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To: Project Management Team

From: Marc Butorac, PE, Matt Kittelson, PE, & Jacki Gulczynski

Subject: Final Memorandum – Existing Conditions Analysis (Task 4.2)

This memorandum summarizes the transportation inventory and identification of existing needs in support of the Terrebonne Refinement Plan (TRP). The majority of the inventory and analysis results are presented in figures and tables, with supplemental text provided to explain the illustrated information. Detailed operational analyses and data are provided in the supporting appendices.

The existing transportation needs, opportunities and constraints reflect an inventory of the multimodal transportation system characteristics conducted in the Spring of 2018. This inventory included all major transportation-related facilities and services within the Terrebonne Community (Terrebonne). Key roadway features, traffic and safety conditions at six study intersections and three roadway segments, bicycle facilities, pedestrian facilities, and transit facilities are analyzed. The memorandum is organized into the following sections:

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### **EXECUTIVE SUMMARY**

An assessment of the existing transportation system conditions and the transportation network inventory identified the following:

- US 97 is a key freight and statewide mobility route that traverse north-south through the Terrebonne Community. The highway also serves as a Tier 1, Phase 1 Lifeline Route considered vital for rescue and recovery operations in case of a natural catastrophe.
- Over Dimensional loads (OD) regularly used US 97 through Terrebonne. These vehicles typically average 120 feet in length, but can exceed 200 feet, including one OD load that was 330 feet.
- The pedestrian network throughout the urban area is largely incomplete. The only sidewalk facilities are present on B Avenue and a short segment of US 97. Nearly all higher order roadways scored a Level of Traffic Stress (LTS) 4 (high stress) with the exception of B Avenue.
- The existing B Avenue marked crosswalk at US 97 could possibly increase the risk of pedestrian related crashes if other pedestrian facility enhancements such as a Rectangular Rapid Flashing Beacon (RRFB) are not installed.
- The only dedicated bicycle facility in the community include bike lanes on a segment of US 97 between C Avenue and 11<sup>th</sup> Street. The remainder of the community relies on paved shoulders for bicycles. The Oregon Scenic Bikeway that bisects the community east-west does not have dedicated bicycle facilities.
- The following three study intersections did not meet mobility targets for the side-street turning movement:
  - US 97/Lower Bridge Way
  - o US 97/C Avenue
  - o US 97/B Avenue
- The US 97/Smith Rock Way (B Avenue) intersection meets mobility targets under typical conditions analyzed in this memorandum, though the 95<sup>th</sup> percentile queue for the westbound approach extends through the 11<sup>th</sup> Street intersection. Also, this intersection experiences high demand during seasonal events associated with agricultural and recreational amenities to the east.
- Segment volumes indicated that US 97 is currently under capacity through the study area.
- Speed data collected at three segments showed that the 85<sup>th</sup> percentile speeds on US 97 at Lower Bridge Way and C Avenue exceed the posted speed by 19 and 3 mph, respectively.
- Ninety-three (93) crashes were reported in the greater Terrebonne area during the five-year study period. There were no fatal crashes during the study period.
- Of the six study intersections, US 97/Lower Bridge Way and 11<sup>th</sup> Street/Smith Rock Way exceed the ODOT Critical Crash Rate over the past five-year period.

### STUDY AREA AND LAND USE

Terrebonne is an unincorporated community within Deschutes County which includes several local businesses, homes, and a local school. According to the US Census Bureau, the 2010 population estimate for Terrebonne was 1,257 residences. Terrebonne represents approximately 8% of Deschutes County's total population. Crooked River Ranch, which has approximately 5,000 residents, and other residential areas in Deschutes County and Jefferson County are located to the west and generally access US 97 via the US 97/Lower Bridge Way intersection at the northern end of Terrebonne.

Basic services are provided within Terrebonne, including a grocery store, hardware store, several restaurants, and other retail options are illustrated in the study area map (see Figure 1). This includes key activity locations, emergency response buildings, historical sites, hazardous material sites, and wetlands.

More expansive services and amenities are available in the neighboring communities of Madras and Redmond, which may require regular travel to these areas for residents of Terrebonne and the surrounding community. Recreational areas, including seasonal agricultural tourism such as the annual pumpkin patch at Smith Rock Ranch<sup>1</sup> and DD Ranch<sup>2</sup>, and Smith Rock State Park, are to the east and generally access US 97 via the Smith Rock Way (B Avenue) intersection.

Figure 2 illustrates the location of several key businesses in Downtown Terrebonne, fronting US 97. There are a variety of commercial and service facilities along the corridor. Figure 3 shows the Deschutes County Zoning Map for the region. The Terrebonne commercial area is located along US 97 and 11<sup>th</sup> Street between Lower Bridge Way and NW 10<sup>th</sup> Street and is surrounded by residential zoning. Outside of this area, Terrebonne consists primarily of agricultural and farm zoning.

<sup>&</sup>lt;sup>1</sup> Smith Rock Ranch hosts the "Central Oregon Pumpkin Patch", one of the region's largest fall attractions

<sup>&</sup>lt;sup>2</sup> DD Ranch hosts several other attractions throughout the year including Easter and Christmas activities: http://ddranch.net/

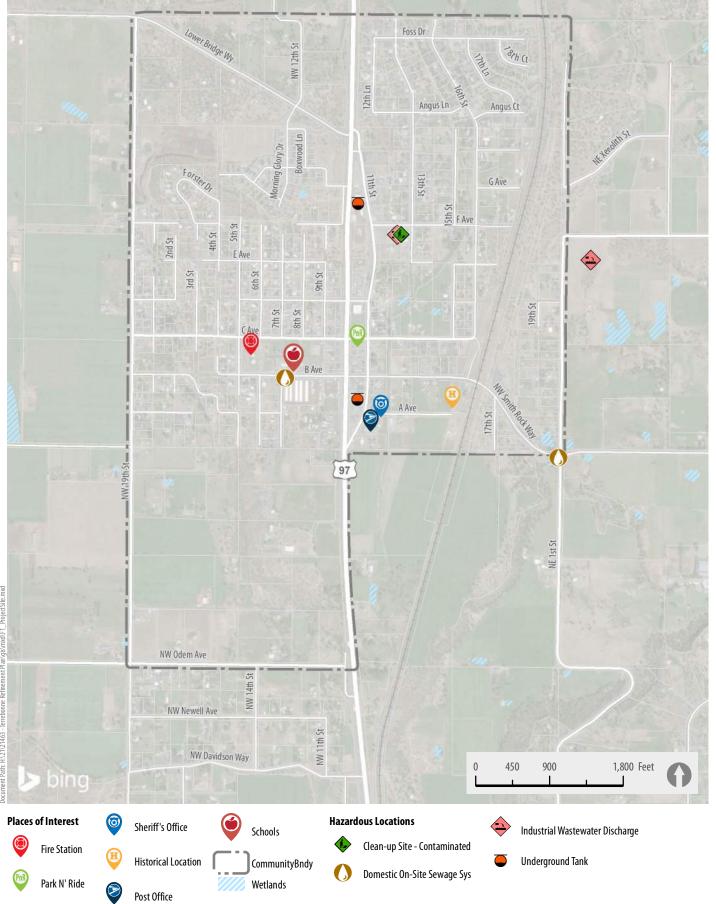
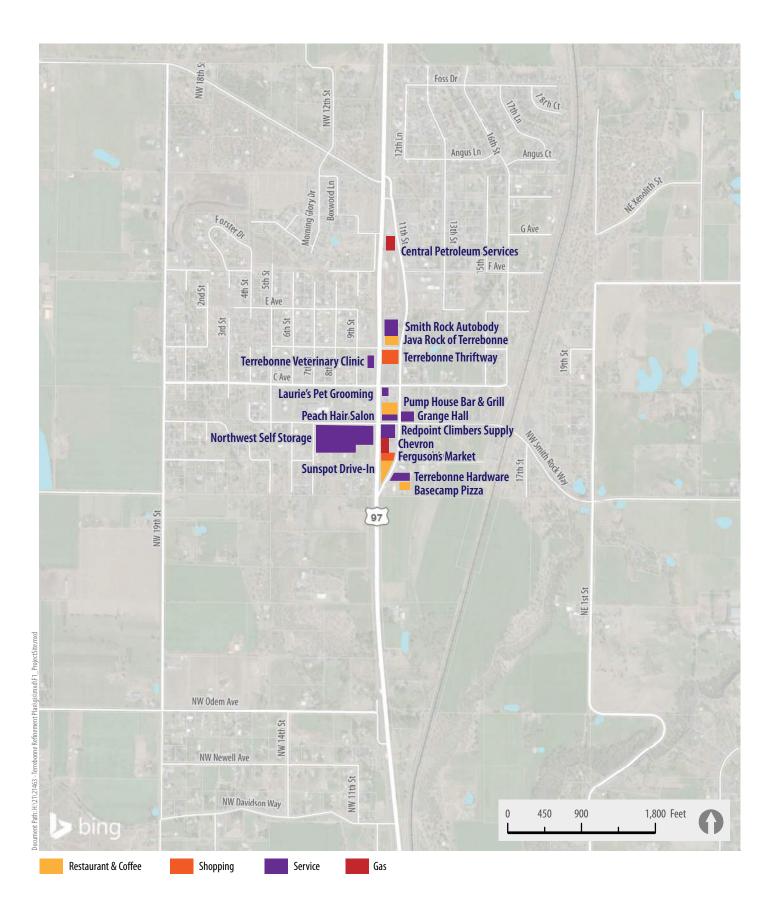
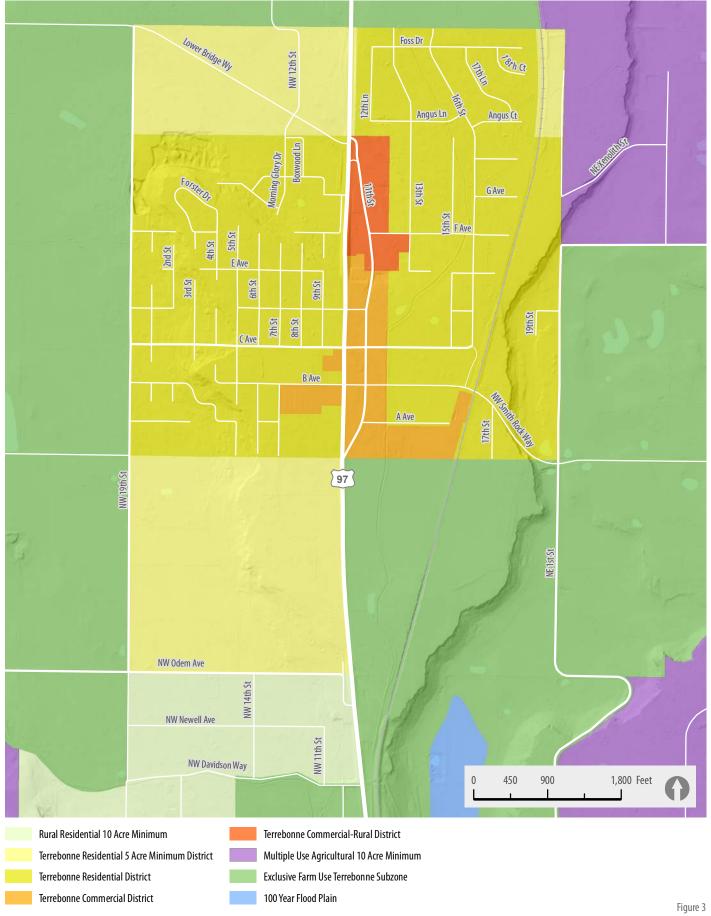


Figure 1



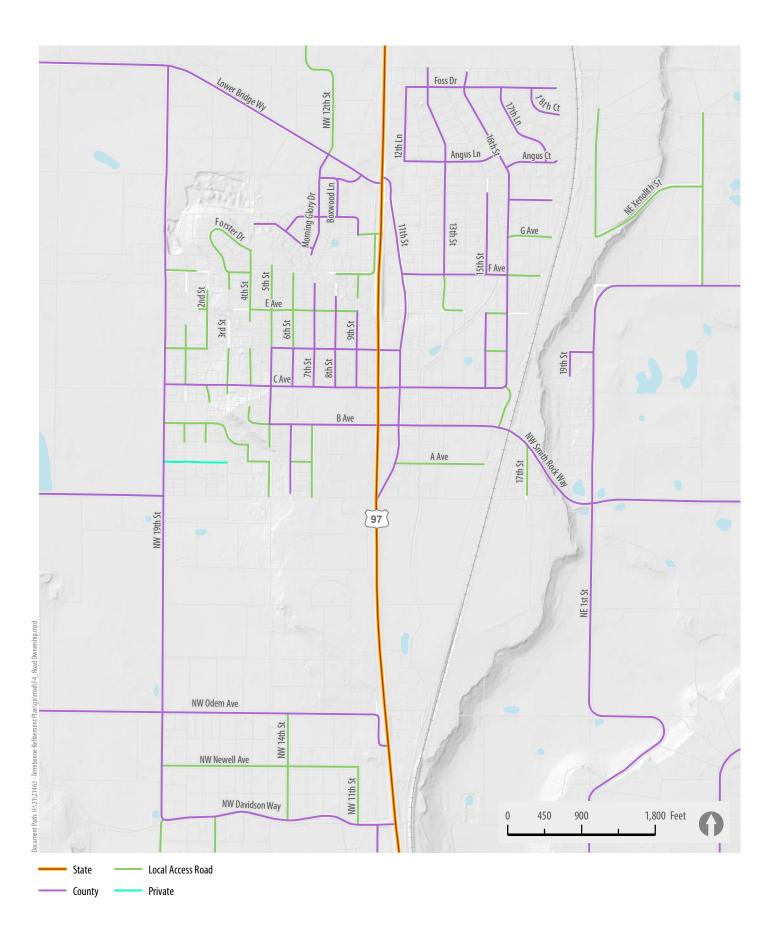




# TRANSPORTATION FACILITIES

This section includes the roadway and multimodal transportation facilities provided in Terrebonne. The Community's connectivity and transportation network has largely been shaped by the presence of US 97 and the BNSF railroad located to the east. The County and ODOT have classified streets into functional classification based on a hierarchy of multimodal mobility and access to, through and between different land use types. The roadway ownership map is shown in Figure 4. Roads ownership in the area is summarized below:

- ODOT: owns and maintains US 97
- Deschutes County: owns and maintains key roadways in Terrebonne, including 11<sup>th</sup> Street,
   B Street, Smith Rock Way, C Street, and Lower Bridge Way
- Local Access Roads: roads that the public has right to use, but are not maintained by ODOT,
   Deschutes County or any other government agency
- Private Roads: roads that are owned and maintained by local property owners or associations.



## State Highways

US 97 is a statewide highway and designated freight route that provides north-south access between northern California and into Canada via Washington State. It is the primary highway serving Terrebonne and generally divides the community with residential and commercial uses on both the east and west side. The highway also serves as a Tier 1, Phase 1 Lifeline Route considered vital for rescue and recovery operations in case of a natural catastrophe. US 97 is a key connection to the Redmond Municipal Airport, identified as a primary emergency response airport in Central Oregon.

Providing adequate access to streets, land uses, and key destinations is a critical part of operating and planning for an effective transportation system for all users. ODOT maintains standards to help balance the needs for both "through travelers" (including freight and public transportation) as well as serving the needs of area residents, businesses, and visitors. US 97 is identified in the Oregon Highway Plan (OHP) as a Statewide Highway and includes Expressway designation immediately north and south of Terrebonne. The Expressway designation does not carry into the Terrebonne urban area between Lower Bridge Way and NW 10<sup>th</sup> Street. The following subsections identify current standards for US 97.

### **Intelligent Transportation Systems**

Speed feedback signs are located on US 97 as drivers enter Terrebonne from the north and south. No other Intelligent Transportation System (ITS) facilities exist in or near the community.

#### **Culverts**

There are no culverts located within the study area on US 97<sup>3</sup>. A culvert is located approximately 0.75 mile north of Lower Bridge Way and 0.75 mile south of NW 10<sup>th</sup> Street.

#### **Posted Speeds**

A map indicating the posted speed on US 97 is shown in Figure 6. North of Terrebonne the posted speed on US 97 is 65 mph. The speed limit is reduced in several phases when entering Terrebonne. The posted speed is 55 mph south of Terrebonne until reaching the Redmond City limits, where the speed is reduced. The Terrebonne urban core has a posted speed of 35 mph between Central Avenue and 11<sup>th</sup> Street.

### **Access Management Standards**

ODOT specifies access management spacing standards in the OHP and OAR 734-051-4020(8). The applicable access management spacing standards for state facilities in a rural area are summarized in

<sup>&</sup>lt;sup>3</sup> Culvert locations derived from ODOT GIS Database, Transgis

Table 1. These standards are based on the 2018 AADT (Annual Average Daily Traffic volume), posted speed limit, and functional classification.

**Table 1: ODOT Access Management Spacing Standards for Highway Segments** 

Route Name	Facility Extents	Facility Designation	2017 AADT	Posted Speed Limit (mph)	Access Spacing Standard (feet)
US 97	Section south of Lower Bridge Way and north of NW 10 <sup>th</sup> Street	Statewide Freight Route; Rural Area	>5,000	35/45/55	770/990/1320

AADT = Average Annual Daily Traffic

mph = miles per hour

Source: Oregon Highway Plan, Appendix C Revisions to Address Senate Bill 264 (2011) Table 14

Thirteen access driveways on US 97 between Lower Bridge Way and NW 10<sup>th</sup> Street were identified. There are two areas where access spacing is less than the standard: two private access points on the west side of US 97 between B Avenue and C Avenue (approximately 60 feet) and three access points on the east side of US 97 between South 11<sup>th</sup> Street and B Avenue that are approximately 50 feet apart.

#### **Access Permits**

Figure 5 shows the ODOT access permit locations along US 97. As shown, access points through Terrebonne are a mix of public and private permits, with the highest concentration located between 11<sup>th</sup> Street in the south to Central Avenue in the north.

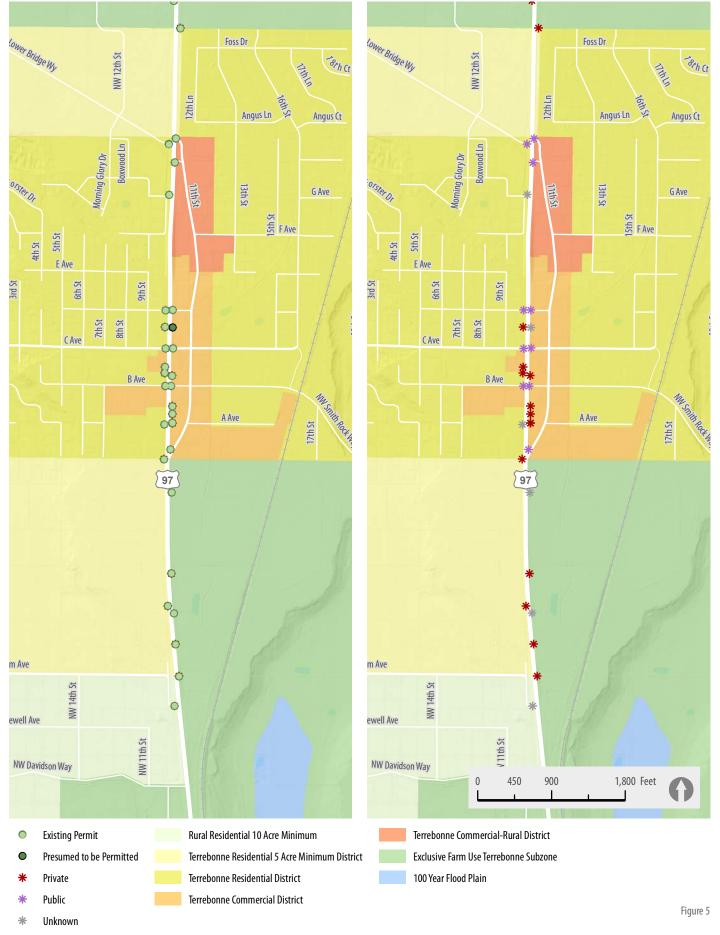
### **Pavement Condition**

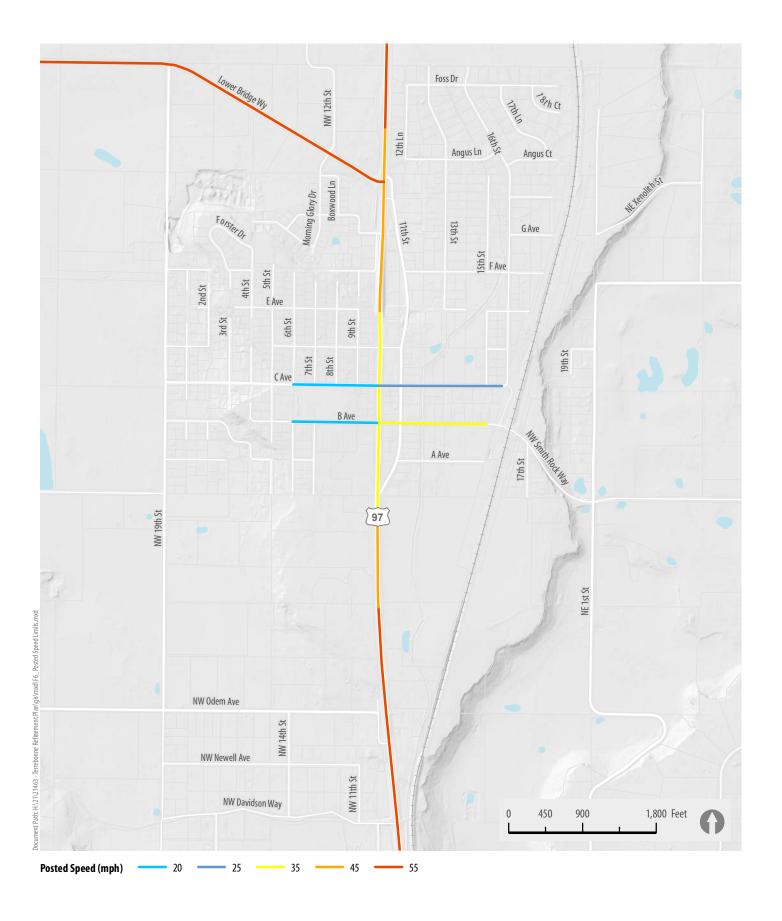
Based on ODOT databases<sup>4</sup>, the pavement condition on US 97 between Lower Bridge Way and NW 10<sup>th</sup> Street is in fair condition. Additionally, ODOT is currently in the construction phase of a repaving project on US 97 between US 26 and NW 10<sup>th</sup> Street. The project will include repaving and updated pavement markings in the Terrebonne area.

### Freight Mobility

As previously stated US 97 is classified as a primary statewide freight corridor and is part of the state's freight network. As shown in Figure 9 below, approximately 20-30% of the vehicular traffic on US 97 in Terrebonne is classified as heavy vehicles. Additional heavy vehicle information is provided in the Heavy Vehicle Observations section below. There are no other identified freight routes in the study area.

<sup>&</sup>lt;sup>4</sup> https://gis.odot.state.or.us/transgis/





## **Deschutes County Facilities**

Deschutes County owns and maintains most primary roadway connections in Terrebonne with expectation to US 97 (see Figure 4). Table 2 illustrates the functional classification of prominent roadways in Terrebonne. This includes Lower Bridge Way, 11<sup>th</sup> Street, B Avenue/Smith Rock Way, 19<sup>th</sup> Street and C Avenue. County maintenance operations includes repairing roads, removal or roadside hazards, vegetation control, and winter maintenance. Local access roads are facilities that the public has right to use but are not maintained by Deschutes County or any other government agency. These roads can be maintained either privately or through a Special Road District. Crooked River Ranch adopted a Special Road District in June 1983.

**Table 2. Deschutes County Functional Classification** 

Functional Classification	Description	Example Roadway Applied To
Principal Arterial	Statewide highways that serve major activity centers in an urban area. Carry the highest portion of traffic entering, leaving, and bypassing the urban area.	US Highway 97
Urban and Rural Arterial	Distributes vehicles to areas without penetrating specific neighborhoods. Provides services within urban area at a lower mobility.	Lower Bridge Way, Smith Rock Way*
Urban and Rural Collector	Primarily serves residential neighborhoods, commercial districts and industrial areas to distribute trips to their final destinations.	C Avenue*, NW 19 <sup>th</sup> Street
Urban and Rural Local	Lowest level of travel mobility to provide access to individual properties and developments.	11 <sup>th</sup> Street*, 5 <sup>th</sup> Avenue

Source: Deschutes County Transportation System Plan (2012)

### 11th Street Roadway Condition

11<sup>th</sup> Street is classified by Deschutes County as an urban local roadway. It travels parallel to US 97 from Lower Bridge Way in the north to just south of the Terrebonne community business district (just south of A Avenue). 11<sup>th</sup> Street serves both businesses and residents. There are over 20 driveway access locations along 11<sup>th</sup> Street, which are shown in Figure 5. Most of these access points lack defined curb cuts, which can cause unclear transitions between the roadway and driveways or adjacent properties.

<sup>\*</sup>Urban designation

Pavement condition data was provided by Deschutes County Public Works Department. The pavement condition index is measured on a scale of 0 to 100 (0 indicating very poor condition and 100 indicating excellent condition). The pavement condition score for several high order county roads in Terrebonne are shown below:

11<sup>th</sup> Street: 71 to 77

C Avenue: 83

Smith Rock Way: 81 to 82

■ Lower Bridge Way: 83

## **Active Transportation Facilities**

### **Pedestrian System**

A complete pedestrian network contributes to the economic vitality, health, and equity for a community. The pedestrian network in Terrebonne largely consists of paved sidewalks on B Avenue and on US 97 within close proximity to the Terrebonne Community School, which were recently constructed as part of an ODOT improvement project. Other areas of Terrebonne rely on paved and gravel shoulders to support pedestrian activity.

Currently, a single marked crosswalk on US 97 is provided within the Terrebonne community at the US 97/B Avenue intersection. This crosswalk included an overhead flashing amber beacon. The beacon flashes regularly and is not pedestrian activated. The Terrebonne Community school is located two blocks to the west on B Avenue. Figure 7 illustrates the location of sidewalks, bike facilities and marked crosswalks.

