Cascade Business Park
Traffic Impact Analysis

1490 Coyote Ridge Road
North Bonneville, Washington 98639

8/1/2025

Prepared for:
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Table of Contents

Supporting Data

TABLES

FIGURES

APPENDICES

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EXECUTIVE SUMMARY

Purpose and Scope

The applicant proposes to develop approximately 11 acres of a 40-acre undeveloped site into 170,000 square feet of general industrial buildings and an 80-room hotel. The site is located in North Bonneville, Washington, on Skamania County (County) parcel number 02072000020500. The existing site is currently undeveloped land. The City of North Bonneville's (City) zoning map designates the site as Industrial/Business Park (I/BP). See Figure 1 for the vicinity map and Figure 2 for the site plan. The estimated completion date of the project is 2035.

The following intersections were identified for this traffic impact analysis (TIA):

1. Bonneville Drive / State Route 14 (SR-14)
2. Dam Access Road / SR-14
3. Cascade Drive / Coyote Ridge Road (Access)
4. Coyote Ridge / Fort Cascades Drive (Access)
5. Evergreen Drive / SR-14
6. SR-14 / Bridge of the Gods

Findings

The findings of this TIA are listed below.

- Traffic volumes in the study area will continue to increase with or without the Cascade Business Park development. Generic background growth is estimated to add approximately 1% annually to the baseline traffic volumes between the baseline year (2025) and the project year (2035).
- The proposed Cascade Business Park development will have two site access points on Coyote Ridge Road.
- The Cascade Business Park is anticipated to generate a total of 1,134 vehicle trips during the weekday and a total of 90 vehicle trips during the PM peak hour.
- All studied intersections operate at an acceptable LOS in the 2025 Existing Conditions and the 2035 Without Project conditions and the SR-14 / Bridge of the Gods intersection fails in the 2035 With Project condition.
- The 2020 to 2024 collision history at the study intersections was reviewed. All studied intersections have collision rates below the critical rate.
- Assure all driveways, sidewalks, and curb ramps constructed with the proposed project comply with the current Americans with Disabilities Act (ADA) guidelines.
- Digital review of the current conditions along Coyote Ridge Road suggests that adequate sight distances should be achievable through design and construction of the proposed site access.

Recommendations

This TIA supports the following recommendations:

- The SR-14 / Bridge of the Gods intersection will need to be closely monitored in the future. A signal, based on Warrant 3, is not met in the 2035 With or Without Project conditions.
- Assure all driveways, sidewalks, and curb ramps constructed with the site development project comply with the current ADA guidelines.

- Design the proposed site access along Coyote Ridge Road to meet North Bonneville Municipal Code (NBMC) 12.24.150 – sight obstruction requirements.

1 INTRODUCTION

The purpose of this study is to determine the impacts of the traffic generated by the Cascade Business Park project (Project) on the surrounding roadway infrastructure. The project site is shown in the vicinity map (Figure 1). This study will determine if mitigation is required to keep the roadways operating safely and at capacity levels acceptable under current level of service (LOS) standards. This report documents the findings and conclusions of a traffic impact analysis (TIA) conducted for the proposed site plan (Figure 2) for property located in North Bonneville, Washington.

1.1 Scope of Study

This study documents the existing and proposed conditions, traffic data, safety analysis, and intersection operations in accordance with the requirements of Washington State Department of Transportation (WSDOT).

The following intersections were identified for analysis:

1. Bonneville Drive / State Route 14 (SR-14)
2. Dam Access Road / SR-14
3. Cascade Drive / Coyote Ridge (Access)
4. Coyote Ridge / Fort Cascades Drive (Access)
5. Evergreen Drive / SR-14
6. SR-14 / Bridge of the Gods

This TIA includes analysis of future background conditions growth based on an assumed 1% annual growth rate.

This TIA is prepared for submission to the Port of Skamania and WSDOT. The traffic-related issues addressed in this report include:

- Existing traffic conditions
- Proposed site-generated traffic volumes and their distribution
- Build-out year (2035) conditions without and with the project
- Capacity analysis of the existing and future conditions for weekday PM peak hour
- Safety analysis of the existing and future conditions
- Recommendations for mitigation of traffic impacts

1.2 Existing Site Conditions

The address associated with the project is 1490 Coyote Ridge Road. The area currently consists of vacant land and is currently zoned Industrial/Business Park (I/BP). See Figure 1 for a vicinity map.

1.3 Existing Infrastructure

The existing infrastructure and operational traffic conditions in the study area are documented in the following sections of this TIA. Roadway conditions were studied to confirm that the roadway is currently operating in a safe and efficient manner.

1.3.1 Land Uses

The land uses surrounding the site are documented to help identify the site location and provide reference for any discussion of conditions that might impact the adjacent properties. The land uses surrounding the site are shown in Table 1.

Table 1. Land Uses Around the Site

North of Site	
Zoning	O
Description	Open Space Preserve
Existing Use	Open Space / Forested Area

West of Site	
Zoning	O / SFR
Description	Open Space Preserve / Single-Family Residential
Existing Use	Forested Areas / Residential

SITE

East of Site	
Zoning	Unzoned
Description	Unzoned Skamania County
Existing Use	Forested Land / Vacant Land

South of Site	
Zoning	USA
Description	Federal Ownership Areas
Existing Use	Forested Land / US Army Corps of Engineers (USACE) Facility

1.3.2 Existing Roadways

The existing roadway providing primary public access to the site is Coyote Ridge Road. This roadway is currently gated and accessible only during certain times of the day. Data was gathered on this and other roadways in the study area to inform operations analysis of the existing roadway system. The pertinent information regarding the study area roadways is tabulated in Table 2.

Table 2. Existing Roadway Information

Roadway Name	Classification	Speed Limit (mph)	Lane Configuration		
			Lanes	Sidewalks	Bike Lanes
SR-14	Rural Other Freeways / Expressways[1]	55	2–3	No	No
Cascade Drive	Rural Major Collector[1]	25	2	No	No
Coyote Ridge Road	Local Access[2]	25	2	Yes	No
Fort Cascades Drive	Local Access[2]	30	2	No	No
Dam Access Road	Local Access[2]	30	2	No	No
Bonneville Drive	Rural Major Collector[1]	25[3]	2	No	No

Roadway Name	Classification	Speed Limit (mph)	Lane Configuration		
			Lanes	Sidewalks	Bike Lanes
Evergreen Drive	Rural Major Collector[1]	25	2	No	No
Bridge of the Gods	Rural Other Principal Arterial[1]	15	2	No	No

[1] Based on the WSDOT Functional Classification Map: https://wsdot.wa.gov/data/tools/geoportal/?config=FunctionalClass
[2] Based on the Skamania County Comprehensive Plan (see References).
[3] Unposted speed limit; reported value is presumed.
mph: miles per hour

1.3.3 Major Intersections and Traffic Control

The intersections studied in this TIA are identified above. The existing characteristics of these intersections, such as their traffic controls, approach lanes, and orientations, are further described in Table 3. In general, the roadway listed first in the intersection title is treated as the north-south alignment, and the roadway listed second is treated as the east-west alignment.

Table 3. Major Intersections: Existing Lanes and Traffic Controls

Intersection	***1. Bonneville Drive / SR-14***			
Leg	**NB (Bonneville)**	**SB**	**WB (SR-14)**	**EB (SR-14)**
Control	Stop	NA	Unc.	Unc.
# of Approach Lanes	2	NA	2	2

Intersection	***2. Dam Access Road / SR-14***			
Leg	**NB (Dam Access)**	**SB**	**WB (SR-14)**	**EB(SR-14)**
Control	Stop	Stop	Unc.	Unc.
Number of Lanes	1	1	3	3

Intersection	***3. Cascade Drive / Coyote Ridge Road (Access)***			
Leg	**NB (Cascade)**	**SB (Cascade)**	**WB (Coyote Ridge)**	**EB**
Control	Unc.	Unc.	Stop	NA
Number of Lanes	1	1	1	NA

Intersection	***4. Coyote Ridge Road / Fort Cascades Drive (Access)***			
Leg	**NB**	**SB (Coyote Ridge)**	**WB (Fort Cascades)**	**EB (Fort Cascades)**
Control	NA	Stop	Unc.	Unc.
Number of Lanes	NA	1	1	1

Intersection	***5. Evergreen Drive / SR-14***			
Leg	**NB**	**SB (Evergreen)**	**WB (SR-14)**	**EB (SR-14)**
Control	Stop	Stop	Unc.	Unc.

Number of Lanes	1	1	2	2

Intersection	***6. SR-14 / Bridge of the Gods***			
Leg	**NB (SR-14)**	**SB (SR-14)**	**WB (Bridge of the Gods)**	**EB**
Control	Unc.	Unc.	Stop	NA
Number of Lanes	1	2	1	NA

NA: not applicable; approach does not currently exist
NB: northbound; SB: southbound; WB: westbound; EB: eastbound
Stop: stop-controlled leg of intersection
Unc.: uncontrolled leg approaching intersection—does not stop or yield

The project area is defined as the vicinity of the site encompasses by the study intersections. The operation of the intersections can be controlled by signing, roundabouts, or signalization. Table 3 refers to the type of control and number of approach lanes for each leg of each intersection. The existing lane configurations and traffic controls for all intersections are shown in Figure 3. Planned lane configurations and traffic controls at future intersections are discussed later in this TIA.

1.4 Traffic Volumes

1.4.1 Existing Traffic Volumes

Turning movement counts were gathered for the weekday PM (4:00 to 6:00 pm) peak hours by REKOR on Tuesday, June 24, 2025, and Tuesday, July 15, 2025, at the following studied intersections. Copies of the count data are provided in Appendix A.

1. Bonneville Drive / SR-14
2. Dam Access Road / SR-14
3. Cascade Drive / Coyote Ridge (Access)
4. Coyote Ridge / Fort Cascades Drive
5. Evergreen Drive / SR-14
6. SR-14 / Bridge of the Gods

Figure 4 shows the 2025 Existing Volumes based on these counts. Copies of the count data used are provided in Appendix A.

1.4.2 Background Growth

Background growth is a generic increase in traffic volumes that either is not attributable to specific developments or is attributable to influences outside the study area. As a conservative estimate, a background growth rate of 1% per year was applied to all 2025 existing peak hour movement volumes between public roadways at the studied intersections.

1.4.3 In-Process Projects

No in-process projects were identified for inclusion in this TIA.

1.4.4 Future Volumes

The baseline volumes for the 2035 intersection operations analysis, termed the 2035 Without Project volumes, represent the sum of 2025 existing traffic and 10 years of background growth. Figure 5 presents the 2035 Without Project volumes for the weekday PM peak hour. These volumes were input to the intersection operations analyses, addressed later in this TIA.

Findings: Traffic volumes in the study area will continue to increase with or without the Project. Generic background growth is estimated to add approximately 1% annually to the baseline traffic volumes between the baseline year (2025) and the project year (2035).

1.4.5 Transportation Improvement Projects

The 2025 through 2030 Transportation Plan (TIP) for the City of North Bonneville (City; see Appendix E) identifies one project that will take place at or near the vicinity of the study intersections for this project. This project is:

- **Project #2—SR 14 Deceleration Lane Construction:** Construct a deceleration lane for exit from SR-14 on to Dam Access Road with an anticipated completion after 2030.

2 PROPOSED CONDITIONS

The proposed development will add traffic to the roadway system. The project location, size, and completion date are all important elements that need to be considered to determine the development's impacts on safety and capacity. It is also important to examine how the project will operate with the existing transportation system, estimate how much new traffic it will generate, and predict where traffic generated by the site will be distributed. All these elements are important in assessing the traffic impacts of this project.

2.1 Project Description

The applicant proposes to develop approximately 11 acres of a 40-acre undeveloped site into 170,000 square feet of general industrial buildings and an 80-room hotel. The site is located in North Bonneville, Washington, on Skamania County (County) parcel number 02072000020500. The existing site is currently undeveloped land. The City's zoning map designates the site as Industrial/Business Park (I/BP). See Figure 1 for the vicinity map and Figure 2 for the site plan. The estimated completion date of the project is 2035.

2.2 Access and Circulation

The proposed development will have access points at each end of Coyote Ridge Road. Each access point will be gated and open only during designated times of the day. See Figure 2 for reference. The site trips are assumed to access the existing roadway network at one of two locations:

- Cascade Drive / Coyote Ridge Road intersection
- Coyote Ridge Road / Fort Cascades Drive intersection

Findings: The proposed Project will have two site access points on Coyote Ridge Road.

2.3 Trip Generation and Distribution

The following sections rely on data provided in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* (see References). Detailed trip generation calculations are provided in Appendix B.

2.3.1 Proposed Trip Generation

The North Bonneville roadway network will see some increase in volumes from the proposed uses. The trips generated by the site are estimated by treating the development as a "Hotel" land use code 310 and "General Light Industrial" land use code 110. The trip generation results are summarized in Table 4. The site trips are presented for the average weekday and the PM peak hour between 4:00 pm and 6:00 pm. The trips generated are estimates using the ITE fitted curve and average rate equations.

Table 4. ITE Trip Generation for Cascade Business Park

Land Use (ITE Code)	Hotel (310)	General Light Industrial (110)	Total
Independent Variable	Rooms	1,000 sf GFA	
Size	80	170	
Average Daily Trips (ADT)	444	690	1,134
Peak Hour Trips	**PM Peak Hour**	**PM Peak Hour**	**PM Peak Hour**
In	16	8	24
Out	15	51	66
Total Trips	31	59	90

sf GFA = square foot gross floor area

Findings: The Project is anticipated to generate a total of 1,134 vehicle trips during the weekday and a total of 90 vehicle trips during the PM peak hour.

2.3.2 Proposed Trip Distribution

The proposed distribution of the primary or net new trips is based on a review of the land uses within the study area, on the concentration of existing traffic patterns, and on engineering judgment. The proposed net new trip distribution pattern is as follows:

- 50% to and from SR-14 west of Cascade Drive
- 45% of trips to and from SR-14 east of Dam Access Road
    - 20% to and from the Bridge of the Gods
- 5% to and from the southwest of Cascade Drive / Coyote Ridge Road

The distribution pattern above represents an external distribution of the net new trips entering and exiting the study area. The primary trip distribution and assignment of the project's net new trips are shown in Figure 6.

2.3.3 Future Volumes with Project

Figure 7 presents the 2035 With Project volumes, or the sum of Without Project volumes and the site-generated trips, for the weekday PM peak hour.

3 INTERSECTION OPERATIONS AND ROADWAY CAPACITY ANALYSES

3.1 Operations Description

Traffic operations are assessed in terms of LOS, a concept developed by transportation engineers to qualify the level of operation of intersections and roadways (*Highway Capacity Manual* (HCM), see References). LOS measures are classified in grades "A" through "F," indicating a range of operation, with LOS "A" signifying the best level of operation and LOS "F" representing the worst level.

LOS at unsignalized intersections is quantified in terms of average delay per vehicle. LOS "A" reflects full freedom of operation for a driver, while LOS "F" represents operational failure.

The volume-to-capacity (v/c) ratio quantifies the portion of the theoretical capacity consumed by traffic demand volume. A v/c ratio of zero (0.00) reflects none of the capacity is consumed and all the capacity is fully available. A v/c ratio of one (1.00) reflects all the capacity is consumed and represents operational failure. The v/c ratio can be calculated for an intersection approach lane or for a signalized intersection as a whole, with the latter calculation aggregating the v/c ratios of the critical movements.

3.2 Operation Standards

Per the WSDOT Design Manual Chapter 320.05 (see References), the minimum acceptable operation for rural facilities is LOS "C".

3.3 Analysis Methodology

The project's traffic impacts were estimated to determine the changes in traffic conditions. To make these determinations, the following were employed:

- The individual 2025 peak hour data were input as the basis for these analyses. They represent the 2025 Existing Conditions volumes.
- The peak hour factor (PHF) for the overall intersection, as calculated from the count data, was applied for the 2025 baseline analysis scenario and the future 2035 conditions.
- A minimum heavy vehicle percentage (HV%) of 2% was assumed for each movement for all analysis scenarios. The HV% calculated from the count data was applied if it was greater than 2%.
- Baseline traffic volumes on the surrounding street system were determined prior to adding the traffic impacts of the proposed project. This was done to establish a baseline for measuring the project impacts at the time of its development. Baseline traffic volume estimates were prepared for the year of buildout (2035 Without Project).
- As noted previously, trip generation estimates for the project were prepared for the weekday PM peak hours on the surrounding street system.
- Cumulative traffic impacts of the proposed project were determined by adding the project generated traffic to the baseline weekday PM peak traffic at all studied intersections. This is termed the 2035 With Project condition.
- The LOS for all two-way stop-controlled (TWSC) intersections was calculated with Trafficware's Synchro software, Version 11, based on HCM 6th Edition (see References) methodologies.

3.4 LOS Analyses

The following sections address operational conditions during the weekday PM peak hour. The first section below addresses the 2025 Existing Conditions scenario, that is, the present intersection operations without any development taking place on the site. Subsequent sections summarize operations in the future 2035 Without

Project scenario (without development on the site) and the 2035 With Project scenario (with the site fully developed as described above).

