

**I-5 Exits 40 and 43 (Gold Hill)
Interchange Area Management Plans**

**DRAFT Technical Memorandum #3
Study Area Inventory**

Prepared for

Oregon Department of Transportation, Region 3
3500 NW Stewart Parkway
Roseburg, Oregon 97470

Prepared by

David Evans and Associates, Inc.
2100 SW River Parkway
Portland, Oregon

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3. EXISTING CONDITIONS

This memorandum summarizes the inventory of existing conditions within the Interstate 5 (I-5) Exits 40 and 43 Interchange Management IMSA (IMSA). The existing conditions assessment includes system inventories for roadway, bicycle/pedestrian, transit, bridge conditions, access and rail. Existing environmental and land use conditions are reviewed in the project IMSAs, with the intent to help inform the conceptual alternatives development process in a subsequent phase of the project.

3.1. Transportation System Inventory

The transportation system inventory examines the highway and intersecting roadways, truck intersection turning movements, bicycle and pedestrian facilities, transit facilities, bridges conditions, access locations, and rail facilities.

3.1.1. Roadway Inventory

I-5 Exits 40 and 43 are rural interchanges that currently function as the main access to the City of Gold Hill and the unincorporated community of Rock Point, respectively. The roadways within the IMSA are largely rural without any on-street parking. Table 3-1 provides an inventory of the roadway characteristics. The inventory reviews the state and local (Jackson County) functional classification as well as posted speed, number of lanes, and widths of the travel lanes, travel surface and paved surface. The majority of the inventory was constructed from ODOT mapping and online databases, specifically TransGIS.

Table 3-1. Roadway Inventory

Roadway/ Highway Name	Jurisdiction ^{1,2}	ODOT/Federal Functional Classification ^{1,2}	City/County Functional Classification ^{1,2}	Posted Speed	No. of Lanes	Width (ft)	
						Travel Surface	Paved Surface
Interstate 5							
Mainline	ODOT	Interstate, FR, NHS	-	65	4	48	86
I-5 Exit 40 Ramps	ODOT	Interstate, NHS	Minor Arterial (SB ramps only)	45 ³	1	16	26
I-5 Exit 43 Ramps	ODOT	Interstate, NHS	Minor Arterial (all except NB on ramp)	45	1	16	26
I-5 Exit 40							
Access Rd (OR 99)	ODOT	Rural Minor Arterial	Minor Arterial	35	2	24-26	24-34
Blackwell Rd	Jackson County	Rural Major Collector	Minor Arterial	40	2	24	28
2 nd Ave (OR 99)	ODOT	Rural Minor Arterial	Minor Arterial	40	2	22	24
Lampman Rd	Jackson County	Local	Local	45	2	18-22	18-22
Old Stage Rd	Jackson County	Local / Rural Major Collector ⁴	Local / Rural Major Collector ⁴	45	2	21	21

Table 3-1. Roadway Inventory

Roadway/ Highway Name	Jurisdiction ^{1,2}	ODOT/Federal Functional Classification ^{1,2}	City/County Functional Classification ^{1,2}	Posted Speed	No. of Lanes	Width (ft)	
						Travel Surface	Paved Surface
I-5 Exit 43							
OR 234 / Rogue River Hwy (OR 99)	ODOT	Rural Minor Arterial	Minor Arterial	45	2	18-28	18-38
Main St (OR 99)	ODOT	Rural Minor Arterial	Minor Arterial	TBD	2	26	26-36
N River Rd	Jackson County	Rural Major Collector	Minor Arterial	45	2	24	24
Profetta Ln	Jackson County	Local	Local	TBD	2	20-22	20-22
Frontage Rd	Jackson County	Local	Local	45	2	22	22

Acronyms: NHS = National Highway System; FR = Freight Route; TR = Truck Route; TBD = To be determined with site visit

Notes:

1. State functional classification maps and TransGIS mapping tool
2. Jackson County Transportation System Plan, 2005
3. The Exit 40 southbound off ramp has a posted speed of 35 mph
4. The Jackson County Transportation System Plan (TSP) classifies Old Stage Rd. as a local road west of Access Rd, and a rural major collector south of Access Rd

3.1.2. Interchange Geometry

Both the Exit 40 and Exit 43 interchanges have a standard diamond layout. All ramp terminal intersections are STOP-controlled with single lane off-ramps that flare at the approaches to the local roadway system.

I-5 Exit 40

The existing interchange geometric design at Exit 40, as summarized by ODOT in the *I-5 State of the Interstate Report*, does not meet some of the current design guidelines, which raises potential safety concerns. The geometric assessment, conducted in 2000 and visually confirmed using aerial imaging, showed the following deficiencies:

- Northbound Off Ramp: Does not have adequate deceleration distance before horizontal curves on ramp (200 feet versus desired 460 feet for 35 mph curve)
- Southbound Off Ramp: Does not have adequate deceleration distance before horizontal curves on ramp (280 feet versus desired 500 feet for 30 mph curve)
- Northbound On Ramp: Does not have adequate acceleration length after horizontal curves on ramp (770 feet versus desired 1,100 feet after a 30 mph curve)
- Southbound On Ramp: Does not have adequate acceleration length after horizontal curves on ramp (710 feet versus desired 1,100 feet after a 30 mph curve)

The bridge over I-5 at Exit 40 was repaired as part of the Oregon Transportation Investment Act (OTIA) with construction completed in 2009. The bridge is now two lanes wide with a paved width of approximately 36 feet. This allows for 12-foot travel lanes and 5- to 6-foot shoulders on both sides of the road.

