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6/18/2024

Oak Village Commercial Lot 1

Transportation Impact Study

Woodland, Washington

Date:
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Executive Summary

1. The proposed Oak Village Commercial Lot 1 project will include the development of a lumber storage facility consisting of outdoor storage areas and two covered storage buildings, totaling approximately 52,480 square feet in gross building floor area, on three properties in Woodland, Washington. Approximately 3,000 square feet of the proposed building area will be allocated for retail activities, predominately the sale of lumber to larger scale builders/construction companies, while the remaining 48,439 square feet of building space will be dedicated to the storage of lumber. Access to the site will be provided via two driveways along Green Mountain Road, near the north and south edges of the site, and two future private access road connections to Old Pacific Highway.

2. The trip generation calculations show that the proposed project is projected to generate 13 AM peak hour trips, 16 PM peak hour trips, and 134 average weekday trips.

3. Based on the most recent five years of available crash data, no significant trends or crash patterns were identified at the intersection of Old Pacific Highway at Green Mountain Road that are indicative of safety concerns. Therefore, no crash-related mitigation is necessary or recommended as part of the proposed development.

4. Adequate sight distances are available at all proposed/future site access locations to allow for safe operation along Old Pacific Highway and Green Mountain Road. No sight distance related mitigation is necessary or recommended.

5. Left-turn lane warrants are met under 2024 existing conditions at the intersection of Old Pacific Highway at Green Mountain Road for the southeast-bound approach. Although left-turn lane warrants are met for this intersection approach, installation of the dedicated left-turn lane as part of the Oak Village Commercial Lot 1 project is not recommended given no crashes reported at the intersection per the crash data analysis could have been mitigated by the installation of the turn lane, the study intersection is projected to operate acceptably without the turn lane installed, and installation of the turn lane would be would be disproportionate to the impacts created by the proposed development.

   No other turn lanes are projected to be warranted at the other study intersections under any analysis scenario. Therefore, no new left-turn lanes are necessary or recommended as part of the proposed development.

6. Traffic signal warrants are not projected to be met at the unsignalized intersection of Old Pacific Highway at Green Mountain Road under year 2026 conditions, regardless of whether or not the proposed development is constructed. Therefore, no new traffic signals are necessary or recommended as part of the proposed development application.

7. All study intersections are currently operating acceptably per City of Woodland standards and are projected to continue operating acceptably through the 2026 buildout year of the site. Accordingly, no operational mitigation is necessary or recommended at the study intersections.

Project Description

Introduction

The proposed Oak Village Commercial Lot 1 project will include the development of a lumber storage facility consisting of outdoor storage areas and two covered storage buildings, totaling approximately 52,480 square feet in gross building floor area, on three properties in Woodland, Washington. Approximately 3,000 square feet of the proposed building area will be allocated for retail activities, predominately the sale of lumber to larger scale builders/construction companies, while the remaining 48,439 square feet of building space will be dedicated to the storage of lumber. Access to the site will be provided via two driveways along Green Mountain Road, near the north and south edges of the site, and two future private access road connections to Old Pacific Highway.

Based on correspondence with City of Woodland staff, the report conducts safety and capacity/level of service analyses at the following intersections:

1. Old Pacific Highway at Green Mountain Road
2. South Site Access at Green Mountain Road
3. North Site Access at Green Mountain Road

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

Location Description

Project Site Description

The project site is located northeast of Old Pacific Highway and west of Green Mountain Road in Woodland, Washington and consists of three properties (assessor parcel 508620100 and portions of parcels 508610100 and 508650100) which encompass an approximate total of 8.03 acres. Located within a developing area of the City, the site is surrounded by a mix of small commercial, industrial, religious, and recreational land uses, as well as undeveloped land in all directions.

The proposed facility will be predominately developed on parcel 508620100, while the other lots will accommodate future road connections to Old Pacific Highway. Access to the site will be provided via two driveways along Green Mountain Road, near the north and south edges of the site, and two future access road connections to Old Pacific Highway. For the two accesses along Green Mountain Road, it is assumed the north access is located roughly opposite the existing driveway which serves parcel 601500102 (7004 Green Mountain Road) while the south access is located opposite the driveway which serves parcel 601540100 (Lewis River Little League baseball fields).

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

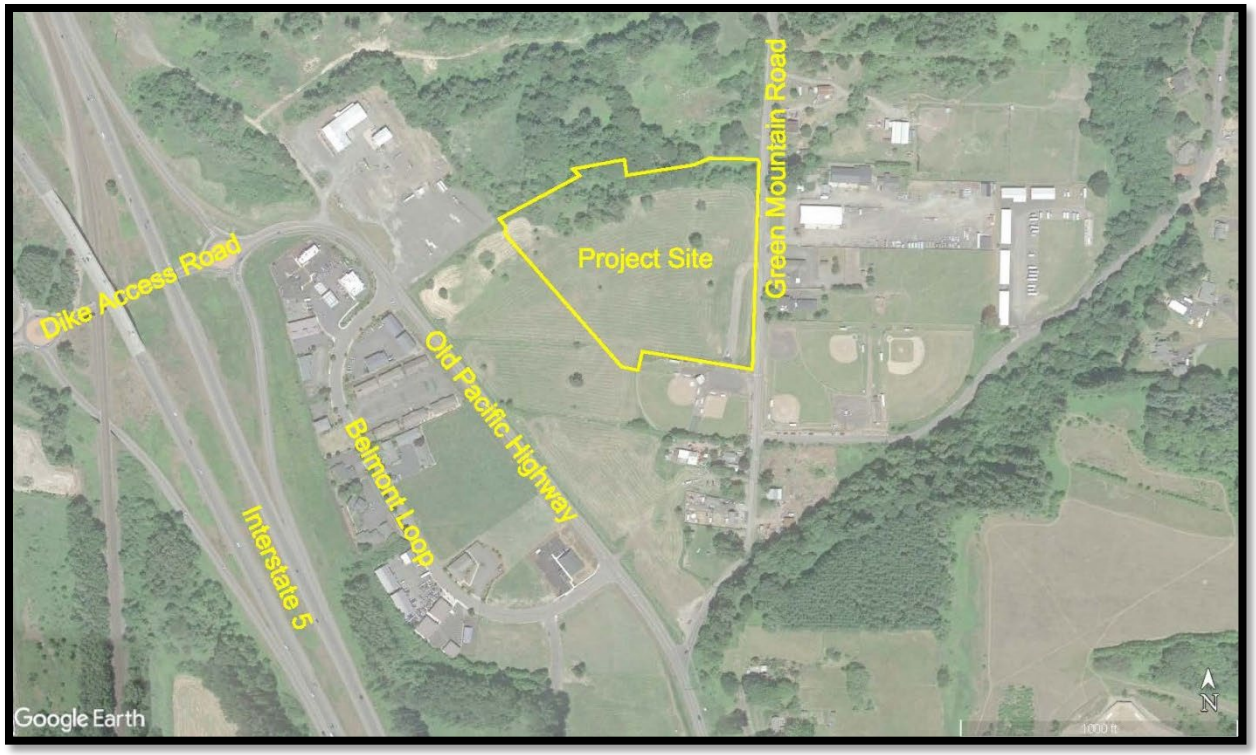


Figure 1: Aerial Photo of Site Vicinity (Image from Google Earth)

Vicinity Streets

The proposed development is located near/adjacent to two roadways: Green Mountain Road and Old Pacific Highway. Table 1 provides a description of these vicinity roadways.

Table 1: Vicinity Roadway Descriptions

Street Name	Jurisdiction	Functional Classification	Speed (MPH)	On-Street Parking	Curbs & Sidewalks	Bicycle Lanes
Old Pacific Highway	City of Woodland	Minor Arterial	35	Not Permitted	Partial Both Sides	Partial Both Sides
Green Mountain Road	City of Woodland	Major Collector	35	Not Permitted	None	None

Table Notes: Functional classification based on WSDOT Functional Classification Map.

Statutory speed based on Washington State Code Section RCW 46.61.400.

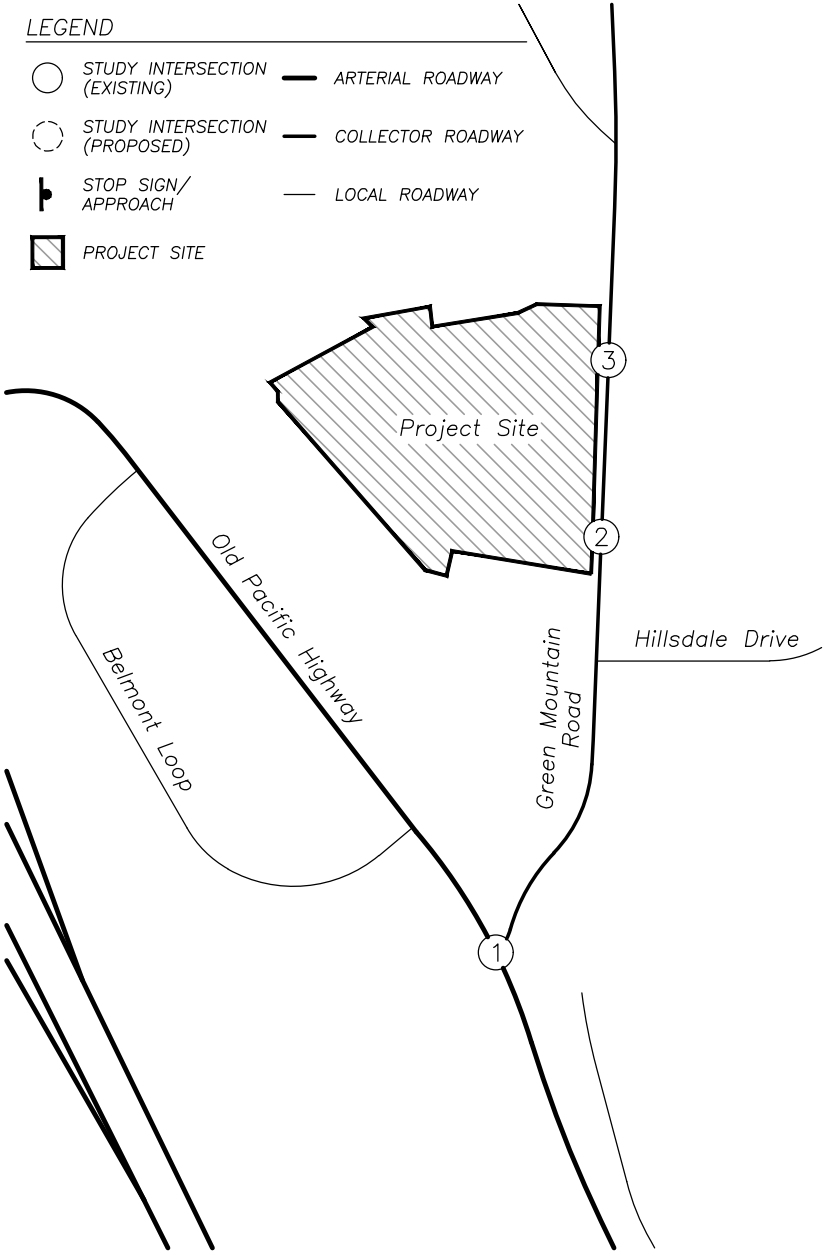
Study Intersections

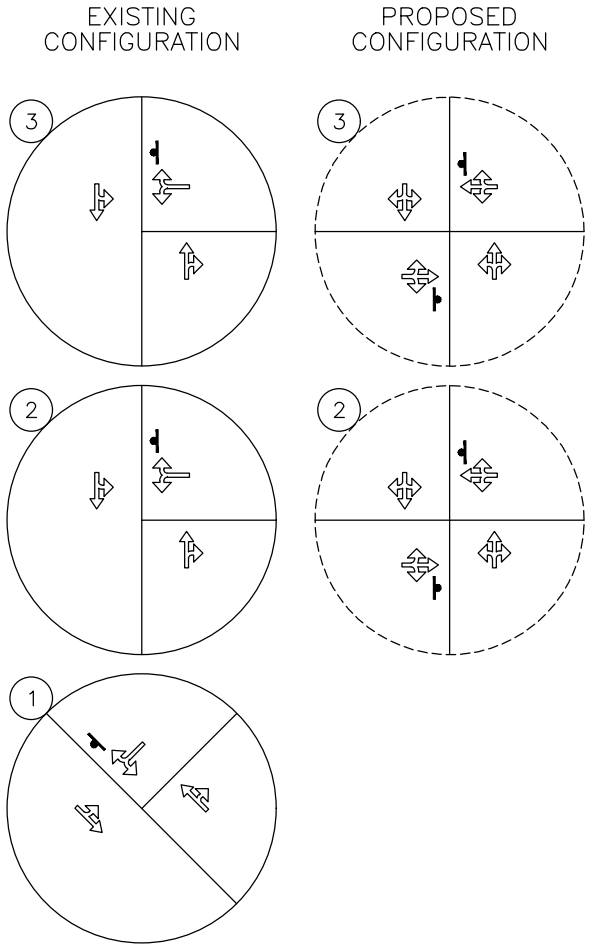
Based on correspondence with City of Woodland staff, analysis of the intersection of Old Pacific Highway at Green Mountain Road and the two proposed site access intersections along Green Mountain Road is required. A summarized description of these study intersections is provided in Table 2.

Table 2: Study Intersection Descriptions

Number	Intersection	Geometry	Traffic Control	Phasing/Stopped Approaches
1	Old Pacific Highway at Green Mountain Road	Three-Legged	Stop-Controlled	Stop-Controlled SWB Approach
2	South Site Access at Green Mountain Road	Four-Legged	Stop-Controlled	Stop-Controlled EB/WB Approaches
3	North Site Access at Green Mountain Road	Four-Legged	Stop-Controlled	Stop-Controlled EB/WB Approaches

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





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VICINITY MAP

Figure 2

Oak Village Commercial Lot 1

6/18/2024

Site Trips

Trip Generation

The proposal will include the construction of a lumber storage facility consisting of outdoor storage areas and two covered storage buildings, totaling approximately 52,480 square feet in gross building floor area. Approximately 3,000 square feet of the proposed building area will be allocated for retail activities, predominately the sale of lumber to larger scale builders/construction companies, while the remaining 48,439 square feet of building space will be dedicated to the storage of lumber.

