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Transportation Engineering and Planning Services

Date:	November 11, 2021
To:	Eric Klann, PE, City of Prineville
From:	Joe Bessman, PE
Project Reference No.:	1578
Project Name:	Ochoco Pointe Subdivision Expansion

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June 14, 2007
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EXPIRES: 12/31/2021

This memorandum provides a Transportation Impact Analysis for the expansion of the Ochoco Pointe Subdivision. This report was prepared in compliance with the Transportation Impact Analysis Requirements in Appendix 1 of the City of the Prineville's 2013 Transportation System Plan (TSP). The Ochoco Pointe Subdivision is located in northeastern Prineville within the approved Iron Horse master planned area, with vehicular access provided through local street connections at Loper Avenue, Meander Road, Whistle Way, Sunrise Street, and Rimfire Drive (see Figure 4) and future access provided to Combs Flat Road. The site vicinity is illustrated in Figure 1 below.

Figure 1. Site Vicinity Map. *Source: Crook County GIS.*

The location of the site within the City's *Functional Classification Map* is included in Figure 2, illustrating the higher order roadway system around the site. As shown in the figure, the site is in close proximity to Hudspeth Lane and Hudspeth Road, which are both designated *Minor Collectors*.

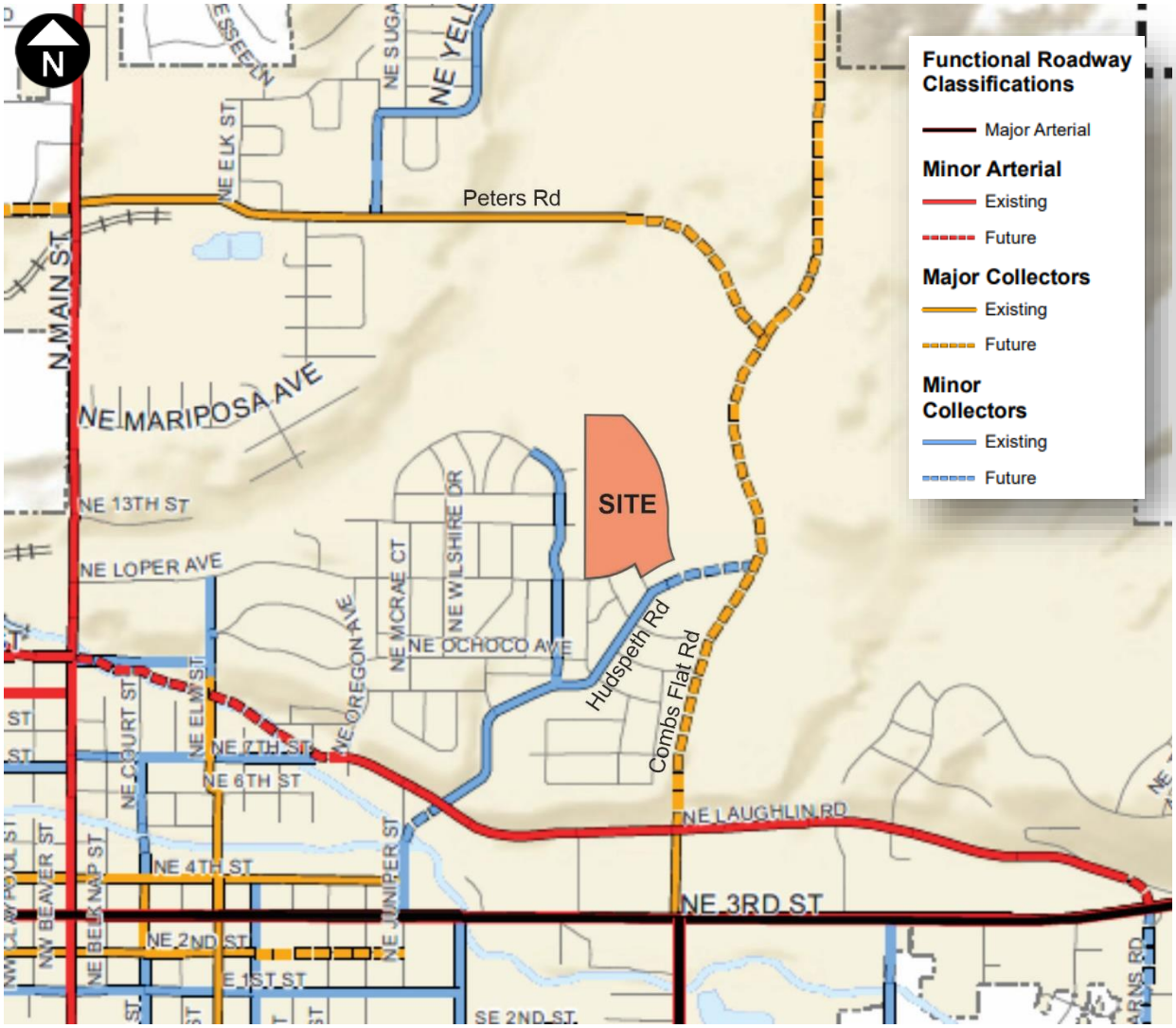


Figure 2. Functional Classification Map. Source: City of Prineville Transportation System Plan.

The 2013 Transportation System Plan shows the proposed Combs Flat Road extension east of the site and intersecting with Peters Road. This has been modified to the current alignment shown in Figure 3, which shows Combs Flat Road adjacent to the east edge of the property and tying into the Yellowpine Road/Peters Road intersection to the north along with underground piping of the irrigation canal that is currently in the planning and design stage.

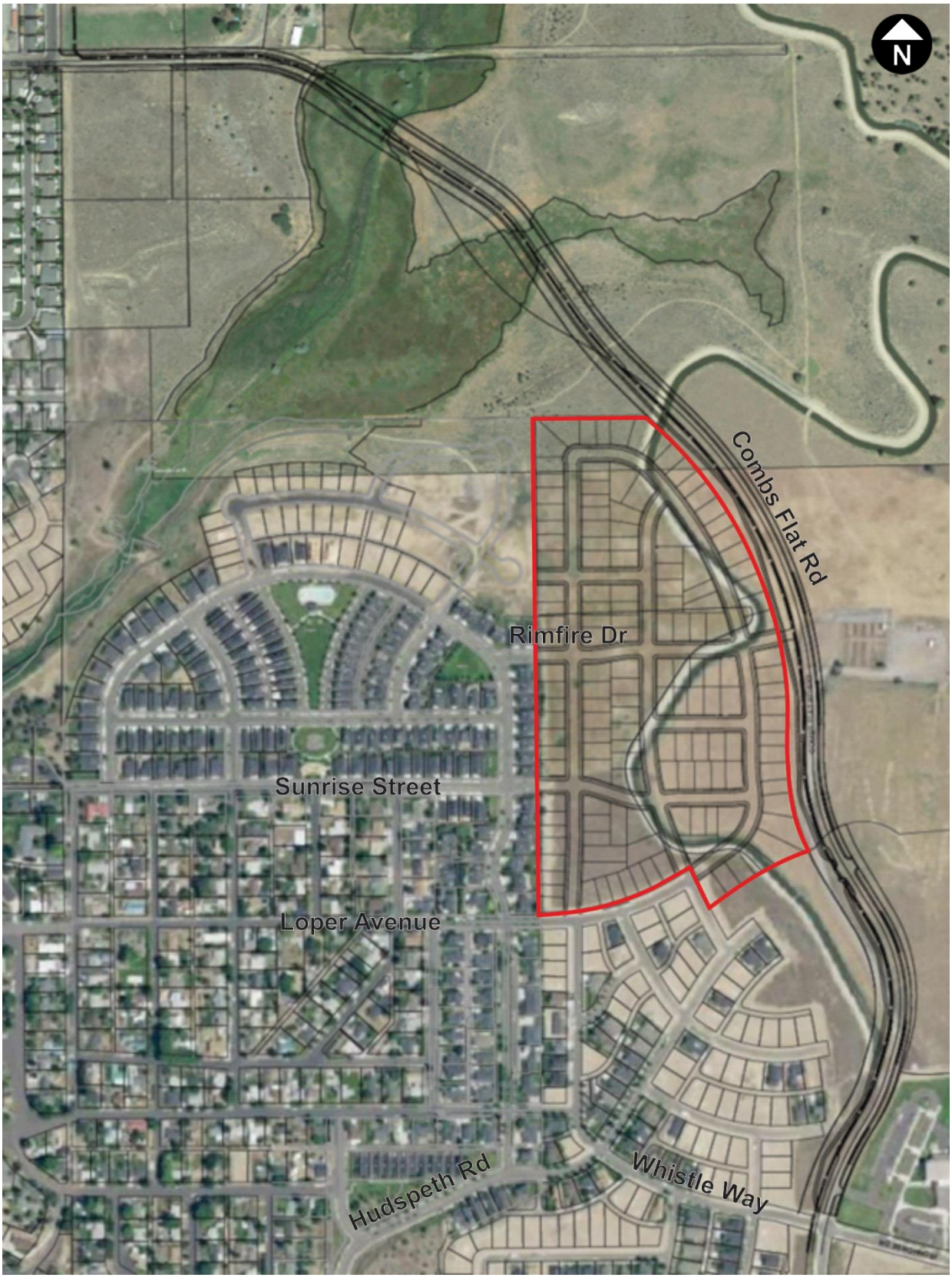


Figure 3. Preliminary Combs Flat Road Extension Alignment.
Source: AKS layout for Ochoco Pointe overlaid on DOWL alignment for Combs Flat Road.

DESCRIPTION OF THE PROPOSED DEVELOPMENT

The site of the proposed development is a 32.35-acre vacant parcel zoned R-2 *General Residential.* Portions of the site currently accommodate the canal alignment and adjacent berms. Directly west and south of the site are neighborhoods of single-family homes, while lands directly north and east are currently vacant. The City's Barnes Butte recreation area is located east of the canal, and Barnes Butte Elementary School is located to the southeast.

The preliminary site plan is included in Figure 4, illustrating the proposed street orientation and parcel lot lines. The Ochoco Pointe subdivision expansion includes 149 single-family lots served by the extension of the surrounding local streets: Rimfire Drive, Sunrise Street, Whistle Way, Meander Drive, and Loper Avenue. Three roads provide a generally north-south alignment through the site (Whistle Way, Meander Drive, and Loper Avenue) and four east-west roads are provided, two of which connect to the adjacent neighborhood to the west (Rimfire Drive, Sunrise Street). Rimfire Drive is stubbed on the east end of the site for future access to the Combs Flat Road extension.

The proposed subdivision plans include 55-foot right-of-way for the new streets, with a 36-foot pavement width to support on-street parking on both sides of the street. A property-tight five-foot wide sidewalk is also proposed throughout, with accessible crossings at all internal intersections. A typical cross-section for the local streets is shown in Figure 5.

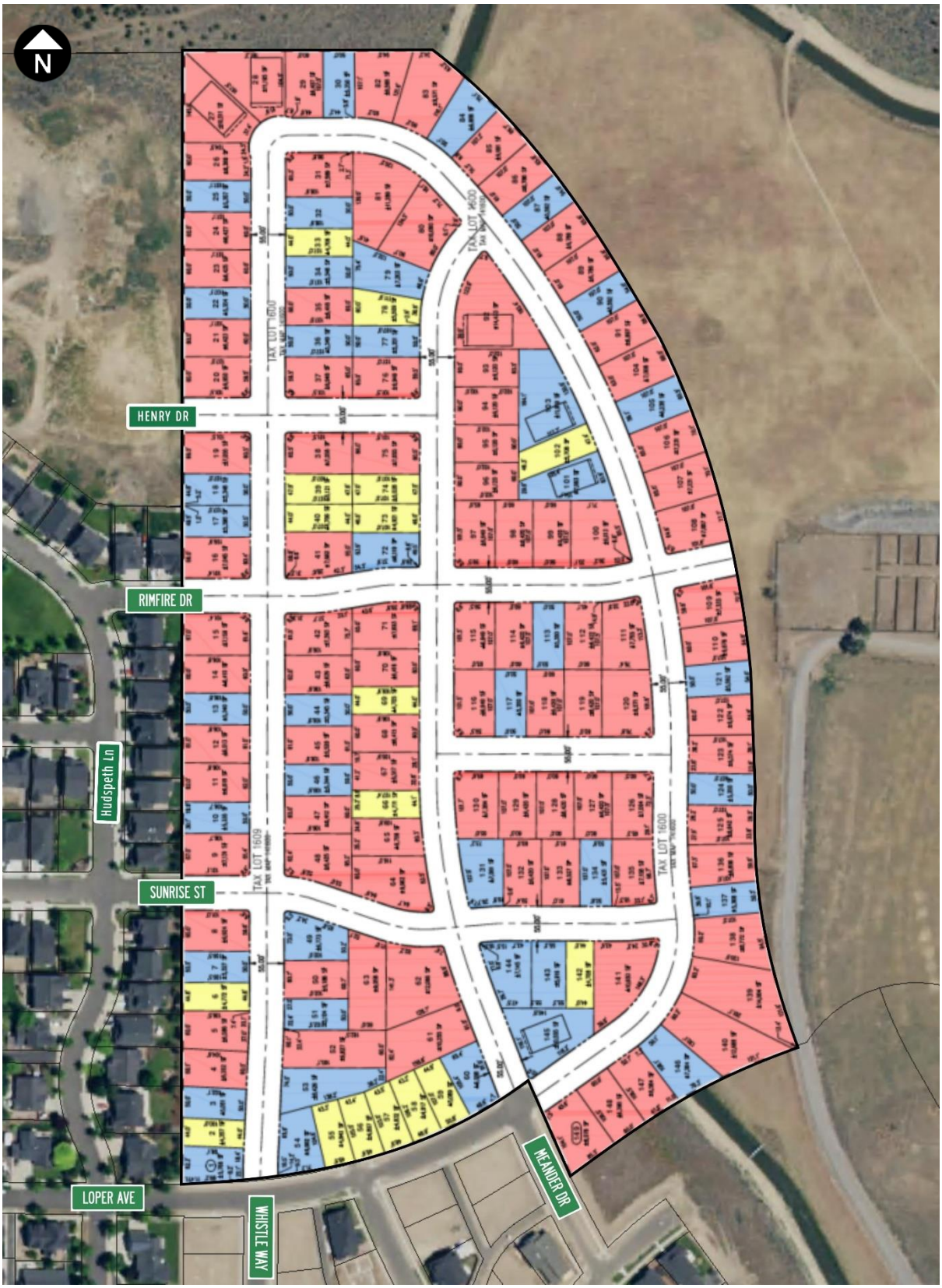


Figure 4. Preliminary Site Plan.
Source: AKS Engineering & Forestry, dated 6/9/21. Map Source: Crook County GIS.

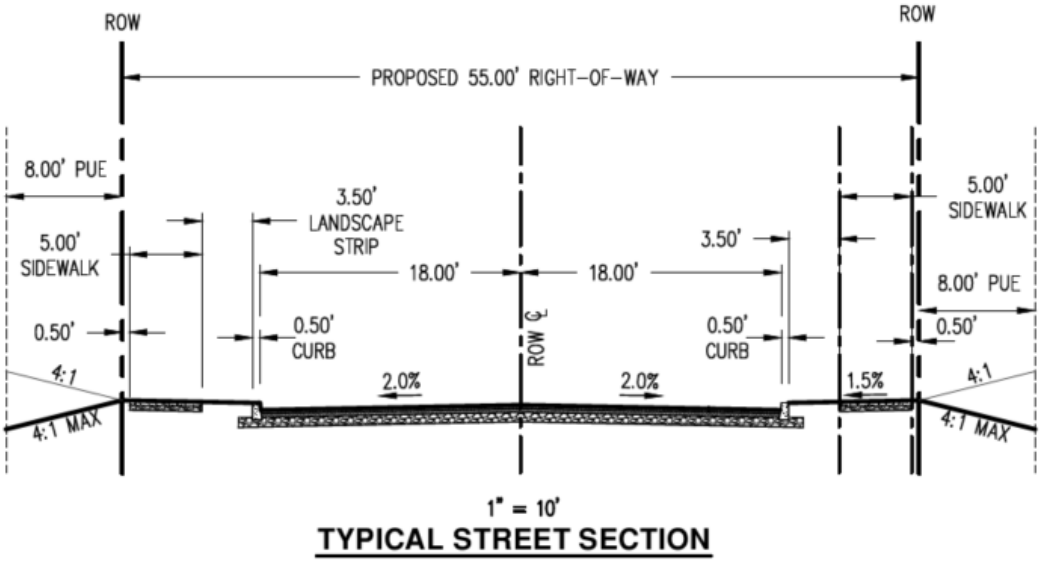


Figure 5. Planned Local Street Cross-Section. *Source: AKS Engineering & Forestry, dated 6/9/21.*

SURROUNDING TRANSPORTATION INFRASTRUCTURE

The *Local Street* Loper Avenue corridor is one of the major vehicular routes from the site to higher order roadways, connecting the site to the Main Street corridor to the west. The posted speed limit is 25 miles per hour. It offers a two-lane pavement cross section and allows for on-street parking. Sidewalks are in place adjacent to the newer residential neighborhoods but missing along most of the roadway.

Rimfire Drive, Whistle Way and Meander Drive are all *Local Streets* that connect the site to the nearby *Minor Collectors* of Hudspeth Lane and Hudspeth Road. These streets are all newer roadways built with the adjacent residential developments. They have sidewalks, on-street parking and no posted speed. Sunrise Street, a *Local Street*, similarly connects the site to Hudspeth Lane and has a speed posting of 25 miles per hour and partial sidewalks, with complete sidewalks provided adjacent to newer development.

Hudspeth Lane is a designated *Minor Collector* that is oriented north-south and connects the site and surrounding residential areas to Hudspeth Road, a *Minor Collector*. Hudspeth Lane has a two-lane cross-section and property tight sidewalks with on-street parking. There is no posted speed on Hudspeth Lane.

Hudspeth Road, a *Minor Collector*, connects from Laughlin Road on the southwest terminus to just east of Meander Drive with future plans to be extended to a Combs Flat Road extension. This roadway will provide one of the main routes from the site to 3rd Street west and the downtown area. Hudspeth Road has nearly complete sidewalks with a small section missing on the east side of the road near Laughlin Road that will presumably be completed with the adjacent property development. Most of Hudspeth Road has curbs, sidewalks and on-street parking, with curb extensions at many of the intersections to reduce pedestrian crossing distance and improve visibility.

N Main Street provides a major north-south route through the city connecting the north end of Prineville to the core area and 3rd Street (US 26/OR 126), continuing south as OR 27 along the Crooked River, and ultimately connecting to US 20 east of Bend. North of NE Peters Road, N Main Street is a two-lane roadway. South of NE Peters Road, the roadway widens to three lanes with paved shoulders and no curbs or sidewalks until it reaches the downtown area.

Less than 1,000 feet south of Loper Avenue along Main Street are two east-west streets that will support a significant number of the trips as they distribute to various destinations within the City of Prineville: NE 10th Street and NE 9th Street. NE 10th Street is a *Minor Arterial* to the west and a *Minor Collector* to the east and is minimally developed with a paved cross-section but no curbs or sidewalks. There is no on-street parking, rather the gravel shoulders are utilized for this purpose. The Main Street traffic signal at 10th Street was recently reconstructed and is intended to ultimately serve as the extension of 7th Street. Currently this road extends west as Lamonta Road, serving industrial and agricultural lands to the west. One block south is NE 9th Street, which is designated as a *Minor Arterial.* NE 9th Street contains a 3-lane cross-section with a two-way center turn-lane, bicycle lanes, curbs, sidewalks, and a posted speed limit of 25 mph. This facility provides a connection to the US 26 corridor at the west edge of Prineville.

Farther south is NE 7th Street, which is classified as a *Minor Collector* and turns into NE Laughlin Road, a *Minor Arterial*, to the east to serve the commercial areas on NE 3rd Street – US 26 on the east side of the City. It is a two-lane roadway with curbs, intermittent sidewalks, no bicycle lanes, and on-street parking.

NE 3rd Street/Highway 26 is classified by the city as a *Major Arterial* and as a *Statewide Highway* by ODOT. It provides the major east-west route through the city connecting north to Madras and to Oregon Highway 126 to Redmond. Within the study area, the highway has a three-lane cross-section with bicycle lanes throughout. Sidewalks are provided along most of the highway within the study area with more gaps east of Combs Flat Road. There is a speed posting of 30 miles per hour.

Combs Flat Road, a *Major Collector*, is a north-south roadway on the east side of Prineville. South of NE 3rd Street it becomes Oregon Highway 380, a state facility. It currently connects from 3rd Street north to just pass Whistle Way at the Barnes Butte Elementary School. Future plans will extend Combs Flat Road adjacent to the proposed development to connect back into Peters Road to the north. The newer section of Combs Flat Road has a two-lane cross-section with sidewalks and bicycle lanes. The older section near NE 3rd Street has bicycle lanes, but has some missing sidewalk segments.

Table 1 summarizes area roadway characteristics.

Table 1. Area Roadway Characteristics

Roadway	Functional Classification	Number of Lanes	Posted Speed	Sidewalks?	Bicycle Lanes?	Parking?
NE Loper Ave	Local Street	2-Lanes	25 mph	Partial	No	Yes
NE Rimfire Dr	Local Street	2-Lanes	Not Posted	Yes	No	Yes
NE Whistle Way	Local Street	2-Lanes	Not Posted	Yes	No	Yes
NE Meander Dr	Local Street	2-Lanes	Not Posted	Yes	No	Yes
NE Sunrise St	Local Street	2-Lanes	25 mph	Partial	No	Yes
NE Hudspeth Ln	Minor Collector	2-Lanes	Not Posted	Yes	No	Yes
NE Hudspeth Rd	Minor Collector	2-Lanes	Not Posted	Partial	No	Yes
N Main Street	Minor Arterial	3-Lanes	35 mph	No	Yes, south of Peters Road	No
NE 10th Street	Minor Arterial (W of Main) Minor Collector (E of Main)	2-Lanes	Not Posted	No	No	No
NE 9th Street	Minor Arterial	3-Lanes	25 mph	Yes	Yes	No
NE 7th Street/ NE Laughlin Rd	Minor Collector	2-Lanes	Not Posted	Partial	No	Yes
NE 3rd St/Hwy 26	Major Arterial	3-Lanes	30 mph	Partial	Yes	No
NE Combs Flat Rd	Major Collector (N of NE 3rd St)	2-Lanes	Not Posted	Partial	Yes	No

TRIP GENERATION

Trip generation estimates for the site were prepared based on the most current edition of the Institute of Transportation Engineers' (ITE) standard reference *Trip Generation, 11th Edition.* The land use category that applies to the proposed single-family home development is land use category 210: *Single-Family Detached Housing.* The ITE manual category description is included below:

- *Land Use 210: A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.*

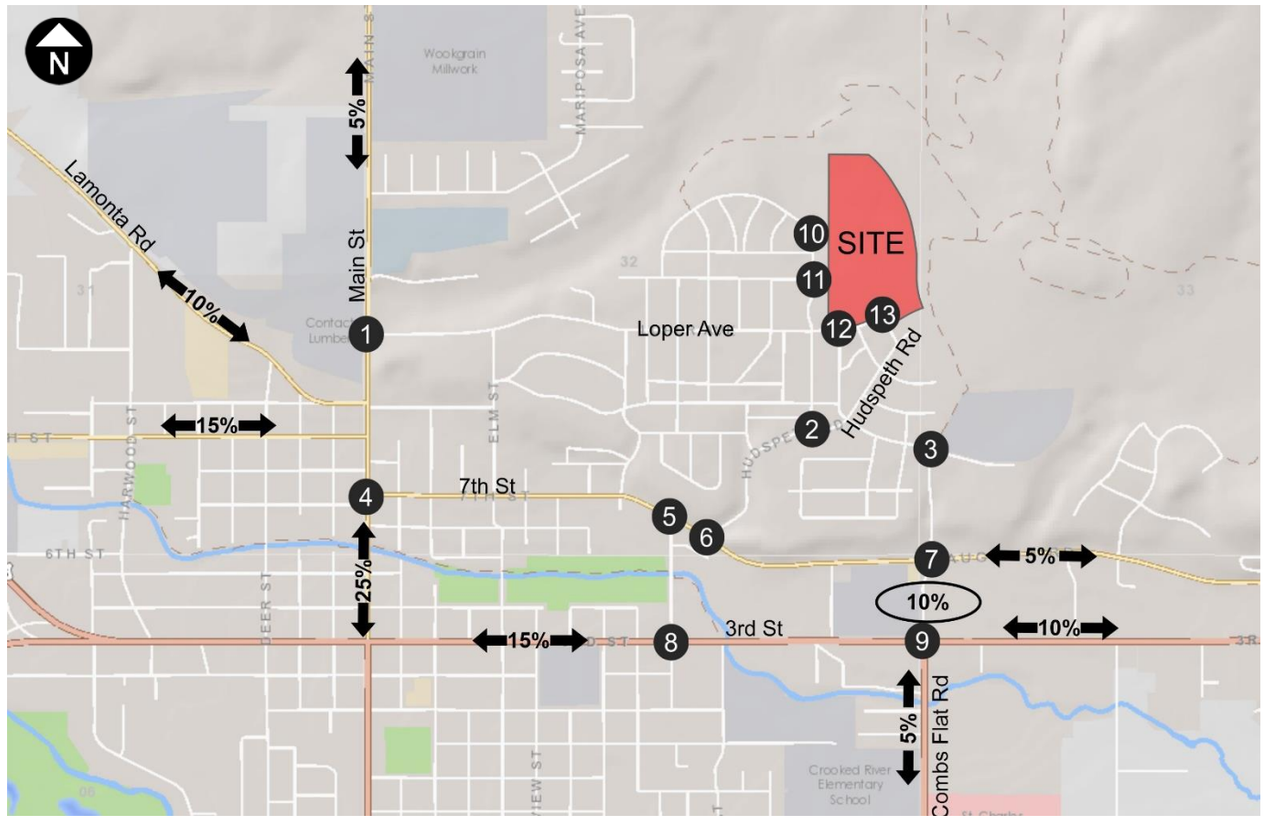
ITE manual average data was applied to the proposed development, and the resultant trip generation is shown in Table 2.

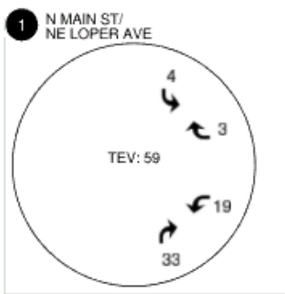
Table 2. Trip Generation Estimates (ITE 11th Edition)

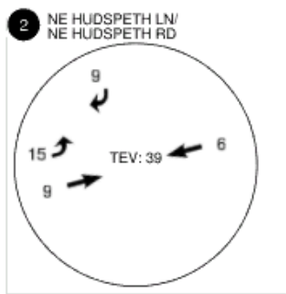
Land Use	ITE Code	Size	Daily Trips	Weekday PM Peak Hour		
				Total	In	Out
Single-Family Detached Housing	210	149 Units	1,405 *9.43/Unit*	140 *0.94/Unit*	88 *63%*	52 *37%*

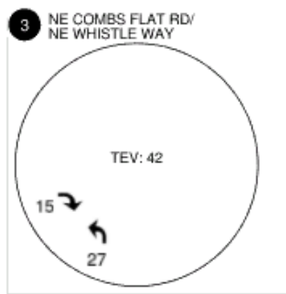
TRIP DISTRIBUTION AND ASSIGNMENT

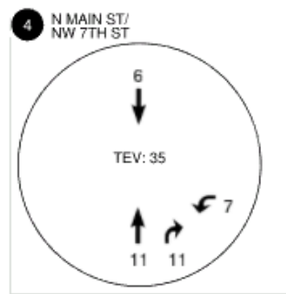
Trips were assigned to the transportation network based on historical traffic counts and the locations of attractions and destinations. With the site location on the northeast side of Prineville, the majority of trips will distribute towards the west to downtown, NE 3rd Street, 9th Street, and 10th Street, with a smaller number heading to the commercial areas directly south of the site off of Laughlin Road and NE 3rd Street. The distribution and assignment of site-generated trips are shown in Figure 6.