LOS calculation reports for the study area intersections are provided in Appendix C. The key analysis findings are listed in the following tables. LOS results that do not meet the WSDOT standard is shown in bold text.

3.4.1 2025 Existing Conditions

Table 5 describes the LOS for each intersection within the study area for the 2025 baseline volumes during the PM peak hour.

Table 5. Estimated 2025 LOS for Existing Conditions

Intersection	Traffic Control	Operation Standard	PM Peak Hour		
			LOS	***Delay (s/veh)***	***v/c (lane)***
1. Bonneville Drive / SR-14	TWSC	LOS C	B	12.4	0.10 (NB LT)
2. Dam Access Road / SR-14	TWSC	LOS C	B	14.2	0.09 (NB)
3. Cascade Drive / Coyote Ridge Road (Access)	TWSC	LOS C	A	0	NA
4. Fort Cascades Drive / Coyote Ridge Road (Access)	TWSC	LOS C	A	0	NA
5. Evergreen Drive / SR-14	TWSC	LOS C	B	11.9	0.03 (SB)
6. SR-14 / Bridge of the Gods	TWSC	LOS C	C	18.9	0.53 (WB)

NB: northbound; SB: southbound; WB: westbound; LT: left; NA: not applicable; s/veh: seconds per vehicle

As shown in Table 5, all studied intersections currently operate at an acceptable LOS and v/c ratio in the 2025 Existing Conditions during the weekday PM peak hour.

3.4.2 2035 Future Conditions Without Project

Table 6 describes the LOS for each intersection within the study area for the 2035 Without Project trips during the PM peak hour. The volumes for the Without Project conditions were calculated with a 1% background growth rate for each analysis year.

Table 6. Estimated 2035 LOS for Without Project Conditions

Intersection	Traffic Control	Operation Standard	PM Peak Hour		
			LOS	***Delay (sec)***	***v/c (lane)***
1. Bonneville Drive / SR-14	TWSC	LOS C	B	13.2	0.12 (NB LT)
2. Dam Access Road / SR-14	TWSC	LOS C	C	15.3	0.11 (NB)
3. Cascade Drive / Coyote Ridge Road (Access)	TWSC	LOS C	A	0	NA
4. Coyote Ridge Road / Fort Cascades Drive (Access)	TWSC	LOS C	A	0	NA
5. Evergreen Drive / SR-14	TWSC	LOS C	B	12.4	0.03 (SB)
6. SR-14 / Bridge of the Gods	TWSC	LOS C	C	22.9	0.61 (WB)

NB: northbound; LT: left; SB: southbound; WB: westbound; NA: not applicable; s/veh: seconds per vehicle

As shown in Table 6, all studied intersections currently operate at an acceptable LOS and v/c ratio in the 2035 Without Project conditions during the weekday PM peak hour.

3.4.3 2035 Future Conditions With Project

Table 7 describes the LOS for each intersection within the study area for the 2035 With Project trips during the PM peak hour. The volumes for the With Project condition were calculated by adding the 2035 Without Project volumes with the Project's primary trip assignment.

Table 7. Estimated 2035 LOS for With Project Conditions

Intersection	Traffic Control	Operation Standard	PM Peak Hour		
			LOS	***Delay (sec)***	***v/c (lane)***
1. Bonneville Drive / SR-14	TWSC	LOS C	C	15.0	0.22 (NB LT)
2. Dam Access Road / SR-14	TWSC	LOS C	C	16.4	0.15 (NB)
3. Cascade Drive / Coyote Ridge Road (Access)	TWSC	LOS C	A	9.0	0.05 (WB)

Intersection	Traffic Control	Operation Standard	PM Peak Hour		
			LOS	***Delay (sec)***	***v/c (lane)***
4. Coyote Ridge Road / Fort Cascades Drive (Access)	TWSC	LOS C	A	9.0	0.06 (SB)
5. Evergreen Drive / SR-14	TWSC	LOS C	B	12.9	0.04 (SB)
6. SR-14 / Bridge of the Gods	TWSC	LOS C	**D**	**26.8**	**0.67 (WB)**

NB: northbound; LT: left; SB: southbound; WB: westbound; NA: not applicable; s/veh: seconds per vehicle

As shown in Table 7, the SR-14 / Bridge of the Gods intersection is forecasted to exceed the acceptable operational standard in the 2035 With Project conditions during the weekday PM peak hour.

Findings: All studied intersections operate at an acceptable LOS in the 2025 Existing Conditions and the 2035 Without Project conditions and the SR-14 / Bridge of the Gods intersection fails in the 2035 With Project condition.

Recommendation: The SR-14 / Bridge of the Gods intersection will need to be closely monitored in the future. A signal, based on Warrant 3, is not met in the 2035 With or Without Project conditions.

3.4.4 LOS Analyses Results Discussion

The SR-14 / Bridge of the Gods intersection operates below the acceptable LOS standard under the 2035 With Project conditions. A signal warrant analysis was conducted based on Warrant 3 – Peak Hour, as outlined in Figure 4C-3 of the *Manual on Uniform Traffic Control Devices* (MUTCD). See Appendix F for details. The analysis indicates that the intersection does not currently meet the criteria to warrant signalization. Continued monitoring of this intersection is recommended to evaluate future operational needs as area traffic volumes change.

4 SAFETY ANALYSIS

4.1 Collision Analysis

Collision data from the study area were obtained from WSDOT for the five-year period spanning from January 2020 through December 2024. This collision analysis assumes that a collision rate less than the critical collision rate for the intersection is typically considered to be within acceptable parameters. A collision rate above the critical rate is worthy of further examination. To calculate the collision rate, the PM peak hour total entering volumes from the existing turning movement counts were multiplied by 10 to provide an approximation of the average daily traffic (ADT).

The detailed collision data, the calculations of the critical rates, and the calculations of the collision rates are provided in Appendix D. Table 8 presents the results of the collision analysis.

Table 8. Collision Analysis for Study Area Intersections (January 2020 through December 2024)

Int. #	Intersection	Angle	Rear-end/ Sideswipe	Left Turn	Right Turn	Object	Total Collisions	Critical Rate	Collison Rate
1	Bonneville Drive / SR-14	--	--	--	--	--	--	--	--
2	Dam Access Road / SR-14	--	--	--	1	3	4	0.34	0.93
3	Cascade Drive / Coyote Ridge (Access)	--	--	--	--	--	--	--	--
4	Coyote Ridge / Fort Cascades Drive (Access)	--	--	--	--	--	--	--	--
5	Evergreen Drive / SR-14	--	--	--	--	--	--	--	--
6	SR-14 / Bridge of the Gods	1	2	3	--	--	6	0.42	0.90

"--" indicates no collisions reported.

As shown in Table 8, all the calculated collision rates are lower than the collision rates.

Findings: The 2020 to 2024 collision history at the study intersections was reviewed. All studied intersections have collision rates below the critical rate.

4.2 Pedestrian and Bicycle Facilities

Most roadways within North Bonneville have sidewalks or shared-use paths that accommodate both bicyclists and pedestrians. There are no bicycle or pedestrian facilities along SR-14.

Recommendation: Assure all driveways, sidewalks, and curb ramps constructed with the proposed project comply with the current Americans with Disabilities Act (ADA) guidelines.

4.3 Site Distance at Site Access Location

The Project's proposed site access does not currently exist, and sight distances were evaluated digitally. The generally flat terrain and slight grade increase along Coyote Ridge Road suggest that adequate sight distances should be achievable through design and construction of the proposed site access on Coyote Ridge Road.

The proposed site driveway on Coyote Ridge Road should be designed in accordance with Chapter 12.24.150 of the North Bonneville Municipal Code (NBMC, see References), based on the posted speed for Coyote Ridge Road of 25 miles per hour (mph). Install no objects within the sight distances triangles that would block exiting drivers' view of approaching traffic.

Findings: Digital review of the current conditions along Coyote Ridge Road suggests that adequate sight distances should be achievable through design and construction of the proposed site access.

Recommendations: Design the proposed site access along Coyote Ridge Road to meet NBMC 12.24.150 – sight obstruction requirements.

5 STUDY FINDINGS

The findings of this TIA are listed below.

5.1 Future Traffic Volumes Increase

Traffic volumes in the study area will continue to increase with or without the Project. Generic background growth is estimated to add approximately 1% annually to the baseline traffic volumes between the baseline year (2025) and the project year (2035).

5.2 Access and Circulation

The proposed Project will have two site access points on Coyote Ridge Road.

5.3 Trip Generation

The Cascade Business Park is anticipated to generate a total of 1,134 vehicle trips during the weekday and a total of 90 vehicle trips during the PM peak hour.

5.4 LOS Analysis

All studied intersections operate at an acceptable LOS in the 2025 Existing Conditions and the 2035 Without Project conditions and the SR-14 / Bridge of the Gods intersection fails in the 2035 With Project condition. This intersection will need to be closely monitored in the future.

5.5 Collision Analysis

The 2020 to 2024 collision history at the study intersections was reviewed. All studied intersections have collision rates below the critical rate.

5.6 Pedestrian and Bicycle Facilities

Assure all driveways, sidewalks, and curb ramps constructed with the proposed project comply with the current ADA guidelines.

5.7 Driveway Sight Distance

Digital review of the current conditions along Coyote Ridge Road suggests that adequate sight distances should be achievable through design and construction of the proposed site access.

6 RECOMMENDATIONS

No traffic-specific mitigation is required; however, the following general recommendations are made.

6.1 LOS Analysis

The SR-14 / Bridge of the Gods intersection will need to be closely monitored in the future. A signal, based on Warrant 3, is not met in the 2035 With or Without Project conditions.

6.2 Accessibility

Assure all driveways, sidewalks, and curb ramps constructed with the site development project comply with the current ADA guidelines.

6.3 Sight Distance

Design the proposed site access along Coyote Ridge Road to meet NBMC 12.24.150 – sight obstruction requirements.

7 REFERENCES

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Figures

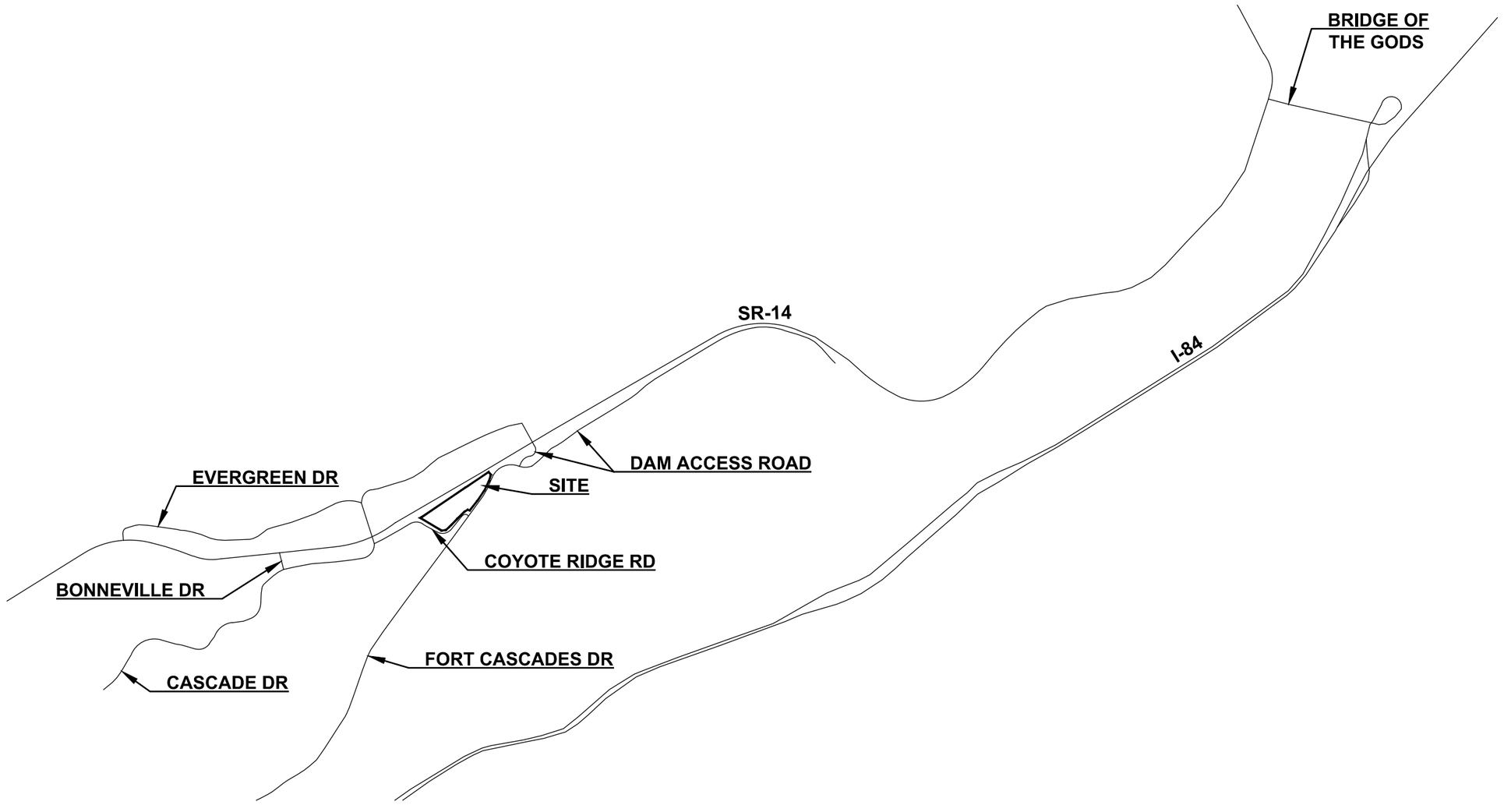

FIGURE 1

Vicinity Map

Cascade Business Park

CASCADE BUSINESS PARK, North Bonneville, WA | Conceptual Site Plan | 05/25/21

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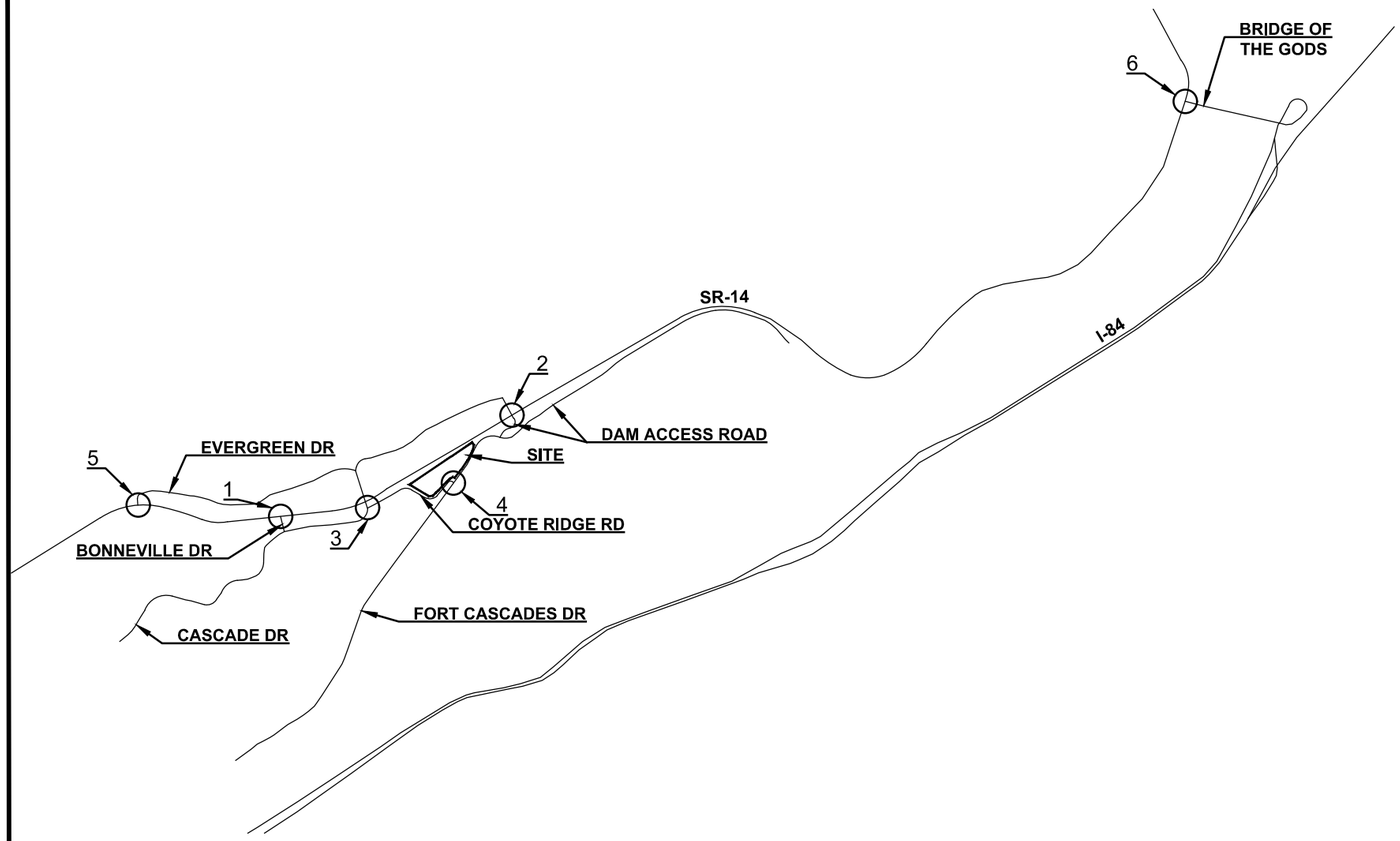
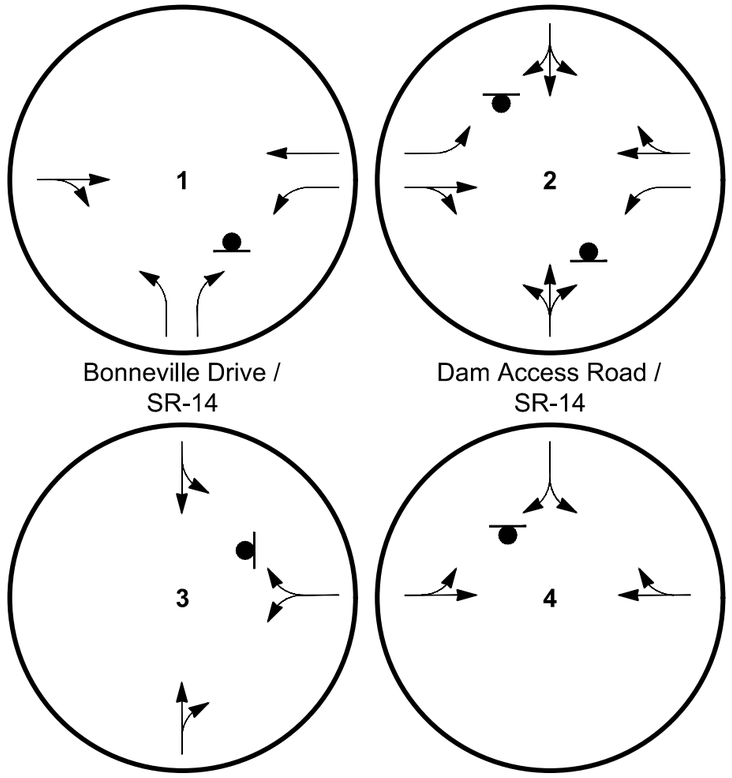
NTS