To estimate the number of trips that will be generated by the proposed development, trip rates from the *Trip Generation Manual*[1] were used. Data from the following land use codes were used to estimate the proposed development's trip generation based on the square footage of the gross building floor area.

- 150 – *Warehousing*
- 812 – *Building Materials and Lumber Store*

According to the *Trip Generation Manual*, the land use descriptions of the aforementioned ITE codes are as follows:

> **150 – Warehousing**
> *A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas. High-cube transload and short-term storage warehouse (Land Use 154), highcube fulfillment center warehouse (Land Use 155), high-cube parcel hub warehouse (Land Use 156), and high-cube cold storage warehouse (Land Use 157) are related uses.*
>
> **812 – Building Materials and Lumber Store**
> *A building materials and lumber store is a free-standing building that sells hardware, building materials, and lumber. The lumber may be stored in the main building, yard, or storage shed. Hardware/paint store (Land Use 816) and home improvement superstore (Land Use 862) are related uses.*

Although the proposed development appears match the description for land use code 812, the strict use of data from code 812 for the entire development is not recommended for the following reasons:

- The proposed development will predominately sell lumber to large scale builders/construction companies, whereas individual homeowners will make up a smaller proportion of the facility's clientele. As such, the proposed development is expected to generate a fewer number of trips than, for example, a Parr Lumber retail business which is more reflective of the trip generation characteristics of ITE code 812.
- ITE code 812 may not be limited to trip generation data of solely lumber retailers. Since general building material sellers are considered under this land use code, the trip generation characteristics of ITE code 812 may also be reflective of stone suppliers, drywall/framing/insulation suppliers, etc.

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

- According to the data statistics of code 812, the average size of a typical *Building Materials and Lumber Store* facility ranges from approximately 16,000 to 18,000 square feet. The proposed development will include the construction of 52,480 square feet of building space, which is significantly larger than the average building size reflected in land use code 812.
- Assuming data from code 812 is solely used to estimate trip generation of the proposed development, the project site would generate 83 AM peak hour trips, 118 PM peak hour trips, and 895 daily trips. These trip estimates are well beyond what the proposed development is expected to generate during a typical peak hour or weekday.

Based on coordination with City of Woodland staff and their transportation engineering consultant, the 3,000 square foot retail portion of the proposed use would be represented by data from land use code 812 while the remaining 48,439 square feet of space would be reflective of data from land use code 150, noting the proposed use is a lumber yard that will store large volumes of lumber only.

The trip generation calculations show that the proposed project is projected to generate 13 AM peak hour trips, 16 PM peak hour trips, and 134 average weekday trips. The trip generation estimates are summarized in Table 3. Detailed trip generation calculations are included as an attachment to this memorandum.

Table 3: Trip Generation Summary

ITE Code		Size/Rate	AM Peak Hour			PM Peak Hour			Weekday Total
			Enter	Exit	Total	Enter	Exit	Total	
Warehousing	150	48,439 SF	6	2	8	3	6	9	83
Building Materials and Lumber Store	812	3,000 SF	3	2	5	3	4	7	51
Total Trips			**9**	**4**	**13**	**6**	**10**	**16**	**134**

Trip Distribution

The trip distribution of the proposed development was referenced from the nearby *Oak Village Apartments Transportation Impact Study* (TIS), dated August 19, 2021. The in-process Oak Village Apartments is located on parcel 508630100 just north of the project site. Given the close proximity of the in-process development to the project site, it's expected the trip distribution characteristics of the proposed development will similarly match those of the Oak Village Apartments.

The following trip distribution is projected:

- Approximately 75% of site trips will travel to/from the northwest along Old Pacific Highway, northwest of Green Mountain Road.
- Approximately 25% of site trips will travel to/from the southeast along Old Pacific Highway, southeast of Green Mountain Road.

The trip distribution and assignment for the site trips generated during the AM and PM peak hours are shown in Figure 3 and Figure 4, respectively.

Traffic Volumes

Existing Conditions

Traffic counts were conducted at the intersection of Old Pacific Highway at Green Mountain Road on Wednesday, May 8, 2024, from 7:00 AM to 9:00 AM and from 4:00 PM to 6:00 PM. Data was used from the intersection's AM and PM peak hours, which occurred between 8:00 AM – 9:00 AM and 4:35 PM – 5:35 PM.

To estimate existing year traffic volumes at the site access intersections, the following were conducted:

- Minor-street traffic volumes on the east legs of the site access intersection locations were estimated as follows:
    - North Site Access at Green Mountain Road, located roughly opposite the existing south driveway which serves parcels 601500101, 102 and 103:
        - The three properties are developed with a single-family detached house and approximately 27,400 square feet of industrial use building space. Trip generation for these uses was estimated using data from land use codes 110, *General Light Industrial*, and 210, *Single-Family Detached Housing*, from the *Trip Generation Manual*.
        - Although the three properties are served by two driveways, to maintain a conservative evaluation of intersection operation all trips are assumed to travel through the existing south driveway. All trips generated by these existing uses were assumed to travel to/from the south along Green Mountain Road.
    - South Site Access at Green Mountain Road, located opposite the driveway which serves parcel 601540100:
        - The property is developed with three baseball fields. Trip generation for these fields was estimated using data from land use code 488, *Soccer Complex*, from the *Trip Generation Manual*. Although the *Trip Generation Manual* does not have a dedicated land use code for recreational baseball fields, both a soccer field and baseball field are expected to generate a similar number of trips (i.e., both are used by two similar sized teams of players with similar expected spectator turnout).
        - To maintain a conservative evaluation of intersection operation all trips are assumed to travel through the existing driveway located opposite of the proposed site access rather than via Hillsdale Drive. All trips generated by the baseball fields were assumed to travel to/from the south along Green Mountain Road.
- Major-street volumes were balanced with those recorded at the intersection of Old Pacific Highway at Green Mountain Road.

The trip generation estimates of these existing uses are included in the appendix.

2026 Background Conditions

Volume Growth

To provide an analysis of the impact of the proposed development on the nearby transportation facilities, an estimate of future traffic volumes is required. In order to approximate the future year 2026 traffic volumes at the study intersections, a compounded growth rate of two percent per year for an assumed buildout condition of two years was applied to the measured existing traffic volumes.

In-Process Data

In addition to the traffic volume growth described above, there are two in-process developments that are currently approved/proposed for construction within the site vicinity that are expected to impact nearby study intersections. These in-process developments include the following:

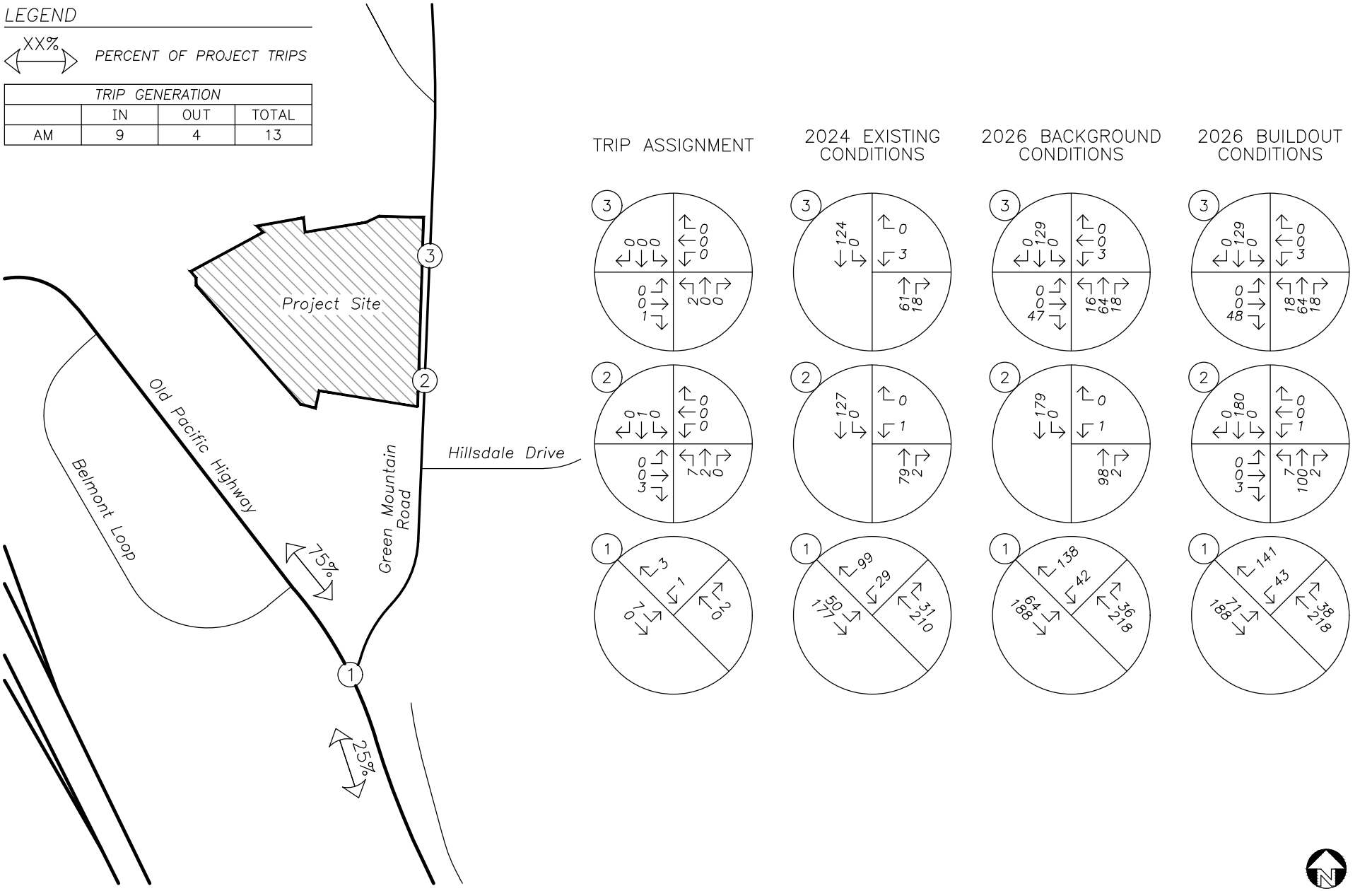
1. Woodland Creek Subdivision
2. Oak Village Apartments

The in-process developments are not currently/fully contributing trips to the transportation system but may potentially be by the assumed 2026 buildout year of the site. Additional trips corresponding to each in-process development were added to the existing year traffic volumes in addition to the two years of traffic growth at each of the applicable study intersections. To maintain a conservative analysis of operation at the study intersections, all in-process developments were assumed to be constructed by year 2026, and all in-process trips generated by the Oak Village Apartments were assumed to solely utilize the planned north site access to travel between the apartments and Green Mountain Road. In-process development data is included in the technical appendix.

2026 Buildout Conditions

Peak hour trips calculated to be generated by the proposed development, as described earlier within the *Site Trips* section, were added to the projected year 2026 background traffic volumes to obtain the expected 2026 site buildout volumes.

Figure 3 and Figure 4 show the year 2024 existing, 2026 background, and 2026 buildout traffic volumes at the study intersections during the AM and PM peak hours.