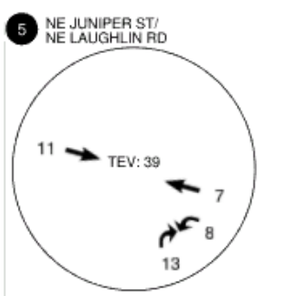


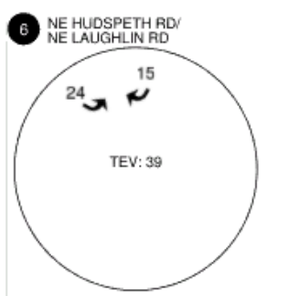


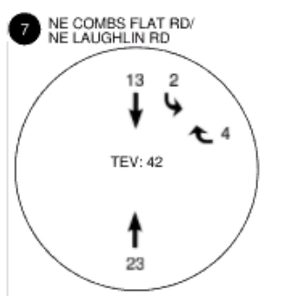


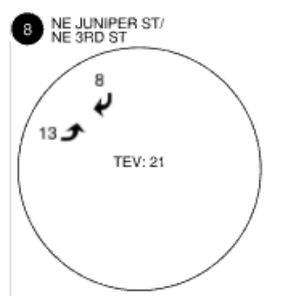


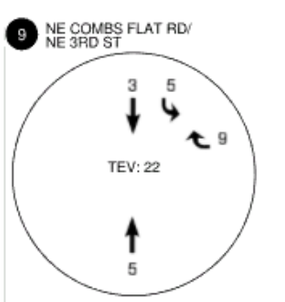


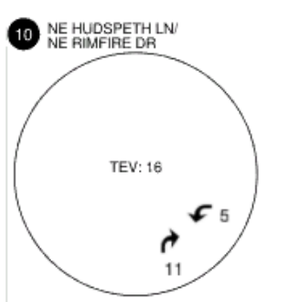


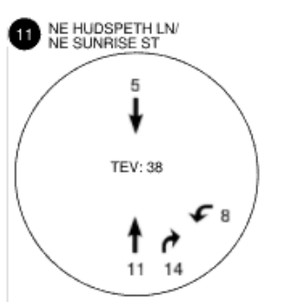


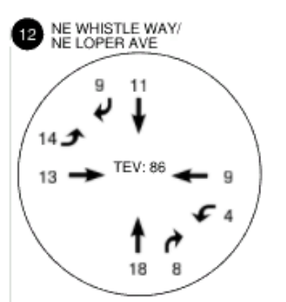












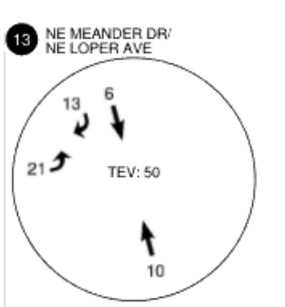


Figure 6. Estimated Trip Distribution and Assignment, Weekday PM Peak Hour.

STUDY AREA

The City of Prineville Transportation System Plan, Appendix 1 details the requirements for a Transportation Impact Analysis. Section 2.1 requires the *study area* to include:

> *… collector and arterial intersections affected by 25 or more weekday p.m. peak hour trips and those adjacent to the property frontage. The inclusion or exclusion of additional intersections shall be at the discretion of the City engineer.*

Based on the trip assignment illustrated in Figure 6, the following intersections meet the requirements for inclusion as *study intersections*:

- Intersection 1: N Main Street / NE Loper Avenue (>25 trips)
- Intersection 2: NE Hudspeth Lane / NE Hudspeth Road (>25 trips)
- Intersection 3: NE Combs Flat Road / NE Whistle Way (>25 trips)
- Intersection 4: N Main Street / NE 7th Street (>25 trips)
- Intersection 5: NE Juniper Street / NE Laughlin Road (>25 trips)
- Intersection 6: NE Hudspeth Road / NE Laughlin Road (>25 trips)
- Intersection 7: NE Combs Flat Road / NE Laughlin Road (>25 trips)
- Intersection 12: NE Whistle Way / NE Loper Ave (adjacent intersection)
- Intersection 13: NE Meander Drive / NE Loper Ave (adjacent intersection)

Two additional intersections were included in the analysis to assess the operations at the primary subdivision connections to NE 3rd Street.

- Intersection 8: NE Juniper Street / NE 3rd Street – US 26
- Intersection 9: NE Combs Flat Road / NE 3rd Street – US 26

SAFETY REVIEW

Crash records were obtained for all of Crook County from the ODOT crash database between January 2015 and December 2019. Crashes required for reporting during this period include those involving any level of personal injury or property damage exceeding $1,500 for crashes before 2018 and $2,500 for crashes during and after 2018. No crashes were reported at the following intersections:

- NE Hudspeth Lane / NE Hudspeth Road
- NE Combs Flat Road / NE Whistle Way
- NE Whistle Way / NE Loper Ave
- NE Meander Drive / NE Loper Ave

The crashes reported at the remaining intersections are summarized in Tables 3 and 4 along with the severity and crash types. As shown in Table 3, all intersections had a crash rate less than the statewide 90th percentile intersection crash rate for similar types of intersections. The N Main Street/NE 7th Street intersection is discussed further below since its crash rate is nearing the 90th percentile crash rate. A discussion is also included of the NE Juniper Road/NE 3rd Street – US 26 intersection due to the reported fatality.

Table 3. Reported Crash Summary (January 2015 through December 2019)

Intersection	# of Crashes	Severity			Intersection Crash Rate per MEV*	90th Percentile Rate
		Fatal	Injury	Non-Injury		
1: N Main St/ NE Loper Ave	1	0	1	0	0.05	0.293 *Urban 3ST*
4: N Main St/ NE 7th Street	6	0	2	4	0.27	0.293 *Urban 3ST*
5: NE Juniper St/ NE Laughlin Rd	2	0	1	1	0.16	0.293 *Urban 3ST*
6: NE Hudspeth Rd/ NE Laughlin Rd	2	0	1	1	0.16	0.293 *Urban 3ST*
7: NE Combs Flat Rd/ NE Laughlin Rd	3	0	1	2	0.25	n/a
8: NE Juniper St/ NE 3rd St – US 26	6	1	2	3	0.25	0.408 *Urban 4ST*
9: NE Combs Flat Rd/ NE 3rd St – US 26	17	0	12	5	0.60	0.860 *Urban 4SG*

*Million Entering Vehicles
3ST: Three-leg minor stop-control, 4ST: Four-leg minor stop-control, 4SG: Four-leg signalized

Table 4. Crash History (January 2015 through December 2019)

Intersection	Crash Type					
	Turning/ Angle	Rear-End	Sideswipe	Fixed Object	Backing	Other
1: N Main St/ NE Loper Ave	1	0	0	0	0	0
4: N Main St/ NE 7th Street	2	2	0	2	0	0
5: NE Juniper St/ NE Laughlin Rd	1	0	0	0	0	1
6: NE Hudspeth Rd/ NE Laughlin Rd	0	1	0	0	0	1
7: NE Combs Flat Rd/ NE Laughlin Rd	3	0	0	0	0	0
8: NE Juniper St/ NE 3rd St – US 26	1	4	0	0	0	1
9: NE Combs Flat Rd/ NE 3rd St – US 26	7	8	1	0	1	0

N Main Street / NE 7th Street

The unsignalized intersection of N Main Street and NE 7th Street provides a critical extension to the east side of Prineville. The intersection is slightly offset between the east and west side of N Main Street, with stop-sign control in the east-west directions. The eastern leg forms a parallel route to the NE 3rd Street corridor, continuing east toward the edge of the City as Laughlin Road where it connects to Combs Flat Road and the overall Iron Horse development. The crash records indicate that there were six reported collisions in the past five years.

- Two fixed object collisions were reported during the study period. One occurred in icy conditions and involved a northbound right-turning vehicle. The crash was attributed to driving too fast for the conditions and involved hitting a utility pole. No injuries were reported in this incident. The other fixed object crash occurred on a clear, dry day in the westbound direction. The records indicate the driver was physically ill and the crash resulted in personal injury.
- One rear-end crash was reported at the N Main Street/NE 7th Street intersection which occurred in the westbound direction on the east leg during daylight hours. Only property damage resulted from this crash. A second rear-end crash was reported to have occurred in the eastbound direction on the west leg approach to the intersection. Again, the weather was clear and dry, and no personal injury occurred.
- One reported turning collision involved an eastbound vehicle driven by a 19-year-old male turning to the north onto Main Street (left) and crashing into a northbound vehicle. No injuries were reported. The second turning movement collision was a left turn from the eastern leg into the intersection colliding with a northbound vehicle. The cause cited was inattention, and minor injuries were reported.

With the limited crash experience and low severity there were no patterns identified within these reported crashes that would require additional mitigation.

NE Juniper Street / NE 3rd Street

Six crashes were reported at this intersection over the five-year review period, which resulted in a crash rate of 0.25.

- One of these crashes resulted in a fatality. This crash occurred on July 18, 2015 at 2:00 a.m. A review of the crash details indicate that this was an angle collision involving a southbound vehicle being pursued by a police vehicle, disregarding the stop sign at NE 3rd Street and colliding with an eastbound vehicle. The driver of the southbound vehicle was not wearing a seatbelt and was under the influence of alcohol. The driver was ejected from the vehicle and later died.
- Four of the crashes were rear-end collisions. Two of these crashes occurred in the eastbound direction, one occurred in the westbound direction, and one occurred in the southbound direction. Two of the crashes involved a pedestrian (yielding) but were not pedestrian crashes. These could have been related to vehicles stopping for a pedestrian crossing NE 3rd Street. Another rear-end crash occurred reportedly due to an animal or insect in the vehicle interfering with the driver.
- One of the crashes was categorized as miscellaneous and involved a deer.

While the crash patterns show an elevated incidence at this higher-volume intersection, the crash rate is within an acceptable range and there was no identified mitigation measures to address the types of crashes reported.

Intersection Sight Distance

Intersection sight distance was field reviewed at the new connections to the subdivision, including the Whistle Way/Loper Avenue and Meander Drive/Loper Avenue intersections. The purpose of sight distance analysis is to ensure an adequate view of conflicting traffic is provided to drivers exiting the site.

The City of Prineville applies the minimum recommended sight distance criteria based on the standard reference *A Policy on Geometric Design of Highways and Streets, 7th Edition* published by the American Association of State Highway and Transportation Officials (AASHTO) in 2018 (commonly referred to as the *Green Book*). This reference provides the recommended sight distances as measured from a height of 3.5 feet 14.5 feet from the edge of travel way, based on the speed of the roadway (see Figure 7). The AASHTO reference is based on conflicts between motorists traveling along the roadway and motorists completing movements at the intersection.

The posted speed along Loper Avenue is 25 miles per hour, and the two-lane roadway is generally flat, with a horizontal curvature through both intersections. The site was visited and inventoried in October 2021, and adequate sight distance is available in both directions at each intersection as shown in Figures 8 through 13.

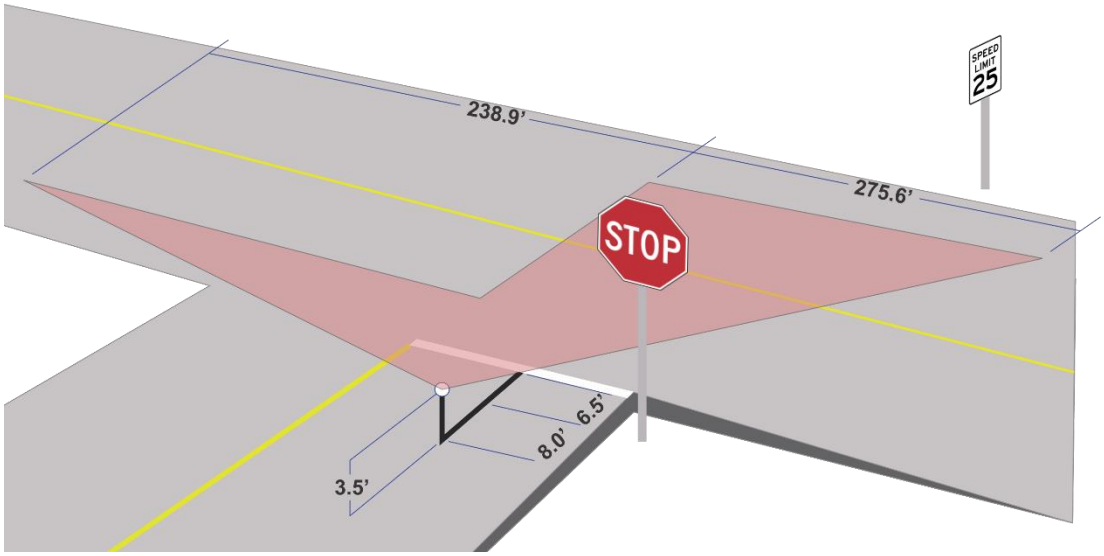


Figure 7. Intersection Sight Distance Requirements at local stop-controlled intersections within the site vicinity.

Figure 8. Facing east (left) along Loper Avenue from Meander Road.

Figure 9. Facing west (right) along Loper Avenue from Meander Road.

Figure 10. Facing due south at the Loper Avenue/Meander Road intersection.

Figure 11. Facing north toward the Loper Avenue/Whistle Way intersection.

Figure 12. Facing east along the Sunrise Street stubbed roadway.

Figure 13. Facing east along the Rimfire Drive stubbed roadway.

Field review showed that all of the stubbed roadways were established in a manner that anticipated the future extensions to the east, and clear sight lines are available to support the new approaches along the Loper Avenue intersections. No sight line deficiencies were identified.

TRAFFIC OPERATIONS

The traffic operations analysis was prepared at each of the study intersections during the weekday p.m. peak hour. The Transportation System Plan requires that traffic studies analyze the existing traffic, the background traffic at the projected year of project completion, and the traffic with the project at the year of project completion. This project is anticipated to be completed in the year 2026. A two-percent annual growth rate was applied to traffic volumes, a more aggressive annual growth rate than what was found in the TSP, which ranged from 0.9% for the NE 7th Street intersection with N Main Street to 1.3% for the Combs Flat Road/NE 3rd Street intersection.

Traffic counts were collected at N Main Street/NE 7th Street on January 20, 2021, and at the remaining intersections on September 23, 2021. The counts were conducted at all study intersections during the weekday p.m. peak period from 4:00 to 6:00 p.m. except for at the NE Combs Flat Road/NE Whistle Way intersection. This intersection is located adjacent to Barnes Butte Elementary School and was counted from 2:00 to 6:00 p.m. to cover the school departure time in addition to the weekday p.m. peak period.

The January traffic count includes the impact of reduced travel due to COVID-19. To account for the reduced travel, ODOT's regional statewide traffic counts from permanent count stations were reviewed between 2019, 2020, and 2021. The *Observed Statewide Traffic Volume Patterns: Related to COVID-19 Monitoring* report dated January 15, 2021, reports that on US 26 "weekday volumes have largely remained within 10% of previous year levels since December." A review of the average weekday volumes for US 26 for the week of January 4th to 10th between 2020 (pre-COVID) and 2021 shows only a 5% decrease in volumes. To compensate, the traffic volumes at N Main Street/NE 7th Street were increased by 5% to reflect what would otherwise be more typical conditions. The most recent report dated July 9, 2021 indicates that "Overall statewide traffic volumes are close to pre-COVID traffic volumes." Thus, the September 23, 2021 counts were not adjusted for any COVID-related impacts.

To account for the seasonal variations at the intersections on NE 3rd Street-US 26, ODOT's Automatic Traffic Recorders at Stations 07-001 (located on US 26, 2.03 miles west of the Ochoco dam) and 07-002 (located on OR 126, 0.35 miles west of the Deschutes – Crook County line) were reviewed for the past five years. Station 07-001 showed that September traffic counts should be increased by 6% to reflect peak July conditions, while Station 07-002 showed an adjustment factor of 3%. Station 07-001 is located east of Prineville and does not reflect commuter travel between Prineville and Bend and Redmond, which accounts for a large portion of Prineville travel. While Station 07-002 is located further away, it more closely reflects the seasonal travel trends within the City of Prineville. Therefore, a seasonal adjustment factor of 3% was applied to the NE 3rd Street intersections. No other intersections required a seasonal adjustment.

Table 5 summarizes the date of each traffic count and the adjustments applied to each intersection to estimate typical 2021 weekday peak hour traffic volumes.

Table 5. Traffic Count Volume Adjustments

Intersection	Count Date	COVID-19 Adjustment	Seasonal Adjustment
1: N Main St/ NE Loper Ave	9/23/2021	n/a	n/a
2: NE Hudspeth Ln/ NE Hudspeth Rd	9/23/2021	n/a	n/a
3: NE Combs Flat Rd/ NE Whistle Way	9/23/2021	n/a	n/a
4: N Main St/ NE 7th Street	1/20/2021	1.05	n/a
5: NE Juniper St/ NE Laughlin Rd	9/23/2021	n/a	n/a
6: NE Hudspeth Rd/ NE Laughlin Rd	9/23/2021	n/a	n/a
7: NE Combs Flat Rd/ NE Laughlin Rd	9/23/2021	n/a	n/a
8: NE Juniper St/ NE 3rd St – US 26	9/23/2021	n/a	1.03 *Applied to through volumes on US 26*
9: NE Combs Flat Rd/ NE 3rd St – US 26	9/23/2021	n/a	1.03 *Applied to through volumes on US 26*

The existing traffic conditions were analyzed using Synchro analysis software with the Highway Capacity Manual 6th Edition methodology. The following scenarios were analyzed:

- Existing Conditions: This analysis reflects traffic conditions during the peak fifteen-minutes of the peak evening commute hour. This scenario is used to calibrate the analysis models to current conditions. The peak hour generally ranged from 4:00 to 5:00 p.m. at the NE 3rd Street – US 26 intersections to 4:30 to 5:30 p.m. at the N Main Street/NE Loper Avenue intersection. Due to its proximity to Barnes Butte Elementary, the peak hour at NE Combs Flat Road/NE Whistle Way was from 2:00 to 3:00 p.m. coinciding with school release times. Conservatively, the individual peaks of each intersection were analyzed on the transportation system.
- Year 2026 "Without Project" Conditions: This analysis identifies how the area transportation system will operate in the build-out year of the proposed subdivision without the project. This includes a two-percent annual growth rate to account for area development that is likely to occur within the next five years, as well as inclusion of trips from the following developments:
    - Wild Horse Mesa Apartments/Multifamily development on NE Blackbear Street (assumed 50% complete)
    - Housing Works project located on NE Peters Road
    - Smith Landing located on west side of N Main Street
    - Stone Ridge Subdivision Phases 9 - 11/Parkview Estates located south of Housing Works
    - Stoneridge Terrace located south of Parkview Estates
    - Ironhorse Subdivision (final phase) located south of Boxcar Drive

  This analysis includes estimates of the traffic volumes at the NE Whistle Way/NE Loper Avenue and NE Meander Drive/NE Loper Avenue intersections with the completion of the surrounding developments by 2026.

- Year 2026 "With Project" Conditions: This analysis includes area growth and adds estimated trips from the proposed development.

The City's 2013 Transportation System Plan identifies the City's adopted performance standards. As identified within the TSP, for roadways within City jurisdiction the City of Prineville considers intersections to operate acceptably if they operate at Level of Service "E" or better during the peak hour, if they remain below their carrying capacity at two-way stop-controlled intersections and below a volume-to-capacity ratio of 0.90 at traffic signals, and if the 95th percentile vehicular queues can be contained within the available storage.

The NE Juniper Street/NE 3rd Street and NE Combs Flat Road/NE 3rd Street intersections are under the jurisdiction of ODOT. Based on the classification of NE 3rd Street-US 26 at NE Juniper Street as a *Statewide*, non-freight route highway in a Special Transportation Area, the target mobility standard is a volume-to-capacity (v/c) ratio of 0.95 or better. The NE Combs Flat Road/NE 3rd Street intersection is not within the Special Transportation Area and therefore has a target v/c ratio of 0.90 based on its classification and posted speed of less than 35 mph.

Figures 14 through 16 illustrate the weekday p.m. peak hour volumes throughout the study area during the respective study years. Table 6 summarizes the results of the transportation analysis and shows that all intersections currently meet operation standards and are expected to continue to do so in the future with the exception of the N Main Street/NE 7th Street intersection. This intersection is discussed further below.

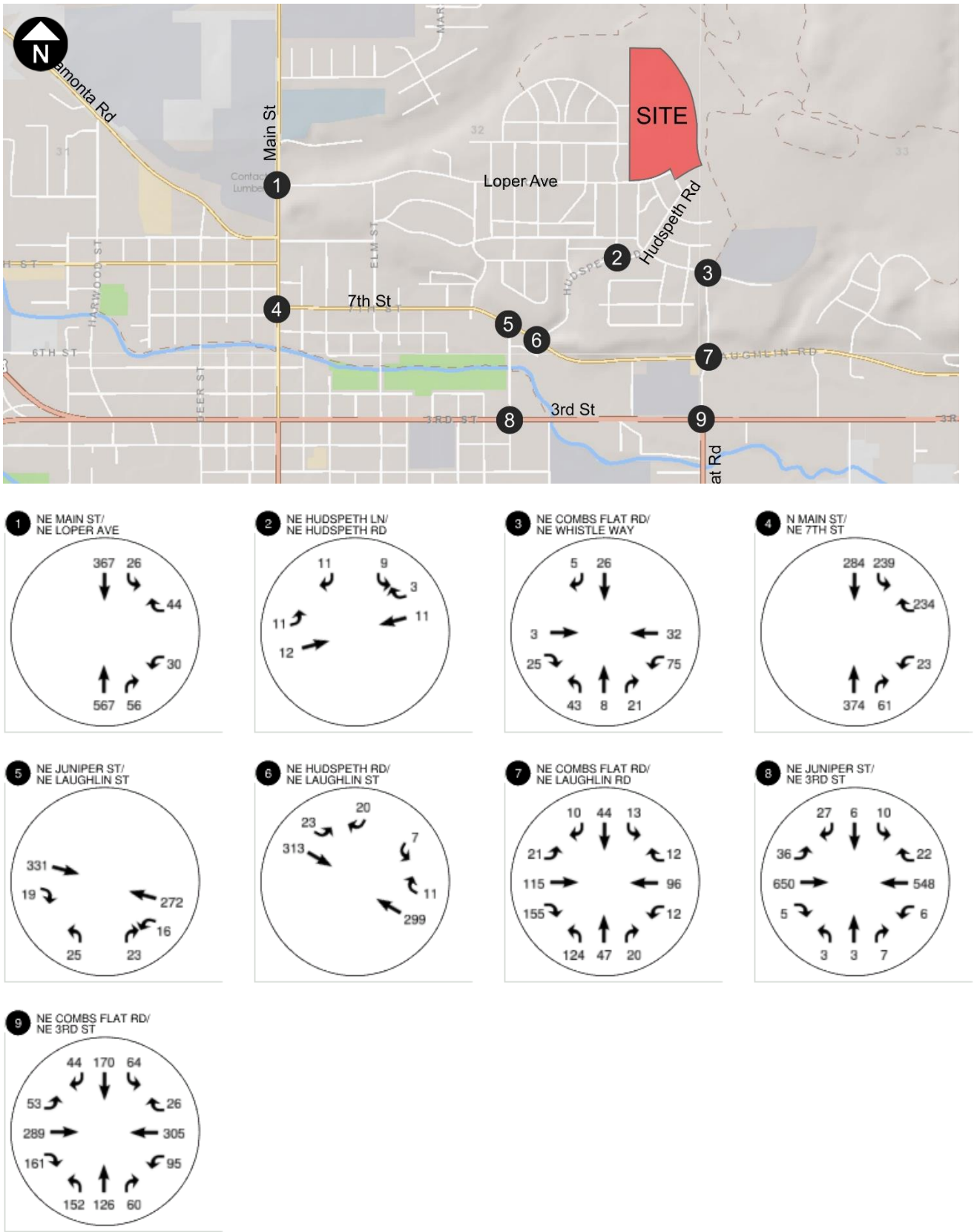


Figure 14. Existing Traffic Volumes, Weekday PM Peak Hour.

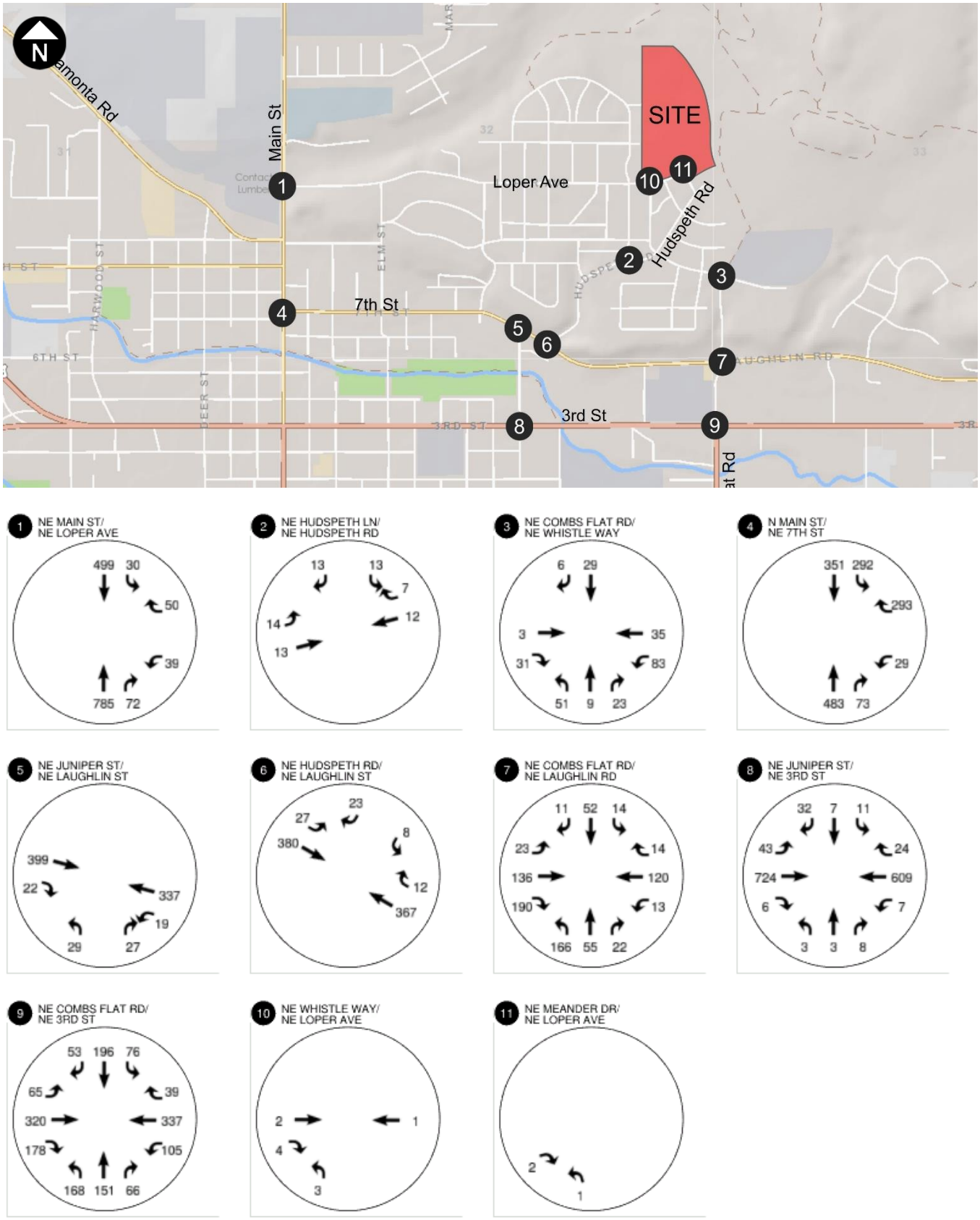


Figure 15. Year 2026 Without Project Traffic Volumes, Weekday PM Peak Hour

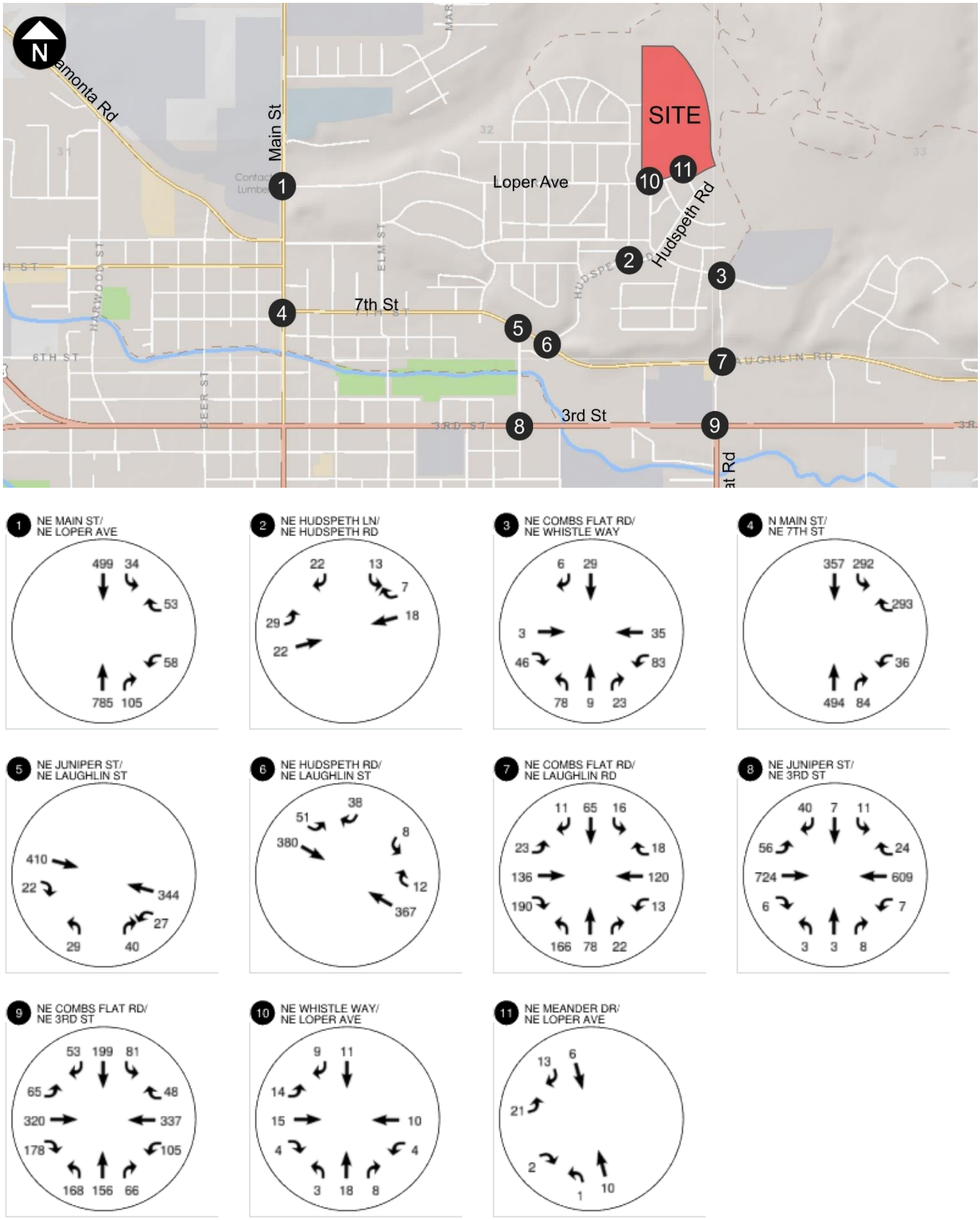


Figure 16. Year 2026 With Project Traffic Volumes, Weekday PM Peak Hour.

