180	47	148	112	99	91	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	10.2	13.8	12.9	11.7
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	32%	31%	46%
Vol Thru, %	48%	52%	17%	43%
Vol Right, %	36%	16%	52%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	280	87	316	195
LT Vol	43	28	98	90
Through Vol	135	45	54	83
RT Vol	102	14	164	22
Lane Flow Rate	308	96	347	214
Geometry Grp	1	1	1	1
Degree of Util (X)	0.458	0.158	0.511	0.341
Departure Headway (Hd)	5.356	5.966	5.296	5.723
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	671	598	677	626
Service Time	3.409	4.04	3.35	3.783
HCM Lane V/C Ratio	0.459	0.161	0.513	0.342
HCM Control Delay, s/veh	12.9	10.2	13.8	11.7
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	2.4	0.6	2.9	1.5

HCM 7th TWSC
2: 3rd Avenue & A Street

10/27/2023

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	221	9	1	278	0	14	3	9	1	3	23
Future Vol, veh/h	14	221	9	1	278	0	14	3	9	1	3	23
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	5	5	5	1	1	1	0	0	0	0	0	0
Mvmt Flow	17	266	11	1	335	0	17	4	11	1	4	28

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	337	0	0	277	0	0	645	645	272	641	650	337
Stage 1	-	-	-	-	-	-	305	305	-	339	339	-
Stage 2	-	-	-	-	-	-	339	339	-	302	311	-
Critical Hdwy	4.15	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.245	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1206	-	-	1292	-	-	388	394	772	390	391	710
Stage 1	-	-	-	-	-	-	709	666	-	679	643	-
Stage 2	-	-	-	-	-	-	680	643	-	712	662	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	1203	-	-	1292	-	-	363	386	772	374	383	708
Mov Cap-2 Maneuver	-	-	-	-	-	-	363	386	-	374	383	-
Stage 1	-	-	-	-	-	-	697	655	-	677	641	-
Stage 2	-	-	-	-	-	-	649	641	-	686	651	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.46			0.03			13.63			11.04		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	448	102	-	-	6	-	-	628
HCM Lane V/C Ratio	0.07	0.014	-	-	0.001	-	-	0.052
HCM Control Delay (s/veh)	13.6	8	0	-	7.8	0	-	11
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2

HCM 7th AWSC
 3: Huntington Avenue & Cowlitz Street

10/27/2023

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	24	5	13	58	193	34	22	217	13
Future Vol, veh/h	0	0	0	24	5	13	58	193	34	22	217	13
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	0	0	2	2	2	3	3	3	6	6	6
Mvmt Flow	0	0	0	28	6	15	67	224	40	26	252	15
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay, s/veh	8.7	10.3	10
HCM LOS	A	B	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	20%	57%	9%
Vol Thru, %	68%	12%	86%
Vol Right, %	12%	31%	5%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	285	42	252
LT Vol	58	24	22
Through Vol	193	5	217
RT Vol	34	13	13
Lane Flow Rate	331	49	293
Geometry Grp	1	1	1
Degree of Util (X)	0.401	0.071	0.363
Departure Headway (Hd)	4.353	5.216	4.454
Convergence, Y/N	Yes	Yes	Yes
Cap	828	686	809
Service Time	2.373	3.255	2.475
HCM Lane V/C Ratio	0.4	0.071	0.362
HCM Control Delay, s/veh	10.3	8.7	10
HCM Lane LOS	B	A	A
HCM 95th-tile Q	1.9	0.2	1.7

HCM 7th AWSC
4: Huntington Avenue & A Street

10/27/2023

Intersection

Intersection Delay, s/veh 10.2

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	156	72	104	127	93	153
Future Vol, veh/h	156	72	104	127	93	153
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	4	4	2	2	5	5
Mvmt Flow	166	77	111	135	99	163
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	1
HCM Control Delay, s/veh 0.8		9.8	10.1
HCM LOS	B	A	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	68%	0%
Vol Thru, %	0%	100%	0%	38%
Vol Right, %	0%	0%	32%	62%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	104	127	228	246
LT Vol	104	0	156	0
Through Vol	0	127	0	93
RT Vol	0	0	72	153
Lane Flow Rate	111	135	243	262
Geometry Grp	7	7	2	5
Degree of Util (X)	0.182	0.203	0.343	0.339
Departure Headway (Hd)	5.914	5.41	5.097	4.663
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	603	659	701	764
Service Time	3.687	3.182	3.166	2.729
HCM Lane V/C Ratio	0.184	0.205	0.347	0.343
HCM Control Delay, s/veh	10	9.6	10.8	10.1
HCM Lane LOS	A	A	B	B
HCM 95th-tile Q	0.7	0.8	1.5	1.5

HCM 7th TWSC
5: Huntington Avenue & C Street

10/27/2023

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	9	0	3	9	1	9	7	205	20	20	138	6
Future Vol, veh/h	9	0	3	9	1	9	7	205	20	20	138	6
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	5	5	5	1	1	1	7	7	7
Mvmt Flow	10	0	3	10	1	10	8	228	22	22	153	7

Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	445	467	158	453	459	239	160	0	0	250	0	0
Stage 1	201	201	-	254	254	-	-	-	-	-	-	-
Stage 2	244	266	-	199	204	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.15	6.55	6.25	4.11	-	-	4.17	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.545	4.045	3.345	2.209	-	-	2.263	-	-
Pot Cap-1 Maneuver	527	497	893	512	494	793	1425	-	-	1287	-	-
Stage 1	805	739	-	743	691	-	-	-	-	-	-	-
Stage 2	764	693	-	796	727	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	507	485	892	498	483	793	1425	-	-	1287	-	-
Mov Cap-2 Maneuver	637	591	-	634	593	-	-	-	-	-	-	-
Stage 1	791	726	-	739	687	-	-	-	-	-	-	-
Stage 2	749	689	-	779	714	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v10.35		10.32	0.23	0.96
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1425	-	-	686	698	1287	-	-
HCM Lane V/C Ratio	0.005	-	-	0.019	0.03	0.017	-	-
HCM Control Delay (s/veh)	7.5	-	-	10.3	10.3	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.1	-	-

HCM 7th TWSC
6: Huntington Avenue & Front Avenue

10/27/2023

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	5	19	40	198	129	10
Future Vol, veh/h	5	19	40	198	129	10
Conflicting Peds, #/hr	1	0	6	0	0	6
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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	1	1	2	2
Mvmt Flow	6	21	44	220	143	11

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	465	155	160	0	0
Stage 1	155	-	-	-	-
Stage 2	310	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-
Pot Cap-1 Maneuver	560	896	1425	-	-
Stage 1	878	-	-	-	-
Stage 2	748	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	533	891	1417	-	-
Mov Cap-2 Maneuver	533	-	-	-	-
Stage 1	842	-	-	-	-
Stage 2	744	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	9.77	1.28	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	303	-	782	-	-
HCM Lane V/C Ratio	0.031	-	0.034	-	-
HCM Control Delay (s/veh)	7.6	0	9.8	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

HCM 7th TWSC
7: Larson Lane & Huntington Avenue

10/27/2023

Intersection												
Int Delay, s/veh	0.1											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	1	0	134	0	3	220	0
Future Vol, veh/h	0	0	0	0	0	1	0	134	0	3	220	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	0	152	0	3	250	0

Major/Minor	Minor1		Minor2		Major1		Major2					
Conflicting Flow All	410	410	153	409	410	250	250	0	0	153	0	0
Stage 1	153	153	-	257	257	-	-	-	-	-	-	-
Stage 2	257	257	-	152	153	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	556	534	898	556	534	794	1316	-	-	1427	-	-
Stage 1	854	774	-	752	699	-	-	-	-	-	-	-
Stage 2	752	699	-	855	774	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	553	532	897	555	532	794	1316	-	-	1426	-	-
Mov Cap-2 Maneuver	553	532	-	555	532	-	-	-	-	-	-	-
Stage 1	853	774	-	750	697	-	-	-	-	-	-	-
Stage 2	749	697	-	855	774	-	-	-	-	-	-	-

Approach	NB	SB	SE	NW
HCM Control Delay, s/v	0	9.54	0	0.1
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	NWR	SEL	SET	SER	SBLn1
Capacity (veh/h)	-	24	-	-	1316	-	-	794
HCM Lane V/C Ratio	-	0.002	-	-	-	-	-	0.001
HCM Control Delay (s/veh)	0	7.5	0	-	0	-	-	9.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

HCM 7th TWSC
8: Site Access & Huntington Avenue

10/27/2023

Intersection						
Int Delay, s/veh	0					
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations	Y		P			4
Traffic Vol, veh/h	0	0	154	0	0	223
Future Vol, veh/h	0	0	154	0	0	223
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	90	90	90	90	90	90
Heavy Vehicles, %	2	2	0	0	1	1
Mvmt Flow	0	0	171	0	0	248

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	419	171	0	0	171	0
Stage 1	171	-	-	-	-	-
Stage 2	248	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	591	873	-	-	1412	-
Stage 1	859	-	-	-	-	-
Stage 2	793	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	591	873	-	-	1412	-
Mov Cap-2 Maneuver	591	-	-	-	-	-
Stage 1	859	-	-	-	-	-
Stage 2	793	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	-	1412	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	-	0	-	-	-

HCM 7th TWSC
 9: Pleasant Hill Road & Huntington Avenue

10/27/2023

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	142	12	1	214	9	4
Future Vol, veh/h	142	12	1	214	9	4
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	90	90	90	90	90	90
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	158	13	1	238	10	4

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	171	0	404
Stage 1	-	-	-	-	164
Stage 2	-	-	-	-	240
Critical Hdwy	-	-	4.11	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.209	-	3.5
Pot Cap-1 Maneuver	-	-	1412	-	606
Stage 1	-	-	-	-	870
Stage 2	-	-	-	-	805
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1412	-	606
Mov Cap-2 Maneuver	-	-	-	-	606
Stage 1	-	-	-	-	870
Stage 2	-	-	-	-	804

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.04	10.48
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	671	-	-	8	-
HCM Lane V/C Ratio	0.022	-	-	0.001	-
HCM Control Delay (s/veh)	10.5	-	-	7.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 7th TWSC
 10: I-5 SB Ramps & Huntington Avenue