TRAFFIC VOLUMES

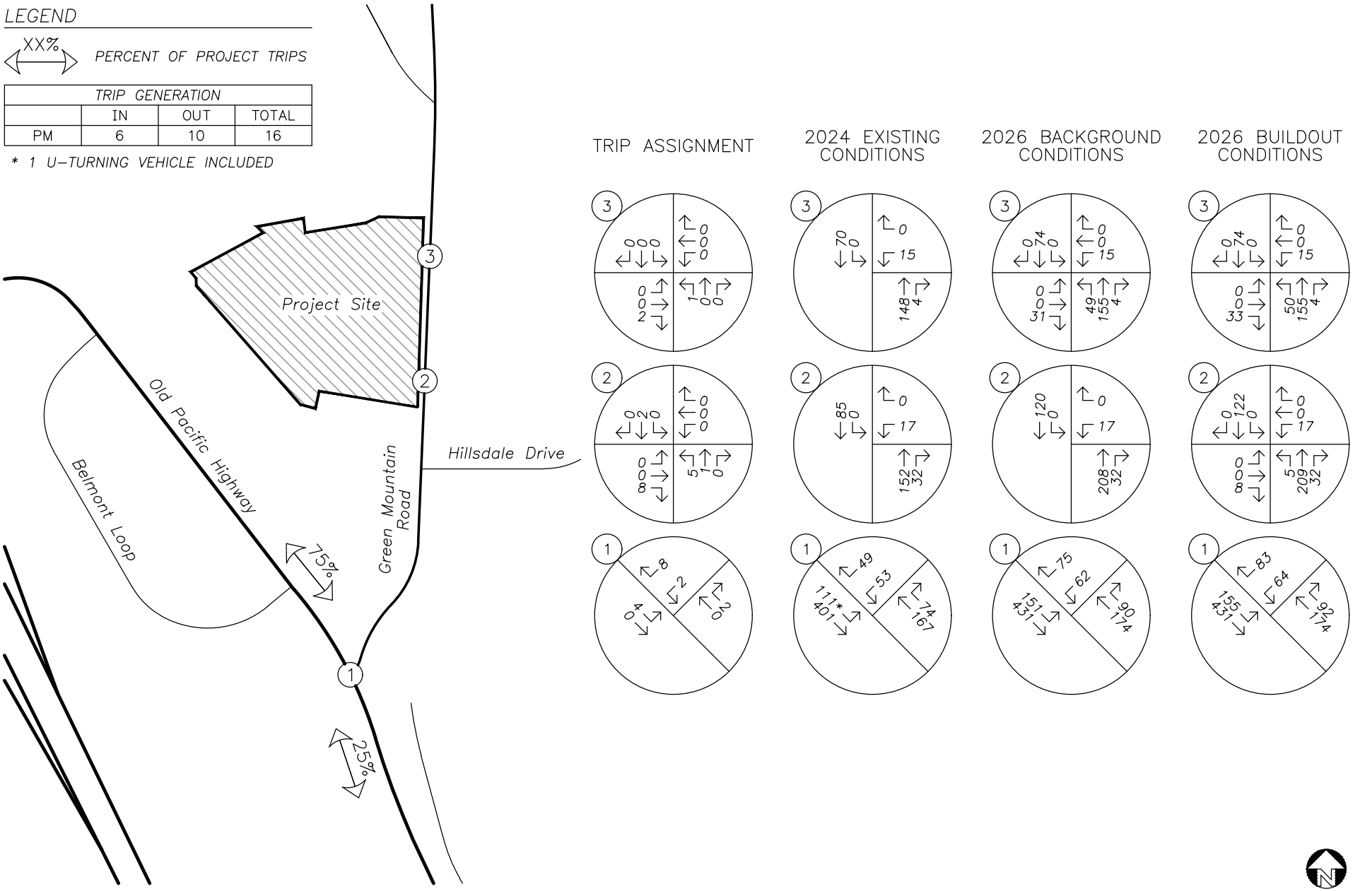
Proposed Development Plan - Site Trips

AM Peak Hour

Figure 3

Oak Village Commercial Lot 1

6/18/2024



TRAFFIC VOLUMES

Proposed Development Plan - Site Trips

PM Peak Hour

Figure 4

Oak Village Commercial Lot 1

6/18/2024

Safety Analysis

Crash History Review

Using data obtained from the Washington Department of Transportation (WSDOT) Crash Data and Reporting Branch, a review of the most recent available five years of crash history (January 2019 to December 2023) at the intersection of Old Pacific Highway at Green Mountain Road was performed. The crash data was evaluated based on the number of crashes, the type of collisions, the severity of the collisions, and the resulting crash rate for the intersection.

Crash rates provide the ability to compare safety risks at different intersections by accounting for both the number of crashes that have occurred during the study period and the number of vehicles that typically travel through the intersection. Crash rates were calculated using the common assumption that traffic counted during the PM peak hour represents approximately 10 percent of the annual average daily traffic (AADT) at the intersection. Crash rates in excess of 1.00 crashes per million entering vehicles (CMEV) may be indicative of design deficiencies and therefore require a need for further investigation and possible mitigation.

With regard to crash severity, WSDOT classifies crashes in the following categories:

- *No Apparent Injury* (NA);
- *Possible Injury* (P);
- *Suspected Minor Injury* (SM);
- *Suspected Serious Injury* (SS); and
- *Fatality* or *Fatal Injury*.

Table 4 provides a summary of crash types while Table 5 summarizes crash severities and rates for each of the applicable study intersections. Crash data is included in the technical appendix to this report.

Table 4: Crash Type Summary

No.	Intersection	Crash Type							Total
		Rear End	Turn	Angle	Fixed Object	Side swipe	Ped/ Bike	Other	
1	Old Pacific Highway at Green Mountain Road	0	1	0	0	1	0	0	2

Table 5: Crash Severity and Rate Summary

No.	Intersection	Crash Severity						Total Crashes	AADT	Crash Rate
		NA	P	SM	SS	Fatal	Unknown			
1	Old Pacific Highway at Green Mountain Road	2	0	0	0	0	0	2	8,550	0.13

Table Notes: ***BOLDED*** *text indicates a crash rate in excess of 1.00 CMEV.*

Based on a review of available crash data, no significant trends or crash patterns were identified at the intersection of Old Pacific Highway at Green Mountain Road that are indicative of safety concerns. Therefore, no crash-related mitigation is necessary or recommended as part of the proposed development.

Sight Distance Evaluation

Methodology

Sight distances were evaluated at the following site access locations:

- North Access Driveway along Green Mountain Road
- South Access Driveway along Green Mountain Road
- Northwest Future Private Street Alignment along Old Pacific Highway
- Southeast Future Private Street Alignment along Old Pacific Highway.

Sight distance was measured and evaluated in accordance with standards established in *A Policy on Geometric Design of Highways and Streets*[2]. According to AASHTO, the driver's eye is assumed to be approximately 15 feet (specifically 14.5 feet) from the near edge of the nearest travel lane (or traveled way) of the intersecting street and at a height of 3.5 feet above the minor-street approach pavement. The vehicle driver's eye-height along the major-street approach is assumed to be 3.5 feet above the cross-street pavement.

Per the AASHTO manual, intersection sight distance is an operation measure intended to provide sufficient line of sight along the major-street so that a driver could turn from the minor-street approach without impeding traffic flow. Conversely, stopping sight distance is considered the minimum requirement to ensure safe operation of an intersection. This is the distance that allows an oncoming driver to see a hazard on the roadway, react, and come to a complete stop, if necessary, to avoid a collision.

Based on posted speeds of 35 mph along Green Mountain Road and Old Pacific Highway, the following minimum intersection sight distance (per City of Woodland Standard Drawing *T-28 Intersection Sight Distance Requirements*) and stopping sight distance are applicable to the side street approaches on each road:

- Green Mountain Road (35 mph)
    - Minimum Intersection Sight Distance: 350 feet for left-turns (viewing south) and right-turns (viewing north).
    - Minimum Stopping Sight Distance: 250 feet.
- Old Pacific Highway (35 mph)
    - Minimum Intersection Sight Distance: 350 feet for left-turns (viewing northwest) and right-turns (viewing southeast).
    - Minimum Stopping Sight Distance: 250 feet.

[2] American Association of State Highway and Transportation Officials (AASHTO), *A Policy on Geometric Design of Highways and Streets*, 6th Edition, 2011.

Proposed Accesses along Green Mountain Road

The proposed development will include the construction of two access driveways along Green Mountain Road, each located near the north and south edges of the site frontage with the roadway. At both locations sight distances were measured to be in excess of 400 feet to the north and south of each driveway. No sight distance related mitigation is necessary or recommended at these access locations.

Private Accesses along Old Pacific Highway

The future planned private accesses along Old Pacific Highway will be located approximately 300 feet northwest of the Belmont Loop (southeast segment) at Old Pacific Highway intersection and opposite/slightly offset to the southeast of the Belmont Loop (northwest segment) at Old Pacific Highway intersection. At the northwest access point, sight distances were measured to be in excess of 350 feet to the northwest and in excess of 400 feet to the southeast. At the southwest location, sight distances were measured to be in excess of 400 feet to the northwest and southeast. No sight distance related mitigation is necessary or recommended at these access locations.

Note that at both locations, due to topography sight distances were measured along the edge of the roadway rather than at the standard 15 feet behind the travel lane. However, no vertical/horizontal obstructions were noted that would limit sight distances to less than 350 feet if measured at the standard 15 feet (provided the minor-street approaches' elevation/grade approximately matches the major-street elevation).

Analysis Summary

Based on the sight distance analysis, adequate sight distances are available at all proposed/future site access locations to allow for safe operation along Old Pacific Highway and Green Mountain Road. No sight distance related mitigation is necessary or recommended.

Warrant Analysis

Left-turn lane and preliminary traffic signal warrants were examined for the intersection of Old Pacific Highway at Green Mountain Road and the site access intersections.

Left-Turn Lane Warrants

A left-turn refuge lane is primarily a safety consideration for the major-street, removing left-turning vehicles from the through traffic stream. The left-turn lane warrants used were developed from the *National Cooperative Highway Research Project's* (NCHRP) *Report 457*. Turn lane warrants were evaluated based on the number of advancing and opposing vehicles as well as the number of turning vehicles, the travel speed, and the number of through lanes.

Based on the analysis, left-turn lane warrants are met under 2024 existing conditions at the intersection of Old Pacific Highway at Green Mountain Road for the southeast-bound approach. Although left-turn lane warrants are met for this intersection approach, installation of the dedicated left-turn lane as part of the Oak Village Commercial Lot 1 project is not recommended for the following reasons:

- There were two reported crashes at the intersection during the analysis period which involved the following:
    - A southbound motorcyclist sideswiped another vehicle stopped at the intersection.
    - The driver of a southwest-bound right-turning vehicle failed to yield right-of-way to a northwest-bound vehicle.

  In the context of the turn lane warrants, a left-turn lane is intended to prevent potential rear-end collisions in the applicable approach's direction of travel. As such, there were no crashes reported at the intersection which could have been mitigated by the installation of the turn lane.
- As described in the *Operational Analysis* section, the study intersection is projected to operate acceptably per City of Woodland standards without the turn lane installed.
- Turn lane warrants are met under existing traffic conditions without impacts from the proposed development. Since this is an existing issue not of the applicant's making, requiring the Oak Village Commercial Lot 1 project to install mitigation at an intersection that neither has a capacity or safety issue (per the crash history analysis) would be disproportionate to the impacts created by the proposed development.

No other turn lanes are projected to be warranted at the other study intersections under any analysis scenario.

Preliminary Traffic Signal Warrants

Preliminary traffic signal warrants were examined for the unsignalized study intersection of Old Pacific Highway at Green Mountain Road to determine whether the installation of a new traffic signal will be warranted at the intersection by the 2026 future year. Based on the preliminary analysis following a review of Warrant 1 in the *Manual on Uniform Traffic Control Devices*, or MUTCD, traffic signal warrants are not projected to be met at the unsignalized study intersection under year 2026 conditions, regardless of whether or not the proposed development is constructed. Therefore, no new traffic signals are necessary or recommended as part of the proposed development application.

Operational Analysis

Intersection Capacity Analysis

A capacity and delay analysis were conducted for each of the study intersections per the unsignalized intersection analysis methodologies in the *Highway Capacity Manual* (HCM)[3]. Intersections are generally evaluated based on the average control delay experienced by vehicles and are assigned a grade according to their operation. The level of service (LOS) of an intersection can range from LOS A, which indicates very little or no delay experienced by vehicles, to LOS F, which indicates a high degree of congestion and delay. The volume-to-capacity (v/c) ratio is a measure that compares the traffic volumes (demand) against the available capacity of an intersection.

Performance Standards

According to the City of Woodland's *Transportation Infrastructure Strategic Plan, Appendix A.1*, intersections along state highways, major/minor arterials, or within the City's Urban Growth Area are required to operate at LOS D.

Delay & Capacity Analysis

The LOS, delay, and v/c results of the capacity analysis are shown in Table 6 for the AM and PM peak hours. Detailed calculations as well as tables showing the relationship between delay and LOS are included in the appendix to this report.

[3] Transportation Research Board, *Highway Capacity Manual 7th Edition*, 2022.

Table 6: Intersection Capacity Analysis Summary

Analysis Scenario	AM Peak Hour			PM Peak Hour		
	LOS	Delay (s)	v/c	LOS	Delay (s)	v/c
1. Old Pacific Highway at Green Mountain Road						
2024 Existing Conditions	B	13	0.25	C	16	0.25
2026 Background Conditions	B	14	0.37	C	20	0.38
2026 Buildout Conditions	B	15	0.38	C	21	0.40
2. South Site Access at Green Mountain Road						
2024 Existing Conditions	A	10	<0.01	B	10	0.02
2026 Background Conditions	B	11	<0.01	B	11	0.03
2026 Buildout Conditions	B	11	<0.01	B	11	0.03
3. North Site Access at Green Mountain Road						
2024 Existing Conditions	A	10	<0.01	A	10	0.02
2026 Background Conditions	B	11	0.07	B	12	0.03
2026 Buildout Conditions	B	11	0.07	B	12	0.04

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

Based on the results of the operational analysis, all study intersections are currently operating acceptably per City of Woodland standards and are projected to continue operating acceptably through the 2026 buildout year of the site. Accordingly, no operational mitigation is necessary or recommended at the study intersections.

Conclusions

Based on the most recent five years of available crash data, no significant trends or crash patterns were identified at the intersection of Old Pacific Highway at Green Mountain Road that are indicative of safety concerns. Therefore, no crash-related mitigation is necessary or recommended as part of the proposed development.

Adequate sight distances are available at all proposed/future site access locations to allow for safe operation along Old Pacific Highway and Green Mountain Road. No sight distance related mitigation is necessary or recommended.

Left-turn lane warrants are met under 2024 existing conditions at the intersection of Old Pacific Highway at Green Mountain Road for the southeast-bound approach. Although left-turn lane warrants are met for this intersection approach, installation of the dedicated left-turn lane as part of the Oak Village Commercial Lot 1 project is not recommended given no crashes reported at the intersection per the crash data analysis could have been mitigated by the installation of the turn lane, the study intersection is projected to operate acceptably without the turn lane installed, and installation of the turn lane would be would be disproportionate to the impacts created by the proposed development.

No other turn lanes are projected to be warranted at the other study intersections under any analysis scenario. Therefore, no new left-turn lanes are necessary or recommended as part of the proposed development.

Traffic signal warrants are not projected to be met at the unsignalized intersection of Old Pacific Highway at Green Mountain Road under year 2026 conditions, regardless of whether or not the proposed development is constructed. Therefore, no new traffic signals are necessary or recommended as part of the proposed development application.

All study intersections are currently operating acceptably per City of Woodland standards and are projected to continue operating acceptably through the 2026 buildout year of the site. Accordingly, no operational mitigation is necessary or recommended at the study intersections.

