HIGHWAY 199 EXPRESSWAY UPGRADE PROJECT

Final Hazardous Materials Technical Report

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Acronyms

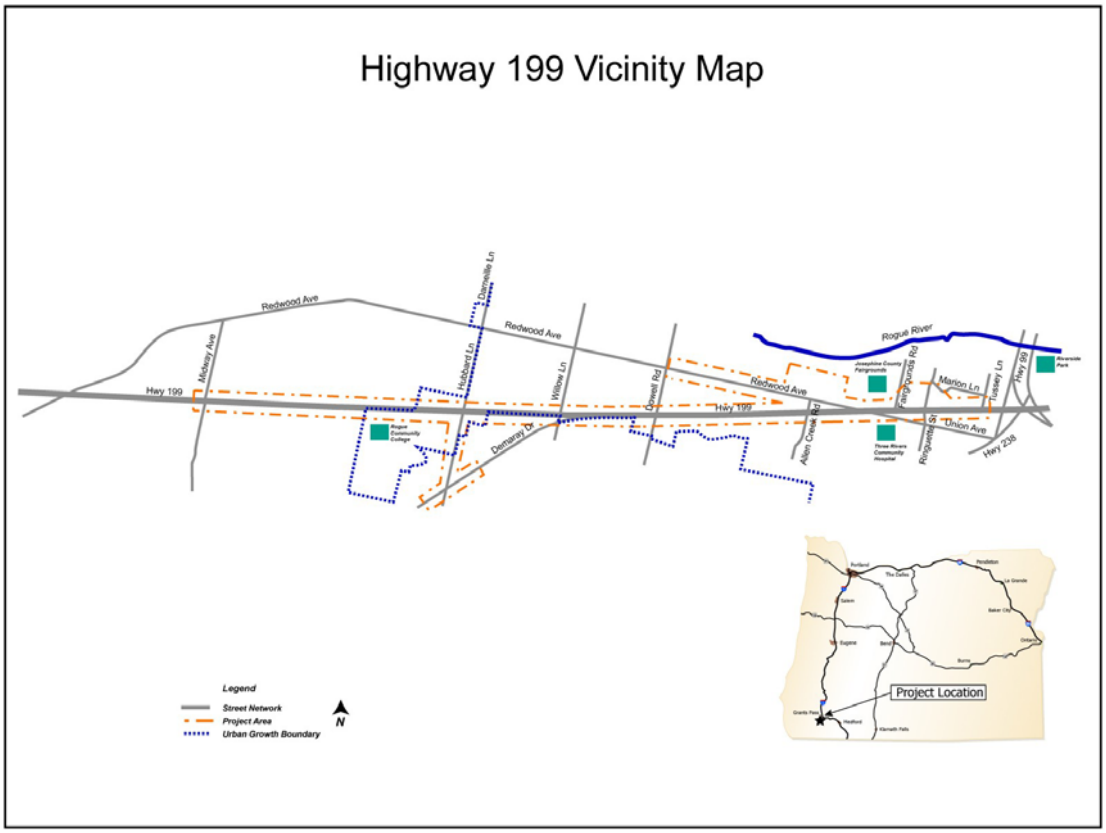
Acronym or Abbreviation	Meaning
API	area of potential impact
ADT	average daily traffic
OHP	Oregon Highway Plan
MVM	million vehicle miles
v/c	volume to capacity
PSI	Preliminary Site Investigation
RPECs	Recognized and Potential Environmental Conditions
DEQ	Oregon Department of Environmental Quality
ECSIs	Environmental Cleanup Sites
RCRA	Resource Conservation and Recovery Act generators
LUST	Leaking Underground Storage Tank
USTs	Underground Storage Tanks
LQG	Large Quantity Generator of Hazardous Waste (more than 2,200 pounds per month)
SQG	Small Quantity Generator of Hazardous Waste (220 – 2,200 pounds per month)
CEG	Conditionally Exempt Generator of Hazardous Waste (less than 220 pounds/month)

1. Executive Summary

The ODOT Region Three Hazmat Section has completed this report to summarize all Recognized and Potential Environmental Conditions (RPECs) that could impact the proposed project activities and areas located within the area of potential impact (API). Environmental information was obtained from a Hazardous Materials Corridor Study, which was completed by the ODOT Region Three Hazmat Section in February 2005 for the Highway 199 (US 199) Expressway Upgrade project. Using information from the Corridor Study, comparisons of likely indirect and direct impacts of the RPEC sites on the proposed project activities and surrounding API were made.

Area of Potential Impact

Exhibit 1. Project location and area of potential impact (API)



An API is defined for the project and depicted in Exhibit 1. The Project Management Team anticipates that impacts associated with this project will be contained within the API. Thus, the API serves as the survey boundaries to evaluate environmental effects.

Methods and Coordination

Upon review of the Hazardous Materials Corridor Study and proposed project alternatives, comparisons of potential impacts from RPEC sites on each of the proposed project alternatives and environment within the API were made. The RPEC sites of concern identified in the Hazardous Materials Corridor Study that could impact the proposed project alternatives were counted and presented for each of the proposed project alternatives as well as sub-sections: (1) Midway Avenue – Dowell Road (2) Dowell Road – Fairgrounds Road and (3) Fairgrounds Road – Tussey Lane. The sites with greater potential of impacting the proposed alternatives were presented and described in further detail in Section 5. Comparison of potential impacts were made for each of the proposed design alternatives. Temporary and Long-Term impacts possible from RPEC sites on the proposed project activities and area within the API were addressed. Mitigation actions needed to either eliminate or minimize potential impacts to the project design alternatives and environment within the API were presented in Section 8.

Environmental Baseline Conditions

The US 199 Expressway Upgrade Hazardous Materials Corridor Study was completed to identify RPEC sites, located within the project corridor area that could impact proposed construction activities or right of way acquisitions. The API is a modified version of the pre-existing project corridor area established in February 2005. The initial project corridor included areas further west along, both US 199 and Redwood Avenue than the API. In the Corridor Study, the RPEC sites were separated into either identified or potential sites. Identified sites were properties found on the DEQ on-line Facility Profiler database search as having documented evidence of Recognized Environmental Conditions (RECs). Potential sites were properties of concern with Potential Environmental Conditions (PECs), as identified from field observations made during three site visits, reviewing aerial photographs and Sanborn Fire Insurance maps, that had no documented evidence of RECs found on the DEQ on-line Facility Profiler database. Although RPEC sites may have multiple RPECs, each property was only counted as one RPEC site. The Corridor Study identified 41 RPEC sites located within and adjacent to the API, 16 of which were listed as identified sites (Sites# 1-16) and 25 were listed as potential sites (Sites# 17-41).

Impacts

There were 40 RPEC sites found within the API, 30 of which could impact proposed project activities as well as the environment within and adjacent to the API if disturbed. While, there are no RPEC sites that could impact the No-Build Alternative; design Alternatives A and B have the same RPEC sites likely to impact the proposed construction activities, including 13 identified sites and 17 potential sites. Both,

temporary (indirect) impacts related to construction activities and long-term (direct) impacts related to the environment within or adjacent to the API were addressed for each design alternative.

Mitigation

Once a design alternative is chosen, a Level 2 Preliminary Site Investigation (PSI) will be completed to minimize or eliminate impacts of the RPEC sites on the project and area within the API. The Level 2 PSI will include: (1) subsurface soil and groundwater sampling (2) describing likely contamination types, concentrations, extents and possible transport mechanisms (3) characterize existing subsurface conditions (4) estimate volumes and costs of disposing contaminated subsurface material (5) identifying the likely impacts to project activities and (6) present mitigation actions needed to minimize or eliminate potential impacts to the project and API.

Exhibit 2. Comparison of impacts by alternative

	Alternative A			Alternative B		
No Build	Midway Avenue to Dowell Road	Dowell Road to Fairgrounds	Fairgrounds to Tussey Lane	Midway Avenue to Dowell Road	Dowell Road to Fairgrounds	Fairgrounds to Tussey Lane
0 sites	2 Potential Sites	6 Identified Sites, 7 Potential Sites	7 Identified Sites, 8 Potential Sites	2 Potential Sites	6 Identified Sites, 7 Potential Sites	7 Identified Sites, 8 Potential Sites

2. Project Purpose and Need

Purpose of the Proposed Action

The purpose of the project is to address vehicular and pedestrian safety, and current and future congestion and operational deficiencies, along Highway 199 between Tussey Lane and Midway Avenue.