10/27/2023

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔	
Traffic Vol, veh/h	0	17	133	16	216	0	0	0	0	1	2	6
Future Vol, veh/h	0	17	133	16	216	0	0	0	0	1	2	6
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	2	2	2	0	0	0	0	0	0
Mvmt Flow	0	19	148	18	240	0	0	0	0	1	2	7

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	167	0	0		294	442	241
Stage 1	-	-	-	-	-	-		276	276	-
Stage 2	-	-	-	-	-	-		19	167	-
Critical Hdwy	-	-	-	4.12	-	-		6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-		5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.4	5.5	-
Follow-up Hdwy	-	-	-	2.218	-	-		3.5	4	3.3
Pot Cap-1 Maneuver	0	-	-	1411	-	0		701	513	803
Stage 1	0	-	-	-	-	0		776	686	-
Stage 2	0	-	-	-	-	0		1009	764	-
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	1411	-	-		691	0	802
Mov Cap-2 Maneuver	-	-	-	-	-	-		691	0	-
Stage 1	-	-	-	-	-	-		776	0	-
Stage 2	-	-	-	-	-	-		994	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0.52	9.65
HCM LOS			A

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	124	-	784
HCM Lane V/C Ratio	-	-	0.013	-	0.013
HCM Control Delay (s/veh)	-	-	7.6	0	9.7
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	-	0

HCM 7th TWSC
 11: I-5 NB Ramps & Huntington Avenue

10/27/2023

Intersection												
Int Delay, s/veh	8.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Vol, veh/h	5	12	0	0	24	3	206	2	28	0	0	0
Future Vol, veh/h	5	12	0	0	24	3	206	2	28	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	86	86	86	86	86	86	86	86	86	86	86	86
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	14	0	0	28	3	240	2	33	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	31	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	1594	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1594	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	2.14	0	10.18
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	969	529	-	-	-
HCM Lane V/C Ratio	0.283	0.004	-	-	-
HCM Control Delay (s/veh)	10.2	7.3	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	1.2	0	-	-	-

Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	37	74	36	74	70	202	12	120	113	212	132	21
Future Vol, veh/h	37	74	36	74	70	202	12	120	113	212	132	21
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	6	6	6	11	11	11	7	7	7
Mvmt Flow	37	74	36	74	70	202	12	120	113	212	132	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	12	16.5	13.6	18.9
HCM LOS	B	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	25%	21%	58%
Vol Thru, %	49%	50%	20%	36%
Vol Right, %	46%	24%	58%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	245	147	346	365
LT Vol	12	37	74	212
Through Vol	120	74	70	132
RT Vol	113	36	202	21
Lane Flow Rate	245	147	346	365
Geometry Grp	1	1	1	1
Degree of Util (X)	0.418	0.268	0.569	0.624
Departure Headway (Hd)	6.144	6.554	5.922	6.158
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	586	547	609	588
Service Time	4.192	4.608	3.964	4.202
HCM Lane V/C Ratio	0.418	0.269	0.568	0.621
HCM Control Delay, s/veh	13.6	12	16.5	18.9
HCM Lane LOS	B	B	C	C
HCM 95th-tile Q	2.1	1.1	3.6	4.3

HCM 7th TWSC
2: 3rd Avenue & A Street

11/07/2023

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	394	10	3	299	3	25	3	10	0	1	19
Future Vol, veh/h	7	394	10	3	299	3	25	3	10	0	1	19
Conflicting Peds, #/hr	1	0	1	1	0	1	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	8	8	8	0	0	0	7	7	7
Mvmt Flow	7	394	10	3	299	3	25	3	10	0	1	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	303	0	0	405	0	0	722	723	400	717	727	304
Stage 1	-	-	-	-	-	-	414	414	-	308	308	-
Stage 2	-	-	-	-	-	-	308	309	-	410	419	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.1	6.5	6.2	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.5	4	3.3	3.563	4.063	3.363
Pot Cap-1 Maneuver	1225	-	-	1122	-	-	345	355	654	338	345	725
Stage 1	-	-	-	-	-	-	620	597	-	692	652	-
Stage 2	-	-	-	-	-	-	707	663	-	609	582	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1223	-	-	1121	-	-	330	350	654	327	341	723
Mov Cap-2 Maneuver	-	-	-	-	-	-	330	350	-	327	341	-
Stage 1	-	-	-	-	-	-	614	592	-	689	649	-
Stage 2	-	-	-	-	-	-	684	660	-	592	577	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.14			0.08			15.47			10.42		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	382	31	-	-	18	-	-	684
HCM Lane V/C Ratio	0.1	0.006	-	-	0.003	-	-	0.029
HCM Control Delay (s/veh)	15.5	8	0	-	8.2	0	-	10.4
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.1

Intersection	
Intersection Delay, s/veh	11.4
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	59	19	42	28	263	40	45	318	3
Future Vol, veh/h	0	0	0	59	19	42	28	263	40	45	318	3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	3	3	3	6	6	6	6	6	6
Mvmt Flow	0	0	0	59	19	42	28	263	40	45	318	3
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay, s/veh	9.7	11.3	12.1
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	8%	49%	12%
Vol Thru, %	79%	16%	87%
Vol Right, %	12%	35%	1%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	331	120	366
LT Vol	28	59	45
Through Vol	263	19	318
RT Vol	40	42	3
Lane Flow Rate	331	120	366
Geometry Grp	1	1	1
Degree of Util (X)	0.431	0.18	0.48
Departure Headway (Hd)	4.687	5.402	4.719
Convergence, Y/N	Yes	Yes	Yes
Cap	765	659	761
Service Time	2.738	3.476	2.769
HCM Lane V/C Ratio	0.433	0.182	0.481
HCM Control Delay, s/veh	11.3	9.7	12.1
HCM Lane LOS	B	A	B
HCM 95th-tile Q	2.2	0.7	2.6

Intersection

Intersection Delay, s/veh 13.1
Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	158	146	132	192	217	156
Future Vol, veh/h	158	146	132	192	217	156
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	6	6	6	6	5	5
Mvmt Flow	158	146	132	192	217	156
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	1
HCM Control Delay, s/veh	3.6	11.4	14.3
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	52%	0%
Vol Thru, %	0%	100%	0%	58%
Vol Right, %	0%	0%	48%	42%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	192	304	373
LT Vol	132	0	158	0
Through Vol	0	192	0	217
RT Vol	0	0	146	156
Lane Flow Rate	132	192	304	373
Geometry Grp	7	7	2	5
Degree of Util (X)	0.238	0.319	0.472	0.542
Departure Headway (Hd)	6.487	5.979	5.586	5.231
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	553	601	644	690
Service Time	4.225	3.718	3.625	3.266
HCM Lane V/C Ratio	0.239	0.319	0.472	0.541
HCM Control Delay, s/veh	11.3	11.5	13.6	14.3
HCM Lane LOS	B	B	B	B
HCM 95th-tile Q	0.9	1.4	2.5	3.3

HCM 7th TWSC
5: Huntington Avenue & C Street

11/07/2023

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	10	12	13	51	19	43	6	279	53	40	269	42
Future Vol, veh/h	10	12	13	51	19	43	6	279	53	40	269	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	6	6	6	4	4	4
Mvmt Flow	10	12	13	51	19	43	6	279	53	40	269	42

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	671	717	290	676	712	309	311	0	0	335	0	0
Stage 1	370	370	-	321	321	-	-	-	-	-	-	-
Stage 2	301	347	-	355	391	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.16	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.254	-	-	2.236	-	-
Pot Cap-1 Maneuver	373	358	754	370	360	736	1227	-	-	1213	-	-
Stage 1	654	624	-	695	656	-	-	-	-	-	-	-
Stage 2	713	638	-	666	611	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	326	343	754	341	346	734	1227	-	-	1210	-	-
Mov Cap-2 Maneuver	495	487	-	517	497	-	-	-	-	-	-	-
Stage 1	633	603	-	690	651	-	-	-	-	-	-	-
Stage 2	648	633	-	621	590	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	11.81	12.74	0.14	0.92
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1227	-	-	564	578	1210	-	-
HCM Lane V/C Ratio	0.005	-	-	0.062	0.196	0.033	-	-
HCM Control Delay (s/veh)	7.9	-	-	11.8	12.7	8.1	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.7	0.1	-	-

HCM 7th TWSC
6: Huntington Avenue & Front Avenue

11/07/2023

Intersection						
Int Delay, s/veh	4.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		
Traffic Vol, veh/h	104	68	40	181	201	13
Future Vol, veh/h	104	68	40	181	201	13
Conflicting Peds, #/hr	4	1	2	0	0	2
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	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	3	3
Mvmt Flow	104	68	40	181	201	13

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	475	211	216	0	0
Stage 1	210	-	-	-	-
Stage 2	265	-	-	-	-
Critical Hdwy	6.43	6.23	4.14	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.236	-	-
Pot Cap-1 Maneuver	547	827	1342	-	-
Stage 1	823	-	-	-	-
Stage 2	777	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	527	825	1339	-	-
Mov Cap-2 Maneuver	527	-	-	-	-
Stage 1	794	-	-	-	-
Stage 2	776	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	13.12	1.41	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	326	-	614	-	-
HCM Lane V/C Ratio	0.03	-	0.28	-	-
HCM Control Delay (s/veh)	7.8	0	13.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.1	-	-

HCM 7th TWSC
7: Larson Lane & Huntington Avenue

11/07/2023

Intersection												
Int Delay, s/veh	0.2											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	4	1	0	0	0	236	3	1	214	0
Future Vol, veh/h	1	0	4	1	0	0	0	236	3	1	214	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	4	4	4
Mvmt Flow	1	0	4	1	0	0	0	236	3	1	214	0

Major/Minor	Minor1		Minor2		Major1			Major2				
Conflicting Flow All	454	454	238	452	455	214	214	0	0	239	0	0
Stage 1	238	238	-	216	216	-	-	-	-	-	-	-
Stage 2	216	216	-	236	239	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	520	505	806	521	504	831	1356	-	-	1316	-	-
Stage 1	770	712	-	791	728	-	-	-	-	-	-	-
Stage 2	791	728	-	772	711	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	520	505	806	518	504	831	1356	-	-	1316	-	-
Mov Cap-2 Maneuver	520	505	-	518	504	-	-	-	-	-	-	-
Stage 1	770	712	-	790	727	-	-	-	-	-	-	-
Stage 2	790	727	-	768	711	-	-	-	-	-	-	-