Appendix A – Site Plan

Site Plan

LDR-8.5 ZONE
LOW DENSITY RESIDENTIAL

TAX LOT 60149

TAX LOT 601500101

TAX LOT 601500102

TAX LOT 60155

TAX LOT 60156

TAX LOT 6015003

TAX LOT 6015401C0

746.8' FRONTAGE IMPROVEMENTS

EXISTING 34' WIDE DRIVEWAY

25.0' EXISTING HALF ROW

EXISTING 50' WIDE DRIVEWAY

31.0' PROPOSED HALF ROW

5.00' SIDEWALK

17.4' BUILDING SETBACK

EXISTING 38' WIDE DRIVEWAY

3.5' LANDSCAPE STRIP

15.5' BUILDING SETBACK

PEDESTRIAN PLAZA ACCESS POINT

BUSINESS IDENTIFICATION SIGN

LDR-8.5 ZONE
LOW DENSITY RESIDENTIAL

GREEN MOUNTAIN ROAD
(PUBLIC) (ASPHALT)

56.00' ROW

CENTERLINE

PROPOSED 44' WIDE ACCESS POINT

SLOPES IN EXCESS OF 15%

PROPOSED BUILDING 1
HEIGHT=29.25'
FLOOR AREA=39,579 SF

199.5'

198.9'

PROPOSED 30' WIDE ACCESS POINT

2 HANDICAP ACCESSABLE PARKING

OVERHEAD POWER, TYP.

POWER POLE, TYP.

TAX LOT 508560100

TAX LOT 508720100

TAX LOT 508710100

TAX LOT 508700100

LDR-8.5 ZONE
LOW DENSITY RESIDENTIAL

BURRIS CREEK

S54°46'40"W 32.5

TAX LOT 508630100

ZONE BOUNDARY

FENCE

LOADING AREA

20'x9' PARKING SPACE, TYP.

TAX LOT 6015401C0

TAX LOT 508690100

TAX LOT 508680100

C-2 ZONE
HIGHWAY COMMERCIAL

PROPOSED BUILDING 3
HEIGHT=19
FLOOR AREA = 4,800 SF

LOT 1
8.3 ACRES
(360,334 SF)
(TAX LOT 508620100)

LOADING AREA

LOADING AREA

LOADING AREA

FENCE

N77°51'35"W 16.3

N77°51'39"W 4.8

N13°52'43"E 35.0

MDR ZONE
MED UM DENSITY RESIDENT AL

30.00' PRIVATE ACCESS, UTILITIES & MAINTENANCE EASEMENT

20.00' BUILDING SETBACK

LOT 2
3.5 ACRES
(152,433 SF)
(TAX LOT 5086131C0)

LOT 4
2.4 ACRES
(104,339 SF)
(TAX LOT 508680100)

N78°03'34"W 25.3

PROPOSED BUILDING 2
HEIGHT=25.25'
FLOOR AREA = 11,860 SF

242.6

SOLID WASTE AND RECYCLING CENTER

SLOPES IN EXCESS OF 15%

PRIVATE ACCESS, UTILITIES & MAINTENANCE EASEMENT

PROPOSED 30' WIDE ACCESS POINT

BELMONT LOOP

EXISTING FIRE HYDRANT

STORM DETENTION POND

FENCE

S43°27'28"E 17.7

SLOPES IN EXCESS OF 15%

TAX LOT 508610101

C-2 ZONE
HIGHWAY COMMERCIAL

LOT 3
8.3 ACRES
(360,435 SF)
(TAX LOT 508650100)

WETLAND BOUNDARY

N09°59'46"E 34.4

OLD PACIFIC HIGHWAY
(PUBLIC) (ASPHALT)

350' HALF ROW

C-2 ZONE
HIGHWAY COMMERCIAL

C-2 ZONE
HIGHWAY COMMERCIAL

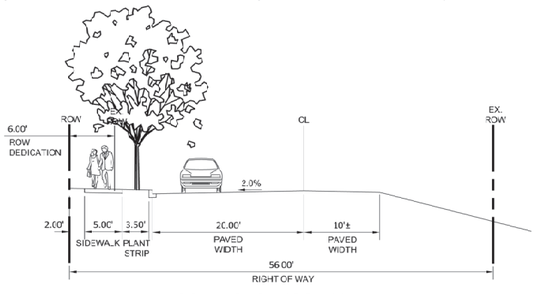
TAX LOT 508580100

30.0' PRIVATE ACCESS, UTILITIES & MAINTENANCE EASEMENT

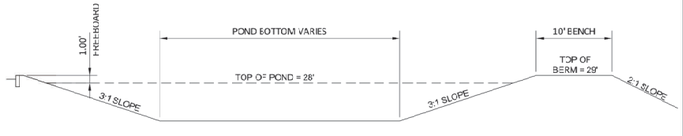
PROPOSED 20' WIDE ACCESS POINT

C-2 ZONE
HIGHWAY COMMERCIAL

BELMONT LOOP



A-A URBAN COLLECTOR (CC-1307)
1"=10'



B-B STOMWATER POND
1"=10'

NOTES:

- NO EXISTING BUILDINGS ONSITE
- SEE NARRATIVE FOR REQUIRED PARKING CALCULATION
- NO WATER WELLS LOCATED ONSITE
- NO AGRICULTURE DRAINAGE T LES LOCATED ONSITE
- NO 100 YEAR FLOODWAYS LOCATED ONSITE
- NO SEPTIC TANKS OR DRAINFIELDS LOCATED ONSITE
- NO AREAS OF POTENTIAL SLOPE INSTABILITY LOCATED ONSITE

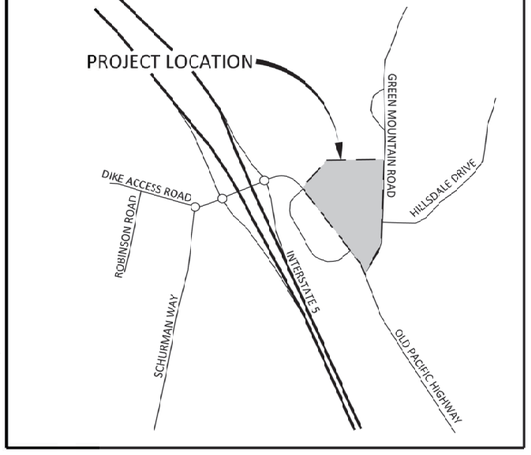
PARKING

PARKING TYPE	PROVIDED
STANDARD	58
COMPACT	0
HANDICAP	2
TOTAL	60

LAND USE LEGEND

SYMBOL	DESCRIPTION	AREA (SQUARE FEET)	AREA (ACRES)	% OF SITE
	BUILDING FOOTPRINT	62,887 SF	1.44 AC	6.4%
	PUBLIC STREET - ROW	14,644 SF	0.34 AC	1.5%
	IMPERVICUS PAVING	233,179 SF	5.35 AC	23.9%
	SIDEWALKS	3,164 SF	0.07 AC	0.3%
	PARKING	10,680 SF	0.25 AC	1.1%
	LANDSCAPE	63,090 SF	1.45 AC	6.5%
	UNDEVELOPED LAND	589,825 SF	13.54 AC	60.3%
TOTAL SITE		977,470 SF	22.44 AC	100.0%

VICINITY MAP:



PREPARED BY:
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APPLICANT & PROPERTY OWNER:
41ST AVENUE LLC
P.O. Box 570
WOODLAND, WA 98674

PRELIMINARY

REV.	DATE	DESCRIPTION

PRELIMINARY SITE PLAN

PACIFIC HIGHWAY COMMERCIAL
WOODLAND, WASHINGTON

PROJECT NO.: JCL002
DESIGN BY: BPT
REVIEWED BY: LKS
DATE: 03/08/2023

SHEET

05

SCALE: 1" = 80
SHEET SIZE: 22x34

0 80 160

P:\JCL0C2-NW 41st Ave Woodland\5 Planning\Drawings\JCL002-Preliminary Site Plan.dwg May 01, 2024 - 12:51pm

Appendix B – Site Trip Generation & Distribution

Trip Generation

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

Land Use:	Warehousing
Land Use Code:	150
Land Use Subcategory:	All Sites
Setting/Location	General Urban/Suburban
Variable:	1000 SF GFA
Trip Type:	Vehicle
Formula Type:	Rate
Variable Quantity:	48.44

AM PEAK HOUR

Trip Rate: 0.17

	Enter	Exit	Total
Directional Split	77%	23%	
Trip Ends	6	2	8

PM PEAK HOUR

Trip Rate: 0.18

	Enter	Exit	Total
Directional Split	28%	72%	
Trip Ends	3	6	9

WEEKDAY

Trip Rate: 1.71

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	42	41	83

SATURDAY

Trip Rate: 0.15

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	4	3	7

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

Land Use:	Building Materials and Lumber Store
Land Use Code:	812
Land Use Subcategory:	All Sites
Setting/Location	General Urban/Suburban
Variable:	1000 SF GFA
Trip Type:	Vehicle
Formula Type:	Rate
Variable Quantity:	3

WARNING: Variable Quantity is less than Minimum Survey Size for Peak Hours

AM PEAK HOUR

Trip Rate: 1.59

	Enter	Exit	Total
Directional Split	62%	38%	
Trip Ends	3	2	5

PM PEAK HOUR

Trip Rate: 2.25

	Enter	Exit	Total
Directional Split	46%	54%	
Trip Ends	3	4	7

WEEKDAY

Trip Rate: 17.05

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	26	25	51

SATURDAY

Trip Rate: 51.61

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	78	77	155

Appendix C – Traffic Volumes

Traffic Counts

Existing Use Trip Generation

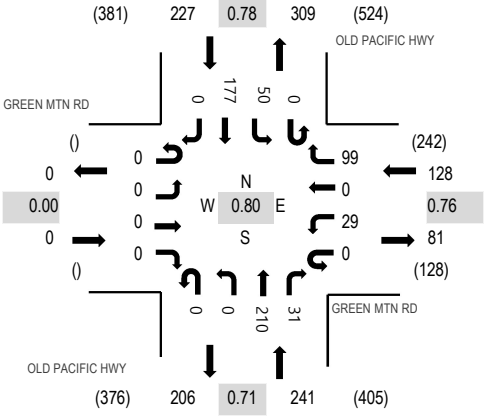
In-Process Data

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

Location: 1 OLD PACIFIC HWY & GREEN MTN RD AM
Date: Wednesday, May 8, 2024
Peak Hour: 08:00 AM - 09:00 AM
Peak 15-Minutes: 08:30 AM - 08:45 AM

Peak Hour

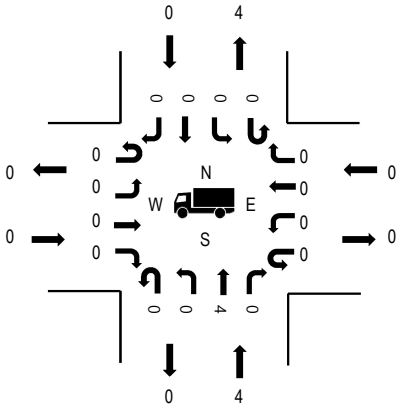
Motorized Vehicles



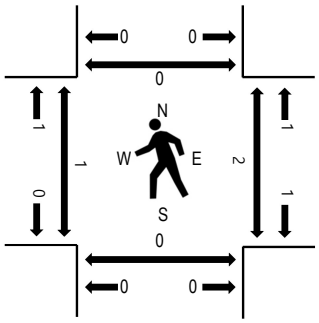
Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	0.0%	0.76
NB	1.7%	0.71
SB	0.0%	0.78
All	0.7%	0.80

Heavy Vehicles



Pedestrians



Traffic Counts - Motorized Vehicles

Interval Start Time	GREEN MTN RD Eastbound				GREEN MTN RD Westbound				OLD PACIFIC HWY Northbound				OLD PACIFIC HWY Southbound					Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	Total	
7:00 AM	0	0	0	0	0	1	0	4	0	0	8	1	0	3	11	0	28	432
7:05 AM	0	0	0	0	0	4	0	10	0	0	7	1	0	2	9	0	33	442
7:10 AM	0	0	0	0	0	2	0	9	0	0	6	3	0	3	10	0	33	445
7:15 AM	0	0	0	0	0	3	0	6	0	0	15	0	0	1	9	0	34	456
7:20 AM	0	0	0	0	0	5	0	6	0	0	15	0	0	2	11	0	39	463
7:25 AM	0	0	0	0	0	3	0	5	0	0	12	3	0	2	13	0	38	474
7:30 AM	0	0	0	0	0	5	0	9	0	0	14	2	0	3	13	0	46	487
7:35 AM	0	0	0	0	0	2	0	6	0	0	12	5	0	2	9	0	36	503
7:40 AM	0	0	0	0	0	5	0	5	0	0	12	2	0	1	7	0	32	529
7:45 AM	0	0	0	0	0	5	0	4	0	0	12	0	0	2	11	0	34	559
7:50 AM	0	0	0	0	0	4	0	4	0	0	16	1	0	2	11	0	38	580
7:55 AM	0	0	0	0	0	2	0	5	0	0	13	4	0	2	15	0	41	588
8:00 AM	0	0	0	0	0	1	0	6	0	0	16	1	0	6	8	0	38	596
8:05 AM	0	0	0	0	0	1	0	13	0	0	7	2	0	2	11	0	36	
8:10 AM	0	0	0	0	0	5	0	11	0	0	11	3	0	0	14	0	44	
8:15 AM	0	0	0	0	0	3	0	9	0	0	15	2	0	2	10	0	41	
8:20 AM	0	0	0	0	0	1	0	8	0	0	19	3	0	3	16	0	50	
8:25 AM	0	0	0	0	0	6	0	2	0	0	26	3	0	4	10	0	51	
8:30 AM	0	0	0	0	0	0	0	7	0	0	24	6	0	7	18	0	62	
8:35 AM	0	0	0	0	0	3	0	11	0	0	26	2	0	5	15	0	62	
8:40 AM	0	0	0	0	0	1	0	7	0	0	29	2	0	3	20	0	62	
8:45 AM	0	0	0	0	0	1	0	9	0	0	21	1	0	7	16	0	55	
8:50 AM	0	0	0	0	0	3	0	9	0	0	9	3	0	5	17	0	46	
8:55 AM	0	0	0	0	0	4	0	7	0	0	7	3	0	6	22	0	49	
Count Total	0	0	0	0	0	70	0	172	0	0	352	53	0	75	306	0	1,028	
Peak Hour	0	0	0	0	0	29	0	99	0	0	210	31	0	50	177	0	596	