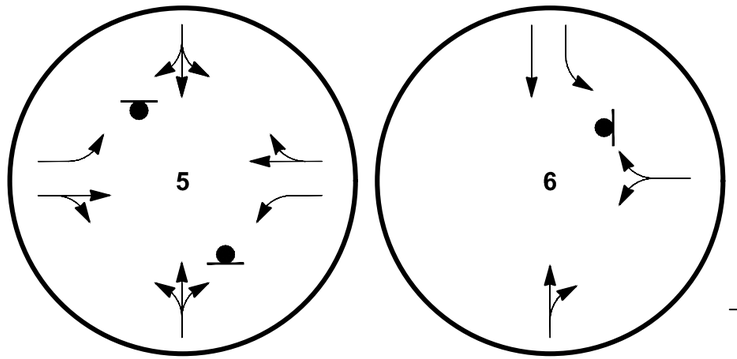
FIGURE 2

Site Plan

Cascade Business Park







LEGEND

- INTERSECTION
- STOP SIGN

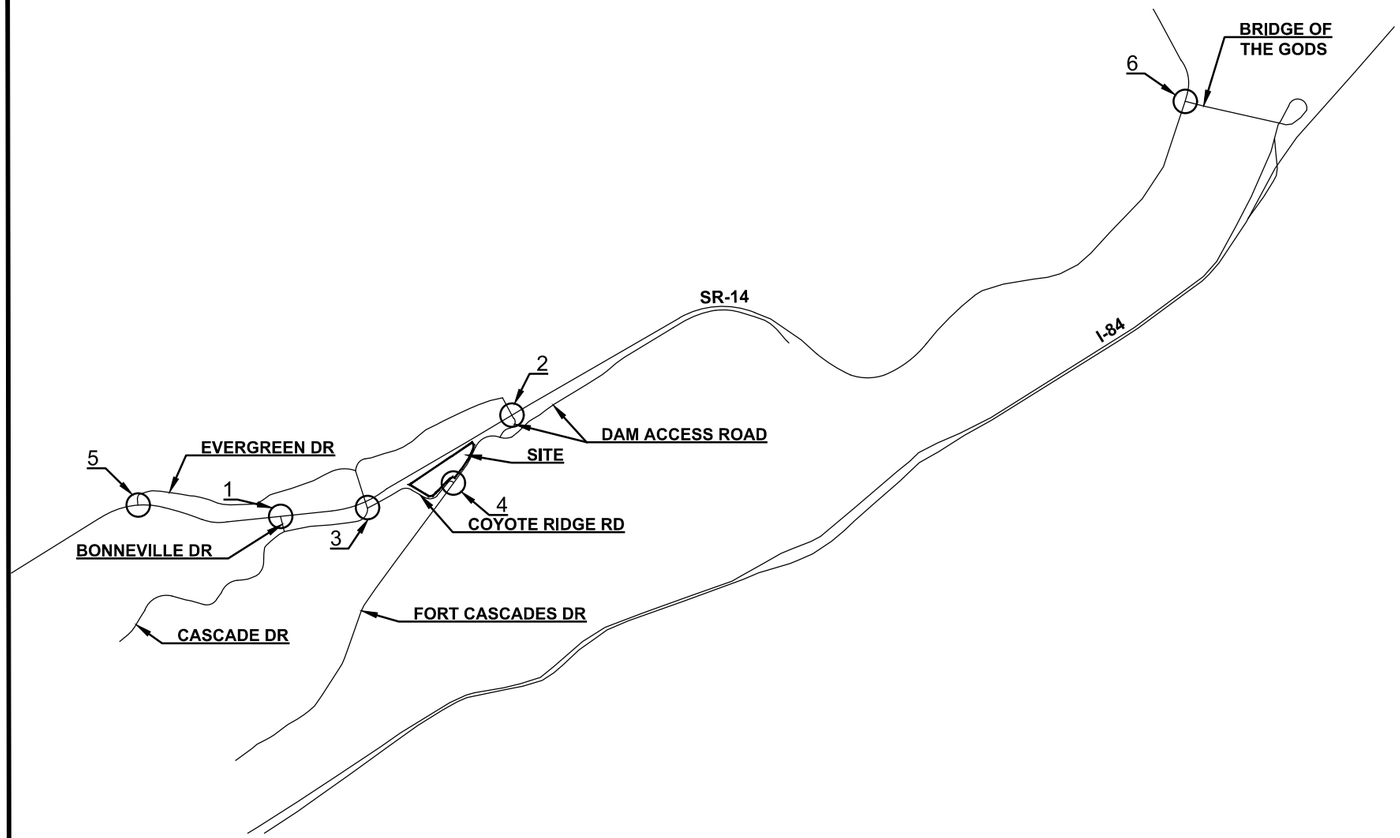
N

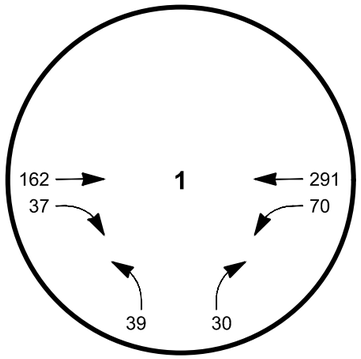
NTS

FIGURE 3

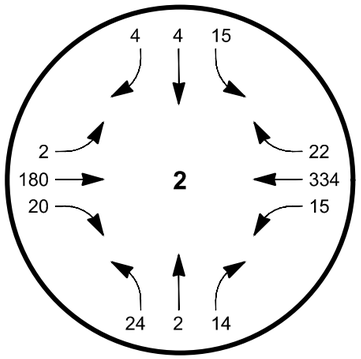
Existing Traffic Controls and Lane Configurations

Cascade Business Park

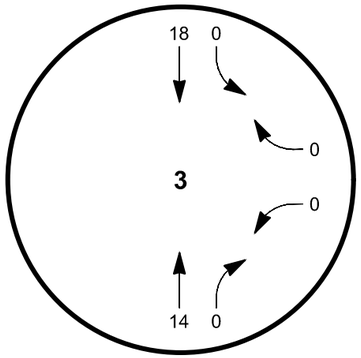




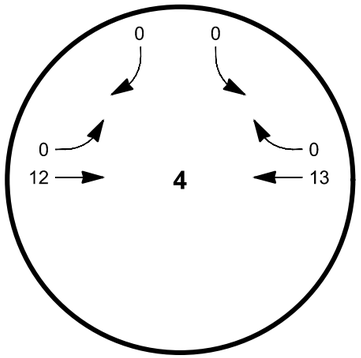
Bonneville Drive /
SR-14



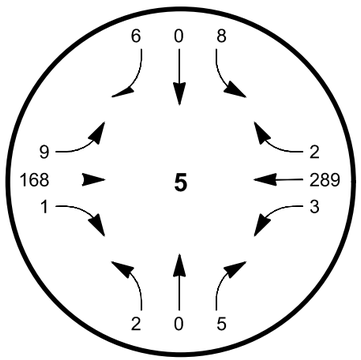
Dam Access Road /
SR-14



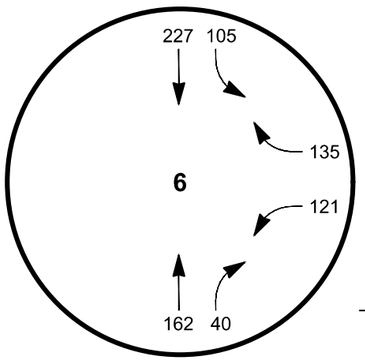
Cascade Drive /
Coyote Ridge Road (Access)



Coyote Ridge Road /
Fort Cascades Drive (Access)



Evergreen Drive /
SR-14



SR-14 /
Bridge of the Gods

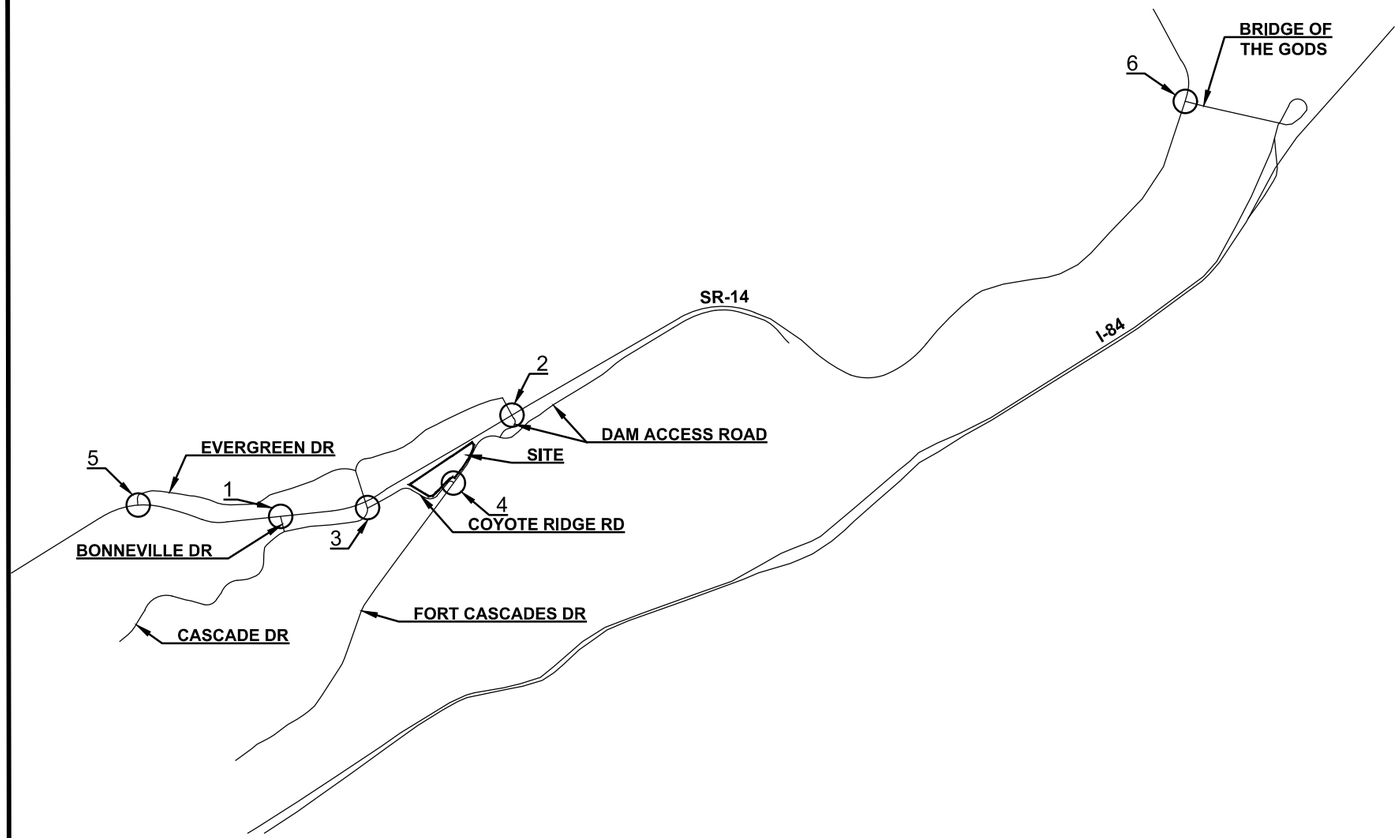
LEGEND	
○	INTERSECTION
XXX	PM PEAK HOUR

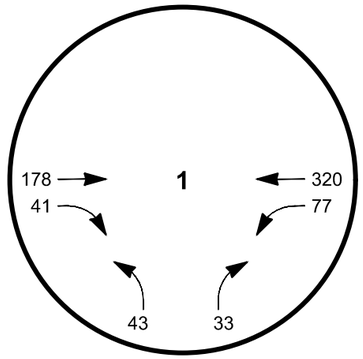
NTS

FIGURE 4

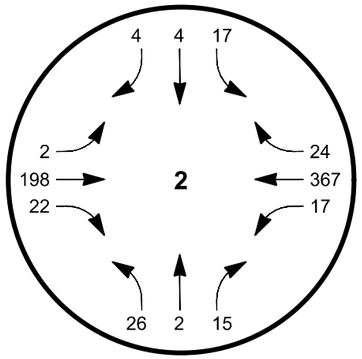
2025 Existing Volumes

Cascade Business Park

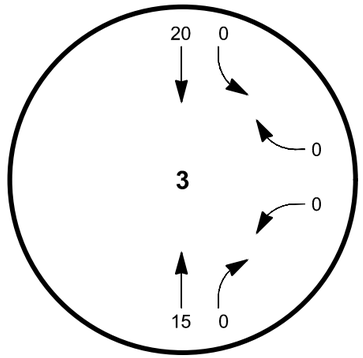




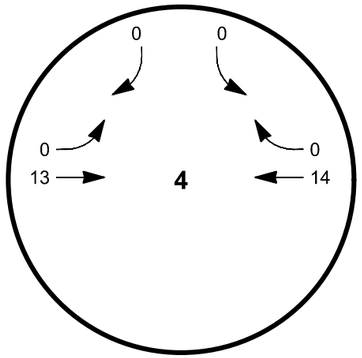
Bonneville Drive /
SR-14



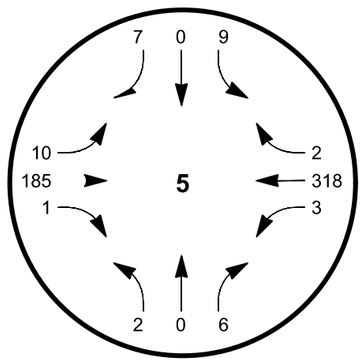
Dam Access Road /
SR-14



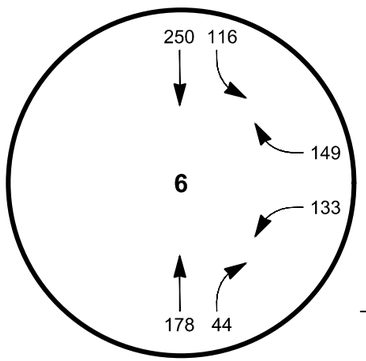
Cascade Drive /
Coyote Ridge Road (Access)



Coyote Ridge Road /
Fort Cascades Drive (Access)