Approach	NB		SB		SE		NW	
HCM Control Delay, s/v	9.99		11.96		0		0.04	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	NWR	SEL	SET	SER	SBLn1
Capacity (veh/h)	726	8	-	-	1356	-	-	518
HCM Lane V/C Ratio	0.007	0.001	-	-	-	-	-	0.002
HCM Control Delay (s/veh)	10	7.7	0	-	0	-	-	12
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

HCM 7th TWSC
8: Site Access & Huntington Avenue

11/07/2023

Intersection						
Int Delay, s/veh	0					
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations	Y		T			T
Traffic Vol, veh/h	0	0	362	0	0	208
Future Vol, veh/h	0	0	362	0	0	208
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	1	1	2	2
Mvmt Flow	0	0	362	0	0	208

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	570	362	0	0	362	0
Stage 1	362	-	-	-	-	-
Stage 2	208	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	483	683	-	-	1197	-
Stage 1	704	-	-	-	-	-
Stage 2	827	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	483	683	-	-	1197	-
Mov Cap-2 Maneuver	483	-	-	-	-	-
Stage 1	704	-	-	-	-	-
Stage 2	827	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	-	1197	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	-	0	-	-	-

HCM 7th TWSC
 9: Pleasant Hill Road & Huntington Avenue

11/07/2023

Intersection						
Int Delay, s/veh	0.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	352	10	3	184	24	0
Future Vol, veh/h	352	10	3	184	24	0
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	100	100	100	100	100	100
Heavy Vehicles, %	1	1	2	2	0	0
Mvmt Flow	352	10	3	184	24	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	362	0	547
Stage 1	-	-	-	-	357
Stage 2	-	-	-	-	190
Critical Hdwy	-	-	4.12	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.218	-	3.5
Pot Cap-1 Maneuver	-	-	1197	-	502
Stage 1	-	-	-	-	713
Stage 2	-	-	-	-	847
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1197	-	500
Mov Cap-2 Maneuver	-	-	-	-	500
Stage 1	-	-	-	-	713
Stage 2	-	-	-	-	845

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.13	12.56
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	500	-	-	29	-
HCM Lane V/C Ratio	0.048	-	-	0.003	-
HCM Control Delay (s/veh)	12.6	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

HCM 7th TWSC
 10: I-5 SB Ramps & Huntington Avenue

11/07/2023

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔	
Traffic Vol, veh/h	0	24	324	37	184	0	0	0	0	16	4	3
Future Vol, veh/h	0	24	324	37	184	0	0	0	0	16	4	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	13	13	13
Mvmt Flow	0	24	324	37	184	0	0	0	0	16	4	3

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	348	0	0		282	606	184
Stage 1	-	-	-	-	-	-		258	258	-
Stage 2	-	-	-	-	-	-		24	348	-
Critical Hdwy	-	-	-	4.11	-	-		6.53	6.63	6.33
Critical Hdwy Stg 1	-	-	-	-	-	-		5.53	5.63	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.53	5.63	-
Follow-up Hdwy	-	-	-	2.209	-	-		3.617	4.117	3.417
Pot Cap-1 Maneuver	0	-	-	1216	-	0		685	397	831
Stage 1	0	-	-	-	-	0		760	675	-
Stage 2	0	-	-	-	-	0		971	615	-
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	1216	-	-		662	0	831
Mov Cap-2 Maneuver	-	-	-	-	-	-		662	0	-
Stage 1	-	-	-	-	-	-		760	0	-
Stage 2	-	-	-	-	-	-		938	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	1.35	10.45
HCM LOS			B

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	301	-	684
HCM Lane V/C Ratio	-	-	0.03	-	0.034
HCM Control Delay (s/veh)	-	-	8.1	0	10.4
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0.1	-	0.1

HCM 7th TWSC
 11: I-5 NB Ramps & Huntington Avenue

11/07/2023

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Vol, veh/h	7	27	0	0	58	3	172	3	18	0	0	0
Future Vol, veh/h	7	27	0	0	58	3	172	3	18	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	2	2	2	2	0	0	0
Mvmt Flow	7	27	0	0	58	3	172	3	18	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	61	0	99
Stage 1	-	-	41
Stage 2	-	-	58
Critical Hdwy	4.1	-	6.42
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	2.2	-	3.518
Pot Cap-1 Maneuver	1555	0	900
Stage 1	-	0	981
Stage 2	-	0	965
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1555	-	896
Mov Cap-2 Maneuver	-	-	896
Stage 1	-	-	977
Stage 2	-	-	965

Approach	EB	WB	NB
HCM Control Delay, s/v	1.51	0	10.03
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	908	371	-	-	-
HCM Lane V/C Ratio	0.212	0.005	-	-	-
HCM Control Delay (s/veh)	10	7.3	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.8	0	-	-	-

Intersection	
Intersection Delay, s/veh	27.7
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	42	67	21	146	80	244	64	201	152	134	123	33
Future Vol, veh/h	42	67	21	146	80	244	64	201	152	134	123	33
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	3	3
Mvmt Flow	42	67	21	146	80	244	64	201	152	134	123	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	13.8	35.8	28.5	19.5
HCM LOS	B	E	D	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	32%	31%	46%
Vol Thru, %	48%	52%	17%	42%
Vol Right, %	36%	16%	52%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	417	130	470	290
LT Vol	64	42	146	134
Through Vol	201	67	80	123
RT Vol	152	21	244	33
Lane Flow Rate	417	130	470	290
Geometry Grp	1	1	1	1
Degree of Util (X)	0.769	0.278	0.848	0.575
Departure Headway (Hd)	6.643	7.709	6.495	7.144
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	546	464	559	505
Service Time	4.677	5.793	4.52	5.214
HCM Lane V/C Ratio	0.764	0.28	0.841	0.574
HCM Control Delay, s/veh	28.5	13.8	35.8	19.5
HCM Lane LOS	D	B	E	C
HCM 95th-tile Q	6.9	1.1	9	3.6

HCM 7th TWSC
2: 3rd Avenue & A Street

10/27/2023

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	328	13	1	413	0	21	4	13	1	4	34
Future Vol, veh/h	21	328	13	1	413	0	21	4	13	1	4	34
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	5	5	5	1	1	1	0	0	0	0	0	0
Mvmt Flow	21	328	13	1	413	0	21	4	13	1	4	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	415	0	0	341	0	0	794	794	335	789	800	415
Stage 1	-	-	-	-	-	-	377	377	-	417	417	-
Stage 2	-	-	-	-	-	-	417	417	-	372	383	-
Critical Hdwy	4.15	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.245	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1128	-	-	1224	-	-	309	323	712	311	320	642
Stage 1	-	-	-	-	-	-	649	620	-	617	595	-
Stage 2	-	-	-	-	-	-	617	595	-	653	616	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1126	-	-	1224	-	-	282	315	712	293	312	641
Mov Cap-2 Maneuver	-	-	-	-	-	-	282	315	-	293	312	-
Stage 1	-	-	-	-	-	-	634	605	-	615	593	-
Stage 2	-	-	-	-	-	-	580	593	-	622	601	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.48			0.02			16.17			11.87		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	360	104	-	-	4	-	-	563
HCM Lane V/C Ratio	0.106	0.019	-	-	0.001	-	-	0.069
HCM Control Delay (s/veh)	16.2	8.3	0	-	7.9	0	-	11.9
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0	-	-	0.2

HCM 7th AWSC
 3: Huntington Avenue & Cowlitz Street

10/27/2023

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	36	7	19	86	287	51	33	322	19
Future Vol, veh/h	0	0	0	36	7	19	86	287	51	33	322	19
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	2	2	2	3	3	3	6	6	6
Mvmt Flow	0	0	0	36	7	19	86	287	51	33	322	19
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay, s/veh	9.3	12.5	11.8
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	20%	58%	9%
Vol Thru, %	68%	11%	86%
Vol Right, %	12%	31%	5%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	424	62	374
LT Vol	86	36	33
Through Vol	287	7	322
RT Vol	51	19	19
Lane Flow Rate	424	62	374
Geometry Grp	1	1	1
Degree of Util (X)	0.529	0.096	0.479
Departure Headway (Hd)	4.495	5.595	4.607
Convergence, Y/N	Yes	Yes	Yes
Cap	801	637	782
Service Time	2.527	3.661	2.641
HCM Lane V/C Ratio	0.529	0.097	0.478
HCM Control Delay, s/veh	12.5	9.3	11.8
HCM Lane LOS	B	A	B
HCM 95th-tile Q	3.2	0.3	2.6

Intersection

Intersection Delay, s/veh 13.8

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	232	107	155	189	138	227
Future Vol, veh/h	232	107	155	189	138	227
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	2	2	5	5
Mvmt Flow	232	107	155	189	138	227
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	1
HCM Control Delay, s/veh	5.3	11.7	14.3
HCM LOS	C	B	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	68%	0%
Vol Thru, %	0%	100%	0%	38%
Vol Right, %	0%	0%	32%	62%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	155	189	339	365
LT Vol	155	0	232	0
Through Vol	0	189	0	138
RT Vol	0	0	107	227
Lane Flow Rate	155	189	339	365
Geometry Grp	7	7	2	5
Degree of Util (X)	0.282	0.318	0.538	0.535
Departure Headway (Hd)	6.56	6.052	5.717	5.275
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	547	593	631	683
Service Time	4.308	3.799	3.759	3.318
HCM Lane V/C Ratio	0.283	0.319	0.537	0.534
HCM Control Delay, s/veh	11.9	11.6	15.3	14.3
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	1.2	1.4	3.2	3.2