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

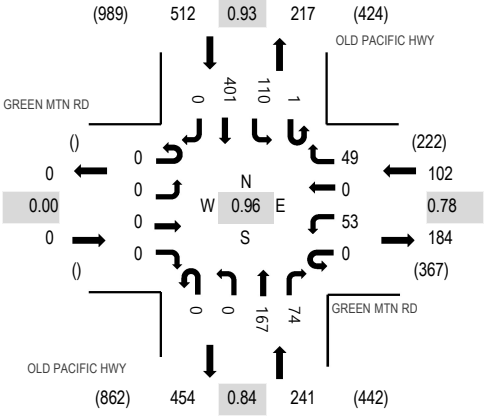
Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	0	0	1	0	1	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0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

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

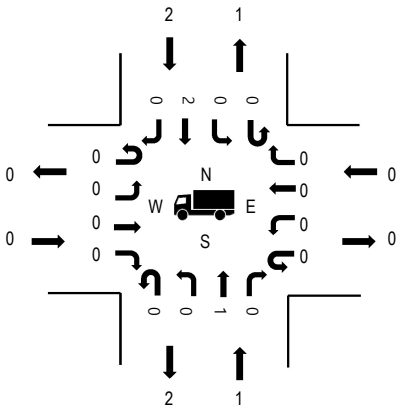
Location: 1 OLD PACIFIC HWY & GREEN MTN RD PM
Date: Wednesday, May 8, 2024
Peak Hour: 04:35 PM - 05:35 PM
Peak 15-Minutes: 04:35 PM - 04:50 PM

Peak Hour

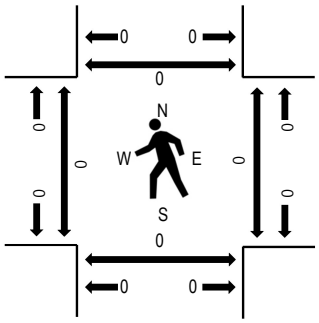
Motorized Vehicles



Heavy Vehicles



Pedestrians



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	0.0%	0.00
WB	0.0%	0.78
NB	0.4%	0.84
SB	0.4%	0.93
All	0.4%	0.96

Traffic Counts - Motorized Vehicles

Interval Start Time	GREEN MTN RD Eastbound				GREEN MTN RD Westbound				OLD PACIFIC HWY Northbound				OLD PACIFIC HWY 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	4	0	7	0	0	8	1	0	11	38	0	69	845
4:05 PM	0	0	0	0	0	5	0	7	0	0	21	7	0	13	31	0	84	841
4:10 PM	0	0	0	0	0	7	0	6	0	0	11	6	0	5	39	0	74	823
4:15 PM	0	0	0	0	0	5	0	6	0	0	16	3	0	12	31	0	73	817
4:20 PM	0	0	0	0	0	5	0	1	0	0	12	5	0	10	31	0	64	819
4:25 PM	0	0	0	0	0	3	0	5	0	0	14	8	0	10	26	0	66	824
4:30 PM	0	0	0	0	0	2	0	5	0	0	10	3	0	14	21	0	55	837
4:35 PM	0	0	0	0	0	5	0	3	0	0	13	12	0	11	31	0	75	855
4:40 PM	0	0	0	0	0	1	0	7	0	0	15	8	0	12	33	0	76	838
4:45 PM	0	0	0	0	0	2	0	3	0	0	10	15	0	13	29	0	72	845
4:50 PM	0	0	0	0	0	6	0	6	0	0	12	4	0	5	33	0	66	837
4:55 PM	0	0	0	0	0	4	0	2	0	0	18	4	0	10	33	0	71	825
5:00 PM	0	0	0	0	0	5	0	1	0	0	13	2	0	13	31	0	65	808
5:05 PM	0	0	0	0	0	7	0	2	0	0	20	5	0	4	28	0	66	
5:10 PM	0	0	0	0	0	2	0	3	0	0	12	4	0	10	37	0	68	
5:15 PM	0	0	0	0	0	5	0	3	0	0	19	7	0	7	34	0	75	
5:20 PM	0	0	0	0	0	4	0	6	0	0	10	0	1	11	37	0	69	
5:25 PM	0	0	0	0	0	10	0	9	0	0	15	5	0	3	37	0	79	
5:30 PM	0	0	0	0	0	2	0	4	0	0	10	8	0	11	38	0	73	
5:35 PM	0	0	0	0	0	3	0	3	0	0	13	7	0	6	26	0	58	
5:40 PM	0	0	0	0	0	2	0	7	0	0	9	9	0	19	37	0	83	
5:45 PM	0	0	0	0	0	7	0	11	0	0	7	4	0	7	28	0	64	
5:50 PM	0	0	0	0	0	1	0	5	0	0	7	6	0	7	28	0	54	
5:55 PM	0	0	0	0	0	5	0	8	0	0	8	6	0	4	23	0	54	
Count Total	0	0	0	0	0	102	0	120	0	0	303	139	1	228	760	0	1,653	
Peak Hour	0	0	0	0	0	53	0	49	0	0	167	74	1	110	401	0	855	

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	1	1	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	0	0	0	0	0	4:25 PM	0	1	0	0	1	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	1	1	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	0	0	0	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	1	0	1	2	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	1	0	1
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	1	1	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	0	1	0	4	5	Count Total	0	1	0	0	1	Count Total	0	0	1	0	1
Peak Hour	0	1	0	2	3	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0

TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Parcels: 601500102 and 103

Land Use:	General Light Industrial
Land Use Code:	110
Land Use Subcategory:	All Sites
Setting/Location	General Urban/Suburban
Variable:	1000 SF GFA
Trip Type:	Vehicle
Formula Type:	Rate
Variable Quantity:	27.4

AM PEAK HOUR

Trip Rate: 0.74

	Enter	Exit	Total
Directional Split	88%	12%	
Trip Ends	18	2	20

PM PEAK HOUR

Trip Rate: 0.65

	Enter	Exit	Total
Directional Split	14%	86%	
Trip Ends	3	15	18

WEEKDAY

Trip Rate: 4.87

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	67	67	134

SATURDAY

Trip Rate: 0.69

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	9	9	18

Caution: Small Sample Size

TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Parcel: 601500101

Land Use:	Single-Family Detached Housing
Land Use Code:	210
Land Use Subcategory:	All Sites
Setting/Location	General Urban/Suburban
Variable:	Dwelling Units
Trip Type:	Vehicle
Formula Type:	Rate
Variable Quantity:	1

WARNING: Variable Quantity is less than Minimum Survey Size for Peak Hours

AM PEAK HOUR

Trip Rate: 0.7

	Enter	Exit	Total
Directional Split	25%	75%	
Trip Ends	0	1	1

PM PEAK HOUR

Trip Rate: 0.94

	Enter	Exit	Total
Directional Split	63%	37%	
Trip Ends	1	0	1

WEEKDAY

Trip Rate: 9.43

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	5	5	10

SATURDAY

Trip Rate: 9.48

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	5	5	10

Source: Trip Generation Manual, 11th Edition

TRIP GENERATION CALCULATIONS
Source: Trip Generation Manual, 11th Edition
Parcel: 601540100

Land Use:	Soccer Complex
Land Use Code:	488
Land Use Subcategory:	All Sites
Setting/Location	General Urban/Suburban
Variable:	Fields
Trip Type:	Vehicle
Formula Type:	Rate
Variable Quantity:	3

WARNING: Variable Quantity is less than Minimum Survey Size for Peak Hours

AM PEAK HOUR

Trip Rate: 0.99

	Enter	Exit	Total
Directional Split	61%	39%	
Trip Ends	2	1	3

PM PEAK HOUR

Trip Rate: 16.43

	Enter	Exit	Total
Directional Split	66%	34%	
Trip Ends	32	17	49

WEEKDAY

Trip Rate: 71.33

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	107	107	214

SATURDAY

Trip Rate: 404.88

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	607	607	1,214

Caution: Small Sample Size

Cowlitz County Property Information

Property ID: 3089178 Parcel: 601500102 Site Address: 7004 GREEN MOUNTAIN RD

Owner Information

Owner: PLATINUM HOLDINGS LLC
Mailing Address: PO BOX 2187
WOODLAND, WA 98674

General Property Info

Jurisdiction: COWLITZ
Acres: 2.6400
Curr Assmt Yr: 2023
Abbr Prop Ref: 61 (BOZARTH J DLC) 12 -5N -1W CC13169 LOT 1 EXC LOT 1A FEE 3235609 EXC BLA FEE 3554180 INCL BLA FEE
Sect/Township/Range: 12-5N-1W
Property Use: WAREHOUSE
Neighborhood: SOUTH COUNTY RURAL
Tax Code Area: 920

Current Assessed Values For 2023

Land Value: $402,670
Improvement Value: $643,290
Current Use: $0
Total Assessed Value: $1,045,960

Current Taxes For 2024 Payable Year

Taxes: $7,330.38
Assessments: $43.29
Total Charges: $7,373.67
First Half: $0.00
Second Half: $0.00
Total Paid: $3,686.87
Total Due: $3,686.80

Photos

Cowlitz County Property Information

Property ID: 3089178 Parcel: 601500102 Site Address: 7004 GREEN MOUNTAIN RD

Property Details

Year Built - COMM	2008
Area (SQFT) - COMM BASE	9,000

Cowlitz County Property Information

Property ID: 3089179 Parcel: 601500103 Site Address: 6970 GREEN MOUNTAIN RD

Owner Information

Owner: PLATINUM HOLDINGS LLC
Mailing Address: PO BOX 2187
WOODLAND, WA 98674

General Property Info

Jurisdiction: COWLITZ
Acres: 2.0100
Curr Assmt Yr: 2023
Abbr Prop Ref: 61 (BOZARTH J DLC) 12 -5N -1W CC13169 LOT 2 INCL BLA FEE 3554180 EXC BLA FEE 3554180.
Sect/Township/Range: 12-5N-1W
Property Use: PARCEL W/OUTBUILDING ONLY
Neighborhood: SOUTH COUNTY RURAL
Tax Code Area: 920

Current Assessed Values For 2023

Land Value: $307,130
Improvement Value: $997,930
Current Use: $0
Total Assessed Value: $1,305,060

Current Taxes For 2024 Payable Year

Taxes: $9,146.23
Assessments: $43.10
Total Charges: $9,189.33
First Half: $0.00
Second Half: $0.00
Total Paid: $4,594.69
Total Due: $4,594.64

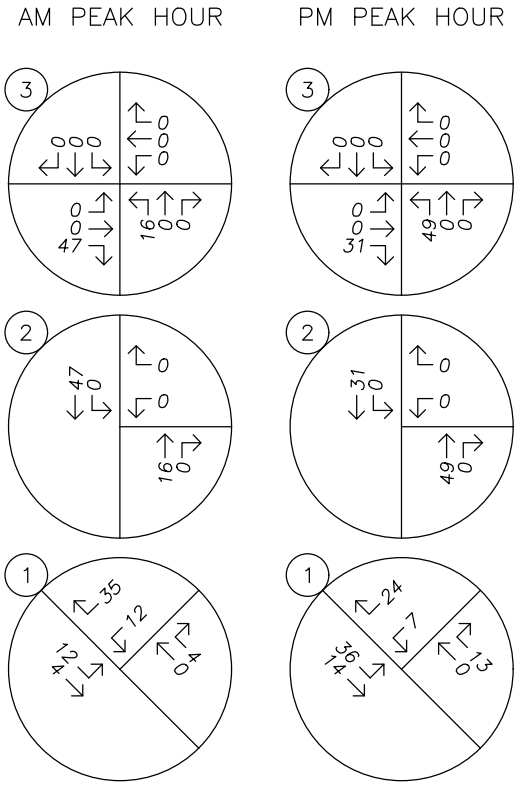
Photos

Cowlitz County Property Information

Property ID: 3089179 Parcel: 601500103 Site Address: 6970 GREEN MOUNTAIN RD

Property Details

Year Built - SHOP	2005
Area (SQFT) - COMM BASE	6,266
Year Built - OFFICE	2005
Area (SQFT) - COMM BASE	2,640
Year Built - DET_GAR_MET	2020
Area (SQFT) -	1,350
Year Built - WAREHOUSE	2023
Area (SQFT) - COMM BASE	8,100



no scale

TRAFFIC VOLUMES
In-Process Development Trips
AM & PM Peak Hours

Figure A
Oak Village Commercial Lot 1
6/12/2024

Appendix D – Safety Analysis

Crash History Data

Left-turn Lane Warrant Analysis

Traffic Signal Warrant Analysis

OFFICER REPORTED CRASHES THAT OCCURRED *at* OR *in the vicinity of* THE FOLLOWING INTERSECTION IN THE CITY OF WOODLAND

GREEN MOUNTAIN RD @ OLD PACIFIC HWY

01/01/2019 - 12/31/2023

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	BLOCK NUMBER	INTERSECTING TRAFFICWAY	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME	MILEPOST	A / B	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# INJ	# FAT	# VEH	# PEDS	# BIKES	VEHICLE 1 TYPE	VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION
City Street	Cowlitz	Woodland	OLD PACIFIC HWY		GREEN MOUNTAIN RD							No	EC78658	08/26/2022	16:20	No Apparent Injury	0	0	2	0	0	Motorcycle	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear	Dry
City Street	Cowlitz	Woodland	OLD PACIFIC HWY		GREEN MOUNTAIN RD							No	EB55169	08/04/2021	16:40	No Apparent Injury	0	0	2	0	0	Pickup,Panel Truck or Vanette under 10,000 lb	Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry

OFFICER REPORTED CRASHES THAT OCCURRED *at* OR *in the vicinity of* THE FOLLOWING INTERSECTION IN THE CITY OF WOODLAND

GREEN MOUNTAIN RD @ OLD PACIFIC HWY

01/01/2019 - 12/31/2023

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.