Table 6. Summary of Intersection Operations Analysis, Weekday PM Peak Hour

Intersection	Operation Standard	Existing Conditions			Year 2026 Without Project Conditions			Year 2026 With Project Conditions			Acceptable?
		LOS	Delay	v/c	LOS	Delay	v/c	LOS	Delay	v/c	
1: N Main St/ NE Loper Ave	LOS E v/c ≤ 1.00 Delay ≤ 50	WB L LOS C	15.4 s	0.08	WB L LOS C	20.2 s	0.15	WB L LOS C	22.0 s	0.22	Yes
2: NE Hudspeth Ln/ NE Hudspeth Rd	LOS E v/c ≤ 1.00 Delay ≤ 50	SB LR LOS A	8.7 s	0.03	SB LR LOS A	8.8 s	0.04	SB LR LOS A	8.9 s	0.05	Yes
3: NE Combs Flat Rd/ NE Whistle Way	LOS E v/c ≤ 1.00 Delay ≤ 50	WB LTR LOS C	20.8 s	0.55	WB LTR LOS C	23.7 s	0.61	WB LTR LOS D	31.7	0.70	Yes
4: N Main St/ NE 7th Street	LOS E v/c ≤ 1.00 Delay ≤ 50	WB LR LOS C	19.0 s	0.53	WB LR LOS E	40.1 s	0.81	**WB LR LOS F**	**50.9 s**	0.88	**No**
5: NE Juniper St/ NE Laughlin Rd	LOS E v/c ≤ 1.00 Delay ≤ 50	NB LR LOS B	13.3 s	0.11	NB LR LOS C	15.5 s	0.16	NB LR LOS C	15.7 s	0.19	Yes
6: NE Hudspeth Rd/ NE Laughlin Rd	LOS E v/c ≤ 1.00 Delay ≤ 50	SB LR LOS B	11.8 s	0.06	SB LR LOS B	13.0 s	0.07	SB LR LOS B	13.0 s	0.11	Yes
7: NE Combs Flat Rd/ NE Laughlin Rd	LOS E v/c ≤ 1.00 Delay ≤ 50	LOS B	10.5 s		LOS B	12.6 s		LOS B	13.0 s		Yes
8: NE Juniper St/ NE 3rd St	v/c ≤ 0.95	NB LTR LOS D	25.4 s	0.07	SB LTR LOS D	31.8 s	0.29	NB LTR LOS D	32.3 s	0.10	Yes
9: NE Combs Flat Rd/ NE 3rd St	v/c ≤ 0.90	LOS C	24.1 s	0.67	LOS C	28.8 s	0.77	LOS C	28.9 s	0.77	Yes
10: NE Whistle Way/ NE Loper Ave	LOS E v/c ≤ 1.00 Delay ≤ 50				NB LR LOS A	8.5 s	0.01	NB LTR LOS A	9.3 s	0.04	Yes
11: NE Meander Dr/ NE Loper Ave	LOS E v/c ≤ 1.00 Delay ≤ 50				NB L LOS A	8.5 s	0.01	EB LR LOS A	8.8 s	0.03	Yes

LOS: Level of Service; Delay: Critical Movement Delay; v/c: Volume-to-Capacity Ratio
WB: Westbound; EB: Eastbound; L: Left-turn; T: Through; R: Right-turn

N Main Street / NE 7th Street

The unsignalized intersection of Main Street/NE 7th Street is shown to experience high westbound delays in the future with a 95th percentile queue of nine vehicles. The shared westbound approach currently serves approximately 25 left-turns and 235 right-turns during the weekday p.m. peak hour. The approach demand is expected to grow by approximately 70 vehicles during the weekday p.m. peak hour from the approved developments, regional growth, and the proposed Ochoco Pointe Subdivision expansion. Combined with the expected growth on the mainline results in delays exceeding 50 seconds during the peak 15 minutes of the peak hour. However, while operating with high delays this movement is expected to meet the City's volume-to-capacity requirements with a v/c ratio of 0.88 for the minor street westbound approach.

Improvements are identified within the City's 2013 Transportation System Plan to better link 9th and 10th Streets to the east to Laughlin Road. The 9th/10th Street extension is identified as Project R1 in the TSP as a medium-term roadway improvement for approximately $2.52 million. This will relieve some of the demand on 7th Street. The following is text from the adopted Transportation System Plan:

Main Street

Future modifications to the Main Street corridor can help ease traffic congestion near 3rd Street, enhance safety, and address pedestrian and bicycle connectivity needs. These modifications may include:

- Development of parallel north-south routes to reduce reliance on Main Street. The Peters Road and Combs Flat connections will form a new route connecting into US 26 at the eastern and western edges of the City.
- Restriping Main Street to a three-lane cross-section from Peters Road south to 9th Street. The narrowing of the road will allow larger shoulder areas for bicycles and pedestrians.
- Construction of improvements at the Main Street/10th Street/Lamonta Road traffic signal to realign the intersection, provide pedestrian accommodations, and accommodate truck turns.
- A phased approach to provide an eastern continuation of the 9th/10th Street corridor will help relieve the volume of traffic currently using 7th Street to access Laughlin Road. Initially, truck traffic on the 9th Street corridor should be directed to use Deer Street to connect to Lamonta Road. As funding is available, a new connection between 9th Street and 10th Street should be made between Deer Street and Claypool Street. The rerouting to 10th Street, west of Main Street, aligns traffic to the Main Street/10th Street intersection where signal improvements are planned. The specific alignment of the roadway extension is also dependent on the impacts to the Price Slasher and associated mitigations. Therefore, the final alignment should be determined as part of future redevelopment opportunities or when funding becomes available for planning/construction.

The City's recent completion of the reconstruction of the Main Street/NE 10th Street intersection is the first step toward these long-term plans. The project has addressed the adjacent lack of pedestrian crossings, suitable truck turning movements, improved efficiency with protected and permissive left-turn signal phasing, and improvements to surrounding access configurations, as shown in Figure 17.

Figure 17. Main Street/NE 10th Street intersection. Photo date: October 13, 2021

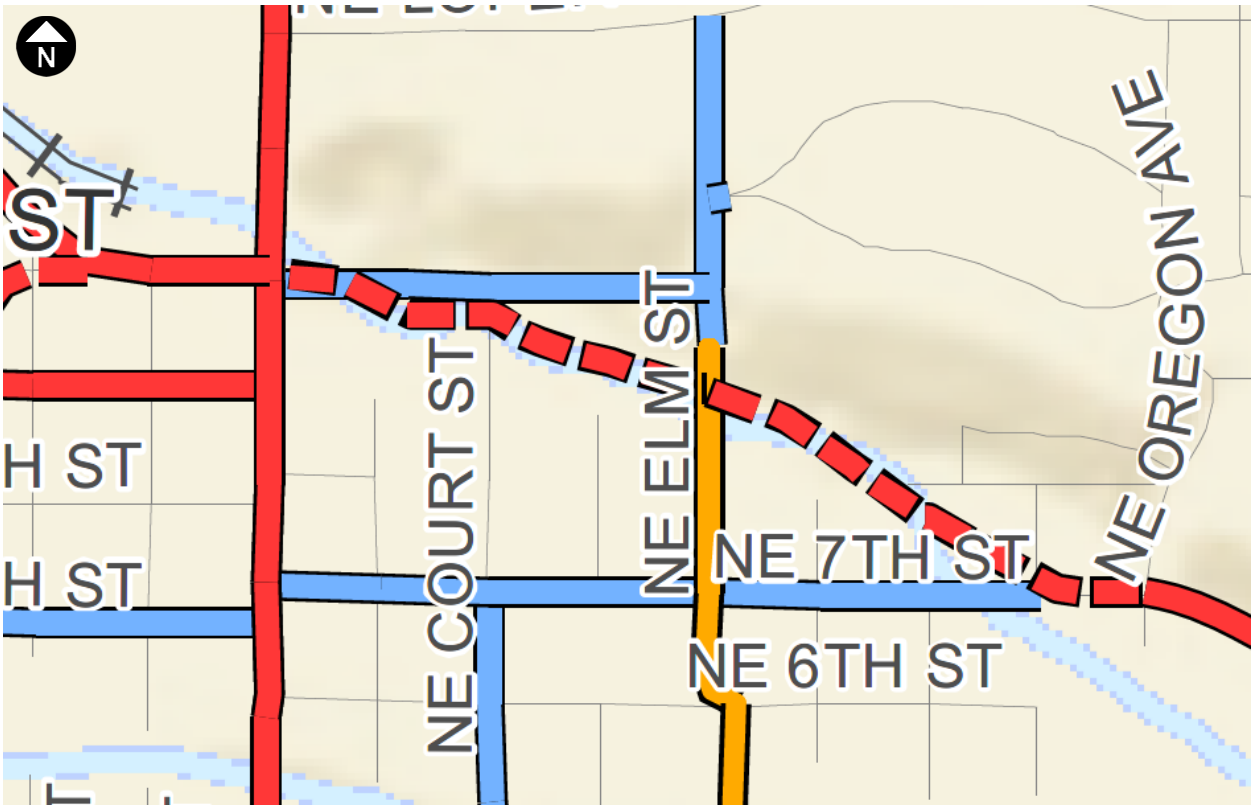


Figure 18. City of Prineville's Medium Term plans to connect NE 10th Street with the 7th Street corridor.

Theoretically, installation of a separate westbound right-turn lane at the N Main Street/NE 7th Street intersection would significantly improve conditions bringing the westbound left-turn movement to a LOS "D" and a v/c ratio of 0.23 and the westbound right-turn movement to LOS "C" and a v/c ratio of 0.65. While the side-by-side unsignalized turning movements can reduce sight lines, this would help alleviate current congestion as an interim fix until the 10th Street extension to NE 7th Street as shown within the City's adopted Transportation System Plan could be fully completed. However, with the limited right-of-way and adjacent utility poles it does not appear that this would be a feasible near-term improvement. If there are any City plans to relocate these utilities out of the sidewalks it is recommended that this treatment be considered.

As an interim solution the City may want to consider designating the intersection for eastbound right-turns only. This could be implemented through a Right-Turn Only sign below the stop sign supplemented with pavement stenciling and advance signage directing left-turning traffic to NE 6th Street, as shown in Figure 19. The right-turns operate with low delay and are the predominant movement at the intersection, and with the gridded street network there are many other opportunities to turn left.

Figure 19. Interim right-turn only signing and striping at NE 7th Street/N Main Avenue.

NE Combs Flat Road / NE Whistle Way

High delays are being experienced at the Combs Flat/Whistle Way intersection as this serves as the primary Barnes Butte Elementary School access and will be a primary connection to the new subdivision. While operating with high delays and limited periods of congestion, the intersection operates within an acceptable performance standard per City Code. This intersection is located adjacent to the Barnes Butte Elementary School, southeast of the proposed Ochoco Pointe subdivision expansion and in a residential area. As there are no other paved roads to the school from the north or east, all school traffic utilizes the Combs Flat Road/Whistle Way intersection. This is a two-way stop-controlled intersection with stop signs posted on the east and west legs of Whistle Way and Ironhorse Drive. The school day has a staggered release schedule with the youngest grade being released at 1:55 p.m. and the oldest grades at 2:02 p.m.

Turning movement counts were collected at this intersection on Thursday, September 23, 2021, from 2:00 p.m. to 6:00 p.m. While area intersections had a weekday p.m. peak hour starting between 4:00 p.m. and 4:30 p.m. the peak volumes were recorded at this intersection between 2:00 and 2:15 p.m., consistent with the release times. Typical single-family homes generate trips throughout the weekday with a morning peak around 7:00 a.m. and a p.m. peak around 4:00 p.m. Figure 20 shows the typical distribution of traffic from single family homes throughout a weekday as provided in the Trip Generation Manual Appendices compared to the traffic volumes collected at the NE Combs Flat Road/NE Whistle Way intersection adjacent to the school.

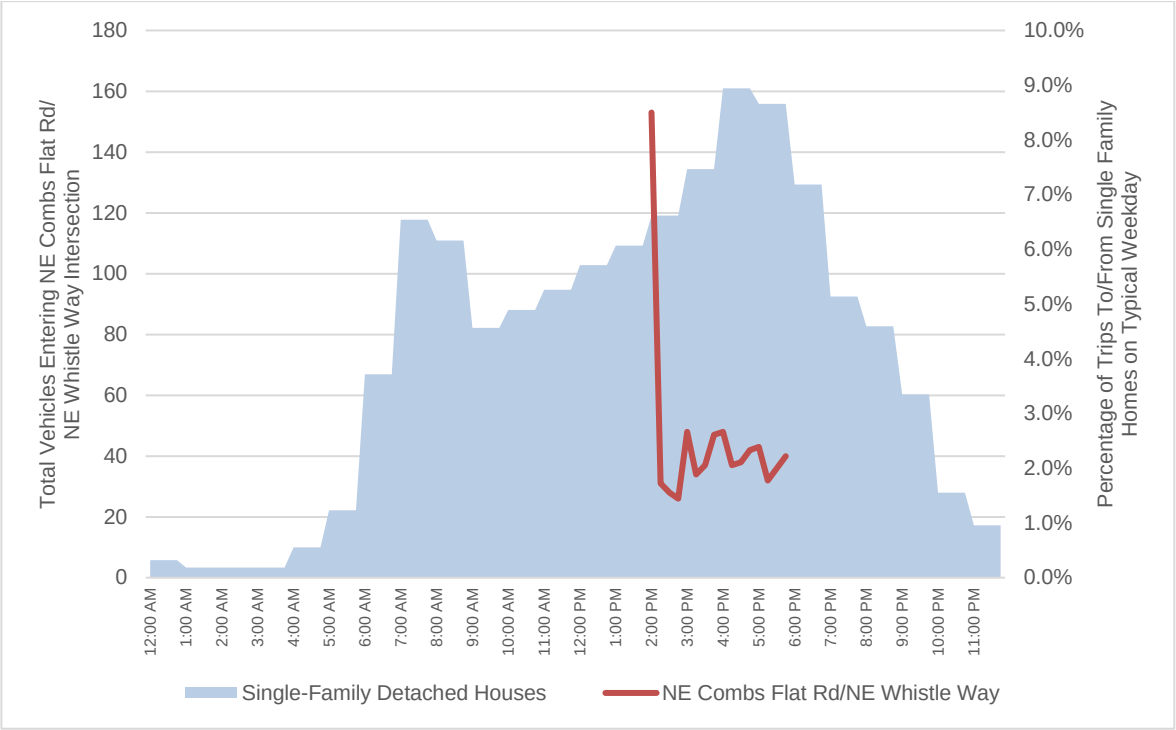


Figure 20. Comparison of Traffic Patterns at NE Combs Flat Road/NE Whistle Way to Typical Residential Neighborhood.

The analysis within this report conservatively analyzed this intersection during the afternoon peak from 2:00 to 3:00 p.m. and added in the site-generated trips from the evening peak of a typical single-family neighborhood from around 4:00 to 5:00 p.m., which effectively shows the impact of combining what are offset peaks. The resulting review shows that this intersection meets operation requirements in 2026 despite the conservative analysis, albeit with high delays and queuing.

A planned mitigation will be the extension of Combs Flat Road north of its current terminus to connect to NE Peters Road. The City is currently in the design stages for this connection, and it is expected to substantially modify area travel patterns when complete. This corridor will allow the school trips (and those from the new neighborhood) to disperse in other directions, reducing the bottleneck that occurs at the Whistle Way intersection with passenger cars and buses.

Findings and Recommendations

Based on this review, the proposed 149-lot subdivision is forecast to generate 1,405 daily trips (including 140 trips during the weekday p.m. peak hour). The trips are expected to use Loper Avenue, Hudspeth Road, and Combs Flat Road to access the major roadways and commercial areas.

Major intersections along the primary access route can accommodate the additional trips, with the exception of the westbound approach at the N Main Street/NE 7th Street intersection which exceeds City performance standards by 2026. This approach has additional carrying capacity, but will operate with longer delays in 2026 with the proposed development. Improvements are already identified in the City's 2013 Transportation System Plan to extend 9th/10th Street east to Laughlin Road, which will reroute traffic from the N Main Street/NE 7th Street intersection. As an interim solution the City may want to consider modifying the intersection to allow westbound right-turns only, rerouting the much lower volume of left-

turns to NE 6th Street. Widening to provide separate left- and right-turn lanes would also reduce delays substantially, but the adjacent utilities would preclude this treatment as a near-term option.

Access to the site is provided through the extension of the adjacent local streets. These include Rimfire Drive, Sunrise Street, Loper Avenue, Whistle Way, and Meander Drive. When Combs Flat Road is extended north on the east edge of the site, Rimfire Drive will provide a direct connection between the site and Combs Flat Road. This will provide another route to the north and a more direct route to the south to Laughlin Road and NE 3rd Street – US 26.

This subdivision project will be required to pay SDC fees toward regional system impacts, which includes payments towards the planned Combs Flat Road extension and connection to Main Street. This improvement will substantially modify the travel patterns identified within this report.

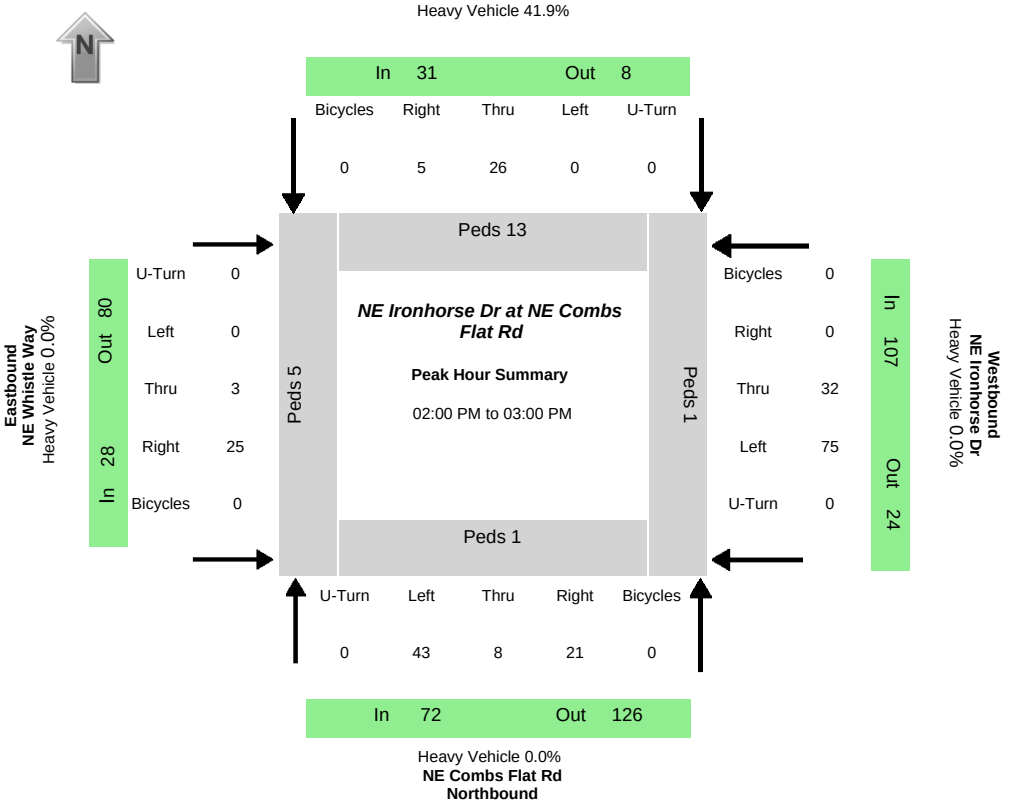
Thank you for the opportunity to provide this transportation study in support of the Ochoco Pointe Subdivision expansion. Please let me know if you have any questions on this analysis at (503) 997-4473 or via email at joe@transightconsulting.com.

Attachments:

- Traffic Count Worksheets
- Safety Summary Worksheets
- Existing Conditions LOS Worksheets
- Year 2026 Without Project LOS Worksheets
- Year 2026 With Project LOS Worksheets

K-D-N
KEY DATA NETWORK

Data Provided by K-D-N.com 503-594-4224	
N/S street	*NE Combs Flat Rd*
E/W street	*NE Whistle Way*
City, State	Prineville OR
Site Notes	
Location	44.307875 - -120.826686
Start Date	Thursday, September 23, 2021
Start Time	02:00:00 PM
Weather	
Study ID #	
Peak Hour Start	02:00:00 PM
Peak 15 Min Start	02:00:00 PM
PHF (15-Min Int)	0.39



Peak-Hour Volumes (PHV)

Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
43	8	21	0	0	26	5	0	0	3	25	0	75	32	0	0	72	31	28	107	126	8	80	24

Percent Heavy Vehicles

0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	41.9%	0.0%	0.0%	10.3%	0.0%	0.0%	0.0%

PHV- Bicycles

Northbound				Southbound				Eastbound				Westbound				
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	**Sum**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHV - Pedestrians

in Crosswalk				
NB	SB	EB	WB	**Sum**
1	13	5	1	20

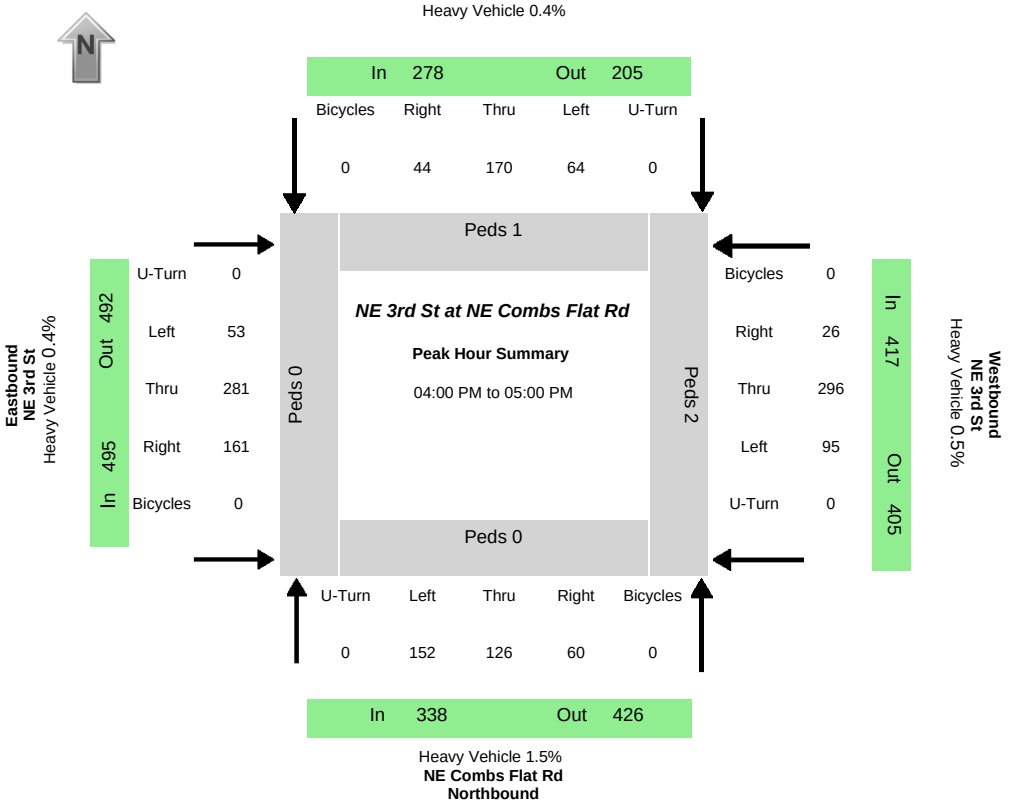
All Vehicle Volumes

	Northbound NE Combs Flat Rd				Southbound NE Combs Flat Rd				Eastbound NE Whistle Way				Westbound NE Ironhorse Dr				15 Min	1 HR
Time	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	Sum
02:00:00 PM	2	0	11	0	0	4	0	0	0	1	1	0	13	9	0	0		
02:05:00 PM	3	1	4	0	0	8	2	0	0	1	0	0	31	12	0	0		
02:10:00 PM	4	2	0	0	0	7	0	0	0	0	5	0	23	9	0	0	153	
02:15:00 PM	4	0	2	0	0	0	1	0	0	0	3	0	0	0	0	0	122	
02:20:00 PM	1	1	1	0	0	1	0	0	0	1	2	0	0	0	0	0	67	
02:25:00 PM	3	2	1	0	0	1	1	0	0	0	4	0	1	1	0	0	31	
02:30:00 PM	4	0	0	0	0	2	0	0	0	0	1	0	1	0	0	0	29	
02:35:00 PM	10	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	34	
02:40:00 PM	5	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	28	
02:45:00 PM	3	2	0	0	0	0	1	0	0	0	2	0	1	0	0	0	29	
02:50:00 PM	2	0	1	0	0	1	0	0	0	0	3	0	2	1	0	0	27	
02:55:00 PM	2	0	0	0	0	1	0	0	0	0	1	0	3	0	0	0	26	238
03:00:00 PM	6	1	0	0	0	2	1	0	0	0	8	0	1	0	0	0	36	216
03:05:00 PM	2	1	0	0	0	3	0	0	0	1	2	0	1	1	0	0	37	165
03:10:00 PM	4	0	0	0	0	4	2	0	0	0	6	0	1	1	0	0	48	133
03:15:00 PM	2	1	0	0	0	5	1	0	0	0	2	0	0	0	0	0	40	134
03:20:00 PM	3	0	0	0	0	6	0	0	0	1	2	0	1	0	0	0	42	140
03:25:00 PM	1	0	1	0	0	1	1	0	0	0	3	0	3	0	0	0	34	136
03:30:00 PM	3	0	2	1	0	1	0	0	0	0	2	0	1	0	0	0	33	138
03:35:00 PM	7	0	0	0	0	0	0	0	0	0	7	0	2	1	0	0	37	143
03:40:00 PM	2	0	1	0	0	4	0	0	0	0	3	0	0	0	0	0	37	145
03:45:00 PM	6	0	2	0	0	0	0	0	0	0	7	0	1	0	0	0	43	152
03:50:00 PM	7	1	0	0	0	1	0	0	0	0	4	0	0	1	0	0	40	156
03:55:00 PM	6	1	2	0	0	1	0	0	0	0	4	0	3	0	0	0	47	166