HCM 7th TWSC
5: Huntington Avenue & C Street

10/27/2023

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	13	0	4	13	1	13	10	305	30	30	205	9
Future Vol, veh/h	13	0	4	13	1	13	10	305	30	30	205	9
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	5	5	5	1	1	1	7	7	7
Mvmt Flow	13	0	4	13	1	13	10	305	30	30	205	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	595	625	211	606	614	320	214	0	0	335	0	0
Stage 1	270	270	-	340	340	-	-	-	-	-	-	-
Stage 2	326	355	-	266	274	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.15	6.55	6.25	4.11	-	-	4.17	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.545	4.045	3.345	2.209	-	-	2.263	-	-
Pot Cap-1 Maneuver	419	404	835	405	403	714	1362	-	-	1197	-	-
Stage 1	741	690	-	669	634	-	-	-	-	-	-	-
Stage 2	691	633	-	733	678	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	397	391	834	389	390	714	1362	-	-	1197	-	-
Mov Cap-2 Maneuver	553	521	-	554	528	-	-	-	-	-	-	-
Stage 1	722	673	-	664	629	-	-	-	-	-	-	-
Stage 2	673	629	-	710	661	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v11.17		11.08	0.22	0.99
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1362	-	-	600	620	1197	-
HCM Lane V/C Ratio	0.007	-	-	0.028	0.044	0.025	-
HCM Control Delay (s/veh)	7.7	-	-	11.2	11.1	8.1	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.1	-

HCM 7th TWSC
6: Huntington Avenue & Front Avenue

10/27/2023

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Traffic Vol, veh/h	7	28	59	294	192	15
Future Vol, veh/h	7	28	59	294	192	15
Conflicting Peds, #/hr	1	0	6	0	0	6
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	1	1	2	2
Mvmt Flow	7	28	59	294	192	15

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	619	206	213	0	0
Stage 1	206	-	-	-	-
Stage 2	413	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-
Pot Cap-1 Maneuver	456	840	1363	-	-
Stage 1	834	-	-	-	-
Stage 2	672	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	427	835	1355	-	-
Mov Cap-2 Maneuver	427	-	-	-	-
Stage 1	786	-	-	-	-
Stage 2	668	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	10.4	1.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	301	-	701	-	-
HCM Lane V/C Ratio	0.044	-	0.05	-	-
HCM Control Delay (s/veh)	7.8	0	10.4	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

HCM 7th TWSC
7: Larson Lane & Huntington Avenue

10/27/2023

Intersection												
Int Delay, s/veh	0.1											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	1	0	199	0	4	327	0
Future Vol, veh/h	0	0	0	0	0	1	0	199	0	4	327	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	0	199	0	4	327	0

Major/Minor	Minor1		Minor2		Major1			Major2				
Conflicting Flow All	535	535	200	534	535	327	327	0	0	200	0	0
Stage 1	200	200	-	335	335	-	-	-	-	-	-	-
Stage 2	335	335	-	199	200	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	459	454	846	460	454	719	1233	-	-	1372	-	-
Stage 1	806	739	-	683	646	-	-	-	-	-	-	-
Stage 2	683	646	-	807	739	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	457	452	845	458	452	719	1233	-	-	1371	-	-
Mov Cap-2 Maneuver	457	452	-	458	452	-	-	-	-	-	-	-
Stage 1	806	739	-	681	644	-	-	-	-	-	-	-
Stage 2	680	644	-	807	739	-	-	-	-	-	-	-

Approach	NB		SB		SE		NW	
HCM Control Delay, s/v	0		10.01		0		0.09	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	NWR	SEL	SET	SER	SBLn1
Capacity (veh/h)	-	22	-	-	1233	-	-	719
HCM Lane V/C Ratio	-	0.003	-	-	-	-	-	0.001
HCM Control Delay (s/veh)	0	7.6	0	-	0	-	-	10
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

HCM 7th TWSC
 8: Site Access & Huntington Avenue

10/27/2023

Intersection						
Int Delay, s/veh	0					
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	0	0	229	0	0	331
Future Vol, veh/h	0	0	229	0	0	331
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	0	0	1	1
Mvmt Flow	0	0	229	0	0	331

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	560	229	0	0	229	0
Stage 1	229	-	-	-	-	-
Stage 2	331	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	489	810	-	-	1345	-
Stage 1	809	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	489	810	-	-	1345	-
Mov Cap-2 Maneuver	489	-	-	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	728	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s/v	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	-	1345	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s/veh)	0	0	-	-	-
HCM Lane LOS	A	A	-	-	-
HCM 95th %tile Q(veh)	-	0	-	-	-

HCM 7th TWSC
 9: Pleasant Hill Road & Huntington Avenue

10/27/2023

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	
Traffic Vol, veh/h	211	18	1	318	13	6
Future Vol, veh/h	211	18	1	318	13	6
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	211	18	1	318	13	6

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	229	0	540
Stage 1	-	-	-	-	220
Stage 2	-	-	-	-	320
Critical Hdwy	-	-	4.11	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.209	-	3.5
Pot Cap-1 Maneuver	-	-	1345	-	506
Stage 1	-	-	-	-	821
Stage 2	-	-	-	-	741
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1345	-	506
Mov Cap-2 Maneuver	-	-	-	-	506
Stage 1	-	-	-	-	821
Stage 2	-	-	-	-	740

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.02	11.46
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	576	-	-	6	-
HCM Lane V/C Ratio	0.033	-	-	0.001	-
HCM Control Delay (s/veh)	11.5	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

HCM 7th TWSC
 10: I-5 SB Ramps & Huntington Avenue

10/27/2023

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔	
Traffic Vol, veh/h	0	25	198	24	321	0	0	0	0	1	3	9
Future Vol, veh/h	0	25	198	24	321	0	0	0	0	1	3	9
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	2	0	0	0	0	0	0
Mvmt Flow	0	25	198	24	321	0	0	0	0	1	3	9

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	223	0	0		394	592	322
Stage 1	-	-	-	-	-	-		369	369	-
Stage 2	-	-	-	-	-	-		25	223	-
Critical Hdwy	-	-	-	4.12	-	-		6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-		5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.4	5.5	-
Follow-up Hdwy	-	-	-	2.218	-	-		3.5	4	3.3
Pot Cap-1 Maneuver	0	-	-	1346	-	0		615	422	724
Stage 1	0	-	-	-	-	0		704	624	-
Stage 2	0	-	-	-	-	0		1003	723	-
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	1346	-	-		601	0	723
Mov Cap-2 Maneuver	-	-	-	-	-	-		601	0	-
Stage 1	-	-	-	-	-	-		704	0	-
Stage 2	-	-	-	-	-	-		981	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0.54	10.18
HCM LOS			B

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	125	-	709
HCM Lane V/C Ratio	-	-	0.018	-	0.018
HCM Control Delay (s/veh)	-	-	7.7	0	10.2
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0.1	-	0.1

HCM 7th TWSC
 11: I-5 NB Ramps & Huntington Avenue

10/27/2023

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Vol, veh/h	7	18	0	0	36	4	306	3	42	0	0	0
Future Vol, veh/h	7	18	0	0	36	4	306	3	42	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	7	18	0	0	36	4	306	3	42	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	40	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	1583	-	0
Stage 1	-	-	0
Stage 2	-	-	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1583	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	2.04	0	10.98
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	952	504	-	-	-
HCM Lane V/C Ratio	0.369	0.004	-	-	-
HCM Control Delay (s/veh)	11	7.3	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	1.7	0	-	-	-

Intersection	
Intersection Delay, s/veh	21.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	37	105	36	86	82	214	12	120	144	243	132	21
Future Vol, veh/h	37	105	36	86	82	214	12	120	144	243	132	21
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	4	6	6	6	11	11	11	7	7	7
Mvmt Flow	37	105	36	86	82	214	12	120	144	243	132	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	14.3	22.2	16.8	26.1
HCM LOS	B	C	C	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	4%	21%	23%	61%
Vol Thru, %	43%	59%	21%	33%
Vol Right, %	52%	20%	56%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	276	178	382	396
LT Vol	12	37	86	243
Through Vol	120	105	82	132
RT Vol	144	36	214	21
Lane Flow Rate	276	178	382	396
Geometry Grp	1	1	1	1
Degree of Util (X)	0.518	0.358	0.68	0.732
Departure Headway (Hd)	6.758	7.242	6.518	6.768
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	538	498	558	539
Service Time	4.758	5.26	4.518	4.768
HCM Lane V/C Ratio	0.513	0.357	0.685	0.735
HCM Control Delay, s/veh	16.8	14.3	22.2	26.1
HCM Lane LOS	C	B	C	D
HCM 95th-tile Q	3	1.6	5.2	6.1

HCM 7th TWSC
2: 3rd Avenue & A Street

11/07/2023

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	487	10	3	335	3	25	3	10	0	1	19
Future Vol, veh/h	7	487	10	3	335	3	25	3	10	0	1	19
Conflicting Peds, #/hr	1	0	1	1	0	1	2	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	8	8	8	8	8	8	0	0	0	7	7	7
Mvmt Flow	7	487	10	3	335	3	25	3	10	0	1	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	339	0	0	498	0	0	851	852	493	846	856	340
Stage 1	-	-	-	-	-	-	507	507	-	344	344	-
Stage 2	-	-	-	-	-	-	344	345	-	503	512	-
Critical Hdwy	4.18	-	-	4.18	-	-	7.1	6.5	6.2	7.17	6.57	6.27
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.17	5.57	-
Follow-up Hdwy	2.272	-	-	2.272	-	-	3.5	4	3.3	3.563	4.063	3.363
Pot Cap-1 Maneuver	1187	-	-	1036	-	-	282	299	580	277	290	692
Stage 1	-	-	-	-	-	-	552	543	-	662	628	-
Stage 2	-	-	-	-	-	-	676	640	-	542	528	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1186	-	-	1035	-	-	270	295	580	266	286	690
Mov Cap-2 Maneuver	-	-	-	-	-	-	270	295	-	266	286	-
Stage 1	-	-	-	-	-	-	547	538	-	659	625	-
Stage 2	-	-	-	-	-	-	653	637	-	525	523	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.11			0.07			17.92			10.77		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	316	25	-	-	16	-	-	644
HCM Lane V/C Ratio	0.12	0.006	-	-	0.003	-	-	0.031
HCM Control Delay (s/veh)	17.9	8.1	0	-	8.5	0	-	10.8
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.1