LIGHTING CONDITION	FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	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 2 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 2 (UNIT 2)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 3 (UNIT 2)	FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Daylight	From same direction - both going straight - one stopped - sideswipe	Going Straight Ahead	Stopped for Traffic	North	South	Vehicle Stopped	Vehicle Stopped	Unknown Distraction			None			Lane of Primary Trafficway	1068200.44	223469.37
Daylight	Entering at angle	Going Straight Ahead	Merging (Entering Traffic)	South	North	East	West	None			Did Not Grant RW to Vehicle			Lane of Primary Trafficway	1068200.44	223469.37

Left-Turn Lane Warrant Analysis

Project: Oak Village Commercial Lot 1
Intersection: 1. Old Pacific Highway at Green Mountain Road
Date: 6/11/2024
Scenario: 2026 Buildout Conditions - AM Peak Hour (SB)

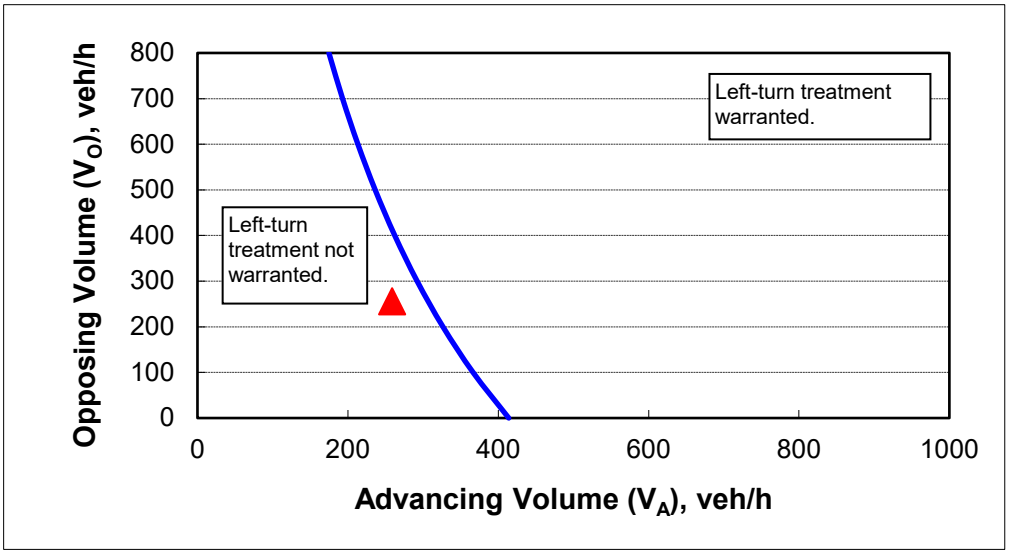
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	27%
Advancing volume (V_A), veh/h:	259
Opposing volume (V_O), veh/h:	256

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	307
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: Oak Village Commercial Lot 1
Intersection: 1. Old Pacific Highway at Green Mountain Road
Date: 6/11/2024
Scenario: 2024 Existing Conditions - PM Peak Hour (SB)

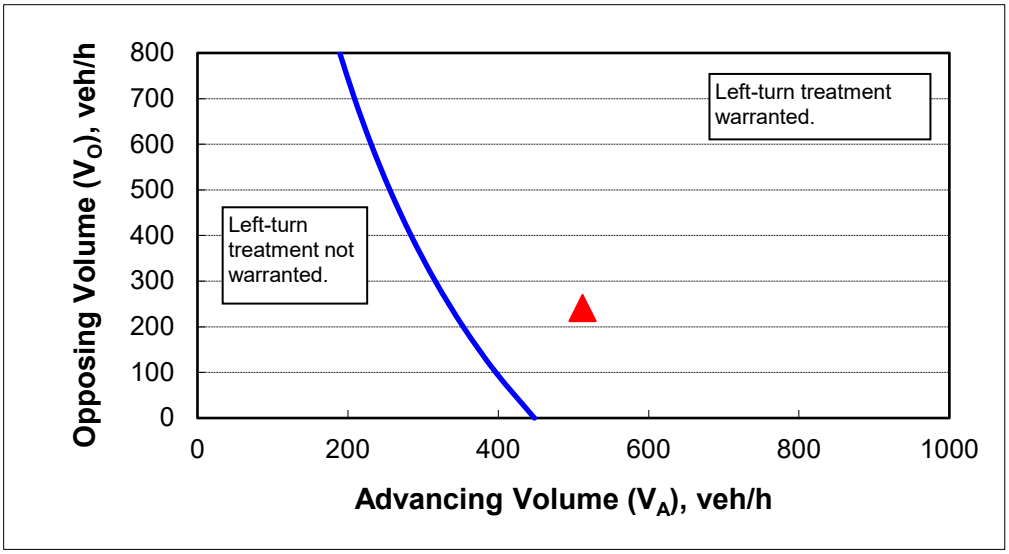
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	22%
Advancing volume (V_A), veh/h:	512
Opposing volume (V_O), veh/h:	241

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	338
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: Oak Village Commercial Lot 1
Intersection: 2. South Site Access at Green Mountain Road
Date: 6/11/2024
Scenario: 2026 Buildout Conditions - AM Peak Hour (NB)

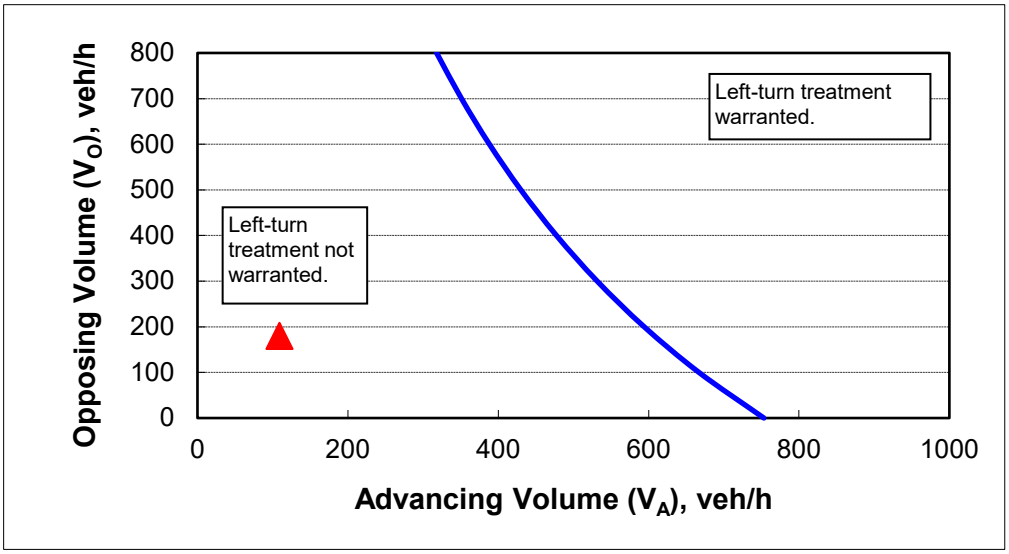
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	6%
Advancing volume (V_A), veh/h:	109
Opposing volume (V_O), veh/h:	180

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	608
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: Oak Village Commercial Lot 1
Intersection: 2. South Site Access at Green Mountain Road
Date: 6/11/2024
Scenario: 2026 Buildout Conditions - AM Peak Hour (SB)

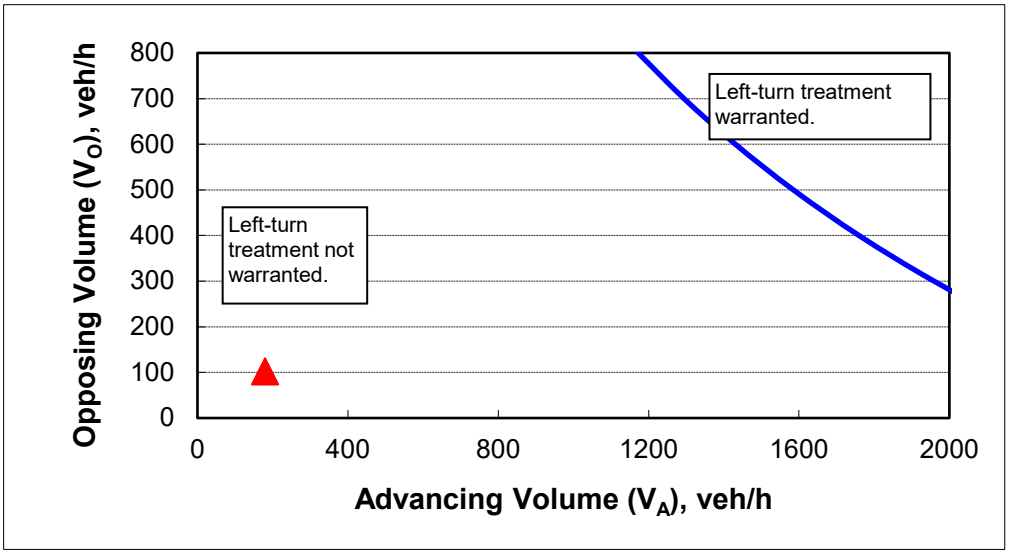
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	180
Opposing volume (V_O), veh/h:	102

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	2452
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: Oak Village Commercial Lot 1
Intersection: 2. South Site Access at Green Mountain Road
Date: 6/11/2024
Scenario: 2026 Buildout Conditions - PM Peak Hour (NB)

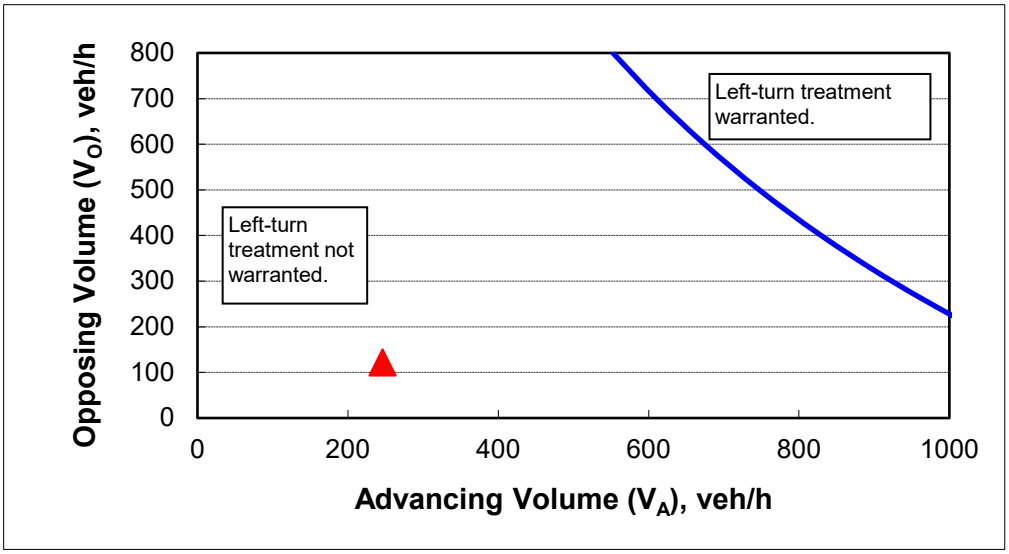
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	2%
Advancing volume (V_A), veh/h:	246
Opposing volume (V_O), veh/h:	122

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	1129
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: Oak Village Commercial Lot 1
Intersection: 2. South Site Access at Green Mountain Road
Date: 6/11/2024
Scenario: 2026 Buildout Conditions - PM Peak Hour (SB)

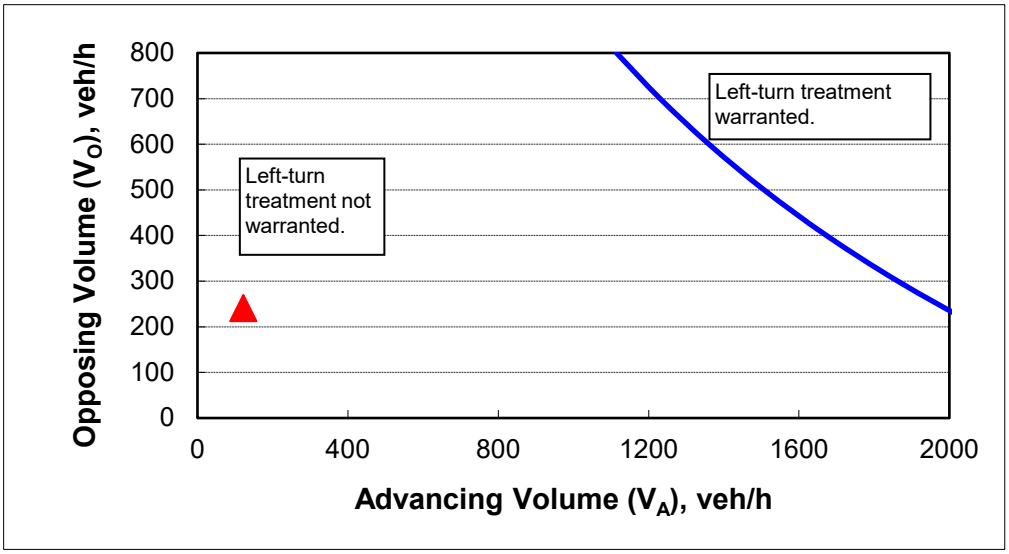
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	122
Opposing volume (V_O), veh/h:	241