04:00:00 PM	7	1	0	0	0	1	1	0	0	1	4	0	1	1	0	0	48	164
04:05:00 PM	6	0	1	0	0	2	0	0	0	0	4	0	0	1	0	0	48	167
04:10:00 PM	5	0	1	0	0	1	0	0	0	0	9	0	0	1	0	0	48	166
04:15:00 PM	5	0	2	0	0	2	0	0	0	0	4	0	2	1	0	0	47	171
04:20:00 PM	4	0	1	0	0	0	0	0	0	0	5	0	1	0	0	0	44	169
04:25:00 PM	6	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	37	169
04:30:00 PM	4	1	1	0	0	0	0	0	0	0	5	0	0	0	0	0	32	170
04:35:00 PM	6	2	3	0	0	0	0	0	0	0	5	0	2	0	0	0	39	171
04:40:00 PM	3	0	0	0	0	0	1	0	0	0	2	0	1	2	0	0	38	170
04:45:00 PM	8	1	3	0	0	1	1	0	0	0	4	0	1	0	0	0	46	173
04:50:00 PM	4	0	1	0	0	1	1	0	0	0	3	0	2	1	0	0	41	172
04:55:00 PM	2	2	2	0	0	1	0	0	1	0	1	0	1	0	0	0	42	165
05:00:00 PM	1	3	1	0	0	1	0	0	0	0	3	0	1	0	0	0	33	158
05:05:00 PM	4	2	3	0	0	0	0	0	0	0	3	0	1	0	0	0	33	157
05:10:00 PM	5	3	0	0	0	2	0	0	1	1	4	0	3	1	0	0	43	160
05:15:00 PM	3	0	2	0	0	2	0	0	0	0	2	0	0	1	0	0	43	154
05:20:00 PM	5	0	0	0	0	0	0	0	0	0	5	0	1	0	0	0	41	154
05:25:00 PM	1	1	1	0	0	0	0	0	0	0	7	0	0	1	0	0	32	155
05:30:00 PM	2	2	0	0	0	0	0	0	0	0	6	0	0	0	0	0	32	154
05:35:00 PM	3	3	0	0	0	1	0	0	0	0	2	0	1	0	0	0	31	146
05:40:00 PM	7	1	1	0	0	2	0	0	0	0	4	0	1	0	0	0	36	153
05:45:00 PM	5	1	1	0	0	2	0	0	1	1	3	0	0	1	0	0	41	149
05:50:00 PM	5	2	0	0	0	2	0	0	0	0	1	0	3	1	0	0	45	150
05:55:00 PM	4	1	0	0	0	1	2	0	0	0	3	0	0	0	0	0	40	151

K-D-N
KEY DATA NETWORK

Data Provided by K-D-N.com 503-594-4224	
N/S street	*NE Combs Flat Rd*
E/W street	*NE 3rd St*
City, State	Prineville OR
Site Notes	
Location	44.302911 - -120.827004
Start Date	Thursday, September 23, 2021
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:00:00 PM
Peak 15 Min Start	04:10:00 PM
PHF (15-Min Int)	0.89



Peak-Hour Volumes (PHV)

Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
152	126	60	0	64	170	44	0	53	281	161	0	95	296	26	0	338	278	495	417	426	205	492	405

Percent Heavy Vehicles

0.0%	4.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	1.5%	0.4%	0.4%	0.5%	0.0%	2.4%	0.4%	0.7%

PHV- Bicycles

Northbound				Southbound				Eastbound				Westbound				
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	**Sum**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHV - Pedestrians

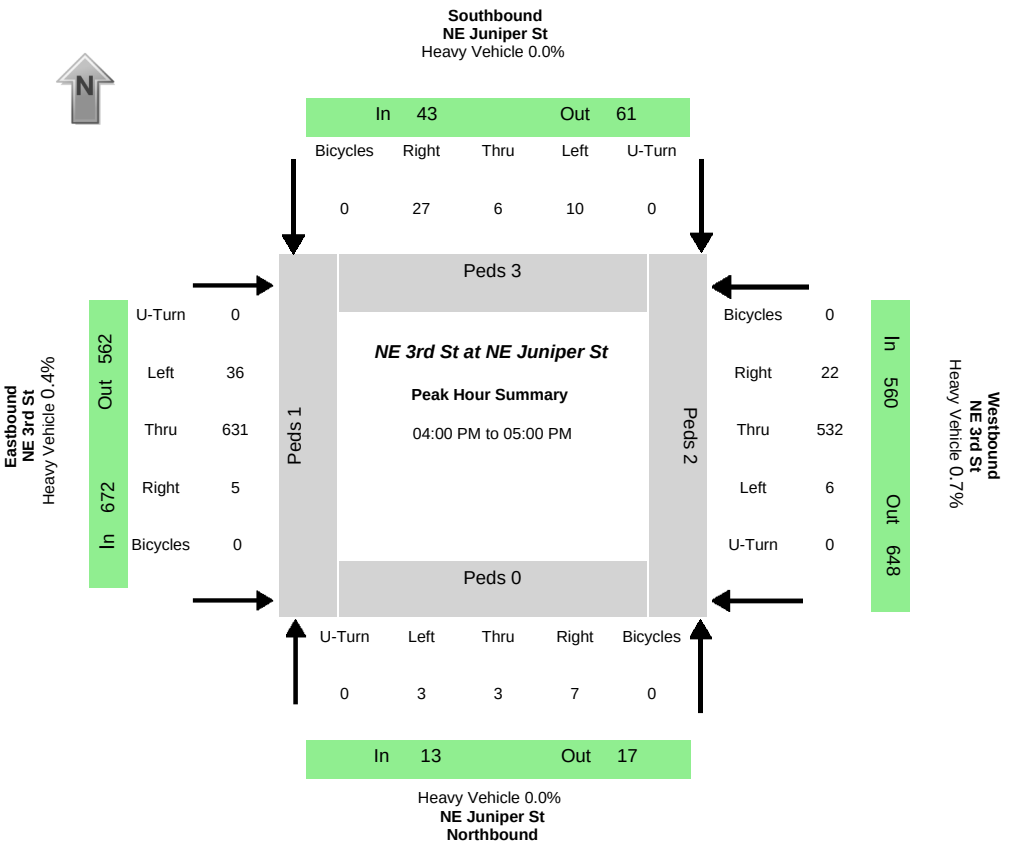
in Crosswalk				
NB	SB	EB	WB	**Sum**
0	1	0	2	3

All Vehicle Volumes

	Northbound NE Combs Flat Rd				Southbound NE Combs Flat Rd				Eastbound NE 3rd St				Westbound NE 3rd St				15 Min	1 HR
Time	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	Sum
04:00:00 PM	16	16	10	0	6	11	2	0	2	18	16	0	11	30	1	0		
04:05:00 PM	22	12	7	0	5	12	4	0	1	29	18	0	9	21	1	0		
04:10:00 PM	10	12	7	0	6	13	7	0	5	31	12	0	7	26	5	0	421	
04:15:00 PM	16	15	6	0	12	17	6	0	6	24	9	0	8	17	1	0	419	
04:20:00 PM	20	12	4	0	5	21	5	0	4	23	18	0	6	28	6	0	430	
04:25:00 PM	14	10	3	0	7	19	0	0	6	13	7	0	8	27	2	0	405	
04:30:00 PM	6	8	8	0	6	13	3	0	6	23	14	0	5	30	3	0	393	
04:35:00 PM	9	11	4	0	0	6	4	0	6	26	10	0	16	34	0	0	367	
04:40:00 PM	13	8	5	0	6	6	1	0	5	26	12	0	7	22	3	0	365	
04:45:00 PM	4	7	1	0	4	22	4	0	4	26	20	0	6	19	1	0	358	
04:50:00 PM	13	14	4	0	6	21	3	0	3	23	14	0	4	24	1	0	362	
04:55:00 PM	9	1	1	0	1	9	5	0	5	19	11	0	8	18	2	0	337	1528
05:00:00 PM	11	7	1	0	6	18	1	0	8	22	9	0	7	18	1	0	328	1498
05:05:00 PM	15	7	6	0	4	15	8	0	6	15	13	0	3	18	3	0	311	1470
05:10:00 PM	14	4	5	0	2	9	7	0	5	27	18	0	4	24	3	0	344	1451
05:15:00 PM	10	11	3	0	4	8	5	0	5	16	19	0	10	20	3	0	349	1428
05:20:00 PM	13	12	5	1	8	20	4	0	5	13	14	0	4	20	4	0	359	1399
05:25:00 PM	10	9	6	0	2	13	3	0	4	23	12	0	8	21	3	0	351	1397
05:30:00 PM	10	11	2	0	3	9	5	0	5	30	5	0	4	28	4	0	353	1388
05:35:00 PM	7	14	5	0	1	5	3	0	3	27	12	0	3	18	1	0	329	1361
05:40:00 PM	16	11	6	0	4	10	3	0	9	20	23	0	6	10	1	0	334	1366
05:45:00 PM	13	9	2	0	1	15	3	0	4	24	12	0	5	14	0	0	320	1350
05:50:00 PM	10	4	1	0	4	14	1	0	8	14	14	0	7	27	1	0	326	1325
05:55:00 PM	7	7	2	0	1	5	1	0	1	21	22	0	7	21	3	0	305	1334

K-D-N
KEY DATA NETWORK

Data Provided by K-D-N.com 503-594-4224	
N/S street	*NE Juniper St*
E/W street	*NE 3rd St*
City, State	Prineville OR
Site Notes	
Location	44.302920 - -120.836121
Start Date	Thursday, September 23, 2021
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:00:00 PM
Peak 15 Min Start	04:35:00 PM
PHF (15-Min Int)	0.93



Peak-Hour Volumes (PHV)

Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
3	3	7	0	10	6	27	0	36	631	5	0	6	532	22	0	13	43	672	560	17	61	562	648

Percent Heavy Vehicles

0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.4%	0.7%	0.0%	0.0%	0.7%	0.5%

PHV- Bicycles

Northbound				Southbound				Eastbound				Westbound				
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	**Sum**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHV - Pedestrians

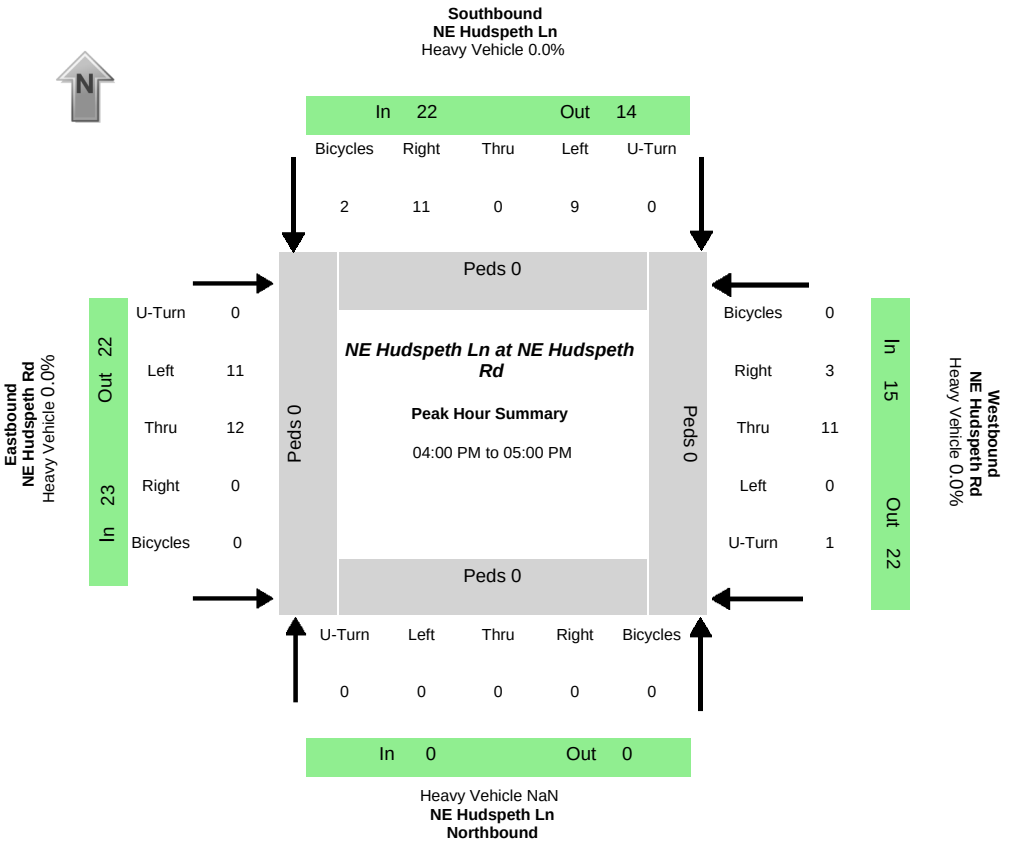
in Crosswalk				
NB	SB	EB	WB	**Sum**
0	3	1	2	6

All Vehicle Volumes

	Northbound NE Juniper St				Southbound NE Juniper St				Eastbound NE 3rd St				Westbound NE 3rd St				15 Min	1 HR
Time	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	Sum
04:00:00 PM	0	1	1	0	0	1	2	0	2	50	2	0	0	42	2	0		
04:05:00 PM	1	0	0	0	0	0	5	0	4	45	0	0	2	50	3	0		
04:10:00 PM	0	0	0	0	1	0	0	0	3	53	2	0	0	41	1	0	314	
04:15:00 PM	1	0	0	0	2	1	2	0	3	54	0	0	0	48	2	0	324	
04:20:00 PM	0	1	0	0	0	1	0	0	2	59	0	0	0	48	2	0	327	
04:25:00 PM	0	1	1	0	0	0	2	0	4	49	0	0	1	51	2	0	337	
04:30:00 PM	0	0	0	0	0	2	4	0	1	40	0	0	1	51	1	0	324	
04:35:00 PM	1	0	2	0	1	0	0	0	6	56	0	0	0	43	3	0	323	
04:40:00 PM	0	0	1	0	4	0	8	0	1	66	0	0	1	49	1	0	343	
04:45:00 PM	0	0	1	0	1	0	0	0	2	58	0	0	0	37	3	0	345	
04:50:00 PM	0	0	1	0	1	0	3	0	2	48	1	0	0	32	2	0	323	
04:55:00 PM	0	0	0	0	0	1	1	0	6	53	0	0	1	40	0	0	294	1288
05:00:00 PM	0	0	0	0	1	0	2	0	0	48	1	0	3	31	1	0	279	1272
05:05:00 PM	0	0	1	0	0	1	3	0	3	50	0	0	2	35	2	0	286	1259
05:10:00 PM	2	0	2	0	0	0	4	0	1	47	0	0	0	52	3	0	295	1269
05:15:00 PM	0	0	0	0	0	0	3	0	2	61	0	0	0	53	4	0	331	1279
05:20:00 PM	0	0	1	0	3	1	1	0	1	43	0	0	1	41	1	0	327	1259
05:25:00 PM	1	0	1	0	1	1	2	0	1	43	0	0	0	47	2	0	315	1247
05:30:00 PM	0	1	1	0	0	0	1	0	0	45	0	0	1	33	1	0	275	1230
05:35:00 PM	1	1	0	0	2	0	2	0	2	44	0	0	3	51	2	0	290	1226
05:40:00 PM	0	1	1	0	0	0	2	0	3	56	0	0	0	35	1	0	290	1194
05:45:00 PM	0	2	0	0	1	0	0	0	1	38	0	0	0	30	0	0	279	1164
05:50:00 PM	1	0	1	0	1	0	2	0	4	43	0	0	2	26	2	0	253	1156
05:55:00 PM	0	0	1	0	2	1	1	0	1	40	0	0	0	30	0	0	230	1130

K-D-N
KEY DATA NETWORK

Data Provided by K-D-N.com 503-594-4224	
N/S street	*NE Hudspeth Ln*
E/W street	*NE Hudspeth Rd*
City, State	Prineville OR
Site Notes	
Location	44.310839 - -120.847047
Start Date	Thursday, September 23, 2021
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:00:00 PM
Peak 15 Min Start	04:10:00 PM
PHF (15-Min Int)	0.76



Peak-Hour Volumes (PHV)

Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
0	0	0	0	9	0	11	0	11	12	0	0	0	11	3	1	0	20	23	15	0	14	22	22

Percent Heavy Vehicles

0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	NaN	0.0%	0.0%	0.0%	NaN	0.0%	0.0%	0.0%

PHV- Bicycles

Northbound				Southbound				Eastbound				Westbound				
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	**Sum**
0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2

PHV - Pedestrians

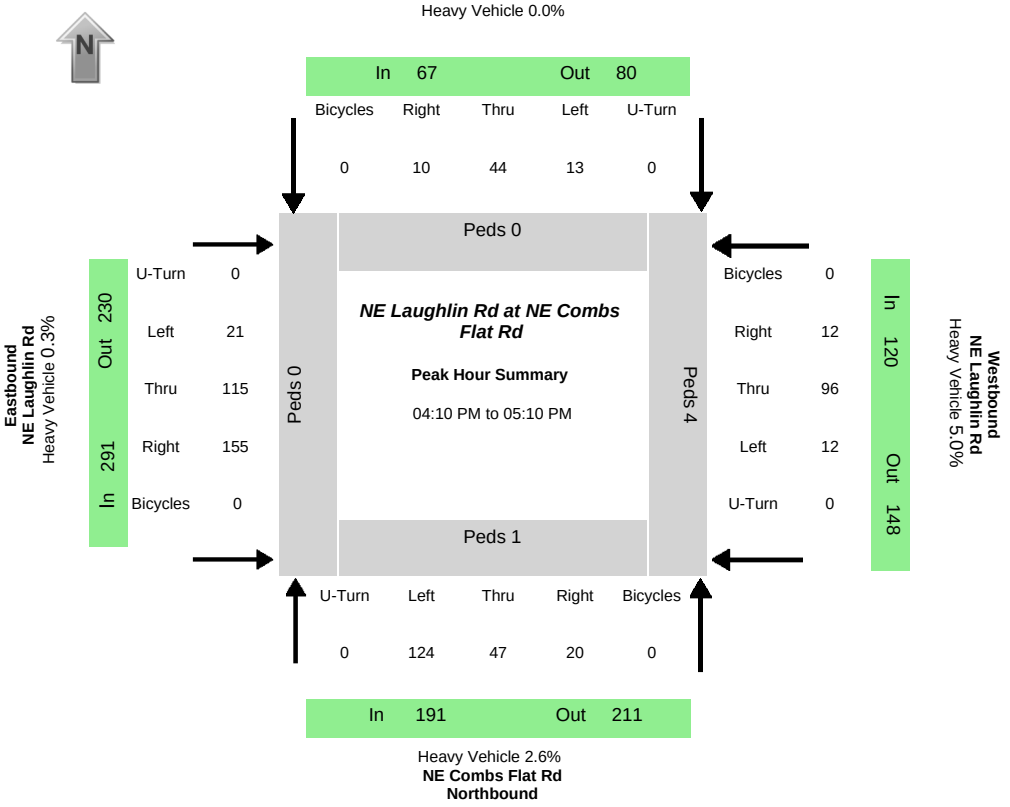
in Crosswalk				
NB	SB	EB	WB	**Sum**
0	0	0	0	0

All Vehicle Volumes

	Northbound NE Hudspeth Ln				Southbound NE Hudspeth Ln				Eastbound NE Hudspeth Rd				Westbound NE Hudspeth Rd				15 Min	1 HR
Time	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	Sum
04:00:00 PM	0	0	0	0	0	0	0	0	1	3	0	0	0	2	0	0		
04:05:00 PM	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0		
04:10:00 PM	0	0	0	0	2	0	2	0	1	1	0	0	0	3	0	0	18	
04:15:00 PM	0	0	0	0	1	0	2	0	1	0	0	0	0	1	0	0	17	
04:20:00 PM	0	0	0	0	0	0	2	0	1	2	0	0	0	0	0	0	19	
04:25:00 PM	0	0	0	0	3	0	1	0	0	2	0	0	0	0	0	0	16	
04:30:00 PM	0	0	0	0	1	0	1	0	1	1	0	0	0	1	0	0	16	
04:35:00 PM	0	0	0	0	0	0	0	0	2	1	0	0	0	0	1	0	15	
04:40:00 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	11	
04:45:00 PM	0	0	0	0	0	0	2	0	2	1	0	0	0	2	2	0	15	
04:50:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	2	0	0	15	
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	58
05:00:00 PM	0	0	0	0	2	0	0	0	1	1	0	0	0	1	0	0	9	57
05:05:00 PM	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	8	57
05:10:00 PM	0	0	0	0	2	0	1	0	2	3	0	0	0	0	0	0	16	56
05:15:00 PM	0	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	14	54
05:20:00 PM	0	0	0	0	1	0	2	0	1	0	0	0	0	0	0	0	15	53
05:25:00 PM	0	0	0	0	1	0	0	0	2	2	0	0	0	1	1	0	14	54
05:30:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	12	50
05:35:00 PM	0	0	0	0	0	0	1	0	1	2	0	0	0	0	0	0	12	50
05:40:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	7	50
05:45:00 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	1	1	0	10	45
05:50:00 PM	0	0	0	0	0	0	1	0	1	0	0	0	0	3	0	0	11	46
05:55:00 PM	0	0	0	0	1	0	0	0	1	2	0	0	0	1	0	0	14	51

K-D-N
KEY DATA NETWORK

Data Provided by K-D-N.com 503-594-4224	
N/S street	*NE Combs Flat Rd*
E/W street	*NE Laughlin Rd*
City, State	Prineville OR
Site Notes	
Location	44.305021 - -120.826717
Start Date	Thursday, September 23, 2021
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:10:00 PM
Peak 15 Min Start	04:10:00 PM
PHF (15-Min Int)	0.86



Peak-Hour Volumes (PHV)

Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
124	47	20	0	13	44	10	0	21	115	155	0	12	96	12	0	191	67	291	120	211	80	230	148

Percent Heavy Vehicles

4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	6.3%	0.0%	0.0%	2.6%	0.0%	0.3%	5.0%	0.0%	0.0%	4.8%	0.7%

PHV- Bicycles

Northbound				Southbound				Eastbound				Westbound				
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	**Sum**
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

PHV - Pedestrians

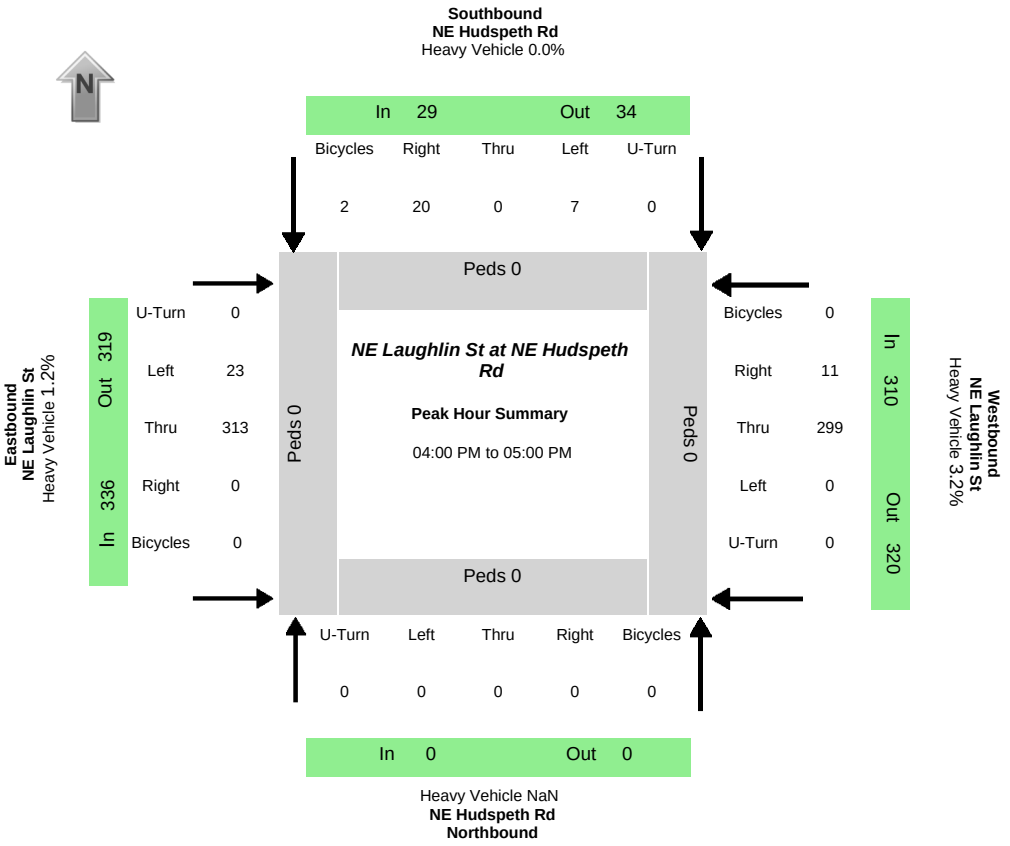
in Crosswalk				
NB	SB	EB	WB	**Sum**
1	0	0	4	5

All Vehicle Volumes

	Northbound NE Combs Flat Rd				Southbound NE Combs Flat Rd				Eastbound NE Laughlin Rd				Westbound NE Laughlin Rd				15 Min	1 HR
Time	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	Sum
04:00:00 PM	19	4	1	0	3	1	3	0	0	7	7	0	1	7	4	0		
04:05:00 PM	9	6	1	0	0	5	1	0	1	9	13	0	0	3	1	0		
04:10:00 PM	13	1	2	0	4	7	0	0	1	13	18	0	1	4	3	0	173	
04:15:00 PM	13	7	1	0	1	5	2	0	2	12	15	0	2	11	0	0	187	
04:20:00 PM	8	3	2	0	1	4	1	0	0	10	18	0	0	9	0	0	194	
04:25:00 PM	11	4	3	0	0	2	0	0	2	12	18	0	1	11	1	0	192	
04:30:00 PM	9	3	3	0	1	4	0	0	4	7	6	0	3	10	0	0	171	
04:35:00 PM	9	7	1	0	1	3	3	0	3	11	3	0	0	9	1	0	166	
04:40:00 PM	14	2	2	0	1	2	1	0	0	7	6	0	0	4	1	0	141	
04:45:00 PM	11	5	1	0	1	3	0	0	3	8	16	0	1	4	2	0	146	
04:50:00 PM	10	3	1	0	0	6	1	0	0	8	16	0	0	6	1	0	147	
04:55:00 PM	6	4	1	0	0	2	1	0	3	5	7	0	2	15	0	0	153	659
05:00:00 PM	6	1	1	0	1	3	1	0	1	12	17	0	1	7	1	0	150	654
05:05:00 PM	14	7	2	0	2	3	0	0	2	10	15	0	1	6	2	0	162	669
05:10:00 PM	6	5	2	0	2	4	1	0	1	6	8	0	0	8	1	0	160	646
05:15:00 PM	6	3	1	0	0	5	1	0	0	11	6	0	1	4	0	0	146	613
05:20:00 PM	12	5	1	0	1	3	1	0	1	4	9	0	1	13	0	0	133	608
05:25:00 PM	13	1	2	0	1	5	1	0	1	8	8	0	2	4	1	0	136	590
05:30:00 PM	12	3	1	0	1	6	0	0	0	7	6	0	2	4	0	0	140	582
05:35:00 PM	10	2	1	0	2	2	0	0	0	3	11	0	1	5	4	0	130	572
05:40:00 PM	13	8	3	0	1	4	1	0	0	11	7	0	0	9	1	0	141	590
05:45:00 PM	6	5	1	0	2	3	1	0	0	8	4	0	1	2	2	0	134	570
05:50:00 PM	8	7	2	0	1	3	1	0	0	3	10	0	2	10	0	0	140	565
05:55:00 PM	12	3	1	0	0	1	3	0	0	5	5	0	0	6	2	0	120	557