HCM 7th AWSC
 3: Huntington Avenue & Cowlitz Street

11/07/2023

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	78	19	42	35	277	47	45	355	3
Future Vol, veh/h	0	0	0	78	19	42	35	277	47	45	355	3
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	3	3	3	6	6	6	6	6	6
Mvmt Flow	0	0	0	78	19	42	35	277	47	45	355	3
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay, s/veh	10.3	12.3	13.5
HCM LOS	B	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	10%	56%	11%
Vol Thru, %	77%	14%	88%
Vol Right, %	13%	30%	1%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	359	139	403
LT Vol	35	78	45
Through Vol	277	19	355
RT Vol	47	42	3
Lane Flow Rate	359	139	403
Geometry Grp	1	1	1
Degree of Util (X)	0.479	0.216	0.54
Departure Headway (Hd)	4.801	5.596	4.823
Convergence, Y/N	Yes	Yes	Yes
Cap	743	634	742
Service Time	2.869	3.695	2.89
HCM Lane V/C Ratio	0.483	0.219	0.543
HCM Control Delay, s/veh	12.3	10.3	13.5
HCM Lane LOS	B	B	B
HCM 95th-tile Q	2.6	0.8	3.3

HCM 7th AWSC
4: Huntington Avenue & A Street

11/07/2023

Intersection

Intersection Delay, s/veh 18.5

Intersection LOS C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	158	258	168	220	273	156
Future Vol, veh/h	158	258	168	220	273	156
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	6	6	6	6	5	5
Mvmt Flow	158	258	168	220	273	156
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	2	0	1
HCM Control Delay, s/veh	0.4	13.6	21
HCM LOS	C	B	C

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	38%	0%
Vol Thru, %	0%	100%	0%	64%
Vol Right, %	0%	0%	62%	36%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	168	220	416	429
LT Vol	168	0	158	0
Through Vol	0	220	0	273
RT Vol	0	0	258	156
Lane Flow Rate	168	220	416	429
Geometry Grp	7	7	2	5
Degree of Util (X)	0.331	0.402	0.677	0.692
Departure Headway (Hd)	7.087	6.576	5.86	5.81
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	504	543	612	618
Service Time	4.872	4.361	3.931	3.884
HCM Lane V/C Ratio	0.333	0.405	0.68	0.694
HCM Control Delay, s/veh	13.4	13.8	20.4	21
HCM Lane LOS	B	B	C	C
HCM 95th-tile Q	1.4	1.9	5.2	5.5

HCM 7th TWSC
5: Huntington Avenue & C Street

11/07/2023

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	10	12	38	70	19	43	15	343	60	40	437	42
Future Vol, veh/h	10	12	38	70	19	43	15	343	60	40	437	42
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	3	3	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	6	6	6	4	4	4
Mvmt Flow	10	12	38	70	19	43	15	343	60	40	437	42

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	921	974	458	929	965	376	479	0	0	406	0	0
Stage 1	538	538	-	406	406	-	-	-	-	-	-	-
Stage 2	383	436	-	523	559	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.16	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.254	-	-	2.236	-	-
Pot Cap-1 Maneuver	253	254	607	250	257	675	1063	-	-	1142	-	-
Stage 1	531	526	-	626	601	-	-	-	-	-	-	-
Stage 2	644	583	-	541	514	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	216	241	607	216	244	673	1063	-	-	1139	-	-
Mov Cap-2 Maneuver	399	405	-	394	408	-	-	-	-	-	-	-
Stage 1	512	507	-	615	591	-	-	-	-	-	-	-
Stage 2	575	573	-	478	496	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v12.97		16	0.3	0.64
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1063	-	-	512	458	1139	-
HCM Lane V/C Ratio	0.014	-	-	0.117	0.288	0.035	-
HCM Control Delay (s/veh)	8.4	-	-	13	16	8.3	-
HCM Lane LOS	A	-	-	B	C	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	1.2	0.1	-

HCM 7th TWSC
6: Huntington Avenue & Front Avenue

11/07/2023

Intersection						
Int Delay, s/veh	4.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	104	93	49	265	424	13
Future Vol, veh/h	104	93	49	265	424	13
Conflicting Peds, #/hr	4	1	2	0	0	2
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	100	100	100	100	100	100
Heavy Vehicles, %	3	3	4	4	3	3
Mvmt Flow	104	93	49	265	424	13

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	800	434	439	0	0
Stage 1	433	-	-	-	-
Stage 2	367	-	-	-	-
Critical Hdwy	6.43	6.23	4.14	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.236	-	-
Pot Cap-1 Maneuver	353	620	1110	-	-
Stage 1	652	-	-	-	-
Stage 2	699	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	333	618	1108	-	-
Mov Cap-2 Maneuver	333	-	-	-	-
Stage 1	617	-	-	-	-
Stage 2	697	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v20.51		1.31	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	281	-	426	-	-
HCM Lane V/C Ratio	0.044	-	0.462	-	-
HCM Control Delay (s/veh)	8.4	0	20.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2.4	-	-

HCM 7th TWSC
7: Larson Lane & Huntington Avenue

11/07/2023

Intersection												
Int Delay, s/veh	0.1											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	4	1	0	0	0	484	3	1	307	0
Future Vol, veh/h	1	0	4	1	0	0	0	484	3	1	307	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	4	4	4
Mvmt Flow	1	0	4	1	0	0	0	484	3	1	307	0

Major/Minor	Minor1		Minor2		Major1		Major2					
Conflicting Flow All	795	795	486	793	796	307	307	0	0	487	0	0
Stage 1	486	486	-	309	309	-	-	-	-	-	-	-
Stage 2	309	309	-	484	487	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.236	-	-
Pot Cap-1 Maneuver	308	323	586	309	322	738	1254	-	-	1066	-	-
Stage 1	567	555	-	705	663	-	-	-	-	-	-	-
Stage 2	705	663	-	568	554	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	308	322	586	306	322	738	1254	-	-	1066	-	-
Mov Cap-2 Maneuver	308	322	-	306	322	-	-	-	-	-	-	-
Stage 1	567	555	-	705	662	-	-	-	-	-	-	-
Stage 2	705	662	-	564	554	-	-	-	-	-	-	-

Approach	NB		SB		SE		NW	
HCM Control Delay, s/v12.33			16.79		0		0.03	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	NWR	SEL	SET	SER	SBLn1
Capacity (veh/h)	496	6	-	-	1254	-	-	306
HCM Lane V/C Ratio	0.01	0.001	-	-	-	-	-	0.003
HCM Control Delay (s/veh)	12.3	8.4	0	-	0	-	-	16.8
HCM Lane LOS	B	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

HCM 7th TWSC
8: Site Access & Huntington Avenue

11/07/2023

Intersection						
Int Delay, s/veh	118.8					
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	107	210	348	262	440	194
Future Vol, veh/h	107	210	348	262	440	194
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	1	1	2	2
Mvmt Flow	107	210	348	262	440	194

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1553	479	0	0	610	0
Stage 1	479	-	-	-	-	-
Stage 2	1074	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	125	587	-	-	969	-
Stage 1	623	-	-	-	-	-
Stage 2	328	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	~ 61	587	-	-	969	-
Mov Cap-2 Maneuver	~ 61	-	-	-	-	-
Stage 1	623	-	-	-	-	-
Stage 2	161	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, \$/veh	568.51	0	8.17
HCM LOS	F		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	151	864	-	-	-
HCM Lane V/C Ratio	2.106	0.454	-	-	-
HCM Control Delay (s/veh)	\$ 568.5	11.8	0	-	-
HCM Lane LOS	F	B	A	-	-
HCM 95th %tile Q(veh)	25.5	2.4	-	-	-

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

HCM 7th TWSC
 9: Pleasant Hill Road & Huntington Avenue

11/07/2023

Intersection						
Int Delay, s/veh	0.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	548	10	3	610	24	0
Future Vol, veh/h	548	10	3	610	24	0
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	100	100	100	100	100	100
Heavy Vehicles, %	1	1	2	2	0	0
Mvmt Flow	548	10	3	610	24	0

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	558	0	1169
Stage 1	-	-	-	-	553
Stage 2	-	-	-	-	616
Critical Hdwy	-	-	4.12	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.218	-	3.5
Pot Cap-1 Maneuver	-	-	1013	-	215
Stage 1	-	-	-	-	580
Stage 2	-	-	-	-	543
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1013	-	214
Mov Cap-2 Maneuver	-	-	-	-	214
Stage 1	-	-	-	-	580
Stage 2	-	-	-	-	540

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.04	23.89
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	214	-	-	9	-
HCM Lane V/C Ratio	0.112	-	-	0.003	-
HCM Control Delay (s/veh)	23.9	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

HCM 7th TWSC
 10: I-5 SB Ramps & Huntington Avenue

11/07/2023

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔	
Traffic Vol, veh/h	0	75	469	37	521	0	0	0	0	16	4	92
Future Vol, veh/h	0	75	469	37	521	0	0	0	0	16	4	92
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	1	1	1	0	0	0	13	13	13
Mvmt Flow	0	75	469	37	521	0	0	0	0	16	4	92

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	544	0	0		670	1139	521
Stage 1	-	-	-	-	-	-		595	595	-
Stage 2	-	-	-	-	-	-		75	544	-
Critical Hdwy	-	-	-	4.11	-	-		6.53	6.63	6.33
Critical Hdwy Stg 1	-	-	-	-	-	-		5.53	5.63	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.53	5.63	-
Follow-up Hdwy	-	-	-	2.209	-	-		3.617	4.117	3.417
Pot Cap-1 Maneuver	0	-	-	1030	-	0		406	192	534
Stage 1	0	-	-	-	-	0		530	475	-
Stage 2	0	-	-	-	-	0		921	502	-
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	1030	-	-		385	0	534
Mov Cap-2 Maneuver	-	-	-	-	-	-		385	0	-
Stage 1	-	-	-	-	-	-		530	0	-
Stage 2	-	-	-	-	-	-		874	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0.57	14.14
HCM LOS			B

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	119	-	505
HCM Lane V/C Ratio	-	-	0.036	-	0.222
HCM Control Delay (s/veh)	-	-	8.6	0	14.1
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0.1	-	0.8