A pedestrian crossing analysis was completed to evaluate whether the existing marked pedestrian crossing of US 97 at B Avenue should be enhanced. Table 11 of the Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations Final Report and Recommended Guidelines<sup>5</sup> uses the roadway type (number of lanes and median type), vehicle ADT, and posted speed as contributing factors to considering a new marked crossing. US 97 is a two-lane road with vehicle ADT > 15,000 and a posted speed of 35 miles per hour at B Avenue. Based on this criterion, the existing B Avenue marked crosswalk could possibly increase the risk of pedestrian related crashes without other pedestrian facility enhancements such as a Rectangular Rapid Flashing Beacon (RRFB).

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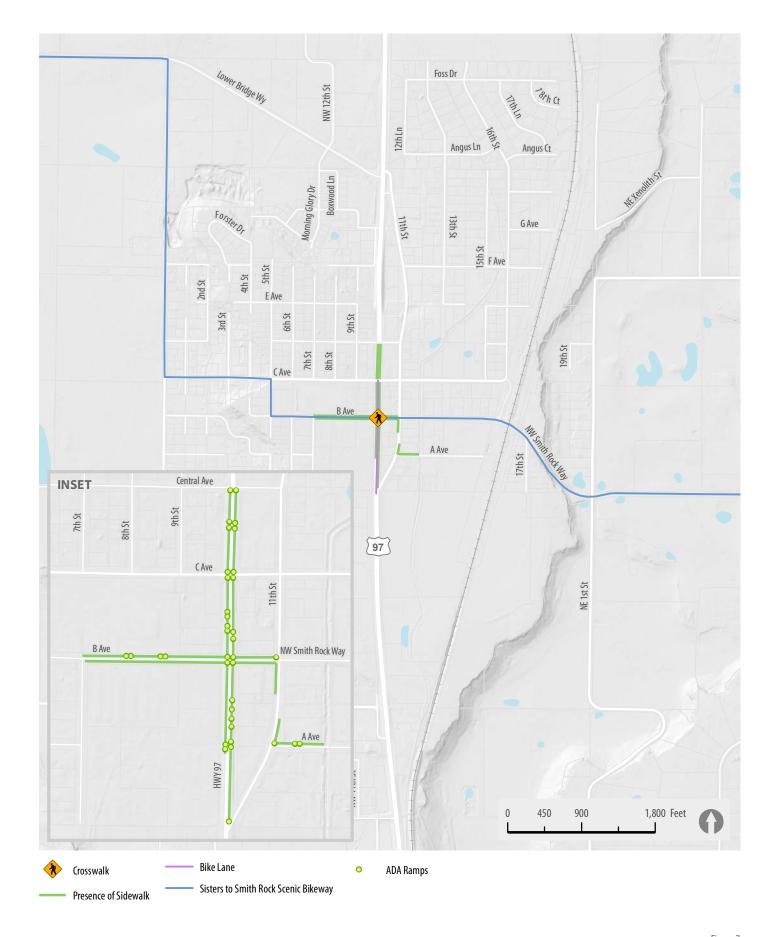
<sup>&</sup>lt;sup>5</sup> FHWA Publication Number HRT-04-100, September 2005

### Bicycle System

Exiting bicycle facilities within the Community are also shown in Figure 7. As identified, 6-foot bicycle lanes are provided on US 97 between 11<sup>th</sup> Street in the south and C Avenue to the north. The Oregon State Park Sisters to Smith Rock Scenic Bikeway is designated through Terrebonne along Smith Rock Way & B Avenue (crossing US 97 at B Avenue) but does not have dedicated facilities along its route in the vicinity of the community.

### **Public Transit System**

The Terrebonne Community is currently served by the Cascades East Transit (CET) Community Connector Route 22 between Redmond and Madras. The route makes three stops throughout the day. The transit stop is located on the northeast corner of US97/C Avenue. The CET Master Plan identifies the need to develop a southbound bus pullout on the westside of US 97 with a signalized pedestrian crossing connecting to the Terrebonne Mini Market Park & Ride.



### **EXISTING INTERSECTION AND STREET OPERATIONS**

As part of the inventory, existing operations at six key intersections were compared to the established performance standards to identify potential deficiencies in the existing system in Terrebonne.

## Analysis Methodology and Performance Standards

All operational analyses described herein are in conformance with State and County methodologies. More details on the analysis methodology can be found in Technical Memorandum #2: Analysis Methodology & Assumptions. Existing conditions operation worksheets can be found in Appendix B.

The operational results for the intersections and segments were compared with County and/or State performance standards to identify existing deficiencies. These standards are shown in Figure 11 and described in Table 3. ODOT defines intersection performance standards by "mobility targets" that are represented by a volume-to-capacity ratio. The County defines performance standards by "level-of-service", which is a rating from A to F to describe the experience of the user.

**Table 3: Study Intersection Control and Mobility Target** 

Study Int. #	Intersection	Classification/ Jurisdiction	Intersection Control	Performance Standard
1	NW 19 <sup>th</sup> Street/Lower Bridge Way	County	Unsignalized	LOS D
2	US 97/Lower Bridge Way	ODOT	Unsignalized	Side-Street: v/c<0.80 Mainline: v/c<0.70
3	US 97/C Avenue	ODOT	Unsignalized	Side-Street: v/c<0.80 Mainline: v/c<0.70
4	US 97/B Avenue (Smith Rock Way)	ODOT	Unsignalized	Side-Street: v/c<0.80 Mainline: v/c<0.70
5	11 <sup>th</sup> Street/Smith Rock Way	County	Unsignalized	LOS D
6	US 97/S 11 <sup>th</sup> Street	ODOT	Unsignalized	Side-Street: v/c<0.80 Mainline: v/c<0.70

### Roadway Segment Analyses

Segment data was collected at three locations along US 97 by tube counts for three days in April 2018 (provided in Appendix A). These traffic volumes were seasonal adjusted and used to conduct capacity analysis to determine how the facilities operate under 30<sup>th</sup> Highest Hour conditions. Vehicle volumes, speeds, and classification information were all collected as part of the data. Figure 10 summarizes the measured peak period traffic volumes, as recorded in Spring 2018, and the resultant volume-to-capacity ratio. As shown in Table 4, the segments do not exceed capacity under 30<sup>th</sup> Highest Hour Conditions today.

**Table 4: Study Segment Analysis Results** 

Roadway Segment	Direction	2018 Daily Traffic Volumes	Peak Hour from 2018 Traffic Counts	Peak Hour Traffic Volumes	Capacity Estimate (vphpl)	Calculated V/C Ratio
US 97 approx. 600 ft	NB	15 212	4:00-5:00pm	584	1 700	0.34
north of Lower Bridge Way	SB	15,213	3:00-4:00pm	640	1,700	0.38
US 97 approx. 100 ft	NB	20.069	4:00-5:00pm	902	1 700	0.53
south of C Avenue	SB	20,968	3:00-4:00pm	786	1,700	0.46
US 97 approx. 500 ft	NB	22,614	4:00-5:00pm	1,021	1,700	0.60
south of NW 10 <sup>th</sup> Street	SB	22,014	3:00-4:00pm	824	1,700	0.48

Note: Vehicles per hour per lane (vphpl)

As seen in Figure 8, weekday traffic volumes generally rise throughout the day and peak in the evening. There is also a slight peak in the morning around 7:00AM. All the count locations follow a similar traffic flow pattern. Volumes north of Lower Bridge Way are approximately 25% lower than the counts at C Avenue and NW 10<sup>th</sup> Street. This is likely due to the demand to and from Crooked River Ranch and other destinations west on Lower Bridge Way.

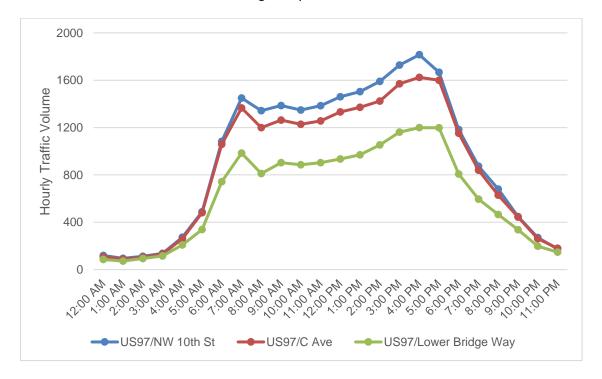


Figure 8. Weekday US 97 Volume Profile in Terrebonne

# Lower Bridge Way Traffic Volumes

Peak hour traffic count data was collected at the intersection of Lower Bridge Way/US 97 in April 2018. Average Daily Traffic (ADT) was interpolated from the peak hour data<sup>6</sup> and shows Lower Bridge Way carries approximately 5,990 ADT. This is approximately 30% of the daily traffic on US 97. As shown, Lower Bridge Way is a well utilized road that provides a key connection to and from US 97 for residents and businesses to the west, including Crooked River Ranch.

# 85<sup>th</sup> Percentile Speed Observations

Speed data was collected at the three tube count locations in Terrebonne over the course of three days in 2018 to assess typical speeds during the weekday. Speeds are generally analyzed in terms of the 85<sup>th</sup> percentile speed, which is the speed which no more than 15% of traffic is exceeding. The 85<sup>th</sup> percentile speed is generally used when setting speed limits. Table 5 provides a summary of the segment speed results. As shown, the average and 85<sup>th</sup> percentile speeds are traveling as speeds higher than the posted speed north of Lower Bridge Way in both direction. The 85<sup>th</sup> percentile speeds exceed the posted speeds in the commercial area near C Avenue in both directions. It should be noted that were the tube data was collected north of Lower Bridge Way is within 100 feet of the transition zone where the speed limit increases to 55 miles per hour. See Figure 6 for a posted speed map.

**Table 5. Existing Segment Speed Results** 

Location	Movement	ADT	Posted Speed	Average Speed (mph)	85 <sup>th</sup> Percentile Speed (mph)
US 97 approx. 600 ft north of Lower Bridge Way	NB	7,459	45	59	64
	SB	7,755	45	54	60
US 97 approx. 100 ft south of C Avenue	NB	10,222	35	31	38
	SB	10,750	35	28	37
US 97 approx. 500 ft south of NW 10 <sup>th</sup> Street	NB	11,186	55	43	49
	SB	11,433	55	45	53

<sup>\*</sup>Orange Cells indicate speeds higher than the posted speed

<sup>&</sup>lt;sup>6</sup> Common practice suggests when daily traffic data is not available, it can be assumed that the peak hour volume is approximately 10% of the daily traffic volume.

### **Heavy Vehicle Observations**

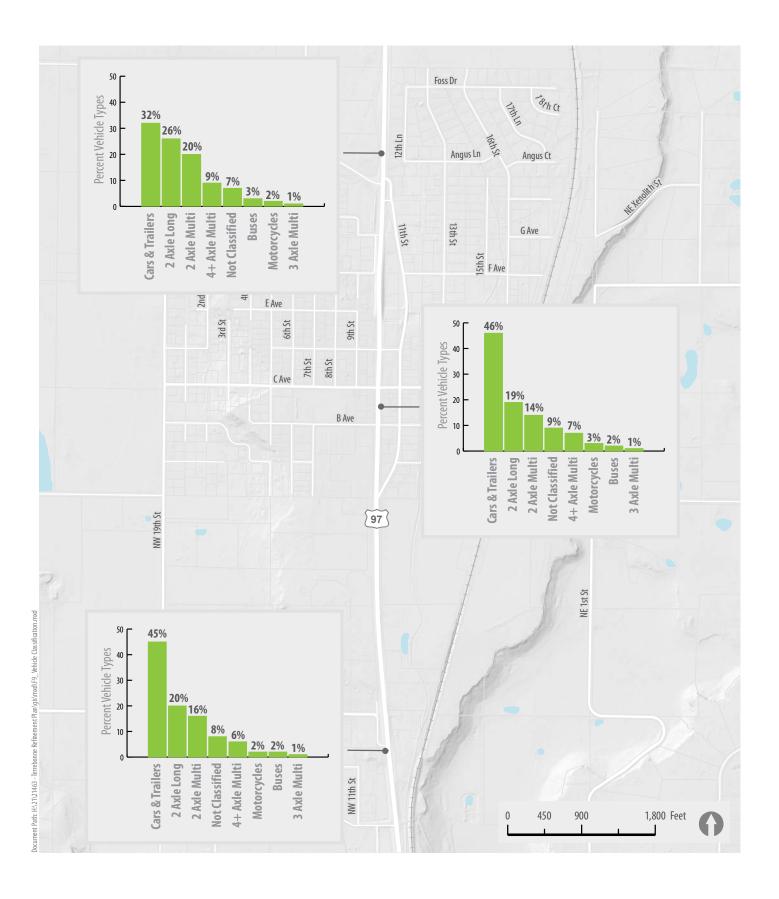
Vehicle classification data was collected at the three tube count locations. Figure 9. shows the average types of vehicle on US 97 at the various locations. US 97, as shown, is a high frequency freight corridor. Detailed heavy vehicle information is included in the traffic counts provided in Appendix A.

#### Over Dimensional Loads

ODOT records on Over Dimensional (OD) loads from 2013-2015 and November 2017 to August 2018 show that US 97 through Terrebonne typically sees 1-2 OD loads per month, with a higher concentration occurring in the Spring, Summer, and Fall. Few OD loads occur in the winter. OD loads during these time periods averaged about 120 feet in length but included several OD loads over 200 feet in length, including a load 330 feet long in July 2014. The average width of OD loads was about 18 feet, with some loads as wide as 26 feet. Table 6 provides a general summary of OD loads during these periods. Appendix H includes the supporting over dimensional load data.

Table 6: Over Dimensional Loads on US 97 Near Terrebonne (2013-2015, November 2017-August 2018)

Number of Loads	Total	90	
Width	Average	18 feet	
Width	Max	26 feet	
Lavardo	Average	116 Feet	
Length	Max	330 Feet	
Weight	Average	220,000 lbs	
vveignit	Max	818,680 lbs	

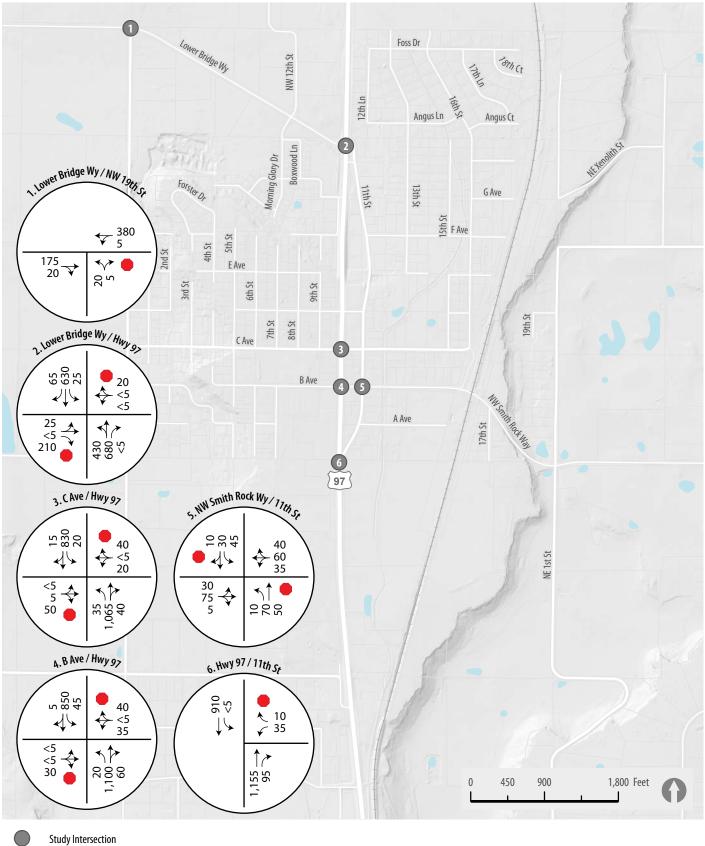


# Intersection Traffic Operations Analysis Results

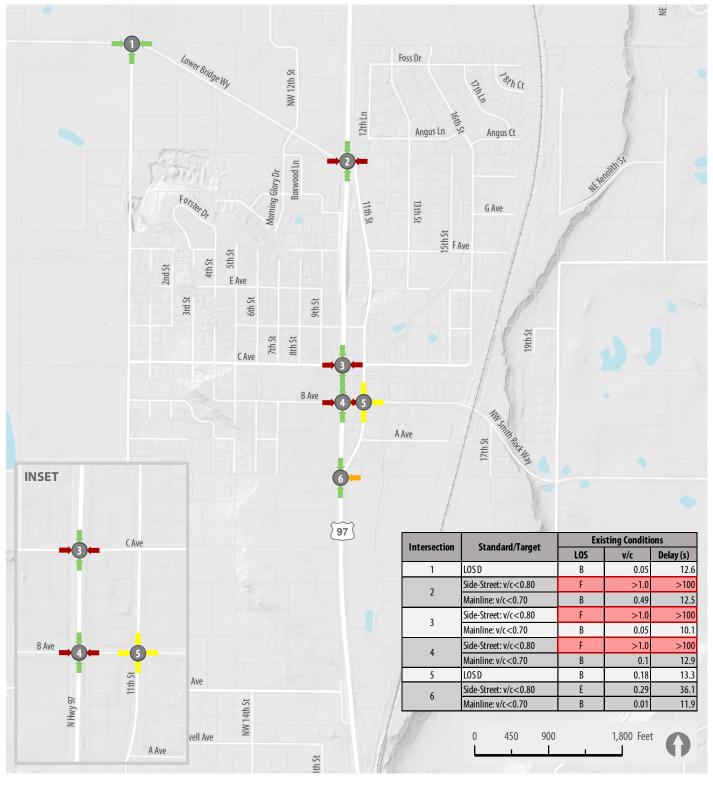
Six study locations were evaluated to assess intersection operations and turning movements onto and off US 97 and at other key intersections within the study area. The traffic counts were collected in April 2018. The existing counts were seasonally adjusted as documented in Technical Memorandum #2. Appendix D also contains detailed information about intersection operations and queuing under existing conditions.

As shown in this analysis, turning movements from the side-street experience significant delays today, especially for left-turn movements from the side-street onto US 97. Because of these delays, users are likely altering their route, potentially the time of day they travel, to avoid left-turns or congested intersections. Feedback from the community during Open House #1 confirmed this assumption (see Open House #1 Comment Report). Additionally, the 95<sup>th</sup> percentile queue for the westbound movement at US 97/B Avenue exceeds the mid-block spacing requiring vehicles to queue on the east side of 11<sup>th</sup> Street. This intersection also experiences seasonal traffic congestion and queues associated with the areas to the east of Terrebonne.

Figure 10 illustrates the existing peak hour traffic volumes and lane configurations and Figure 11 illustrates the results of the peak hour intersection operations. Figure 12 illustrates the existing 95<sup>th</sup> percentile queue at the study intersections.



Stop Sign



### **Level of Service by Direction**

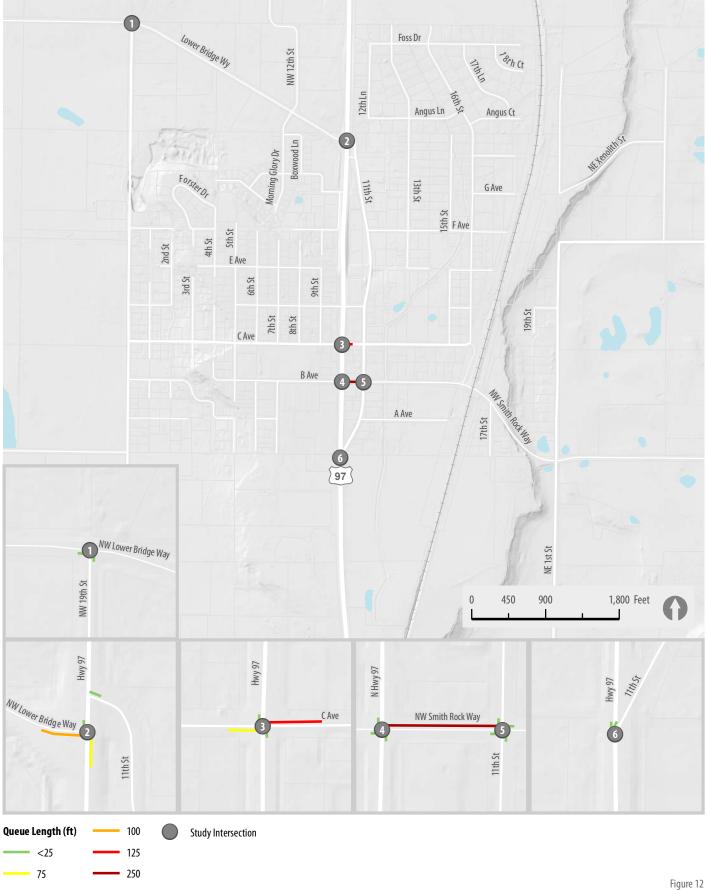
A thru C Study Intersection

D

E

Figure 11





### MULTIMODAL GAPS AND DEFICIENCIES

The following section documents gaps and deficiencies in the existing pedestrian and bicycle system. A gap is defined as a missing link in the network, such as an identified key walking or biking route is missing sidewalk or designated bicycle facility. A deficiency is defined as a pedestrian or bicycle facility that does not meet the standard or is insufficient to meet the users' needs. Examples of deficiencies include:

- Locations with documented pedestrian and bicycle crash histories
- On-street connections that have a Bicycle Level of Traffic Stress greater than 2
- On-street connections that have a Pedestrian Level of Traffic Stress greater than 2

### Pedestrian Facility Gaps and Deficiencies

Streets with no sidewalks or intermittent sidewalks force pedestrians to walk along the edge of the road, use the shoulder if available, or simply not make their intended trip by walking. In many cases, the absence of sidewalks or intermittent sidewalk facilities increases the number of vehicles on the road by forcing pedestrians to drive to accomplish short distance trips due to the increased stress resulting in lack of separation between the vehicular traffic and pedestrian space. In Terrebonne, sidewalk facilities are present on B Avenue near Terrebonne Community School and on US 97 between Central Avenue and 11<sup>th</sup> Street. The remainder of the pedestrian network remains incomplete.

### **Pedestrian Level of Stress**

Pedestrian facilities located along key roadways were evaluated to identify potential issues that could be addressed as part of the Refinement Plan. The ODOT Analysis Procedures Manual (APM) provides a methodology for evaluating pedestrian facilities called Pedestrian Level of Traffic Stress (PLTS). This methodology classifies four levels of traffic stress that a pedestrian can experience on the roadway, ranging from PLTS 1 (little traffic stress) to PLTS 4 (high traffic stress). Per the APM, PLTS 2 is considered a reasonable target for most pedestrian facilities due to its acceptability for the majority of people. Table 7 provides a detailed description of each PLTS rating.

Table 7: Pedestrian Level of Traffic Stress (PLTS) Descriptions

PLTS Rating	Description of PLTS Segment, Suitability and Condition <sup>1</sup>
1	Represents little to no traffic stress, suitable for all users including children 10 years or younger, groups of people and people using wheeled mobility devices. Provides a separated facility with a buffer between the pedestrian and vehicular traffic.
2	Represents little traffic stress but requires more attention to the traffic situation than of which young children may be capable.  Suitable for children over 10, teens, and adults. Provides sidewalks in good condition; roadways may have higher speeds and volumes
3	Represents moderate stress and is suitable for adults. An able-bodied adult would feel uncomfortable but safe using this facility. Includes higher speed roadways with smaller or no buffers. Small areas in this facility may be impassable for a person using a wheeled mobility device. Some users are willing to use this facility
4	Represents high traffic stress. Only able-bodied adults with limited route choices would use this facility. Traffic speeds are moderate to high with narrow or no pedestrian facilities provided. Only the most confident users are willing to use this facility.

<sup>1.</sup> Descriptions for PTLS ratings were sourced from the ODOT APM Volume 2.

The PLTS score is based on four criteria, including sidewalk condition, physical buffer type, total buffering width, and general land use. All four criteria are scored from 1-4 and the highest score determines the overall score for the road segment. Figure 13 illustrates the results of the PLTS analysis for the Terrebonne Refinement Plan along improved roadways; gravel and dirt roadways were not analyzed as part of the level of traffic stress analysis.

As shown in the figure, the pedestrian network throughout Terrebonne is largely incomplete. The only sidewalk facilities are present on B Avenue and a segment of US 97. Nearly all higher order roadways scored a LTS 4 (high stress) with the exception of B Avenue near the Terrebonne Community School, which has a PLTS score of 2, and where sidewalks are complete along US 97, which has a PLTS score of 3. Appendix F provides a detailed summary of the results of the PLTS analysis and includes the scores of each criterion.

### Bicycle Facility Gaps and Deficiencies

Streets with no bike lanes or intermittent bicycle facilities force bicyclists to share the travel lane with motor vehicles, use the shoulder or ride on the sidewalk (if available). In many cases, this is not a desirable option for bicyclists due to the proximity to vehicular traffic. Adequate bicycle facilities should be provided to allow for safe travel between neighborhoods and essential destinations.

The only bicycle facilities in the community include bike lanes on a segment of US 97 between C Avenue and 11<sup>th</sup> Street. The remainder of the community relies on paved shoulders for bicycles. The Oregon Scenic Bikeway that bisects the community does not have dedicated bicycle facilities.