K-D-N
KEY DATA NETWORK

Data Provided by K-D-N.com 503-594-4224	
N/S street	*NE Hudspeth Rd*
E/W street	*NE Laughlin St*
City, State	Prineville OR
Site Notes	
Location	44.306156 - -120.836110
Start Date	Thursday, September 23, 2021
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:00:00 PM
Peak 15 Min Start	04:15:00 PM
PHF (15-Min Int)	0.87



Peak-Hour Volumes (PHV)

Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
0	0	0	0	7	0	20	0	23	313	0	0	0	299	11	0	0	27	336	310	0	34	319	320

Percent Heavy Vehicles

0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	NaN	0.0%	1.2%	3.2%	NaN	0.0%	3.1%	1.3%

PHV- Bicycles

Northbound				Southbound				Eastbound				Westbound				
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum
0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2

PHV - Pedestrians

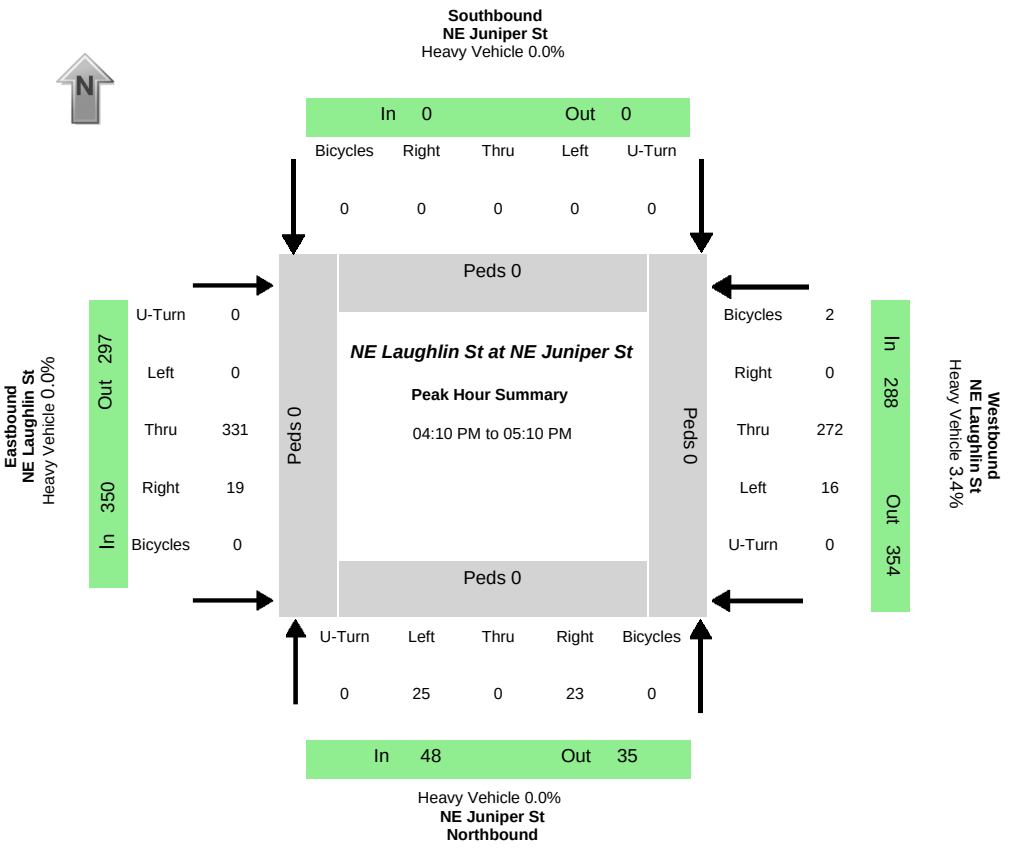
in Crosswalk				
NB	SB	EB	WB	Sum
0	0	0	0	0

All Vehicle Volumes

	Northbound NE Hudspeth Rd				Southbound NE Hudspeth Rd				Eastbound NE Laughlin St				Westbound NE Laughlin St				15 Min	1 HR
Time	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	Sum
04:00:00 PM	0	0	0	0	0	0	1	0	3	17	0	0	0	33	1	0		
04:05:00 PM	0	0	0	0	1	0	0	0	0	25	0	0	0	26	0	0		
04:10:00 PM	0	0	0	0	0	0	4	0	3	32	0	0	0	23	1	0	170	
04:15:00 PM	0	0	0	0	1	0	5	0	0	31	0	0	0	25	0	0	177	
04:20:00 PM	0	0	0	0	0	0	0	0	3	37	0	0	0	21	0	0	186	
04:25:00 PM	0	0	0	0	2	0	1	0	2	34	0	0	0	29	2	0	193	
04:30:00 PM	0	0	0	0	0	0	2	0	2	21	0	0	0	19	1	0	176	
04:35:00 PM	0	0	0	0	0	0	0	0	2	25	0	0	0	29	1	0	172	
04:40:00 PM	0	0	0	0	1	0	1	0	0	18	0	0	0	25	1	0	148	
04:45:00 PM	0	0	0	0	0	0	2	0	3	29	0	0	0	23	2	0	162	
04:50:00 PM	0	0	0	0	1	0	3	0	2	24	0	0	0	26	2	0	163	
04:55:00 PM	0	0	0	0	1	0	1	0	3	20	0	0	0	20	0	0	162	673
05:00:00 PM	0	0	0	0	0	0	0	0	2	29	0	0	0	18	1	0	153	668
05:05:00 PM	0	0	0	0	0	0	2	0	0	33	0	0	0	20	1	0	151	672
05:10:00 PM	0	0	0	0	0	0	3	0	3	18	0	0	0	24	3	0	157	660
05:15:00 PM	0	0	0	0	1	0	1	0	1	20	0	0	0	17	0	0	147	638
05:20:00 PM	0	0	0	0	0	0	2	0	1	21	0	0	0	27	0	0	142	628
05:25:00 PM	0	0	0	0	0	0	1	0	2	22	0	0	0	21	3	0	140	607
05:30:00 PM	0	0	0	0	2	0	1	0	1	17	0	0	0	22	0	0	143	605
05:35:00 PM	0	0	0	0	0	0	1	0	2	21	0	0	0	29	0	0	145	601
05:40:00 PM	0	0	0	0	0	0	1	0	2	20	0	0	0	21	1	0	141	600
05:45:00 PM	0	0	0	0	1	0	0	0	1	18	0	0	0	14	1	0	133	576
05:50:00 PM	0	0	0	0	0	0	2	0	1	15	0	0	0	18	0	0	116	554
05:55:00 PM	0	0	0	0	1	0	1	0	2	14	0	0	0	21	2	0	112	550

K-D-N
KEY DATA NETWORK

Data Provided by K-D-N.com 503-594-4224	
N/S street	*NE Juniper St*
E/W street	*NE Laughlin St*
City, State	Prineville OR
Site Notes	
Location	44.306156 - -120.836110
Start Date	Thursday, September 23, 2021
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:10:00 PM
Peak 15 Min Start	04:10:00 PM
PHF (15-Min Int)	0.89



Peak-Hour Volumes (PHV)

Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
25	0	23	0	0	0	0	0	0	331	19	0	16	272	0	0	48	0	350	288	35	0	297	354

Percent Heavy Vehicles

0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	0.0%	0.0%	3.4%	0.0%

PHV- Bicycles

Northbound				Southbound				Eastbound				Westbound				
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	**Sum**
0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2

PHV - Pedestrians

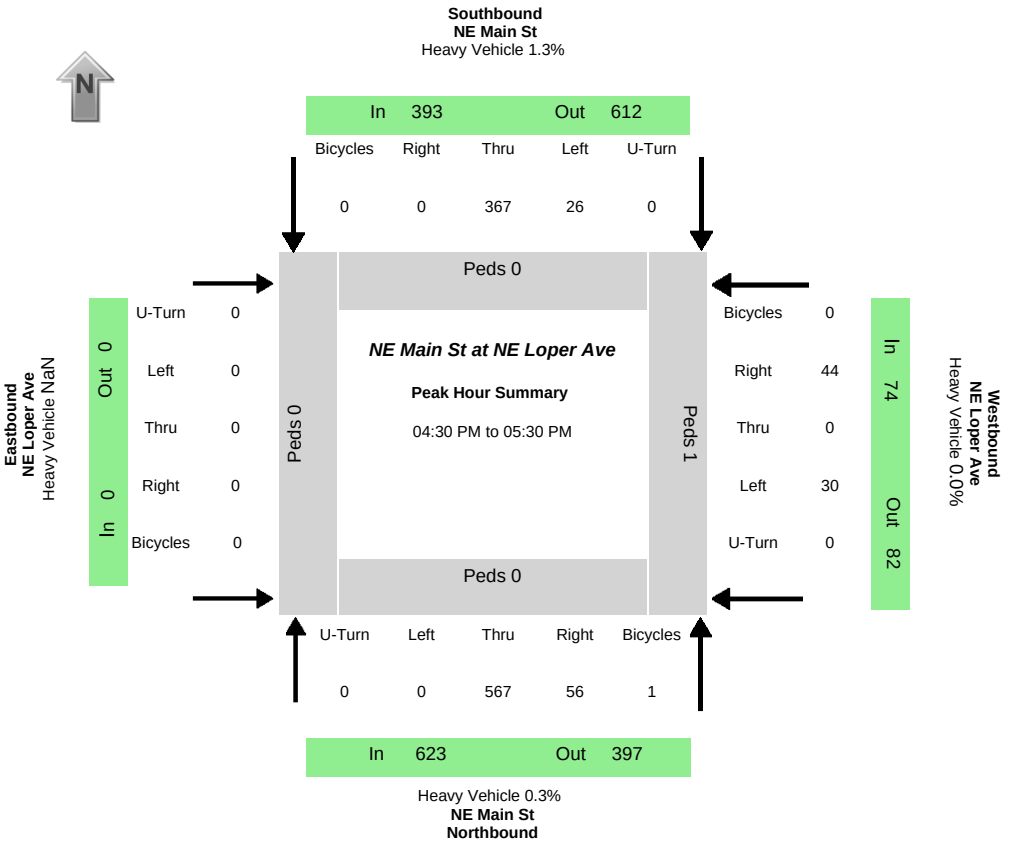
in Crosswalk				
NB	SB	EB	WB	**Sum**
0	0	0	0	0

All Vehicle Volumes

	Northbound NE Juniper St				Southbound NE Juniper St				Eastbound NE Laughlin St				Westbound NE Laughlin St				15 Min	1 HR
Time	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	Sum
04:00:00 PM	3	0	2	0	0	0	0	0	0	24	1	0	2	29	0	0		
04:05:00 PM	2	0	1	0	0	0	0	0	0	16	1	0	1	26	0	0		
04:10:00 PM	2	0	2	0	0	0	0	0	0	36	1	0	2	23	0	0	174	
04:15:00 PM	1	0	0	0	0	0	0	0	0	37	2	0	4	29	0	0	186	
04:20:00 PM	1	0	6	0	0	0	0	0	0	26	0	0	1	19	0	0	192	
04:25:00 PM	3	0	0	0	0	0	0	0	0	33	2	0	1	26	0	0	191	
04:30:00 PM	2	0	1	0	0	0	0	0	0	27	0	0	2	22	0	0	172	
04:35:00 PM	6	0	3	0	0	0	0	0	0	19	2	0	2	28	0	0	179	
04:40:00 PM	0	0	0	0	0	0	0	0	0	25	4	0	0	19	0	0	162	
04:45:00 PM	3	0	2	0	0	0	0	0	0	23	0	0	2	24	0	0	162	
04:50:00 PM	3	0	3	0	0	0	0	0	0	26	3	0	0	23	0	0	160	
04:55:00 PM	1	0	4	0	0	0	0	0	0	14	2	0	0	22	0	0	155	682
05:00:00 PM	1	0	1	0	0	0	0	0	0	34	3	0	1	17	0	0	158	678
05:05:00 PM	2	0	1	0	0	0	0	0	0	31	0	0	1	20	0	0	155	686
05:10:00 PM	2	0	1	0	0	0	0	0	0	17	2	0	2	27	0	0	163	671
05:15:00 PM	2	0	4	0	0	0	0	0	0	19	6	0	2	12	0	0	151	643
05:20:00 PM	1	0	2	0	0	0	0	0	0	22	4	0	2	30	0	0	157	651
05:25:00 PM	4	0	2	0	0	0	0	0	0	18	1	0	1	19	0	0	151	631
05:30:00 PM	0	0	0	0	0	0	0	0	0	21	1	0	1	23	0	0	152	623
05:35:00 PM	3	0	2	0	0	0	0	0	0	19	3	0	1	26	0	0	145	617
05:40:00 PM	4	0	2	0	0	0	0	0	0	20	0	0	0	19	0	0	145	614
05:45:00 PM	3	0	1	0	0	0	0	0	0	15	1	0	1	14	0	0	134	595
05:50:00 PM	2	0	3	0	0	0	0	0	0	14	3	0	2	22	0	0	126	583
05:55:00 PM	1	0	1	0	0	0	0	0	0	13	5	0	1	19	0	0	121	580

K-D-N
KEY DATA NETWORK

Data Provided by K-D-N.com 503-594-4224	
N/S street	*NE Main St*
E/W street	*NE Loper Ave*
City, State	Prineville OR
Site Notes	
Location	44.310839 - -120.847047
Start Date	Thursday, September 23, 2021
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:30:00 PM
Peak 15 Min Start	05:15:00 PM
PHF (15-Min Int)	0.96



Peak-Hour Volumes (PHV)

Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
0	567	56	0	26	367	0	0	0	0	0	0	30	0	44	0	623	393	0	74	397	611	0	82

Percent Heavy Vehicles

0.0%	0.4%	0.0%	0.0%	19.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	1.3%	NaN	0.0%	0.0%	0.3%	NaN	6.1%

PHV- Bicycles

Northbound				Southbound				Eastbound				Westbound				
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1

PHV - Pedestrians

in Crosswalk				
NB	SB	EB	WB	Sum
0	0	0	1	1

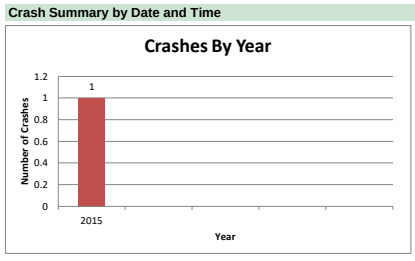
All Vehicle Volumes

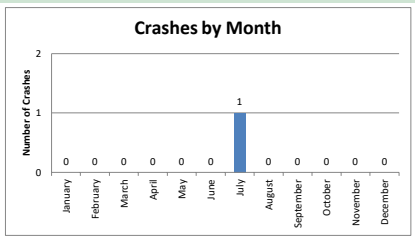
	Northbound NE Main St				Southbound NE Main St				Eastbound NE Loper Ave				Westbound NE Loper Ave				15 Min	1 HR
Time	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	Sum
04:00:00 PM	0	45	1	0	6	25	0	0	0	0	0	0	5	0	8	0		
04:05:00 PM	0	45	2	0	2	33	0	0	0	0	0	0	4	0	5	0		
04:10:00 PM	0	51	5	0	3	36	0	0	0	0	0	0	3	0	4	0	283	
04:15:00 PM	0	38	7	0	2	29	0	0	0	0	0	0	1	0	8	0	278	
04:20:00 PM	0	38	6	0	1	35	0	0	0	0	0	0	3	0	4	0	274	
04:25:00 PM	0	42	6	0	1	24	0	0	0	0	0	0	3	0	5	0	253	
04:30:00 PM	0	37	3	0	0	38	0	0	0	0	0	0	0	0	2	0	248	
04:35:00 PM	0	42	6	0	1	36	0	0	0	0	0	0	4	0	3	0	253	
04:40:00 PM	0	40	1	0	3	31	0	0	0	0	0	0	4	0	3	0	254	
04:45:00 PM	0	50	5	0	3	33	0	0	0	0	0	0	1	0	2	0	268	
04:50:00 PM	0	57	3	0	2	32	0	0	0	0	0	0	2	0	7	0	279	
04:55:00 PM	0	38	6	0	0	25	0	0	0	0	0	0	2	0	4	0	272	1062
05:00:00 PM	0	55	7	0	2	20	0	0	0	0	0	0	1	0	2	0	265	1059
05:05:00 PM	0	46	8	0	6	27	0	0	0	0	0	0	4	0	5	0	258	1064
05:10:00 PM	0	62	4	0	2	23	0	0	0	0	0	0	3	0	4	0	281	1060
05:15:00 PM	0	45	4	0	2	33	0	0	0	0	0	0	1	0	2	0	281	1062
05:20:00 PM	0	42	5	0	1	37	0	0	0	0	0	0	2	0	7	0	279	1069
05:25:00 PM	0	53	4	0	4	32	0	0	0	0	0	0	6	0	3	0	283	1090
05:30:00 PM	0	35	3	0	2	29	0	0	0	0	0	0	0	0	2	0	267	1081
05:35:00 PM	0	44	5	0	1	23	0	0	0	0	0	0	4	0	7	0	257	1073
05:40:00 PM	0	50	6	0	0	33	0	0	0	0	0	0	3	0	6	0	253	1089
05:45:00 PM	0	46	5	0	1	27	0	0	0	0	0	0	2	0	1	0	264	1077
05:50:00 PM	0	40	2	0	2	22	0	0	0	0	0	0	6	0	6	0	258	1052
05:55:00 PM	0	36	1	0	1	22	0	0	0	0	0	0	4	0	0	0	224	1041

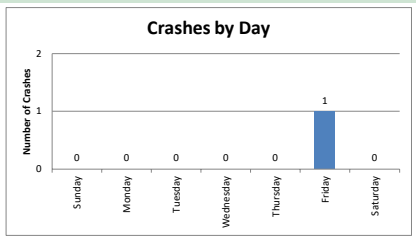
Project Name:	Ochoco Pointe Expansion
Project Number	1578
Query Information:	N Main St / NE Loper Ave
Date Queried:	Jan 2015-Dec 2019
Data Provider:	ODOT Crash Analysis Reporting Unit
Analyst:	JWW
Summary Date:	10/6/2021
Text File Name:	
Filters Applied:	: County: CrookCrash Year: 2015Crash Month: JulyWeek Day Code: FridayCollision Type: Turning MovementWeal

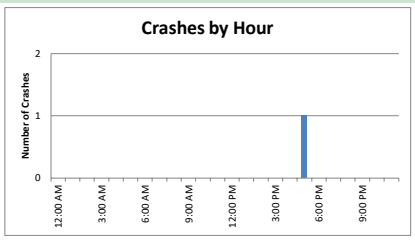
N Main St / NE Loper Ave

Crash Summary by Date and Time

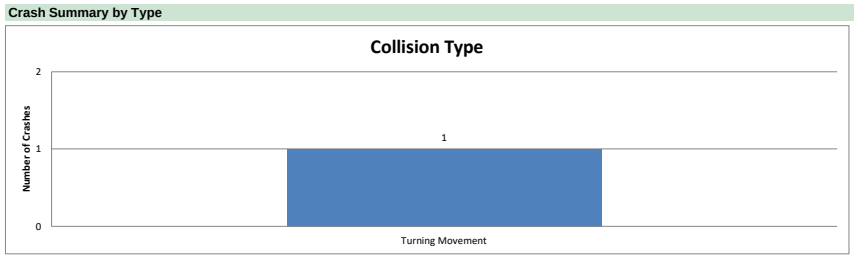


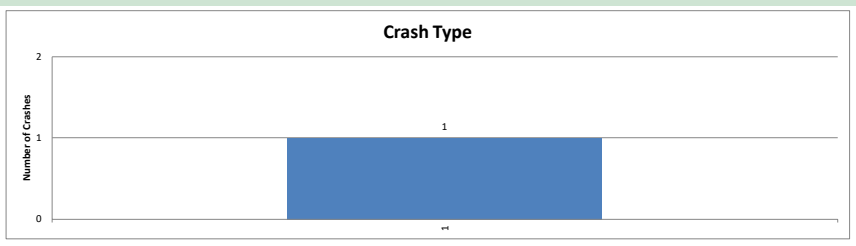




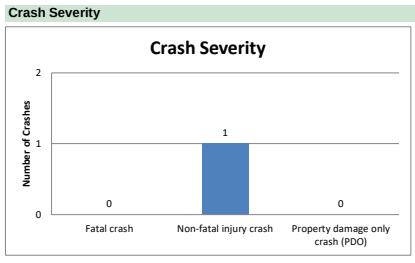


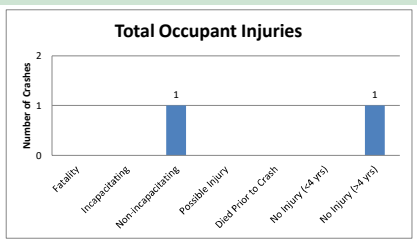
Crash Summary by Type



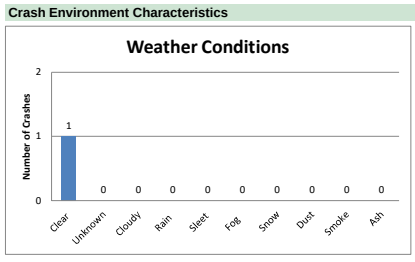


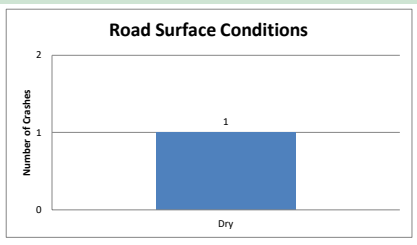
Crash Severity

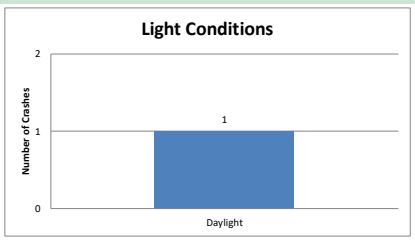




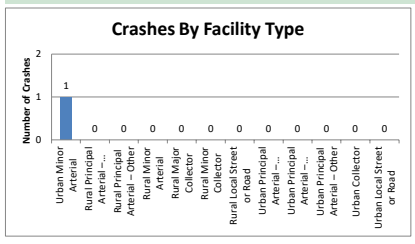
Crash Environment Characteristics

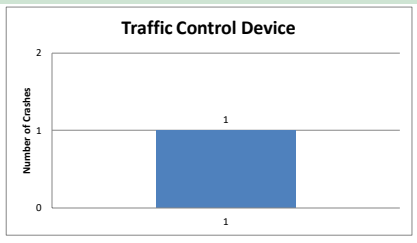


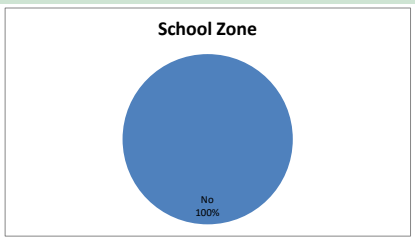


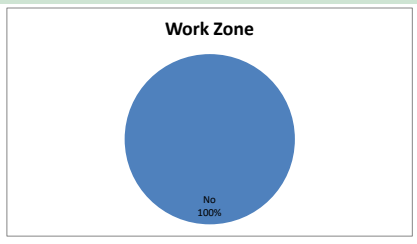


Crash Area Characteristics

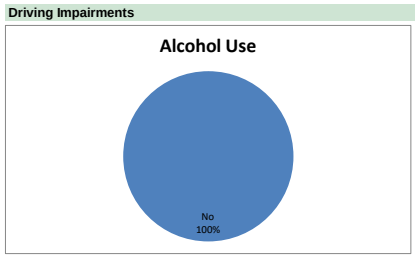


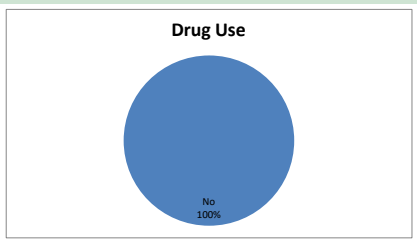




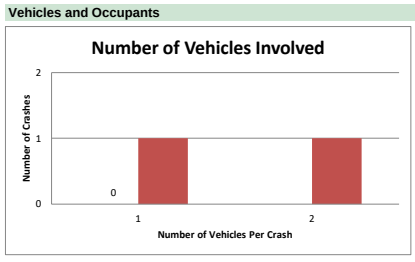


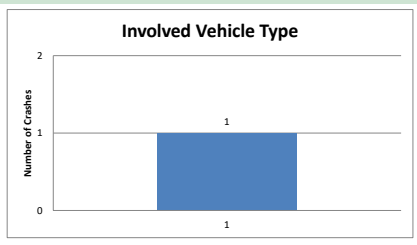
Driving Impairments

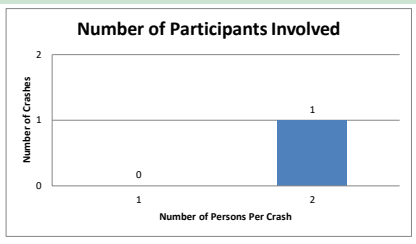




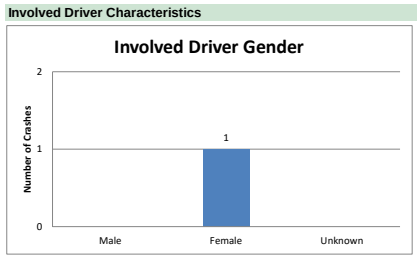
Vehicles and Occupants

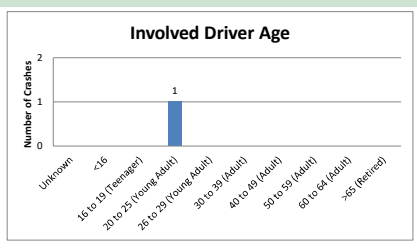


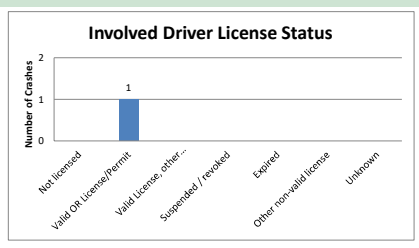


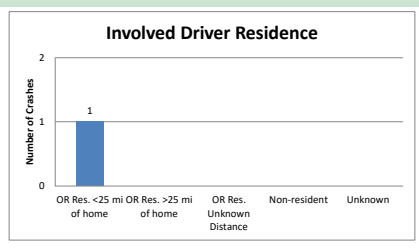


Involved Driver Characteristics

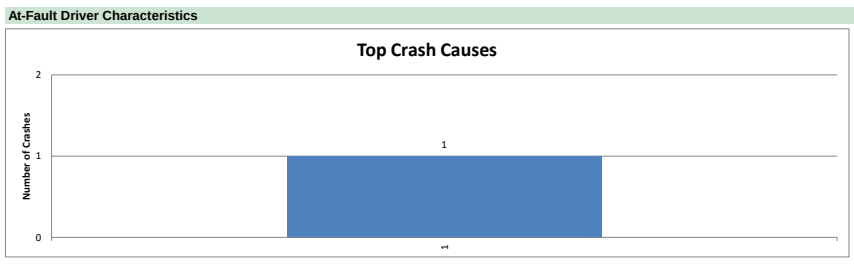


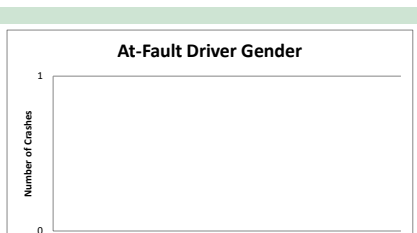


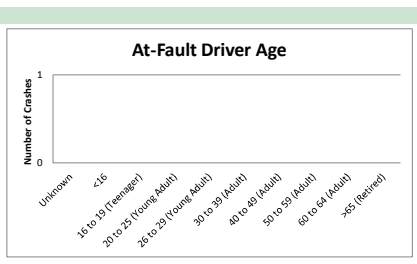




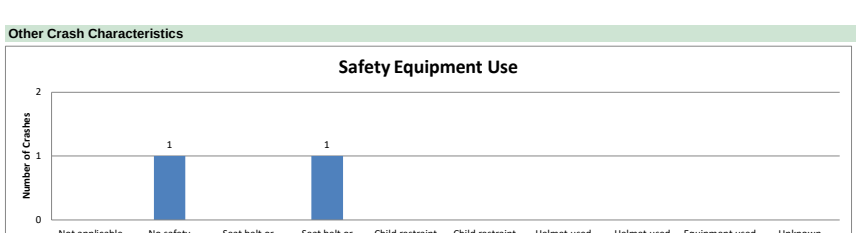
At-Fault Driver Characteristics

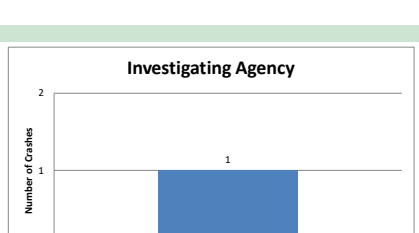






Other Crash Characteristics

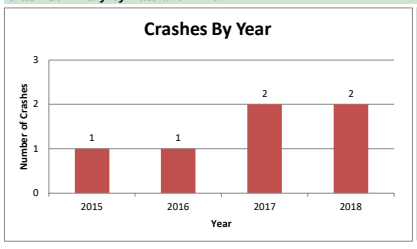


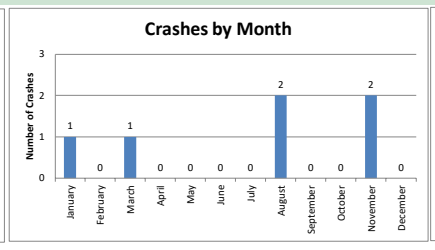


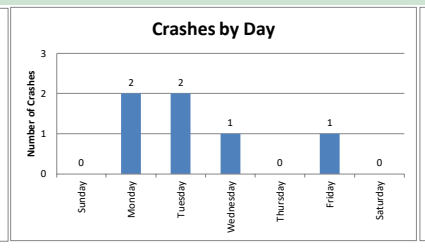
Project Name:	Ochoco Pointe Expansion
Project Number	1578
Query Information:	N Main Street / NE 7th St
Date Queried:	Jan 2015-Dec 2019
Data Provider:	ODOT Crash Analysis Reporting Unit
Analyst:	JWW
Summary Date:	10/6/2021
Text File Name:	
Filters Applied:	: County: Crook