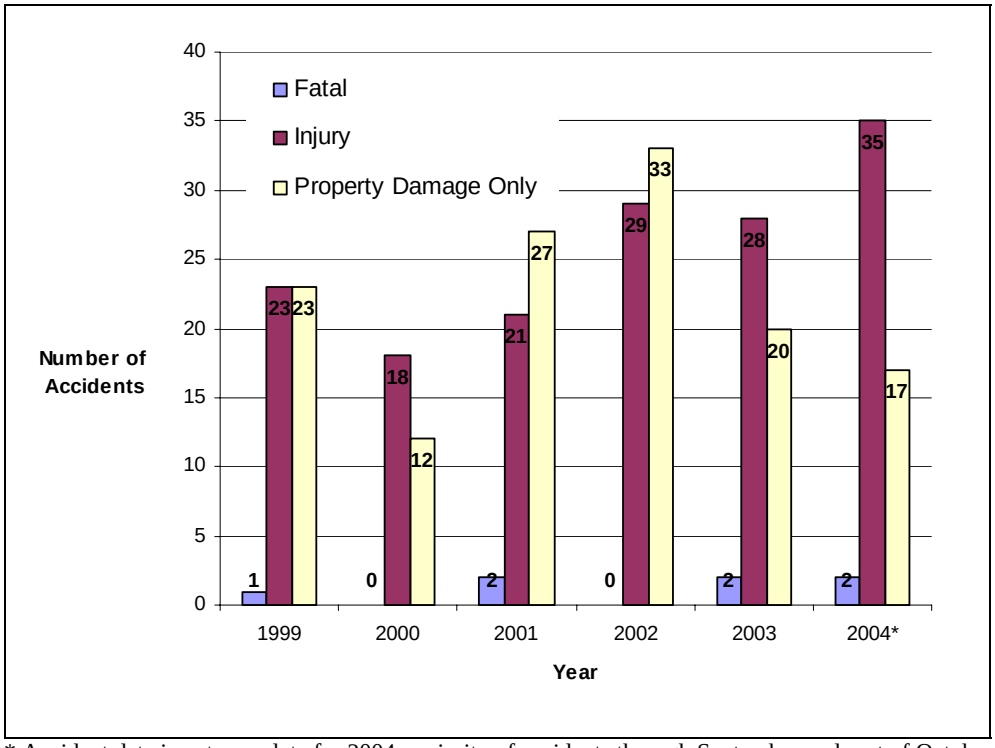
Need for the Proposed Action

The need for the project is based on the accident history, congestion, access, growth of surrounding area, and system efficiency of Highway 199.

Safety

There have been 293 accidents reported within the limits of the project between January 1999 and October 2004. Of these reported accidents, 2 percent included fatalities, 53 percent involved injuries, and 45 percent involved property damage only (Exhibit 3).

Exhibit 3. Highway 199 accident summary from Tussey Lane to Midway Avenue



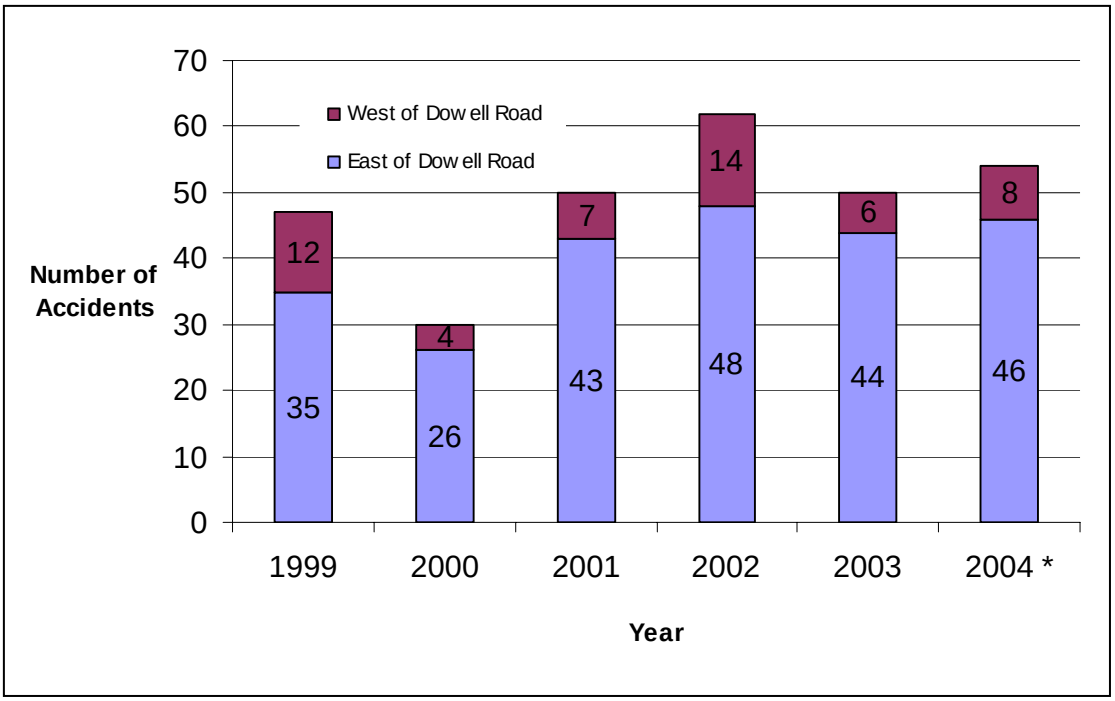
* Accident data is not complete for 2004; majority of accidents through September and part of October are included

Highway 199 from Tussey Lane to Midway Avenue has experienced an accident rate consistently higher than the statewide average for similar facilities. Along the eastern portion of Highway 199 from Tussey Lane to Dowell Road, the accident rate is 3.69 accidents per million-vehicle miles (MVM) versus the statewide average of 2.99

accidents per MVM. Within the western portion of Highway 199, from Dowell Road to Midway Avenue, the accident rate is 0.89 accidents per MVM versus the statewide average of 0.80 accidents per MVM. Exhibit 4 shows the number of accidents occurring on Highway 199 east and west of Dowell Road from January 1999 through about October 2004.

The highest number of accidents occurred between Tussey Lane and Dowell Road. Accidents within this segment tend to be less severe than accidents west of Dowell Road. Since 1999 there have been 242 accidents in this segment, one of which involved a fatality.

Exhibit 4. Accidents occurring on Highway 199 east and west of Dowell Road



Between Dowell Road and Midway Avenue, accidents occur less, but the severity of the accidents is greater due to the higher speeds. From 1999 to October 2004 there have been 51 accidents, of which there were 6 accidents that included fatalities. To put this in perspective, there were 17 fatalities reported in Josephine County in 2004. Twenty-five percent of these fatalities occurred within the limits of this project.

West of Dowell Road, there is a lack of safe areas along Highway 199 for residents and delivery services to access mail and newspaper boxes along the highway shoulders. Also, there is a lack of safe areas for school buses to stop along the highway to pick up school children.

During peak traffic hours, vehicles at uncontrolled intersections have longer waits to find gaps in traffic to safely enter the highway. This is especially difficult for vehicles

attempting to make left turns across multiple lanes of traffic. In these situations, drivers wait long periods of time, become increasingly frustrated, and take higher risks to enter the highway.

Access

There are 15 intersections along Highway 199 in the project area. Five of the intersections are controlled by 4-way signals, and 10 are partially controlled by stop signs at the intersecting local roads. In addition to the controlled intersections, there are approximately 13 driveways that allow uncontrolled access to Highway 199. A particular unsafe area occurs on westbound Highway 199 between Tussey Lane to Ringuette Street where there is no barrier or curb and uncontrolled access into dense commercial development. This presents a situation where traffic freely enters and exits the highway, which increases the risk of accidents.