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	1988
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: Oak Village Commercial Lot 1
Intersection: 3. North Site Access at Green Mountain Road
Date: 6/11/2024
Scenario: 2026 Buildout Conditions - AM Peak Hour (NB)

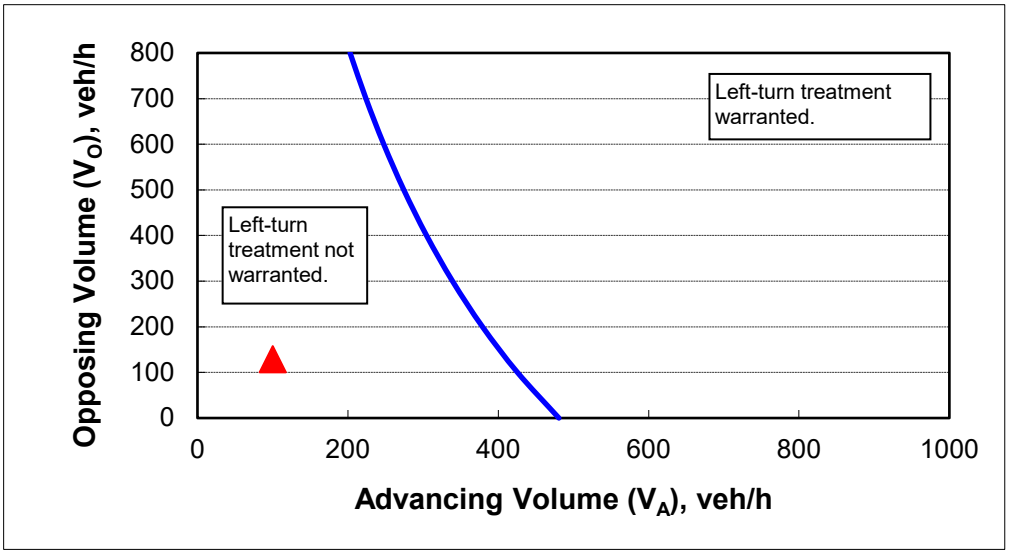
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	18%
Advancing volume (V_A), veh/h:	100
Opposing volume (V_O), veh/h:	129

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	411
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: Oak Village Commercial Lot 1
Intersection: 3. North Site Access at Green Mountain Road
Date: 6/11/2024
Scenario: 2026 Buildout Conditions - AM Peak Hour (SB)

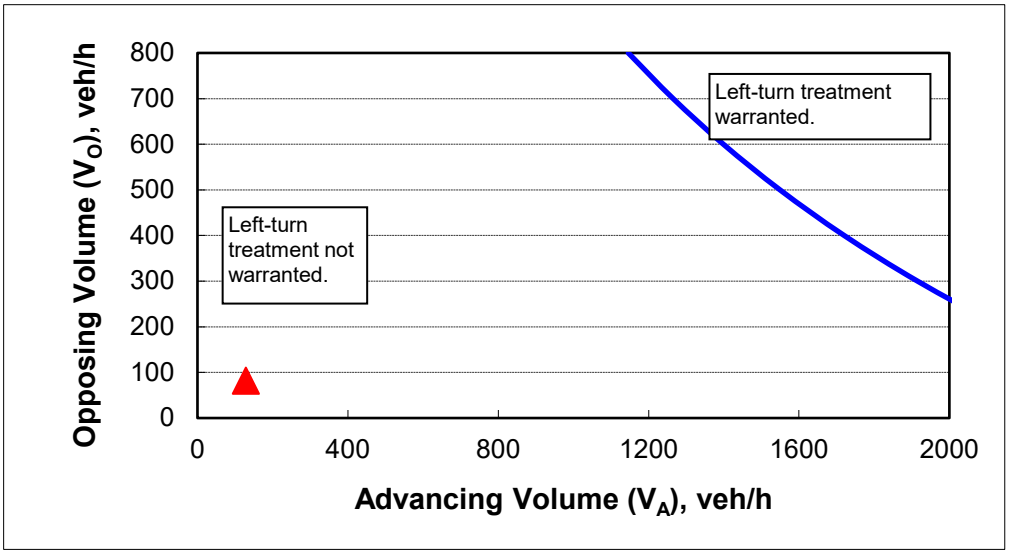
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	129
Opposing volume (V_O), veh/h:	82

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	2455
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: Oak Village Commercial Lot 1
Intersection: 3. North Site Access at Green Mountain Road
Date: 6/11/2024
Scenario: 2026 Buildout Conditions - PM Peak Hour (NB)

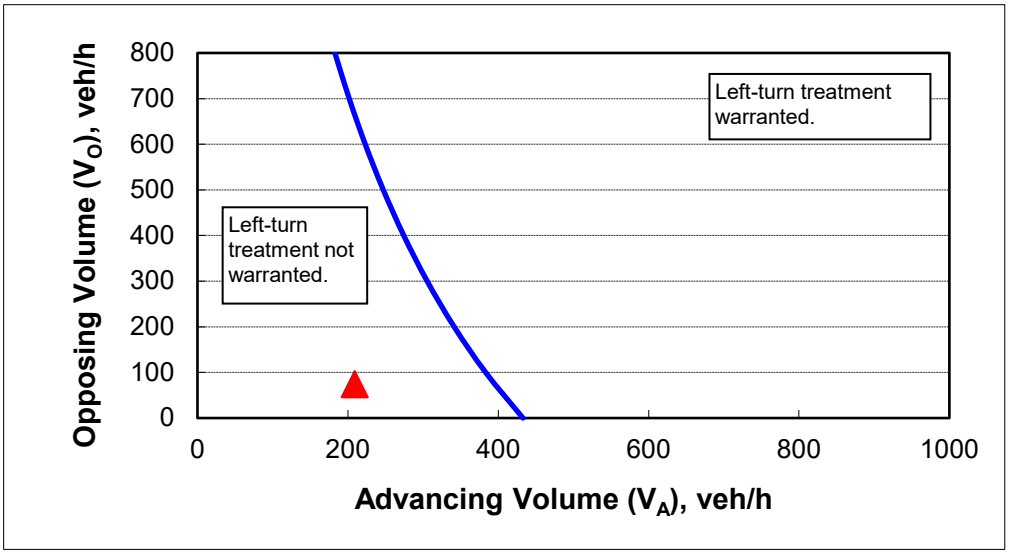
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	24%
Advancing volume (V_A), veh/h:	209
Opposing volume (V_O), veh/h:	74

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	395
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Left-Turn Lane Warrant Analysis

Project: Oak Village Commercial Lot 1
Intersection: 3. North Site Access at Green Mountain Road
Date: 6/11/2024
Scenario: 2026 Buildout Conditions - PM Peak Hour (SB)

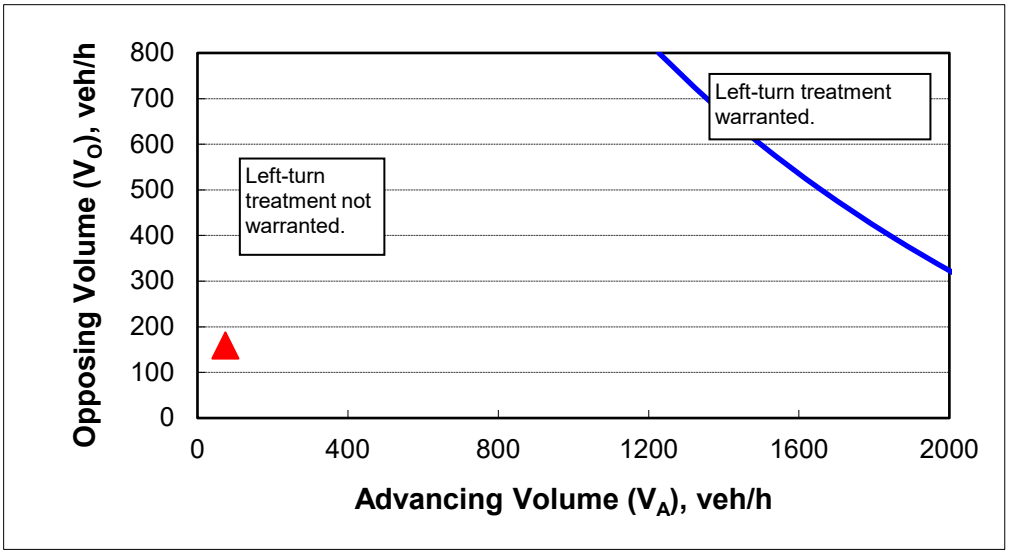
2-lane roadway (English)

INPUT

Variable	Value
85th percentile speed, mph:	35
Percent of left-turns in advancing volume (V_A), %:	0%
Advancing volume (V_A), veh/h:	74
Opposing volume (V_O), veh/h:	159

OUTPUT

Variable	Value
Limiting advancing volume (V_A), veh/h:	2402
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	



CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	3.0
Critical headway, s:	5.0
Average time for left-turn vehicle to clear the advancing lane, s:	1.9

Traffic Signal Warrant Analysis

Project: Oak Village Commercial Lot 1
Date: 6/11/2024
Scenario: 2023 Buildout Conditions

Major Street:	Old Pacific Highway	Minor Street:	Green Mountain Road
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	852	PM Peak Hour Volumes:	126

Warrant Used:

	100 percent of standard warrants used
X	70 percent of standard warrants may be used if the 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	8,520	6,200	
Minor Street*	1,260	1,850	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	8,520	9,300	
Minor Street*	1,260	950	**No**
Combination Warrant			
Major Street	8,520	7,440	
Minor Street*	1,260	1,480	**No**

Note: Minor street right-turning traffic volumes reduced by 25%.

Appendix E – Operation Analysis

Level of Service Descriptions

Capacity Reports

LEVEL OF SERVICE

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

Level of service A: Very low delay at intersections, with all traffic signal cycles clearing and no vehicles waiting through more than one signal cycle. On highways, low volume and high speeds, with speeds not restricted by other vehicles.

Level of service B: Operating speeds beginning to be affected by other traffic; short traffic delays at intersections. Higher average intersection delay than for level of service A resulting from more vehicles stopping.

Level of service C: Operating speeds and maneuverability closely controlled by other traffic; higher delays at intersections than for level of service B due to a significant number of vehicles stopping. Not all signal cycles clear the waiting vehicles. This is the recommended design standard for rural highways.

Level of service D: Tolerable operating speeds; long traffic delays occur at intersections. The influence of congestion is noticeable. At traffic signals many vehicles stop, and the proportion of vehicles not stopping declines. The number of signal cycle failures, for which vehicles must wait through more than one signal cycle, are noticeable. This is typically the design level for urban signalized intersections.

Level of service E: Restricted speeds, very long traffic delays at traffic signals, and traffic volumes near capacity. Flow is unstable so that any interruption, no matter how minor, will cause queues to form and service to deteriorate to level of service F. Traffic signal cycle failures are frequent occurrences. For unsignalized intersections, level of service E or better is generally considered acceptable.

Level of service F: Extreme delays, resulting in long queues which may interfere with other traffic movements. There may be stoppages of long duration, and speeds may drop to zero. There may be frequent signal cycle failures. Level of service F will typically result when vehicle arrival rates are greater than capacity. It is considered unacceptable by most drivers.

LEVEL OF SERVICE CRITERIA
FOR SIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-20
C	20-35
D	35-55
E	55-80
F	>80

LEVEL OF SERVICE CRITERIA
FOR UNSIGNALIZED INTERSECTIONS

LEVEL OF SERVICE	CONTROL DELAY PER VEHICLE (Seconds)
A	<10
B	10-15
C	15-25
D	25-35
E	35-50
F	>50

Intersection	
Int Delay, s/veh	3.3

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	50	177	210	31	29	99
Future Vol, veh/h	50	177	210	31	29	99
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	63	221	263	39	36	124

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	303	0	-	0	630	284
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	346	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1269	-	-	-	449	760
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	721	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1267	-	-	-	422	758
Mov Cap-2 Maneuver	-	-	-	-	422	-
Stage 1	-	-	-	-	724	-
Stage 2	-	-	-	-	719	-

Approach	SE	NW	SW
HCM Control Delay, s/v	1.76	0	12.45
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	396	-	642
HCM Lane V/C Ratio	-	-	0.049	-	0.249
HCM Control Delay (s/veh)	-	-	8	0	12.5
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0.2	-	1

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	79	2	0	127
Future Vol, veh/h	1	0	79	2	0	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	99	3	0	159

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	259	100	0	0	101	0
Stage 1	100	-	-	-	-	-
Stage 2	159	-	-	-	-	-
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	730	956	-	-	1491	-
Stage 1	924	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	730	956	-	-	1491	-
Mov Cap-2 Maneuver	730	-	-	-	-	-
Stage 1	924	-	-	-	-	-
Stage 2	870	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.94	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	730	1491	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s/veh)	-	-	9.9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	0	61	18	0	124
Future Vol, veh/h	3	0	61	18	0	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	76	23	0	155

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	243	88	0	0	99	0
Stage 1	88	-	-	-	-	-
Stage 2	155	-	-	-	-	-
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	746	971	-	-	1494	-
Stage 1	936	-	-	-	-	-
Stage 2	873	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	746	971	-	-	1494	-
Mov Cap-2 Maneuver	746	-	-	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	873	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.85	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	746	1494	-
HCM Lane V/C Ratio	-	-	0.005	-	-
HCM Control Delay (s/veh)	-	-	9.9	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	1.9

Movement	SEU	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations							
Traffic Vol, veh/h	1	110	401	167	74	53	49
Future Vol, veh/h	1	110	401	167	74	53	49
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	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	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0
Mvmt Flow	1	115	418	174	77	55	51

Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	-	251	0	-	0	859	213
Stage 1	-	-	-	-	-	213	-
Stage 2	-	-	-	-	-	647	-
Critical Hdwy	-	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	-	5.4	-
Follow-up Hdwy	-	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	1326	-	-	-	329	833
Stage 1	-	-	-	-	-	828	-
Stage 2	-	-	-	-	-	525	-
Platoon blocked, %			-	-	-		
Mov Cap-1 Maneuver	~ -113	~ -113	-	-	-	292	833
Mov Cap-2 Maneuver	-	-	-	-	-	292	-
Stage 1	-	-	-	-	-	734	-
Stage 2	-	-	-	-	-	525	-

Approach	SE	NW	SW
HCM Control Delay, s/v		0	16.3
HCM LOS			C

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	390	-	424
HCM Lane V/C Ratio	-	-	-	-	0.25
HCM Control Delay (s/veh)	-	-	-	-	16.3
HCM Lane LOS	-	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	-	1

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

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	0	152	32	0	85
Future Vol, veh/h	17	0	152	32	0	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	158	33	0	89

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	264	175	0	0	192	0
Stage 1	175	-	-	-	-	-
Stage 2	89	-	-	-	-	-
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	725	868	-	-	1382	-
Stage 1	855	-	-	-	-	-
Stage 2	935	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	725	868	-	-	1382	-
Mov Cap-2 Maneuver	725	-	-	-	-	-
Stage 1	855	-	-	-	-	-
Stage 2	935	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	725	1382	-
HCM Lane V/C Ratio	-	-	0.024	-	-
HCM Control Delay (s/veh)	-	-	10.1	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	0	148	4	0	70
Future Vol, veh/h	15	0	148	4	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	0	154	4	0	73

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	229	156	0	0	158	0
Stage 1	156	-	-	-	-	-
Stage 2	73	-	-	-	-	-
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	759	889	-	-	1421	-
Stage 1	872	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	759	889	-	-	1421	-
Mov Cap-2 Maneuver	759	-	-	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	950	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	9.84	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	759	1421	-
HCM Lane V/C Ratio	-	-	0.021	-	-
HCM Control Delay (s/veh)	-	-	9.8	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	4.5

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	64	188	218	36	42	138
Future Vol, veh/h	64	188	218	36	42	138
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	80	235	273	45	53	173

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	320	0	-	0	692	297
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	395	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1252	-	-	-	413	747
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	685	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1249	-	-	-	381	746
Mov Cap-2 Maneuver	-	-	-	-	381	-
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	684	-

Approach	SE	NW	SW
HCM Control Delay, s/v	2.05	0	14.32
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	457	-	610
HCM Lane V/C Ratio	-	-	0.064	-	0.369
HCM Control Delay (s/veh)	-	-	8.1	0	14.3
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0.2	-	1.7

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	98	2	0	179
Future Vol, veh/h	1	0	98	2	0	179
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	123	3	0	224

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	348	124	0	0	125	0
Stage 1	124	-	-	-	-	-
Stage 2	224	-	-	-	-	-
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	649	927	-	-	1462	-
Stage 1	902	-	-	-	-	-
Stage 2	813	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	649	927	-	-	1462	-
Mov Cap-2 Maneuver	649	-	-	-	-	-
Stage 1	902	-	-	-	-	-
Stage 2	813	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.55	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	649	1462	-
HCM Lane V/C Ratio	-	-	0.002	-	-
HCM Control Delay (s/veh)	-	-	10.6	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	47	3	0	0	16	64	18	0	129	0
Future Vol, veh/h	0	0	47	3	0	0	16	64	18	0	129	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	59	4	0	0	20	80	23	0	161	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	281	304	161	293	293	91	161	0	0	103	0	0
Stage 1	161	161	-	131	131	-	-	-	-	-	-	-
Stage 2	120	143	-	161	161	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	671	609	884	660	618	966	1418	-	-	1489	-	-
Stage 1	841	765	-	872	788	-	-	-	-	-	-	-
Stage 2	884	779	-	841	765	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	661	600	884	607	609	966	1418	-	-	1489	-	-
Mov Cap-2 Maneuver	661	600	-	607	609	-	-	-	-	-	-	-
Stage 1	841	765	-	859	776	-	-	-	-	-	-	-
Stage 2	871	767	-	785	765	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	9.36	10.97	1.24	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	282	-	-	884	607	1489	-	-
HCM Lane V/C Ratio	0.014	-	-	0.066	0.006	-	-	-
HCM Control Delay (s/veh)	7.6	0	-	9.4	11	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-

Intersection	
Int Delay, s/veh	2.8

Movement	SEU	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations							
Traffic Vol, veh/h	1	150	431	174	90	62	75
Future Vol, veh/h	1	150	431	174	90	62	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	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	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	0	0
Mvmt Flow	1	156	449	181	94	65	78

Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	-	275	0	-	0	990	228
Stage 1	-	-	-	-	-	228	-
Stage 2	-	-	-	-	-	761	-
Critical Hdwy	-	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	-	5.4	-
Follow-up Hdwy	-	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	1300	-	-	-	276	816
Stage 1	-	-	-	-	-	815	-
Stage 2	-	-	-	-	-	465	-
Platoon blocked, %			-	-	-		
Mov Cap-1 Maneuver	~ -152	~ -152	-	-	-	231	816
Mov Cap-2 Maneuver	-	-	-	-	-	231	-
Stage 1	-	-	-	-	-	683	-
Stage 2	-	-	-	-	-	465	-

Approach	SE	NW	SW
HCM Control Delay, s/v		0	20.03
HCM LOS			C

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	467	-	381
HCM Lane V/C Ratio	-	-	-	-	0.375
HCM Control Delay (s/veh)	-	-	-	-	20
HCM Lane LOS	-	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	-	1.7

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

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	17	0	208	32	0	120
Future Vol, veh/h	17	0	208	32	0	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	0	217	33	0	125

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	358	233	0	0	250	0
Stage 1	233	-	-	-	-	-
Stage 2	125	-	-	-	-	-
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	640	806	-	-	1316	-
Stage 1	805	-	-	-	-	-
Stage 2	901	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	640	806	-	-	1316	-
Mov Cap-2 Maneuver	640	-	-	-	-	-
Stage 1	805	-	-	-	-	-
Stage 2	901	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s/v	10.78	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	640	1316	-
HCM Lane V/C Ratio	-	-	0.028	-	-
HCM Control Delay (s/veh)	-	-	10.8	0	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	31	15	0	0	49	155	4	0	74	0
Future Vol, veh/h	0	0	31	15	0	0	49	155	4	0	74	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	32	16	0	0	51	161	4	0	77	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	341	345	77	343	343	164	77	0	0	166	0	0
Stage 1	77	77	-	266	266	-	-	-	-	-	-	-
Stage 2	264	268	-	77	77	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	613	578	984	611	580	881	1522	-	-	1413	-	-
Stage 1	932	831	-	740	689	-	-	-	-	-	-	-
Stage 2	742	688	-	932	831	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	591	557	984	569	558	881	1522	-	-	1413	-	-
Mov Cap-2 Maneuver	591	557	-	569	558	-	-	-	-	-	-	-
Stage 1	932	831	-	712	663	-	-	-	-	-	-	-
Stage 2	714	662	-	901	831	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.78	11.5	1.75	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	422	-	-	984	569	1413	-	-
HCM Lane V/C Ratio	0.034	-	-	0.033	0.027	-	-	-
HCM Control Delay (s/veh)	7.4	0	-	8.8	11.5	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	4.7

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	71	188	218	38	43	141
Future Vol, veh/h	71	188	218	38	43	141
Conflicting Peds, #/hr	2	0	0	2	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	89	235	273	48	54	176

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	322	0	-	0	711	298
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	413	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1249	-	-	-	403	746
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1247	-	-	-	368	745
Mov Cap-2 Maneuver	-	-	-	-	368	-
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	671	-

Approach	SE	NW	SW
HCM Control Delay, s/v	2.22	0	14.65
HCM LOS			B

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	493	-	601
HCM Lane V/C Ratio	-	-	0.071	-	0.383
HCM Control Delay (s/veh)	-	-	8.1	0	14.7
HCM Lane LOS	-	-	A	A	B
HCM 95th %tile Q(veh)	-	-	0.2	-	1.8

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	3	1	0	0	7	100	2	0	180	0
Future Vol, veh/h	0	0	3	1	0	0	7	100	2	0	180	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	4	1	0	0	9	125	3	0	225	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	368	370	225	369	369	126	225	0	0	128	0	0
Stage 1	225	225	-	144	144	-	-	-	-	-	-	-
Stage 2	143	145	-	225	225	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	589	560	814	588	560	924	1344	-	-	1459	-	-
Stage 1	778	718	-	859	778	-	-	-	-	-	-	-
Stage 2	860	777	-	778	718	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	585	556	814	581	557	924	1344	-	-	1459	-	-
Mov Cap-2 Maneuver	585	556	-	581	557	-	-	-	-	-	-	-
Stage 1	778	718	-	853	772	-	-	-	-	-	-	-
Stage 2	854	772	-	774	718	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	9.44	11.21	0.49	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	115	-	-	814	581	1459	-	-
HCM Lane V/C Ratio	0.007	-	-	0.005	0.002	-	-	-
HCM Control Delay (s/veh)	7.7	0	-	9.4	11.2	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0	0	-	-

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	0	0	48	3	0	0	18	64	18	0	129	0
Future Vol, veh/h	0	0	48	3	0	0	18	64	18	0	129	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	60	4	0	0	23	80	23	0	161	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	286	309	161	298	298	91	161	0	0	103	0	0
Stage 1	161	161	-	136	136	-	-	-	-	-	-	-
Stage 2	125	148	-	161	161	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	666	606	884	655	614	966	1418	-	-	1489	-	-
Stage 1	841	765	-	867	784	-	-	-	-	-	-	-
Stage 2	879	775	-	841	765	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	655	595	884	600	604	966	1418	-	-	1489	-	-
Mov Cap-2 Maneuver	655	595	-	600	604	-	-	-	-	-	-	-
Stage 1	841	765	-	852	771	-	-	-	-	-	-	-
Stage 2	864	762	-	784	765	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	9.37	11.04	1.36	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	310	-	-	884	600	1489	-	-
HCM Lane V/C Ratio	0.016	-	-	0.068	0.006	-	-	-
HCM Control Delay (s/veh)	7.6	0	-	9.4	11	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0	0	-	-

Intersection	
Int Delay, s/veh	3

Movement	SEU	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations							
Traffic Vol, veh/h	1	154	431	174	92	64	83
Future Vol, veh/h	1	154	431	174	92	64	83
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0	-
Veh in Median Storage, #	-	-	0	0	-	0	-
Grade, %	-	-	0	0	-	0	-
Peak Hour Factor	92	96	96	96	96	96	96
Heavy Vehicles, %	2	0	0	0	0	0	0
Mvmt Flow	1	160	449	181	96	67	86

Major/Minor	Major1		Major2		Minor2		
Conflicting Flow All	-	277	0	-	0	999	229
Stage 1	-	-	-	-	-	229	-
Stage 2	-	-	-	-	-	770	-
Critical Hdwy	-	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	-	5.4	-
Follow-up Hdwy	-	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	1297	-	-	-	272	815
Stage 1	-	-	-	-	-	814	-
Stage 2	-	-	-	-	-	460	-
Platoon blocked, %			-	-	-		
Mov Cap-1 Maneuver	~ -148	~ -148	-	-	-	227	815
Mov Cap-2 Maneuver	-	-	-	-	-	227	-
Stage 1	-	-	-	-	-	679	-
Stage 2	-	-	-	-	-	460	-

Approach	SE	NW	SW
HCM Control Delay, s/v		0	20.52
HCM LOS			C

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	476	-	383
HCM Lane V/C Ratio	-	-	-	-	0.4
HCM Control Delay (s/veh)	-	-	-	-	20.5
HCM Lane LOS	-	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	-	1.9

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

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	8	17	0	0	5	209	32	0	122	0
Future Vol, veh/h	0	0	8	17	0	0	5	209	32	0	122	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	8	18	0	0	5	218	33	0	127	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	355	389	127	372	372	234	127	0	0	251	0	0
Stage 1	127	127	-	245	245	-	-	-	-	-	-	-
Stage 2	228	261	-	127	127	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	600	546	923	585	558	805	1459	-	-	1314	-	-
Stage 1	877	791	-	759	703	-	-	-	-	-	-	-
Stage 2	775	692	-	877	791	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	597	544	923	577	556	805	1459	-	-	1314	-	-
Mov Cap-2 Maneuver	597	544	-	577	556	-	-	-	-	-	-	-
Stage 1	877	791	-	756	701	-	-	-	-	-	-	-
Stage 2	771	689	-	869	791	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.94	11.43	0.15	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	36	-	-	923	577	1314	-	-
HCM Lane V/C Ratio	0.004	-	-	0.009	0.031	-	-	-
HCM Control Delay (s/veh)	7.5	0	-	8.9	11.4	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	33	15	0	0	50	155	4	0	74	0
Future Vol, veh/h	0	0	33	15	0	0	50	155	4	0	74	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	34	16	0	0	52	161	4	0	77	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	343	347	77	345	345	164	77	0	0	166	0	0
Stage 1	77	77	-	268	268	-	-	-	-	-	-	-
Stage 2	266	270	-	77	77	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
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	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	611	577	984	609	578	881	1522	-	-	1413	-	-
Stage 1	932	831	-	738	688	-	-	-	-	-	-	-
Stage 2	740	686	-	932	831	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	588	555	984	566	556	881	1522	-	-	1413	-	-
Mov Cap-2 Maneuver	588	555	-	566	556	-	-	-	-	-	-	-
Stage 1	932	831	-	710	662	-	-	-	-	-	-	-
Stage 2	712	660	-	899	831	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s/v	8.79	11.54	1.78	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	428	-	-	984	566	1413	-	-
HCM Lane V/C Ratio	0.034	-	-	0.035	0.028	-	-	-
HCM Control Delay (s/veh)	7.4	0	-	8.8	11.5	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0	-	-