### Bicycle Level of Traffic Stress

Bicycle facilities located along key roadways were evaluated to identify potential issues that could be addressed as part of the Refinement Plan. The APM provides a methodology for evaluating bicycle facilities called Bicycle Level of Traffic Stress (BLTS). As applied by ODOT, this methodology classifies four levels of traffic stress that a person biking can experience on the roadway, ranging from BLTS 1

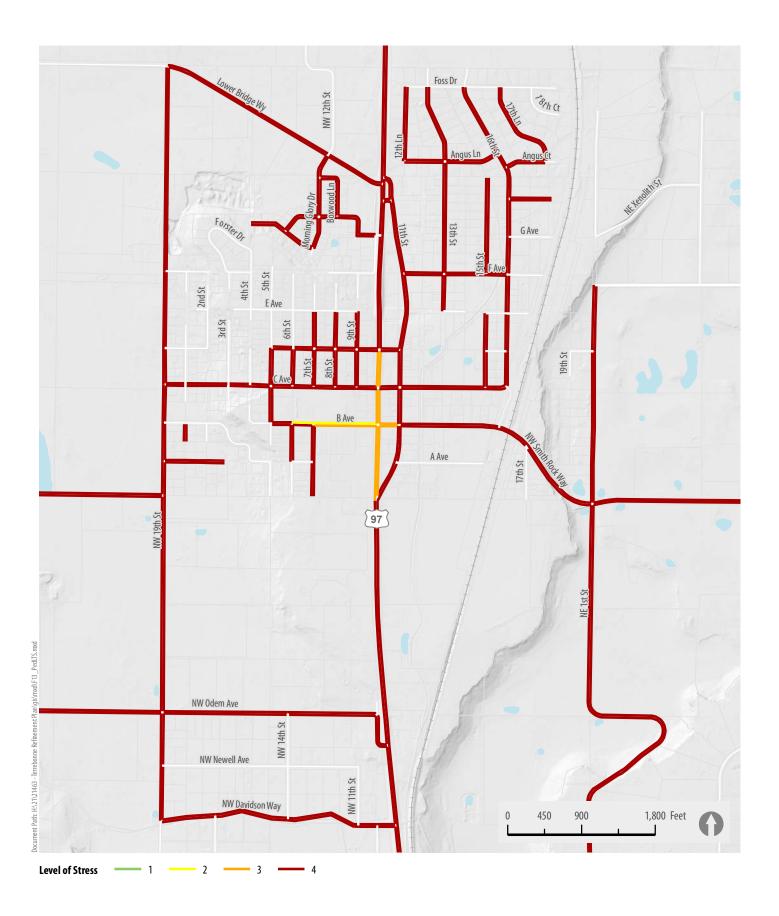
(little traffic stress) to BLTS 4 (high traffic stress). A road segment that is rated BLTS 1 generally has low traffic volumes and travel speeds and is suitable for all cyclists, including older children. A road segment that is rated BLTS 4 generally has high traffic volumes and travel speeds and is perceived as unsafe by most adults. The BLTS score is determined based on the vehicular speed, the number of travel lanes per direction, the presence and width of an on-street bicycle facility and/or adjacent parking lane, and several other factors such as the presence of a centerline. Per the APM, BLTS 2 is considered a reasonable target for bicycle facilities due to its acceptability for most adults. Table 8 provides a detailed description of each BLTS rating.

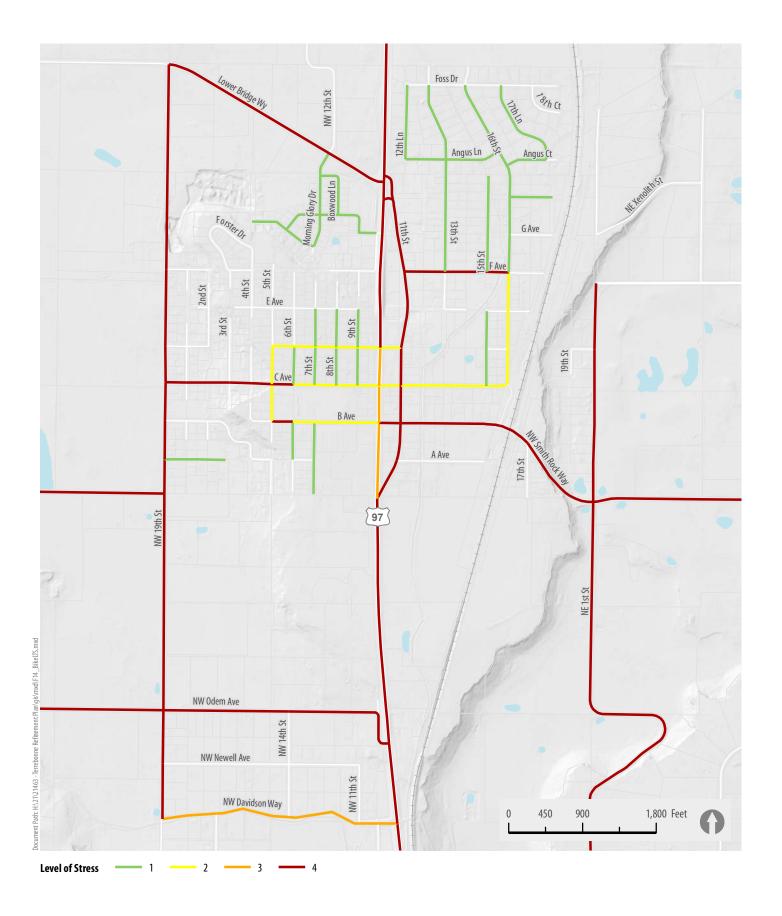
Table 8: Bicycle Level of Traffic Stress (BLTS) Description

BLTS Rating	Description of BLTS Segment, Suitability and Condition <sup>1</sup>
1	Represents little to no traffic stress, suitable for all cyclists. This includes children that are trained to safely cross intersections alone and supervising riding parents of younger children. Traffic speeds and volumes are low. Also includes paths and lanes that are physically separated from motor vehicle traffic.
2	Represents little traffic stress but requires more attention that young children can handle, so is suitable for teen and adult cyclists with adequate bike handling skills. Traffic speeds and volumes are slightly higher than LTS 1 streets, but speed differentials are still low.
3	Represents moderate stress and suitable for most observant adult cyclists. Traffic speeds and volumes are moderate.
4	Represents high stress and suitable for experienced and skilled cyclists. Traffic speeds and volumes are high.

<sup>1.</sup> Descriptions for BTLS ratings were sourced from the ODOT APM Volume 2.

Figure 14 illustrates the results of the BLTS analysis for Terrebonne Refinement Plan along improved roadways; gravel and dirt roadways were not analyzed as part of the level of traffic stress analysis. As shown, only a segment of US 97 has dedicated bicycle lanes. The remained of the Community used paved shoulders or shared use facilities. Several roadways scored a BLTS at or below 2. This is largely due to the low vehicular volumes and speeds. Appendix G summarizes the detailed results of the BLTS analysis and includes the scores of each criterion.





### HISTORIC CRASH ANALYSIS

Reported crash data was analyzed at the six key intersections and throughout the study area in effort to identify patterns and trends that may indicate an opportunity to reduce crash frequency and severity. The data was obtained from ODOT for the five-year period from January 1, 2012 through December 31, 2016 and includes information about crash location, type, weather, roadway surface conditions, traffic control, and vehicle information. A summary of reported crashes by study segment is provided in Appendix C.

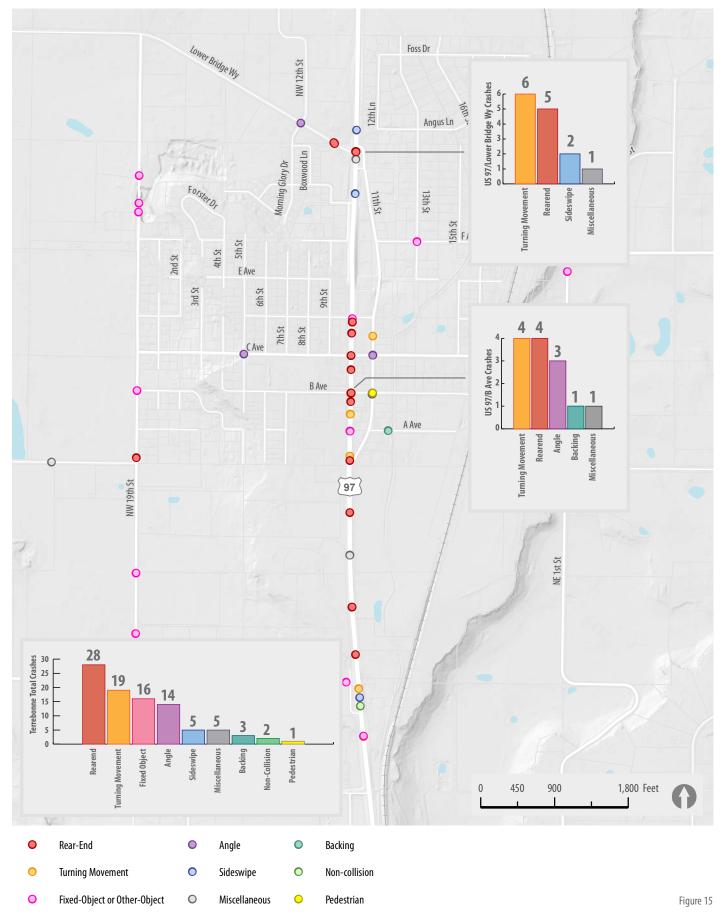
Figure 15 – Figure 17 provide details on the location and type of crashes recorded during the most recent five-year period. There were no fatal crashes in Terrebonne during the study period.

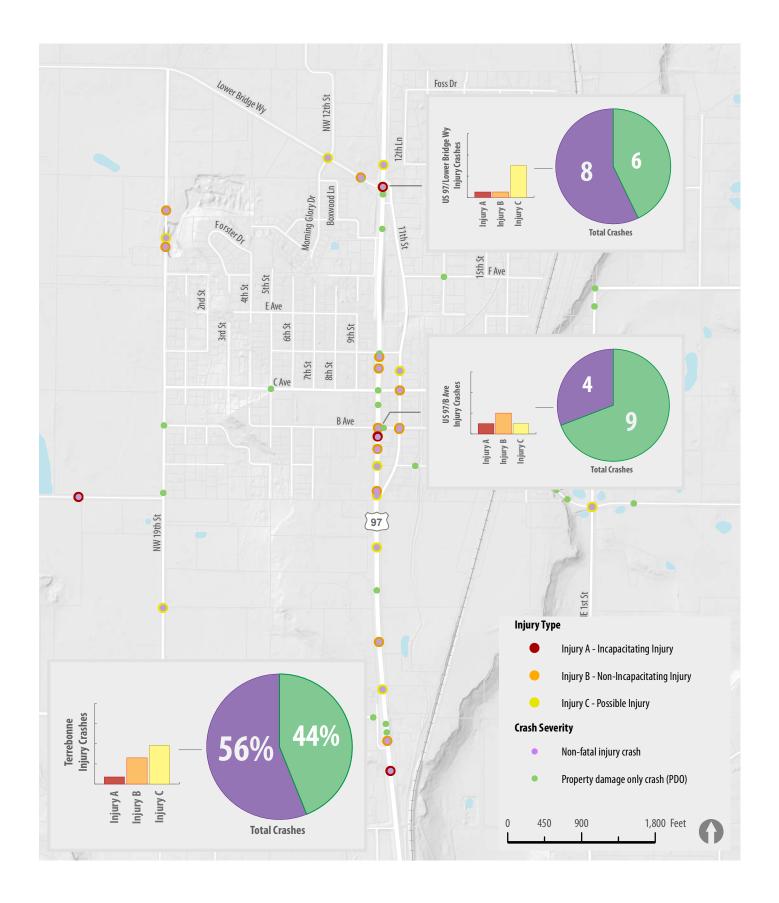
### Statewide Crash Performance Standards

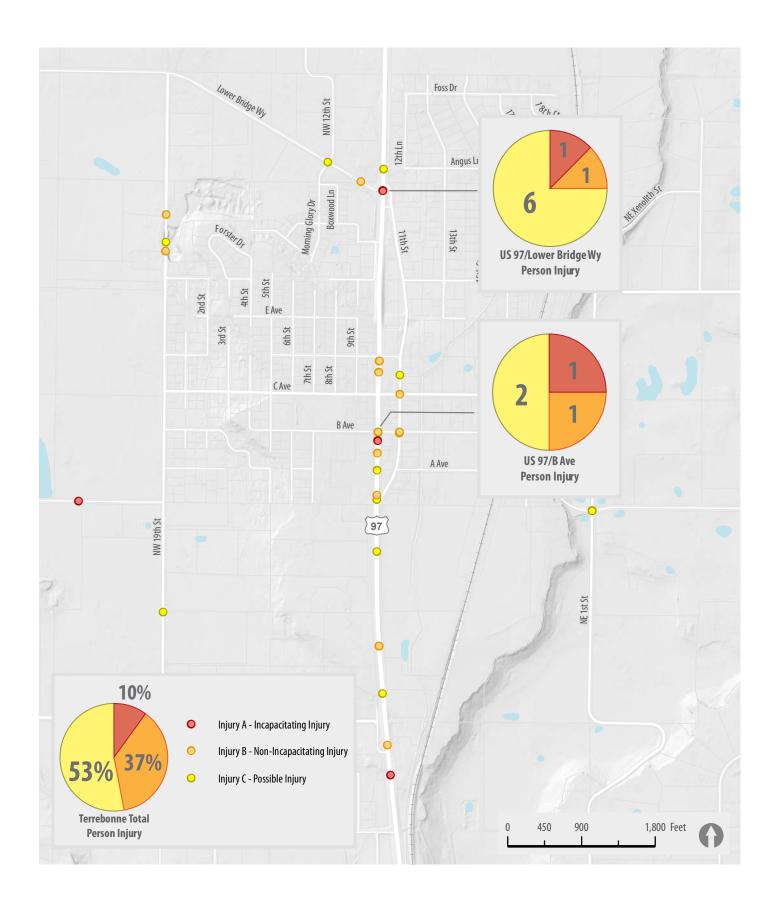
Table 9 identifies the study intersections that exceed ODOT crash performance. As shown the intersections of US 97/Lower Bridge Way and 11<sup>th</sup> Street/Smith Rock Way exceed the critical crash rate. Appendices C and E provide additional information and a summary of key observations at study intersections.

Table 9. Summary of Study Intersections that Exceed ODOT Crash Performance Standards

	90 <sup>th</sup> Percentile	Critical Crash	
Intersection	Crash Rate	Rate	Top 85% SPIS Site
NW 19th Street/Lower Bridge Way	Does not Exceed	Does not Exceed	Does not Exceed
US 97/Lower Bridge Way	Does not Exceed	Exceeds	Does not Exceed
US 97/C Avenue	Does not Exceed	Does not Exceed	Does not Exceed
US 97/B Avenue (Smith Rock Way)	Does not Exceed	Does not Exceed	Does not Exceed
11th Street/Smith Rock Way	Does not Exceed	Exceeds	Does not Exceed
US 97/S 11th Street	Does not Exceed	Does not Exceed	Does not Exceed





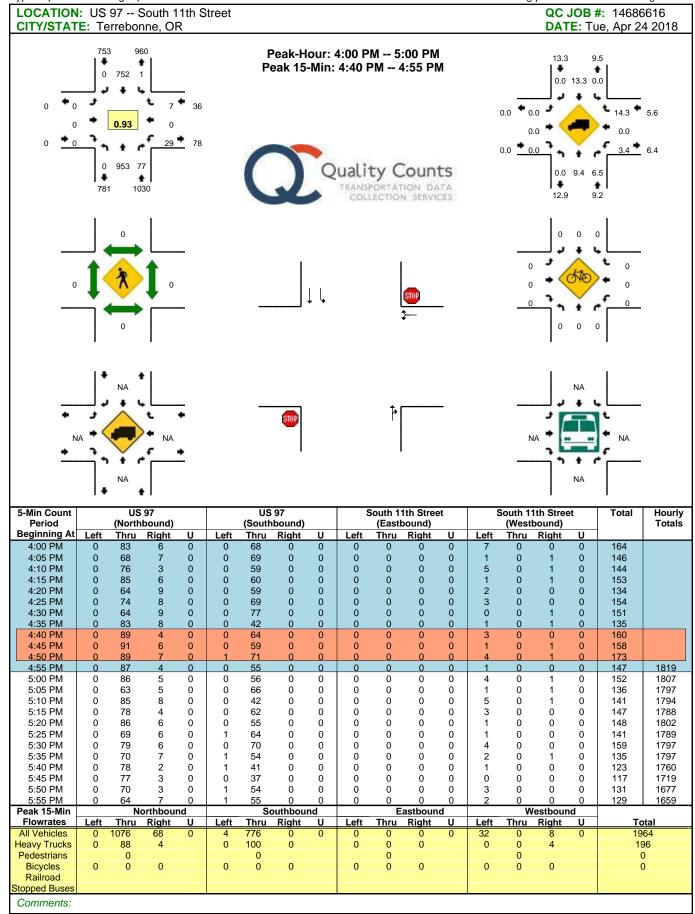


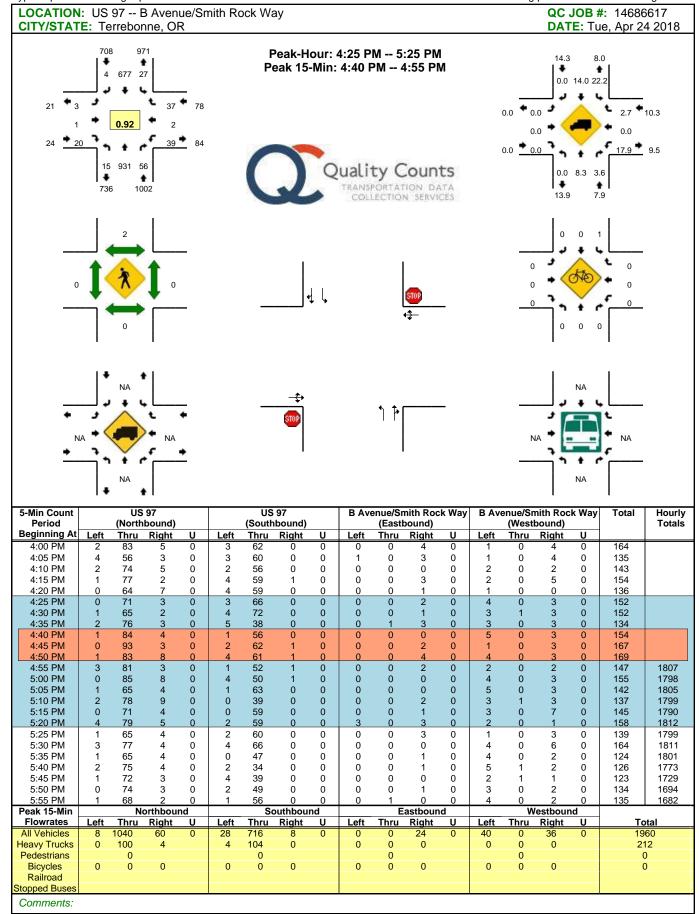
### SUMMARY OF EXISTING CONDITIONS

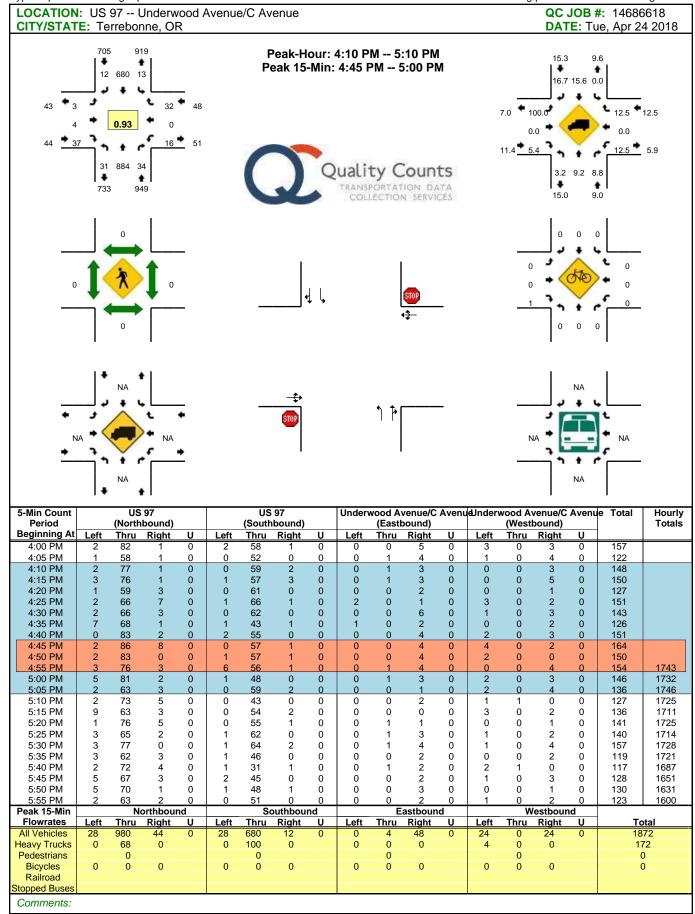
The assessment of the existing transportation system conditions and the transportation network inventory identified the following:

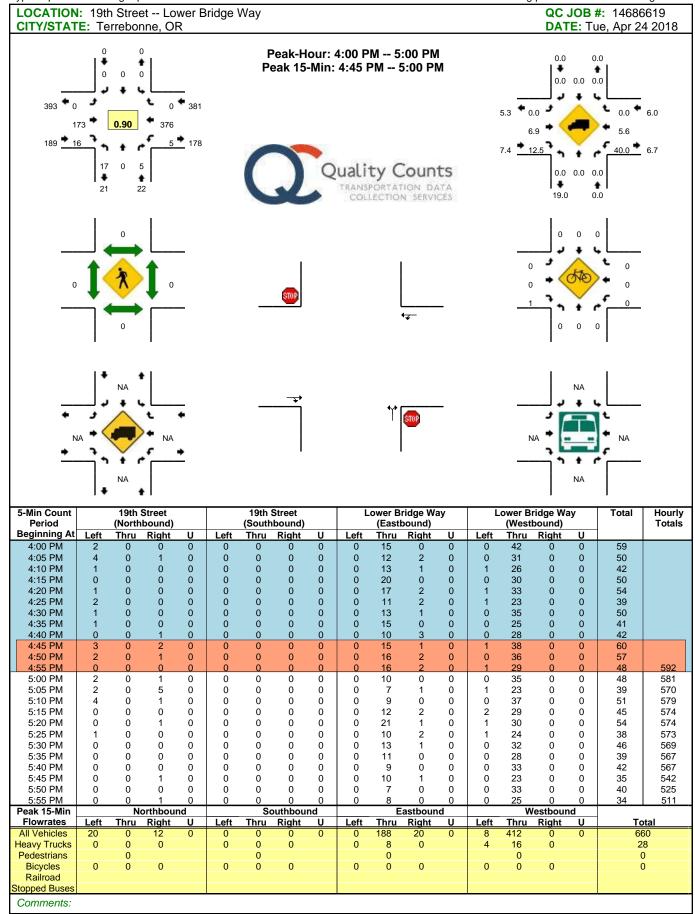
- US 97 is a key freight and statewide mobility route that traverse north-south through the Terrebonne Community. The highway also serves as a Tier 1, Phase 1 Lifeline Route considered vital for rescue and recovery operations in case of a natural catastrophe.
- Over Dimensional loads (OD) regularly used US 97 through Terrebonne. These vehicles typically average 120 feet in length, but can exceed 200 feet, including one OD load that was 330 feet.
- The pedestrian network throughout the urban area is largely incomplete. The only sidewalk facilities are present on B Avenue and a short segment of US 97. Nearly all higher order roadways scored a Level of Traffic Stress (LTS) 4 (high stress) with the exception of B Avenue.
- The existing B Avenue marked crosswalk at US 97 could possibly increase the risk of pedestrian related crashes if other pedestrian facility enhancements such as a Rectangular Rapid Flashing Beacon (RRFB) are not installed.
- The only dedicated bicycle facility in the community include bike lanes on a segment of US 97 between C Avenue and 11<sup>th</sup> Street. The remainder of the community relies on paved shoulders for bicycles. The Oregon Scenic Bikeway that bisects the community east-west does not have dedicated bicycle facilities.
- The following three study intersections did not meet mobility targets for the side-street turning movement:
  - US 97/Lower Bridge Way
  - o US 97/C Avenue
  - US 97/B Avenue
- The US 97/Smith Rock Way (B Avenue) intersection meets mobility targets under typical conditions analyzed in this memorandum, though the 95<sup>th</sup> percentile queue for the westbound approach extends through the 11<sup>th</sup> Street intersection. Also, this intersection experiences high demand during seasonal events associated with agricultural and recreational amenities to the east.
- Segment volumes indicated that US 97 is currently under capacity through the study area.
- Speed data collected at three segments showed that the 85<sup>th</sup> percentile speeds on US 97 at Lower Bridge Way and C Avenue exceed the posted speed by 19 and 3 mph, respectively.
- Ninety-three (93) crashes were reported in the greater Terrebonne area during the fiveyear study period. There were no fatal crashes during the study period.
- Of the six study intersections, US 97/Lower Bridge Way and 11<sup>th</sup> Street/Smith Rock Way exceed the ODOT Critical Crash Rate over the past five-year period.