I-5 Exit 43

The existing interchange geometric design at Exit 43 also has safety concerns summarized by ODOT in the *I-5 State of the Interstate Report*. The geometric deficiency assessment, conducted in 2000 and visually confirmed using aerial imaging, showed the following deficiencies:

- Northbound Off Ramp: Does not have adequate deceleration distance before horizontal curves on ramp (305 feet versus desired 350 feet for 55 mph curve)
- Southbound Off Ramp: Does not have adequate deceleration distance before horizontal curves on ramp (280 feet versus desired 350 feet for 65 mph curve)
- Northbound Off Ramp Intersection: Cross street does not meet desired stopping sight distance (165 feet versus 250-280 feet for 55 mph speed and crest vertical curve)
- Southbound Off Ramp Intersection: Cross street does not meet desired stopping sight distance (165 feet versus 250-280 feet for 55 mph speed and crest vertical curve)

Although the stopping sight distance at the off ramp intersections with Main Street does not meet the standard for a 55 mph speed, few vehicles are likely to be traveling at that speed on Main Street because of the nearby intersections and the upgrade at the overpass.

The bridge over I-5 at Exit 43 is two lanes wide with a paved width of approximately 30 feet. This provides 12-foot travel lanes and 2-foot shoulders with raised curbs on both sides of the road.

3.1.3. Truck Turning Movement Inventory

The truck turning movement inventory assesses the level of difficulty for truck traffic to navigate I-5 Exit 40 and Exit 43 study area intersections. Table 3-2 provides an inventory of existing truck turning deficiencies (i.e., truck needs portion of opposing travel lane to complete turning movement) at major study area intersections. Intersections that primarily serve residential traffic were not assessed for truck accessibility.

Table 3-2. Truck Turning Movement Inventory

Intersections	Deficient Movements	
I-5 Exit 40		
Access Rd & Blackwell Rd (OR 99)	Access Rd: NBL, NBR	Blackwell Rd: WBL, EBR
Access Rd & I-5 NB Ramps	Access Rd: None	I-5 NB Ramps: WBL, WBR
Access Rd & I-5 SB Ramps	Access Rd: SBL	I-5 SB Ramps: EBL
Access Rd & Old Stage Rd	Access Rd: NBL, SBR	Old Stage Rd: None
I-5 Exit 43		
OR 99/OR 234 & N. River Rd	OR 99/OR 234: NBL	N. River Rd: EBR
OR 99/OR 234 & Main St	OR 99/OR 234: WBL, EBR	Main St: NBL, NBR
Main St & I-5 NB Ramps	Main St: NBL	I-5 NB Ramps: WBL, WBR
Main St & I-5 SB Ramps	Main St: SBL	I-5 SB Ramps: EBL

Acronyms: EB = eastbound; WB = westbound; NB = northbound; and SB = southbound. L = left; T = through; and R = right.

All intersections assessed in each IMSA have at least two turning movements that will not allow a WB-67 (design vehicle) to execute a turning maneuver without crossing into oncoming traffic or tracking onto the roadway shoulder. In some cases, both are necessary when a WB-67 is making a turn. Truck turning movement diagrams can be found in Appendix B.

3.1.4. Pavement Conditions

Inside the IMSA, pavement type and conditions vary. Table 3-3 summarizes the pavement conditions of roads within the IMSA.

Table 3-3. Pavement Conditions

Roadway / Highway Name	Pavement Type	Pavement Condition ¹	Shoulder Width (ft)	
			Left	Right
Interstate 5				
Mainline	Paved	Fair	7	12
Exit 40 Ramps	Paved	Fair/Poor ²	5	5
Exit 43 Ramps	Paved	Fair	5	5
I-5 Exit 40				
Access Rd (OR 99)	Paved	Fair	0-5	0-5
Blackwell Rd	Paved	Fair	0-2	0-2
2 nd Ave (OR 99)	Paved	Poor	0-1	0-1
Lampman Rd	Paved	Fair	0	0
Old Stage Rd	Paved / Gravel	Good	0	0
I-5 Exit 43				
OR 234 / Rogue River Hwy (OR 99)	Paved	Fair – Poor	0-6	0-6
Main St	Paved	Poor	0-2	0-2
N River Rd	Paved	Fair	0	0
Profetta Ln	Paved	Poor	0	0
Frontage Rd	Paved	Fair	0	0

Notes:

1. From ODOT TransGIS database
2. I-5 Exit 40 southbound on ramp is rated as Poor; all other ramps at this interchange are rated as Fair.

3.1.5. Pedestrian and Bicycle Facilities Inventory

Traditional pedestrian and bicycle facilities do not exist within the IMSAs; none of the IMSA roadways have paved sidewalks or bicycle lanes. In addition to the lack of established pedestrian and bicycle facilities, many of the roads have substandard shoulder width and pavement quality, as discussed in the previous section.