Evergreen Drive /
SR-14



SR-14 /
Bridge of the Gods

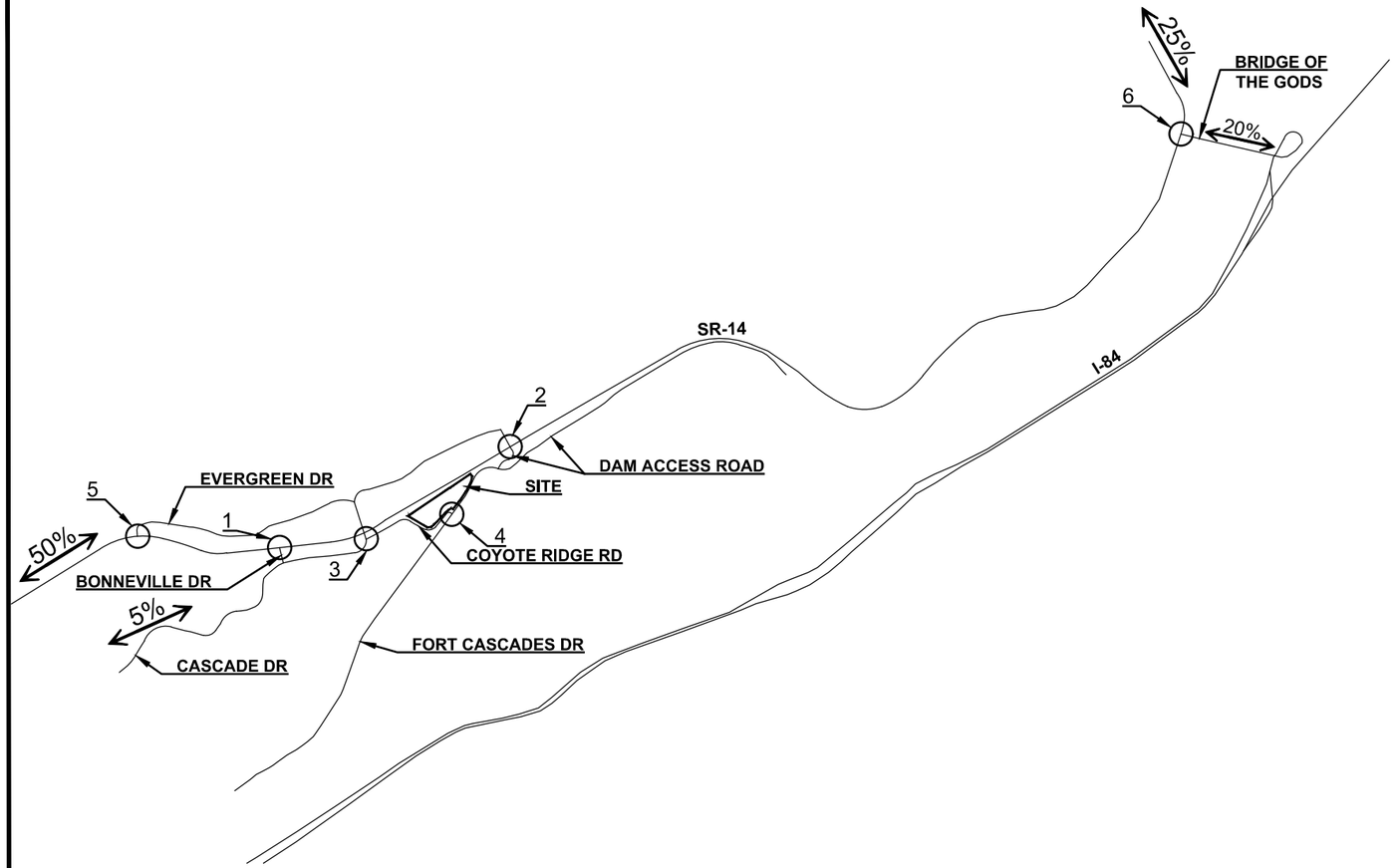
LEGEND	
○	INTERSECTION
XXX	PM PEAK HOUR

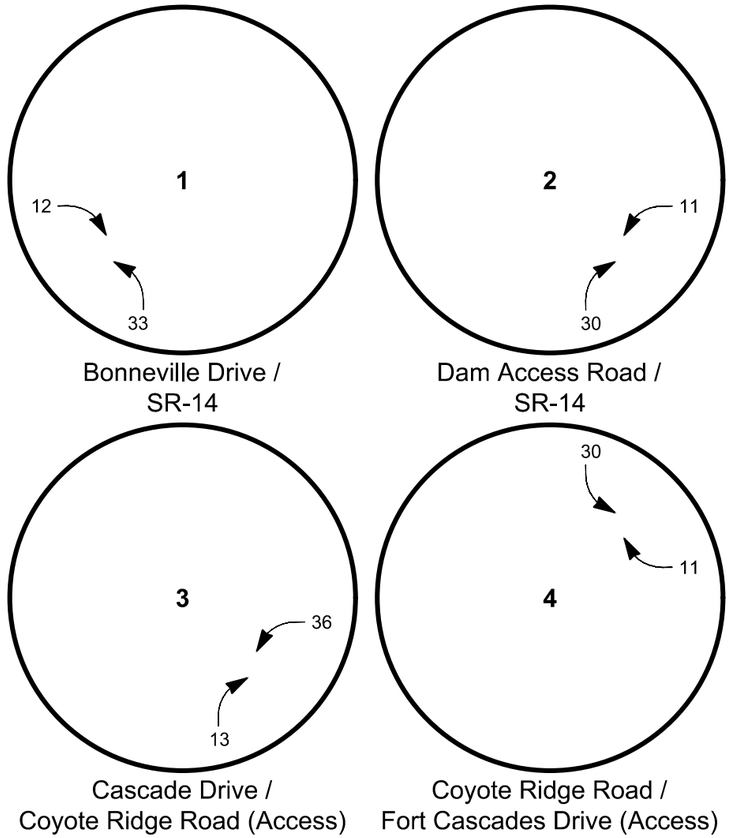
NTS

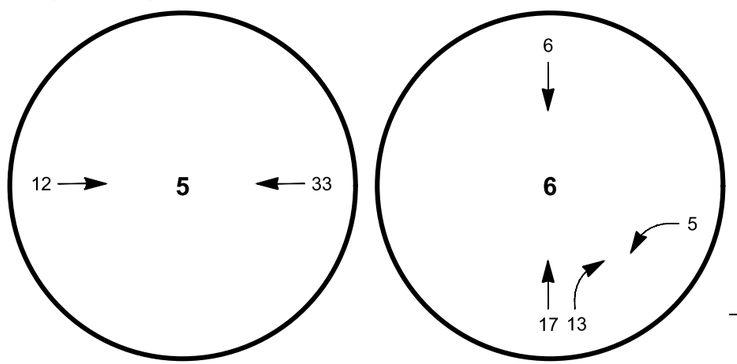
FIGURE 5

2035 Without Project Volumes

Cascade Business Park







LEGEND

- ○ INTERSECTION
- ● STOP SIGN

WEEKDAY PM PEAK HOUR
ENTER = 24
EXIT = 66
TOTAL = 90

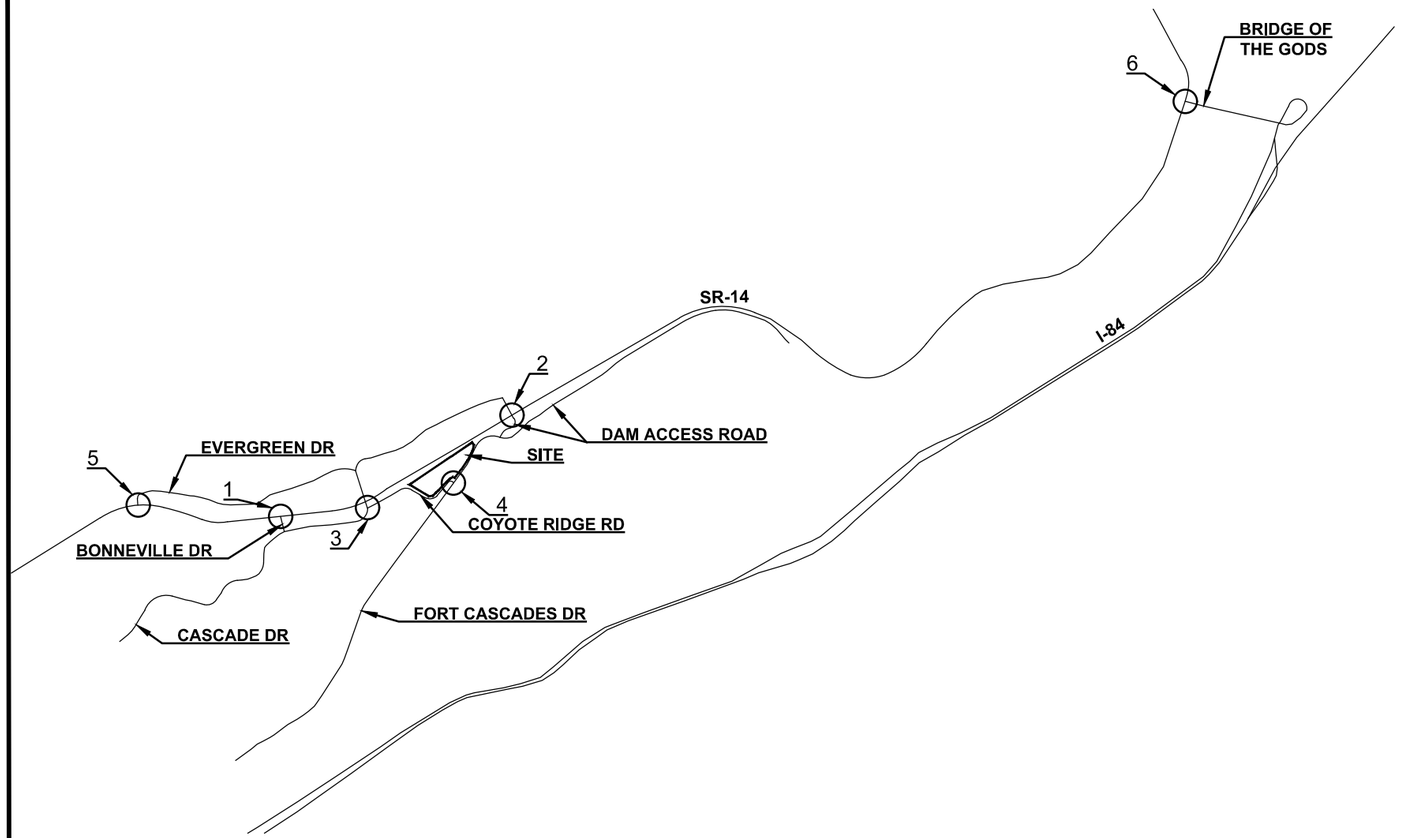
N

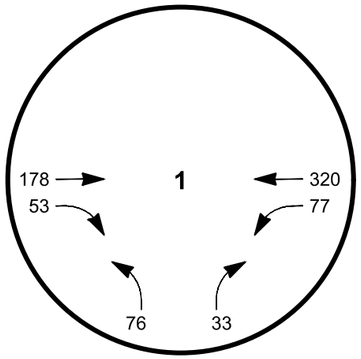
NTS

FIGURE 6

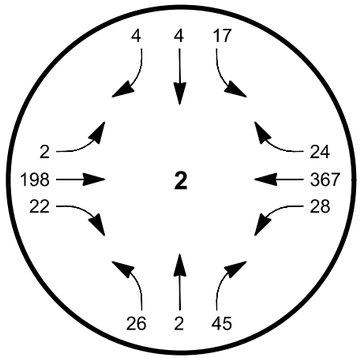
Trip Assignment and Distribution

Cascade Business Park

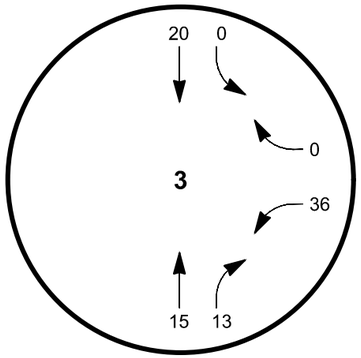




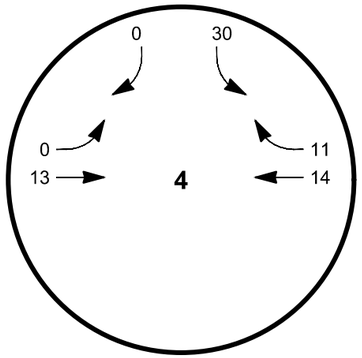
Bonneville Drive /
SR-14



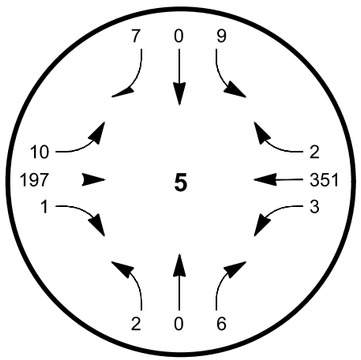
Dam Access Road /
SR-14



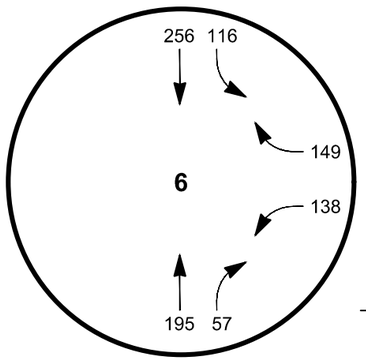
Cascade Drive /
Coyote Ridge Road (Access)



Coyote Ridge Road /
Fort Cascades Drive (Access)



Evergreen Drive /
SR-14



SR-14 /
Bridge of the Gods

NTS

LEGEND

- INTERSECTION
- STOP SIGN

FIGURE 7

2035 With Project Volumes

Cascade Business Park

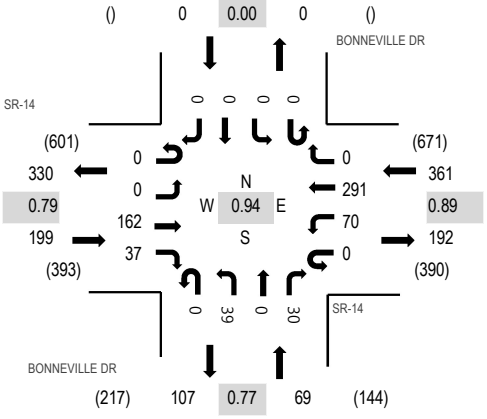
Appendix A
Traffic Counts

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

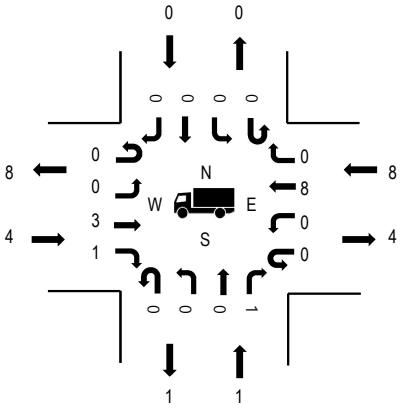
Location: 1 BONNEVILLE DR & SR-14 PM
Date: Tuesday, June 24, 2025
Peak Hour: 04:40 PM - 05:40 PM
Peak 15-Minutes: 05:15 PM - 05:30 PM

Peak Hour

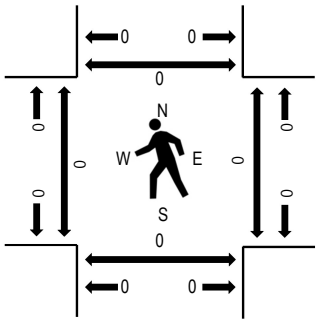
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	2.0%	0.79
WB	2.2%	0.89
NB	1.4%	0.77
SB	0.0%	0.00
All	2.1%	0.94

Traffic Counts - Motorized Vehicles

Interval Start Time	SR-14 Eastbound				SR-14 Westbound				BONNEVILLE DR Northbound				BONNEVILLE DR Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	12	4	0	5	20	0	0	2	0	2	0	0	0	0	45	608
4:05 PM	0	0	7	6	0	5	29	0	0	4	0	5	0	0	0	0	56	618
4:10 PM	0	0	11	2	0	4	21	0	0	0	0	5	0	0	0	0	43	614
4:15 PM	0	0	16	3	0	8	20	0	0	2	0	8	0	0	0	0	57	621
4:20 PM	0	0	18	3	0	7	24	0	0	2	0	6	0	0	0	0	60	626
4:25 PM	0	0	11	5	0	2	29	0	0	4	0	1	0	0	0	0	52	612
4:30 PM	0	0	8	4	0	7	20	0	0	0	0	5	0	0	0	0	44	619
4:35 PM	0	0	18	5	0	3	15	0	0	1	0	1	0	0	0	0	43	620
4:40 PM	0	0	14	2	0	10	32	0	0	6	0	3	0	0	0	0	67	629
4:45 PM	0	0	19	3	0	3	25	0	0	2	0	2	0	0	0	0	54	600
4:50 PM	0	0	5	1	0	4	19	0	0	4	0	4	0	0	0	0	37	595
4:55 PM	0	0	15	2	0	1	30	0	0	0	0	2	0	0	0	0	50	605
5:00 PM	0	0	19	4	0	3	22	0	0	5	0	2	0	0	0	0	55	600
5:05 PM	0	0	14	3	0	7	26	0	0	1	0	1	0	0	0	0	52	
5:10 PM	0	0	7	1	0	9	29	0	0	2	0	2	0	0	0	0	50	
5:15 PM	0	0	20	4	0	9	21	0	0	4	0	4	0	0	0	0	62	
5:20 PM	0	0	11	3	0	2	22	0	0	4	0	4	0	0	0	0	46	
5:25 PM	0	0	21	8	0	9	17	0	0	3	0	1	0	0	0	0	59	
5:30 PM	0	0	9	3	0	3	23	0	0	4	0	3	0	0	0	0	45	
5:35 PM	0	0	8	3	0	10	25	0	0	4	0	2	0	0	0	0	52	
5:40 PM	0	0	9	3	0	3	18	0	0	1	0	4	0	0	0	0	38	
5:45 PM	0	0	13	3	0	10	15	0	0	4	0	4	0	0	0	0	49	
5:50 PM	0	0	14	7	0	5	17	0	0	1	0	3	0	0	0	0	47	
5:55 PM	0	0	11	1	0	5	18	0	0	4	0	6	0	0	0	0	45	
Count Total	0	0	310	83	0	134	537	0	0	64	0	80	0	0	0	0	1,208	
Peak Hour	0	0	162	37	0	70	291	0	0	39	0	30	0	0	0	0	629	