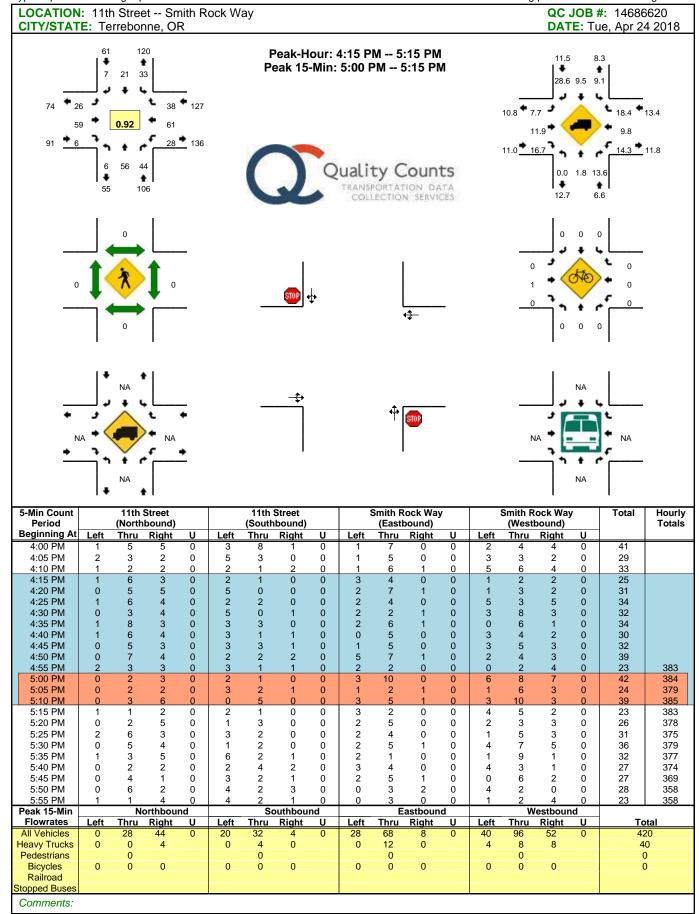
Appendix A – Traffic Counts

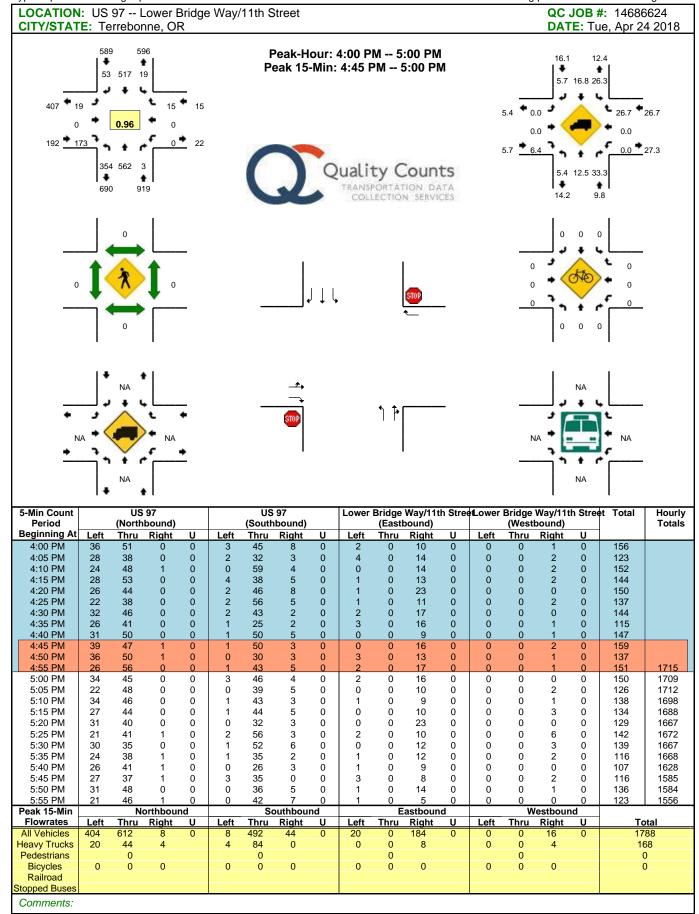












LOCATION:																	C JOB #:	
SPECIFIC L				N of Low	er Bridg	e Way											RECTION:	
CITY/STATI																D	ATE: Apr 2	
	1	16	21	26	31	36	41	46	51	56	61	66	71	76			Pace	Number
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999		Total	Speed	in Pace
12:00 AM	8	0	0	0	0	0	4	10	11	12	7	8	4	6		70	52-61	22
1:00 AM	1	0	0	0	0	0	2	8	15	16	13	8	1	3		67	51-60	31
2:00 AM	12	2	0	2	0	0	0	10	9	16	19	18	7	6		101	61-70	37
3:00 AM	11	0	0	0	0	4	8	10	23	21	12	9	5	3		106	51-60	44
4:00 AM	8	0	0	0	0	2	9	25	40	44	31	21	17	5		202	51-60	84
5:00 AM	10	1	0	2	0	2	4	40	72	72	64	41	18	25		351	51-60	144
6:00 AM	25	0	0	0	0	1	3	47	111	144	175	114	61	39		720	56-65	319
7:00 AM	65	0	0	0	1	0	7	88	188	258	245	107	28	4		991	56-65	503
8:00 AM	53	0	0	0	0	0	18	63	151	212	161	87	28	14		787	56-65	373
9:00 AM	84	0	1	0	0	3	5	94	189	236	155	77	20	10		874	51-60	425
10:00 AM	58	0	0	0	2	6	36	100	213	237	145	45	12	4		858	51-60	449
11:00 AM	61	0	0	5	4	11	30	184	231	219	109	31	7	2		894	51-60	449
12:00 PM	46	2	0	0	0	8	26	131	252	233	135	34	3	1		871	51-60	485
1:00 PM	62	1	0	0	5	3	41	197	221	201	108	42	10	3		894	51-60	422
2:00 PM	88	0	0	0	5	17	81	245	226	225	115	26	5	1	mode of	1034	46-55	471
3:00 PM	57	1	0	0	0	0	28	164	275	299	155	51	12	2		1044	51-60	573
4:00 PM	80	0	0	2	7	22	36	206	268	307	183	62	19	4		1196	51-60	575
5:00 PM	61	1	1	4	13	4	44	162	262	292	177	55	17	4		1097	51-60	554
6:00 PM	39	2	0	0	0	3	30	106	191	213	131	49	12	2		778	51-60	404
7:00 PM	29	1	0	0	0	2	22	81	132	138	85	42	12	7		551	51-60	270
8:00 PM	14	0	0	0	0	3	22	77	122	103	58	22	5	2		428	51-60	225
9:00 PM	16	0	0	0	0	5	13	53	91	71	57	15	4	0		325	51-60	161
10:00 PM	12	0	0	0	0	0	12	35	36	37	25	13	4	1		175	51-60	73
11:00 PM	7	0	0	0	0	1	11	14	32	30	13	7	3	12		130	51-60	62
Day Total	907	11	2	15	37	97	492	2150	3361	3636	2378	984	314	160		14544	51-60	6997
Percent	6.2%	0.1%	0.0%	0.1%	0.3%	0.7%	3.4%	14.8%	23.1%	25.0%	16.4%	6.8%	2.2%	1.1%				
ADT 14544			_	_	_									_				
AM Peak				11:00 AM									6:00 AM			7:00 AM		
Volume	84	2	1	5	4	11	36	184	231	258	245	114	61	39		991		
PM Peak		12:00 PM	5:00 PM			4:00 PM		2:00 PM	3:00 PM	4:00 PM	4:00 PM	4:00 PM		11:00 PM		4:00 PM		
Volume	88	2	1	4	13	22	81	245	275	307	183	62	19	12		1196		
Comments:																		

LOCATION:																	C JOB #:	
SPECIFIC L				N of Low	er Bridg	e Way											RECTION:	
CITY/STATE				26	31	20	41	40	51	56	61		71	76		D/	ATE: Apr 2	
l	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	60	65	66 70	71 75	76 999			Pace	Number
Start Time																Total	Speed	in Pace
12:00 AM	7	0	0	0	0	0	2	14	25	20	14	5	5	0		92	51-60	45
1:00 AM	11	0	2	2	0	2	2	13	9	13	13	3	1	0		71	56-65	26
2:00 AM	11	0	0	0	0	1	2	11	18	19	12	9	1	2		86	51-60	36
3:00 AM	13	0	0	0	0	2	3	7	27	19	23	16	8	2		120	52-61	45
4:00 AM	12	2	0	0	0	2	10	14	42	45	38	23	17	4		209	51-60	87
5:00 AM	10	0	0	0	0	1	4	34	71	83	68	32	21	4		328	51-60	154
6:00 AM	33	0	0	0	0	0	8	55	124	191	153	123	47	18		752	56-65	344
7:00 AM	53	0	0	0	0	4	4	48	222	259	223	109	34	14		970	56-65	482
8:00 AM	59	0	0	0	0	7	14	92	192	203	164	61	27	8		827	51-60	395
9:00 AM	73	0	0	0	0	2	31	147	259	226	140	55	14	4		951	51-60	485
10:00 AM	72	0	1	0	0	4	20	108	200	257	156	53	12	3		886	51-60	456
11:00 AM	57	0	0	0	0	2	32	129	247	208	128	29	6	2		840	51-60	455
12:00 PM	45	0	0	0	0	3	38	170	276	234	128	23	6	2		925	51-60	509
1:00 PM	62	0	0	0	1	9	27	148	255	246	148	32	8	1		937	51-60	501
2:00 PM	68	1	0	0	3	15	39	168	287	279	119	30	2	. 1.	ander or	1012	51-60	565
3:00 PM	88	0	0	3	14	7	66	235	342	261	145	19	5	1		1186	51-60	603
4:00 PM	74	1	0	0	0	2	22	174	322	366	187	62	12	2		1224	51-60	688
5:00 PM	82	0	0	1	3	7	24	131	326	316	195	55	5	3		1148	51-60	642
6:00 PM	48	0	0	0	0	0	20	130	206	201	140	42	11	3		801	51-60	407
7:00 PM	37	0	0	0	0	3	11	75	127	133	111	40	9	3		549	51-60	260
8:00 PM	27	0	0	0	0	5	14	73	131	114	71	27	17	5		484	51-60	245
9:00 PM	13	1	0	0	0	0	14	37	72	86	50	18	1	2		294	51-60	157
10:00 PM	12	0	0	0	0	0	4	40	46	46	26	8	5	2		189	51-60	91
11:00 PM	11	0	0	0	0	0	5	16	39	28	22	8	6	5		140	51-60	66
Day Total	978	5	3	6	21	78	416	2069	3865	3853	2474	882	280	91		15021	51-60	7718
Percent	6.5%	0.0%	0.0%	0.0%	0.1%	0.5%	2.8%	13.8%	25.7%	25.7%	16.5%	5.9%	1.9%	0.6%				+
ADT 15021		_	_		_													
AM Peak		4:00 AM					11:00 AM				7:00 AM		6:00 AM			7:00 AM		
Volume	73	2	2	2		7	32	147	259	259	223	123	47	18		970		
PM Peak	3:00 PM	2:00 PM		3:00 PM	3:00 PM	2:00 PM		3:00 PM	3:00 PM	4:00 PM		4:00 PM	8:00 PM			4:00 PM		
Volume	88	1		3	14	15	66	235	342	366	195	62	17	5		1224		
Comments:																		
		0040 5 04														-1-110/1-11-		

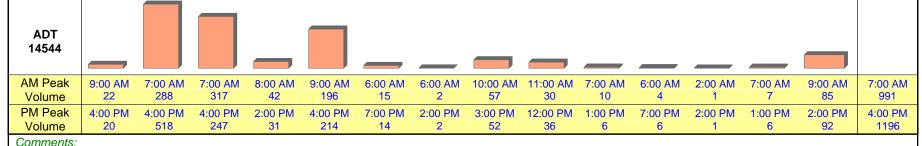
LOCATION						- \\/											C JOB #: 'IRECTION:	
SPECIFIC L				IN OI LOV	ver Briag	e way											ATE: Apr 2	
CITTOTATI	1	16	21	26	31	36	41	46	51	56	61	66	71	76			Pace	Number
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999		Total	Speed	in Pace
12:00 AM	5	0	0	0	0	0	3	10	16	25	16	11	3	4		93	56-65	41
1:00 AM	2	0	0	0	0	0	3	14	18	16	7	13	1	4		78	51-60	34
2:00 AM	14	1	0	1	0	0	1	9	19	21	12	8	8	2		96	51-60	40
3:00 AM	10	0	0	0	Ö	2	4	4	26	27	17	16	5	7		118	51-60	53
4:00 AM	14	0	0	0	0	0	5	21	39	50	32	26	13	17		217	51-60	89
5:00 AM	19	0	0	0	0	0	3	22	45	58	79	48	34	26		334	56-65	137
6:00 AM	35	1	0	0	0	2	4	30	94	160	183	148	52	46		755	56-65	343
7:00 AM	64	0	0	0	0	2	6	47	117	276	262	145	50	22		991	56-65	538
8:00 AM	44	1	1	0	2	6	26	35	142	208	225	92	25	13		820	56-65	433
9:00 AM	65	1	0	0	0	1	12	127	254	210	146	53	15	4		888	51-60	464
10:00 AM	60	1	0	2	12	5	32	142	270	206	129	42	11	2		914	51-60	476
11:00 AM	75	0	0	5	0	8	36	153	294	249	123	25	8	1		977	51-60	542
12:00 PM	76	0	0	1	1	2	32	170	292	278	123	25	5	1		1006	51-60	570
1:00 PM	73	0	0	1	5	4	51	185	317	289	113	27	12	3		1080	51-60	605
2:00 PM	102	0	0	0	1	2	39	209	298	310	112	34	7	. 1.	- t-	1115	51-60	608
3:00 PM	88	0	0	2	4	11	58	199	316	329	178	61	10 8			1257	51-60	644
4:00 PM	89	1	1	1	4 <b>11</b>	3 <b>15</b>	28 <b>78</b>	185	299	289	200	61		1		1176	51-60 51-60	587
5:00 PM 6:00 PM	93 40	0 0	0	2	0	0	7 <b>8</b> 16	<b>222</b> 129	<b>381</b> 214	<b>337</b> 254	164 138	30 44	14 7	0		<b>1348</b> 845	51-60	718 467
7:00 PM	43	0	0	0	2	1	19	100	169	179	116	4 <del>4</del> 47	10	0		686	51-60	347
8:00 PM	28	2	0	0	0	7	21	106	141	112	52	12	5	0		486	51-60	252
9:00 PM	13	0	0	0	0	3	17	75	99	108	56	17	4	0		392	51-60	207
10:00 PM	8	0	0	0	0	0	8	46	81	51	26	8	2	0		230	51-60	131
11:00 PM	6	0	0	0	0	0	6	24	48	46	34	8	2	1		175	51-60	93
Day Total	1066	8	2	15	42	74	508	2264	3989	4088	2543	1001	311	166		16077	51-60	8077
Percent	6.6%	0.0%	0.0%	0.1%		0.5%	3.2%						1.9%		,		0.00	
ADT 16077					_													
AM Peak					10:00 AM								6:00 AM			7:00 AM		
Volume	75	1	1	5	12	8	36	153	294	276	262	148	52	46		991		
PM Peak					5:00 PM			5:00 PM								5:00 PM		
Volume	102	2	1	2	11	15	78	222	381	337	200	61	14	7		1348		
Comments:																		
	l															-1-110/1-11		

71 1		<u> </u>																
LOCATION: SPECIFIC LOCATION:	CATIO	N: US9	7 600ft N			e Way									D.A	-	C JOB #: 1 IRECTION: 4 2018 - Ar	NB/SB
<u> </u>	1	16	21	26	31	36	41	46	51	56	61	66	71	76		11 <b>2.</b> 7(p) 2	Pace	Number
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999		Total	Speed	in Pace
<b>Grand Total</b>	2951	24	7	36	100	249	1416	6483	11215	11577	7395	2867	905	417		45642	51-60	22792
Percent	6.5%	0.1%	0.0%	0.1%	0.2%	0.5%	3.1%	14.2%	24.6%	25.4%	16.2%	6.3%	2.0%	0.9%				
Cumulative																		
Percent	6.5%	6.5%	6.5%	6.6%	6.8%	7.4%	10.5%	24.7%	49.3%	74.6%	90.8%	97.1%	99.1%	100.0%				
ADT 15214			_		_												35th Percent	
Comments:																	Medi	an 55 MPH
																	Mod	de: 58 MPH

Report generated on 5/3/2018 5:01 PM



LOCATION: US97 600ft N of Lower Bridge Way QC JOB #: 14686621 SPECIFIC LOCATION: US97 600ft N of Lower Bridge Way **DIRECTION: NB/SB** CITY/STATE: Terrebonne. OR **DATE:** Apr 24 2018 Motor-Cars & 2 Axle 2 Axle 3 Axle 4 Axle <5 Axle 5 Axle >6 Axle <6 Axle 6 Axle >6 Axle Not **Buses** Trailer 6 Tire Single Single Double **Double Double** Multi Multi Classified cycles Long Multi **Start Time** Total 12:00 AM 1:00 AM 2:00 AM 3:00 AM 4:00 AM 5:00 AM 6:00 AM 7:00 AM 8:00 AM 9:00 AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM 6:00 PM 7:00 PM 8:00 PM 9:00 PM 10:00 PM 11:00 PM **Day Total** 1.9% 0.2% 6.7% Percent 32.3% 26.1% 3.3% 19.7% 1.4% 0.1% 4.2% 3.0% 0.5% 0.1% 0.5%



LOCATION: US97 600ft N of Lower Bridge Way QC JOB #: 14686621 SPECIFIC LOCATION: US97 600ft N of Lower Bridge Way **DIRECTION: NB/SB** CITY/STATE: Terrebonne. OR **DATE:** Apr 25 2018 Cars & >6 Axle Motor-2 Axle 2 Axle 3 Axle 4 Axle <5 Axle 5 Axle >6 Axle <6 Axle 6 Axle Not **Buses** Trailer 6 Tire Single Single Double **Double** Double Multi Multi Multi Classified cycles Long **Start Time** Total 12:00 AM 1:00 AM 2:00 AM 3:00 AM 4:00 AM 5:00 AM 6:00 AM 7:00 AM 8:00 AM 9:00 AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM 6:00 PM 7:00 PM 8:00 PM 9:00 PM 10:00 PM 11:00 PM **Day Total** Percent 1.7% 4.5% 0.2% 7.1% 32.3% 25.8% 3.2% 20.1% 1.1% 0.1% 2.9% 0.4% 0.0% 0.5%

ADT 15021							_								
AM Peak	6:00 AM	11:00 AM	7:00 AM	6:00 AM	9:00 AM	6:00 AM	8:00 AM	9:00 AM	11:00 AM	10:00 AM	2:00 AM	12:00 AM	6:00 AM	10:00 AM	7:00 AM
Volume	19	273	340	37	232	13	2	59	33	7	5	1	10	81	970
PM Peak	3:00 PM	4:00 PM	4:00 PM	2:00 PM	4:00 PM	3:00 PM	8:00 PM	4:00 PM	12:00 PM	6:00 PM	7:00 PM	7:00 PM	8:00 PM	3:00 PM	4:00 PM
Volume	17	493	273	29	241	13	2	57	33	5	4	1	7	92	1224
Comments:															

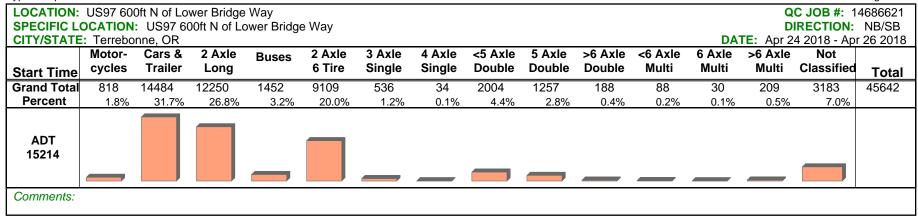
LOCATION: US97 600ft N of Lower Bridge Way

SPECIFIC LOCATION: US97 600ft N of Lower Bridge Way

CITY/STATE: Terrebonne, OR

Motor- Cars & 2 Axle Buses 2 Axle Single Single Double Double Multi Multi Multi Classified Total

Start Time	Motor- cycles	Cars & Trailer	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axle Double	5 Axle Double	>6 Axle Double	<6 Axle Multi	6 Axle Multi	>6 Axle Multi	Not Classified	Total
12:00 AM	4	10	25	12	16	2	0	4	5	2	1	3	1	8	93
1:00 AM	3	12	24	9	11	3	0	4	7	0	0	0	2	3	78
2:00 AM	5	5	24	11	10	3	2	7	4	2	7	0	1	15	96
3:00 AM	7	13	32	14	19	4	0	4	5	2	0	1	4	13	118
4:00 AM	8	42	66	13	46	9	1	3	7	2	1	2	2	15	217
5:00 AM	9	26	129	24	91	2	1	17	5	0	2	2	2	24	334
6:00 AM	17	89	307	31	215	10	1	25	8	7	2	0	3	40	755
7:00 AM	13	150	450	28	223	5	1	31	13	2	3	0	4	68	991
8:00 AM	11	163	283	28	202	10	1	49	21	1	0	0	2	49	820
9:00 AM	16	222	245	25	202	12	0	54	25	7	1	1	3	75	888
10:00 AM	16	262	254	38	191	17	1	41	21	2	0	1	5	65	914
11:00 AM	15	305	258	33	203	10	0	45	22	0	0	2	3	81	977
12:00 PM	12	352	271	20	190	5	0	44	27	4	0	0	2	79	1006
1:00 PM	9	390	299	26	188	4	1	54	32	0	0	0	4	73	1080
2:00 PM	16	413	260	21	213	10	0	49	26	2	1	_1_	2	101	1115
3:00 PM	21	466	325	28	228	16	0	57	18	1.(	0	0	2	95	1257
4:00 PM	19	419	310	24	224	10	0	49	21	2	0	2	4	92	1176
5:00 PM	22	556	290	25	264	6	0	59	27	2		0	2	94	1348
6:00 PM	16	354	206	20	132	8	0	35	26	2	COAL	0	4	41	845
7:00 PM	15	236	182	11	134	6	1	21	23	5	4	0	5	43	686
8:00 PM	9	202	113	8	85	6	0	22	7	1	4	0	3	26	486
9:00 PM	10	109	124	18	76	6	0	18	10	2	0	0	4	15	392
10:00 PM	4	88	56	8	40	2	0	9	10	2	1	0	1	9	230
11:00 PM	6	48	50	6	30	4	0	7	8	3	1	2	2	8	175
Day Total	283	4932	4583	481	3233	170	10	708	378	53	30	17	67	1132	16077
Percent	1.8%	30.7%	28.5%	3.0%	20.1%	1.1%	0.1%	4.4%	2.4%	0.3%	0.2%	0.1%	0.4%	7.0%	
ADT 16077											_				
AM Peak	6:00 AM	11:00 AM	7:00 AM	10:00 AM	7:00 AM	10:00 AM	2:00 AM	9:00 AM	9:00 AM	6:00 AM	2:00 AM	12:00 AM	10:00 AM	11:00 AM	7:00 AM
Volume	17	305	450	38	223	17	2	54	25	7	7	3	5	81	991
PM Peak	5:00 PM	5:00 PM	3:00 PM	3:00 PM	5:00 PM	3:00 PM	1:00 PM	5:00 PM	1:00 PM	7:00 PM	7:00 PM	4:00 PM	7:00 PM	2:00 PM	5:00 PM
Volume	22	556	325	28	264	16	1	59	32	5	4	2	5	101	1348
Comments:															



Report generated on 5/3/2018 5:01 PM



LOCATION: US97 600ft N of Lower Bridge Way
SPECIFIC LOCATION: US97 600ft N of Lower Bridge Way
CITY/STATE: Terrebonne OR

Start Time	Mon	<b>Tue</b> 24-Apr-18	<b>Wed</b> 25-Apr-18	<b>Thu</b> 26-Apr-18	Fri	Average Weekday Hourly Traffic	Sat	Sun	Average Week Hourly Traffic	Average Week Profi
12:00 AM		70	92	93		85			85	
1:00 AM		67	71	78		72			72	
2:00 AM		101	86	96		94			94	
3:00 AM		106	120	118		115			115	
4:00 AM		202	209	217		209			209	
5:00 AM		351	328	334		338			338	
6:00 AM		720	752	755		742			742	
7:00 AM		991	970	991		984			984	
8:00 AM		787	827	820		811			811	
9:00 AM		874	951	888		904			904	
10:00 AM		858	886	914		886			886	
11:00 AM		894	840	977		904			904	
12:00 PM		871	925	1006		934			934	
1:00 PM		894	937	1080		970			970	
2:00 PM		1034	1012	1115		1054			1054	
3:00 PM		1044	1186	1257		1162	- /	00	1162	
4:00 PM		1196	1224	1176		1199		3 8 75 8 1	1199	
5:00 PM		1097	1148	1348		1198		ZATA	1198	
6:00 PM		778	801	845		808			808	
7:00 PM		551	549	686		595			595	
8:00 PM		428	484	486		466			466	
9:00 PM		325	294	392		337			337	
10:00 PM		175	189	230		198			198	
11:00 PM		130	140	175		148			148	
Day Total		14544	15021	16077		15213			15213	
% Weekday										
Average		95.6%	98.7%	105.7%						
% Week										
Average		95.6%	98.7%	105.7%		100.0%				
AM Peak		7:00 AM	7:00 AM	7:00 AM		7:00 AM			7:00 AM	
Volume		991	970	991		984			984	
PM Peak		4:00 PM	4:00 PM	5:00 PM		4:00 PM			4:00 PM	
Volume		1196	1224	1348		1199			1199	

QC JOB #: 14686621

LOCATION:																	C JOB #:	
SPECIFIC L				south of	C Ave												RECTION:	
CITY/STATI																D/	ATE: Apr 2	
	1	16	21	26	31	36	41	46	51	56	61	66	71	76			Pace	Number
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999		Total	Speed	in Pace
12:00 AM	0	0	2	5	14	40	13	7	0	0	0	0	0	0		81	31-40	54
1:00 AM	1	0	2	4	16	38	22	2	2	0	0	0	0	0		87	36-45	60
2:00 AM	2	1	4	1	18	40	30	1	0	0	0	0	0	0		97	36-45	70
3:00 AM	0	0	1	7	24	51	20	9	3	0	0	0	0	0		115	31-40	75
4:00 AM	14	1	5	15	48	108	65	11	0	0	0	0	0	0		267	36-45	173
5:00 AM	22	0	8	35	127	217	63	3	2	1	0	0	0	0		478	31-40	343
6:00 AM	83	2	22	68	263	439	136	19	1	1	0	0	0	0		1034	31-40	701
7:00 AM	140	10	39	159	484	457	81	6	1	0	0	0	0	0		1377	31-40	941
8:00 AM	136	77	347	302	196	84	18	1	0	0	0	0	0	0		1161	21-30	649
9:00 AM	107	66	249	244	368	151	23	1	0	0	0	0	0	0		1209	26-35	612
10:00 AM	101	4	41	164	526	331	46	3	1	0	0	0	0	0		1217	31-40	857
11:00 AM	105	11	58	186	589	289	30	5	0	0	0	0	0	0		1273	31-40	877
12:00 PM	145	12	54	191	564	265	39	1	0	0	0	0	0	0		1271	31-40	829
1:00 PM	125	9	79	255	561	269	42	2	0	0	0	0	0	0		1342	31-40	829
2:00 PM	138	16	72	348	560	219	27	4	. 1 .	0	0	0	0	0	and the same	1385	26-35	908
3:00 PM	267	96	294	409	318	99	9	<b>1</b> ].	0	0	0	0	0	0		1493	26-35	726
4:00 PM	199	18	98	335	613	317	35	1	0	0	0	0	0	0	1 6	1616	26-35	947
5:00 PM	136	7	80	178	643	410	69	7	0	0	0	0	0	0	e Tivo	1530	31-40	1053
6:00 PM	68	2	43	101	415	377	63	7	0	0	0	0	0	0	6110	1076	31-40	792
7:00 PM	41	6	30	124	291	264	50	9	0	0	0	0	0	0		815	31-40	554
8:00 PM	22	1	22	59	227	215	42	4	0	0	0	0	0	0		592	31-40	442
9:00 PM	11	1	11	39	152	161	36	8	0	0	0	0	0	0		419	31-40	313
10:00 PM	4	0	6	16	81	95	31	2	0	0	0	0	0	0		235	31-40	176
11:00 PM	6	0	0	18	45	53	23	14	1	0	0	0	0	0		160	31-40	97
Day Total	1873	340	1567	3263	7143	4989	1013	128	12	2	0	0	0	0		20330	31-40	12131
Percent	9.2%	1.7%	7.7%	16.1%	35.1%	24.5%	5.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%				
ADT 20330									_		_		_	_				
AM Peak	7:00 AM	8:00 AM	8:00 AM	8:00 AM	11:00 AM	7:00 AM	6:00 AM	6:00 AM	3:00 AM	5:00 AM						7:00 AM		
Volume	140	77	347	302	589	457	136	19	3	1						1377		
PM Peak Volume	3:00 PM 267	3:00 PM 96	3:00 PM 294	3:00 PM 409	5:00 PM 643	5:00 PM 410	5:00 PM 69	11:00 PM 14	2:00 PM 1							4:00 PM 1616		
Comments:																		