I-5 Exit 40

The IMSA for Exit 40 includes or abuts several popular bike routes. One route runs along Old Stage Road from Gold Hill, across the freeway (through the IMSA), and continuing southward towards Medford and Jacksonville. The nearby Rogue River Greenway Trail (RRGT) runs

through Gold Hill on a combination of city streets and a multi-use path that runs along the Rogue River northeast of the city. Several bicycling websites identify loops that use both the RRG T and Old Stage Road.

I-5 Exit 43

The IMSA for Exit 43 includes the RRG T, which runs on-street along OR 234 to N River Road. This on-street segment of the RRG T connects between two multi-use paths and the Valley of the Rogue State Park, making it a popular route for cyclists.

3.1.6. Transit Inventory

Transit is limited through the IMSA, with the only stops being in Gold Hill for the Southwest Point Shuttle. The Southwest Point Shuttle (operated by Klamath Shuttle) makes a daily round trip between Brookings and Klamath Falls, with a westbound morning and eastbound afternoon stop in Gold Hill. Klamath Shuttle is interlined with Greyhound Lines, Inc., and Greyhound tickets can be purchased through them.

3.1.7. Bridge Inventory

The 2012 bridge inventory data was obtained from ODOT's Bridge Maintenance Section and reviewed. One element used to evaluate bridge conditions is the sufficiency rating, which is a complex formula that takes into account four separate factors to obtain a numeric value rating the ability of a bridge to service demand. The result of this method is a percentage in which 100 percent would represent an entirely sufficient bridge and zero percent would represent an entirely insufficient or deficient bridge. Those bridges with a sufficiency rating of 80 or less are eligible for rehabilitation. Those bridges with a sufficiency of 50 or less are eligible for replacement. Bridges lose their eligibility status for a period of ten years after a (Highway Bridge Program) project is completed.

Two additional elements are used to rate bridge conditions: structural deficiency and functional obsolescence. Structural deficiency is determined based on the condition rating for the deck, superstructure, substructure, or culvert and retaining walls. It may also be based on the appraisal rating of the structural condition or waterway adequacy. Functional obsolescence is determined based on the appraisal rating for the bridge deck geometry, underclearances, and approach roadway alignment. It may also be based on the appraisal rating of the structural condition or waterway adequacy.

There are four bridges located within or near the IMSA, as listed in Table 3-4.

I-5 Exit 40

The Access Road bridge (07601B) over I-5 at Exit 40 was repaired as part of OTIA III with construction completed in 2009. The bridge is now two lanes wide with a paved width of approximately 36 feet. There are no deficiencies listed for the bridge and the sufficiency rating is 69.2, an improvement over previous ratings before repairs and widening.

Table 3-4. Bridge Conditions

Bridge ID	Milepoint	Name	No. of Lanes	Sufficiency Rating	Deficiencies
I-5 Exit 40					
07601B	3.07	OR 234 spur over I-5 (Hwy 271 Spur over Hwy 1 [S Gold Hill])	2	69.2	ND
00576	2.65	OR 234 across the Rogue River (Rogue River, Hwy 271 [Gold Hill])	2	57.9	SD
I-5 Exit 43					
08382	14.64	OR 99 over I-5 (Hwy 60 over Hwy 1)	2	59.2	ND
00332A	0.09	OR 234/OR 99 across Rogue River & Lampman Rd (Rogue River +, Hwy 271 [Rock point])	2	43.3	OD: LC, LSL

Acronyms: ND = Not Deficient; SD = Structurally Deficient; OD = Other Deficiencies; LC = Load Capacity; LSL = Low Service Life

Source: ODOT, 2012 Bridge Condition Report

Just outside of the IMSA, the bridge (00576) crossing the Rogue River east of Gold Hill is identified as structurally deficient with a sufficiency rating of 57.9.

I-5 Exit 43

The Main Street bridge (08382) over I-5 at Exit 43 is two lanes wide with a paved width of approximately 30 feet. There are no deficiencies listed for the bridge and the sufficiency rating is 59.2.

The OR 234/OR 99 bridge (00332A) crossing a narrow strait of the Rogue River is identified as having low service life and load capacity deficiencies. The railings on this bridge were recently replaced and no load restrictions are posted. However the travel lanes are still only 9 feet wide.

3.1.8. Access Inventory

Access inventory data was obtained from aerial photography and site visits. This data includes public street intersections, as well as both public and private access points to businesses and residences. For Exit 40, 34 access points were identified along the IMSA roads, while 21 access points were identified for Exit 43.

Figure 3-1 provides aerial maps depicting existing access locations for each interchange. Table 3-5 corresponds to the figures and provides details for all approaches in the IMSA including: roadway, type of use, width, side of the road and distance to next access point. Access spacing is measured along one side of the roadway without regard for connections on the opposite side.