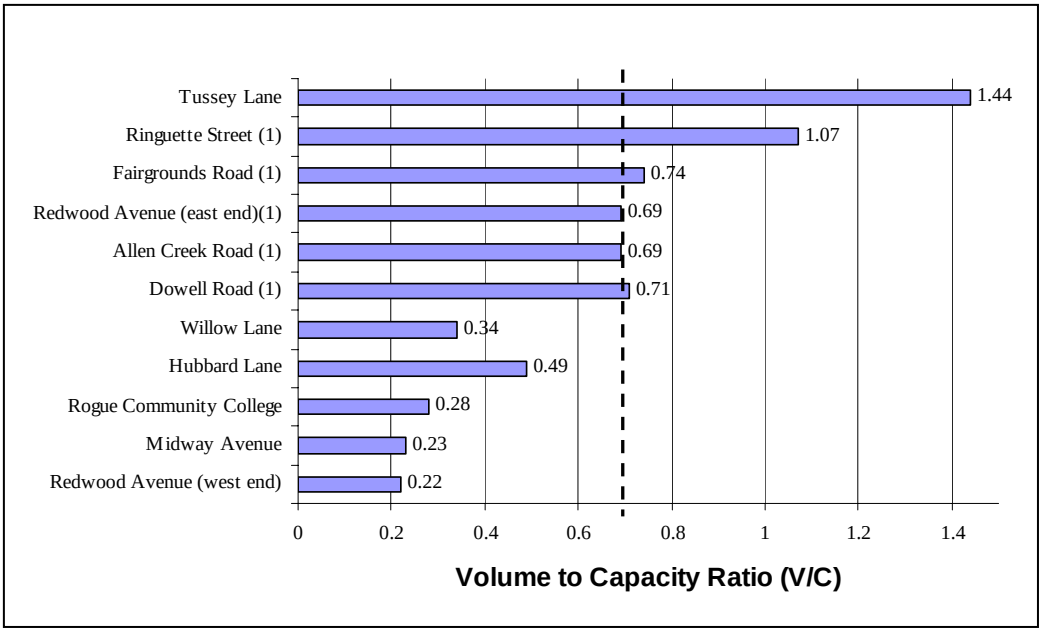
The signals at Ringuette Street, Fairgrounds Road, and Redwood Avenue do not meet the standard signalized access spacing of at least 0.5 mile. Only the spacing from Allen Creek Road to Dowell Road signals currently meets this standard.

The current substandard spacing of signalized intersections, the multiple driveways along the highway, and the high traffic volumes during peak hour traffic has created an environment of stop-and-go traffic due to vehicles slowing and stopping to enter or exit the highway. These conditions diminish the ability of Highway 199 to function as an expressway where traffic should travel safely at efficient high speeds and promote high volume traffic movements.

Capacity and Congestion

The average daily traffic (ADT) between Tussey Lane and Dowell Road ranges from 38,000 to 22,000 and from Dowell Road to Midway Avenue it ranges from 22,000 to 12,000. Congestion is occurring throughout the Highway 199 corridor. Currently 4 intersections within the corridor are functioning at an unacceptable volume to capacity (v/c) level, and 2 intersections are nearly at the unacceptable level. A v/c ratio above 0.70 for highways such as Highway 199 is considered unacceptable per the 1999 Oregon Highway Plan.

Exhibit 5. Volume/capacity ratios for intersections on Highway 199



Growth

Grants Pass, the second largest city in Southern Oregon, has experienced a high population growth rate, averaging 2.8 percent annual increase from 1993 to 2004. Over the last 10 years the population of Grants Pass has increased by 34 percent. The current population of Grants Pass is 24,790. Development is occurring at a high rate within and near the Highway 199 project limits. With the increase in population comes an increase in traffic. Traffic west of Dowell Road is growing at a rate of 1.5 to 2 percent per year. Looking ahead, growth in Grants Pass is likely to increase over the next several years and add traffic to the currently congested Highway 199.

System Efficiency

Highway 199 is currently not functioning as an expressway as defined by the Oregon Highway Plan (OHP). The 1999 OHP defines an expressway as a highway that provides for safe and efficient high speed and high volume traffic movements. The primary function of an expressway is for interurban travel and connections to ports and major recreation areas with minimal interruptions. Private access is discouraged and public access is highly controlled. Freight, commuters, and tourists cannot effectively move through the Highway 199 corridor due to high traffic congestion, slower speeds, and numerous access points that have negatively impacted inter-regional and regional travel.

High traffic volumes on Highway 199 also create a barrier for north-south local travelers trying to use local roads. Local users are also using Highway 199 to make short trips, such as to the hospital, local business, or community college located next to the highway. Local users are often making more turning movements onto and off of the highway,

which puts local use in conflict with through users and decreases the systems efficiency. This high level of local use conflicts with the through users who are using the expressway for inter-regional travel.

3. Project Alternatives

Description of the Alternatives

The Highway 199 Expressway Upgrade Project considered a range of alternatives to rectify the safety, access, congestion, and future growth needs while minimizing effects to the community and environment. This range of alternatives was narrowed down to two build alternatives (Alternatives A and B) as well as the No Build Alternative. The alternatives are described below. For description and analysis purposes, each build alternative is broken into three segments (from west to east): Midway Avenue to Dowell Road, Dowell Road to the Josephine County Fairgrounds entrance, and the Fairgrounds entrance to Tussey Lane.

No Build

The No Build provides the basis for a comparative analysis of the build alternatives. The No Build alternative assumes that roadway configurations along Highway 199 within the API would remain in their current configuration.

Currently Highway 199 within the API has two lanes in each direction, with signalized intersections at Ringuette Street, the Fairgrounds entrance, Redwood Avenue, Allen Creek Road, and Dowell Road. Unsignalized intersections include: Tussey Lane, Willow Lane, Hubbard Lane, Rogue Community College, and Midway Avenue. In addition, Dawn Drive, Arbor Ridge Drive and several private driveways currently have direct and uncontrolled access onto Highway 199. Between Allen Creek Road and Tussey Lane the eastbound and westbound travel lanes on Highway 199 are separated by a large grass median. West of Willow Lane to Midway Avenue access along Highway 199 is uncontrolled; allowing for unrestricted vehicular movements across the highway. At the intersection of Highway 199 and Willow Lane there is a raised median, which provides traffic on Highway 199 with left turn lanes onto Willow Lane and prohibits traffic on Willow Lane from crossing Highway 199.

There is an existing bicycle and pedestrian shared use path along the south side of Highway 199; beginning at the Rogue Community College entrance and continuing until Nebraska Avenue. Along Redwood Avenue and most of Hubbard Lane pedestrians and bicyclists use paved shoulders. A small section of sidewalk exists along Hubbard Avenue just south of Highway 199.

The No Build alternative also assumes that other programmed and funded projects within and adjacent to the API will occur, regardless of whether the Highway 199 Expressway

Upgrade project is constructed. The No Build alternative assumes the following future improvements:

- Repaving of 6th and 7th Streets from M to the South Y
- Minor road realignment and signal installation at Park and Lewis
- Signal installation at Harbeck and OR 238
- Construct eastbound Passing Lanes on Highway 199 (MP 10.4-11.2)
- Resurface and construct bicycle and pedestrian facilities on OR 99 (MP 0 to 1.39) and OR 238 (MP 0 to 1.7)
- Resurface Highway 199 from I-5 (exit 55) to the South Y
- Redwood Avenue improvements including construction of two travel lanes, center turn lane, and bicycle and pedestrian facilities (Redwood Circle to Dowell Road)
- Installation of signal at signal at Redwood Avenue/Dowell Road intersection
- Improvements on West Park Street (6th to Ringuette) including constructing curb, gutter, sidewalk and bicycle lanes.