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

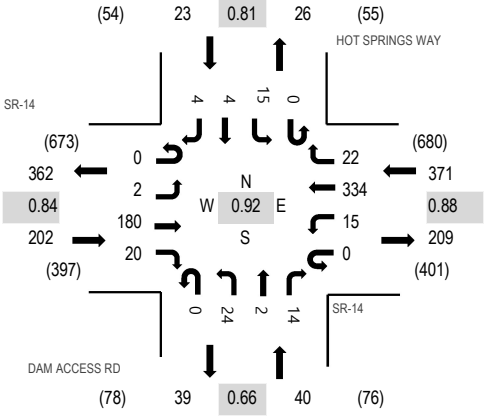
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	1	0	1	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	1	0	0	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	1	0	0	0	1	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	0	0	0	0	4:30 PM	0	0	0	0	0	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	0	0	3	0	3	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	1	0	0	0	1	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	1	0	1	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	0	0	1	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	2	0	2	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	1	0	0	0	1	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	0	0	1	0	1	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	1	1	0	0	2	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	1	0	0	0	1	5:40 PM	0	0	0	0	0	5:40 PM	0	0	0	0	0
5:45 PM	1	0	0	0	1	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	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	10	1	10	0	21	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	4	1	8	0	13	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

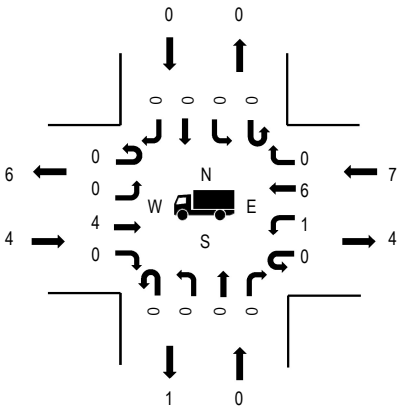
Location: 2 DAM ACCESS RD & SR-14 PM
Date: Tuesday, June 24, 2025
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

Peak Hour

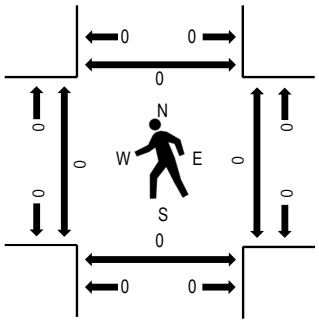
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	2.0%	0.84
WB	1.9%	0.88
NB	0.0%	0.66
SB	0.0%	0.81
All	1.7%	0.92

Traffic Counts - Motorized Vehicles

Interval Start Time	SR-14 Eastbound				SR-14 Westbound				DAM ACCESS RD Northbound				HOT SPRINGS WAY Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	18	2	0	2	30	2	0	2	0	1	0	4	0	0	61	623
4:05 PM	0	0	13	1	0	1	22	2	0	5	1	0	0	3	0	1	49	619
4:10 PM	0	2	10	2	0	2	24	3	0	2	1	0	0	2	0	1	49	626
4:15 PM	0	0	23	2	0	1	26	0	0	1	0	0	0	0	0	1	54	636
4:20 PM	0	0	20	2	0	1	35	4	0	0	1	3	0	1	0	0	67	632
4:25 PM	0	0	11	0	0	2	26	0	0	0	0	0	0	2	0	1	42	612
4:30 PM	0	0	13	2	0	0	22	4	0	4	0	1	0	0	0	0	46	628
4:35 PM	0	0	17	1	0	0	25	1	0	3	0	0	0	1	2	0	50	617
4:40 PM	0	0	16	1	0	1	28	1	0	5	1	2	0	0	0	1	56	617
4:45 PM	0	0	19	3	0	1	27	3	0	0	0	2	0	3	0	0	58	600
4:50 PM	0	0	9	1	0	3	26	2	0	1	0	0	0	2	0	0	44	582
4:55 PM	0	0	14	4	0	1	25	0	0	3	0	0	0	0	0	0	47	586
5:00 PM	0	2	15	2	0	0	24	5	0	4	0	2	0	2	1	0	57	584
5:05 PM	0	0	13	2	0	5	29	0	0	2	0	2	0	2	0	1	56	
5:10 PM	0	0	10	0	0	0	41	2	0	1	0	2	0	2	1	0	59	
5:15 PM	0	1	14	2	0	1	24	3	0	1	0	2	0	2	0	0	50	
5:20 PM	0	0	16	1	0	0	24	3	0	0	0	1	0	2	0	0	47	
5:25 PM	0	0	21	5	0	1	23	2	0	1	0	0	0	4	0	1	58	
5:30 PM	0	0	9	0	0	1	21	0	0	2	0	0	0	0	0	2	35	
5:35 PM	0	0	13	0	0	0	30	0	0	5	0	0	0	0	2	0	50	
5:40 PM	0	1	12	2	0	0	19	3	0	1	0	1	0	0	0	0	39	
5:45 PM	0	0	8	1	0	1	22	2	0	3	0	2	0	0	0	1	40	
5:50 PM	0	1	14	4	0	2	22	0	0	2	0	0	0	1	1	1	48	
5:55 PM	0	0	18	4	0	1	15	1	0	2	1	0	0	1	0	2	45	
Count Total	0	7	346	44	0	27	610	43	0	50	5	21	0	34	7	13	1,207	
Peak Hour	0	2	180	20	0	15	334	22	0	24	2	14	0	15	4	4	636	

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

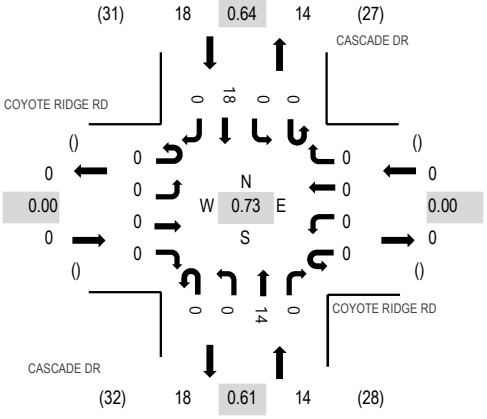
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	1	0	1	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0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

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

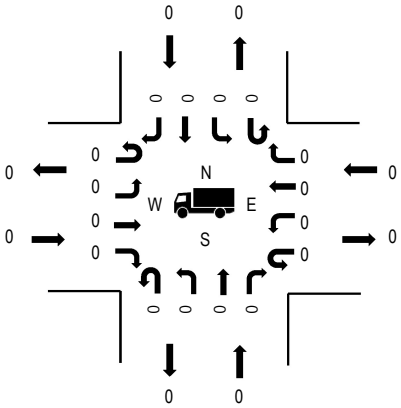
Location: 3 CASCADE DR & COYOTE RIDGE RD PM
Date: Tuesday, June 24, 2025
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:40 PM - 04:55 PM

Peak Hour

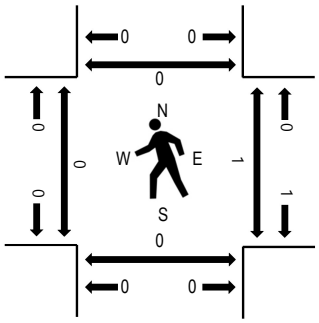
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	0.0%	0.00
NB	0.0%	0.61
SB	0.0%	0.64
All	0.0%	0.73

Traffic Counts - Motorized Vehicles

Interval Start Time	COYOTE RIDGE RD Eastbound				COYOTE RIDGE RD Westbound				CASCADE DR Northbound				CASCADE DR Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	4	32
4:05 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	5	31
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	26
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	29
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	29
4:25 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0	5	29
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	24
4:35 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	25
4:40 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	27
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	26
4:50 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	27
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	3	27
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:10 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	4	
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
5:20 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	3	
5:35 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	0	3	
5:40 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	
5:50 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	
5:55 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
Count Total	0	0	0	0	0	0	0	0	1	0	27	0	0	0	31	0	59	
Peak Hour	0	0	0	0	0	0	0	0	0	0	14	0	0	0	18	0	32	

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

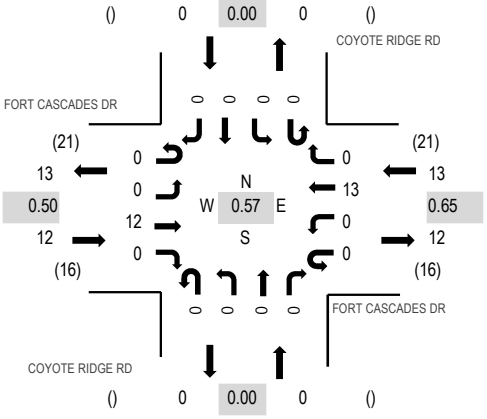
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	0	0	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	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	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	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	1	0	1
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	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	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	0	0	0	0	0	Count Total	0	0	0	0	0	Count Total	0	0	2	0	2
Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0	Peak Hour	0	0	2	0	2

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

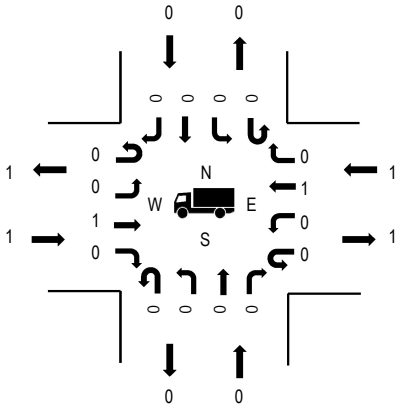
Location: 4 COYOTE RIDGE RD & FORT CASCADES DR PM
Date: Tuesday, June 24, 2025
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:50 PM - 05:05 PM

Peak Hour

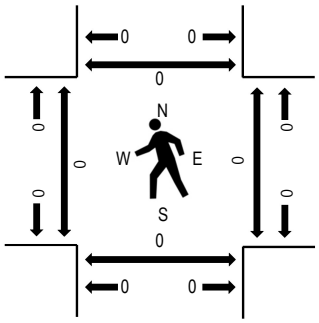
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	8.3%	0.50
WB	7.7%	0.65
NB	0.0%	0.00
SB	0.0%	0.00
All	8.0%	0.57

Traffic Counts - Motorized Vehicles

Interval Start Time	FORT CASCADES DR Eastbound				FORT CASCADES DR Westbound				COYOTE RIDGE RD Northbound				COYOTE RIDGE RD Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	20
4:05 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	22
4:10 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	22
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
4:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	25
4:35 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	3	23
4:40 PM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	21
4:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	20
4:50 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	20
4:55 PM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	18
5:00 PM	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4	17
5:05 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
5:10 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:20 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	
5:25 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
5:35 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
5:40 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
5:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
5:50 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	
5:55 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3	
Count Total	0	0	16	0	0	0	21	0	0	0	0	0	0	0	0	0	37	
Peak Hour	0	0	12	0	0	0	13	0	0	0	0	0	0	0	0	0	25	

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

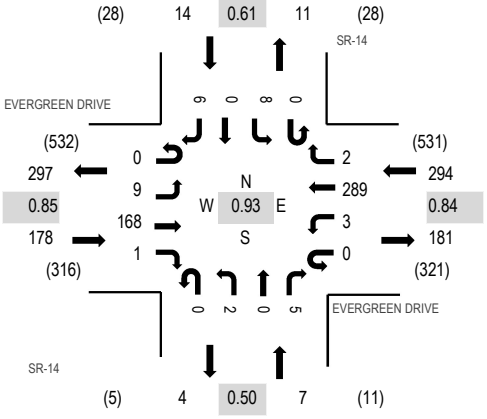
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	0	0	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	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	1	0	1	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	1	0	0	0	1	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	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	1	1	0	0	2
Count Total	1	0	1	0	2	Count Total	0	0	0	0	0	Count Total	1	1	0	0	2
Peak Hour	1	0	1	0	2	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

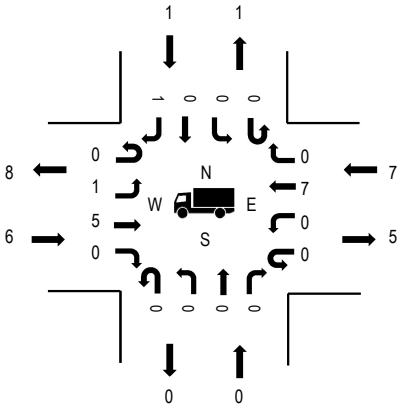
Location: 5 SR-14 & EVERGREEN DRIVE PM
Date: Tuesday, July 15, 2025
Peak Hour: 04:15 PM - 05:15 PM
Peak 15-Minutes: 04:45 PM - 05:00 PM

Peak Hour

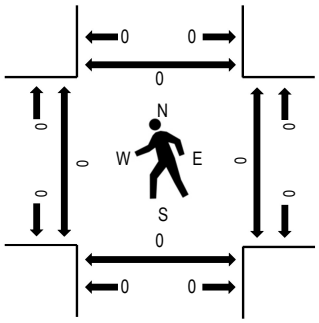
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	3.4%	0.85
WB	2.4%	0.84
NB	0.0%	0.50
SB	7.1%	0.61
All	2.8%	0.93

Traffic Counts - Motorized Vehicles

Interval Start Time	EVERGREEN DRIVE Eastbound				EVERGREEN DRIVE Westbound				SR-14 Northbound				SR-14 Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	19	0	0	0	13	0	0	1	0	0	0	1	0	0	34	471
4:05 PM	0	1	8	0	0	1	24	1	0	0	0	0	0	0	0	1	36	481
4:10 PM	0	0	8	0	0	0	25	0	0	0	0	0	0	0	0	2	35	485
4:15 PM	0	1	9	0	0	0	25	0	0	0	0	0	0	0	0	1	36	493
4:20 PM	0	0	21	0	0	1	18	1	0	0	0	0	0	1	0	1	43	486
4:25 PM	0	1	13	0	0	0	20	0	0	0	0	0	0	0	0	1	35	477
4:30 PM	0	2	16	0	0	0	23	0	0	0	0	0	0	0	0	0	41	477
4:35 PM	0	1	6	0	0	0	24	0	0	0	0	1	0	1	0	0	33	467
4:40 PM	0	0	11	0	0	1	30	0	0	0	0	0	0	2	0	2	46	465
4:45 PM	0	1	9	0	0	0	35	0	0	1	0	0	0	0	0	0	46	453
4:50 PM	0	0	15	0	0	1	18	0	0	0	0	1	0	2	0	1	38	449
4:55 PM	0	2	20	0	0	0	25	0	0	1	0	0	0	0	0	0	48	439
5:00 PM	0	1	12	1	0	0	28	0	0	0	0	1	0	1	0	0	44	415
5:05 PM	0	0	16	0	0	0	22	0	0	0	0	2	0	0	0	0	40	
5:10 PM	0	0	20	0	0	0	21	1	0	0	0	0	0	1	0	0	43	
5:15 PM	0	0	13	0	0	0	15	0	0	0	0	0	0	1	0	0	29	
5:20 PM	0	0	5	0	0	0	28	0	0	0	0	0	0	0	0	1	34	
5:25 PM	0	0	15	0	0	0	17	1	0	0	0	0	0	1	0	1	35	
5:30 PM	0	2	13	0	0	0	12	1	0	0	0	0	0	1	0	2	31	
5:35 PM	0	1	10	0	0	0	13	6	0	0	0	0	0	0	0	1	31	
5:40 PM	0	0	9	0	0	0	22	1	0	0	0	2	0	0	0	0	34	
5:45 PM	0	0	15	0	0	0	26	1	0	0	0	0	0	0	0	0	42	
5:50 PM	0	0	10	0	0	0	16	1	0	1	0	0	0	0	0	0	28	
5:55 PM	0	1	8	0	0	0	13	0	0	0	0	0	0	1	0	1	24	
Count Total	0	14	301	1	0	4	513	14	0	4	0	7	0	13	0	15	886	
Peak Hour	0	9	168	1	0	3	289	2	0	2	0	5	0	8	0	6	493	