Table 3-5. IMSA Access Inventory

ID	Main Roadway	Access Type	Site Use	Width (ft)	Distance to Next Point (ft)
I-5 Exit 40					
Access Points along South/East Side of Road					
2	Old Stage Rd	Private	Residential	TBD	693
4	Old Stage Rd	Public	Medford Moose Lodge #178 LO	TBD	300
5	Old Stage Rd	Public	Medford Moose Lodge #178 LO	TBD	122
8	Old Stage Rd	Private	Residential	TBD	359
11	Old Stage Rd	Private	Residential	TBD	552
17	Access Rd	Public	I-5 Exit 40 Southbound On Ramp	TBD	614
18	Access Rd	Public	I-5 Exit 40 Northbound Off Ramp	TBD	187
19	Access Rd	Public	Lampman Rd	TBD	755
21	Access Rd	Private	Residential	TBD	210
24	Access Rd	Private	Residential	TBD	103
25	Access Rd	Private	Residential	TBD	121
26	Blackwell Rd	Public	Access Rd	TBD	472
27	Blackwell Rd	Private	Residential	TBD	294
29	Blackwell Rd	Private	Residential	TBD	158
30	Blackwell Rd	Private	Residential	TBD	25
31	Blackwell Rd	Private	Residential	TBD	216
33	Blackwell Rd	Private	Residential	TBD	51
34	Blackwell Rd	Private	Residential	TBD	51
Access Points along North/West Side of Road					
1	Old Stage Rd	Private	Residential	TBD	649
3	Old Stage Rd	Private	Residential	TBD	687
6	Old Stage Rd	Public	Access Rd	TBD	92
7	Old Stage Rd	Private	Residential	TBD	218
9	Old Stage Rd	Private	Residential	TBD	118
10	Old Stage Rd	Private	Residential	TBD	356
12	Old Stage Rd	Private	Residential	TBD	83
13	Old Stage Rd	Private	Residential	TBD	101
14	Old Stage Rd	Private	Residential	TBD	39
15	Old Stage Rd	Private	Residential	TBD	188
16	Old Stage Rd	Private	Residential	TBD	188
17	Access Rd	Public	I-5 Exit 40 Southbound Off Ramp	TBD	614
18	Access Rd	Public	I-5 Exit 40 Northbound On Ramp	TBD	187
20	Access Rd	Public	Jackson County Fire District #3	TBD	333
22	Garden Row	Public	Running Salmon RV Park	TBD	23
23	Garden Row	Public	Running Salmon RV Park	TBD	328
28	Blackwell Rd	Private	Residential	TBD	487
32	Blackwell Rd	Private	Residential	TBD	487

Table 3-5. IMSA Access Inventory

ID	Main Roadway	Access Type	Site Use	Width (ft)	Distance to Next Point (ft)
I-5 Exit 43					
Access Points along South/East Side of Road					
35	OR 99	Private	Residential	TBD	177
37	OR 99	Private	Residential	TBD	193
38	OR 99	Private	Residential	TBD	88
40	OR 99	Private	Residential	TBD	50
41	OR 99	Private	Residential??	TBD	122
42	OR 99	Private	Residential??	TBD	269
44	OR 99	Private	Residential	TBD	212
46	OR 99	Public	Rowley & Rowley Inc.	TBD	218
47	OR 99	Public	Access Rd	TBD	384
49	Access Rd	Public	I-5 Exit 43 Northbound Off Ramp	TBD	648
50	Access Rd	Public	I-5 Exit 43 Southbound On Ramp	TBD	138
52	Frontage Rd	Private	Brotherton Pipeline, Inc.	TBD	410
53	Frontage Rd	Private	Brotherton Pipeline, Inc.	TBD	406
54	Frontage Rd	Private	Brotherton Pipeline, Inc.	TBD	737
55	Frontage Rd	Private	Brotherton Pipeline, Inc.	TBD	737
Access Points along North/West Side of Road					
36	OR 99	Private	Residential	TBD	299
39	OR 99	Private	Residential	TBD	236
42	OR 99	Private	Residential	TBD	269
43	OR 99	Private	Residential	TBD	223
45	OR 99	Private	Residential	TBD	972
48	OR 99	Public	Lampman Rd	TBD	972
49	Access Rd	Public	I-5 Exit 43 Northbound On Ramp	TBD	648
50	Access Rd	Public	I-5 Exit 43 Southbound Off Ramp	TBD	138
51	Frontage Rd	Public	Frontage Rd	TBD	913

Acronyms: TBD = To be determined with site visit

Source David Evans and Associates, Inc.

At Exit 40, the northbound and southbound ramp terminals are spaced approximately 615 feet apart with accesses located as close as 185 feet from the ramps. At Exit 43, the northbound and southbound ramp terminals are spaced approximately 650 feet apart with accesses located as close as 140 feet from the ramps. The Oregon Highway Plan (OHP) recommends a minimum spacing of 1,320 feet (¼ mile) on either side of freeway ramps. As traffic volumes continue to grow, the proximity of these intersections could affect the safe and efficient function of the interchange area.

Outside the ¼-mile influence area of the ramp terminals, Jackson County uses spacing standards for minor collectors (150 feet), major collectors (225 feet), and arterials (300 feet), as identified in their TSP¹.

3.1.9. Rail Inventory

One railroad line passes through the IMSA. The Central Oregon and Pacific (CORP) Railroad is a short line railroad owned by RailAmerica, Inc., which is based in Jacksonville, Florida. Currently, the railroad line is exclusively for freight, with 90 percent of their delivery consisting of forest products.

CORP, headquartered in Roseburg, Oregon, has 389 miles of track between Eugene, Oregon and Black Butte, California. CORP tracks are maintained to Federal Railroad Administration (FRA) Class 1 (47 miles) and Class 2 (200 miles) conditions, which limits maximum speeds to 10 mph for Class 1 or 25 mph for Class 2. Current service includes one northbound and one southbound train five days a week on four routes:

- Medford and Grants Pass
- Glendale and Medford
- Medford and Black Butte
- White City and Medford

No passenger rail service is available in the IMSA; the closest available is AMTRAK located in Klamath Falls, OR.