HCM 7th TWSC
 11: I-5 NB Ramps & Huntington Avenue

11/07/2023

Intersection												
Int Delay, s/veh	16											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Vol, veh/h	58	27	0	0	58	3	509	3	18	0	0	0
Future Vol, veh/h	58	27	0	0	58	3	509	3	18	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	2	2	2	2	0	0	0
Mvmt Flow	58	27	0	0	58	3	509	3	18	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	61	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	1555	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1555	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	5.05	0	19.61
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	765	1228	-	-	-
HCM Lane V/C Ratio	0.693	0.037	-	-	-
HCM Control Delay (s/veh)	19.6	7.4	0	-	-
HCM Lane LOS	C	A	A	-	-
HCM 95th %tile Q(veh)	5.7	0.1	-	-	-

Intersection	
Intersection Delay, s/veh	59.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	42	90	21	181	115	279	64	201	175	157	123	33
Future Vol, veh/h	42	90	21	181	115	279	64	201	175	157	123	33
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	3	3	3
Mvmt Flow	42	90	21	181	115	279	64	201	175	157	123	33
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay, s/veh	16.7	101.5	43.8	26.6
HCM LOS	C	F	E	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	27%	31%	50%
Vol Thru, %	46%	59%	20%	39%
Vol Right, %	40%	14%	49%	11%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	440	153	575	313
LT Vol	64	42	181	157
Through Vol	201	90	115	123
RT Vol	175	21	279	33
Lane Flow Rate	440	153	575	313
Geometry Grp	1	1	1	1
Degree of Util (X)	0.874	0.357	1.117	0.674
Departure Headway (Hd)	7.584	8.849	6.995	8.229
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	480	409	518	441
Service Time	5.584	6.849	5.067	6.229
HCM Lane V/C Ratio	0.917	0.374	1.11	0.71
HCM Control Delay, s/veh	43.8	16.7	101.5	26.6
HCM Lane LOS	E	C	F	D
HCM 95th-tile Q	9.3	1.6	18.8	4.9

HCM 7th TWSC
2: 3rd Avenue & A Street

10/27/2023

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	21	397	13	1	518	0	21	4	13	1	4	34
Future Vol, veh/h	21	397	13	1	518	0	21	4	13	1	4	34
Conflicting Peds, #/hr	2	0	0	0	0	2	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	5	5	5	1	1	1	0	0	0	0	0	0
Mvmt Flow	21	397	13	1	518	0	21	4	13	1	4	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	520	0	0	410	0	0	968	968	404	963	974	520
Stage 1	-	-	-	-	-	-	446	446	-	522	522	-
Stage 2	-	-	-	-	-	-	522	522	-	441	452	-
Critical Hdwy	4.15	-	-	4.11	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.245	-	-	2.209	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1031	-	-	1154	-	-	235	256	651	237	254	560
Stage 1	-	-	-	-	-	-	596	578	-	542	534	-
Stage 2	-	-	-	-	-	-	542	534	-	599	574	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1029	-	-	1154	-	-	212	248	651	222	246	559
Mov Cap-2 Maneuver	-	-	-	-	-	-	212	248	-	222	246	-
Stage 1	-	-	-	-	-	-	580	562	-	540	533	-
Stage 2	-	-	-	-	-	-	504	533	-	568	559	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s/v	0.42			0.02			19.81			13.2		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	281	87	-	-	3	-	-	478
HCM Lane V/C Ratio	0.135	0.02	-	-	0.001	-	-	0.082
HCM Control Delay (s/veh)	19.8	8.6	0	-	8.1	0	-	13.2
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.3

HCM 7th AWSC
 3: Huntington Avenue & Cowlitz Street

10/27/2023

Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↕			↕			↕	
Traffic Vol, veh/h	0	0	0	50	7	19	107	329	72	33	349	19
Future Vol, veh/h	0	0	0	50	7	19	107	329	72	33	349	19
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	0	0	0	2	2	2	3	3	3	6	6	6
Mvmt Flow	0	0	0	50	7	19	107	329	72	33	349	19
Number of Lanes	0	0	0	0	1	0	0	1	0	0	1	0

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay, s/veh	9.8	15.7	13.1
HCM LOS	A	C	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	21%	66%	8%
Vol Thru, %	65%	9%	87%
Vol Right, %	14%	25%	5%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	508	76	401
LT Vol	107	50	33
Through Vol	329	7	349
RT Vol	72	19	19
Lane Flow Rate	508	76	401
Geometry Grp	1	1	1
Degree of Util (X)	0.646	0.124	0.53
Departure Headway (Hd)	4.576	5.886	4.756
Convergence, Y/N	Yes	Yes	Yes
Cap	787	603	754
Service Time	2.622	3.979	2.807
HCM Lane V/C Ratio	0.645	0.126	0.532
HCM Control Delay, s/veh	15.7	9.8	13.1
HCM Lane LOS	C	A	B
HCM 95th-tile Q	4.8	0.4	3.2

Intersection

Intersection Delay, s/veh	20
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	232	190	260	273	179	227
Future Vol, veh/h	232	190	260	273	179	227
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Heavy Vehicles, %	4	4	2	2	5	5
Mvmt Flow	232	190	260	273	179	227
Number of Lanes	1	0	1	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB	EB	
Conflicting Lanes Right	2	0	1
HCM Control Delay, s/veh	3.8	16.5	20.5
HCM LOS	C	C	C

Lane	NBLn1	NBLn2	EBLn1	SBLn1
Vol Left, %	100%	0%	55%	0%
Vol Thru, %	0%	100%	0%	44%
Vol Right, %	0%	0%	45%	56%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	260	273	422	406
LT Vol	260	0	232	0
Through Vol	0	273	0	179
RT Vol	0	0	190	227
Lane Flow Rate	260	273	422	406
Geometry Grp	7	7	2	5
Degree of Util (X)	0.513	0.5	0.722	0.672
Departure Headway (Hd)	7.098	6.587	6.163	5.958
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	504	543	582	601
Service Time	4.893	4.382	4.239	4.044
HCM Lane V/C Ratio	0.516	0.503	0.725	0.676
HCM Control Delay, s/veh	17.2	15.9	23.8	20.5
HCM Lane LOS	C	C	C	C
HCM 95th-tile Q	2.9	2.8	6	5.1

HCM 7th TWSC
5: Huntington Avenue & C Street

10/27/2023

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	13	0	22	27	1	13	38	494	51	30	329	9
Future Vol, veh/h	13	0	22	27	1	13	38	494	51	30	329	9
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	2	-	-	2	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	5	5	5	1	1	1	7	7	7
Mvmt Flow	13	0	22	27	1	13	38	494	51	30	329	9

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	964	1015	335	986	994	520	338	0	0	545	0	0
Stage 1	394	394	-	596	596	-	-	-	-	-	-	-
Stage 2	571	621	-	390	398	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.15	6.55	6.25	4.11	-	-	4.17	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.15	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.545	4.045	3.345	2.209	-	-	2.263	-	-
Pot Cap-1 Maneuver	237	240	712	224	242	551	1227	-	-	999	-	-
Stage 1	635	609	-	485	487	-	-	-	-	-	-	-
Stage 2	510	482	-	628	598	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	217	226	711	204	228	551	1227	-	-	999	-	-
Mov Cap-2 Maneuver	389	380	-	383	389	-	-	-	-	-	-	-
Stage 1	616	591	-	470	472	-	-	-	-	-	-	-
Stage 2	481	468	-	590	580	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v12.08		14.39	0.52	0.71
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1227	-	-	544	424	999	-	-
HCM Lane V/C Ratio	0.031	-	-	0.064	0.097	0.03	-	-
HCM Control Delay (s/veh)	8	-	-	12.1	14.4	8.7	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.3	0.1	-	-

HCM 7th TWSC
6: Huntington Avenue & Front Avenue

10/27/2023

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			T		T
Traffic Vol, veh/h	7	46	87	545	355	15
Future Vol, veh/h	7	46	87	545	355	15
Conflicting Peds, #/hr	1	0	6	0	0	6
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	1	1	2	2
Mvmt Flow	7	46	87	545	355	15

Major/Minor	Minor2	Major1		Major2	
Conflicting Flow All	1089	369	376	0	0
Stage 1	369	-	-	-	-
Stage 2	720	-	-	-	-
Critical Hdwy	6.4	6.2	4.11	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.209	-	-
Pot Cap-1 Maneuver	241	681	1188	-	-
Stage 1	704	-	-	-	-
Stage 2	486	-	-	-	-
Platoon blocked, %				-	-
Mov Cap-1 Maneuver	213	678	1181	-	-
Mov Cap-2 Maneuver	213	-	-	-	-
Stage 1	626	-	-	-	-
Stage 2	483	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s/v	12.61	1.14	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	248	-	526	-	-
HCM Lane V/C Ratio	0.074	-	0.101	-	-
HCM Control Delay (s/veh)	8.3	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.3	-	-

HCM 7th TWSC
7: Larson Lane & Huntington Avenue

10/27/2023

Intersection												
Int Delay, s/veh	0											
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	0	0	1	0	380	0	4	606	0
Future Vol, veh/h	0	0	0	0	0	1	0	380	0	4	606	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	1	0	380	0	4	606	0

Major/Minor	Minor1		Minor2		Major1		Major2					
Conflicting Flow All	995	995	381	994	995	606	606	0	0	381	0	0
Stage 1	381	381	-	614	614	-	-	-	-	-	-	-
Stage 2	614	614	-	380	381	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	226	247	671	226	247	501	972	-	-	1177	-	-
Stage 1	645	617	-	483	486	-	-	-	-	-	-	-
Stage 2	483	486	-	646	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	224	245	670	225	245	501	972	-	-	1176	-	-
Mov Cap-2 Maneuver	224	245	-	225	245	-	-	-	-	-	-	-
Stage 1	645	616	-	480	483	-	-	-	-	-	-	-
Stage 2	479	483	-	646	616	-	-	-	-	-	-	-

Approach	NB	SB	SE	NW
HCM Control Delay, s/v	0	12.2	0	0.05
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	NWR	SEL	SET	SER	SBLn1
Capacity (veh/h)	-	12	-	-	972	-	-	501
HCM Lane V/C Ratio	-	0.003	-	-	-	-	-	0.002
HCM Control Delay (s/veh)	0	8.1	0	-	0	-	-	12.2
HCM Lane LOS	A	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0