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

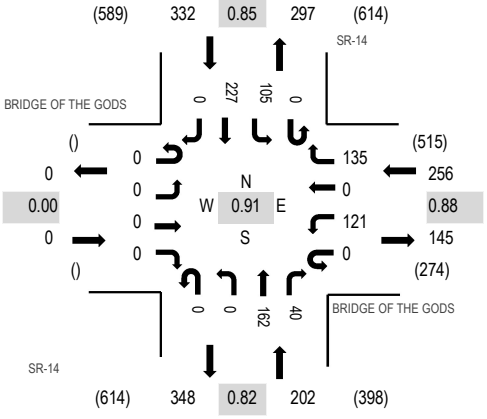
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	1	0	1	0	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	1	0	1	0	2	4:25 PM	0	0	0	0	0	4:25 PM	0	0	0	0	0
4:30 PM	2	0	0	0	2	4:30 PM	0	0	0	0	0	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	0	0	0	0	0	4:40 PM	0	0	0	0	0	4:40 PM	0	0	0	0	0
4:45 PM	1	0	1	0	2	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	0	1	1	2	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	1	0	0	0	1	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	2	0	2	5:05 PM	0	0	0	0	0	5:05 PM	0	0	0	0	0
5:10 PM	0	0	2	0	2	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	1	0	0	0	1	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	1	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	1	0	0	0	1	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	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	10	0	9	1	20	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	6	0	7	1	14	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

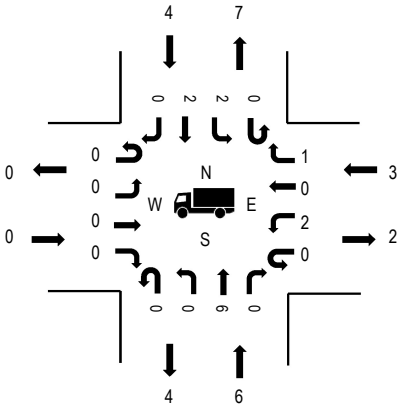
Location: 6 SR-14 & BRIDGE OF THE GODS PM
Date: Tuesday, July 15, 2025
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:25 PM - 04:40 PM

Peak Hour

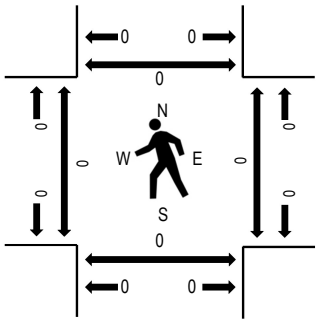
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	1.2%	0.88
NB	3.0%	0.82
SB	1.2%	0.85
All	1.6%	0.91

Traffic Counts - Motorized Vehicles

Interval Start Time	BRIDGE OF THE GODS Eastbound				BRIDGE OF THE GODS Westbound				SR-14 Northbound				SR-14 Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
4:00 PM	0	0	0	0	0	8	0	9	0	0	19	4	0	10	23	0	73	790
4:05 PM	0	0	0	0	0	8	0	12	0	0	17	2	0	8	17	0	64	776
4:10 PM	0	0	0	0	0	14	0	11	0	0	15	3	0	7	20	0	70	778
4:15 PM	0	0	0	0	0	6	0	18	0	0	8	4	0	11	17	0	64	771
4:20 PM	0	0	0	0	0	9	0	11	0	0	11	4	0	8	16	0	59	783
4:25 PM	0	0	0	0	0	9	0	11	0	0	19	5	0	10	20	0	74	777
4:30 PM	0	0	0	0	0	9	0	15	0	0	15	2	0	9	22	0	72	745
4:35 PM	0	0	0	0	0	12	0	12	0	0	15	1	0	12	20	0	72	730
4:40 PM	0	0	0	0	0	15	0	11	0	0	6	0	0	10	25	0	67	723
4:45 PM	0	0	0	0	0	9	0	11	0	0	14	3	0	6	12	0	55	725
4:50 PM	0	0	0	0	0	13	0	6	0	0	7	4	0	7	17	0	54	723
4:55 PM	0	0	0	0	0	9	0	8	0	0	16	8	0	7	18	0	66	731
5:00 PM	0	0	0	0	0	12	0	7	0	0	18	4	0	5	13	0	59	712
5:05 PM	0	0	0	0	0	9	0	14	0	0	17	3	0	7	16	0	66	
5:10 PM	0	0	0	0	0	9	0	12	0	0	16	2	0	11	13	0	63	
5:15 PM	0	0	0	0	0	9	0	13	0	0	15	10	0	9	20	0	76	
5:20 PM	0	0	0	0	0	8	0	11	0	0	16	1	0	8	9	0	53	
5:25 PM	0	0	0	0	0	8	0	13	0	0	3	1	0	8	9	0	42	
5:30 PM	0	0	0	0	0	8	0	14	0	0	14	2	0	8	11	0	57	
5:35 PM	0	0	0	0	0	14	0	12	0	0	14	2	0	10	13	0	65	
5:40 PM	0	0	0	0	0	6	0	17	0	0	10	0	0	14	22	0	69	
5:45 PM	0	0	0	0	0	7	0	10	0	0	14	4	0	6	12	0	53	
5:50 PM	0	0	0	0	0	7	0	12	0	0	20	1	0	6	16	0	62	
5:55 PM	0	0	0	0	0	9	0	18	0	0	7	2	0	5	6	0	47	
Count Total	0	0	0	0	0	227	0	288	0	0	326	72	0	202	387	0	1,502	
Peak Hour	0	0	0	0	0	121	0	135	0	0	162	40	0	105	227	0	790	

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	1	0	1	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	0	0	0	1	1	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	0	0	0	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	1	0	1	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	1	0	1	2	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	1	1	1	3	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	0	1	0	0	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	1	0	2	3	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	2	2	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	1	1	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	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	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	10	4	8	22	Count Total	0	0	0	0	0	Count Total	0	0	0	0	0
Peak Hour	0	6	3	4	13	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

Appendix B
Trip Generation Calculations

Query | Filter

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
310

LAND USE GROUP:
(300-399) Lodging

LAND USE :
310 - Hotel

LAND USE SUBCATEGORY:
All Sites

SETTING/LOCATION:
General Urban/Suburban

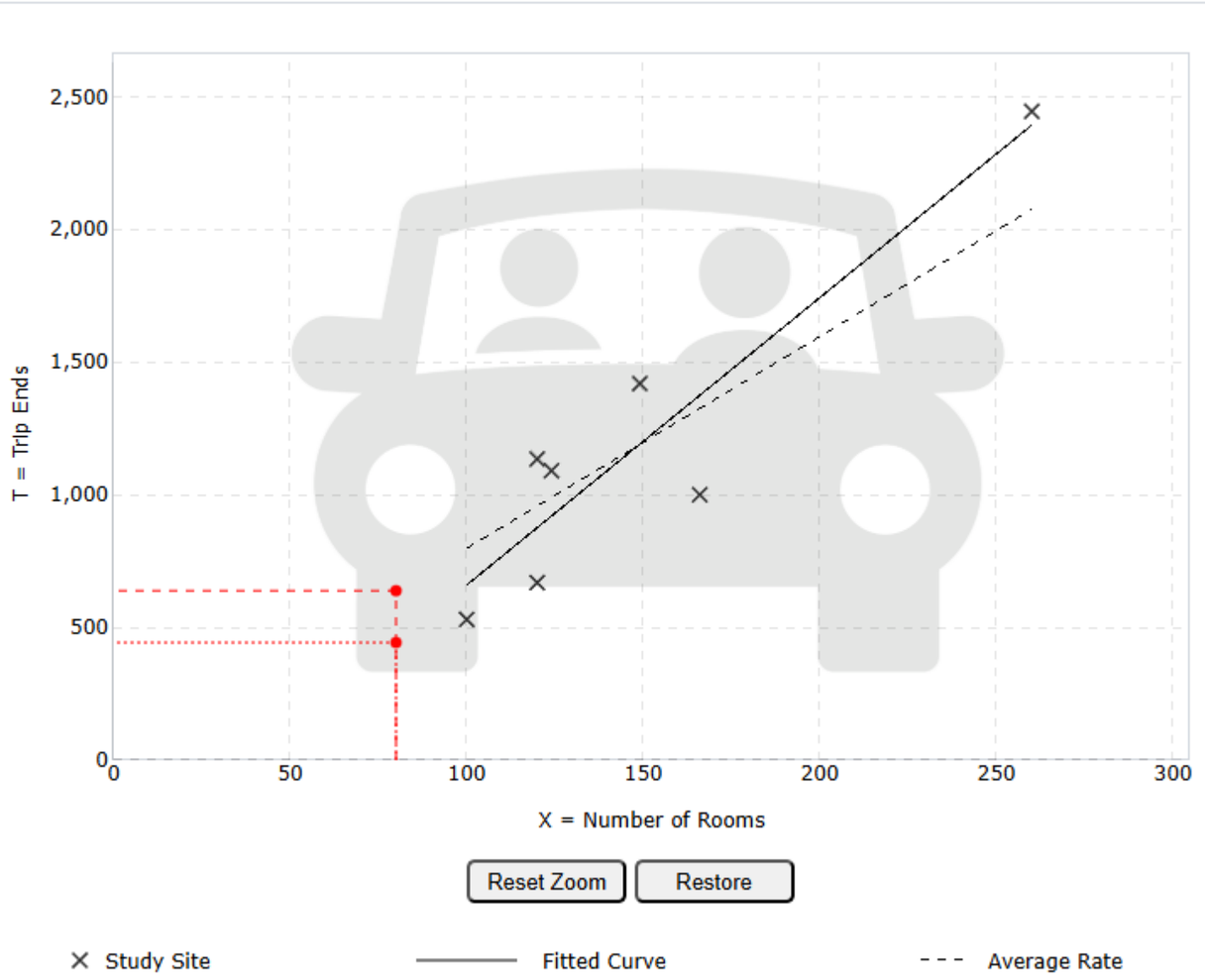
INDEPENDENT VARIABLE (IV):
Rooms

TIME PERIOD:
Weekday

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
80 Calculate

Data Plot and Equation



DATA STATISTICS

Land Use:
Hotel (310) Click for Description and Data Plots

Independent Variable:
Rooms

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
7

Avg. Num. of Rooms:
148

Average Rate:
7.99

Range of Rates:
5.31 - 9.53

Standard Deviation:
1.92

Fitted Curve Equation:
T = 10.84(X) - 423.51

R^2:
0.85

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 639 (Total), 320 (Entry), 319 (Exit)
Fitted Curve: 444 (Total), 222 (Entry), 222 (Exit)

Query | Filter

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
310

LAND USE GROUP:
(300-399) Lodging

LAND USE :
310 - Hotel

LAND USE SUBCATEGORY:
All Sites

SETTING/LOCATION:
General Urban/Suburban

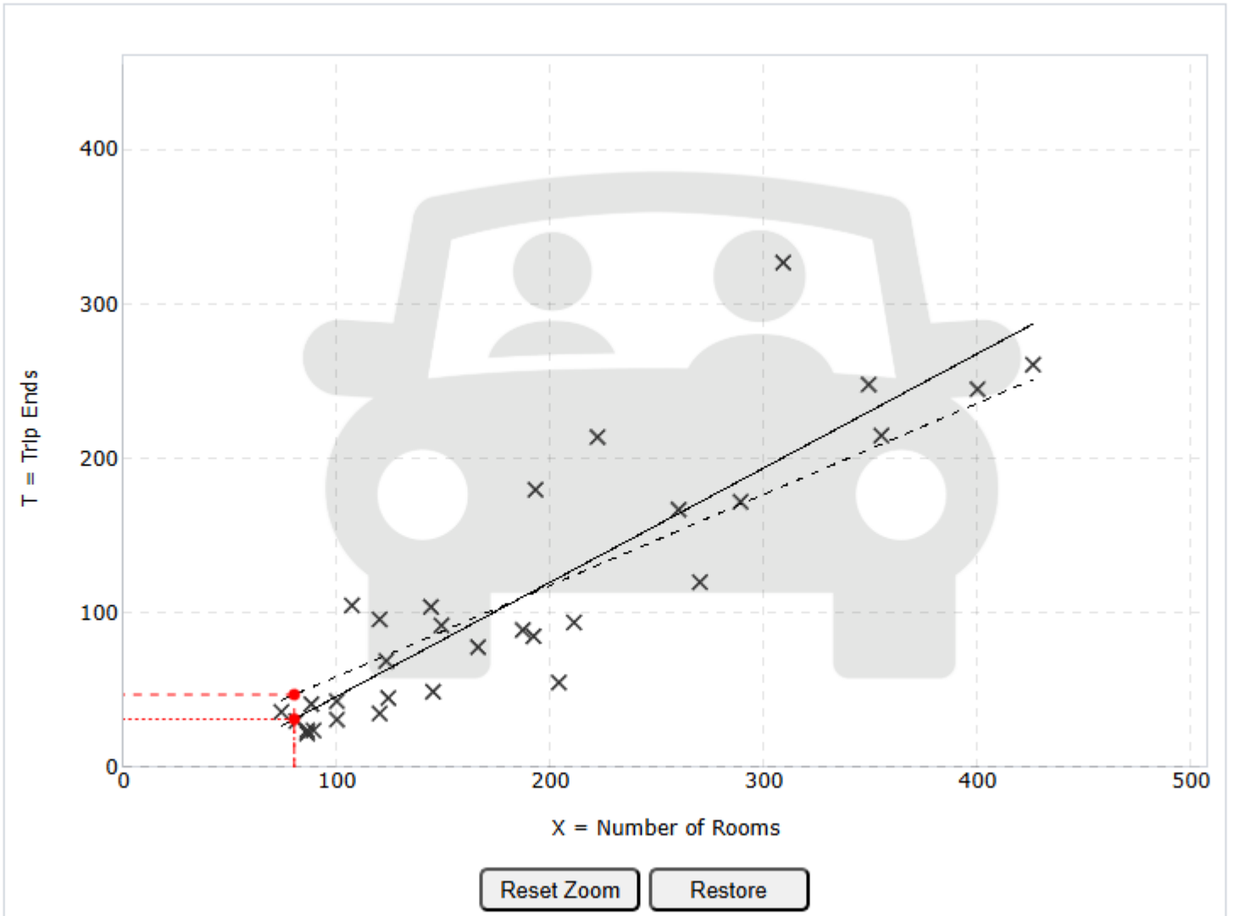
INDEPENDENT VARIABLE (IV):
Rooms

TIME PERIOD:
Weekday, Peak Hour of Adjacent Stre

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
80 Calculate

Data Plot and Equation



DATA STATISTICS

Land Use:
Hotel (310) Click for Description and Data Plots

Independent Variable:
Rooms

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
31

Avg. Num. of Rooms:
186

Average Rate:
0.59

Range of Rates:
0.26 - 1.06

Standard Deviation:
0.22

Fitted Curve Equation:
T = 0.74(X) - 27.89

R^2:
0.78

Directional Distribution:
51% entering, 49% exiting

Calculated Trip Ends:
Average Rate: 47 (Total), 24 (Entry), 23 (Exit)
Fitted Curve: 31 (Total), 16 (Entry), 15 (Exit)