3.1.10. Summary of Existing Transportation System Deficiencies

Existing deficiencies identified through the interchange inventory and analyses are summarized in Table 3-6.

Table 3-6. Summary of Existing Deficiencies

Deficiency	Location	Related Goals
Geometry		
Ramp Deficiencies	I-5 Exit 40	<ul style="list-style-type: none"> ▪ Mobility ▪ Freight Operations ▪ Safety
	<ul style="list-style-type: none"> ▪ Northbound and Southbound Off Ramps: Does not have adequate deceleration distance before horizontal curves on ramp ▪ Northbound and Southbound On Ramps: Does not have adequate acceleration length after horizontal curves on ramp 	
	I-5 Exit 43	
	<ul style="list-style-type: none"> ▪ Northbound and Southbound Off Ramps – Does not have adequate deceleration distance before horizontal curves on ramp ▪ Northbound and Southbound Off Ramp Intersections: Cross street does not meet desired stopping sight distance 	

¹ Jackson County Transportation System Plan Table 5-2, 2005.

Table 3-6. Summary of Existing Deficiencies

Deficiency	Location	Related Goals
Inadequate Truck Turning Radius	<p>I-5 Exit 40</p> <ul style="list-style-type: none"> ▪ Access Rd & Blackwell Rd (OR 99): NBL, NBR on Access Rd and WBL, EBR on Blackwell Rd ▪ Access Rd & I-5 NB Ramp: WBL, WBR on I-5 NB Ramps ▪ Access Rd & I-5 SB Ramps: SBL on Access Rd and EBL on I-5 SB Ramps ▪ Access Rd & Old Stage Rd: NBL, SBR on Access Rd <p>I-5 Exit 43</p> <ul style="list-style-type: none"> ▪ OR 99/OR 234 & N. River Rd: NBL on OR 99/OR 234 and EBR on N. River Rd ▪ OR 99/OR 234 & Main St: WBL, EBR on OR 99/OR 234 and NBL, NBR on Main St ▪ Main St & I-5 NB Ramps: NBL on Main St and WBL, WBR on I-5 NB Ramps ▪ Main St & I-5 SB Ramps: SBL on Main St and EBL on I-5 SB Ramps 	<ul style="list-style-type: none"> ▪ Mobility ▪ Freight Operations ▪ Safety
Access Spacing	<ul style="list-style-type: none"> ▪ Multiple accesses within ½ mile of ramps for both interchanges 	<ul style="list-style-type: none"> ▪ Safety
Pavement		
Poor Pavement	<ul style="list-style-type: none"> ▪ 2nd Avenue (OR 99) ▪ OR 234/Rogue River Hwy (OR 99) ▪ Main Street ▪ Profetta Lane 	<ul style="list-style-type: none"> ▪ Mobility
Bridge		
Structurally Deficient	<p>I-5 Exit 40</p> <ul style="list-style-type: none"> ▪ OR 234 across the Rogue River (sufficiency rating: 57.9) 	<ul style="list-style-type: none"> ▪ Mobility ▪ Freight Operations
Other Deficiency	<p>I-5 Exit 43</p> <ul style="list-style-type: none"> ▪ OR 234/OR 99 across Rogue River and Lampman Rd (sufficiency rating: 43.3 and identified as load capacity, low service life) 	<ul style="list-style-type: none"> ▪ Mobility ▪ Freight Operations
Pedestrian Facilities		
Limited Sidewalks	<ul style="list-style-type: none"> ▪ No designated sidewalk areas are present within the I-5 Exit 40 or I-5 Exit 43 IMSAs. 	<ul style="list-style-type: none"> ▪ Safety
Limited Bike Lanes	<ul style="list-style-type: none"> ▪ No bike lanes are striped within the I-5 Exit 40 or I-5 Exit 43 IMSAs. ▪ Shoulder widths for bicycle usage are insufficient along most roadways. 	<ul style="list-style-type: none"> ▪ Safety

3.2. Existing Environmental Summary

To understand the potential existing environmental, and to help inform the subsequent conceptual alternatives development process for improvements in the IMSAs, this section identifies and reviews the existing environmental conditions in the IMSAs. The information gathered was taken primarily from published documents and maps, GIS data, and email correspondence with appropriate professional contacts. A summary of the research that includes the mapped known environmental resources is provided. It identifies areas where existing conditions may constrain transportation improvement projects.

3.2.1. Wildlife Habitat and Wetlands

The IMSAs are within the Middle Rogue River Watershed. The Rogue River runs south to north through the eastern section of both IMSAs (see Figure 3-2). The Rogue River supports Summer and Winter steelhead and Fall and Spring Chinook salmon, Coho salmon, and Pacific Lamprey. In the Exit 40 IMSA, Kane Creek flows from southwest to northeast and supports Summer and Winter steelhead. Blackwell Creek is east of I-5 just north of Lampman Road and flows from the south into the Rogue River. There are no creeks or streams in the Exit 43 IMSA.