HCM 7th TWSC
8: Site Access & Huntington Avenue

10/27/2023

Intersection						
Int Delay, s/veh	798.2					
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations	Y		P			A
Traffic Vol, veh/h	293	590	215	195	444	317
Future Vol, veh/h	293	590	215	195	444	317
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	0	0	1	1
Mvmt Flow	293	590	215	195	444	317

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1518	313	0	0	410	0
Stage 1	313	-	-	-	-	-
Stage 2	1205	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	~ 131	728	-	-	1154	-
Stage 1	742	-	-	-	-	-
Stage 2	~ 284	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	~ 70	728	-	-	1154	-
Mov Cap-2 Maneuver	~ 70	-	-	-	-	-
Stage 1	742	-	-	-	-	-
Stage 2	~ 151	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay \$/veh	151.69	0	5.87
HCM LOS	F		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	177	951	-	-	-
HCM Lane V/C Ratio	5.003	0.385	-	-	-
HCM Control Delay (s/veh) \$	1851.7	10.1	0	-	-
HCM Lane LOS	F	B	A	-	-
HCM 95th %tile Q(veh)	91.9	1.8	-	-	-

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

HCM 7th TWSC
 9: Pleasant Hill Road & Huntington Avenue

10/27/2023

Intersection						
Int Delay, s/veh	0.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	
Traffic Vol, veh/h	787	18	1	748	13	6
Future Vol, veh/h	787	18	1	748	13	6
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	100	100	100	100	100	100
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	787	18	1	748	13	6

Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	805	0	1546
Stage 1	-	-	-	-	796
Stage 2	-	-	-	-	750
Critical Hdwy	-	-	4.11	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.209	-	3.5
Pot Cap-1 Maneuver	-	-	824	-	127
Stage 1	-	-	-	-	448
Stage 2	-	-	-	-	470
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	824	-	127
Mov Cap-2 Maneuver	-	-	-	-	127
Stage 1	-	-	-	-	448
Stage 2	-	-	-	-	469

Approach	EB	WB	NB
HCM Control Delay, s/v	0	0.01	30.26
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	161	-	-	2	-
HCM Lane V/C Ratio	0.118	-	-	0.001	-
HCM Control Delay (s/veh)	30.3	-	-	9.4	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

HCM 7th TWSC
 10: I-5 SB Ramps & Huntington Avenue

10/27/2023

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗			↖						↕	
Traffic Vol, veh/h	0	173	626	24	627	0	0	0	0	1	3	133
Future Vol, veh/h	0	173	626	24	627	0	0	0	0	1	3	133
Conflicting Peds, #/hr	0	0	0	0	0	0	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	2	2	2	0	0	0	0	0	0
Mvmt Flow	0	173	626	24	627	0	0	0	0	1	3	133

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	799	0	0		848	1474	628
Stage 1	-	-	-	-	-	-		675	675	-
Stage 2	-	-	-	-	-	-		173	799	-
Critical Hdwy	-	-	-	4.12	-	-		6.4	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-		5.4	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.4	5.5	-
Follow-up Hdwy	-	-	-	2.218	-	-		3.5	4	3.3
Pot Cap-1 Maneuver	0	-	-	824	-	0		334	128	487
Stage 1	0	-	-	-	-	0		510	456	-
Stage 2	0	-	-	-	-	0		862	401	-
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	824	-	-		319	0	486
Mov Cap-2 Maneuver	-	-	-	-	-	-		319	0	-
Stage 1	-	-	-	-	-	-		510	0	-
Stage 2	-	-	-	-	-	-		824	0	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0	0.35	15.34
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	-	-	66	-	484
HCM Lane V/C Ratio	-	-	0.029	-	0.283
HCM Control Delay (s/veh)	-	-	9.5	0	15.3
HCM Lane LOS	-	-	A	A	C
HCM 95th %tile Q(veh)	-	-	0.1	-	1.2

HCM 7th TWSC
 11: I-5 NB Ramps & Huntington Avenue

10/27/2023

Intersection												
Int Delay, s/veh	73.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Vol, veh/h	155	18	0	0	36	4	612	3	42	0	0	0
Future Vol, veh/h	155	18	0	0	36	4	612	3	42	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	155	18	0	0	36	4	612	3	42	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	40	0	- - - 0 364 368 18
Stage 1	-	-	- - - 328 328 -
Stage 2	-	-	- - - 36 40 -
Critical Hdwy	4.1	-	- - - 6.4 6.5 6.2
Critical Hdwy Stg 1	-	-	- - - 5.4 5.5 -
Critical Hdwy Stg 2	-	-	- - - 5.4 5.5 -
Follow-up Hdwy	2.2	-	- - - 3.5 4 3.3
Pot Cap-1 Maneuver	1583	- 0 0	- - - 639 564 1066
Stage 1	-	- 0 0	- - - 734 651 -
Stage 2	-	- 0 0	- - - 992 866 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1583	- - -	- ~ 576 0 1066
Mov Cap-2 Maneuver	-	- - -	- ~ 576 0 -
Stage 1	-	- - -	- 662 0 -
Stage 2	-	- - -	- 992 0 -

Approach	EB	WB	NB
HCM Control Delay, s/v	6.74	0	95.02
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	594	1567	-	-	-
HCM Lane V/C Ratio	1.107	0.098	-	-	-
HCM Control Delay (s/veh)	95	7.5	0	-	-
HCM Lane LOS	F	A	A	-	-
HCM 95th %tile Q(veh)	20.1	0.3	-	-	-

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

HCM 7th TWSC
 8: Site Access & Huntington Avenue

10/27/2023

Intersection						
Int Delay, s/veh	17.3					
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	135	246	215	92	184	317
Future Vol, veh/h	135	246	215	92	184	317
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	100	100	100	100	100	100
Heavy Vehicles, %	2	2	0	0	1	1
Mvmt Flow	135	246	215	92	184	317

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	946	261	0	0	307	0
Stage 1	261	-	-	-	-	-
Stage 2	685	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	290	778	-	-	1259	-
Stage 1	783	-	-	-	-	-
Stage 2	500	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	239	778	-	-	1259	-
Mov Cap-2 Maneuver	239	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	412	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s/v50.09		0	3.07
HCM LOS	F		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	432	661	-	-	-
HCM Lane V/C Ratio	0.882	0.146	-	-	-
HCM Control Delay (s/veh)	50.1	8.3	0	-	-
HCM Lane LOS	F	A	A	-	-
HCM 95th %tile Q(veh)	9.2	0.5	-	-	-

HCM 7th TWSC
 11: I-5 NB Ramps & Huntington Avenue

10/27/2023

Intersection												
Int Delay, s/veh	39.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔				
Traffic Vol, veh/h	132	18	0	0	36	4	565	3	42	0	0	0
Future Vol, veh/h	132	18	0	0	36	4	565	3	42	0	0	0
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	132	18	0	0	36	4	565	3	42	0	0	0

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	40	0	-
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	1583	0	0
Stage 1	-	0	0
Stage 2	-	0	0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1583	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s/v	6.58	0	50.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBT	WBR
Capacity (veh/h)	641	1567	-	-	-
HCM Lane V/C Ratio	0.952	0.083	-	-	-
HCM Control Delay (s/veh)	50.1	7.5	0	-	-
HCM Lane LOS	F	A	A	-	-
HCM 95th %tile Q(veh)	13.3	0.3	-	-	-

SITE LAYOUT

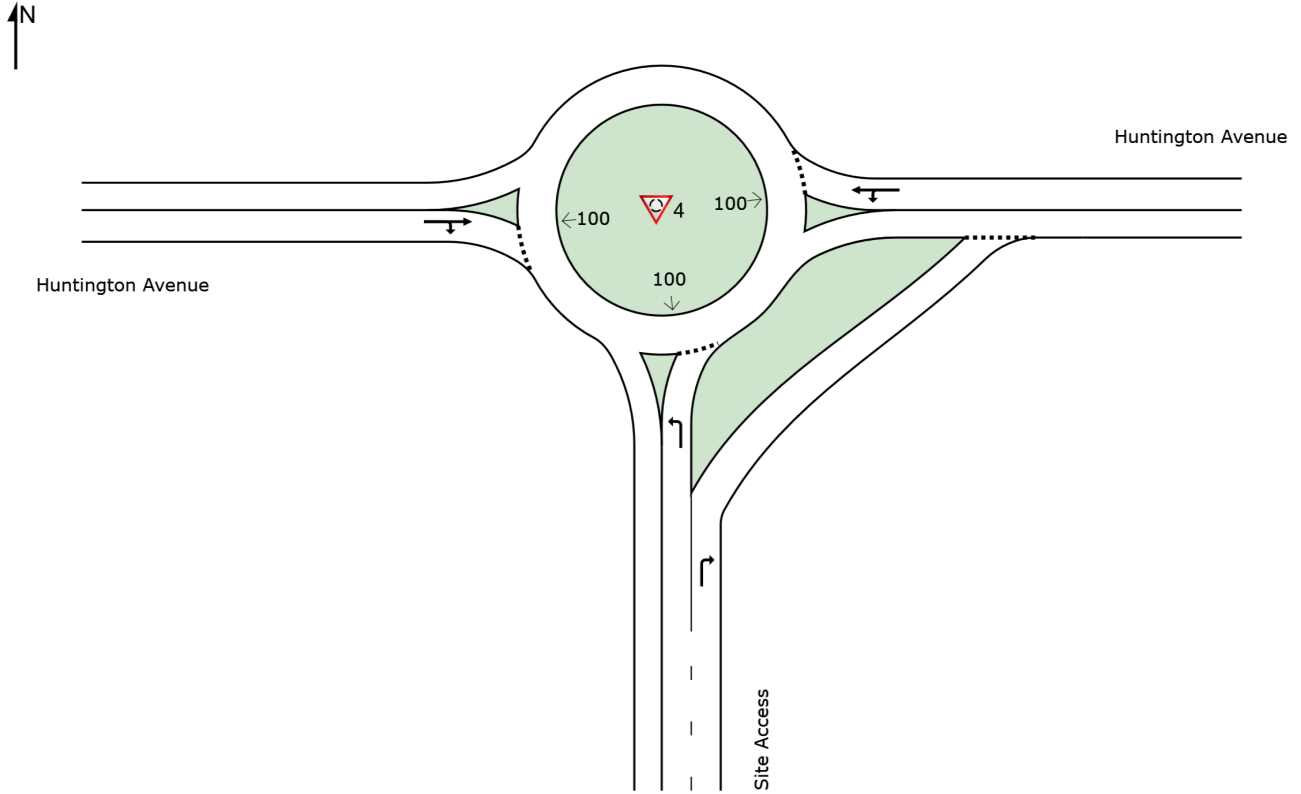
Site: 4 [STAM (100%) (Site Folder: General)]