Alternative A

Midway Avenue to Dowell Road

Between Midway Avenue at the western terminus of the project and Dowell Road, Alternative A has the following design features:

- Highway 199 would remain a four-lane roadway but with a barrier between the eastbound and westbound lanes. From Midway Avenue to west of the entrance to Rogue Community College, the barrier would be a concrete median barrier. This median barrier would transition to a median curb in the vicinity of the Rogue Community College. The median curb would continue from the entrance to the Rogue Community College to Dowell Road.

- Hubbard Lane would be improved to City of Grants Pass standards (including bike lanes and sidewalks) south of Highway 199. The southern-most 400 feet of Hubbard Lane would be realigned to create a new intersection with Demaray Drive. The existing intersection of Hubbard Lane and Demaray Drive would be closed and made into a cul-de-sac.

- The existing configuration of the Highway 199 – Midway Avenue intersection would remain, with two through lanes in each direction and left turn lanes from Highway 199 north and south onto Midway Avenue. Improvements to this intersection would include widening Highway 199 to accommodate u-turn movements.

- Arbor Ridge Drive, Dawn Drive and various private driveways would be restricted to right in/right out movements onto and off of Highway 199.

- The entrance to Rogue Community College from the west (eastbound on Highway 199) would have a deceleration lane for right turns into the college.

Entrance to the college from the east (westbound on Highway 199) would have a dedicated left turn lane. Exit from the college would be right out only.

- The Highway 199 – Hubbard Lane intersection would be constructed to accommodate a future traffic signal when traffic conditions warrant. Left turn lanes on all four of the legs would be constructed and u-turns would be permissible.
- The Highway 199 – Dowell Road intersection would continue to be signalized. This intersection would function as the transition from a four-lane expressway to a six-lane expressway (heading eastbound on the highway).
- A separated bicycle and pedestrian facility would be constructed along the north side of Highway 199 between Hubbard Lane and Dowell Road.

Dowell Road to Fairgrounds

Between Dowell Road and the entrance to the Josephine County Fairgrounds Alternative A has the following design features:

- This segment of Highway 199 would be a six-lane roadway with a raised curb barrier between the eastbound and westbound lanes. Auxiliary lanes would be incorporated at the Allen Creek Road intersection to accommodate turning movements. There would be no direct access to businesses or residences.
- A city street would be constructed to provide new access to the Josephine County Fairgrounds and businesses along the north side of Highway 199. The city street would have two vehicle lanes, bicycle lanes, and sidewalks.
- The existing signal at the intersection of Redwood Avenue and Highway 199 would be removed.
- The intersection of Highway 199 – Allen Creek Road would have the following features:

  - Westbound Highway 199 would have three through lanes continuing westbound, with the right hand lane also allowing for right turns onto northbound Allen Creek Road. There would be two left-turn-only lanes to provide access to southbound Allen Creek Road.

    Eastbound Highway 199 would have one right-turn-only lane onto southbound Allen Creek Road, three through lanes continuing eastbound on Highway 199, and one left-turn lane onto northbound Allen Creek Road to access the new city street.

  - Northbound Allen Creek Road would have two left-turn-only lanes onto westbound Highway 199, one through lane northbound, and one right-turn-only lane (eastbound).

- Southbound Allen Creek Road would have two left-turn-only lanes onto eastbound Highway 199, and one combined right-turn (westbound) and through lane (southbound).

- Allen Creek Road would be extended approximately 250 feet north of the existing Redwood Avenue (where it currently ends at a "T" intersection). This separation from Redwood Avenue is necessary to allow sufficient distance for queuing for those vehicles traveling southbound on Allen Creek Road and wishing to turn right (west) or left (east) on to Highway 199. In addition, the city street would bulb-out to the north such that westbound city street traffic would be aligned with northbound Allen Creek Road traffic upon entering the new intersection between the city street and Allen Creek Road.
- The intersection of Allen Creek Road and the new city street also include realigning Redwood Avenue from the existing intersection with Highway 199 to Redwood Circle. The realigned portion of Redwood Avenue between Allen Creek Road and Redwood Circle would bend Redwood Avenue to the north to align with the new city street intersection with Allen Creek Road. There would also be a new one-way slip ramp to allow westbound traffic from Highway 199 to continue across the intersection to the realigned Redwood Avenue, turn right onto the new city street bulb-out and proceed east, or turn left (south) to the Highway 199 - Allen Creek Road intersection. Thus the new intersection between Allen Creek Road and the city street would become a four-way, signalized intersection but would not allow all traffic movements from all directions.

Fairgrounds to Tussey Lane

Between the entrance to the Josephine County Fairgrounds and Tussey Lane at the eastern terminus of the project Alternative A has the following design features:

- This segment of Highway 199 would be a six-lane roadway with a raised curb barrier between the eastbound and westbound lanes. Auxiliary lanes would be incorporated at the Highway 199 – Ringuette Street intersection to accommodate turning movements. There would be no direct access to businesses or residences along this section.
- A city street would be constructed to provide new access for the Josephine County Fairgrounds and the businesses along the north side of Highway 199. The city street would have two vehicle lanes, bicycle lanes, and sidewalks.
- The existing signal at the fairgrounds entrance would be removed.
- Tussey Lane would no longer access Highway 199 but only the city street.
- The intersection of Highway 199 – Ringuette Street would have the following features:

- Westbound Highway 199 would have two right-turn-only lanes onto northbound Ringuette Street to access the new city street, three through lanes continuing westbound on Highway 199, and one left-turn lane onto southbound Ringuette Street.

- Eastbound Highway 199 would have one right-turn-only lane onto southbound Ringuette Street, three through lanes continuing eastbound on Highway 199, and two left-turn-only lanes onto northbound Ringuette Street.

- Northbound Ringuette Street would have two left-turn lanes onto westbound Highway 199, one combined right-turn (eastbound) and through lane northbound, and one right-turn-only lane (eastbound).

- Southbound Ringuette Street would have a right-turn-only lane onto westbound Highway 199, two through lanes continuing southbound on Ringuette Street, and a left-turn-only lane onto eastbound Highway 199.

- The city street would diverge northward away from Highway 199, intersecting Ringuette Street approximately 500 feet north of the Highway 199 centerline. This separation distance is necessary for sufficient queuing distance for those vehicles traveling southbound on Ringuette Street and wishing to turn right (west) or left (east) on to Highway 199.

Alternative B

Midway Avenue to Dowell Road

This section of Alternative B has the same design features as Alternative A.

Dowell Road to Fairgrounds

For the segment between Dowell Road and the entrance to the Josephine County Fairgrounds, Alternative B has the following design features:

- Highway 199 would be six-lanes with a raised curb barrier between the eastbound and westbound lanes. Auxiliary lanes would be incorporated at Allen Creek Road to accommodate turning movements. There would be no direct access to businesses or residences along this section.

- A city street would be constructed to provide new access to the Josephine County Fairgrounds and the businesses along the north side of Highway 199. The city street would have two vehicle lanes, bicycle lanes, and sidewalks.

- The intersection of Allen Creek Road and the city street would be grade-separated, with Allen Creek Road passing under the city street. The vertical profile of Allen Creek Road would not change but the city street would bridge over Allen Creek Road. The city street would continue west and connect to Redwood Avenue.

- The existing signal at the intersection of Redwood Avenue and Highway 199 would be removed.
- The intersection of Highway 199 – Allen Creek Road would have the following features:

  - Westbound Highway 199 would have two right-turn-only lanes onto northbound Allen Creek Road in addition to three through lanes continuing westbound on Highway 199. There would be two left-turn-only lanes providing access to southbound Allen Creek Road.

  - Northbound Allen Creek Road would have two left-turn-only lanes onto westbound Highway 199, two through lanes northbound, and one right-turn-only lane (eastbound).

  - Southbound Allen Creek Road would have two left-turn-only lanes onto eastbound Highway 199, and one combined right-turn (westbound) and through lane (southbound).