LOCATION:																	C JOB #:	
SPECIFIC L				south of	C Ave												RECTION:	
CITY/STATI					04	20	- 44	40		F.0	04		74	70		D	ATE: Apr 2	
	1 15	16	21 25	26	31 35	36	41	46 50	51 55	56	61 65	66 70	71 75	76 999			Pace	Number
Start Time	15	20	25	30		40	45	50		60		70	/5	999		Total	Speed	in Pace
12:00 AM	2	0	0	5	39	41	30	8	3	1	0	0	0	0		129	31-40	80
1:00 AM	4	1	2	2	18	45	10	0	2	0	1	0	0	0		85	31-40	63
2:00 AM	2	0	2	5	13	66	21	3	0	0	0	0	0	0		112	36-45	86
3:00 AM	5	0	1	9	14	65	33	7	1	0	0	0	0	0		135	36-45	97
4:00 AM	2	0	3	12	50	125	51	5	0	1	0	0	0	0		249	36-45	175
5:00 AM	20	5	14	30	145	206	65	8	0	0	0	0	0	0		493	31-40	351
6:00 AM	81	4	14	128	321	417	106	10	2	1	1	0	0	0		1085	31-40	738
7:00 AM	135	5	34	172	510	422	62	9	0	0	0	0	0	0		1349	31-40	932
8:00 AM	151	108	363	287	192	111	20	2	1	0	0	0	0	0		1235	21-30	650
9:00 AM	158	83	272	289	331	154	17	1	0	0	0	0	0	0		1305	26-35	620
10:00 AM	112	9	54	217	534	262	30	3	0	0	0	0	0	0		1221	31-40	796
11:00 AM	88	7	49	184	517	309	41	2	0	0	0	1	0	0		1198	31-40	825
12:00 PM	131	14	71	239	520	307	35	2	0	0	0	0	0	0		1319	31-40	827
1:00 PM	133	6	55	247	566	273	29	4	0	0	0	0	0	0		1313	31-40	838
2:00 PM	198	73	360	364	323	105	9	2	0	0	0	0	0	0	make of	1434	21-30	723
3:00 PM	175	27	91	316	604	318	21	3	0	0	0	0	0	0		1555	31-40	921
4:00 PM	234	10	98	423	615	208	25	3	0	0	0	0	0	0		1616	26-35	1038
5:00 PM	151	7	53	229	674	407	54	7	0	0	0	0	0	0		1582	31-40	1081
6:00 PM	70	4	48	142	427	387	67	5	0	0	0	0	0	0		1150	31-40	814
7:00 PM	39	1	28	88	255	317	68	8	2	0	0	0	0	0		806	31-40	572
8:00 PM	26	3	27	75	209	236	65	12	1	0	1	0	0	0		655	31-40	445
9:00 PM	14	3	14	37	113	181	44	5	1	0	0	0	0	0		412	31-40	294
10:00 PM	8	2	5	19	68	98	39	8	0	0	0	0	0	1		248	31-40	166
11:00 PM	2	1	2	12	52	69	16	4	2	0	0	0	0	0		160	31-40	121
Day Total	1941	373	1660	3531	7110	5129	958	121	15	3	3	1	0	1		20846	31-40	12238
Percent	9.3%	1.8%	8.0%	16.9%	34.1%	24.6%	4.6%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%				
ADT 20846																		
AM Peak									12:00 AM							7:00 AM		
Volume	158	108	363	289	534	422	106	10	3	1	1	1				1349		
PM Peak			2:00 PM	4:00 PM			7:00 PM	8:00 PM			8:00 PM			10:00 PM		4:00 PM		
Volume	234	73	360	423	674	407	68	12	2		1			1		1616		
Comments:																		
	l															-1-10/1-11-		

LOCATION:																	C JOB #:	
SPECIFIC L				south of	C Ave												RECTION:	
CITY/STATI				26	24	36	41	40	51	56	61		71	76		D/	ATE: Apr 2	1
l	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	55	56 60	65	66 70	71 75	76 999			Pace	Number
Start Time																Total	Speed	in Pace
12:00 AM	4	0	0	2	16	46	25	12	6	0	0	0	0	0		111	36-45	71
1:00 AM	3	0	3	4	18	34	26	4	1	0	0	0	0	0		93	36-45	60
2:00 AM	7	0	1	3	14	38	33	7	0	1	0	0	0	0		104	36-45	70
3:00 AM	9	0	0	3	14	62	39	12	2	0	0	1	0	0		142	36-45	101
4:00 AM	9	0	8	6	49	134	55	6	2	0	0	0	0	0		269	36-45	189
5:00 AM	25	0	12	24	94	224	75	13	1	1	0	0	0	0		469	31-40	318
6:00 AM	82	1	19	80	321	400	128	25	3	0	0	0	0	0		1059	31-40	721
7:00 AM	116	5	34	138	498	464	101	9	3	1	0	0	0	0		1369	31-40	961
8:00 AM	138	96	286	281	250	121	24	6	0	0	0	0	0	0		1202	21-30	567
9:00 AM	138	92	273	297	286	168	21	0	0	0	0	0	0	0		1275	26-35	583
10:00 AM	114	10	50	171	540	311	49	0	0	0	0	0	0	0		1245	31-40	851
11:00 AM	125	7	53	201	565	303	39	3	0	0	0	0	0	0		1296	31-40	867
12:00 PM	143	7	71	273	563	294	51	2	1	0	0	0	0	0		1405	31-40	856
1:00 PM	130	18	87	297	659	242	24	2	0	0	0	0	0	0		1459	26-35	955
2:00 PM	158	16	68	321	580	268	39	3	0	0	0	0	0	0	and a	1453	26-35	901
3:00 PM	313	151	381	437	284	85	5	3	0	0	0	0	0	0		1659	21-30	818
4:00 PM	184	25	104	367	592	319	44	4	0	1	0	0	0	0	1 6	1640	26-35	959
5:00 PM	192	3	67	351	657	364	51	3	0	0	0	0	0	0	verm Ive	1688	31-40	1020
6:00 PM	99	1	39	139	471	410	63	8	0	0	0	0	0	0	C DIC	1230	31-40	881
7:00 PM	47	3	20	72	341	351	61	4	0	0	0	0	0	0		899	31-40	692
8:00 PM	16	3	21	96	253	211	36	2	1	0	0	0	0	0		639	31-40	464
9:00 PM	16	1	24	43	166	209	37	6	0	0	0	0	0	0		502	31-40	374
10:00 PM	14	1	5	26	72	138	35	7	1	0	0	0	0	0		299	31-40	210
11:00 PM	8	0	4	10	31	107	51	9	11	0	0	0	0	0		221	36-45	157
Day Total	2090	440	1630	3642	7334	5303	1112	150	22	4	0	1	0	0		21728	31-40	12636
Percent	9.6%	2.0%	7.5%	16.8%	33.8%	24.4%	5.1%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%				
ADT 21728																		
AM Peak			8:00 AM		11:00 AM			6:00 AM				3:00 AM				7:00 AM		
Volume	138	96	286	297	565	464	128	25	6	1		1				1369		
PM Peak	3:00 PM	3:00 PM	3:00 PM	3:00 PM	1:00 PM	6:00 PM	6:00 PM	11:00 PM	12:00 PM	4:00 PM						5:00 PM		
Volume	313	151	381	437	659	410	63	9	1	1						1688		
Comments:																		
	l															-1-110/1-11-		

Type of Teport. I	ubc oot	ин орсс	u Data				COIVII	VI/~\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Tube 0	ount o	peca De	ita						1 agc + oi +
LOCATION: SPECIFIC LO	CATIC	N: US	97 100ft		f C Ave										DA	DI	C JOB #: 1	NB/SB
Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	DA	Total	4 2018 - Ap <b>Pace</b> <b>Speed</b>	Number in Pace
Grand Total Percent	5904 9.4%	1153 1.8%	4857 7.7%	10436 16.6%		15421 24.5%	3083 4.9%	399 0.6%	_	9 0.0%	3 0.0%	2 0.0%	0 0.0%	1 0.0%		62904	31-40	37007
Cumulative Percent	9.4%	11.2%	18.9%	35.5%	69.8%	94.4%	99.3%	99.9%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%				
ADT 20968																	Sth Percent	
Comments:																		an 32 MPH de: 33 MPH

Report generated on 5/3/2018 5:01 PM



LOCATION:US 97 100ft south of C AveQC JOB #: 14686622SPECIFIC LOCATION:US 97 100ft south of C AveDIRECTION:NB/SBCITY/STATE:Terrebonne, ORDATE: Apr 24 2018

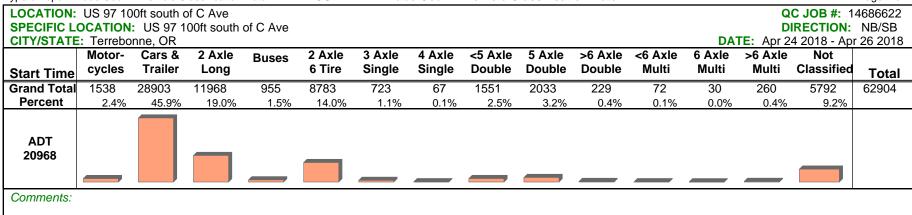
CITY/STATE	: Terrebo	nne, OR											D.	ATE: Apr 2	4 2018
	Motor-	Cars &	2 Axle	Buses	2 Axle	3 Axle	4 Axle	<5 Axle	5 Axle	>6 Axle	<6 Axle	6 Axle	>6 Axle	Not	
Start Time	cycles	Trailer	Long		6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classified	Total
12:00 AM	7	31	16	1	3	1	0	3	13	0	3	0	2	1	81
1:00 AM	2	30	22	4	12	1	0	1	9	3	1	0	0	2	87
2:00 AM	1	35	19	4	7	1	1	2	12	1	2	1	5	6	97
3:00 AM	2	43	16	4	19	1	0	2	16	0	2	1	6	3	115
4:00 AM	3	136	46	4	32	2	0	6	13	1	2	1	7	14	267
5:00 AM	7	201	82	10	101	5	1	19	20	2	1	1	6	22	478
6:00 AM	11	436	210	14	221	8	2	16	25	5	1	0	4	81	1034
7:00 AM	24	647	246	15	198	12	2	38	29	18	0	0	9	139	1377
8:00 AM	29	485	216	25	161	23	3	37	34	10	0	0	2	136	1161
9:00 AM	31	532	195	19	187	30	1	46	49	8	0	1	6	104	1209
10:00 AM	44	536	232	32	169	13	1	48	40	3	0	0	4	95	1217
11:00 AM	35	569	257	21	173	18	1	42	42	7	1	0	4	103	1273
12:00 PM	39	604	220	18	154	23	1	29	38	2	0	0	2	141	1271
1:00 PM	34	614	264	15	186	14	2	42	38	6	0	0	3	124	1342
2:00 PM	39	624	265	21	181	21	2	31	53	3	0	0	5	140	1385
3:00 PM	47	639	264	16	169	29	0	37	28	1 (	0	0	1	262	1493
4:00 PM	35	777	289	13	205	12	2	32	45	3	0	1	5	197	1616
5:00 PM	35	783	303	13	181	14	0	25	32	3	0	0	5	136	1530
6:00 PM	19	548	203	12	154	6	0	13	42	5	COAL	0	4	69	1076
7:00 PM	23	403	144	7	119	11	0	14	40	3	4	1	4	42	815
8:00 PM	11	317	118	10	71	1	0	10	25	2	2	1	2	22	592
9:00 PM	12	221	75	3	44	4	0	7	35	3	1	0	3	11	419
10:00 PM	10	112	54	5	16	3	0	4	25	1	1	0	0	4	235
11:00 PM	8	76	25	9	20	11	0	1	9	11	0	2	2	6	160
Day Total	508	9399	3781	295	2783	254	19	505	712	91	22	10	91	1860	20330
Percent	2.5%	46.2%	18.6%	1.5%	13.7%	1.2%	0.1%	2.5%	3.5%	0.4%	0.1%	0.0%	0.4%	9.1%	
ADT 20330													_		
AM Peak	10:00 AM	7:00 AM	11:00 AM		6:00 AM	9:00 AM	8:00 AM	10:00 AM	9:00 AM	7:00 AM	12:00 AM	2:00 AM	7:00 AM	7:00 AM	7:00 AM
Volume	44	647	257	32	221	30	3	48	49	18	3	1	9	139	1377
PM Peak	3:00 PM	5:00 PM	5:00 PM	2:00 PM	4:00 PM	3:00 PM	1:00 PM	1:00 PM	2:00 PM	1:00 PM	7:00 PM	11:00 PM	2:00 PM	3:00 PM	4:00 PM
Volume	47	783	303	21	205	29	2	42	53	6	4	2	5	262	1616
Comments:															

LOCATION:US 97 100ft south of C AveQC JOB #: 14686622SPECIFIC LOCATION:US 97 100ft south of C AveDIRECTION:NB/SBCITY/STATE:Terrebonne, ORDATE: Apr 25 2018

CITY/STATE	: Terrebo	nne, OR											D	ATE: Apr 2	5 2018
	Motor-	Cars &	2 Axle	Buses	2 Axle	3 Axle	4 Axle	<5 Axle	5 Axle	>6 Axle	<6 Axle	6 Axle	>6 Axle	Not	
Start Time	cycles	Trailer	Long		6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classified	Total
12:00 AM	21	31	37	10	5	3	0	1	16	2	0	1	0	2	129
1:00 AM	6	36	17	2	11	1	0	1	6	0	0	0	3	2	85
2:00 AM	6	41	11	5	12	3	0	1	14	3	5	0	8	3	112
3:00 AM	8	45	11	8	24	4	0	3	17	1	1	0	8	5	135
4:00 AM	12	118	51	4	31	3	0	1	15	2	3	0	7	2	249
5:00 AM	21	198	88	11	109	1	0	10	23	5	0	2	6	19	493
6:00 AM	30	461	216	14	211	10	0	18	25	9	1	0	10	80	1085
7:00 AM	28	578	296	13	207	16	0	38	28	5	1	1	7	131	1349
8:00 AM	35	512	238	25	190	17	4	29	33	1	0	0	7	144	1235
9:00 AM	29	565	222	18	188	19	3	47	54	6	1	0	1	152	1305
10:00 AM	34	579	244	20	146	9	3	27	42	5	1	0	3	108	1221
11:00 AM	29	556	229	19	171	19	1	39	40	3	0	0	3	89	1198
12:00 PM	32	617	253	17	173	19	1	32	39	2	0	0	3	131	1319
1:00 PM	35	620	250	20	173	9	2	31	43	0	0	0	1	129	1313
2:00 PM	35	644	276	27	170	18	5	31	32	3	0	0	2	191	1434
3:00 PM	43	700	322	8	210	17	3	39	37	2	0	0	3	171	1555
4:00 PM	34	760	270	11	215	14	2	31	39	4	0	0	3	233	1616
5:00 PM	26	800	300	10	216	17	2	19	37	3	0	0	2	150	1582
6:00 PM	27	580	218	16	154	9	0	31	37	4	001	0	2	71	1150
7:00 PM	11	414	154	14	101	11	0	23	29	2	3	1	4	39	806
8:00 PM	8	296	144	19	105	3	0	14	32	1	2	0	4	27	655
9:00 PM	15	199	75	8	50	4	0	11	31	3	0	0	2	14	412
10:00 PM	7	122	49	11	27	1	0	5	15	0	1	0	2	8	248
11:00 PM	2	84	28	2	11	3	0	8	16	0	0	2	2	2	160
Day Total	534	9556	3999	312	2910	230	26	490	700	66	20	7	93	1903	20846
Percent	2.6%	45.8%	19.2%	1.5%	14.0%	1.1%	0.1%	2.4%	3.4%	0.3%	0.1%	0.0%	0.4%	9.1%	
ADT 20846															
AM Peak	8:00 AM	10:00 AM	7:00 AM	8:00 AM	6:00 AM	9:00 AM	8:00 AM	9:00 AM	9:00 AM	6:00 AM	2:00 AM	5:00 AM	6:00 AM	9:00 AM	7:00 AM
Volume	35	579	296	25	211	19	4	47	54	9	5	2	10	152	1349
PM Peak	3:00 PM	5:00 PM	3:00 PM	2:00 PM	5:00 PM	12:00 PM	2:00 PM	3:00 PM	1:00 PM	4:00 PM	7:00 PM	11:00 PM	7:00 PM	4:00 PM	4:00 PM
Volume	43	800	322	27	216	19	5	39	43	4	3	2	4	233	1616
Comments:															

LOCATION: US 97 100ft south of C Ave
SPECIFIC LOCATION: US 97 100ft south of C Ave
DIRECTION: NB/SB
CITY/STATE: Terrebonne, OR
DATE: Apr 26 2018

CITY/STATE	: rerrebo	nne, OR											D.	ATE: Apr 2	6 2018
	Motor-	Cars &	2 Axle	Buses	2 Axle	3 Axle	4 Axle	<5 Axle	5 Axle	>6 Axle	<6 Axle	6 Axle	>6 Axle	Not	
Start Time	cycles	Trailer	Long		6 Tire	Single	Single	Double	Double	Double	Multi	Multi	Multi	Classified	Total
12:00 AM	7	27	30	5	15	1	0	5	12	2	0	2	1	4	111
1:00 AM	6	35	14	3	11	3	0	2	15	0	0	0	1	3	93
2:00 AM	5	24	19	9	11	1	0	6	9	1	8	0	5	6	104
3:00 AM	6	39	29	9	21	2	0	1	16	3	0	0	7	9	142
4:00 AM	15	135	44	9	25	4	0	3	17	0	2	2	5	8	269
5:00 AM	12	173	98	16	102	3	0	7	22	2	2	2	5	25	469
6:00 AM	16	450	231	6	196	13	1	26	20	8	3	0	7	82	1059
7:00 AM	16	648	281	18	217	10	0	25	36	7	3	0	4	104	1369
8:00 AM	31	497	251	23	177	10	3	43	27	6	1	0	1	132	1202
9:00 AM	35	542	228	21	205	27	3	41	33	7	1	0	3	129	1275
10:00 AM	28	522	246	30	196	16	4	46	36	3	0	0	4	114	1245
11:00 AM	31	580	253	29	183	15	1	36	37	1	0	0	4	126	1296
12:00 PM	30	639	282	20	198	12	1	36	37	3	0	1	4	142	1405
1:00 PM	46	720	280	21	177	21	1	30	34	0	0	0	0	129	1459
2:00 PM	30	665	290	17	193	18	1_1_	36	38	4	0	_1_	3	157	1453
3:00 PM	49	692	278	22	224	30	5	44	20	5	0	0	3	287	1659
4:00 PM	35	759	295	17	244	19	<b>1</b>	42	35	3	0	2	4	184	1640
5:00 PM	32	847	299	17	220	15	0	42	24	2	0	0	2	188	1688
6:00 PM	18	637	243	18	147	6	ANDE	20	37	2	COAL	0	1	99	1230
7:00 PM	12	450	181	12	120	3	0	21	40	5	4	0	5	46	899
8:00 PM	10	347	127	8	77	2	0	20	23	2	3	1	2	17	639
9:00 PM	12	251	103	9	68	4	0	12	23	1	0	0	3	16	502
10:00 PM	4	166	48	6	35	0	0	6	15	2	1	0	2	14	299
11:00 PM	10	103	38	3	28	4	0	6	15	3	11	2	0	8	221
Day Total	496	9948	4188	348	3090	239	22	556	621	72	30	13	76	2029	21728
Percent	2.3%	45.8%	19.3%	1.6%	14.2%	1.1%	0.1%	2.6%	2.9%	0.3%	0.1%	0.1%	0.3%	9.3%	
ADT 21728													_		
AM Peak	9:00 AM	7:00 AM	7:00 AM	10:00 AM	7:00 AM	9:00 AM		10:00 AM	11:00 AM	6:00 AM	2:00 AM	12:00 AM	3:00 AM	8:00 AM	7:00 AM
Volume	35	648	281	30	217	27	4	46	37	8	8	2	7	132	1369
PM Peak	3:00 PM	5:00 PM	5:00 PM	3:00 PM	4:00 PM	3:00 PM	3:00 PM	3:00 PM	7:00 PM	3:00 PM	7:00 PM	4:00 PM	7:00 PM	3:00 PM	5:00 PM
Volume	49	847	299	22	244	30	5	44	40	5	4	2	5	287	1688
Comments:															



Report generated on 5/3/2018 5:01 PM



LOCATION: US 97 100ft south of C Ave

QC JOB #: 14686622 DIRECTION: NB/SB

SPECIFIC LOCATION: US 97 100ft south of C Ave CITY/STATE: Terrebonne, OR

**DATE:** Apr 24 2018 - Apr 26 2018

CITY/STATE						,				Apr 24 2018 - Apr 26 2018
	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
Start Time		24-Apr-18	25-Apr-18	26-Apr-18		Hourly Traffic			Hourly Traffic	
12:00 AM		81	129	111		107			107	
1:00 AM		87	85	93		88			88	
2:00 AM		97	112	104		104			104	
3:00 AM		115	135	142		131			131	
4:00 AM		267	249	269		262			262	
5:00 AM		478	493	469		480			480	
6:00 AM		1034	1085	1059		1059			1059	
7:00 AM		1377	1349	1369		1365			1365	
8:00 AM		1161	1235	1202		1199			1199	
9:00 AM		1209	1305	1275		1263			1263	
10:00 AM		1217	1221	1245		1228			1228	
11:00 AM		1273	1198	1296		1256			1256	
12:00 PM		1271	1319	1405		1332			1332	
1:00 PM		1342	1313	1459		1371			1371	
2:00 PM		1385	1434	1453		1424		\(	1424	
3:00 PM		1493	1555	1659		1569	- /	00	1569	
4:00 PM		1616	1616	1640		1624		3 8 7 8 7	1624	
5:00 PM		1530	1582	1688		1600		ZATA	1600	
6:00 PM		1076	1150	1230		1152			1152	
7:00 PM		815	806	899		840			840	
8:00 PM		592	655	639		629			629	
9:00 PM		419	412	502		444			444	
10:00 PM		235	248	299		261			261	
11:00 PM		160	160	221		180			180	
Day Total		20330	20846	21728		20968			20968	
% Weekday										
Average		97.0%	99.4%	103.6%						
% Week										
Average		97.0%	99.4%	103.6%		100.0%				
AM Peak		7:00 AM	7:00 AM	7:00 AM		7:00 AM			7:00 AM	
Volume		1377	1349	1369		1365			1365	
PM Peak		4:00 PM	4:00 PM	5:00 PM		4:00 PM			4:00 PM	
Volume		1616	1616	1688		1624			1624	
Comments:										

LOCATION: US97 500ft S of 10th St QC JOB #: 14686623 **DIRECTION: NB/SB** SPECIFIC LOCATION: US97 500ft S of 10th St **DATE:** Apr 24 2018 CITY/STATE: Terrebonne, OR Pace Number in Pace Speed **Start Time** Total 46-55 12:00 AM 1:00 AM 46-55 2:00 AM 46-55 3:00 AM 46-55 4:00 AM 46-55 5:00 AM 46-55 6:00 AM 46-55 7:00 AM 46-55 8:00 AM 46-55 9:00 AM 41-50 10:00 AM 41-50 11:00 AM 41-50 12:00 PM 41-50 1:00 PM 41-50 2:00 PM 41-50 3:00 PM 41-50 4:00 PM 41-50 5:00 PM 41-50 6:00 PM 46-55 7:00 PM 41-50 8:00 PM 41-50 9:00 PM 41-50 10:00 PM 46-55 11:00 PM 41-50 **Day Total** 41-50 Percent 7.5% 0.0% 0.0% 0.4% 2.0% 9.2% 24.5% 31.4% 18.3% 5.2% 1.2% 0.2% 0.1% 0.1% ADT AM Peak 9:00 AM 2:00 AM 10:00 AM 10:00 AM 11:00 AM 11:00 AM 7:00 AM 7:00 AM 7:00 AM 6:00 AM 6:00 AM 6:00 AM 7:00 AM 11:00 AM Volume PM Peak 4:00 PM 4:00 PM 4:00 PM 4:00 PM 3:00 PM 3:00 PM 5:00 PM 5:00 PM 6:00 PM 6:00 PM 7:00 PM 11:00 PM 12:00 PM 4:00 PM Volume Comments:

LOCATION: US97 500ft S of 10th St QC JOB #: 14686623 **DIRECTION: NB/SB** SPECIFIC LOCATION: US97 500ft S of 10th St **DATE:** Apr 25 2018 CITY/STATE: Terrebonne, OR Pace Number in Pace Speed **Start Time** Total 46-55 12:00 AM 1:00 AM 46-55 2:00 AM 46-55 3:00 AM 46-55 4:00 AM 46-55 5:00 AM 46-55 6:00 AM 46-55 7:00 AM 46-55 8:00 AM 46-55 9:00 AM 41-50 10:00 AM 41-50 11:00 AM 41-50 12:00 PM 41-50 1:00 PM 41-50 2:00 PM 41-50 3:00 PM 41-50 4:00 PM 41-50 5:00 PM 41-50 6:00 PM 41-50 7:00 PM 41-50 8:00 PM 46-55 9:00 PM 41-50 10:00 PM 41-50 11:00 PM 46-55 **Day Total** 41-50 Percent 8.4% 0.1% 0.5% 0.8% 2.4% 10.0% 23.4% 30.6% 17.7% 4.8% 0.9% 0.2% 0.0% 0.0% ADT **AM Peak** 11:00 AM 11:00 AM 11:00 AM 11:00 AM 11:00 AM 9:00 AM 9:00 AM 7:00 AM 7:00 AM 6:00 AM 6:00 AM 12:00 AM 3:00 AM 10:00 AM 7:00 AM Volume PM Peak 4:00 PM 3:00 PM 4:00 PM 3:00 PM 3:00 PM 2:00 PM 2:00 PM 5:00 PM 6:00 PM 5:00 PM 11:00 PM 5:00 PM 8:00 PM 11:00 PM 4:00 PM Volume Comments:

Type of report.																		Page 3 01 2
LOCATION	: US97 5	500ft S c	of 10th S	t													C JOB #:	
SPECIFIC L				S of 10th	n St												RECTION:	
CITY/STATI																D.	ATE: Apr 2	
	1	16	21	26	31	36	41	46	51	56	61	66	71	76			Pace	Number
Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999		Total	Speed	in Pace
12:00 AM	7	0	0	0	0	6	16	41	38	10	7	1	1	0		127	46-55	78
1:00 AM	9	0	0	0	0	8	15	19	28	15	4	2	0	1		101	47-56	46
2:00 AM	15	0	0	0	1	7	12	15	26	18	11	4	4	0		113	51-60	43
3:00 AM	10	0	0	0	1	2	5	34	48	22	15	5	2	1		145	46-55	81
4:00 AM	12	0	0	0	0	4	27	66	75	67	24	2	0	0		277	51-60	142
5:00 AM	24	0	0	0	0	2	38	114	187	100	23	9	0	0		497	46-55	300
6:00 AM	66	0	0	0	1	20	75	267	370	213	57	14	4	2		1089	46-55	637
7:00 AM	87	0	0	1	1	22	158	454	508	180	28	6	0	1		1446	46-55	961
8:00 AM	103	0	0	3	11	66	258	474	314	89	14	0	0	0		1332	46-55	787
9:00 AM	122	2	6	11	29	85	356	430	289	45	8	2	0	0		1385	41-50	786
10:00 AM	121	0	0	0	7	93	364	512	227	63	2	0	0	0		1389	41-50	876
11:00 AM	123	0	0	2	58	145	434	436	178	42	4	0	0	0		1422	41-50	870
12:00 PM	121	1	2	30	44	219	464	400	202	33	5	0	0	0		1521	41-50	864
1:00 PM	158	0	0	5	70	268	420	437	173	34	6	0	0	0		1571	41-50	857
2:00 PM	155	4	2	25	81	279	458	430	161	30	3	. 1	0	0		1629	41-50	888
3:00 PM	225	3	26	41	102	323	508	441	151	23	3	0	0	0		1846	41-50	949
4:00 PM	206	0	7	123	131	300	411	396	192	47	6	1	0	0		1820	41-50	807
5:00 PM																		
6:00 PM																N		
7:00 PM																		
8:00 PM																		
9:00 PM																		
10:00 PM																		
11:00 PM																		
Day Total	1564	10	43	241	537	1849	4019	4966	3167	1031	220	47	11	5		17710	41-50	8985
Percent	8.8%	0.1%	0.2%	1.4%	3.0%	10.4%	22.7%	28.0%	17.9%	5.8%	1.2%	0.3%	0.1%	0.0%				
AM Peak	11:00 AM	9:00 AM	9:00 AM	9:00 AM	11:00 AM	11:00 AM	11:00 AM	10:00 AM	7:00 AM	6:00 AM	6:00 AM	6:00 AM	2:00 AM	6:00 AM		7:00 AM		
Volume	123	2	6	11	58	145	434	512	508	213	57	14	4	2		1446		
PM Peak	3:00 PM	2:00 PM	3:00 PM	4:00 PM	4:00 PM	3:00 PM	3:00 PM	3:00 PM	12:00 PM	4:00 PM	1:00 PM	2:00 PM				3:00 PM		
Volume	225	4	26	123	131	323	508	441	202	47	6	1				1846		
Comments:																		
Poport gonorat	ad an E/0	/2010 11.	EE ANA										COL	IDCE: O.	ality Carr	nto IIC (httr		ituanunta nat

71 1																		
LOCATION: SPECIFIC LOCATION:	CATIO	N: US9	97 500ft		n St										DA	-	C JOB #: 1 RECTION: 4 2018 - Ap	NB/SB
Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999		Total	Pace Speed	Number in Pace
Grand Total Percent	5127 8.2%	41 0.1%	168 0.3%	505 0.8%	1526 2.4%	6175 9.9%	14756 23.6%	18857 30.2%	11235 18.0%	3274 5.2%	687 1.1%	137 0.2%	35 0.1%	20 0.0%		62543	41-50	33613
Cumulative Percent	8.2%	8.3%	8.5%	9.3%	11.8%	21.7%	45.2%	75.4%	93.4%	98.6%	99.7%	99.9%	100.0%	100.0%				
ADT 22416													_	_			S5th Percent	
Comments:																		an 45 MPH de: 48 MPH

Report generated on 5/9/2018 11:55 AM



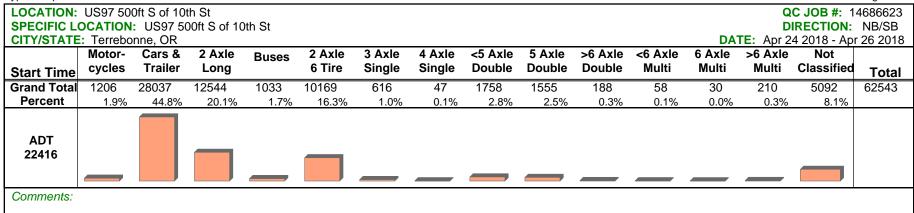
LOCATION: US97 500ft S of 10th St
SPECIFIC LOCATION: US97 500ft S of 10th St
CITY/STATE: Terrebonne, OR

QC JOB #: 14686623
DIRECTION: NB/SB
DATE: Apr 24 2018

CITY/STATE	Motor-	Cars &	2 Axle		2 Axle	3 Axle	4 Axle	<5 Axle	5 Axle	>6 Axle	<6 Axle	6 Axle	>6 Axle	Not	4 2010
Start Time		Trailer	Long	Buses	6 Tire	Single	Single	Double	Double	Double	Multi	Multi	>6 Axie Multi	Classified	Total
12:00 AM	7	34	16	2	8	1	0	1	10	0	3	0	2	6	90
1:00 AM	4	28	26	5	12	1	0	2	8	2	1	0	2	4	95
2:00 AM	3	38	18	5	11	3	0	3	9	2	2	1	8	8	111
3:00 AM	2	45	16	8	22	2	0	4	11	0	1	1	5	9	126
4:00 AM	6	131	55	5	35	6	0	10	9	2	1	1	2	12	275
5:00 AM	6	188	74	16	119	4	0	19	18	3	1	1	6	24	479
6:00 AM	12	440	233	11	237	14	1	14	21	3	2	0	7	68	1063
7:00 AM	16	664	285	24	262	9	2	51	25	12	0	0	6	109	1465
8:00 AM	20	513	310	29	261	17	1	48	43	5	0	0	0	81	1328
9:00 AM	21	572	256	24	227	20	1	51	43	6	0	0	6	121	1348
10:00 AM	11	586	254	29	222	11	0	56	29	3	0	0	4	108	1313
11:00 AM	29	681	312	19	216	12	1	47	36	7	1	0	1	107	1469
12:00 PM	26	656	270	23	218	17	3	44	28	1	0	1	2	136	1425
1:00 PM	28	669	278	32	254	11	1	51	41	4	0	0	1	101	1471
2:00 PM	37	639	301	29	236	24	1_1_	42	38	3	00	0	4	148	1502
3:00 PM	25	754	356	20	267	14	1	49	32	3	0	0	6	148	1675
4:00 PM	36	851	353	21	273	15	0	42	34	2	0	1	4	179	1811
5:00 PM	27	813	336	25	265	13	1	29	20	2	0	0	6	115	1652
6:00 PM	17	558	208	17	204	7	1	20	32	4	COAL	2	4	76	1151
7:00 PM	26	438	158	7	126	6	1	11	35	2	3	2	3	54	872
8:00 PM	11	345	137	10	83	1	0	16	24	2	1	0	0	24	654
9:00 PM	9	241	81	2	43	1	1	13	34	3	1	0	2	11	442
10:00 PM	9	128	49	4	31	4	0	6	17	1	1	0	0	16	266
11:00 PM	9	84	23	7	22	5	0	0	12	1	0	1	1	6	171
Day Total	397	10096	4405	374	3654	218	16	629	609	73	19	11	82	1671	22254
Percent	1.8%	45.4%	19.8%	1.7%	16.4%	1.0%	0.1%	2.8%	2.7%	0.3%	0.1%	0.0%	0.4%	7.5%	
ADT 22254															
AM Peak		11:00 AM		8:00 AM	7:00 AM	9:00 AM	7:00 AM	10:00 AM	8:00 AM	7:00 AM	12:00 AM	2:00 AM	2:00 AM	9:00 AM	11:00 AM
Volume	29	681	312	29	262	20	2	56	43	12	3	1	8	121	1469
PM Peak	2:00 PM	4:00 PM	3:00 PM	1:00 PM	4:00 PM	2:00 PM	12:00 PM	1:00 PM	1:00 PM	1:00 PM	7:00 PM	6:00 PM	3:00 PM	4:00 PM	4:00 PM
Volume	37	851	356	32	273	24	3	51	41	4	3	2	6	179	1811
Comments:															

LOCATION: US97 500ft S of 10th St QC JOB #: 14686623 SPECIFIC LOCATION: US97 500ft S of 10th St **DIRECTION: NB/SB** CITY/STATE: Terrebonne. OR **DATE:** Apr 25 2018 Motor-Cars & 2 Axle 2 Axle 3 Axle 4 Axle <5 Axle 5 Axle >6 Axle <6 Axle 6 Axle >6 Axle Not **Buses** Trailer Long Single **Double Double** Multi Classified cycles 6 Tire Single Double Multi Multi **Start Time** Total 12:00 AM 1:00 AM 2:00 AM 3:00 AM 4:00 AM 5:00 AM 6:00 AM 7:00 AM 8:00 AM 9:00 AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM 6:00 PM 7:00 PM 8:00 PM 9:00 PM 10:00 PM 11:00 PM **Day Total** Percent 2.1% 45.6% 19.6% 1.6% 15.8% 1.0% 0.1% 2.7% 2.6% 0.3% 0.1% 0.0% 0.3% 8.2% **ADT** AM Peak 9:00 AM 7:00 AM 2:00 AM 7:00 AM 10:00 AM 8:00 AM 8:00 AM 11:00 AM 9:00 AM 9:00 AM 6:00 AM 5:00 AM 6:00 AM 9:00 AM 7:00 AM Volume PM Peak 2:00 PM 4:00 PM 3:00 PM 1:00 PM 4:00 PM 2:00 PM 2:00 PM 12:00 PM 12:00 PM 2:00 PM 7:00 PM 3:00 PM 12:00 PM 4:00 PM 4:00 PM Volume Comments:

LOCATION: US97 500ft S of 10th St QC JOB #: 14686623 SPECIFIC LOCATION: US97 500ft S of 10th St **DIRECTION: NB/SB** CITY/STATE: Terrebonne, OR **DATE:** Apr 26 2018 >6 Axle Motor-Cars & 2 Axle 2 Axle 3 Axle 4 Axle <5 Axle 5 Axle >6 Axle <6 Axle 6 Axle Not **Buses** Trailer 6 Tire Single Double **Double Double** Multi Multi Classified cycles Long Single Multi **Start Time** Total 12:00 AM 1:00 AM 2:00 AM 3:00 AM 4:00 AM 5:00 AM 6:00 AM 7:00 AM 8:00 AM 9:00 AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM 6:00 PM 7:00 PM 8:00 PM 9:00 PM 10:00 PM 11:00 PM **Day Total** 0.3% Percent 1.9% 43.2% 20.9% 1.7% 16.7% 1.0% 0.1% 2.9% 2.0% 0.1% 0.1% 0.3% 8.8% AM Peak 11:00 AM 11:00 AM 7:00 AM 9:00 AM 9:00 AM 12:00 AM 9:00 AM 10:00 AM 6:00 AM 8:00 AM 10:00 AM 11:00 AM 2:00 AM 9:00 AM 7:00 AM Volume PM Peak 3:00 PM 4:00 PM 3:00 PM 1:00 PM 4:00 PM 3:00 PM 12:00 PM 3:00 PM 2:00 PM 3:00 PM 2:00 PM 4:00 PM 3:00 PM 3:00 PM Volume Comments:



Report generated on 5/9/2018 11:55 AM



LOCATION: US97 500ft S of 10th St

	Mon	Tue	Wed	Thu	Fri	Average Weekday	Sat	Sun	Average Week	Average Week Profile
Start Time		24-Apr-18	25-Apr-18	26-Apr-18		Hourly Traffic			Hourly Traffic	
12:00 AM		90	140	127		119			119	
1:00 AM		95	88	101		95			95	
2:00 AM		111	116	113		113			113	
3:00 AM		126	139	145		137			137	
4:00 AM		275	267	277		273			273	
5:00 AM		479	489	497		488			488	
6:00 AM		1063	1098	1089		1083			1083	
7:00 AM		1465	1435	1446		1449			1449	
8:00 AM		1328	1370	1332		1343			1343	
9:00 AM		1348	1424	1385		1386			1386	
10:00 AM		1313	1342	1389		1348			1348	
11:00 AM		1469	1261	1422		1384			1384	
12:00 PM		1425	1433	1521		1460			1460	
1:00 PM		1471	1469	1571		1504			1504	
2:00 PM		1502	1639	1629		1590		(	1590	
3:00 PM		1675	1664	1846		1728	- /	00	1728	
4:00 PM		1811	1815	1820		1815		5 8 75 8 A	1815	
5:00 PM		1652	1682			1667		ZATA	1667	
6:00 PM		1151	1215			1183			1183	
7:00 PM		872	876			874			874	
8:00 PM		654	708			681			681	
9:00 PM		442	454			448			448	
10:00 PM		266	276			271			271	
11:00 PM		171	179			175			175	
Day Total		22254	22579	17710		22614			22614	
% Weekday										
Average		98.4%	99.8%	78.3%						
% Week										
Average		98.4%	99.8%	78.3%		100.0%				
AM Peak		11:00 AM	7:00 AM	7:00 AM		7:00 AM			7:00 AM	
Volume		1469	1435	1446		1449			1449	
PM Peak		4:00 PM	4:00 PM	3:00 PM		4:00 PM			4:00 PM	
Volume		1811	1815	1846		1815			1815	

Appendix B – Existing PM Operational Analysis Worksheets

Intersection						
Int Delay, s/veh	0.5					
	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	₽			र्स	¥	
Traffic Vol, veh/h	173	16	5	376	17	5
Future Vol, veh/h	173	16	5	376	17	5
Conflicting Peds, #/hr	0	0	0	0	0	0
	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	_	-	_	-	0	-
Veh in Median Storage,	# 0	_	_	0	0	_
Grade, %	0	_	_	0	0	_
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	7	12	40	6	0	0
Mymt Flow	192	18	6	418	19	6
MALL LIOM	192	10	U	410	19	U
Major/Minor Ma	ajor1	N	Major2	ı	Minor1	
Conflicting Flow All	0	0	210	0	631	201
Stage 1	_	_		_	201	
Stage 2	_	_	_	_	430	_
Critical Hdwy	_	_	4.5	_	6.4	6.2
Critical Hdwy Stg 1		_		_	5.4	0.2
	-	_	-		5.4	
Critical Hdwy Stg 2	-	-	-	-		-
Follow-up Hdwy	-	-	2.56	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1164	-	448	845
Stage 1	-	-	-	-	838	-
Stage 2	-	-	-	-	660	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1164	-	445	845
Mov Cap-2 Maneuver	-	-	-	-	445	-
Stage 1	-	-	-	-	832	-
Stage 2	_	_	-	_	660	_
J. 1. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.					300	
Approach	EB		WB		NB	
HCM Control Delay, s	EB 0		WB 0.1		12.6	
HCM Control Delay, s					12.6	
HCM Control Delay, s HCM LOS	0	JIDI =4	0.1	EDD	12.6 B	WPT
HCM Control Delay, s HCM LOS Minor Lane/Major Mvmt	0	NBLn1	0.1 EBT	EBR	12.6 B WBL	WBT
HCM Control Delay, s HCM LOS  Minor Lane/Major Mvmt Capacity (veh/h)	0	499	0.1 EBT	-	12.6 B WBL 1164	-
HCM Control Delay, s HCM LOS  Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio	0	499 0.049	0.1 EBT	-	12.6 B WBL 1164 0.005	- -
HCM Control Delay, s HCM LOS  Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio HCM Control Delay (s)	0	499	0.1 EBT	-	12.6 B WBL 1164 0.005 8.1	- - 0
HCM Control Delay, s HCM LOS  Minor Lane/Major Mvmt Capacity (veh/h) HCM Lane V/C Ratio	0	499 0.049	0.1 EBT -	- -	12.6 B WBL 1164 0.005	- -

Intersection													
Int Delay, s/veh	13.1												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	ሻ		7	11.00	,,,,,	7	ኘ	1	11511	ኘ	<u> </u>	T T	
Traffic Vol, veh/h	23	0	209	0	0	18	428	680	4	23	626	64	
Future Vol, veh/h	23	0	209	0	0	18	428	680	4	23	626	64	
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	-	-	Yield	
Storage Length	400	-	0	-	-	0	320	-	-	240	-	265	
Veh in Median Storage	e,# -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96	
Heavy Vehicles, %	0	0	6	0	0	27	5	12	33	26	17	6	
Mvmt Flow	24	0	218	0	0	19	446	708	4	24	652	67	
Major/Minor	Minor2		I	Minor1			Major1		ı	Major2			
Conflicting Flow All	2312	-	652	-	-	710	652	0	0	712	0	0	
Stage 1	700	-	-	-	-	-	-	-	-	-	-	-	
Stage 2	1612	-	-	-	-	-	-	-	-	-	-	-	
Critical Hdwy	7.1	-	6.26	-	-	6.47	4.15	-	-	4.36	-	-	
Critical Hdwy Stg 1	6.1	-	-	-	-	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.1	-	-	-	-	-	-	-	-	-	-	-	
Follow-up Hdwy	3.5	-	3.354	-	-	3.543	2.245	-	-	2.434	-	-	
Pot Cap-1 Maneuver	27	0	461	0	0	394	920	-	-	787	-	-	
Stage 1	433	0	-	0	0	-	-	-	-	-	-	-	
Stage 2	133	0	-	0	0	-	-	-	-	-	-	-	
Platoon blocked, %								-	-		-	-	
Mov Cap-1 Maneuver	~ 16	-	461	-	-	394	920	-	-	787	-	-	
Mov Cap-2 Maneuver	~ 16	-	-	-	-	-	-	-	-	-	-	-	
Stage 1	223	-	-	-	-	-	-	-	-	-	-	-	
Stage 2	65	-	-	-	-	-	-	-	_	-	-	-	
Approach	EB			WB			NB			SB			
HCM Control Delay, s	91.7			14.6			4.8			0.3			
HCM LOS	F			В									
Minor Lane/Major Mvn	nt	NBL	NBT	NBR E	BLn1	EBLn2V	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		920	-	-	16	461	394	787	-	-			
HCM Lane V/C Ratio		0.485	-	-	1.497		0.048	0.03	-	-			
HCM Control Delay (s)		12.5	-		747.1	19.6	14.6	9.7	-	-			
HCM Lane LOS		В	-	-	F	С	В	Α	-	-			
HCM 95th %tile Q(veh	)	2.7	-	-	3.5	2.5	0.1	0.1	-	-			
Notes													
	nacity	¢. Da	alay aya	oods 30	ıΩe	T. Com	outation	Not Do	fined	*. All »	naior v	olumo in	nlatoon
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined								. All f	najoi v	Julie III	n platoon		

Intersection												
Int Delay, s/veh	10.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4		ሻ	<b>1</b>		ሻ	<b>1</b>	
Traffic Vol, veh/h	4	5	51	19	0	39	33	1065	38	17	826	13
Future Vol, veh/h	4	5	51	19	0	39	33	1065	38	17	826	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	<u>-</u>	-	None	-	-	None	_	-	None	-	-	None
Storage Length	-	-	-	-	-	-	200	-	-	200	-	-
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, %	100	0	7	12	0	12	4	10	10	0	15	9
Mvmt Flow	4	5	55	20	0	42	35	1145	41	18	888	14
Major/Minor N	/linor2			Minor1			Major1		N	//ajor2		
Conflicting Flow All	2188	2187	895	2197	2174	1166	902	0	0	1186	0	0
Stage 1	931	931	-	1236	1236	-	-	-	-	-	-	-
Stage 2	1257	1256	-	961	938	-	-	-	-	-	-	-
Critical Hdwy	8.1	6.5	6.27	7.22	6.5	6.32	4.14	-	-	4.1	-	-
Critical Hdwy Stg 1	7.1	5.5	-	6.22	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	7.1	5.5	-	6.22	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	4.4	4	3.363	3.608	4	3.408	2.236	-	-	2.2	-	-
Pot Cap-1 Maneuver	17	46	332	30	47	225	745	-	-	596	-	-
Stage 1	218	348	-	206	250	-	-	-	-	-	-	-
Stage 2	134	245	-	295	346	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	13	43	332	21	43	225	745	-	-	596	-	-
Mov Cap-2 Maneuver	13	43	-	21	43	-	-	-	-	-	-	-
Stage 1	208	338	-	196	238	-	-	-	-	-	-	-
Stage 2	104	233	-	235	336	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	84.4			295.9			0.3			0.2		
HCM LOS	F			F			3.0			J.L		
	•			•								
Minor Lane/Major Mvm	t	NBL	NBT	NBR I	EBLn1\	VBLn1	SBL	SBT	SBR			
Capacity (veh/h)		745	-	-	104	54	596		_			
HCM Lane V/C Ratio		0.048	_	_		1.155		_	_			
HCM Control Delay (s)		10.1	-	-		295.9	11.2	_	-			
HCM Lane LOS		В	_	_	F	F	В	-	_			
HCM 95th %tile Q(veh)		0.1	-	-	3	5.4	0.1	-	-			
		<b>V.</b> 1				V. 1	V. 1					

Intersection													
Int Delay, s/veh	31.3												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	LDL	4	LDIX	VVDL	4	VVDIX	NDL 1	<b>14</b>	NUIN	) T	<b>1</b> ∌	ODIN	
Traffic Vol, veh/h	1	1	30	35	1	42	21	1097	58	44	851	5	
Future Vol, veh/h	1	1	30	35	1	42	21	1097	58	44	851	5	
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	-	-	-	-	-	-	200	-	_	200	-	-	
Veh in Median Storage	e, # -	0	-	-	0	-	-	0	-	-	0	-	
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-	
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92	
Heavy Vehicles, %	0	0	0	21	0	0	6	11	6	17	15	0	
Mvmt Flow	1	1	33	38	1	46	23	1192	63	48	925	5	
Major/Minor	Minor2		1	Minor1		1	Major1		ı	Major2			
Conflicting Flow All	2317	2325	928	2311	2296	1224	930	0	0	1255	0	0	
Stage 1	1024	1024	-	1270	1270	-	-	-	-	-	-	-	
Stage 2	1293	1301	-	1041	1026	-	-	-	-	-	-	-	
Critical Hdwy	7.1	6.5	6.2	7.31	6.5	6.2	4.16	-	-	4.27	-	-	
Critical Hdwy Stg 1	6.1	5.5	-	6.31	5.5	-	-	-	-	-	-	-	
Critical Hdwy Stg 2	6.1	5.5	-	6.31	5.5	-	-	-	-	-	-	-	
Follow-up Hdwy	3.5	4	3.3	3.689	4	3.3	2.254	-	-	2.353	-	-	
Pot Cap-1 Maneuver	27	38	328	~ 23	39	220	719	-	-	506	-	-	
Stage 1	286	315	-	188	241	-	-	-	-	-	-	-	
Stage 2	202	233	-	256	315	-	-	-	-	-	-	-	
Platoon blocked, %								-	-		-	-	
Mov Cap-1 Maneuver	19	33	328	~ 18	34	220	719	-	-	506	-	-	
Mov Cap-2 Maneuver	19	33	-	~ 18	34	-	-	-	-	-	-	-	
Stage 1	277	285	-	182	233	-	-	-	-	-	-	-	
Stage 2	154	226	-	208	285	-	-	-	-	-	-	-	
Approach	EB			WB			NB			SB			
HCM Control Delay, s	29.2		\$	855.9			0.2			0.6			
HCM LOS	D			F									
Minor Lane/Major Mvm	nt	NBL	NBT	NBR E	EBLn1V	VBLn1	SBL	SBT	SBR				
Capacity (veh/h)		719	-	-	183	36	506	-	-				
HCM Lane V/C Ratio		0.032	-	-		2.355	0.095	-	-				
HCM Control Delay (s)		10.2	-	-	29.2\$	855.9	12.9	-	-				
HCM Lane LOS		В	-	-	D	F	В	-	-				
HCM 95th %tile Q(veh)	)	0.1	-	-	0.7	9.5	0.3	-	-				
Notes													
~: Volume exceeds cap	pacity	\$: De	lay exc	eeds 30	00s -	+: Com	outation	Not De	fined	*: All r	major vo	olume in	n platoon