Site Access at Huntington Avenue

Site Category: 2043 Buildout Conditions (100%) - AM Peak Hour (Scenario 1)

Roundabout

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Project: Z:\Projects\Washington\Castle Rock\21044 - Castle Rock Landing Master Plan\Capacity Analysis\DA Traffic Study\SIDRA\Site Access & Huntington.sip9

LANE SUMMARY

Site: 4 [STAM (100%) (Site Folder: General)]

Site Access at Huntington Avenue

Site Category: 2043 Buildout Conditions (100%) - AM Peak Hour (Scenario 1)

Roundabout

Lane Use and Performance													
	DEMAND FLOWS		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	[Total veh/h	HV %						[Veh	Dist] ft				
South: Site Access													
Lane 1 ^d	107	2.0	1334	0.080	100	9.8	LOSA	0.5	12.3	Full	250	0.0	0.0
Lane 2	210	2.0	1334	0.157	100	4.1	LOSA	1.0	25.4	Full	250	0.0	0.0
Approach	317	2.0		0.157		6.0	LOSA	1.0	25.4				
East: Huntington Avenue													
Lane 1 ^d	634	1.6	1337	0.474	100	8.6	LOSA	3.5	88.9	Full	1600	0.0	0.0
Approach	634	1.6		0.474		8.6	LOSA	3.5	88.9				
West: Huntington Avenue													
Lane 1 ^d	610	0.8	1078	0.566	100	7.2	LOSA	4.7	119.0	Full	1600	0.0	0.0
Approach	610	0.8		0.566		7.2	LOSA	4.7	119.0				
Intersection	1561	1.4		0.566		7.5	LOSA	4.7	119.0				

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
South: Site Access										
Mov. From S To Exit:	L2	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	W	E								
Lane 1	107	-	107	2.0	1334	0.080	100	NA	NA	
Lane 2	-	210	210	2.0	1334	0.157	100	NA	NA	
Approach	107	210	317	2.0		0.157				
East: Huntington Avenue										
Mov. From E To Exit:	L2	T1	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	S	W								
Lane 1	440	194	634	1.6	1337	0.474	100	NA	NA	
Approach	440	194	634	1.6		0.474				
West: Huntington Avenue										
Mov. From W To Exit:	T1	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	E	S								
Lane 1	348	262	610	0.8	1078	0.566	100	NA	NA	

Approach	348	262	610	0.8	0.566
Total %HV Deg.Satn (v/c)					
Intersection	1561	1.4	0.566		

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: Site Access Merge Type: Not Applied											
Full Length Lane	1	Merge Analysis not applied.									
East Exit: Huntington Avenue Merge Type: Not Applied											
Full Length Lane	1	Merge Analysis not applied.									
West Exit: Huntington Avenue Merge Type: Not Applied											
Full Length Lane	1	Merge Analysis not applied.									

SITE LAYOUT

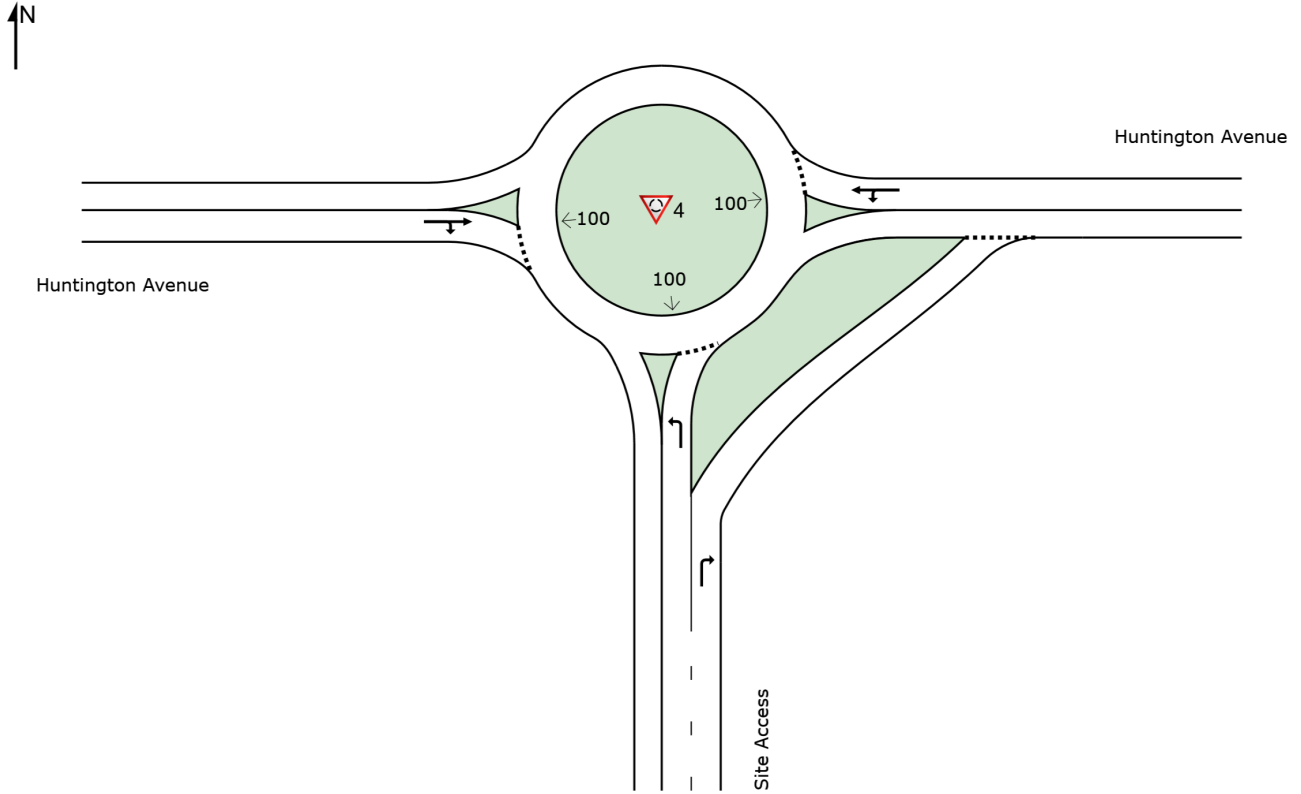
Site: 4 [STPM (100%) (Site Folder: General)]

Site Access at Huntington Avenue

Site Category: 2043 Buildout Conditions (100%) - PM Peak Hour (Scenario 1)

Roundabout

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LANE SUMMARY

Site: 4 [STPM (100%) (Site Folder: General)]

Site Access at Huntington Avenue

Site Category: 2043 Buildout Conditions (100%) - PM Peak Hour (Scenario 1)

Roundabout

Lane Use and Performance													
	DEMAND FLOWS		Cap. veh/h	Deg. Satn v/c	Lane Util. %	Aver. Delay sec	Level of Service	95% BACK OF QUEUE		Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
	[Total veh/h	[HV %						[Veh	[Dist] ft				
South: Site Access													
Lane 1 ^d	293	2.0	1461	0.201	100	9.5	LOSA	1.3	31.8	Full	250	0.0	0.0
Lane 2	590	2.0	1461	0.404	100	3.8	LOSA	3.0	77.2	Full	250	0.0	0.0
Approach	883	2.0		0.404		5.7	LOSA	3.0	77.2				
East: Huntington Avenue													
Lane 1 ^d	761	0.9	1184	0.643	100	9.9	LOSA	6.0	150.6	Full	1600	0.0	0.0
Approach	761	0.9		0.643		9.9	LOSA	6.0	150.6				
West: Huntington Avenue													
Lane 1 ^d	410	0.0	1046	0.392	100	6.0	LOSA	2.7	67.4	Full	1600	0.0	0.0
Approach	410	0.0		0.392		6.0	LOSA	2.7	67.4				
Intersection	2054	1.2		0.643		7.3	LOSA	6.0	150.6				

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Site tab).

Roundabout LOS Method: Same as Signalised Intersections.

Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

^d Dominant lane on roundabout approach

Approach Lane Flows (veh/h)										
South: Site Access										
Mov. From S To Exit:	L2	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	W	E								
Lane 1	293	-	293	2.0	1461	0.201	100	NA	NA	
Lane 2	-	590	590	2.0	1461	0.404	100	NA	NA	
Approach	293	590	883	2.0		0.404				
East: Huntington Avenue										
Mov. From E To Exit:	L2	T1	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	S	W								
Lane 1	444	317	761	0.9	1184	0.643	100	NA	NA	
Approach	444	317	761	0.9		0.643				
West: Huntington Avenue										
Mov. From W To Exit:	T1	R2	Total	%HV	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Prob. SL Ov. %	Ov. Lane No.	
	E	S								
Lane 1	215	195	410	0.0	1046	0.392	100	NA	NA	

Approach	215	195	410	0.0	0.392
Total %HV Deg.Satn (v/c)					
Intersection	2054	1.2	0.643		

Lane flow rates given in this report are based on the arrival flow rates subject to upstream capacity constraint where applicable.

Merge Analysis											
	Exit Lane Number	Short Lane Length ft	Percent Opng in Lane % veh/h	Opposing Flow Rate pcu/h	Critical Gap sec	Follow-up Headway sec	Lane Flow Rate veh/h	Capacity veh/h	Deg. Satn v/c	Min. Delay sec	Merge Delay sec
South Exit: Site Access											
Merge Type: Not Applied											
Full Length Lane	1	Merge Analysis not applied.									
East Exit: Huntington Avenue											
Merge Type: Not Applied											
Full Length Lane	1	Merge Analysis not applied.									
West Exit: Huntington Avenue											
Merge Type: Not Applied											
Full Length Lane	1	Merge Analysis not applied.									