Query | Filter

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
110

LAND USE GROUP:
(100-199) Industrial

LAND USE :
110 - General Light Industrial

LAND USE SUBCATEGORY:
All Sites

SETTING/LOCATION:
General Urban/Suburban

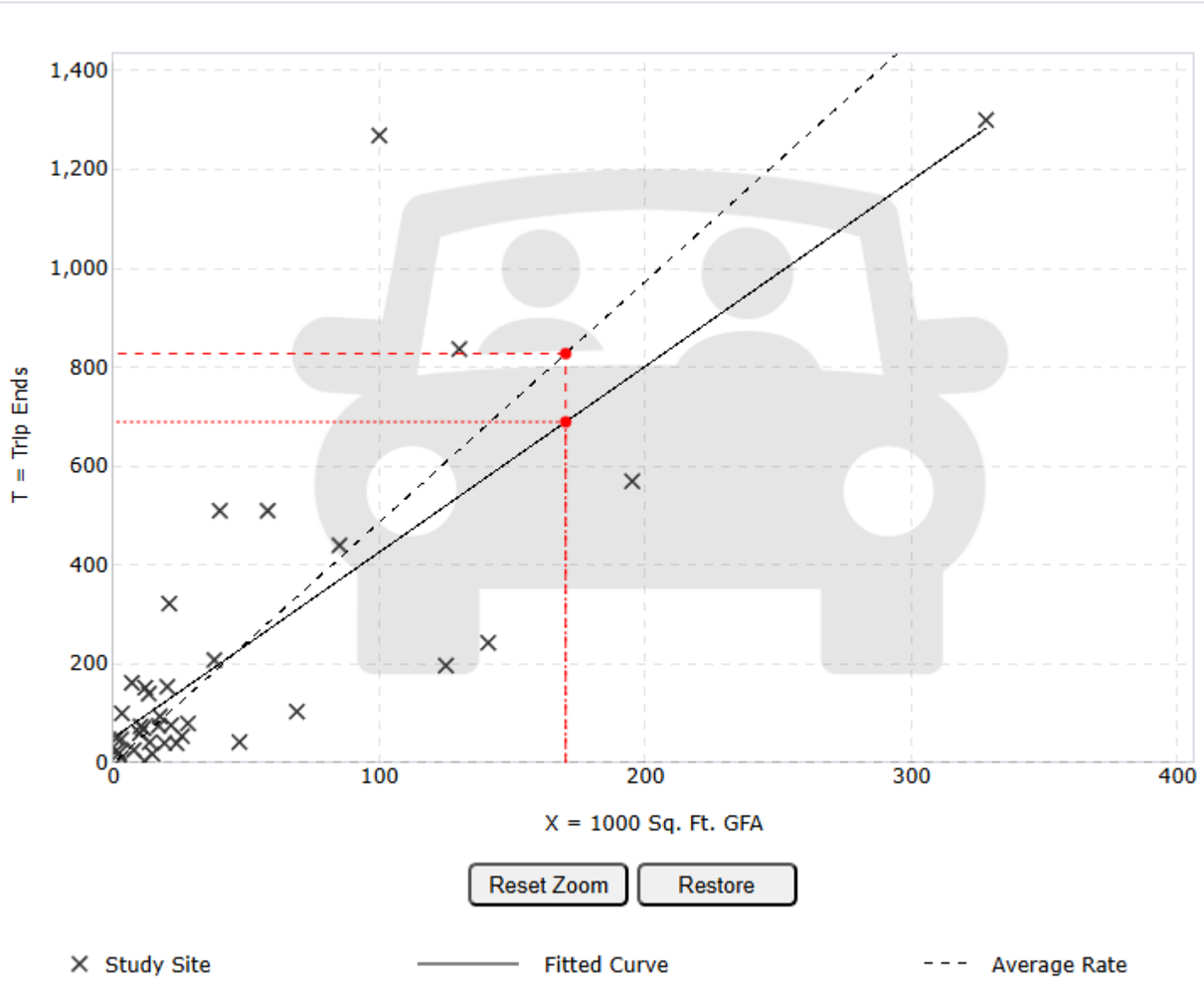
INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA

TIME PERIOD:
Weekday

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
170 Calculate

Data Plot and Equation



DATA STATISTICS

Land Use:
General Light Industrial (110) Click for Description and Data Plots

Independent Variable:
1000 Sq. Ft. GFA

Time Period:
Weekday

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
37

Avg. 1000 Sq. Ft. GFA:
45

Average Rate:
4.87

Range of Rates:
0.34 - 43.86

Standard Deviation:
4.08

Fitted Curve Equation:
T = 3.76(X) + 50.47

R^2:
0.61

Directional Distribution:
50% entering, 50% exiting

Calculated Trip Ends:
Average Rate: 828 (Total), 414 (Entry), 414 (Exit)
Fitted Curve: 690 (Total), 345 (Entry), 345 (Exit)

Query | Filter

DATA SOURCE:
Trip Generation Manual, 11th Ed

SEARCH BY LAND USE CODE:
110

LAND USE GROUP:
(100-199) Industrial

LAND USE :
110 - General Light Industrial

LAND USE SUBCATEGORY:
All Sites

SETTING/LOCATION:
General Urban/Suburban

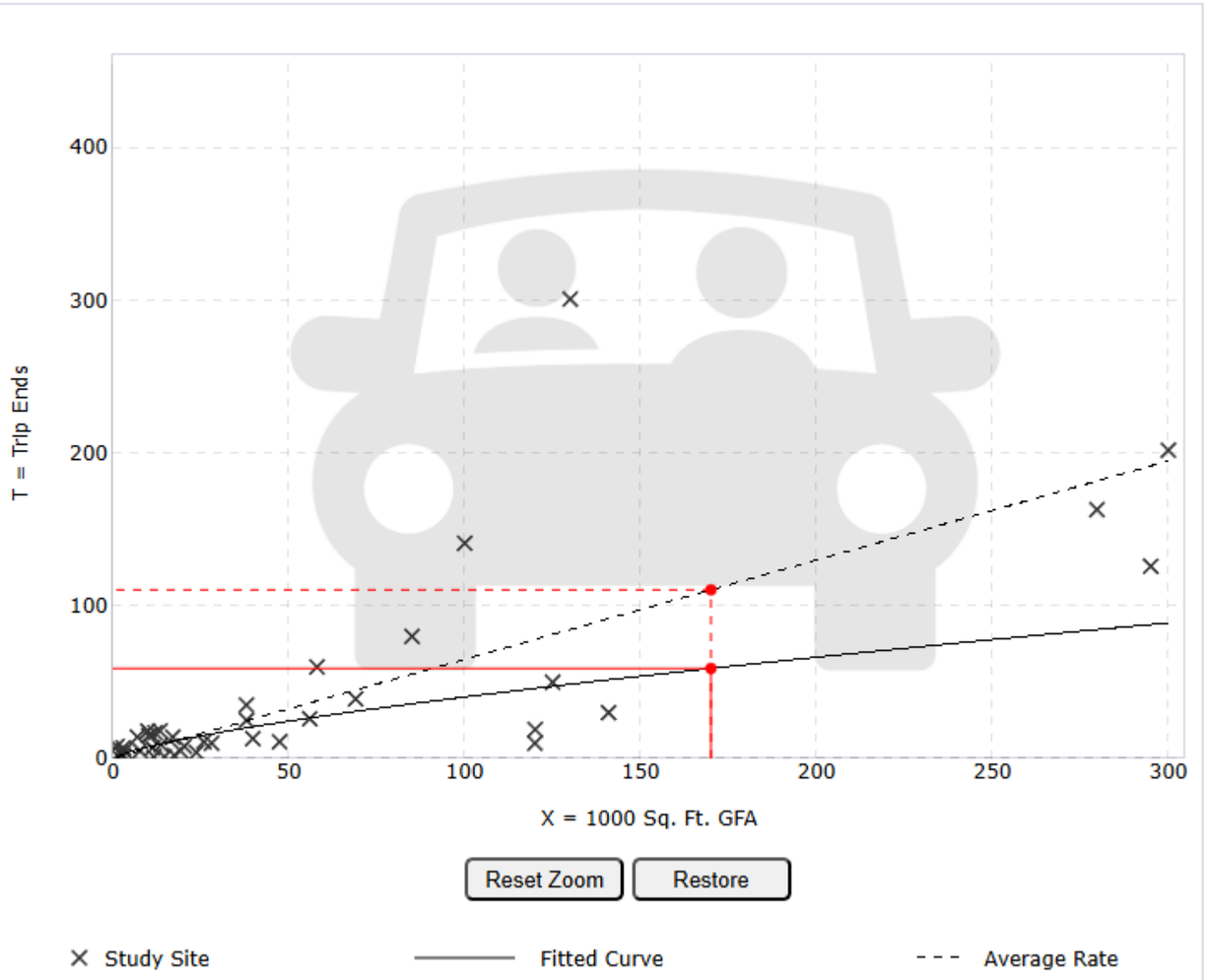
INDEPENDENT VARIABLE (IV):
1000 Sq. Ft. GFA

TIME PERIOD:
Weekday, Peak Hour of Adjacent Stre

TRIP TYPE:
Vehicle

ENTER IV VALUE TO CALCULATE TRIPS:
170 Calculate

Data Plot and Equation



DATA STATISTICS

Land Use:
General Light Industrial (110) Click for Description and Data Plots

Independent Variable:
1000 Sq. Ft. GFA

Time Period:
Weekday
Peak Hour of Adjacent Street Traffic
One Hour Between 4 and 6 p.m.

Setting/Location:
General Urban/Suburban

Trip Type:
Vehicle

Number of Studies:
40

Avg. 1000 Sq. Ft. GFA:
58

Average Rate:
0.65

Range of Rates:
0.07 - 7.02

Standard Deviation:
0.56

Fitted Curve Equation:
Ln(T) = 0.72 Ln(X) + 0.38

R^2:
0.55

Directional Distribution:
14% entering, 86% exiting

Calculated Trip Ends:
Average Rate: 111 (Total), 15 (Entry), 96 (Exit)
Fitted Curve: 59 (Total), 8 (Entry), 51 (Exit)

Appendix C
Level of Service Calculations

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	162	37	70	291	39	30
Future Vol, veh/h	162	37	70	291	39	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	220	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	3	2	3	2	3
Mvmt Flow	172	39	74	310	41	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	211	0	650	192
Stage 1	-	-	-	-	192	-
Stage 2	-	-	-	-	458	-
Critical Hdwy	-	-	4.12	-	6.42	6.23
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.327
Pot Cap-1 Maneuver	-	-	1360	-	434	847
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	637	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1360	-	411	847
Mov Cap-2 Maneuver	-	-	-	-	411	-
Stage 1	-	-	-	-	841	-
Stage 2	-	-	-	-	603	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	12.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	411	847	-	-	1360	-
HCM Lane V/C Ratio	0.101	0.038	-	-	0.055	-
HCM Control Delay (s)	14.7	9.4	-	-	7.8	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0.2	-

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	2	180	20	15	334	22	24	2	14	15	4	4
Future Vol, veh/h	2	180	20	15	334	22	24	2	14	15	4	4
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	150	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	7	2	2	2	2	2	2	2	2
Mvmt Flow	2	196	22	16	363	24	26	2	15	16	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	387	0	0	218	0	0	622	630	207	627	629	375
Stage 1	-	-	-	-	-	-	211	211	-	407	407	-
Stage 2	-	-	-	-	-	-	411	419	-	220	222	-
Critical Hdwy	4.12	-	-	4.17	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.263	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1171	-	-	1322	-	-	399	399	833	396	399	671
Stage 1	-	-	-	-	-	-	791	728	-	621	597	-
Stage 2	-	-	-	-	-	-	618	590	-	782	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1171	-	-	1322	-	-	389	393	833	383	393	671
Mov Cap-2 Maneuver	-	-	-	-	-	-	389	393	-	383	393	-
Stage 1	-	-	-	-	-	-	789	727	-	620	590	-
Stage 2	-	-	-	-	-	-	602	583	-	764	719	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	13.3	14.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	479	1171	-	-	1322	-	-	416
HCM Lane V/C Ratio	0.091	0.002	-	-	0.012	-	-	0.06
HCM Control Delay (s)	13.3	8.1	-	-	7.8	-	-	14.2
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	14	0	0	18
Future Vol, veh/h	0	0	14	0	0	18
Conflicting Peds, #/hr	1	1	0	1	1	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	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	19	0	0	25

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	46	21	0	0	20	0
Stage 1	20	-	-	-	-	-
Stage 2	26	-	-	-	-	-
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	964	1056	-	-	1596	-
Stage 1	1003	-	-	-	-	-
Stage 2	997	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	962	1054	-	-	1594	-
Mov Cap-2 Maneuver	962	-	-	-	-	-
Stage 1	1002	-	-	-	-	-
Stage 2	996	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1594	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	12	13	0	0	0
Future Vol, veh/h	0	12	13	0	0	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	57	57	57	57	57	57
Heavy Vehicles, %	2	8	8	2	2	2
Mvmt Flow	0	21	23	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	23	0	-	0	44	23
Stage 1	-	-	-	-	23	-
Stage 2	-	-	-	-	21	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1592	-	-	-	967	1054
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	1002	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1592	-	-	-	967	1054
Mov Cap-2 Maneuver	-	-	-	-	967	-
Stage 1	-	-	-	-	1000	-
Stage 2	-	-	-	-	1002	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1592	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	168	1	3	289	2	2	0	5	8	0	6
Future Vol, veh/h	9	168	1	3	289	2	2	0	5	8	0	6
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	90	-	-	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	11	3	2	2	2	2	2	2	2	2	2	17
Mvmt Flow	10	181	1	3	311	2	2	0	5	9	0	6

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	313	0	0	182	0	0	523	521	182	522	520	312
Stage 1	-	-	-	-	-	-	202	202	-	318	318	-
Stage 2	-	-	-	-	-	-	321	319	-	204	202	-
Critical Hdwy	4.21	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.37
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.299	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.453
Pot Cap-1 Maneuver	1198	-	-	1393	-	-	465	460	861	465	461	695
Stage 1	-	-	-	-	-	-	800	734	-	693	654	-
Stage 2	-	-	-	-	-	-	691	653	-	798	734	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1198	-	-	1393	-	-	457	455	861	458	456	695
Mov Cap-2 Maneuver	-	-	-	-	-	-	457	455	-	458	456	-
Stage 1	-	-	-	-	-	-	794	728	-	687	653	-
Stage 2	-	-	-	-	-	-	683	652	-	786	728	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	10.3	11.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	687	1198	-	-	1393	-	-	536
HCM Lane V/C Ratio	0.011	0.008	-	-	0.002	-	-	0.028
HCM Control Delay (s)	10.3	8	-	-	7.6	-	-	11.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	7.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	121	135	162	40	105	227
Future Vol, veh/h	121	135	162	40	105	227
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	-	-	-	190	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	4	2	2	2
Mvmt Flow	133	148	178	44	115	249

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	679	200	0	0	222	0
Stage 1	200	-	-	-	-	-
Stage 2	479	-	-	-	-	-
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	417	841	-	-	1347	-
Stage 1	834	-	-	-	-	-
Stage 2	623	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	382	841	-	-	1347	-
Mov Cap-2 Maneuver	382	-	-	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	570	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.9	0	2.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	536	1347	-
HCM Lane V/C Ratio	-	-	0.525	0.086	-
HCM Control Delay (s)	-	-	18.9	7.9	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	3	0.3	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	178	41	77	320	43	33
Future Vol, veh/h	178	41	77	320	43	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	220	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	3	2	3	2	3
Mvmt Flow	189	44	82	340	46	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	233	0	715	211
Stage 1	-	-	-	-	211	-
Stage 2	-	-	-	-	504	-
Critical Hdwy	-	-	4.12	-	6.42	6.23
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.327
Pot Cap-1 Maneuver	-	-	1335	-	397	827
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	607	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1335	-	373	827
Mov Cap-2 Maneuver	-	-	-	-	373	-
Stage 1	-	-	-	-	824	-
Stage 2	-	-	-	-	570	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	373	827	-	-	1335	-
HCM Lane V/C Ratio	0.123	0.042	-	-	0.061	-
HCM Control Delay (s)	16	9.5	-	-	7.9	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.2	-

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	2	198	22	17	367	24	26	2	15	17	4	4
Future Vol, veh/h	2	198	22	17	367	24	26	2	15	17	4	4
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	150	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	7	2	2	2	2	2	2	2	2
Mvmt Flow	2	215	24	18	399	26	28	2	16	18	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	425	0	0	239	0	0	683	692	227	688	691	412
Stage 1	-	-	-	-	-	-	231	231	-	448	448	-
Stage 2	-	-	-	-	-	-	452	461	-	240	243	-
Critical Hdwy	4.12	-	-	4.17	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.263	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1134	-	-	1299	-	-	363	367	812	360	368	640
Stage 1	-	-	-	-	-	-	772	713	-	590	573	-
Stage 2	-	-	-	-	-	-	587	565	-	763	705	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1134	-	-	1299	-	-	353	361	812	347	362	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	353	361	-	347	362	-
Stage 1	-	-	-	-	-	-	770	712	-	589	565	-
Stage 2	-	-	-	-	-	-	571	557	-	744	704	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	14.2	15.3
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	440	1134	-	-	1299	-	-	377
HCM Lane V/C Ratio	0.106	0.002	-	-	0.014	-	-	0.072
HCM Control Delay (s)	14.2	8.2	-	-	7.8	-	-	15.3
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.4	0	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	15	0	0	20
Future Vol, veh/h	0	0	15	0	0	20
Conflicting Peds, #/hr	1	1	0	1	1	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	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	21	0	0	27