The Jackson County Goal 5 Resources Background Document 1990 (Open Spaces, Scenic and Natural Areas and Historic Resources), identifies the West Valley Wildlife Area west of I-5 in both IMSAs. The Wildlife Area is described as:

Unit locates south and west of the Interstate-5 corridor on generally north-facing slopes drained by tributaries of the Rogue River and Bear Creek. Supports low densities of resident deer throughout the year, with annual movement fluctuating according to weather severity. Its slope space, predominance of conifers and hardwoods, and limited browse species make this extended range relatively poor habitat and of least importance in comparison to other range units in the county.

Outside of the IMSAs to the east of the Rogue River is the Sardine Creek Wildlife Area. This unit is described as:

Unit is located to the south and east of the Evans Creek Unit, generally north of Rogue River and the City of Gold Hill. This unit is similar to the Evans Creek Unit in that it supports a resident deer population, where animal movement fluctuates elevationally with weather severity. Slope space and vegetative variety make the Sardine Creek Unit a relatively more desirable habitat.

Other wildlife potentially found in the IMSAs are mourning dove, valley quail, blue grouse, ruffed grouse, mountain quail, band-tailed pigeon, western gray squirrel, ducks, geese, American coot, common snipe, black bear, cougar, fox, coyote, otter, mink, muskrat, raccoon, and beaver.

Wildlife needs the ability to move to access food, water, shelter, mates, and wintering habitat and to disperse to maintain healthy populations. Loss of habitat connectivity due to manmade barriers is a major contributor to loss of species and degradation of ecosystems. In the IMSAs, the water resources (Rogue River, Kane and Blackwell creeks) provide linear wildlife habitat and connections between the upland wildlife areas and water resources. However, I-5 creates a barrier between wildlife areas to the west and east and the Rogue River. The Oregon Department of Fish and Wildlife (ODFW), under the Oregon Wildlife Movement Strategy and in partnership with other government agencies, produces data for wildlife linkages, which are key movement areas for wildlife, specifically across roads. For Exit 43, the entire IMSA has a moderate to high wildlife movement threat value based on roadkill data (ODOT's Wildlife Collision Hotspots dataset), and areas identified during the workshops by ODFW and other

agency staff, areas important for multiple species, and areas connected to public lands. A more detailed qualitative explanation of ranking process can be found in the ODFW linkages report.²

In the Exit 40 IMSA, there is a small area of Freshwater Forested/Shrub Wetlands at the river bend on the east side of the Rogue River and wetland. There is a Freshwater Emergent Wetland west of Old Stage Road. Wetland areas can be found along both Kane and Blackwell Creeks. In the Exit 43 IMSA, there is a Freshwater Emergent Wetland on the eastern side of the Rogue River. In addition to the mapped wetlands, there are likely unmapped wetland areas in the Exit 40 IMSA due to the topography of the IMSAs which is a valley floor with the Rogue River and supporting streams.

IAMP Considerations: *To preserve wildlife habitat, disturbances to undeveloped areas should be avoided or minimized if possible. Wildlife movement and passage should be considered in project design. Erosion control and water quality Best Management Practices can protect impacts to aquatic habitat. Wetland permits will be required if impacts to wetlands are unavoidable. Wetland impacts could be minimized or avoided and protective measures integrated into project design and construction.*

3.2.2. Threatened and Endangered Species

The Oregon Natural Heritage Information Center (ONHIC) database documents the federally listed and state listed threatened and endangered (T&E) species. The State of Oregon and the federal government maintain separate lists of T&E species. These are species whose status is such that they are at some degree of risk of becoming extinct. The ONHIC information, based on reported historic sightings within two miles of the IMSAs, is summarized in Table 3-7. There is only one federally-listed threatened species, the Coho salmon, and no state-listed T&E species. However, there are both state and federal species listed as sensitive or species of concern.

Under state law (Oregon Revised Statutes 496.171 to 496.192) the Fish and Wildlife Commission, through the ODFW, maintains the list of native wildlife species in Oregon that have been determined to be either threatened or endangered according to criteria set forth by rule (Oregon Administrative Rule [OAR] 635-100-0105). Plant listings are handled through the Oregon Department of Agriculture, while most invertebrate listings are conducted through the Oregon Natural Heritage Program.

Under federal law, the U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) share responsibility for implementing the federal Endangered Species Act (ESA) of 1973 (Public Law 93-205, 16 United States Code (USC) § 1531), as amended. In general, USFWS has oversight for land and freshwater species and NOAA for marine and anadromous fish species. In addition to information about listed species listed, the USFWS Oregon Field Office maintains a list of Species of Concern.

²https://nrimp.dfw.state.or.us/web%20stores/data%20libraries/files/ODFW/ODFW_806_2_Linkages_Report_Final_2009.pdf).

Table 3-7. ONHIC-Identified Federal and State Listed Threatened or Endangered Species

Common Name	Scientific Name	Status	
		Federal ¹	State ²
<i>Vertebrate Animal</i>			
Common kingsnake	<i>Lampropeltis getula</i>	SOC	SV
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	SOC	SV
California mountain kingsnake	<i>Lampropeltis zonata</i>	SOC	SC
Steelhead (Klamath Mountains Province ESU, summer run)	<i>Oncorhynchus mykiss pop. 24</i>	-	SC/SV
Chinook salmon (Southern Oregon/Northern California Coast ESU, spring run)	<i>Oncorhynchus tshawytscha pop. 25</i>	-	SV
Chinook salmon (Southern Oregon/Northern California Coast ESU, fall run)	<i>Oncorhynchus tshawytscha pop. 26</i>	-	SV
Coho salmon (Southern Oregon/Northern California Coasts ESU)	<i>Oncorhynchus kisutch pop. 2</i>	LT	SV
<i>Invertebrate Animal</i>			
Franklin's bumblebee	<i>Bombus franklini</i>	SOC	-
<i>Vascular Plant</i>			
Slender meadow-foam	<i>Limnanthes gracilis ssp. gracilis</i>	SOC	C
Red-root yampah	<i>Perideridia erythrorhiza</i>	SOC	C