  - Eastbound Highway 199 would have one right-turn-only lane onto southbound Allen Creek Road, three through lanes continuing eastbound on Highway 199, and one left-turn-only lane onto northbound Allen Creek Road to access the new city street.
- To allow users of the city street to access Highway 199, a separate short connector street between the city street and Allen Creek Road is required. The connector street is in the shape of a traditional cloverleaf and begins at the city street approximately 500 feet east of the centerline of Allen Creek Road and terminates north of the existing Allen Creek Road – Redwood Avenue intersection. Traffic traveling eastbound on Redwood Avenue would also have an at-grade slip ramp which allows vehicles to turn right (southbound) onto Allen Creek Road, without crossing the bridge over Allen Creek Road, and continue eastbound on the city street.

Fairgrounds to Tussey Lane

This section of Alternative B has the same design features as Alternative A.

4. Methods and Coordination

A review of the US 199 Expressway Upgrade Hazardous Materials Corridor Study was conducted to identify and estimate the potential impacts that RPEC sites could have on the project and area within the API. Based on the proposed design alternatives and information identified in the Corridor Study (1) impact potentials were assessed for each of the design alternatives (2) mitigation actions to minimize or eliminate potential

impacts were described and (3) resulting effects of the proposed mitigation and project work to both, the project activities and area within the API were presented.

Methods

The review of the Corridor Study addressed three subjects: (1) each of the RPEC sites located within the API (2) documented and observed RPEC site information and (3) the estimated subsurface conditions within the API. After reviewing the Corridor Study, proposed activities for each of the design alternatives were addressed. Activities, such as new alignments with Right of Way purchasing, excavation below sub-grade and possible geotechnical drilling needs were reviewed.

Impact potentials were assessed for each of the design alternatives based on RPEC site locations, documented or suspected on-site contamination, proposed construction activities and Right of Way purchasing. The assessment addressed the three proposed design alternatives: (1) No-Build (2) Alternative A and (3) Alternative B. alternative was sub-divided into sections: (1) Midway Avenue to Dowell Road (2) Dowell Road to Josephine County Fairgrounds and (3) Josephine County Fairgrounds to Tussey Lane. Once RPEC sites with likely potentials of impacting proposed design alternatives were identified, mitigation procedures needed to eliminate or minimize impact potentials were established.

Coordination

The ODOT Region Three Hazardous Materials section will conduct the hazardous material investigations needed for project completion. The first of these investigations began with completing the Hazardous Materials Corridor Study in February 2005. The next will be completing a final Hazardous Materials Technical Report. Upon completion of this report, necessary mitigation work will be completed as well as coordination with the other involved departments of ODOT to ensure that impacts of RPEC sites and project activities on the API will either be eliminated or minimized.

5. Baseline Conditions

The Hazardous Materials Corridor Study identified 41 RPEC sites located within and adjacent to the API, including 16 identified sites and 25 potential sites (Figures 2 and 3). The study consisted of conducting environmental record reviews and site assessments to identify RPEC sites and summarizing proposed construction activities.

As presented in the Corridor Study, sites# (1-16) are referred to as identified sites and sites# (17-41) are referred to as potential sites. The identified sites consist of those sites with documented evidence of at least one of the following RECs: Environmental Cleanup Site Information (ECSI), Resource Conservation and Recovery Act (RCRA) generators,

Leaking Underground Storage Tank (LUST) sites or sites with registered Underground Storage Tanks (USTs). The sites that could likely have greater impacts on the proposed project activities, due to severity of documented or suspected on-site contamination, were described in further detail at the end of this section.

Of the 41 RPEC sites identified in the Corridor Study, 40 are located within the API. Of the 40 sites, 30 could have impacts on the proposed design alternatives, which includes 13 identified sites (sites# 1-13) and 17 potential sites (sites# 17-39, 41). See Exhibits 6 and 7 for summarized RPEC site information located within the API. While there are no RPEC sites that could impact proposed activities for the No-Build Alternative, there are up to 30 RPEC sites that could impact design Alternatives A and B.

No-Build

Based from information obtained in the Corridor Study, there are no RPEC sites that could impact the activities proposed in the No-Build Alternative.

Alternatives A and B

A total of 30 RPEC sites identified in the Corridor Study could impact design Alternatives A and B. This includes the same 13 identified sites and 17 potential sites, which are presented in Exhibits 6 and 7.

The 13 identified sites have the following RECs:

- Three ECSI sites (sites# 1, 11 and 12)
- Nine LUST sites with 15 total LUSTs (sites# 2-9 and 13)
- Two registered UST sites with seven total registered USTs (sites# 4 and 7)
- Two Resource Conservation and Recovery Act (RCRA) generators (sites# 6 and 10).

The 17 potential sites include the following types of land-use properties:

- A former bulk plant facility (site# 17)
- An active gasoline station (site# 24)
- Numerous active or likely former automotive or rental equipment repair facilities (sites# 18, 19, 20, 21, 23, 25, 26, 28, 29, 30, 38, 39 and 41)
- Two sites of concern with unknown activities (sites #22 and 27)

Exhibit 6. Summary of identified sites that could impact design alternatives A and B.

Site Number	Site Name	Location	Site Information	DEQ ID# *Facility ID or Operation ID*	Status
1	Mobil Oil Bulk Facility (Former); Current Guthrie Motors	250 Redwood Highway	ECSI	1823	Suspect Site Requiring Further Investigation
2	Former Triple A RV Center	324 Redwood Highway	LUST	-	Cleanup Completed
3	Former Don's Petroleum Inc; Current Card Paul S Automotive Repair	610 Redwood Highway	LUST	6044	Cleanup Completed
4	Former Colvin Oil Co – Grants Pass #1; Current Chevron Minimart & Moser Paving & Excavating	650 Redwood Highway	LUST (4) USTs	6617	Cleanup Started
5	Josephine County Parks Shop	125 Ringuette St	(2) LUSTs	10222	Cleanup Completed
6	Josephine County School Maintenance Shop & Laidlaw Transit INC.	126 Ringuette St	(3) LUSTs CEG	4473 110	Cleanup Complete, Cleanup Started, Release Confirmed
7	Former Fairgrounds Texaco; Current Fairgrounds Towing & Shell	780 Union Ave	(2) LUSTs (3) USTs	9187	Cleanup Started, Cleanup Started
8	Josephine County Fairgrounds	1451 Fairgrounds Rd	(3) LUSTs	9163	Cleanup Completed, Cleanup Completed, Cleanup Started
9	Former Star Concrete INC.	689 Union Ave	LUST	4134	Cleanup Completed
10	Former Chrome City; Current Cartwright's Valley Meat Co	1550 Nebraska	LQG	4846	-
11	Josephine County Fairgrounds	100 Redwood Ave	ECSI	1708	Suspect Site Requiring Further Investigation
12	Allen Creek Property	1618 Allen Creek Road	ECSI	3107	No Further Action
13	Former Rogue River Rentals South; Current Redwood Nursery	1303 Redwood Avenue	LUST	9977	Cleanup Completed

CEG or VQG – conditionally exempt generator (less than 220 pounds/month)
SQG – small quantity generator (220 – 2,200 pounds per month)
LQG – large quantity generator (more than 2,200 pounds per month)
TSD – treatment storage and disposal facility
LUST – Leaking Underground Storage Tank
UST – Underground Storage Tank
ECSI – Environmental Cleanup Site Information

Exhibit 7. Summary of potential sites that could impact design alternatives A and B.