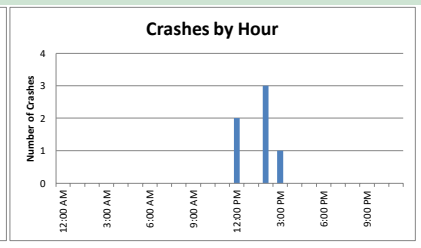
N Main St / NE 7th St

Crash Summary by Date and Time

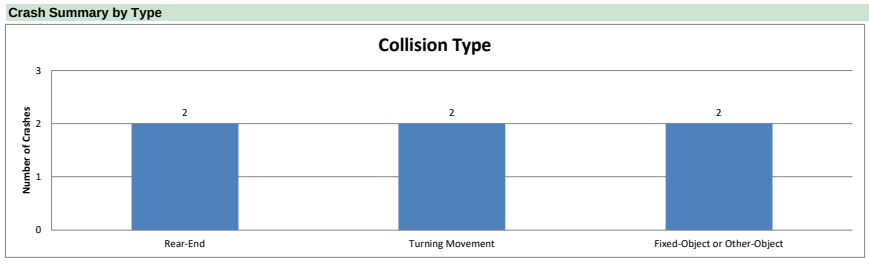


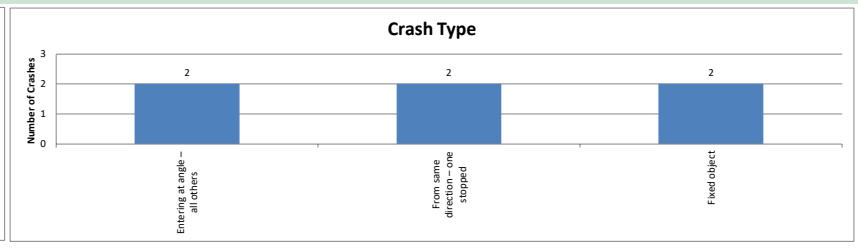




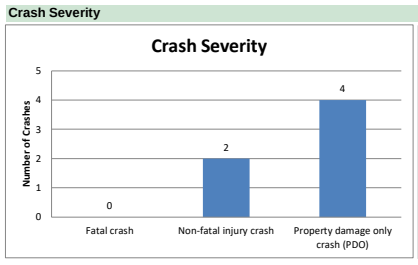


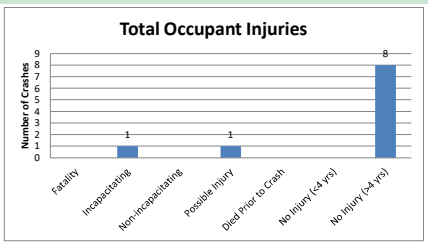
Crash Summary by Type



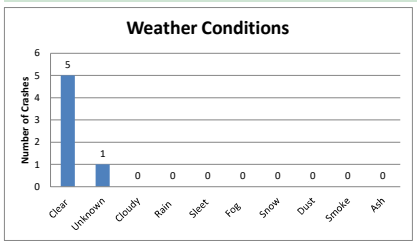


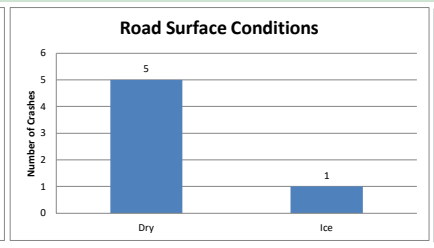
Crash Severity

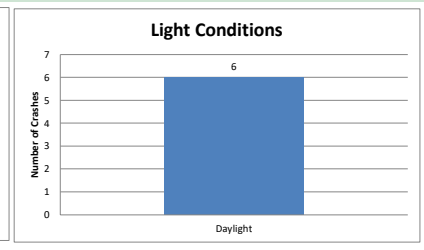




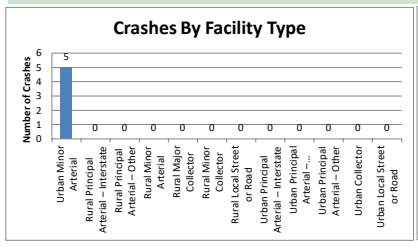
Crash Environment Characteristics

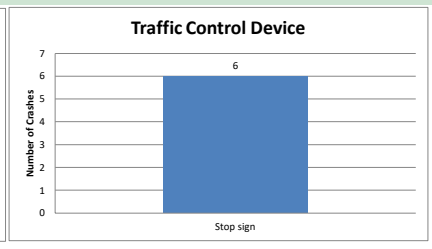


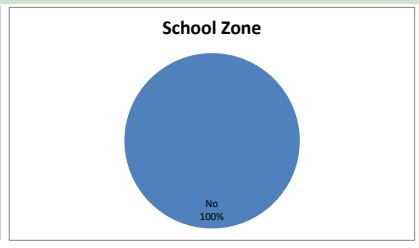




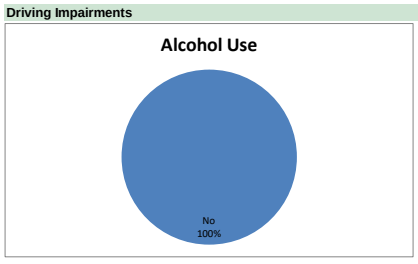
Crash Area Characteristics

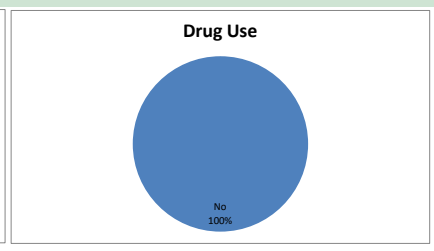




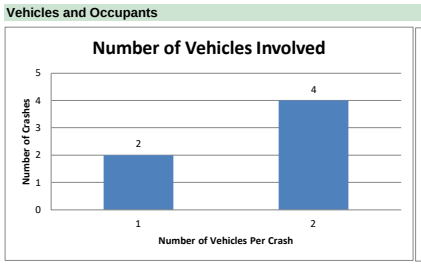


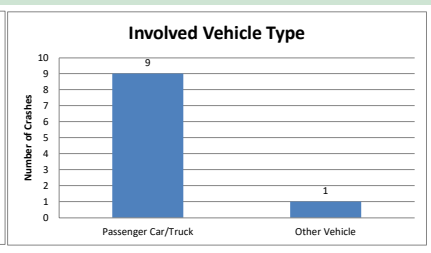
Driving Impairments

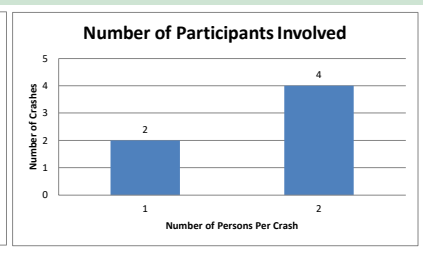




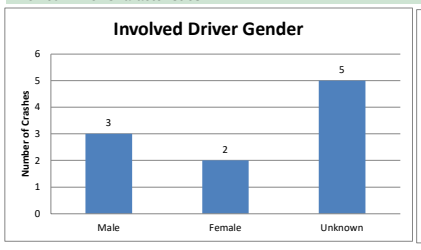
Vehicles and Occupants

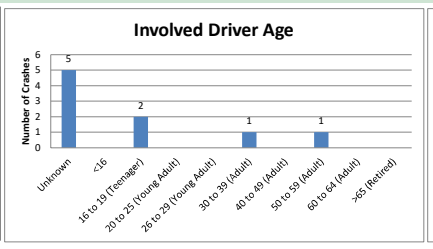


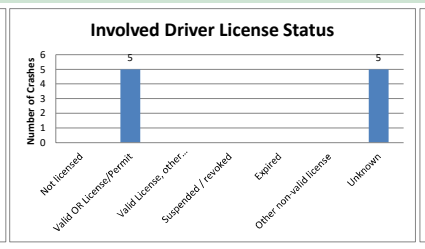


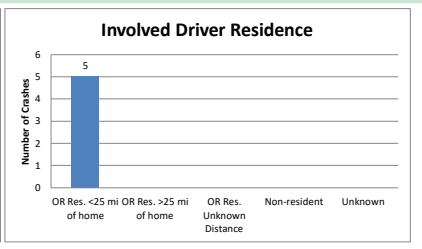


Involved Driver Characteristics

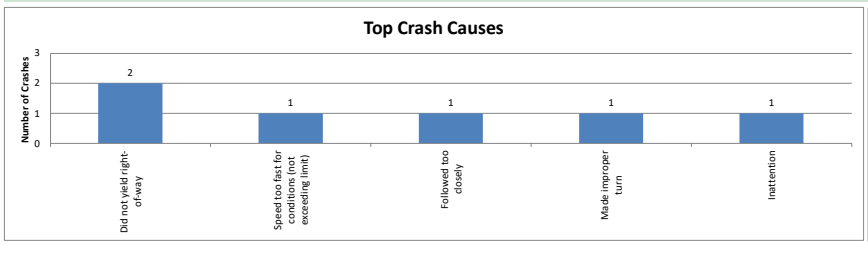


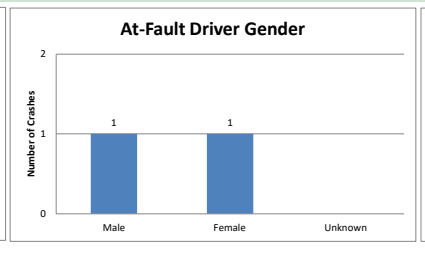


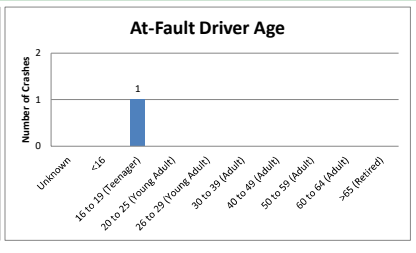




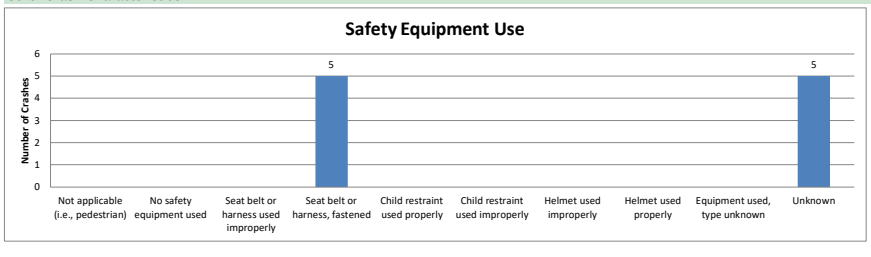
At-Fault Driver Characteristics

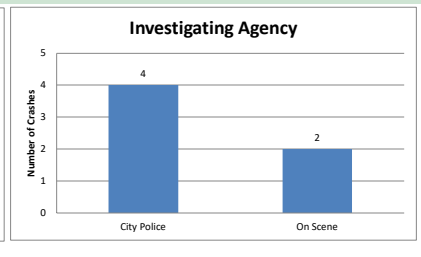






Other Crash Characteristics

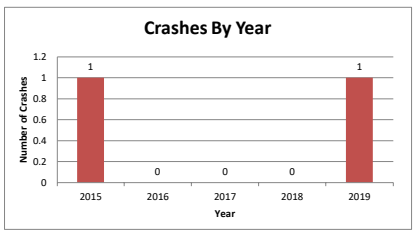


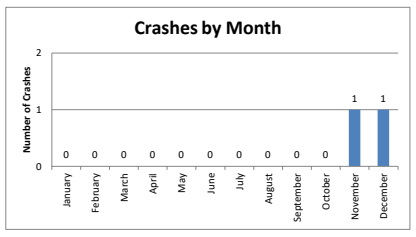


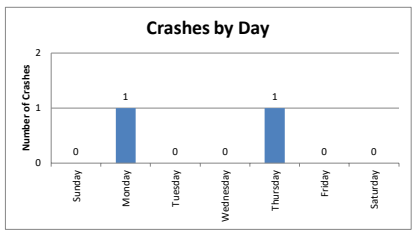
Project Name:	Ochoco Pointe Expansion
Project Number	1578
Query Information:	NE Juniper St/NE Laughlin Rd
Date Queried:	Jan 2015-Dec 2019
Data Provider:	ODOT Crash Analysis Reporting Unit
Analyst:	JWW
Summary Date:	10/6/2021
Text File Name:	
Filters Applied:	: County: Crook

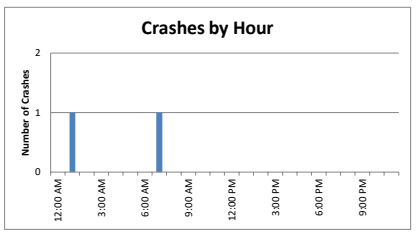
NE Juniper St/NE Laughlin Rd

Crash Summary by Date and Time

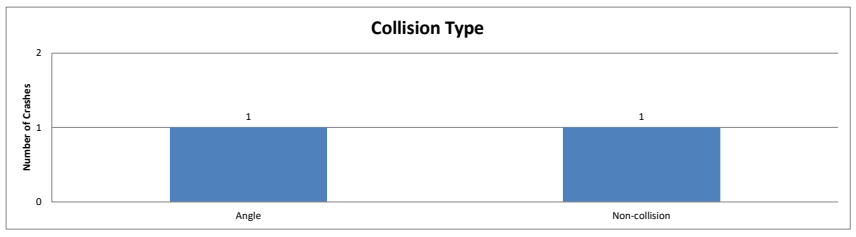


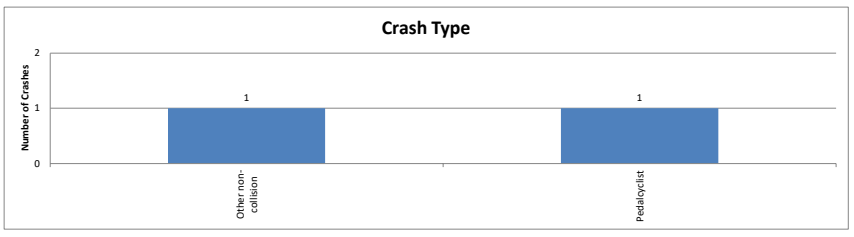




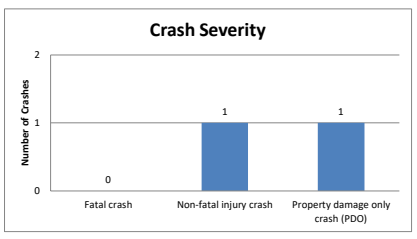


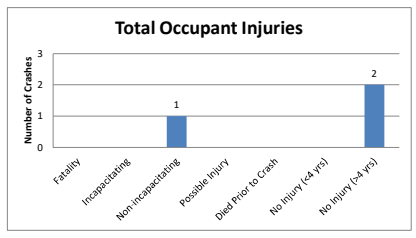
Crash Summary by Type



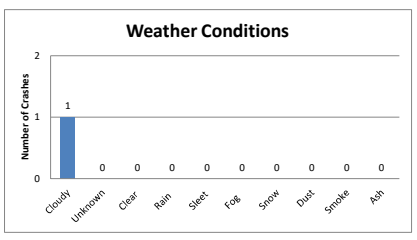


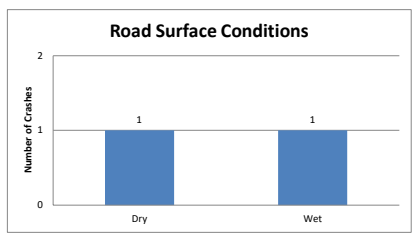
Crash Severity

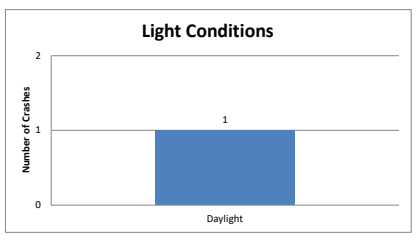




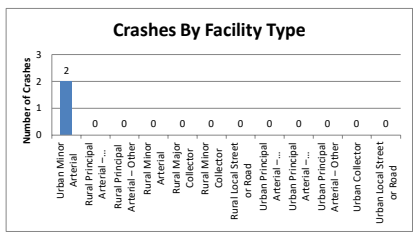
Crash Environment Characteristics

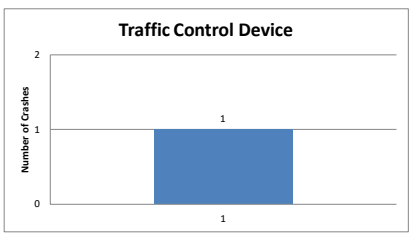


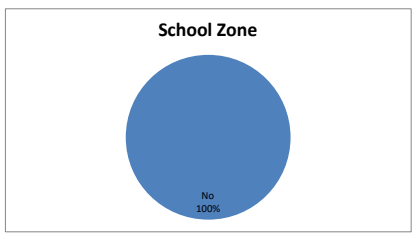


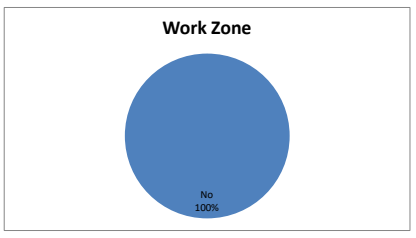


Crash Area Characteristics

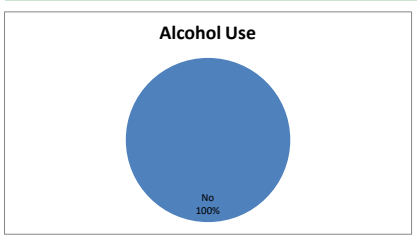


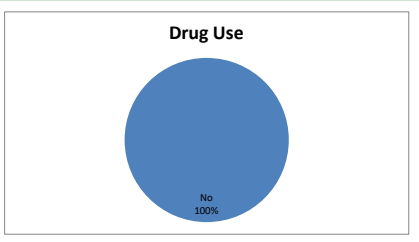




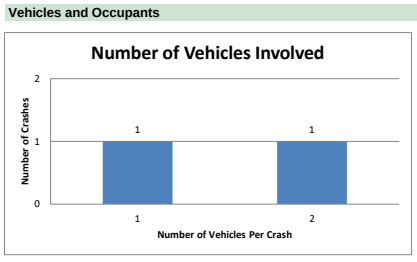


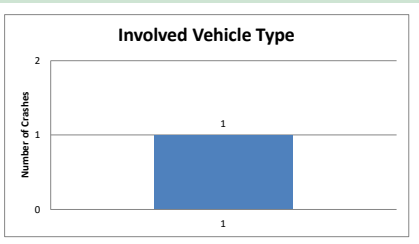
Driving Impairments

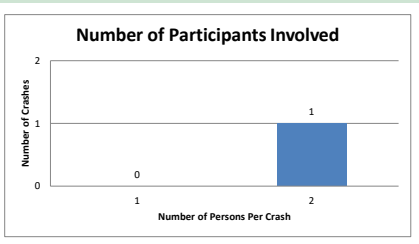




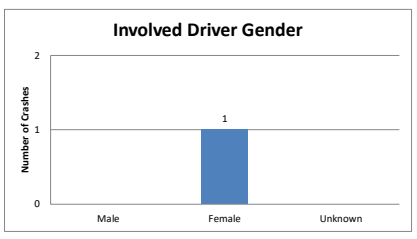
Vehicles and Occupants

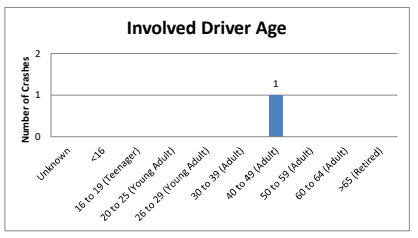


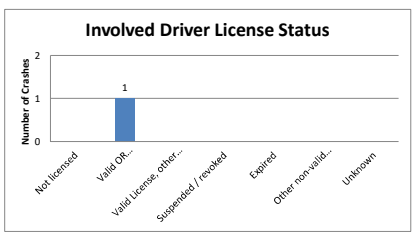


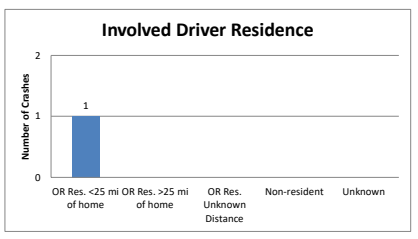


Involved Driver Characteristics

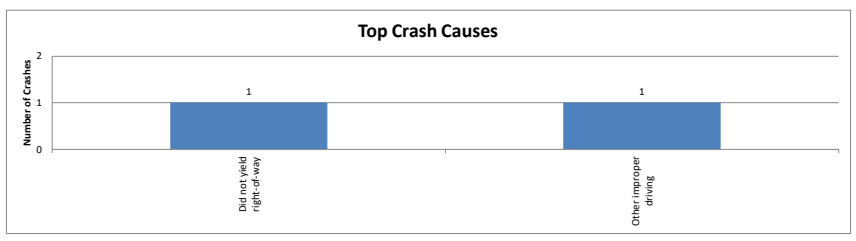


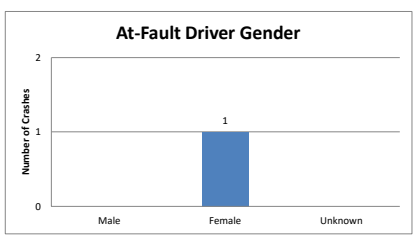


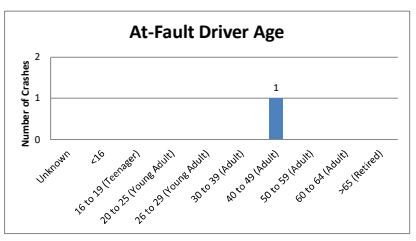




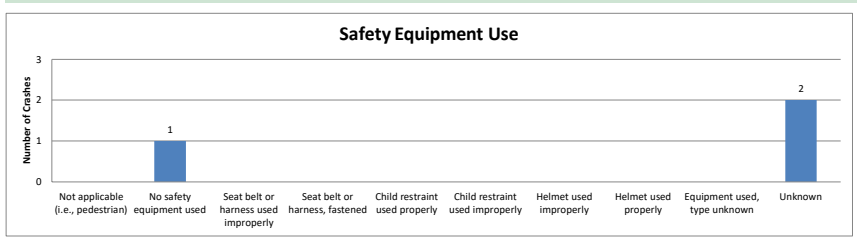
At-Fault Driver Characteristics

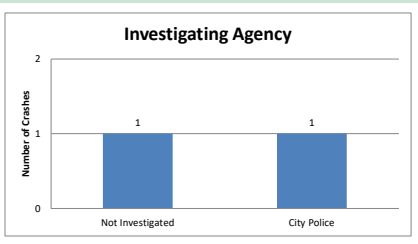






Other Crash Characteristics





CITY OF PRINEVILLE, CROOK COUNTY

COMBS FLAT RD at 3RD ST, City of Prineville, Crook County, 01/01/2015 to 12/31/2019

1 - 4 of 12 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	S I H L	C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / TYPE / OWNER	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
00071	Y	N	N		N	N		04/28/2017	14	COMBS FLAT RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										32,29,27
CITY								FR		E 3RD ST	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W								000		00
N								9A			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	25	M	OR-Y		052,026,016	038	32,29,27
N								44 18 10.41	-120 49 37.09	004100100S00															OR<25				
																	02	NONE 0	STOP										
																		PRVTE	E -W								011		00
																		PSNGR CAR		01	DRVR	INJB	26	F	OR-Y		000	000	00
																									OR<25				
																	02	NONE 0	STOP										
																		PRVTE	E -W								011		00
																		PSNGR CAR		02	PSNG	NO<5	02	F			000	000	00
00100	N	N	N					05/15/2019	14	COMBS FLAT RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29
NONE								WE		E 3RD ST	E		TRF SIGNAL	N	DRY	REAR		PRVTE	E -W								000		00
N								5P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	27	M	OR-Y		026	000	29
N								44 18 10.41	-120 49 37.1	004100100S00															OR>25				
																	02	NONE 0	STOP										
																		PRVTE	E -W								011		00
																		PSNGR CAR		01	DRVR	INJC	37	M	OR-Y		000	000	00
																									OR<25				
00235	N	N	N		N	N		10/24/2019	14	COMBS FLAT RD	INTER	CROSS	N	N	CLR	O-1STOP	01	NONE 9	BACK										02
CITY								TH		E 3RD ST	S		TRF SIGNAL	N	DRY	BACK		N/A	N -S								000		00
N								11A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N								44 18 10.44	-120 49 37.12	004100100S00															UNK				
																	02	NONE 9	STOP										
																		N/A	S -N								012		00
																		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																									UNK				
00219	N	N	N		Y			09/16/2016	14	COMBS FLAT RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										29,40
CITY								FR		E 3RD ST	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W -E								000		00
N								7A			06	0		N	DAWN	INJ		PSNGR CAR		01	DRVR	NONE	39	F	OR-Y		026,014	026	29,40
N								44 18 10.41	-120 49 37.09	004100100S00															OR<25				
																	02	NONE 0	STOP										
																		PRVTE	W -E								011		00
																		PSNGR CAR		01	DRVR	NONE	44	F	OR-Y		000	000	00
																									OR>25				
																	02	NONE 0	STOP										
																		PRVTE	W -E								011		00
																		PSNGR CAR		02	PSNG	INJC	24	M			000	000	00

COMBS FLAT RD at 3RD ST, City of Prineville, Crook County, 01/01/2015 to 12/31/2019

5 - 7 of 12 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E E D	A L C	D R U G S	M J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00005	N	N	N		N	N	01/09/2015	14	COMBS FLAT RD	INTER	CROSS	N	N	CLR	S-1TURN	01	NONE 0	STRGHT											07,27
NONE							FR		E 3RD ST	CN		TRF SIGNAL	N	DRY	REAR		PRVTE	S -N									000		00
N							1P			04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	26	M	OR-Y		043	038		07,27
N							44 18 10.41	-120 49 37.09	004100100S00															OR<25					
																02	NONE 0	STOP											
																	PRVTE	S -W									013		00
																	PSNGR CAR		01	DRVR	NONE	66	M	OR-Y		000	000		00
																								OR<25					
00251	N	Y	N				11/15/2015	14	COMBS FLAT RD	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											04
NO RPT							SU		E 3RD ST	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	E -W									000		00
N							5P			01	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	51	M	OR-Y		020	000		04
N							44 18 10.41	-120 49 37.09	004100100S00															OR>25					
																02	NONE 0	TURN-L											
																	PRVTE	N -E									000		00
																	PSNGR CAR		01	DRVR	INJB	48	F	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	TURN-L											
																	PRVTE	N -E									000		00
																	PSNGR CAR		02	PSNG	INJA	55	M			000	000		00
																02	NONE 0	TURN-L											
																	PRVTE	N -E									000		00
																	PSNGR CAR		03	PSNG	INJB	07	F			000	000		00
00010	Y	N	N		N	N	01/01/2017	14	COMBS FLAT RD	INTER	CROSS	N	N	SNOW	ANGL-OTH	01	NONE 0	STRGHT										124	01,04
CITY							SU		E 3RD ST	CN		TRF SIGNAL	N	SNO	ANGL		PRVTE	W -E									006	124	00
N							7A			03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	39	M	OR-Y		047,020	000		01,04
N							44 18 10.41	-120 49 37.09	004100100S00															OR<25					
																02	NONE 0	STRGHT											
																	PRVTE	N -S									000		00
																	PSNGR CAR		01	DRVR	INJC	52	M	OR-Y		000	000		00
																								OR<25					
																02	NONE 0	STRGHT											
																	PRVTE	N -S									000		00
																	PSNGR CAR		02	PSNG	INJC	18	F			000	000		00
00053	N	N	N		N	N	03/30/2017	14	COMBS FLAT RD	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											04
CITY							TH		E 3RD ST	CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	N -S									015		00
N							6P			04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	29	F	OR-Y		097	000		00
N							44 18 10.41	-120 49 37.09	004100100S00															OR<25					