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4			4			4			4	
Traffic Vol, veh/h	27	73	6	34	61	42	12	71	51	46	30	11
Future Vol, veh/h	27	73	6	34	61	42	12	71	51	46	30	11
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	e, # -	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, %	9	12	20	11	10	14	0	5	14	11	20	22
Mvmt Flow	29	78	6	37	66	45	13	76	55	49	32	12
Major/Minor I	Major1			Major2		<u> </u>	Minor1			Minor2		
Conflicting Flow All	111	0	0	84	0	0	324	324	81	368	305	89
Stage 1	-	-	-	-	-	-	139	139	-	163	163	-
Stage 2	-	-	-	-	-	-	185	185	-	205	142	-
Critical Hdwy	4.19	-	-	4.21	-	-	7.1	6.55	6.34	7.21	6.7	6.42
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.55	-	6.21	5.7	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.55	-	6.21	5.7	-
Follow-up Hdwy	2.281	-	-	2.299	-	-	3.5	4.045	3.426	3.599	4.18	3.498
Pot Cap-1 Maneuver	1436	-	-	1458	-	-	633	589	947	572	580	917
Stage 1	-	-	-	-	-	-	869	776	-	818	730	-
Stage 2	_	-	-	-	-	-	821	741	-	777	746	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1436	-	-	1458	-	-	575	561	947	466	553	917
Mov Cap-2 Maneuver	-	-	-	-	-	-	575	561	-	466	553	-
Stage 1	-	-	-	-	-	-	851	760	-	801	710	-
Stage 2	-	-	-	-	-	-	753	721	-	645	730	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.9			1.9			11.9			13.3		
HCM LOS							В			В		
Minor Lane/Major Mvm	nt I	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)		666	1436		-	1458			527			
HCM Lane V/C Ratio		0.216	0.02	-	-	0.025	-	-	0.178			
HCM Control Delay (s)		11.9	7.6	0	-	7.5	0	-	13.3			
HCM Lane LOS		В	Α	A	-	Α	A	-	В			
HCM 95th %tile Q(veh)	)	0.8	0.1	-	-	0.1	-	-	0.6			

Intersection						
Int Delay, s/veh	0.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	M		1>		ሻ	<b>†</b>
Traffic Vol, veh/h	35	8	1153	93	1	910
Future Vol, veh/h	35	8	1153	93	1	910
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	-	-	-	200	-
Veh in Median Storage	e, # 0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	3	14	9	6	0	13
Mvmt Flow	38	9	1240	100	1	978
William Com			1210	100	•	0.0
Major/Minor	Minor1	N	Major1	ı	Major2	
Conflicting Flow All	2270	1290	0	0	1340	0
Stage 1	1290	-	-	-	-	-
Stage 2	980	-	-	-	-	-
Critical Hdwy	6.43	6.34	-	-	4.1	-
Critical Hdwy Stg 1	5.43	-	-	-	_	-
Critical Hdwy Stg 2	5.43	_	_	_	_	_
Follow-up Hdwy	3.527	3.426	_	_	2.2	_
Pot Cap-1 Maneuver	44	188	_	_	521	_
Stage 1	257	-	_	_	-	_
Stage 2	362	_			_	_
Platoon blocked, %	302		_	_	_	_
	44	188			521	
Mov Cap-1 Maneuver			-	-		-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	256	-	-	-	-	-
Stage 2	362	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	36.1		0		0	
HCM LOS	E		U		U	
TIOW LOG	<u> </u>					
Minor Lane/Major Mvn	nt	NBT	NBRV	VBLn1	SBL	SBT
Capacity (veh/h)		-	-	161	521	-
HCM Lane V/C Ratio		-	-	0.287		_
HCM Control Delay (s	)	-	-	36.1	11.9	-
HCM Lane LOS		-	-	Е	В	-
HCM 95th %tile Q(veh	)	_	_	1.1	0	_
TOW JOHN JUNE Q(VEI	7			1.1	U	

Appendix C – Crash Data

146622 146777 147315 147315 147706 148422 148877 149076 149086 149086 149378 149388 149886 149815 150333 150615 152042 152085 152085	705 150 708 196 196 228 715 769 809 993 782 805	355 March 563 April 752 June 763 June 814 June 814 June 957 July 1103 August 1276 September 1397 October 1451 October 1391 October 1564 November	6 26 16 18 28 27 21 28 21	2012 2012 The Dalles - California 2012 2012 The Dalles - California	Southeast Intersection Quadrant Southwest Intersection Quadrant Inbound within 50 feet Inbound within 50 feet Inbound within 50 feet Southwest Intersection Quadrant	Entering at angle ГÇô all others Fixed object From same direction ГÇô one stopped From same direction ГÇô one stopped	Angle Fixed-Object or Other-Object Rear-End	Non-fatal injury crash Non-fatal injury crash Non-fatal injury crash	Clear Clear	Dry Dry Dry	Daylight Daylight Daylight	Stop sign Unknown or not defined	No No	0 0 0 1	2 0 2 0 0 1
147315 147377 147415 147706 148422 148871 149086 149086 149378 149886 149915 150336 150615 152042 152085 152085	150 708 196 1063 228 715 769 809 993 782 805	752 June 763 June 814 June 957 July 1103 August 1276 September 1397 October 1451 October 1391 October 1564 November	16 18 28 27 21 28 21	2012 2012 The Dalles - California	Inbound within 50 feet Inbound within 50 feet Inbound within 50 feet	From same direction ΓÇô one stopped	Rear-End								
14737C 14741E 14770C 148422 148873 14907C 14908C 14908C 14937E 14988C 14988C 14981C 152041 152042 152085 152085 152085 152291	708 196 163 2228 715 769 809 993 782 805 960	763 June 814 June 957 July 1103 August 1276 September 1397 October 1451 October 1391 October 1564 November	18 28 27 21 28 21	2012 The Dalles - California 2012 The Dalles - California 2012 The Dalles - California 2012 The Dalles - California	Inbound within 50 feet Inbound within 50 feet			Non-fatal injury crash	Class	Drv	Daylight				
147415 147705 148422 148871 149076 149086 149378 149386 149896 149915 150330 150615 152041 152043 152085 152085 152085	196 063 228 715 769 309 993 782 305 960	814 June 957 July 1103 August 1276 September 1397 October 1451 October 1391 October 1564 November	28 27 21 28 21	2012 The Dalles - California 2012 The Dalles - California 2012 The Dalles - California	Inbound within 50 feet	From same direction ΓÇô one stopped			Clear			Unknown or not defined	No	0 0	1 0 1
147706 148422 148871 149076 149086 149376 149886 149891 150330 150615 152041 152042 152085 152085 152085	063 228 715 769 309 993 782 305 960	957 July 1103 August 1276 September 1397 October 1451 October 1391 October 1564 November	27 21 28 21	2012 The Dalles - California 2012 The Dalles - California		5	Rear-End	Property damage only crash (PDO)	Clear	Dry	Daylight	Unknown or not defined	No	0 0	0 0 0
148422 148877 149076 149080 149099 149378 149886 149816 150333 150615 152041 152042 152085 152085	228 715 769 309 993 782 305 960	1103 August 1276 September 1397 October 1451 October 1391 October 1564 November	21 28 21	2012 The Dalles - California		From same direction ΓÇô one stopped	Rear-End	Property damage only crash (PDO)	Clear Clear	Dry	Daylight	Stop sign Unknown or not defined	No No	0 0	0 0 0
148871 149076 149086 149378 149378 149896 149919 150330 150615 152041 152085 152085 152085	715 769 809 993 782 805 960	1276 September 1397 October 1451 October 1391 October 1564 November	28 21		Southwest Intersection Quadrant	From same direction ΓÇô one turn, one straight From same direction ΓCô one stopped	Turning Movement Rear-End	Property damage only crash (PDO) Non-fatal injury crash	Clear	Dry Dry	Daylight Daylight	Unknown or not defined	NO	0 0	0 0 0
149076 149086 149095 149376 149886 149915 150330 150615 152041 152085 152085 152085 152085	769 309 993 782 305 960	1397 October 1451 October 1391 October 1564 November	21		Inbound within 50 feet	From same direction IÇô one stopped	Rear-End	Property damage only crash (PDO)	Clear	Dry	Daylight	Stop sign	No	0 0	0 0 0
149080 149080 149378 149880 149919 150330 150615 152041 152042 152085 152089 152291	309 993 782 305 960 196	1451 October 1391 October 1564 November		2012 The Dalles - California	Southwest Intersection Quadrant	Entering at angle rÇô all others	Turning Movement	Property damage only crash (PDO)	Sleet	Snow	Daylight	Stop sign	No	0 0	0 0 0
149378 149880 149890 149919 150330 150619 152042 152042 152089 152292	782 305 960 196	1564 November		2012 The Dalles - California	Southwest Intersection Quadrant	Animal	Miscellaneous	Property damage only crash (PDO)	Clear	Dry	Darkness FÇô no street lights	Unknown or not defined		0 0	0 0 0
149880 149912 150330 150615 152043 152085 152085 152291	305 960 196		21	2012	Southwest Intersection Quadrant	Entering at angle FÇô all others	Angle	Property damage only crash (PDO)	Clear	Dry	Daylight	No control (as stated on Police Report)	No	0 0	0 0 0
149896 149919 150330 150619 152041 152043 152089 152291	960 196		20	2012 The Dalles - California	Southeast Intersection Quadrant	From opposite direction 「Çô both going straight	Sideswipe-meeting	Non-fatal injury crash	Clear	Dry	Daylight	Unknown or not defined		0 0	0 1 1
149919 150330 150615 152041 152085 152085 152291	196	1652 December	6	2012	Midblock location	From opposite direction ΓÇô one left turn, one straight	Turning Movement	Non-fatal injury crash	Cloudy	Dry	Daylight	No control (as stated on Police Report)		0 0	0 1 1
150330 150615 152041 152043 152085 152089 152291		1725 December	17	2012 The Dalles - California	Inbound within 50 feet	From same direction 「Çô one stopped	Rear-End	Property damage only crash (PDO)	Cloudy	Ice	Daylight	Unknown or not defined	No	0 0	0 0 0
150615 152041 152043 152085 152089 152291		1816 December	25	2012	NW Intersection Quadrant	Fixed object	Fixed-Object or Other-Object	Property damage only crash (PDO)	Clear	Ice	Daylight	No control (as stated on Police Report)	No	0 0	0 0 0
152041 152043 152085 152089 152291 152292		6 January	1	2013 The Dalles - California	NW Intersection Quadrant	From opposite direction ΓÇô one left turn, one straight	Turning Movement	Non-fatal injury crash	Cloudy	Wet	Daylight	Unknown or not defined	No	0 0	0 1 1
152043 152085 152089 152291 152292		204 February 614 May	11 19	2013 The Dalles - California 2013	Southwest Intersection Quadrant Midblock location	Entering at angle ΓÇô all others	Angle	Property damage only crash (PDO)	Cloudy	Dry	Darkness FÇô no street lights	Stop sign	No No	0 0	0 0 0
152085 152089 152291 152292		593 May	14	2013	NW Intersection Quadrant	Fixed object Fixed object	Fixed-Object or Other-Object Fixed-Object or Other-Object	Non-fatal injury crash Property damage only crash (PDO)	Clear Clear	Dry Dry	Daylight Daylight	Unknown or not defined Unknown or not defined	NO	0 0	0 0 0
152089 152291 152292		576 May	8	2013 The Dalles - California	Southwest Intersection Quadrant	Entering at angle FÇô all others	Turning Movement	Property damage only crash (PDO)	Clear	Dry	Daylight	Stop sign		0 0	0 0 0
152292		666 May	30	2013 The Dalles - California	Southeast Intersection Quadrant	From opposite direction 「Çô both going straight	Sideswipe-meeting	Property damage only crash (PDO)	Clear	Dry	Daylight	Unknown or not defined	No	0 0	0 0 0
	918	679 June	1	2013 The Dalles - California	Southwest Intersection Quadrant	Animal	Miscellaneous	Property damage only crash (PDO)	Clear	Dry	Darkness ΓÇô no street lights	Unknown or not defined		0 0	0 0 0
	920	678 June	1	2013 The Dalles - California	Southwest Intersection Quadrant	Animal	Miscellaneous	Property damage only crash (PDO)	Clear	Dry	Darkness ΓÇô no street lights	Unknown or not defined		0 0	0 0 0
153569		1332 September	27	2013 The Dalles - California	Inbound within 50 feet	From same direction 「Çô one stopped	Rear-End	Property damage only crash (PDO)	Cloudy	Dry	Daylight	Traffic signals	No	0 0	0 0 0
153608		1275 June	15	2013	Inbound within 50 feet	Fixed object	Fixed-Object or Other-Object	Non-fatal injury crash	Clear	Dry	Daylight	No control (as stated on Police Report)	No	0 0	0 1 1
153609		1225 September	20	2013	NW Intersection Quadrant	Fixed object	Fixed-Object or Other-Object	Property damage only crash (PDO)	Clear	Dry	Daylight	No control (as stated on Police Report)		0 0	0 0 0
156000		456 March	20	2014 The Dalles - California 2014	Southwest Intersection Quadrant	From same direction ΓÇô both going straight	Rear-End  Fixed Object or Other Object	Property damage only crash (PDO)	Clear	Dry	Daylight	Unknown or not defined	No	0 0	0 0 0
156271 156293		531 April 584 April	21	2014	Outbound within 50 feet Inbound within 50 feet	Fixed object From opposite direction ΓÇô one stopped	Fixed-Object or Other-Object Backing	Property damage only crash (PDO) Property damage only crash (PDO)	Clear Clear	Dry Dry	Daylight Dusk (Twilight)	No control (as stated on Police Report) Unknown or not defined	No No	0 0	0 0 0
156638		732 May	22	2014 The Dalles - California	Outbound within 50 feet	Fixed object	Fixed-Object or Other-Object	Property damage only crash (PDO)	Clear	Dry	Daylight	Unknown or not defined	No	0 0	0 0 0
156811		80101 May	25	2014	Inbound within 50 feet	From same direction ΓÇô one stopped	Sideswipe-overtaking	Property damage only crash (PDO)	Clear	Dry	Daylight	Stop sign		0 0	0 0 0
157910	101	80136 July	18	2014 The Dalles - California	Inbound within 50 feet	From same direction ΓÇô one stopped	Rear-End	Non-fatal injury crash	Clear	Dry	Daylight	Stop sign		0 0	0 1 1
158020	200	1076 July	21	2014 The Dalles - California	Outbound within 50 feet	From opposite direction ΓÇô both going straight	Sideswipe-meeting	Property damage only crash (PDO)	Clear	Dry	Daylight	No control (as stated on Police Report)	No	0 0	0 0 0
158546		1185 August	10	2014 The Dalles - California	Inbound within 50 feet	From same direction ΓÇô one stopped	Rear-End	Non-fatal injury crash	Clear	Dry	Daylight	Special pedestrian signal	No	0 0	1 1 2
158547		1187 August	11	2014 The Dalles - California	Southwest Intersection Quadrant	From same direction ΓÇô one stopped	Rear-End	Non-fatal injury crash	Clear	Dry	Daylight	Unknown or not defined	No	0 0	0 1 1
158578		1248 August	21	2014	Southwest Intersection Quadrant	Entering at angle ΓÇô all others	Backing	Property damage only crash (PDO)	Clear	Dry	Daylight	No control (as stated on Police Report)	No	0 0	0 0 0
158639		1158 August	6 17	2014	Outbound within 50 feet	Fixed object	Fixed-Object or Other-Object	Property damage only crash (PDO)	Clear	Dry	Daylight	Unknown or not defined	No No	0 0	0 0 0
159702 159719		1562 October 1483 October	1/	2014 The Dalles - California 2014 The Dalles - California	Southwest Intersection Quadrant Southwest Intersection Quadrant	From same direction ΓÇô both going straight From same direction ΓÇô one stopped	Rear-End Rear-End	Property damage only crash (PDO) Property damage only crash (PDO)	Clear Clear	Dry Dry	Daylight Daylight	Unknown or not defined No control (as stated on Police Report)	No No	0 0	0 0 0
159777		1499 October	7	2014 The Dalles - California	Southwest Intersection Quadrant	From opposite direction (Çô one left turn, one straight	Turning Movement	Property damage only crash (PDO)	Clear	Dry	Daylight	Traffic signals	Yes	0 0	0 0 0
159883		1792 November	17	2014 The Dalles - California	Midblock location	From opposite direction IÇô both going straight	Sideswipe-meeting	Non-fatal injury crash	Clear	Ice	Daylight	Unknown or not defined	No	0 0	1 2 3
159935	356	1898 December	4	2014 The Dalles - California	Inbound within 50 feet	Entering at angle FÇô all others	Turning Movement	Property damage only crash (PDO)	Cloudy	Wet	Dusk (Twilight)	Unknown or not defined	No	0 0	0 0 0
159951	518	1935 December	10	2014	Outbound within 50 feet	Pedestrian	Pedestrian	Non-fatal injury crash	Cloudy	Dry	Darkness ΓÇô no street lights	Stop sign	No	0 0	1 0 1
159961		1962 December	15	2014 The Dalles - California	NW Intersection Quadrant	Entering at angle ΓÇô all others	Angle	Property damage only crash (PDO)	Cloudy	Ice	Daylight	Stop sign	Yes	0 0	0 0 0
162521		1463 October	4	2015	NE Intersection Quadrant	From opposite direction ΓÇô one left turn, one straight	Turning Movement	Non-fatal injury crash	Clear	Dry	Daylight	Stop sign	No	0 0	0 1 1
162569		1567 October	21	2015	Inbound within 50 feet	From same direction FÇô one stopped	Rear-End	Non-fatal injury crash	Clear	Dry	Daylight	Stop sign	No	0 0	0 1 1
163189		190 February	13	2015	Inbound within 50 feet	Fixed object	Fixed-Object or Other-Object	Property damage only crash (PDO)	Unknown	Unknown	Daylight	Unknown or not defined	•••	0 0	0 0 0
163679 164338		409 April 1932 December	3	2015 2015	Inbound within 50 feet	Overturned Fixed object	Non-collision Fixed-Object or Other-Object	Property damage only crash (PDO)	Cloudy Unknown	Dry Ice	Daylight Daylight	Unknown or not defined	No	0 0	0 0 0
161983		999 July	12	2015	Unknown Southwest Intersection Quadrant	Animal	Miscellaneous	Property damage only crash (PDO) Non-fatal injury crash	Clear	Dry	Daylight	Unknown or not defined  No control (as stated on Police Report)	No	0 0	0 0 0
160738		14 January	2	2015 The Dalles - California	NW Intersection Quadrant	Entering at angle FCô one vehicle stopped	Turning Movement	Non-fatal injury crash	Clear	Ice	Daylight	Stop sign	No	0 0	2 0 2
161364	541	532 April	25	2015 The Dalles - California	NW Intersection Quadrant	From opposite direction 「Çô one left turn, one straight	Turning Movement	Non-fatal injury crash	Cloudy	Dry	Darkness ΓÇô no street lights	Stop sign	No	0 0	2 0 2
162577	771	1615 October	29	2015 The Dalles - California	Southeast Intersection Quadrant	Overturned	Non-collision	Non-fatal injury crash	Clear	Dry	Darkness ΓÇô no street lights	Unknown or not defined	No	0 0	1 0 1
162625		1712 November	11	2015 The Dalles - California	Southeast Intersection Quadrant	From same direction ΓÇô both going straight	Rear-End	Non-fatal injury crash	Clear	Dry	Darkness ΓÇô no street lights	Unknown or not defined	No	0 0	0 2 2
163675		414 April	2	2015 The Dalles - California	Southwest Intersection Quadrant	Entering at angle ΓÇô all others	Backing	Property damage only crash (PDO)	Clear	Dry	Daylight	Unknown or not defined		0 0	0 0 0
164110		1256 August	31	2015 The Dalles - California	Southeast Intersection Quadrant	From same direction 「Çô one turn, one straight	Turning Movement	Property damage only crash (PDO)	Clear	Dry	Daylight	No control (as stated on Police Report)	No	0 0	0 0 0
164201 161643		1574 October 566 February	22 13	2015 The Dalles - California 2015	Southeast Intersection Quadrant	From opposite direction ΓÇô one left turn, one straight	Turning Movement	Property damage only crash (PDO)	Clear Clear	Dry	Darkness FÇô with street lights	Left turn refuge (when refuge is involved)	No	0 0	0 0 0 0
161686		655 May	17	2015	NE Intersection Quadrant Southwest Intersection Quadrant	Pedalcyclist Entering at angle ΓÇô all others	Angle Angle	Non-fatal injury crash Non-fatal injury crash	Clear	Dry Dry	Daylight Daylight	Stop sign Stop sign	No	0 0	0 1 1
163257		310 March	13	2015	Southwest Intersection Quadrant	From same direction 「Çô both going straight	Rear-End	Property damage only crash (PDO)	Cloudy	Dry	Dusk (Twilight)	Unknown or not defined	No	0 0	0 0 0
163919		867 June	22	2015	NW Intersection Quadrant	Entering at angle ΓÇô all others	Angle	Property damage only crash (PDO)	Clear	Dry	Daylight	Stop sign		0 0	0 0 0
164341	115	2001 December	11	2015	Southeast Intersection Quadrant	Entering at angle ΓÇô all others	Angle	Property damage only crash (PDO)	Cloudy	Wet	Daylight	Stop sign	No	0 0	0 0 0
162781		2136 December	26	2015	Midblock location	Fixed object	Fixed-Object or Other-Object	Non-fatal injury crash	Cloudy	Dry	Darkness ΓÇô no street lights	Unknown or not defined	No	0 0	2 0 2
164111		1227 August	22	2015	Inbound within 50 feet	Fixed object	Fixed-Object or Other-Object	Property damage only crash (PDO)	Clear	Dry	Daylight	Stop sign		0 0	0 0 0
164308		1893 November	28	2015	Southwest Intersection Quadrant	From same direction ΓÇô both going straight	Rear-End	Property damage only crash (PDO)	Clear	Ice	Daylight	Unknown or not defined	No	0 0	0 0 0
161756 166653		724 May 807 May	29 23	2015 2016	NE Intersection Quadrant Southwest Intersection Quadrant	Entering at angle ΓÇô all others Entering at angle ΓÇô all others	Angle Angle	Non-fatal injury crash Non-fatal injury crash	Clear Clear	Dry Snow	Daylight Daylight	Stop sign	No No	0 0	0 3 3
171076		1682 October	23 1	2016	Southwest Intersection Quadrant Southwest Intersection Quadrant	Entering at angle ι Ço all others  From same direction ΓÇô one turn, one straight	Angle Turning Movement	Property damage only crash (PDO)	Cloudy	Dry	Daylight Daylight	Stop sign Stop sign	No No	0 0	0 0 0
169457		592 April	13	2016	Midblock location	Fixed object	Fixed-Object or Other-Object	Property damage only crash (PDO)	Clear	Dry	Daylight	Unknown or not defined	No	0 0	0 0 0
165699		318 February	28	2016 The Dalles - California	NE Intersection Quadrant	Entering at angle FÇô all others	Turning Movement	Non-fatal injury crash	Clear	Dry	Daylight	Traffic signals	No	0 0	1 1 2
165700	007	512 April	1	2016 The Dalles - California	Southwest Intersection Quadrant	From same direction ΓÇô one stopped	Rear-End	Non-fatal injury crash	Clear	Dry	Daylight	Unknown or not defined	No	0 0	0 1 1
165703		574 April	13	2016 The Dalles - California	NW Intersection Quadrant	From opposite direction 「Çô one left turn, one straight	Turning Movement	Non-fatal injury crash	Clear	Dry	Daylight	Stop sign	No	0 1	1 3 5
165716		628 April	24	2016 The Dalles - California	Southeast Intersection Quadrant	From same direction 「Çô one stopped	Rear-End	Non-fatal injury crash	Cloudy	Dry	Daylight	Unknown or not defined	No	0 0	1 7 8
165819		1568 September	15	2016 The Dalles - California	Southwest Intersection Quadrant	From same direction 「Çô one stopped	Rear-End	Non-fatal injury crash	Clear	Dry	Daylight	Unknown or not defined	No	0 0 0 1	1 1 2 1 0 2
165837 167820		1881 October 2154 December	29	2016 The Dalles - California 2016 The Dalles - California	Southeast Intersection Quadrant NW Intersection Quadrant	From same direction ΓÇô one stopped Entering at angle ΓÇô all others	Rear-End Angle	Non-fatal injury crash Non-fatal injury crash	Cloudy	Dry	Daylight Daylight	Unknown or not defined Stop sign	No No	0 0	1 0 2
167820		2254 December	14	2016 The Dalles - California	Southwest Intersection Quadrant	From same direction CCô one stopped	Rear-End	Non-fatal injury crash	Snow	Dry Snow	Daylight	Unknown or not defined	110	0 0	0 1 1
168288		713 May	7	2016 The Dalles - California	Inbound within 50 feet	Fixed object	Fixed-Object or Other-Object	Non-fatal injury crash	Clear	Dry	Darkness FÇô no street lights	No control (as stated on Police Report)	No	0 0	0 1 1
168291		967 June	17	2016 The Dalles - California	Inbound within 50 feet	From same direction 「Çô one stopped	Rear-End	Non-fatal injury crash	Rain	Wet	Daylight	Left turn green arrow, lane markings or signal	No	0 0	0 1 1
168291		973 June	18	2016 The Dalles - California	Southeast Intersection Quadrant	From same direction ΓÇô both going straight	Rear-End	Non-fatal injury crash	Clear	Dry	Daylight	Unknown or not defined	No	0 0	0 1 1
169482		672 May	1	2016 The Dalles - California	Southwest Intersection Quadrant	From same direction ΓÇô one stopped	Rear-End	Property damage only crash (PDO)	Clear	Dry	Daylight	Unknown or not defined	Yes	0 0	0 0 0
170394		1404 August	20	2016 The Dalles - California	Southwest Intersection Quadrant	From same direction ΓÇô one stopped	Rear-End	Property damage only crash (PDO)	Clear	Dry	Daylight	Unknown or not defined	No	0 0	0 0 0
170394		1406 August	20	2016 The Dalles - California	Inbound within 50 feet	From same direction ΓÇô one turn, one straight	Turning Movement	Property damage only crash (PDO)	Clear	Dry	Daylight	Stop sign	No	0 0	0 0 0
171262		2238 November	10	2016 The Dalles - California	Southeast Intersection Quadrant	From opposite direction ΓÇô one left turn, one straight	Turning Movement	Property damage only crash (PDO)	Rain	Wet	Darkness FÇô with street lights	Stop sign	No No	0 0	0 0 0
171291 166136		2036 November 80050 March	19 4	2016 The Dalles - California 2016	Southeast Intersection Quadrant	Entering at angle ΓÇô all others From same direction ΓÇô one stopped	Turning Movement Rear-End	Non-fatal injury crash Non-fatal injury crash	Clear Clear	Dry Dry	Daylight Daylight	Unknown or not defined Stop sign	No	0 0	1 0 1
168941		452 March	18	2016		From same direction rço one stopped  From same direction rçô one stopped	Rear-End	Property damage only crash (PDO)	Cloudy	Dry	Daylight	Stop sign		0 0	0 0 0
170244		1057 July	1	2016	Southwest Intersection Quadrant	From opposite direction IÇô one stopped	-	Property damage only crash (PDO)	Unknown	Unknown	Daylight	Unknown or not defined		0 0	0 0 0
171214		1879 October	28	2016	Southwest Intersection Quadrant	Entering at angle ΓÇô all others	Angle	Property damage only crash (PDO)	Clear	Wet	Daylight	Stop sign		0 0	0 0 0
166648		748 May	12	2016	NW Intersection Quadrant	Fixed object	Fixed-Object or Other-Object	Non-fatal injury crash	Clear	Dry	Darkness ΓÇô no street lights	Unknown or not defined	No	0 0	1 0 1
167347		37 January	6	2016	NE Intersection Quadrant	Entering at angle FÇô all others	Angle	Property damage only crash (PDO)	Clear	Dry	Daylight	Stop sign	No	0 0	0 0 0
169487	375	674 May	1	2016	Southwest Intersection Quadrant	Entering at angle ΓÇô all others	Angle	Property damage only crash (PDO)	Clear	Dry	Daylight	Stop sign	No	0 0	0 0 0