Site Number	Site Name	Location	Site Information	DEQ ID# *File #*	Status
17	Former Unocal Oil Facility	SW of intersection of Redwood Highway and Williamson Highway	-	-	Facilities no longer
18	Dan'L Boone's Trading Post	470 Redwood Highway	-	-	Active
19	Henderson's Line-Up Brake & RV INC.	417 SW Henderson Lane	-	-	Active
20	Les Schwab Tire Center	320 Union Avenue	Industrial Storm Water	112799	Active New
21	Piper Drive-in	550 Redwood Highway	-	-	Active
22	Abandoned Building	340 Union Avenue	-	-	-
23	Cash Equipment Sales	568 Redwood Highway	-	-	-
24	Current Mobil Station, Bi-Mor Stations INC. No 21	730 Redwood Highway	-	-	Active
25	Revolvo West	699 Union Avenue	-	-	Active
26	Oregon's Best Cars Service Center	715 Union Avenue	-	-	Active
27	A-1 Speedy Plumbing	1222 Redwood Avenue	-	-	Active
28	Auto Wheel Corp (AWC)	1258 Redwood Avenue	-	-	Active
29	Lewis Power Equipment Rental & Repair	1307 Redwood Avenue	-	-	Active
30	Hawg Wild Custom Motorcycles	Located adjacent (just north) to Site 29.	-	-	Active
31	City Automotive Service	1515 Redwood Avenue	-	-	Active
32	United Rentals & Sales	1581 Redwood Avenue	-	-	Active
33	Oregon Crewe Cutters	1665 Redwood Avenue	-	-	Active
34	Ironworks	1660 Redwood Avenue	-	-	Active
35	Larry Williams Automotive & Diagnostic Service	1664B Redwood Avenue	-	-	Active
36	Ken's Quality Automotive Services & Sam & Son Transmissions	1670 Redwood Avenue	-	-	Active
37	The Laundry Room	1720 Redwood Avenue	-	-	Active
38	RW WEST & Auto RV & Repair	1749 Schutzwohl Lane	-	-	Active
39	Miller Auto Sales	1792 Dowell Rd	-	-	Active
41	Mr. Quick's Automotive Repair	1872 Demaray Drive	-	-	Active

The following RPEC sites may have relatively greater impacts on the activities proposed in Alternatives A and B. Summaries of documented site conditions for each site are presented below.

- Site #1 - Former Mobil Oil Bulk Facility ECSI; 250 Redwood Highway. DEQ files indicate that four Above Ground Storage Tanks (ASTs) and one UST were removed from the property in the mid-1970s. According to DEQ, groundwater off-site has slightly elevated TPH and PAHs. DEQ suspects the likely source of these elevated levels is from the former petroleum bulk facility. DEQ is requiring further investigation of this site.

- Site #4 – Former Colvin Oil Co – Grants Pass #1; Current Chevron Minimart and Moser Paving and Excavation; 650 Redwood Highway. There is a LUST report documented as well as four registered USTs. According to DEQ records, the cleanup for the LUST report has not been completed.

- Site #7 – Former Fairgrounds Texaco; Current Fairgrounds Towing and Shell; 780 Union Avenue. There is documentation of two LUSTs and three registered USTs at this site. DEQ records indicate that the cleanup for the LUSTs has not been completed.

- Site #11 - Josephine County Fairgrounds ECSI; 100 Redwood Avenue. According to DEQ online records, in April 1995 3800 gallons of "Vultafoam" 1 (1-dichloro-2-fluoroethane) was released into a gravel parking lot on the Josephine County Fairgrounds property. DEQ notes that the release was due to vandal activity. In addition, DEQ confirmed that 500 tons of soil and gravel were removed from the site and were disposed of at the River Bend Landfill in McMinnville, OR. Furthermore, DEQ records explain that the liquid waste was sent to Burlington Environmental, and stormwater that accumulated in the excavation area in anticipation of confirmation sampling was discharged into Allen Creek under a Water Quality special permit. DEQ is requiring further investigation of this site.

- Site #12 – Allen Creek Property ECSI; 1618 Allen Creek Road. According to DEQ on-line records this property was formerly used for lumber remanufacturing. Site facilities and activities included the following: (1) an office building (2) sawmill (3) yard office and scale shack (4) truck repair shop (5) chip/sawdust conveyor (6) a lumber storage area and (7) miscellaneous outbuildings. The primary concern for DEQ regarding this site included the following: wood treatment preservatives used on-site such as, Pentachlorophenol (PCP), Tetrachlorophenol (TCP) and petroleum hydrocarbons and the extent of remaining contamination in the site soils, surface water sediments and groundwater. DEQ confirms that there has not been off-site contamination into the underlying aquifer beneath this site. DEQ records indicate that the former top soil, which consists of wood fragments/bark, is located between two and four feet below ground surface (bgs), and that this layer is approximately one to three inches thick. In addition, this layer is covered by about three feet of imported fill, and there are clay sediments that lie beneath this bark layer. Finally, the clay sediments have helped confine the elevated PCP and TCP concentrations to the bark layer. The No Further Action determination issued by DEQ was only in regards for the wood treatment area of the property. DEQ has not issued a No Further Action for the rest of the property.

- Site 17 – Former Unocal Oil Facility; Southwest of intersection between Redwood Highway and Williamson Highway. Evidence from aerial photographs taken in 1957 and 1976 indicates the presence of relatively large Above ground Storage Tanks (ASTs).

6. Temporary Impacts

Temporary impacts may occur in the API as a result of existing RPEC sites and proposed construction activities in Alternatives A and B. The temporary impacts consist of all the indirect effects related to proposed construction activities: (1) worker and public health risks (2) construction costs and (3) Right of Way purchasing. The main impacts to worker and public safety can come from unnecessary exposure to hazardous materials during construction. The construction costs relate directly to regulatory compliance needed to work with hazardous materials by following mandatory protocol to ensure worker and public safety. Property values are likely to vary depending on the presence of on-site contamination. Identifying RPEC sites is a valuable asset to the project and community located within the API.

Identifying RPEC sites likely to impact proposed project activities involved numerous variables: (1) site locations relative to proposed project activities (2) estimated groundwater flow directions (3) likely areas of Right of Way purchasing (4) proposed construction activities requiring excavation below sub-grade and (5) severity of documented or suspected on-site contamination. The following sites could impact the proposed construction activities of the design alternatives.

No Build

Since there are no activities planned for this alternative, zero of the 40 RPEC sites identified within the API could impact this design alternative.

Alternative A

There are 30 RPEC sites, within the API, that could impact design Alternative A. This includes 13 identified and 17 potential sites, which are located in the sections below.

Midway Avenue to Dowell Road

Two RPEC sites (potential sites #39 and #41) could impact proposed project activities in this section.

Dowell Road to Fairgrounds

A total of 13 sites, including six identified sites (site# 8-13) and seven potential sites (sites# 25-30, 38), could impact proposed project activities in this section.

Fairgrounds to Tussey Lane

A total of 15 sites, including seven identified sites (sites# 1-7) and eight potential sites (sites# 17-24), could impact proposed project activities in this section.

Alternative B

The same RPEC sites that could impact design Alternative A could also impact design Alternative B.

7. Long-Term Impacts

Long-Term beneficial and non-beneficial impacts may occur to the project and API as a result of the proposed project activities and locations of the RPEC sites. These long-term impacts consist of the direct effects that proposed project activities may have on the project and the API including (1) public health hazards, (2) environmental impacts and (3) project costs. The human health hazards are associated with possible changes in the amount of hazardous materials located, both above and below the ground surface. Benefits to the environment within and adjacent to the API as well as project costs are possible by identifying and possibly removing existing contamination. Project activities could be beneficial to the public and environment within and adjacent to the API by (1) providing additional surface and subsurface information as to the presence of hazardous materials (2) possible removal of hazardous materials from, both above and below the ground surface and (3) eliminating or minimizing potential exposures of hazardous materials to the public, both during and after completion of the project. The proposed project activities may have direct effects on the following RPEC sites.

No Build

Without any construction activities in the API, existing site-contamination (if present) can either be both beneficial and non-beneficial to the API when left undisturbed. Sites with documented on-site contamination will likely not be disturbed and exposed to surface conditions if no construction activities are to occur. Therefore, the proposal for no construction will likely have no direct impacts on the RPEC sites.

Alternative A

The same RPEC sites likely to impact construction activities of the proposed design Alternative A listed in Section 6.0 could have direct impacts on the API and project if disturbed. See Section 6.0 for potential impact sites.

Alternative B

The same RPEC sites likely to impact construction activities of the proposed design Alternative B listed in Section 6.0 could have direct impacts on the API and project if disturbed. See Section 6.0 for potential impact sites.

8. Indirect and Cummulative Effects

Secondary and cumulative impacts and benefits may occur in the project area. Generally, secondary impacts and benefits occur as a result of a proposed project action, but take place later in time than the initial action. Cumulative impacts and benefits occur as a result of the combined effects of several proposed or considered project actions that may take place in the project area before, during, or after the project timeframe.