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	50	23	0	0	22	0
Stage 1	22	-	-	-	-	-
Stage 2	28	-	-	-	-	-
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	959	1054	-	-	1593	-
Stage 1	1001	-	-	-	-	-
Stage 2	995	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	957	1052	-	-	1591	-
Mov Cap-2 Maneuver	957	-	-	-	-	-
Stage 1	1000	-	-	-	-	-
Stage 2	994	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1591	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	13	14	0	0	0
Future Vol, veh/h	0	13	14	0	0	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	57	57	57	57	57	57
Heavy Vehicles, %	2	8	8	2	2	2
Mvmt Flow	0	23	25	0	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	25	0	-	0	48	25
Stage 1	-	-	-	-	25	-
Stage 2	-	-	-	-	23	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1589	-	-	-	962	1051
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	1000	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1589	-	-	-	962	1051
Mov Cap-2 Maneuver	-	-	-	-	962	-
Stage 1	-	-	-	-	998	-
Stage 2	-	-	-	-	1000	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1589	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	185	1	3	318	2	2	0	6	9	0	7
Future Vol, veh/h	10	185	1	3	318	2	2	0	6	9	0	7
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	90	-	-	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	11	3	2	2	2	2	2	2	2	2	2	17
Mvmt Flow	11	199	1	3	342	2	2	0	6	10	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	344	0	0	200	0	0	575	572	200	574	571	343
Stage 1	-	-	-	-	-	-	222	222	-	349	349	-
Stage 2	-	-	-	-	-	-	353	350	-	225	222	-
Critical Hdwy	4.21	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.37
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.299	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.453
Pot Cap-1 Maneuver	1166	-	-	1372	-	-	429	430	841	430	431	667
Stage 1	-	-	-	-	-	-	780	720	-	667	633	-
Stage 2	-	-	-	-	-	-	664	633	-	778	720	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1166	-	-	1372	-	-	420	425	841	423	426	667
Mov Cap-2 Maneuver	-	-	-	-	-	-	420	425	-	423	426	-
Stage 1	-	-	-	-	-	-	773	714	-	661	632	-
Stage 2	-	-	-	-	-	-	655	632	-	765	714	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	10.4	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	672	1166	-	-	1372	-	-	504
HCM Lane V/C Ratio	0.013	0.009	-	-	0.002	-	-	0.034
HCM Control Delay (s)	10.4	8.1	-	-	7.6	-	-	12.4
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	8.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	133	149	178	44	116	250
Future Vol, veh/h	133	149	178	44	116	250
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	-	-	-	190	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	4	2	2	2
Mvmt Flow	145	162	193	48	126	272

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	741	217	0	0	241	0
Stage 1	217	-	-	-	-	-
Stage 2	524	-	-	-	-	-
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	384	823	-	-	1326	-
Stage 1	819	-	-	-	-	-
Stage 2	594	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	348	823	-	-	1326	-
Mov Cap-2 Maneuver	348	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	538	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.9	0	2.5
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	501	1326	-
HCM Lane V/C Ratio	-	-	0.612	0.095	-
HCM Control Delay (s)	-	-	22.9	8	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	4.1	0.3	-

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	178	53	77	320	76	33
Future Vol, veh/h	178	53	77	320	76	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	220	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	3	2	3	2	3
Mvmt Flow	189	56	82	340	81	35

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	245	0	721	217
Stage 1	-	-	-	-	217	-
Stage 2	-	-	-	-	504	-
Critical Hdwy	-	-	4.12	-	6.42	6.23
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.327
Pot Cap-1 Maneuver	-	-	1321	-	394	820
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	607	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1321	-	370	820
Mov Cap-2 Maneuver	-	-	-	-	370	-
Stage 1	-	-	-	-	819	-
Stage 2	-	-	-	-	569	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	370	820	-	-	1321	-
HCM Lane V/C Ratio	0.219	0.043	-	-	0.062	-
HCM Control Delay (s)	17.4	9.6	-	-	7.9	-
HCM Lane LOS	C	A	-	-	A	-
HCM 95th %tile Q(veh)	0.8	0.1	-	-	0.2	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	198	22	28	367	24	26	2	45	17	4	4
Future Vol, veh/h	2	198	22	28	367	24	26	2	45	17	4	4
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	150	-	-	250	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	7	2	2	2	2	2	2	2	2
Mvmt Flow	2	215	24	30	399	26	28	2	49	18	4	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	425	0	0	239	0	0	707	716	227	729	715	412
Stage 1	-	-	-	-	-	-	231	231	-	472	472	-
Stage 2	-	-	-	-	-	-	476	485	-	257	243	-
Critical Hdwy	4.12	-	-	4.17	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.263	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1134	-	-	1299	-	-	350	356	812	338	356	640
Stage 1	-	-	-	-	-	-	772	713	-	573	559	-
Stage 2	-	-	-	-	-	-	570	552	-	748	705	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1134	-	-	1299	-	-	338	347	812	310	347	640
Mov Cap-2 Maneuver	-	-	-	-	-	-	338	347	-	310	347	-
Stage 1	-	-	-	-	-	-	770	712	-	572	546	-
Stage 2	-	-	-	-	-	-	549	539	-	700	704	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.5	13	16.4
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	529	1134	-	-	1299	-	-	344
HCM Lane V/C Ratio	0.15	0.002	-	-	0.023	-	-	0.079
HCM Control Delay (s)	13	8.2	-	-	7.8	-	-	16.4
HCM Lane LOS	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.3

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	0	15	13	0	20
Future Vol, veh/h	36	0	15	13	0	20
Conflicting Peds, #/hr	1	1	0	1	1	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	73	73	73	73	73	73
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	49	0	21	18	0	27

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	59	32	0	0	40	0
Stage 1	31	-	-	-	-	-
Stage 2	28	-	-	-	-	-
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	948	1042	-	-	1570	-
Stage 1	992	-	-	-	-	-
Stage 2	995	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	946	1040	-	-	1569	-
Mov Cap-2 Maneuver	946	-	-	-	-	-
Stage 1	991	-	-	-	-	-
Stage 2	994	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	946	1569	-
HCM Lane V/C Ratio	-	-	0.052	-	-
HCM Control Delay (s)	-	-	9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	13	14	11	30	0
Future Vol, veh/h	0	13	14	11	30	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	57	57	57	57	57	57
Heavy Vehicles, %	2	8	8	2	2	2
Mvmt Flow	0	23	25	19	53	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	44	0	-	0	58	35
Stage 1	-	-	-	-	35	-
Stage 2	-	-	-	-	23	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1564	-	-	-	949	1038
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	1000	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1564	-	-	-	949	1038
Mov Cap-2 Maneuver	-	-	-	-	949	-
Stage 1	-	-	-	-	987	-
Stage 2	-	-	-	-	1000	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1564	-	-	-	949
HCM Lane V/C Ratio	-	-	-	-	0.055
HCM Control Delay (s)	0	-	-	-	9
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	197	1	3	351	2	2	0	6	9	0	7
Future Vol, veh/h	10	197	1	3	351	2	2	0	6	9	0	7
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	90	-	-	90	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	11	3	2	2	2	2	2	2	2	2	2	17
Mvmt Flow	11	212	1	3	377	2	2	0	6	10	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	379	0	0	213	0	0	623	620	213	622	619	378
Stage 1	-	-	-	-	-	-	235	235	-	384	384	-
Stage 2	-	-	-	-	-	-	388	385	-	238	235	-
Critical Hdwy	4.21	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.37
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.299	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.453
Pot Cap-1 Maneuver	1132	-	-	1357	-	-	398	404	827	399	404	637
Stage 1	-	-	-	-	-	-	768	710	-	639	611	-
Stage 2	-	-	-	-	-	-	636	611	-	765	710	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1132	-	-	1357	-	-	390	399	827	392	399	637
Mov Cap-2 Maneuver	-	-	-	-	-	-	390	399	-	392	399	-
Stage 1	-	-	-	-	-	-	760	703	-	633	610	-
Stage 2	-	-	-	-	-	-	627	610	-	752	703	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.1	10.6	12.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	646	1132	-	-	1357	-	-	471
HCM Lane V/C Ratio	0.013	0.009	-	-	0.002	-	-	0.037
HCM Control Delay (s)	10.6	8.2	-	-	7.7	-	-	12.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	9.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	138	149	195	57	116	256
Future Vol, veh/h	138	149	195	57	116	256
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	-	-	-	190	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	4	2	2	2
Mvmt Flow	152	164	214	63	127	281

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	781	246	0	0	277	0
Stage 1	246	-	-	-	-	-
Stage 2	535	-	-	-	-	-
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	363	793	-	-	1286	-
Stage 1	795	-	-	-	-	-
Stage 2	587	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	327	793	-	-	1286	-
Mov Cap-2 Maneuver	327	-	-	-	-	-
Stage 1	795	-	-	-	-	-
Stage 2	529	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.8	0	2.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	471	1286	-
HCM Lane V/C Ratio	-	-	0.67	0.099	-
HCM Control Delay (s)	-	-	26.8	8.1	-
HCM Lane LOS	-	-	D	A	-
HCM 95th %tile Q(veh)	-	-	4.9	0.3	-

Appendix D

Collision Rate Calculations and Data

OFFICER REPORTED CRASHES THAT OCCURRED ON ALL ROADS IN SKAMANIA COUNTY

Intersection #2 - Dam Access Road / SR-14

1/1/2020 - 12/31/2024

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	MILEPOST	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PED	# BIKES	JUNCTION RELATIONSHIP	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)
State Route	Skamania	North Bonneville	014	38.54	38.27	No	EB61518	08/14/2021	18:42	Unknown	0	0	1	0	0	At Intersection and Not Related	Street Light Pole or Base		East	West			Under Influence of Alcohol	
State Route	Skamania	North Bonneville	014	38.54	38.27	No	ED51653	02/27/2023	18:38	Possible Injury	1	0	1	0	0	At Intersection and Related	Earth Bank or Ledge		East	North			Improper Turn/Merge	
State Route	Skamania	North Bonneville	014	38.54	38.27	No	ED87300	08/07/2023	17:58	No Apparent Injury	0	0	2	0	0	At Intersection and Related	From same direction - one right turn - one straight	Going Straight Ahead	East	North	East	West	Improper Turn/Merge	None
State Route	Skamania	North Bonneville	014	38.55	38.28	No	EC24201	02/23/2022	18:31	No Apparent Injury	0	0	1	0	0	At Intersection and Related	Roadway Ditch		West	North			Improper Turn/Merge	

OFFICER REPORTED CRASHES THAT OCCURRED ON ALL ROADS IN SKAMANIA COUNTY

Intersection #6 - SR-14 / Bridge of the Gods

1/1/2020 - 12/31/2024

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	MILEPOST	SR ONLY ACCUMULATIVE ROUTE MILEPOST (ARM)	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# MVE	# PEDS	# BIKES	JUNCTION RELATIONSHIP	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM	VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)
State Route	Skamania		014	41.55	41.46	No	EF44400	12/09/2024	14:25	No Apparent Injury	0	0	2	0	0	At Intersection and Related	From opposite direction - one left turn - one straight	Going Straight Ahead	North	East	South	North	Did Not Grant RW to Vehicle	None
State Route	Skamania		014	41.55	41.46	No	EA93352	12/27/2020	12:01	Suspected Minor Injury	2	0	2	0	0	At Intersection and Related	From opposite direction - one left turn - one straight	Going Straight Ahead	East	South	West	East	Did Not Grant RW to Vehicle	None
State Route	Skamania		014	41.55	41.46	No	EE78157	05/10/2024	17:33	No Apparent Injury	0	0	2	0	0	At Intersection and Related	From opposite direction - one left turn - one straight	Going Straight Ahead	Northeast	Southeast	Southwest	Northeast	Did Not Grant RW to Vehicle	None
State Route	Skamania		014	41.55	41.46	No	ED87023	08/05/2023	10:05	Possible Injury	1	0	2	0	0	At Intersection and Related	Same direction – both turning right – both moving – rear end	Stopped at Signal or Stop Sign	South	Northeast	Vehicle Stopped	Vehicle Stopped	Disregard Traffic Sign and Signals	None
State Route	Skamania		014	41.55	41.46	No	EE83131	05/31/2024	15:47	No Apparent Injury	0	0	2	0	0	At Intersection and Related	Entering at angle	Going Straight Ahead	Southeast	Southwest	Southwest	Northeast	Did Not Grant RW to Vehicle	None
State Route	Skamania		014	41.55	41.46	No	3843881	10/07/2020	11:00	Suspected Minor Injury	2	0	2	0	0	At Intersection and Related	From same direction - both going straight - one stopped - rear-end	Stopped for Traffic	West	East		Vehicle Stopped	Improper U-Turn	

Collision Rate Calculations at
2. Dam Access Road / SR-14

Intersection:	Dam Access Road / SR-14	Date	7/28/2025

Ra =	System Wide Average collision rate =	0.6
K =	Statistical Constant =	1.645
Average Daily cars passing Through intersection		
	ADT	230
		3710
		400
		2020
M=	Millions of Vehicles for a five year period =	**11.607**

Rc=	Critical Rate =	**0.93**

Collision Rate

Number of collisions =	4
Number of years =	5
Collision Rate =	**0.34**

Rc= Ra+(K*Ra/M)^.5)-1/(2*M)

ADT = 2025 PM Count X 10
PM Peak Hour= Approx. 10% ADT

Collision Rate Calculations at
6. SR-14 / Bridge of the Gods

Intersection:	Bombing Range Road / Keene Road	Date	7/28/2025

Ra =	System Wide Average collision rate =	0.6
K =	Statistical Constant =	1.645

Average Daily cars passing Through intersection

	ADT	3320
		0
		2560
		2020
M=	Millions of Vehicles for a five year period =	**14.4175**

Rc=	Critical Rate =	**0.90**

Collision Rate

Number of collisions =	6
Number of years =	5
Collision Rate =	**0.42**

Rc= Ra+(K*Ra/M)^.5)-1/(2*M)

ADT = 2025 PM Count X 10
PM Peak Hour= Approx. 10% ADT

Appendix E

Transportation Improvement Project

Project Detail Sheet
Project #2 – SR 14 Deceleration Lane Construction

Vicinity Map

Project Summary

Priority:	D
Length:	0.07 miles (375 feet)
Status:	Awaiting funding and/or site development
Purpose:	Enable safe access to Dam Access Road;
Impact:	Economic development
Timeline:	Concurrent with property development
Description:	Construct a deceleration lane for exit from State Route 14 on to the Dam Access Road. Lane length will be as recommended by Washington Department of Transportation. Ancillary improvements include Highway signage, striping
Partners:	Washington Department of Transportation, Port of Skamania County, Corps of Engineers, Bonneville Power Administration
Notes:	None

Cost Estimates

Engineering:	$160,000
Real Property:	$0 (Existing ROW)
Construction:	$640,000

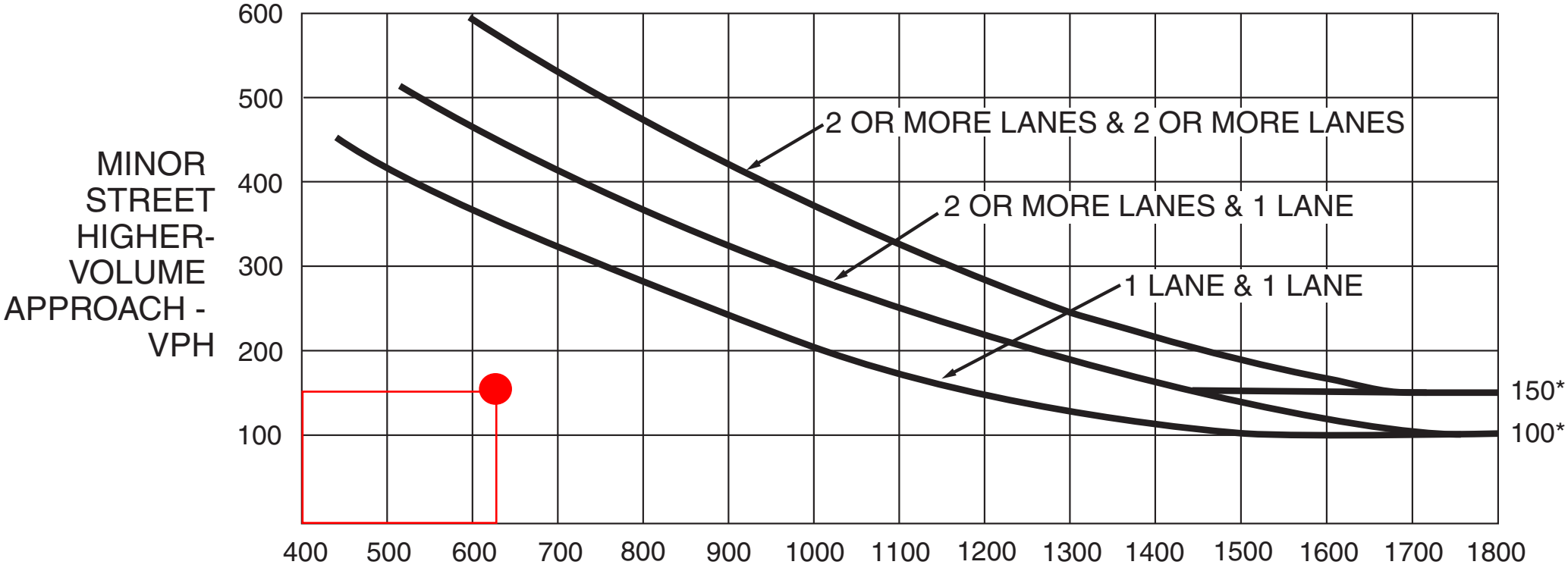
Funding

Loan(s):	$
County Road Fund:	$
TIF:	$
Federal Grant(s):	$
Other / Partners	
Port of Skamania:	$
Corps of Engineers:	$
Bonneville Power:	$
Projected Funds:	$0
Unfunded:	$800,000

Appendix F
Peak Hour Signal Warrant

Intersection 6 - SR-14 / Bridge of the Gods

Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.