Acronyms: SOC = Species of Concern; LT = Listed Threatened; SV = Sensitive-Vulnerable; SC = Sensitive-Critical; C Candidate for Listing as Threatened or Endangered)

Source: Oregon Natural Heritage Information Center (ONHIC) database, 2012

Once it is listed as T&E, a species is afforded the full range of protections available under the ESA, including prohibitions on killing, harming or otherwise “taking” a species. In some instances, the listing of a species can be avoided by the development of Candidate Conservation Agreements that may remove threats facing the candidate species.

A species is listed as one of two categories, endangered or threatened, depending on its status and the degree of threat it faces. An “endangered species” is one that is in danger of extinction throughout all or a significant portion of its range. A “threatened species” is one that is likely to become endangered in the foreseeable future throughout all or a significant portion of its range. “Species of Concern” is an informal term under the federal listing that is not specifically defined in the federal ESA. The term commonly refers to species that are declining or appear to be in need of conservation.

Under Oregon’s Sensitive Species Rule (OAR 635-100-040), a “sensitive” species classification was created that focuses fish and wildlife management and research activities on species that need conservation attention. “Sensitive” refers to naturally reproducing fish and wildlife species, subspecies, or populations that are facing one or more threats to their populations and/or habitats. Implementation of appropriate conservation measures to address the threats may prevent them from declining to the point of qualifying for threatened or endangered status.

Sensitive species are assigned one of two subcategories. “Critical” sensitive species are imperiled with extirpation from a specific geographical area of the state because of small population sizes, habitat loss or degradation, and/or immediate threats. Critical sensitive species may decline to the point of qualifying for threatened or endangered status if conservation actions are not taken. “Vulnerable” sensitive species are facing one or more threats to their populations and/or habitats. Although not currently imperiled with extirpation from a specific geographical area of the state, vulnerable species could, however, become so with continued or increased threats to populations and/or habitats. For plants, there are no sensitive species candidates for listing as threatened or endangered.

IAMP Considerations: *During project development, surveys should be conducted for Species of Concern in order to avoid habitat areas. Measures must be incorporated into project design and construction alternatives to protect water quality for listed aquatic species.*

3.2.3. Hazardous Materials

On January 15, 2013, federal and state databases were searched for identified hazardous waste sites and incidences within or near the IMSAs.

None of the federal databases identified any sites or incidences in the IMSAs:

- National Priority List (NPL)—List of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants
- Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)—Abandoned hazardous waste sites—“Superfund”
- Resource Conservation and Recovery Act (RCRA) Generators—Generate or store defined amount of hazardous waste in any one calendar month and are subject to regulatory control
- Emergency Response Notification System (ERNS)—Releases or potential releases reported to the National Response Center, which acts as a reporting center for the Environmental Protection Agency and U.S. Coast Guard

Table 3-8 and Figure 3-3 summarizes sites identified. Background data files for each identified site are in Appendix C.

All of the identified sites, incidents, and permitted facilities have been remediated, are being monitored, have been investigated and found not to be contaminated to the point of needing further action, or are a permitted facility. The land within the IMSAs has been previously disturbed by transportation uses that may include undocumented spills or an accumulation of many years of roadway runoff. It has been historically disturbed by agricultural uses that may include the use of chemical pesticides therefore undocumented hazardous materials may be present. Mercury vapor lamps and treated timbers may be present in the IMSAs and would require special handling if they need to be removed or replaced.

IAMP Considerations: Known hazardous material sites are likely avoidable. However, a Phase I Environmental Site Assessment is recommended depending on the type of improvement and construction activities and because additional sites may be created before construction begins.

Table 3-8. State Hazardous Material Sites and Incidences

Database	Description	Total Sites Found
Environmental Cleanup Site Information System (ECSIS) - Sites that may be contaminated or require cleanup	N/A	0
Oregon State Fire Marshal's (OSFM) Hazardous Materials Incidents - All hazardous material emergency incidents to which Fire Marshal Hazardous Materials Response Teams have responded	Oil spills and gas leaks along highway. Incidents handled.	6
Oregon Permitted Solid Waste Landfills - Current active permitted facilities including landfills, waste tire storage sites, and household hazardous waste sites	N/A	0
Department of Environmental Quality (DEQ) Facility Profiler Leaking Underground Storage Tanks (LUSTs) - Known sites where leaks in buried tanks have been reported	Clean up Completed Site Location: 9625 Old Stage Road	1
Underground Storage Tanks (USTs) - Registration, installation, operation, and removal of USTs; cleanup of soil and groundwater contamination from petroleum leaks	Two sites at one location: 9625 Old Stage Road	2
TRAACS - Air Quality Permit	Gasoline Service Station Site Location: 9625 Old Stage Road Underground Natural Gas Site Location: 11 Frontage Road	2
Water Quality Permits (WQSIS)	RV Trailer Parks and Campsites – Onsite Sewage Treatments Site Location: 12297 Blackwell Road Vineyard Site Location: 58 N River Road Residence Site Location: 97 Rogue River Highway	3