Indirect Effects

Project activities could potentially have both beneficial and non-beneficial effects on the API upon completion. The potentially beneficial effects include things, such as (1) increased public safety and positive impacts on the environment associated with possible contamination removal in the API (2) improved understanding of existing subsurface conditions from subsurface investigations and (3) enhanced assessment of property values within API as a result of subsurface investigations.

The potentially non-beneficial indirect effects consist mainly of (1) possible exposure of hazardous materials to the public and environment as a result of construction activities and (2) possible re-mobilization of existing contaminated soil and groundwater due to excavation below sub-grade.

Cumulative Effects

Numerous project actions could potentially have beneficial and non-beneficial effects on the API, both during and after completion of activities. The potentially beneficial effects include (1) improved public and environmental safety within and adjacent to the API as a result of subsurface investigations and site-remediation actions necessary for construction activities and risk-based site closures (2) improved worker and public safety during construction as a result of following necessary safety protocol associated with hazardous materials (3) better understanding of existing hazardous materials located above and below the ground surface and (4) enhanced understanding of existing geologic conditions due to subsurface investigations and excavations.

The potentially non-beneficial effects include (1) possible increase in human health safety hazards due to potential disturbance and exposures to contaminated soil and groundwater during and after construction activities and (2) potential increased use of hazardous

materials in the API as a result of possible increased commercial development and activity due to project completion.

This information is intended for these proposed design alternatives and API only. Separate hazmat investigations must be conducted for projects proposed outside or adjacent to the API by other state and private agencies for hazardous material clearances.

Mitigation

Further investigation of the API is necessary to eliminate or minimize the impacts that RPEC sites could have on project activities and vice versa. This investigation would include preparing a Level 2 Preliminary Site Investigation (PSI) report, once a design is chosen, for the areas within the API. The Level 2 PSI would include (1) a subsurface investigation on or adjacent to each site of concern and (2) subsurface sampling that may include analysis for petroleum hydrocarbons using the Northwest Total Petroleum Hydrocarbon Identification (NWTPH-HCID) method, Polychlorinated Biphenyl's (PCBs), RCRA Metals, Asbestos and Lead-based paint. Completing this investigation would have impacts on both, the project as well as the environment and community within the API.

Temporary Impacts

Conducting a Level 2 PSI would have several positive temporary impacts on the proposed project activities and API. These beneficial impacts include (1) reducing potential human health risks during construction (2) identifying the existing subsurface conditions within the API up to 12 feet bgs (3) documenting the existence, concentrations and estimated quantities of existing contamination within the API (4) provide necessary information needed for improved property assessments required for Right of Way purchasing and (5) provide adequate information needed for site clean-up (if needed).

Long-Term Impacts

Conducting a Level 2 PSI would have numerous positive long-term impacts on the proposed project activities and API, as well. The impacts could (1) reduced potential human health risks during and after construction within or adjacent to the API (2) improve environmental conditions within and adjacent to the API and (3) reduce potential project costs.

9. References

Garwood, Jason. Hazardous Materials Corridor Study: US 199 Expressway Upgrade.

Josephine County, Oregon. Roseburg, OR: Oregon Department of Transportation, 2005.

10. Glossary

Term	Definition
Concentration	A concentrated product
Confirmation	The act of confirming or state of being confirmed.
Contamination	Pollutant
Groundwater	Water found below the water table.
Hazardous Material	In a broad sense, any substance or mixture of substances having properties capable of producing adverse health or safety effects.
Hydrocarbon	Any of a class of compounds containing only hydrogen and carbon.
Mitigation	Making less severe, intense or painful.
Petroleum	An oily naturally occurring liquid that is a form of bitumen or a mixture of various hydrocarbons: used as fuel or separated by distillation into gasoline, etc.
Reconnaissance	A general survey of a region.
Soil	The portion of the earth's surface consisting of disintegrated rock and humus.

Appendix A

Figure 1; Vicinity Map

Figure 2; Western Section of API

Figure 3; Eastern Section of API

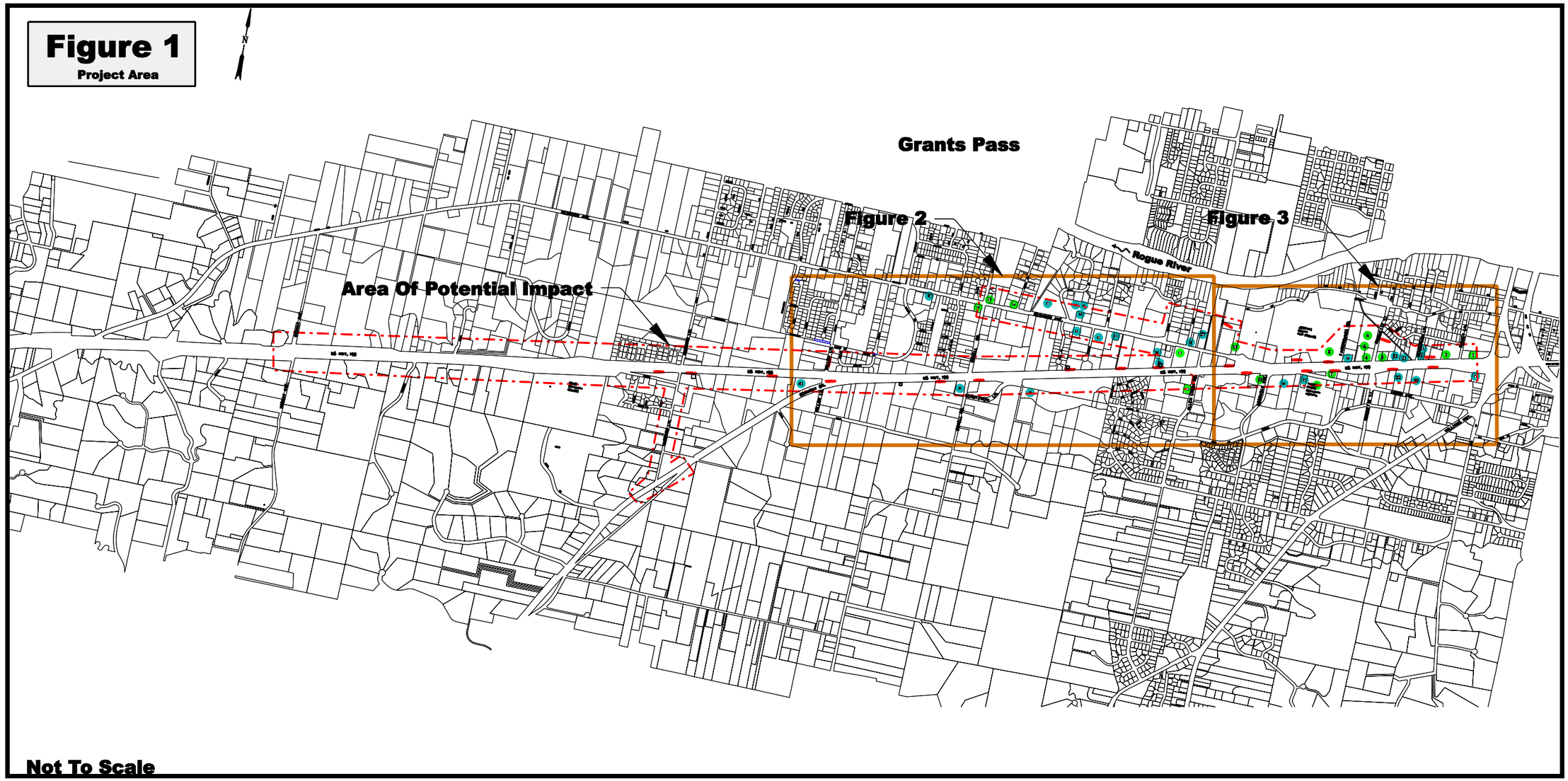


Figure 1
Project Area
N
Grants Pass
Figure 2
Figure 3
Rogue River
Area Of Potential Impact
Not To Scale