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J N V	S I H L	C O R K	W	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
																	02	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	61	M	OR-Y OR<25		097	000 000	00 00
00227	N	N	N					10/22/2017 SU 3P 44 18 10.41 -120 49 37.09	14 004100100S00	COMBS FLAT RD E 3RD ST	INTER CN 04	CROSS 0	N TRF SIGNAL	N N	CLR DRY DAY	ANGL-OTH TURN INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT W -E	01	DRVR	NONE	38	M	OR-Y OR>25		024,028	000	02,14 00 02,14
NO RPT N N																												
																	02	POLCE 0 PUBLC PSNGR CAR	TURN-L S -W	01	DRVR	INJC	39	M	OR-Y OR<25		000	000 000	00 00
00209	N	N	N		N	N		09/30/2017 SA 7A 44 18 10.41 -120 49 37.09	14 004100100S00	COMBS FLAT RD E 3RD ST	INTER CN 01	CROSS 0	N TRF SIGNAL	N N	CLR DRY DAY	ANGL-OTH ANGL PDO	01	NONE 9 N/A PSNGR CAR	STRGHT E -W	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000	04,40 00 00
CITY N N																												
																	02	NONE 9 N/A MOTRHOME	STRGHT N -S	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000	00 00
00273	N	N	N					12/16/2017 SA 1P 44 18 10.41 -120 49 37.09	14 004100100S00	COMBS FLAT RD E 3RD ST 03	INTER CN 0	CROSS 0	N TRF SIGNAL N	N N N	CLR DRY DAY	ANGL-OTH ANGL PDO	01	NONE 9 N/A PSNGR CAR	STRGHT N -S	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000	04 00 00
NO RPT N N																												
																	02	NONE 9 N/A PSNGR CAR	STRGHT W -E	01	DRVR	NONE	00	Unk	UNK UNK		000	000 000	00 00
00071	N	N	N		N	N		05/12/2018 SA 11A 44 18 10.41 -120 49 37.09	14 004100100S00	COMBS FLAT RD E 3RD ST 01	INTER CN 0	CROSS 0	N TRF SIGNAL N	N N N	CLR DRY DAY	O-1 L-TURN TURN INJ	01	NONE 0 PRVTE MTRCYCLE	STRGHT N -S	01	DRVR	INJB	68	M	OR-Y OR>25		000	000 000	02 00 00
CITY N N																												
																	01	NONE 0 PRVTE MTRCYCLE	STRGHT N -S	02	PSNG	INJC	62	F			000	000 000	00 00
																	02	NONE 0 PRVTE PSNGR CAR	TURN-L S -W	01	DRVR	NONE	67	F	OR-Y OR<25		028,004	000 000	00 02

CITY OF PRINEVILLE, CROOK COUNTY

COMBS FLAT RD at LAUGHLIN RD, City of Prineville, Crook County, 01/01/2015 to 12/31/2019

1 - 3 of 3 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R G S	J N V	I H L	C S K	O W R	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC / TYPE	INJ / SVRTY	A G E	S E X	LICNS / RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00025	N	N	N		N	N		02/14/2015	16	COMBS FLAT RD	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											02
CITY								SA	0	LAUGHLIN RD	CN		STOP SIGN	N	DRY	ANGL		PRVTE	E -W									000		00
N								2P			02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	68	F	OR-Y		000	000		00
N								44 18 18.06	-120 49 37.54																OR<25					
																	02	NONE 0	STRGHT											
																		PRVTE	S -N									000		00
																		PSNGR CAR		01	DRVR	NONE	80	M	OR-Y		028	000		02
																									OR<25					
00008	N	N	N					01/16/2015	16	COMBS FLAT RD	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	TURN-L											02
NONE								FR	0	LAUGHLIN RD	CN		STOP SIGN	N	DRY	TURN		PRVTE	S -W									015		00
N								4P			01	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	57	F	OR-Y		004,028	000		02
N								44 18 18.06	-120 49 37.54																OR<25					
																	02	NONE 0	STRGHT											
																		PRVTE	N -S									000		00
																		PSNGR CAR		01	DRVR	NONE	18	F	OR-Y		000	000		00
																									OR<25					
00086	Y	N	N		N	N		04/18/2019	16	COMBS FLAT RD	INTER	3-LEG	N	Y	CLR	ANGL-OTH	01	NONE 0	STRGHT											079	27,03,02
CITY								TH	0	LAUGHLIN RD	CN		STOP SIGN	N	DRY	ANGL		PRVTE	E -W									000	079	00
N								11A			02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJA	72	F	OTH-Y		016,020,028	000		27,03,02
N								44 18 18.1	-120 49 36.21																N-RES					
																	02	NONE 0	STRGHT											
																		PRVTE	S -N									000		00
																		PSNGR CAR		01	DRVR	INJB	43	F	OR-Y		000	000		00
																									OR<25					
																	02	NONE 0	STRGHT											
																		PRVTE	S -N									000		00
																		PSNGR CAR		02	PSNG	INJB	11	F			000	000		00
																	02	NONE 0	STRGHT											
																		PRVTE	S -N									000		00
																		PSNGR CAR		03	PSNG	INJB	13	F			000	000		00

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF PRINEVILLE, CROOK COUNTY

HUDSPETH RD at LAUGHLIN RD, City of Prineville, Crook County, 01/01/2015 to 12/31/2019

1 - 1 of 1 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D R J U G S	M J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	SPCL USE / TRLR QTY / OWNER / V# / TYPE	MOVE / FROM / TO	P# / TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
00090	N	N	N	N		N	04/24/2019	16	HUDSPETH RD	INTER	3-LEG	N	N	CLR	S-1STOP	01 NONE 9	STRGHT									29
CITY							WE	0	LAUGHLIN RD	NW		NONE	N	DRY	REAR	N/A	NW-SE								000	00
N							7A			06	0		N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000	00
N							44 18 20.21	-120 50 5.49														UNK				
																02 NONE 9	STOP									
																N/A	NW-SE								011	00
																PSNGR CAR		01 DRVR	NONE	00	Unk	UNK		000	000	00
																						UNK				

CONTINUOUS SYSTEM CRASH LISTING

041: OCHOCO

Highway 041 ALL ROAD TYPES, MP 19.24 to 19.34 01/01/2015 to 12/31/2019, Both Add and Non-Add mileage

1 - 3 of 5 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S D M / P R J S W / E A U I C O / E L G N H R / D C S V L K	DATE / DAY / TIME / LAT	COUNTY / CITY / URBAN AREA / LONG	RD# FC / COMPNT / MLG TYP / MILEPNT	CONN# / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE / (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
00191	N N N N	09/18/2015	CROOK	1 14		STRGHT		N	Y	CLR	PRKD MV	01	NONE 0	STRGHT										003,030	27
CITY		FR	PRINEVILLE	MN 0	NE 3RD ST	W	(NONE)	CURVE	N	DRY	REAR		PRVTE	E -W									000		00
Y		7P	PRINEVL UA	19.26	N JUNIPER ST	05			N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	41	F	OR-Y		016,083,080	038	003	27
N		44 18 10.45	-120 50 11.84		004100100S00		(02)													OR<25					
												02	NONE 0	PRKD-P											
													PRVTE	E -W									008		00
													PSNGR CAR												
00037	N N N N Y N	02/20/2015	CROOK	1 14		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										004	07
CITY		FR	PRINEVILLE	MN 0	N JUNIPER ST	W		STOP SIGN	N	DRY	REAR		PRVTE	W -E									006		00
N		3P	PRINEVL UA	19.29	NE 3RD ST	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	77	F	OR-Y		043	000		07
N		44 18 10.45	-120 50 9.93		004100100S00															OR<25					
												02	NONE 0	STOP											
													PRVTE	W -E									011	004	00
													PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		000	000		00
																				OR<25					
00086	N N N N	05/03/2016	CROOK	1 14		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										004	32,29
NO RPT		TU	PRINEVILLE	MN 0	N JUNIPER ST	W		STOP SIGN	N	DRY	REAR		PRVTE	W -E									000		00
N		11A	PRINEVL UA	19.29	NE 3RD ST	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	66	M	OR-Y		052,026	000		32,29
N		44 18 10.45	-120 50 9.93		004100100S00															OR>25					
												02	NONE 0	STOP											
													PRVTE	W -E									011	004	00
													PSNGR CAR		01	DRVR	INJC	38	M	OR-Y		000	000		00
																				OR<25					
00153	Y Y N N N N	07/18/2015	CROOK	1 14		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										001,013	01,03
STATE		SA	PRINEVILLE	MN 0	N JUNIPER ST	CN		STOP SIGN	N	DRY	ANGL		PRVTE	N -S									000	013	00
N		2A	PRINEVL UA	19.29	NE 3RD ST	03	0		N	DLIT	FAT		PSNGR CAR		01	DRVR	KILL	22	M	OR-Y		073,047,021	000	001	01,03
N		44 18 10.45	-120 50 9.93		004100100S00															OR<25					
												02	NONE 0	STRGHT											
													PRVTE	W -E									000		00
													PSNGR CAR		01	DRVR	INJC	31	M	OR-Y		000	000		00
																				OR<25					
												03	NONE 0	PRKD-P											
													PRVTE	N -S									008		00
													PSNGR CAR												
												04	NONE 0	PRKD-P											
													PRVTE	N -S									008		00
													PSNGR CAR												
												05	NONE 0	PRKD-P											
													PRVTE	N -S									008		00
													PSNGR CAR												

4 - 5 of 5 Crash records shown.

SER# INVEST RD DPT UNLOC?	S P E E D	 A L C	D R U G S	M J I N V	 S C H L	 W O R K	DATE DAY TIME LAT	COUNTY CITY URBAN AREA LONG	RD# FC COMPNT MLG TYP MILEPNT	CONN# FIRST STREET SECOND STREET LRS	RD CHAR DIRECT LOCTN	INT-TYPE (MEDIAN) LEGS (#LANES)	INT-REL TRAF- CONTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH COLL SVRTY	SPCL USE TRLR QTY OWNER V# TYPE	MOVE FROM TO	PRTC P# TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT	EVENT	CAUSE
																	06 NONE 0	PRKD-P										
																	PRVTE	N -S								008		00
																	PSNGR CAR											
																	07 NONE 0	PRKD-P										
																	PRVTE	N -S								008		00
																	PSNGR CAR											
00178	N	N	N	N	N	N	08/27/2015	CROOK	1 14		STRGHT		N	N	CLR	ANIMAL	01 NONE 0	STRGHT									035,082	12
CITY							TH	PRINEVILLE	MN 0	NE 3RD ST	E	(NONE)	NONE	N	DRY	OTH	PRVTE	E -W								000	035	00
N							10A	PRINEVL UA	19.31	N JUNIPER ST	04			N	DAY	PDO	PSNGR CAR		01 DRVR	NONE	58	F	OR-Y		000	000	082	12
N							44 18 10.44	-120 50 8.48		004100100S00		(02)											OR<25					

CITY OF PRINEVILLE, CROOK COUNTY

JUNIPER ST and Intersectional Crashes at JUNIPER ST, City of Prineville, Crook County, 03/05/2019 to 03/07/2019

1 - 1 of 1 Crash records shown.

SER# / INVEST / RD DPT / UNLOC?	S P E D	A L C	D M R U G S	J I N V	S C H L	W O R K	DATE / DAY / TIME / LAT	CLASS / DIST / FROM / LONG	CITY STREET / FIRST STREET / SECOND STREET / LRS	RD CHAR / DIRECT / LOCTN	INT-TYPE (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH / COLL / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	A G E	S E X	LICNS RES	PED LOC	ERROR	ACT EVENT	CAUSE
00057	N	N	N				03/06/2019	18	N JUNIPER ST	STRGHT		N	N	CLR	S-1STOP	01	NONE 9	STRGHT										29
NONE							WE	100	NE 3RD ST	N	(NONE)	UNKNOWN	N	ICE	REAR		N/A	N -S									000	00
N							2P			08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
N							44 18 11.81	-120 50 9.99			(02)													UNK				
																02	NONE 9	STOP										
																	N/A	N -S									011	00
																	PSNGR CAR		01	DRVR	NONE	00	Unk	UNK		000	000	00
																								UNK				

Intersection	
Int Delay, s/veh	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	30	44	567	56	26	367
Future Vol, veh/h	30	44	567	56	26	367
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	60	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	19	0
Mvmt Flow	31	46	591	58	27	382

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1056	620	0	0	649	0
Stage 1	620	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.29	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.371	-
Pot Cap-1 Maneuver	252	492	-	-	861	-
Stage 1	540	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	244	492	-	-	861	-
Mov Cap-2 Maneuver	377	-	-	-	-	-
Stage 1	540	-	-	-	-	-
Stage 2	636	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	14	0	0.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	377	492	861	-
HCM Lane V/C Ratio	-	-	0.083	0.093	0.031	-
HCM Control Delay (s)	-	-	15.4	13.1	9.3	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	0.3	0.3	0.1	-

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	12	11	3	9	11
Future Vol, veh/h	11	12	11	3	9	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	14	16	14	4	12	14

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	18	0	-	0	60	16
Stage 1	-	-	-	-	16	-
Stage 2	-	-	-	-	44	-
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	1612	-	-	-	952	1069
Stage 1	-	-	-	-	1012	-
Stage 2	-	-	-	-	984	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1612	-	-	-	943	1069
Mov Cap-2 Maneuver	-	-	-	-	943	-
Stage 1	-	-	-	-	1003	-
Stage 2	-	-	-	-	984	-

Approach	EB	WB	SB
HCM Control Delay, s	3.5	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1612	-	-	-	1008
HCM Lane V/C Ratio	0.009	-	-	-	0.026
HCM Control Delay (s)	7.3	0	-	-	8.7
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	11.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	3	25	75	32	0	43	8	21	0	26	5
Future Vol, veh/h	0	3	25	75	32	0	43	8	21	0	26	5
Conflicting Peds, #/hr	1	0	13	13	0	1	1	0	5	5	0	1
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	39	39	39	39	39	39	39	39	39	39	39	39
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	50	0
Mvmt Flow	0	8	64	192	82	0	110	21	54	0	67	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	385	375	88	396	354	54	81	0	0	80	0	0
Stage 1	75	75	-	273	273	-	-	-	-	-	-	-
Stage 2	310	300	-	123	81	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	577	559	976	568	574	1019	1529	-	-	1531	-	-
Stage 1	939	836	-	737	688	-	-	-	-	-	-	-
Stage 2	705	669	-	886	832	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	478	513	963	485	527	1013	1528	-	-	1524	-	-
Mov Cap-2 Maneuver	478	513	-	485	527	-	-	-	-	-	-	-
Stage 1	867	835	-	678	632	-	-	-	-	-	-	-
Stage 2	566	615	-	809	831	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	20.8	4.5	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1528	-	-	880	497	1524	-	-
HCM Lane V/C Ratio	0.072	-	-	0.082	0.552	-	-	-
HCM Control Delay (s)	7.5	0	-	9.5	20.8	0	-	-
HCM Lane LOS	A	A	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.3	3.3	0	-	-

Intersection	
Int Delay, s/veh	5.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	23	234	374	61	239	284
Future Vol, veh/h	23	234	374	61	239	284
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	-	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	1	0	1	1
Mvmt Flow	26	260	416	68	266	316

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1298	450	0	0	484	0
Stage 1	450	-	-	-	-	-
Stage 2	848	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	180	609	-	-	1084	-
Stage 1	647	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	136	609	-	-	1084	-
Mov Cap-2 Maneuver	247	-	-	-	-	-
Stage 1	647	-	-	-	-	-
Stage 2	319	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19	0	4.3
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	538	1084	-
HCM Lane V/C Ratio	-	-	0.531	0.245	-
HCM Control Delay (s)	-	-	19	9.4	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	3.1	1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	331	19	16	272	25	23
Future Vol, veh/h	331	19	16	272	25	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	4	0	0
Mvmt Flow	372	21	18	306	28	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	393	0	725	383
Stage 1	-	-	-	-	383	-
Stage 2	-	-	-	-	342	-
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	-	-	1177	-	395	669
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	724	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1177	-	388	669
Mov Cap-2 Maneuver	-	-	-	-	388	-
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	711	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	13.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	486	-	-	1177	-
HCM Lane V/C Ratio	0.111	-	-	0.015	-
HCM Control Delay (s)	13.3	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	23	313	299	11	7	20
Future Vol, veh/h	23	313	299	11	7	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	1	3	0	0	0
Mvmt Flow	26	360	344	13	8	23

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	357	0	-	0	763	351
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	412	-
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	1213	-	-	-	375	697
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	673	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1213	-	-	-	365	697
Mov Cap-2 Maneuver	-	-	-	-	365	-
Stage 1	-	-	-	-	698	-
Stage 2	-	-	-	-	673	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1213	-	-	-	564
HCM Lane V/C Ratio	0.022	-	-	-	0.055
HCM Control Delay (s)	8	0	-	-	11.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	10.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	115	155	12	96	12	124	47	20	13	44	10
Future Vol, veh/h	21	115	155	12	96	12	124	47	20	13	44	10
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	1	0	0	6	0	4	0	0	0	0	0
Mvmt Flow	24	134	180	14	112	14	144	55	23	15	51	12
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	11.2	9.5	10.5	9.3
HCM LOS	B	A	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	7%	10%	100%	0%
Vol Thru, %	0%	70%	40%	80%	0%	81%
Vol Right, %	0%	30%	53%	10%	0%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	124	67	291	120	13	54
LT Vol	124	0	21	12	13	0
Through Vol	0	47	115	96	0	44
RT Vol	0	20	155	12	0	10
Lane Flow Rate	144	78	338	140	15	63
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.256	0.121	0.433	0.202	0.028	0.103
Departure Headway (Hd)	6.397	5.61	4.602	5.213	6.565	5.925
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	564	642	771	692	547	607
Service Time	4.108	3.32	2.693	3.213	4.28	3.64
HCM Lane V/C Ratio	0.255	0.121	0.438	0.202	0.027	0.104
HCM Control Delay	11.3	9.1	11.2	9.5	9.5	9.3
HCM Lane LOS	B	A	B	A	A	A
HCM 95th-tile Q	1	0.4	2.2	0.8	0.1	0.3

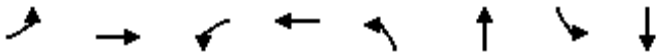
Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	650	5	6	548	22	3	3	7	10	6	27
Future Vol, veh/h	36	650	5	6	548	22	3	3	7	10	6	27
Conflicting Peds, #/hr	0	0	3	3	0	0	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	39	699	5	6	589	24	3	3	8	11	6	29

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	613	0	0	707	0	0	1416	1408	706	1399	1398	603
Stage 1	-	-	-	-	-	-	783	783	-	613	613	-
Stage 2	-	-	-	-	-	-	633	625	-	786	785	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	976	-	-	901	-	-	116	140	439	119	142	503
Stage 1	-	-	-	-	-	-	390	407	-	483	486	-
Stage 2	-	-	-	-	-	-	471	480	-	388	407	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	976	-	-	898	-	-	101	133	437	111	135	502
Mov Cap-2 Maneuver	-	-	-	-	-	-	101	133	-	111	135	-
Stage 1	-	-	-	-	-	-	373	389	-	464	483	-
Stage 2	-	-	-	-	-	-	434	477	-	363	389	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	25.4	24.8
HCM LOS			D	C

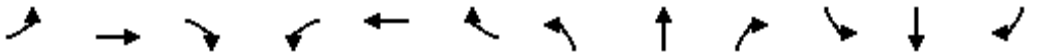
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	190	976	-	-	898	-	-	228
HCM Lane V/C Ratio	0.074	0.04	-	-	0.007	-	-	0.203
HCM Control Delay (s)	25.4	8.8	-	-	9	-	-	24.8
HCM Lane LOS	D	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.7



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	60	506	107	372	171	209	72	240
v/c Ratio	0.34	0.84	0.56	0.55	0.48	0.34	0.19	0.38
Control Delay	34.9	32.5	42.3	19.1	24.9	16.7	19.0	18.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.9	32.5	42.3	19.1	24.9	16.7	19.0	18.7
Queue Length 50th (ft)	25	171	45	120	60	56	22	73
Queue Length 95th (ft)	58	#320	#104	197	119	108	52	132
Internal Link Dist (ft)		2312		462		224		690
Turn Bay Length (ft)	90		125		100		60	
Base Capacity (vph)	191	727	204	785	353	612	372	625
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.70	0.52	0.47	0.48	0.34	0.19	0.38

Intersection Summary

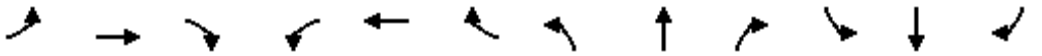
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	289	161	95	305	26	152	126	60	64	170	44
Future Volume (vph)	53	289	161	95	305	26	152	126	60	64	170	44
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.99		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	1633		1662	1714		1658	1622		1630	1688	
Flt Permitted	0.95	1.00		0.95	1.00		0.56	1.00		0.60	1.00	
Satd. Flow (perm)	1662	1633		1662	1714		972	1622		1027	1688	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	60	325	181	107	343	29	171	142	67	72	191	49
RTOR Reduction (vph)	0	30	0	0	4	0	0	23	0	0	12	0
Lane Group Flow (vph)	60	476	0	107	368	0	171	186	0	72	228	0
Confl. Peds. (#/hr)			1	1			2					2
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	4%	0%	2%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	3.9	23.1		5.7	24.9		23.1	23.1		23.1	23.1	
Effective Green, g (s)	3.9	23.1		5.7	24.9		23.1	23.1		23.1	23.1	
Actuated g/C Ratio	0.06	0.35		0.09	0.38		0.35	0.35		0.35	0.35	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	99	576		144	652		343	572		362	596	
v/s Ratio Prot	0.04	c0.29		c0.06	0.21			0.11			0.13	
v/s Ratio Perm							c0.18			0.07		
v/c Ratio	0.61	0.83		0.74	0.56		0.50	0.32		0.20	0.38	
Uniform Delay, d1	30.0	19.3		29.1	16.0		16.6	15.5		14.7	15.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.1	9.5		18.6	1.1		5.1	1.5		1.2	1.9	
Delay (s)	40.1	28.8		47.7	17.1		21.7	17.0		15.9	17.7	
Level of Service	D	C		D	B		C	B		B	B	
Approach Delay (s)		30.0			23.9			19.1			17.3	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	65.4	Sum of lost time (s)	13.5
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	53	289	161	95	305	26	152	126	60	64	170	44
Future Volume (veh/h)	53	289	161	95	305	26	152	126	60	64	170	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1736	1750	1750	1736	1750	1750	1695	1750	1723	1750	1750
Adj Flow Rate, veh/h	60	325	181	107	343	29	171	142	67	72	191	49
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	1	0	0	1	0	0	4	0	2	0	0
Cap, veh/h	86	367	205	134	600	51	378	386	182	392	476	122
Arrive On Green	0.05	0.35	0.35	0.08	0.38	0.38	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1667	1047	583	1667	1579	133	1065	1088	513	1078	1342	344
Grp Volume(v), veh/h	60	0	506	107	0	372	171	0	209	72	0	240
Grp Sat Flow(s),veh/h/ln	1667	0	1630	1667	0	1712	1065	0	1601	1078	0	1687
Q Serve(g_s), s	2.2	0.0	18.4	4.0	0.0	10.9	9.1	0.0	6.1	3.4	0.0	6.8
Cycle Q Clear(g_c), s	2.2	0.0	18.4	4.0	0.0	10.9	15.8	0.0	6.1	9.5	0.0	6.8
Prop In Lane	1.00		0.36	1.00		0.08	1.00		0.32	1.00		0.20
Lane Grp Cap(c), veh/h	86	0	572	134	0	651	378	0	568	392	0	598
V/C Ratio(X)	0.70	0.00	0.88	0.80	0.00	0.57	0.45	0.00	0.37	0.18	0.00	0.40
Avail Cap(c_a), veh/h	187	0	684	201	0	732	378	0	568	392	0	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.5	0.0	19.3	28.5	0.0	15.5	21.3	0.0	15.1	18.6	0.0	15.3
Incr Delay (d2), s/veh	9.8	0.0	11.7	12.3	0.0	0.8	3.9	0.0	1.8	1.0	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	8.1	2.0	0.0	3.9	2.5	0.0	2.3	0.9	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	0.0	31.0	40.8	0.0	16.4	25.2	0.0	17.0	19.7	0.0	17.3
LnGrp LOS	D	A	C	D	A	B	C	A	B	B	A	B
Approach Vol, veh/h		566			479			380			312	
Approach Delay, s/veh		31.8			21.8			20.6			17.9	
Approach LOS		C			C			C			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		26.9	9.6	26.7		26.9	7.8	28.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		22.4	7.6	26.5		22.4	7.1	27.0				
Max Q Clear Time (g_c+I1), s		17.8	6.0	20.4		11.5	4.2	12.9				
Green Ext Time (p_c), s		0.8	0.0	1.7		1.2	0.0	1.9				

Intersection Summary												
HCM 6th Ctrl Delay			24.1									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	1.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	50	785	72	30	499
Future Vol, veh/h	39	50	785	72	30	499
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	60	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	19	0
Mvmt Flow	41	52	818	75	31	520

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1438	856	0	0	893	0
Stage 1	856	-	-	-	-	-
Stage 2	582	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.29	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.371	-
Pot Cap-1 Maneuver	148	360	-	-	693	-
Stage 1	420	-	-	-	-	-
Stage 2	563	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	141	360	-	-	693	-
Mov Cap-2 Maneuver	278	-	-	-	-	-
Stage 1	420	-	-	-	-	-
Stage 2	538	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.2	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	278	360	693	-
HCM Lane V/C Ratio	-	-	0.146	0.145	0.045	-
HCM Control Delay (s)	-	-	20.2	16.7	10.4	-
HCM Lane LOS	-	-	C	C	B	-
HCM 95th %tile Q(veh)	-	-	0.5	0.5	0.1	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	14	13	12	7	13	13
Future Vol, veh/h	14	13	12	7	13	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	18	17	16	9	17	17

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	25	0	-	0	74	21
Stage 1	-	-	-	-	21	-
Stage 2	-	-	-	-	53	-
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	1603	-	-	-	935	1062
Stage 1	-	-	-	-	1007	-
Stage 2	-	-	-	-	975	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1603	-	-	-	925	1062
Mov Cap-2 Maneuver	-	-	-	-	925	-
Stage 1	-	-	-	-	996	-
Stage 2	-	-	-	-	975	-

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	8.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1603	-	-	-	989
HCM Lane V/C Ratio	0.011	-	-	-	0.035
HCM Control Delay (s)	7.3	0	-	-	8.8
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	13.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	0	8	71	201	86	0	120	21	56	0	70	13
Future Vol, veh/h	0	8	71	201	86	0	120	21	56	0	70	13
Conflicting Peds, #/hr	1	0	13	13	0	1	1	0	5	5	0	1
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	50	0
Mvmt Flow	0	8	71	201	86	0	120	21	56	0	70	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	411	400	91	423	378	55	84	0	0	82	0	0
Stage 1	78	78	-	294	294	-	-	-	-	-	-	-
Stage 2	333	322	-	129	84	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	555	541	972	545	557	1018	1526	-	-	1528	-	-
Stage 1	936	834	-	719	673	-	-	-	-	-	-	-
Stage 2	685	655	-	880	829	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	452	493	959	459	508	1012	1525	-	-	1521	-	-
Mov Cap-2 Maneuver	452	493	-	459	508	-	-	-	-	-	-	-
Stage 1	857	833	-	656	614	-	-	-	-	-	-	-
Stage 2	540	597	-	797	828	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	23.7	4.6	0
HCM LOS	A	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1525	-	-	875	473	1521	-	-
HCM Lane V/C Ratio	0.079	-	-	0.09	0.607	-	-	-
HCM Control Delay (s)	7.6	0	-	9.5	23.7	0	-	-
HCM Lane LOS	A	A	-	A	C	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	4	0	-	-