**Study Intersection Crash Type and Severity** 

					ash Type				Severity		
ID	Intersection Name	Rear- End	Turning	Angle	Fixed- Object	Pedestrian	Sideswipe	Severe Injury (A)	Moderate & Minor Injury (B+C)	PDO* (O)	Total
1	NW 19th Street/Lower Bridge Way	0	0	0	0	0	0	0	0	0	0
2	US 97/Lower Bridge Way	5	6	0	1	0	2	1	7	6	14
3	US 97/C Avenue	2	0	0	0	0	0	0	0	2	2
4	US 97/B Avenue (Smith Rock Way)	4	4	3	2	0	0	1	3	9	13
5	11th Street/Smith Rock Way	0	0	5	0	1	0	0	3	3	6
6	US 97/S 11th Street	1	1	0	0	0	0	0	2	0	2

Appendix D – Intersection Traffic Operations

**Table F1. Existing Intersection Traffic Operations** 

Intersection	Standard/Target	Critical	Existing Conditions				
intersection	Standard/ raiget	Movement	LOS	v/c	Delay (s)		
19th Street/Lower Bridge Way	LOS D	NB	В	0.05	12.6		
US 07/Lower Bridge Way (11th Street)	Side-Street: v/c<0.80	EBL	F	>1.0	>100		
US 97/Lower Bridge Way (11th Street)	Mainline: v/c<0.70	NBL	В	0.49	12.5		
US 97/C Avenue (Underwood Avenue)	Side-Street: v/c<0.80	WB	F	>1.0	>100		
03 97/C Avenue (Onderwood Avenue)	Mainline: v/c<0.70	NBL	В	0.05	10.1		
US 97/B Avenue (Smith Rock Way)	Side-Street: v/c<0.80	WB	F	>1.0	>100		
03 97/B Avenue (Smith Rock Way)	Mainline: v/c<0.70	SBL	В	0.1	12.9		
11th Street/Smith Rock Way	LOS D	SBL	В	0.18	13.3		
LIC 07/Courth 11th Stroot	Side-Street: v/c<0.80	WB	E	0.29	36.1		
US 97/South 11th Street	Mainline: v/c<0.70	SBL	В	0.01	11.9		

<sup>\*</sup>Orange Cells indicate movement is above the standard/target

Table F2. Existing Intersection 95<sup>th</sup> Percentile Queue

Intersection	95th Percentile Queue								
intersection	NB	SB	ЕВ	WB					
19th Street/Lower Bridge Way	<25	-	-	<25					
US 97/Lower Bridge Way (11th Street)	75	<25	100	<25					
US 97/C Avenue (Underwood Avenue)	<25	<25	75	125					
US 97/B Avenue (Smith Rock Way)	<25	<25	25	250					
11th Street/Smith Rock Way	25	25	<25	<25					
US 97/South 11th Street	-	<25	-	<25					

<sup>\*</sup>Orange Cell indicates queue exceeds storage

Appendix E –Statewide Crash Performance Standards Summary

# 90th Percentile Crash Rate Comparisons

A method used to identify intersections with more crashes than expected is to compare the crash rate to the statewide 90<sup>th</sup> percentile rates for similar intersection types, as documented in Table 4-1 of the ODOT APM. The daily total entering vehicles used to determine the crash rate was based on the peak hour intersection turning movement counts. The peak hour was assumed to be ten percent of the daily volume. A table of all the study intersection crash rates compared to the statewide 90<sup>th</sup> percentile rates for similar facilities is shown below. None of the study intersections exceed the statewide 90<sup>th</sup> percentile crash rates.

# Study Intersections that Exceed 90th Percentile Crash Rate

Intersection	Intersection Control Type	Statewide 90 <sup>th</sup> Perc. Crash Rate	Intersection Crash Rate
NW 19th Street/Lower Bridge Way	3-way stop controlled	0.48	0.00
US 97/Lower Bridge Way	4-way stop controlled	1.08	0.37
US 97/C Avenue	4-way stop controlled	1.08	0.05
US 97/B Avenue (Smith Rock Way)	4-way stop controlled	1.08	0.33
11th Street/Smith Rock Way	4-way stop controlled	1.08	0.71
US 97/S 11th Street	3-way stop controlled	0.48	0.05

### **Critical Crash Rate Comparisons**

A critical crash rate may be used to identify intersections that warrant further investigation and may represent opportunities to reduce crash frequency and severity. The critical crash rate establishes a threshold for comparison among intersections with similar number of approaches and similar traffic control. The study intersections exceeding the critical crash rate are identified in the table below.

### Study Intersections that Exceed the Critical Crash Rate

Intersection	Critical Crash Rate	Observed Crash Rate
NW 19th Street/Lower Bridge Way	0.36	0.00
US 97/Lower Bridge Way	0.33	0.37
US 97/C Avenue	0.33	0.05
US 97/B Avenue (Smith Rock Way)	0.33	0.33
11th Street/Smith Rock Way	0.51	0.71
US 97/S 11th Street	0.24	0.05

## Statewide Safety Priority Index System

The ODOT Statewide Safety Priority Index System (SPIS) identifies sites along state highways where safety issues warrant further investigation. The SPIS is a method developed by ODOT for identifying hazardous locations on state highways through consideration of crash frequency, crash rate, and crash severity. The sites are listed under the 2016 SPIS based on 2013 through 2015 crash data. No intersections above the 85% percentile were identified in Terrebonne.

#### Summary of Key Intersections and Crash Types

The critical crash rate was the only statewide standard exceeded at the study intersections during the study period. The following is a summary of the intersections that exceeded the critical crash rate.

#### US 97/Lower Bridge Way

- o A total of 14 reported crashes during the study period, 8 of which resulted in injury.
- Weather and lighting did not appear to be a contributing crash trend.
- One crash resulted in serious injuries. A total of five persons were injured in the crash including a child under the age of 4.
- There were 6 turning movement, 5 rear-end, 2 sideswipe, and 1 miscellaneous crash at the intersection. No notable crash trends were identified.

#### • 11<sup>th</sup> Street/Smith Rock Way

- o Six crashes were reported at this intersection. Half of the crashes resulted in injury.
- Five of the crashes were angle crashes and once crash involved a pedestrian.

#### Pedestrian Crash

 A pedestrian crash at 11<sup>th</sup> Street/Smith Rock Way during night time conditions. The crash report indicated that the non-motorist was illegally in the roadway and wearing dark clothing at the time of the crash. The crash resulted in moderate injuries.

### • Heavy Vehicle Crashes

- Three crashes involving heavy vehicles occurred during the study period.
  - April 9, 2014: A fixed object crash occurred at the intersection of F Avenue/13<sup>th</sup>
     Street. The daytime crash resulted in property damage only.
  - October 1, 2016: A turning movement crashes occurred at Smith Rock Way/Cornelius Road. The crash involved a farm tractor and resulted in property damage only.
  - June 18, 2016: A rear end collision occurred on US 97 slightly north of Odem Avenue. The tractor trailer jackknifed due to insufficient brakes. The crash resulted in minor injuries.

Appendix F –
Pedestrian Level
of Traffic Stress

# **PLTS Analysis Results**

				Pedestrian LTS Criteria									
Street	From	То	Side	Speed (MPH)	Lanes per Direction	Bike Lane (feet)	Parking	Sidewalk Condition	Sidewalk Width (feet) <sup>1</sup>	Buffer	Illumination	Land Use	PLTS
					Pr	incipal Arte	rial (State Hig	hway					
	NW Lower Bridge Way	Central Avenue	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Low density development	4
	Central Avenue	A Avenue	Both	35	1 <sup>2</sup>	6	N/A	Good	≥6	Solid Surface	No <sup>2</sup>	Low density development	3
Highway 97	A Avenue	NW Davidson Way	East	35	1	6	N/A	Good	≥6	Solid Surface	No <sup>2</sup>	Low density development	3
	A Avenue	NW Davidson Way	West	35	1	6	N/A	N/A	N/A	N/A	N/A	Low density development	4
	A Avenue	NW Davidson Way	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Low density development	4
						Collector	/Local Streets	5	•				
NW Lower Bridge Way	NW 19 <sup>th</sup> Street	Highway 97	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
NW Davidson Way	NW 19 <sup>th</sup> Street	Highway 97	Both	30	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
NW Sedgewick Avenue	Eby Road	NW 19 <sup>th</sup> Street	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
A Avenue	NW 19 <sup>th</sup> Street	NW 2 <sup>nd</sup> Street	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
A Avenue	Highway 97	11 <sup>th</sup> Street	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
	5 <sup>th</sup> Street	6 <sup>th</sup> Street	Both	35	1	N/A	N/A	N/A	N/A	N/A	N/A	Low density development	4
	6 <sup>th</sup> Street	7 <sup>th</sup> Street	North	20	1	N/A	N/A	Good	≥5	Landscape	No <sup>2</sup>	Low density development	2
D. Avenue	6 <sup>th</sup> Street	7 <sup>th</sup> Street	South	20	1	N/A	N/A	N/A	N/A	N/A	N/A	Low density development	4
B Avenue	7 <sup>th</sup> Street	Highway 97	North	20	1	N/A	N/A	Good	≥6	Landscape	No <sup>2</sup>	Low density development	2
	7 <sup>th</sup> Street	Highway 97	South	20	1	N/A	N/A	Good	≥5	Curb Tight	No <sup>2</sup>	Low density development	3
	Highway 97	11 <sup>th</sup> Street	Both	35	1	N/A	N/A	Good	≥5	Solid Surface	No <sup>2</sup>	Low density development	3

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	ı	1			1		1	r		1	1		
	11 <sup>th</sup> Street	NE 1 <sup>st</sup> Street	Both	35	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
	NE 1 <sup>st</sup> Street	Irrigation Lateral Road	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
	NW 19 <sup>th</sup> Street	NW 6 <sup>th</sup> Street	Both	35	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
C Avenue	NW 6 <sup>th</sup> Street	Highway 97	Both	20	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
	Highway 97	16 <sup>th</sup> Street	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
Central Avenue	NW 5 <sup>th</sup> Street	Highway 97	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
Central Avenue	Highway 97	11 <sup>th</sup> Street	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
F Avenue	11 <sup>th</sup> Street	16 <sup>th</sup> Street	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
H Avenue	16 <sup>th</sup> Street	Eastern Terminus	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
NW Odem	NW Almeter Way	NW 19 <sup>th</sup> Street	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
Avenue	NW 19 <sup>th</sup> Street	Highway 97	Both	35	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
Morning Glory Drive	NW Lower Bridge Way	Majestic Rock Drive	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
Boxwood Lane	Morning Glory Drive	Barberry Drive	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
Barberry Drive	Majestic Rock Drive	G Avenue	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
Majestic Rock Drive	Western Terminus	Morning Glory Drive	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
Angus Lane	12 <sup>th</sup> Lane	16 <sup>th</sup> Street	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
Angus Court	16 <sup>th</sup> Street	17 <sup>th</sup> Lane	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
	Wilcox Avenue	NW Smith Rock Way	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
NE 1 <sup>st</sup> Street	NW Smith Rock Way	Knickerbocker Lane	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
5 <sup>th</sup> Street	Central Avenue	B Avenue	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
6 <sup>th</sup> Street	Central Avenue	C Avenue	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
	B Avenue	A Avenue	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
	E Avenue	C Avenue	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
7 <sup>th</sup> Street	B Avenue	Southern Terminus	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
8 <sup>th</sup> Street	E Avenue	C Avenue	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
9 <sup>th</sup> Street	E Avenue	C Avenue	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4

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11 <sup>th</sup> Street	Highway 97	C Avenue	Both	35	1	N/A	N/A	N/A	N/A	N/A	N/A	Low density development	4
11 Street	C Avenue	Highway 97	Both	35	1	N/A	N/A	N/A	N/A	N/A	N/A	Low density development	4
12 <sup>th</sup> Lane	Foss Drive	Angus Lane	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
13 <sup>th</sup> Street	Foss Drive	F Avenue	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
15 <sup>th</sup> Street	Northern Terminus	F Avenue	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
	E Avenue	C Avenue	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	development  Low density development  Residential  Residential	4
16 <sup>th</sup> Street	C Avenue	F Avenue	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
10 30000	F Avenue	Foss Drive	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Low density development Residential	4
17 <sup>th</sup> Lane	Foss Drive	Angus Court	Both	25	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
	Lower Bridge Way	C Avenue	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
NW 19 <sup>th</sup> Street	C Avenue	Sedgewick Avenue	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
NVV 13 Street	Sedgewick Avenue	NW Odem Avenue	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4
	NW Odem Avenue	NW Davidson Way	Both	45	1	N/A	N/A	N/A	N/A	N/A	N/A	Residential	4

 $<sup>^{\</sup>rm 1}\,{\rm Sidewalk}$  refers to sidewalks, shared-use paths, and pedestrian paths.

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<sup>&</sup>lt;sup>2</sup> No illumination present, LTS increase by one (1)

<sup>&</sup>lt;sup>3</sup> Shared-use Path

Appendix G – Bicycle Level of Traffic Stress

# **BLTS Analysis Results**

					Bicycle LTS Criteria					
Street	From	То	Side	Facility Type	Speed (MPH)	Lanes per Direction	Bike Lane Width (feet)	Parking	Frequent Blockage	BLTS
		Pr	incipal Arter	ial (State Highway)						
	NW Lower Bridge Way	Central Avenue	Both	Shoulder Bikeway	45	1	N/A	N/A	N/A	4
Highway 97	Central Avenue	11 <sup>th</sup> Street	Both	Bike Lane	35	1 <sup>2</sup>	6	N/A	N/A	3
	11 <sup>th</sup> Street	NW Davidson Way	Both	Shoulder Bikeway	45	1	N/A	N/A	N/A	4
			Collector	/Local Streets				l		
NW Lower Bridge Way	NW 19 <sup>th</sup> Street	Highway 97	Both	Shoulder Bikeway	45	1	N/A	N/A	N/A	4
NW Davidson Way	NW 19 <sup>th</sup> Street	Highway 97	Both	N/A	30	1	N/A	N/A	N/A	3
NW Sedgewick Avenue	Eby Road	NW 19 <sup>th</sup> Avenue	Both	N/A	45	1	N/A	N/A	N/A	4
	NW 19 <sup>th</sup> Street	2 <sup>nd</sup> Street	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
A Avenue	Highway 97	11 <sup>th</sup> Street	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
	5 <sup>th</sup> Street	6 <sup>th</sup> Street	Both	N/A	35	1	N/A	N/A	N/A	4
	6 <sup>th</sup> Street	Highway 97	Both	N/A	20	1	N/A	N/A	N/A	2
B Avenue	Highway 97	11 <sup>th</sup> Street	Both	Shoulder Bikeway	35	1	N/A	N/A	N/A	4
	11 <sup>th</sup> Street	NE 1 <sup>st</sup> Street	Both	N/A	35	1	N/A	N/A	N/A	4
	NE 1 <sup>st</sup> Street	Irrigation Lateral Road	Both	N/A	45	1	N/A	N/A	N/A	4
	NW 19 <sup>th</sup> Street	6 <sup>th</sup> Street	Both	Shoulder Bikeway	35	1	N/A	N/A	N/A	4
C Avenue	6 <sup>th</sup> Street	Highway 97	Both	Bike Lane	20	1	≤ 5.5′	N/A	N/A	2
	Highway 97	16 <sup>th</sup> Street	Both	N/A	25	1	N/A	N/A	N/A	2
Caral and Assessment	5 <sup>th</sup> Street	Highway 97	Both	N/A	25	1	N/A	N/A	N/A	2
Central Avenue	Highway 97	11 <sup>th</sup> Street	Both	N/A	25	1	N/A	N/A	N/A	2
F Avenue	11 <sup>th</sup> Street	16 <sup>th</sup> Street	Both	N/A	35	1	N/A	N/A	N/A	4
H Avenue	16 <sup>th</sup> Street	Eastern Terminus	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
NIM Odam A	NW Almeter Way	NW 19 <sup>th</sup> Street	Both	N/A	45	1	N/A	N/A	N/A	4
NW Odem Avenue	NW 19 <sup>th</sup> Street	Highway 97	Both	N/A	35	1	N/A	N/A	N/A	4
Morning Glory Drive	NW Lower Bridge Way	Majestic Rock Drive	Both	N/A	25	1	N/A¹	N/A	N/A	1
Boxwood Lane	Morning Glory Drive	Barberry Drive	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
Barberry Drive	Majestic Rock Drive	G Avenue	Both	N/A	25	1	N/A¹	N/A	N/A	1

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Majestic Rock Drive	Western Terminus	Morning Glory Drive	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
Angus Lane	12 <sup>th</sup> Lane	16 <sup>th</sup> Street	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
Angus Court	16 <sup>th</sup> Street	17 <sup>th</sup> Lane	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
NE 1st Street	Wilcox Avenue	NW Smith Rock Way	Both	N/A	45	1	N/A	N/A	N/A	4
NE 13 Street	NW Smith Rock Way	Knickerbocker Lane	Both	N/A	45	1	N/A	N/A	N/A	4
5 <sup>th</sup> Street	Central Avenue	B Avenue	Both	N/A	25	1	N/A	N/A	N/A	2
6 <sup>th</sup> Street	Central Avenue	C Avenue	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
o Sileet	B Avenue	A Avenue	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
7 <sup>th</sup> Street	E Avenue	C Avenue	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
7 311661	B Avenue	Southern Terminus	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
8 <sup>th</sup> Street	E Avenue	C Avenue	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
9 <sup>th</sup> Street	E Avenue	C Avenue	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
11 <sup>th</sup> Street	Highway 97	C Avenue	Both	N/A	35	1	N/A	N/A	N/A	4
113(166)	C Avenue	Highway 97	Both	N/A	35	1	N/A	N/A	N/A	4
12 <sup>th</sup> Lane	Foss Drive	Angus Lane	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
13 <sup>th</sup> Street	Foss Drive	F Avenue	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
15 <sup>th</sup> Street	Northern Terminus	F Avenue	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
15 Street	E Avenue	C Avenue	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
16 <sup>th</sup> Street	C Avenue	F Avenue	Both	N/A	25	1	N/A	N/A	N/A	2
10 Street	F Avenue	Foss Drive	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
17 <sup>th</sup> Lane	Foss Drive	Angus Court	Both	N/A	25	1	N/A <sup>1</sup>	N/A	N/A	1
	Lower Bridge Way	C Avenue	Both	N/A	45	1	N/A	N/A	N/A	4
NW 19 <sup>th</sup> Street	C Avenue	Sedgewick Avenue	Both	N/A	45	1	N/A	N/A	N/A	4
MM 19 Street	Sedgewick Avenue	NW Odem Avenue	Both	N/A	45	1	N/A	N/A	N/A	4
	NW Odem Avenue	NW Davidson Way	Both	N/A	45	1	N/A	N/A	N/A	4

<sup>&</sup>lt;sup>1</sup> Unmarked Centerline

Shaded cell segments do not meet the LTS 2 target

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<sup>&</sup>lt;sup>2</sup> Two-way Center Turn Lane

Appendix H – Over Dimensional Load Data

1574    00-km3    14	D 't No b	D I D I.	Wilds Front	William I	Hatala Fasa	Hatala Inches	O	
1,6826  1,03413  10								195800
1,00,000   1,00,000	137410							613000
1,00,000   1,00,000	168261			8		, and the second		130600
178079								
17,8819   29,8413   15	169115	15-Jul-13	16	6			78	
153385   31 May 13   16   0   14   0   90   1040   184   1	178078	06-Aug-13	18	1	14	0	75	
18640    064-bn13   16	174819	29-Jul-13	15	11	15	0	121	195060
184656   26-May 13								
184742   20 Aug.   3								104000
18014   26.4mpl   3								
189014   27.Acg. 3								
18918   22.49,13								
194786   25.04.13								100000
197572   0.2-0c-13   17								
197651   02-06-13   12   8   14   0   75								203000
202326 15-Oct-13 18 0 14 0 78 224-14 17 1 14 10 95 1200 26-5672 16-Apr.14 17 1 14 10 95 1200 26-5672 16-Apr.14 17 1 14 10 95 1200 26-5673 16-Apr.14 17 1 1 14 10 95 1200 26-5673 16-Apr.14 17 1 1 14 10 95 1200 26-5673 16-Apr.14 17 1 1 14 10 95 1200 26-5673 16-Apr.14 17 1 1 14 10 95 1200 26-5673 16-Apr.14 17 1 1 14 10 95 1200 26-5673 16-Apr.14 17 1 1 14 10 95 1200 26-5673 16-Apr.14 16 16 17 1 1 14 10 95 1200 26-5673 16-Apr.14 16 16 17 1 1 14 10 95 1200 26-5673 16-Apr.14 16 16 17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								
26.547								
205.472   10-Apr.14   17   1   14   10   95   12000								120000
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272707   06-May-14   16   6   16   3   127   1906			17	1	14	10		120000
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297668   15.36-14   18   6   17   0   330   81865   315359   15.36-14   18   10   14   0   78   3308317   18.46-14   10   0   16   8   199   41000   259357   27.46-14   11   10   11   14   75   30   200   22.36-27   27.46-14   17   19   17   9   77   9   77   79   9   900   22.36-27   19.460-14   17   79   79   79   70   70   70   70   7		•						246000
315350   33-69-14   18   10   14   0   78								198000
308317   18-kug-14   10   0   16   8   199   41000								818680
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275712   19-May-14   18	2/1202	04.41.4						00000
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330837   08-Sep-14   10   11   14   75   320500   18-Sep-14   11   10   10   21900   321441   22-Mar-14   15   15   6   160   19900   321760   22-Sep-14   18   3   14   118   17400   322760   32-Sep-15   14   6   14   215   22710   322760   32-Sep-15   14   6   14   4   80   9400   32-Sep-15   14   6   14   80   9400   32-Sep-15   15   10   14   80   9400   339195   16-Apr-15   21   10   14   75   9400   339823   23-Apr-15   16   8   14   1   72   402504   08-May-15   16   8   14   1   72   402504   08-May-15   16   8   14   1   72   11   86   10100   402509   08-May-15   19   17   11   86   10100   402509   08-May-15   19   17   11   88   10100   402755   15   8   16   1   95   402755   15   8   16   1   95   402755   15   8   16   1   95   402755   15   8   16   1   95   402755   15   8   16   1   95   402755   15   15   16   16   10   95   402755   15   15   16   16   10   95   402755   15   16   14   16   17250   402809   08-May-15   22   14   14   16   17250   402809   08-May-15   22   14   16   17250   402809   08-May-15   18   11   14   16   17250   402809   08-May-15   17   17   18   18								154000
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301086   Os-Jon-15		25-Sep-14	18				118	174000
392564   03.Apr.15   14   6   14   215   26700								174000
396195   16-Apr-15   21   10   14   80   9400						6		247160
396196   16.Apr-15								267000
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402584   08-May-15   19   17   11   86   10100								236300
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441239       18-Aug-15       16       17       190       49854         441546       17-Aug-15       16       17       195       47042         441625       24-Aug-15       14       6       14       195       23583         444443       26-Aug-15       16       17       5       74         447804       02-Sep-15       14       6       195       22850         449999       09-Sep-15       14       6       195       22526         453695       18-Sep-15       14       6       195       25526         453695       18-Sep-15       14       6       195       25526         453695       18-Sep-15       16       8       15       10       135       13200         4413343       27-Oct-15       16       8       15       8       124       13200         471068       06-Nov-15       20       8       16       6       93         471069       03-Nov-15       16       8       15       8       93       8000         489255       23-Dec-15       16       8       15       8       93       800         489327				10				
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396563   17-Apr-15   22   0   14   0   166   25500								
396537   17-Apr-15   22   0   14   0   166   25600   20-Apr-15   18   2   14   0   111   19050   20-Apr-15   20   9   14   0   113   19380   20-Apr-15   18   2   14   0   17   19380   20-Apr-15   18   2   14   0   107   19380   20-Apr-15   21   4   14   0   113   17640   20-Apr-15   20   10   14   0   113   19150   20-Apr-15   20   10   14   0   113   19150   20-Apr-15   20   20   20-Apr-15   20   20-Apr-15   20   20-Apr-15   20   20-Apr-15		17-Apr-15						255000
397690     20-Apr-15     18     2     14     0     111     19050       397691     20-Apr-15     20     9     14     0     113     19380       397694     22-Apr-15     18     2     14     0     107     19380       397695     21-Apr-15     21     4     14     0     113     17640       397697     20-Apr-15     20     10     14     0     113     19150       399295     23-Apr-15     22     0     14     0     166     19250								255000
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