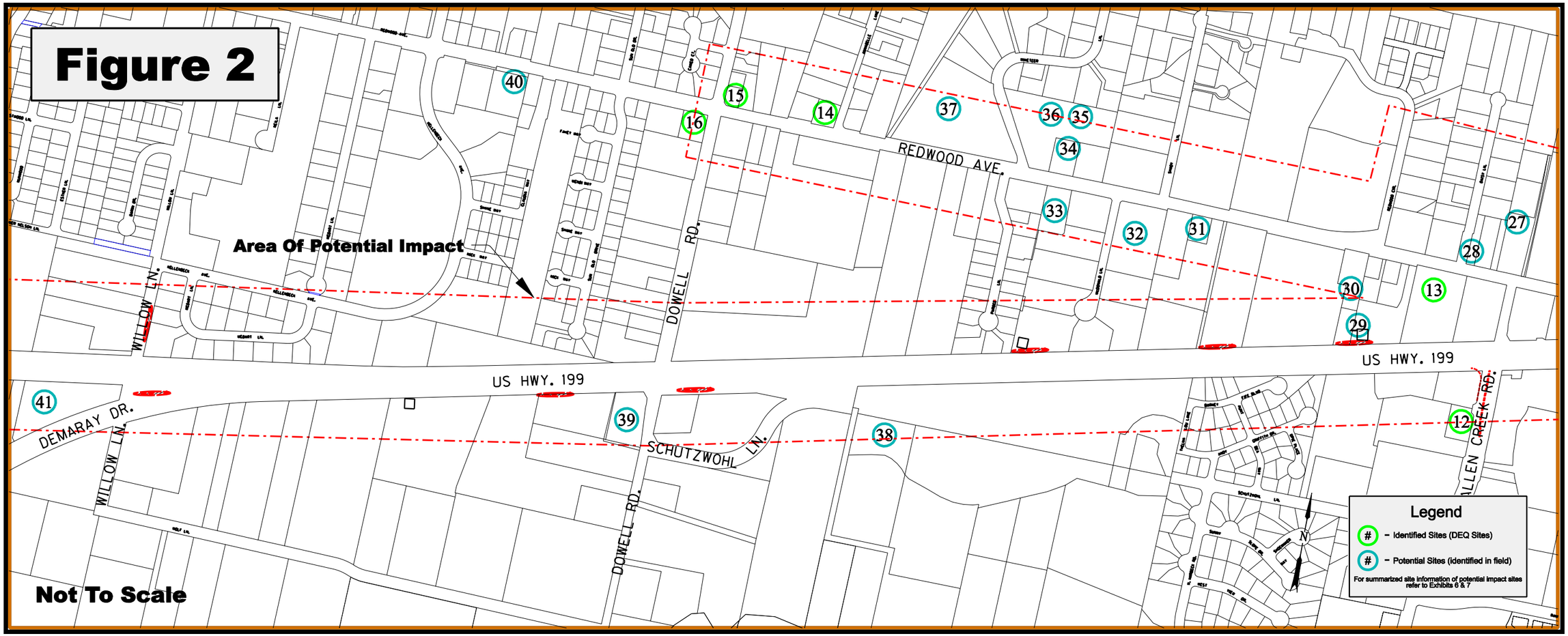


Figure 2
Area Of Potential Impact
REDWOOD AVE.
DOWELL RD.
US HWY. 199
WILLOW LN.
DEMARAY DR.
SCHUTZWOHL LN.
ALLEN CREEK RD.
40
15
16
14
37
36
35
34
33
32
31
30
29
28
27
13
41
39
38
12
Not To Scale
Legend
- Identified Sites (DEQ Sites)
- Potential Sites (identified in field)
For summarized site information of potential impact sites refer to Exhibits 6 & 7

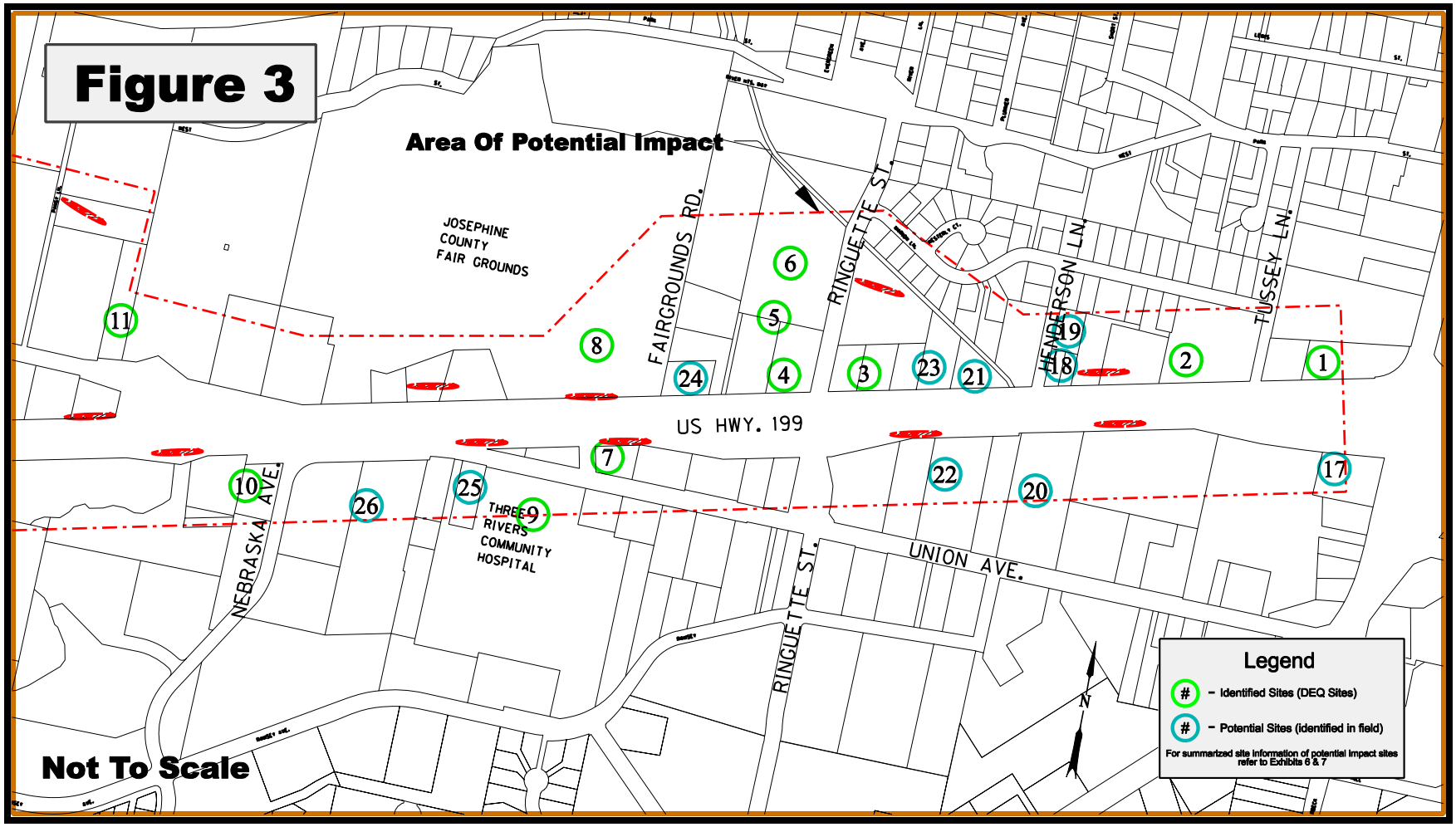


Figure 3
Area Of Potential Impact
JOSEPHINE COUNTY FAIR GROUNDS
FAIRGROUNDS RD.
RINGUETTE ST.
HENDERSON LN.
TUSSEY LN.
US HWY. 199
NEBRASKA AVE.
THREE RIVERS COMMUNITY HOSPITAL
UNION AVE.
RINGUETTE ST.
Not To Scale
Legend
- Identified Sites (DEQ Sites)
- Potential Sites (identified in field)
For summarized site information of potential impact sites refer to Exhibits 6 & 7
N