Intersection	
Int Delay, s/veh	10.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	293	483	73	292	351
Future Vol, veh/h	29	293	483	73	292	351
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	-	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	1	0	1	1
Mvmt Flow	32	326	537	81	324	390

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1616	578	0	0	618	0
Stage 1	578	-	-	-	-	-
Stage 2	1038	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	115	516	-	-	967	-
Stage 1	565	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	76	516	-	-	967	-
Mov Cap-2 Maneuver	176	-	-	-	-	-
Stage 1	565	-	-	-	-	-
Stage 2	229	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	40.1	0	4.8
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	440	967	-
HCM Lane V/C Ratio	-	-	0.813	0.336	-
HCM Control Delay (s)	-	-	40.1	10.6	-
HCM Lane LOS	-	-	E	B	-
HCM 95th %tile Q(veh)	-	-	7.5	1.5	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	399	22	19	337	29	27
Future Vol, veh/h	399	22	19	337	29	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	4	0	0
Mvmt Flow	448	25	21	379	33	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	473	0	882	461
Stage 1	-	-	-	-	461	-
Stage 2	-	-	-	-	421	-
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	-	-	1099	-	319	605
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	667	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1099	-	311	605
Mov Cap-2 Maneuver	-	-	-	-	311	-
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	651	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	15.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	406	-	-	1099	-
HCM Lane V/C Ratio	0.155	-	-	0.019	-
HCM Control Delay (s)	15.5	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	380	367	12	8	23
Future Vol, veh/h	27	380	367	12	8	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	1	3	0	0	0
Mvmt Flow	31	437	422	14	9	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	436	0	-	0	928	429
Stage 1	-	-	-	-	429	-
Stage 2	-	-	-	-	499	-
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	1134	-	-	-	300	630
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	614	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1134	-	-	-	289	630
Mov Cap-2 Maneuver	-	-	-	-	289	-
Stage 1	-	-	-	-	637	-
Stage 2	-	-	-	-	614	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1134	-	-	-	483
HCM Lane V/C Ratio	0.027	-	-	-	0.074
HCM Control Delay (s)	8.3	0	-	-	13
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Intersection	
Intersection Delay, s/veh	12.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	136	190	13	120	14	166	55	22	14	52	11
Future Vol, veh/h	23	136	190	13	120	14	166	55	22	14	52	11
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	1	0	0	6	0	4	0	0	0	0	0
Mvmt Flow	27	158	221	15	140	16	193	64	26	16	60	13
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	14.3	10.7	12.2	10.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	7%	9%	100%	0%
Vol Thru, %	0%	71%	39%	82%	0%	83%
Vol Right, %	0%	29%	54%	10%	0%	17%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	166	77	349	147	14	63
LT Vol	166	0	23	13	14	0
Through Vol	0	55	136	120	0	52
RT Vol	0	22	190	14	0	11
Lane Flow Rate	193	90	406	171	16	73
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.363	0.149	0.563	0.266	0.032	0.131
Departure Headway (Hd)	6.764	5.982	4.991	5.61	7.06	6.424
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	531	599	722	638	506	557
Service Time	4.508	3.726	3.033	3.663	4.817	4.181
HCM Lane V/C Ratio	0.363	0.15	0.562	0.268	0.032	0.131
HCM Control Delay	13.3	9.8	14.3	10.7	10.1	10.2
HCM Lane LOS	B	A	B	B	B	B
HCM 95th-tile Q	1.6	0.5	3.5	1.1	0.1	0.4

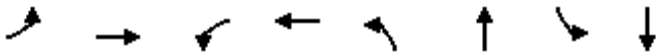
Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	724	6	7	609	24	3	3	8	11	7	32
Future Vol, veh/h	43	724	6	7	609	24	3	3	8	11	7	32
Conflicting Peds, #/hr	0	0	3	3	0	0	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	46	778	6	8	655	26	3	3	9	12	8	34

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	681	0	0	787	0	0	1583	1573	785	1564	1563	670
Stage 1	-	-	-	-	-	-	876	876	-	684	684	-
Stage 2	-	-	-	-	-	-	707	697	-	880	879	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	921	-	-	841	-	-	89	111	396	92	113	460
Stage 1	-	-	-	-	-	-	346	369	-	442	452	-
Stage 2	-	-	-	-	-	-	429	446	-	345	368	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	921	-	-	839	-	-	74	104	394	84	106	459
Mov Cap-2 Maneuver	-	-	-	-	-	-	74	104	-	84	106	-
Stage 1	-	-	-	-	-	-	328	349	-	420	447	-
Stage 2	-	-	-	-	-	-	386	442	-	317	348	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.1	30.5	31.8
HCM LOS			D	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	156	921	-	-	839	-	-	187
HCM Lane V/C Ratio	0.096	0.05	-	-	0.009	-	-	0.288
HCM Control Delay (s)	30.5	9.1	-	-	9.3	-	-	31.8
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-	-	1.1



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	73	560	118	423	189	244	85	280
v/c Ratio	0.51	0.89	0.63	0.63	0.61	0.41	0.26	0.46
Control Delay	45.7	37.2	47.5	20.8	31.6	18.4	20.4	20.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	37.2	47.5	20.8	31.6	18.4	20.4	20.2
Queue Length 50th (ft)	31	201	50	135	70	70	27	88
Queue Length 95th (ft)	#82	#378	#119	220	#158	129	61	155
Internal Link Dist (ft)		2312		462		224		690
Turn Bay Length (ft)	90		125		100		60	
Base Capacity (vph)	143	705	195	768	308	595	332	608
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.79	0.61	0.55	0.61	0.41	0.26	0.46

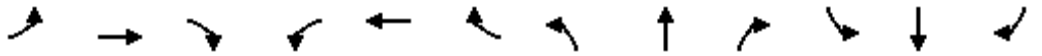
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	320	178	105	337	39	168	151	66	76	196	53
Future Volume (vph)	65	320	178	105	337	39	168	151	66	76	196	53
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	0.99	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.98		1.00	0.95		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	1633		1662	1707		1659	1625		1630	1685	
Flt Permitted	0.95	1.00		0.95	1.00		0.50	1.00		0.55	1.00	
Satd. Flow (perm)	1662	1633		1662	1707		873	1625		939	1685	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	73	360	200	118	379	44	189	170	74	85	220	60
RTOR Reduction (vph)	0	29	0	0	6	0	0	22	0	0	14	0
Lane Group Flow (vph)	73	531	0	118	417	0	189	222	0	85	266	0
Confl. Peds. (#/hr)			1	1			2					2
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	4%	0%	2%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	4.1	24.1		5.6	25.6		23.1	23.1		23.1	23.1	
Effective Green, g (s)	4.1	24.1		5.6	25.6		23.1	23.1		23.1	23.1	
Actuated g/C Ratio	0.06	0.36		0.08	0.39		0.35	0.35		0.35	0.35	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	102	593		140	659		304	566		327	587	
v/s Ratio Prot	0.04	c0.33		c0.07	0.24			0.14			0.16	
v/s Ratio Perm							c0.22			0.09		
v/c Ratio	0.72	0.89		0.84	0.63		0.62	0.39		0.26	0.45	
Uniform Delay, d1	30.5	19.9		29.9	16.5		18.0	16.3		15.5	16.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.1	15.9		34.5	2.0		9.2	2.0		1.9	2.5	
Delay (s)	51.7	35.8		64.4	18.5		27.2	18.4		17.4	19.2	
Level of Service	D	D		E	B		C	B		B	B	
Approach Delay (s)		37.7			28.5			22.2			18.8	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	66.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	320	178	105	337	39	168	151	66	76	196	53
Future Volume (veh/h)	65	320	178	105	337	39	168	151	66	76	196	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1736	1750	1750	1736	1750	1750	1695	1750	1723	1750	1750
Adj Flow Rate, veh/h	73	360	200	118	379	44	189	170	74	85	220	60
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	1	0	0	1	0	0	4	0	2	0	0
Cap, veh/h	93	390	217	148	619	72	318	377	164	336	446	122
Arrive On Green	0.06	0.37	0.37	0.09	0.41	0.41	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1667	1048	582	1667	1527	177	1027	1119	487	1045	1323	361
Grp Volume(v), veh/h	73	0	560	118	0	423	189	0	244	85	0	280
Grp Sat Flow(s),veh/h/ln	1667	0	1631	1667	0	1704	1027	0	1606	1045	0	1684
Q Serve(g_s), s	2.9	0.0	21.9	4.6	0.0	13.1	12.0	0.0	7.9	4.6	0.0	8.8
Cycle Q Clear(g_c), s	2.9	0.0	21.9	4.6	0.0	13.1	20.8	0.0	7.9	12.6	0.0	8.8
Prop In Lane	1.00		0.36	1.00		0.10	1.00		0.30	1.00		0.21
Lane Grp Cap(c), veh/h	93	0	607	148	0	691	318	0	541	336	0	567
V/C Ratio(X)	0.79	0.00	0.92	0.80	0.00	0.61	0.59	0.00	0.45	0.25	0.00	0.49
Avail Cap(c_a), veh/h	137	0	647	187	0	727	318	0	541	336	0	567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.2	0.0	20.0	29.9	0.0	15.7	25.9	0.0	17.3	22.2	0.0	17.6
Incr Delay (d2), s/veh	16.5	0.0	18.2	17.2	0.0	1.4	7.9	0.0	2.7	1.8	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	10.6	2.5	0.0	4.9	3.5	0.0	3.1	1.2	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	0.0	38.3	47.0	0.0	17.1	33.8	0.0	20.0	24.0	0.0	20.7
LnGrp LOS	D	A	D	D	A	B	C	A	C	C	A	C
Approach Vol, veh/h		633			541			433			365	
Approach Delay, s/veh		39.3			23.6			26.1			21.4	
Approach LOS		D			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		27.0	10.4	29.4		27.0	8.2	31.6				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		22.5	7.5	26.5		22.5	5.5	28.5				
Max Q Clear Time (g_c+I1), s		22.8	6.6	23.9		14.6	4.9	15.1				
Green Ext Time (p_c), s		0.0	0.0	0.9		1.2	0.0	2.2				

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

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	2	4	0	1	3	0
Future Vol, veh/h	2	4	0	1	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	3	5	0	1	4	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	8	0	7	6
Stage 1	-	-	-	-	6	-
Stage 2	-	-	-	-	1	-
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	-	-	1625	-	1019	1083
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1028	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1625	-	1019	1083
Mov Cap-2 Maneuver	-	-	-	-	1019	-
Stage 1	-	-	-	-	1022	-
Stage 2	-	-	-	-	1028	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1019	-	-	1625	-
HCM Lane V/C Ratio	0.004	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	2	0	0	1	0
Future Vol, veh/h	0	2	0	0	1	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	3	0	0	1	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	3	0	3	2
Stage 1	-	-	-	-	2	-
Stage 2	-	-	-	-	1	-
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	-	-	1632	-	1025	1088
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	1028	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1632	-	1025	1088
Mov Cap-2 Maneuver	-	-	-	-	1025	-
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	1028	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1025	-	-	1632	-
HCM Lane V/C Ratio	0.001	-	-	-	-
HCM Control Delay (s)	8.5	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	58	53	785	105	34	499
Future Vol, veh/h	58	53	785	105	34	499
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	60	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	19	0
Mvmt Flow	60	55	818	109	35	520

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1463	873	0	0	927	0
Stage 1	873	-	-	-	-	-
Stage 2	590	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.29	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.371	-
Pot Cap-1 Maneuver	143	352	-	-	672	-
Stage 1	412	-	-	-	-	-
Stage 2	558	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	136	352	-	-	672	-
Mov Cap-2 Maneuver	272	-	-	-	-	-
Stage 1	412	-	-	-	-	-
Stage 2	529	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.7	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	272	352	672	-
HCM Lane V/C Ratio	-	-	0.222	0.157	0.053	-
HCM Control Delay (s)	-	-	22	17.1	10.7	-
HCM Lane LOS	-	-	C	C	B	-
HCM 95th %tile Q(veh)	-	-	0.8	0.6	0.2	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	22	18	7	13	22
Future Vol, veh/h	29	22	18	7	13	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	38	29	24	9	17	29

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	33	0	-	0	134	29
Stage 1	-	-	-	-	29	-
Stage 2	-	-	-	-	105	-
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	1592	-	-	-	864	1052
Stage 1	-	-	-	-	999	-
Stage 2	-	-	-	-	924	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1592	-	-	-	843	1052
Mov Cap-2 Maneuver	-	-	-	-	843	-
Stage 1	-	-	-	-	975	-
Stage 2	-	-	-	-	924	-

Approach	EB	WB	SB
HCM Control Delay, s	4.2	0	8.9
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1592	-	-	-	963
HCM Lane V/C Ratio	0.024	-	-	-	0.048
HCM Control Delay (s)	7.3	0	-	-	8.9
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Intersection	
Int Delay, s/veh	16.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	8	88	201	86	0	152	21	56	0	70	13
Future Vol, veh/h	0	8	88	201	86	0	152	21	56	0	70	13
Conflicting Peds, #/hr	1	0	13	13	0	1	1	0	5	5	0	1
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	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	50	0
Mvmt Flow	0	8	88	201	86	0	152	21	56	0	70	13

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	475	464	91	496	442	55	84	0	0	82	0	0
Stage 1	78	78	-	358	358	-	-	-	-	-	-	-
Stage 2	397	386	-	138	84	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	503	498	972	487	513	1018	1526	-	-	1528	-	-
Stage 1	936	834	-	664	631	-	-	-	-	-	-	-
Stage 2	633	614	-	870	829	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	396	443	959	394	457	1012	1525	-	-	1521	-	-
Mov Cap-2 Maneuver	396	443	-	394	457	-	-	-	-	-	-	-
Stage 1	837	833	-	592	562	-	-	-	-	-	-	-
Stage 2	479	547	-	773	828	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.6	31.7	5.1	0
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1525	-	-	874	411	1521	-	-
HCM Lane V/C Ratio	0.1	-	-	0.11	0.698	-	-	-
HCM Control Delay (s)	7.6	0	-	9.6	31.7	0	-	-
HCM Lane LOS	A	A	-	A	D	A	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.4	5.2	0	-	-

Intersection	
Int Delay, s/veh	12.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	293	494	84	292	357
Future Vol, veh/h	36	293	494	84	292	357
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	-	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	1	0	1	1
Mvmt Flow	40	326	549	93	324	397

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1641	596	0	0	642	0
Stage 1	596	-	-	-	-	-
Stage 2	1045	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	111	504	-	-	947	-
Stage 1	554	-	-	-	-	-
Stage 2	342	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	73	504	-	-	947	-
Mov Cap-2 Maneuver	172	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	225	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	50.9	0	4.8
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	416	947	-
HCM Lane V/C Ratio	-	-	0.879	0.343	-
HCM Control Delay (s)	-	-	50.9	10.8	-
HCM Lane LOS	-	-	F	B	-
HCM 95th %tile Q(veh)	-	-	9	1.5	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	410	22	27	344	29	40
Future Vol, veh/h	410	22	27	344	29	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	4	0	0
Mvmt Flow	461	25	30	387	33	45

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	486	0	921	474
Stage 1	-	-	-	-	474	-
Stage 2	-	-	-	-	447	-
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	-	-	1087	-	303	595
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	649	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1087	-	292	595
Mov Cap-2 Maneuver	-	-	-	-	292	-
Stage 1	-	-	-	-	630	-
Stage 2	-	-	-	-	626	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	414	-	-	1087	-
HCM Lane V/C Ratio	0.187	-	-	0.028	-
HCM Control Delay (s)	15.7	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	51	380	367	12	8	38
Future Vol, veh/h	51	380	367	12	8	38
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	1	3	0	0	0
Mvmt Flow	59	437	422	14	9	44

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	436	0	-	0	984	429
Stage 1	-	-	-	-	429	-
Stage 2	-	-	-	-	555	-
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	1134	-	-	-	278	630
Stage 1	-	-	-	-	661	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1134	-	-	-	259	630
Mov Cap-2 Maneuver	-	-	-	-	259	-
Stage 1	-	-	-	-	615	-
Stage 2	-	-	-	-	579	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1134	-	-	-	504
HCM Lane V/C Ratio	0.052	-	-	-	0.105
HCM Control Delay (s)	8.3	0	-	-	13
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3

Intersection	
Intersection Delay, s/veh	13
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	136	190	13	120	18	166	78	22	16	65	11
Future Vol, veh/h	23	136	190	13	120	18	166	78	22	16	65	11
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	0	1	0	0	6	0	4	0	0	0	0	0
Mvmt Flow	27	158	221	15	140	21	193	91	26	19	76	13
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	15	11.1	12.3	10.5
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	7%	9%	100%	0%
Vol Thru, %	0%	78%	39%	79%	0%	86%
Vol Right, %	0%	22%	54%	12%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	166	100	349	151	16	76
LT Vol	166	0	23	13	16	0
Through Vol	0	78	136	120	0	65
RT Vol	0	22	190	18	0	11
Lane Flow Rate	193	116	406	176	19	88
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.367	0.197	0.578	0.28	0.037	0.161
Departure Headway (Hd)	6.849	6.113	5.131	5.751	7.158	6.543
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	586	702	622	499	546
Service Time	4.602	3.866	3.179	3.811	4.925	4.31
HCM Lane V/C Ratio	0.368	0.198	0.578	0.283	0.038	0.161
HCM Control Delay	13.5	10.4	15	11.1	10.2	10.6
HCM Lane LOS	B	B	B	B	B	B
HCM 95th-tile Q	1.7	0.7	3.7	1.1	0.1	0.6

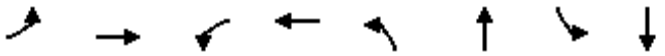
Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	56	724	6	7	609	24	3	3	8	11	7	40
Future Vol, veh/h	56	724	6	7	609	24	3	3	8	11	7	40
Conflicting Peds, #/hr	0	0	3	3	0	0	2	0	1	1	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	50	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	60	778	6	8	655	26	3	3	9	12	8	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	681	0	0	787	0	0	1616	1601	785	1592	1591	670
Stage 1	-	-	-	-	-	-	904	904	-	684	684	-
Stage 2	-	-	-	-	-	-	712	697	-	908	907	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	921	-	-	841	-	-	84	107	396	88	108	460
Stage 1	-	-	-	-	-	-	334	358	-	442	452	-
Stage 2	-	-	-	-	-	-	427	446	-	332	357	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	921	-	-	839	-	-	67	99	394	79	100	459
Mov Cap-2 Maneuver	-	-	-	-	-	-	67	99	-	79	100	-
Stage 1	-	-	-	-	-	-	311	334	-	413	447	-
Stage 2	-	-	-	-	-	-	376	442	-	300	333	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.1	32.3	31.7
HCM LOS			D	D

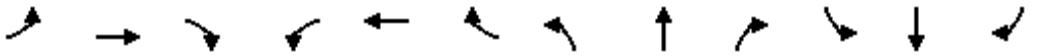
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	147	921	-	-	839	-	-	196
HCM Lane V/C Ratio	0.102	0.065	-	-	0.009	-	-	0.318
HCM Control Delay (s)	32.3	9.2	-	-	9.3	-	-	31.7
HCM Lane LOS	D	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.3	0.2	-	-	0	-	-	1.3



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	73	560	118	433	189	249	91	284
v/c Ratio	0.51	0.89	0.63	0.64	0.62	0.42	0.28	0.47
Control Delay	45.7	37.2	47.5	21.1	32.1	18.7	20.9	20.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.7	37.2	47.5	21.1	32.1	18.7	20.9	20.4
Queue Length 50th (ft)	31	201	50	139	70	72	29	91
Queue Length 95th (ft)	#82	#378	#119	225	#159	133	65	158
Internal Link Dist (ft)		2312		462		224		690
Turn Bay Length (ft)	90		125		100		60	
Base Capacity (vph)	143	705	195	767	304	594	327	607
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.79	0.61	0.56	0.62	0.42	0.28	0.47

Intersection Summary

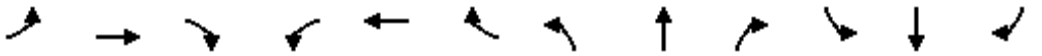
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	320	178	105	337	48	168	156	66	81	199	53
Future Volume (vph)	65	320	178	105	337	48	168	156	66	81	199	53
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.98		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1662	1633		1662	1702		1659	1626		1630	1686	
Flt Permitted	0.95	1.00		0.95	1.00		0.49	1.00		0.54	1.00	
Satd. Flow (perm)	1662	1633		1662	1702		863	1626		928	1686	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	73	360	200	118	379	54	189	175	74	91	224	60
RTOR Reduction (vph)	0	29	0	0	7	0	0	21	0	0	13	0
Lane Group Flow (vph)	73	531	0	118	426	0	189	228	0	91	271	0
Confl. Peds. (#/hr)			1	1			2					2
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	4%	0%	2%	0%	0%
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	4.1	24.1		5.6	25.6		23.1	23.1		23.1	23.1	
Effective Green, g (s)	4.1	24.1		5.6	25.6		23.1	23.1		23.1	23.1	
Actuated g/C Ratio	0.06	0.36		0.08	0.39		0.35	0.35		0.35	0.35	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	102	593		140	657		300	566		323	587	
v/s Ratio Prot	0.04	c0.33		c0.07	0.25			0.14			0.16	
v/s Ratio Perm							c0.22			0.10		
v/c Ratio	0.72	0.89		0.84	0.65		0.63	0.40		0.28	0.46	
Uniform Delay, d1	30.5	19.9		29.9	16.7		18.0	16.4		15.6	16.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.1	15.9		34.5	2.2		9.7	2.1		2.2	2.6	
Delay (s)	51.7	35.8		64.4	18.9		27.7	18.5		17.8	19.4	
Level of Service	D	D		E	B		C	B		B	B	
Approach Delay (s)		37.7			28.6			22.5			19.0	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	66.3	Sum of lost time (s)	13.5
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	320	178	105	337	48	168	156	66	81	199	53
Future Volume (veh/h)	65	320	178	105	337	48	168	156	66	81	199	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1750	1736	1750	1750	1736	1750	1750	1695	1750	1723	1750	1750
Adj Flow Rate, veh/h	73	360	200	118	379	54	189	175	74	91	224	60
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	0	1	0	0	1	0	0	4	0	2	0	0
Cap, veh/h	93	390	217	148	603	86	315	381	161	332	448	120
Arrive On Green	0.06	0.37	0.37	0.09	0.41	0.41	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1667	1048	582	1667	1486	212	1023	1130	478	1040	1329	356
Grp Volume(v), veh/h	73	0	560	118	0	433	189	0	249	91	0	284
Grp Sat Flow(s),veh/h/ln	1667	0	1631	1667	0	1698	1023	0	1608	1040	0	1685
Q Serve(g_s), s	2.9	0.0	21.9	4.6	0.0	13.6	12.1	0.0	8.1	5.0	0.0	9.0
Cycle Q Clear(g_c), s	2.9	0.0	21.9	4.6	0.0	13.6	21.0	0.0	8.1	13.1	0.0	9.0
Prop In Lane	1.00		0.36	1.00		0.12	1.00		0.30	1.00		0.21
Lane Grp Cap(c), veh/h	93	0	607	148	0	688	315	0	542	332	0	568
V/C Ratio(X)	0.79	0.00	0.92	0.80	0.00	0.63	0.60	0.00	0.46	0.27	0.00	0.50
Avail Cap(c_a), veh/h	137	0	647	187	0	725	315	0	542	332	0	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.2	0.0	20.0	29.9	0.0	15.8	26.1	0.0	17.4	22.5	0.0	17.7
Incr Delay (d2), s/veh	16.5	0.0	18.2	17.2	0.0	1.6	8.2	0.0	2.8	2.0	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	10.6	2.5	0.0	5.0	3.5	0.0	3.2	1.4	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.6	0.0	38.3	47.0	0.0	17.5	34.3	0.0	20.2	24.6	0.0	20.8
LnGrp LOS	D	A	D	D	A	B	C	A	C	C	A	C
Approach Vol, veh/h		633			551			438			375	
Approach Delay, s/veh		39.3			23.8			26.2			21.7	
Approach LOS		D			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		27.0	10.4	29.4		27.0	8.2	31.6				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		22.5	7.5	26.5		22.5	5.5	28.5				
Max Q Clear Time (g_c+I1), s		23.0	6.6	23.9		15.1	4.9	15.6				
Green Ext Time (p_c), s		0.0	0.0	0.9		1.2	0.0	2.2				

Intersection Summary												
HCM 6th Ctrl Delay			28.9									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	14	15	4	4	10	0	3	18	8	0	11	9
Future Vol, veh/h	14	15	4	4	10	0	3	18	8	0	11	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	80	80	80	80	80	80	80	80	80	80	80	80
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	18	19	5	5	13	0	4	23	10	0	14	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	13	0	0	24	0	0	94	81	22	97	83	13
Stage 1	-	-	-	-	-	-	58	58	-	23	23	-
Stage 2	-	-	-	-	-	-	36	23	-	74	60	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1619	-	-	1604	-	-	894	813	1061	890	811	1073
Stage 1	-	-	-	-	-	-	959	851	-	1000	880	-
Stage 2	-	-	-	-	-	-	985	880	-	940	849	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1619	-	-	1604	-	-	864	802	1061	854	800	1073
Mov Cap-2 Maneuver	-	-	-	-	-	-	864	802	-	854	800	-
Stage 1	-	-	-	-	-	-	948	842	-	989	877	-
Stage 2	-	-	-	-	-	-	957	877	-	896	840	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.1	2.1	9.3	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	867	1619	-	-	1604	-	-	903
HCM Lane V/C Ratio	0.042	0.011	-	-	0.003	-	-	0.028
HCM Control Delay (s)	9.3	7.2	0	-	7.3	0	-	9.1
HCM Lane LOS	A	A	A	-	A	A	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		⇕			⇕			⇕			⇕	
Traffic Vol, veh/h	21	0	2	0	0	0	1	10	0	0	6	13
Future Vol, veh/h	21	0	2	0	0	0	1	10	0	0	6	13
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	26	0	3	0	0	0	1	13	0	0	8	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	31	31	16	33	39	13	24	0	0	13	0	0
Stage 1	16	16	-	15	15	-	-	-	-	-	-	-
Stage 2	15	15	-	18	24	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	982	866	1069	979	857	1073	1604	-	-	1619	-	-
Stage 1	1009	886	-	1010	887	-	-	-	-	-	-	-
Stage 2	1010	887	-	1006	879	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	981	865	1069	976	856	1073	1604	-	-	1619	-	-
Mov Cap-2 Maneuver	981	865	-	976	856	-	-	-	-	-	-	-
Stage 1	1008	886	-	1009	886	-	-	-	-	-	-	-
Stage 2	1009	886	-	1004	879	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.8	0	0.7	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1604	-	-	988	-	1619	-	-
HCM Lane V/C Ratio	0.001	-	-	0.029	-	-	-	-
HCM Control Delay (s)	7.2	0	-	8.8	0	0	-	-
HCM Lane LOS	A	A	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-

Intersection	
Int Delay, s/veh	7.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	293	494	84	292	357
Future Vol, veh/h	36	293	494	84	292	357
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	75	-	-	75	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	0	2	1	0	1	1
Mvmt Flow	40	326	549	93	324	397

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1641	596	0	0	642	0
Stage 1	596	-	-	-	-	-
Stage 2	1045	-	-	-	-	-
Critical Hdwy	6.4	6.22	-	-	4.11	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	-	-	2.209	-
Pot Cap-1 Maneuver	111	504	-	-	947	-
Stage 1	554	-	-	-	-	-
Stage 2	342	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	73	504	-	-	947	-
Mov Cap-2 Maneuver	172	-	-	-	-	-
Stage 1	554	-	-	-	-	-
Stage 2	225	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.2	0	4.8
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	172	504	947	-
HCM Lane V/C Ratio	-	-	0.233	0.646	0.343	-
HCM Control Delay (s)	-	-	32.2	24.3	10.8	-
HCM Lane LOS	-	-	D	C	B	-
HCM 95th %tile Q(veh)	-	-	0.9	4.5	1.5	-