3.2.4. Historic and Archaeological Resources

Under Section 106 of the National Historic Preservation Act of 1966 (Public Law 89-665), 16 USC 470, and under federal regulations governing the protection of historic and cultural resources (36 Code of Federal Regulations [CFR] 800), federal agencies, and the state and local agencies to which the federal agency has delegated responsibility, are directed to avoid undertakings that adversely affect properties that are included in or are eligible for inclusion in the National Register of Historic Places (NRHP). The NRHP identifies and documents (in partnership with

state, federal, and tribal preservation programs) districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. This section summarizes NRHP resources near the IMSA, as well as other historic, prehistoric, and cultural resources.

For the IMSAs, the State Historic Preservation Office (SHPO) database shows historical resources listed on the NRHP as shown in Table 3-9.

Table 3-9. NRHP-listed Resources

Historic Name	Location Description	Resource Type	Primary Construction Date	Original Use	Eligibility Evaluation & Year Listed
Vroman, Cyrenus & Ellen House	Old Stage & Blackwell Roads (Exit 40)	Building	1915	Single Dwelling	Eligible/Contributing
Crawford, Joshua M & Mina S, House	95 Garden Row (Exit 40)	Building	1890	Single Dwelling	Undetermined
Stickel, Hunter, House	9437 Old Stage Road (Exit 40)	Building	1905	Single Dwelling	Eligible/Contributing
Nye, HB House	41 Hwy 99 (Exit 43)	Building	1910	Single Dwelling	Eligible/Contributing
Gray, Charles House	54 Hwy 99 (Exit 43)	Building	1925	Single Dwelling	Eligible/Contributing

Source: SHPO NRHP database, 2012

Jessica Bochart, ODOT's Rogue Valley Office Archaeologist, was contacted to identify recorded archaeological locations within the IMSAs. Ms. Bochart identified known archaeological sites in the Exit 40 IMSA and indicated there is a high probability overall for archaeological and historical resources in both Exit 40 and 43 IMSAs. Ms. Bochart provided the following basis for her conclusion for cultural resources and the potential for cultural resources in the IMSA:

- At Exit 40 there is a significant archaeological site known as the Gold Hill Burial Site. The exact site boundaries have never been established. Areas that are not significantly disturbed would have a high probability for containing intact cultural resource deposits.
- Sites 35JA378, 35JA666, and 35JA372 are located within the Exit 40 IMSA.
- There is a high potential for encountering human remains within the IMSAs, which would require careful and close coordination with the applicable Native American tribes.

As mentioned above, it is likely that historical and archaeological resources are in the IMSAs including resources that have not been identified and surveyed and structures that have not been determined for eligibility and entered into the SHPO database. Due to the high potential for resources in numerous areas within the IMSAs, historical and cultural resources surveys by professionals should be conducted during the development of specific transportation improvement projects. The cultural surveys potentially could provide project design parameters if resources, their values, and their locations have been identified.

IAMP Considerations: Cultural resources and a high probability for cultural resources have been identified for the IMSAs. Improvements should be designed to avoid ground disturbing actions

in areas that have not been previously disturbed. Archaeological field investigations should be conducted before any ground disturbing actions. Additionally, if right-of-way acquisition is necessary for any proposed projects, ODOT must conduct a cultural resource survey for properties to be acquired in order to determine the eligibility of buildings or structures more than 50 years of age.

3.2.5. Floodplains and Floodways

Acting through the local planning agencies, the Federal Emergency Management Agency (FEMA) regulates development within Regulated Floodways and Special Flood Hazard Areas (SFHA). A "Regulatory Floodway" means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. SFHA are defined as the areas that will be inundated by the flood event having a one-percent chance of being equaled or exceeded in any given year. The one-percent annual chance flood is also referred to as the base flood or 100-year flood. Development in the regulated floodway typically requires a project to demonstrate no net rise and could require an amendment to the FEMA regulated floodway boundaries.

FEMA-designated regulated floodways and SFHA in the vicinity of the IMSA are displayed in Figure 3-2. In the Exit 40 IMSA (FEMA Map Panel: 41029C1736F, May 3, 2011), Kane Creek and its associated floodplain transect the Exit 40 IMSA from the southwest to northeast, crossing Old Stage Road from the southwest, then under I-5 just south of the interchange and flowing east until it empties into the Rogue River. The Rogue River floodplain extends to I-5 past Lampman Road in the Exit 40 IMSA. The Rogue River floodway is approximately 1,000 feet from the I-5 northbound on-ramp at its closets point in the IMSA.

In the Exit 43 IMSA (FEMA Map Panel: 41029C1736F and 41029C1737F, May 3, 2011), the Rogue River floodplain and floodway are in the eastern portion IMSA. The floodplain crosses west of OR 99 in much of the IMSA and west of I-5 in the southern portion of the IMSA.

IAMP Considerations: *Depending on the location of the improvement, Jackson County standards require no-net rise in the floodway and/or or limited rise to one foot above base flood elevation in the floodplain.*

3.3. Existing Land Use Summary

To understand the existing land use issues, and to help inform the subsequent conceptual alternatives development process for improvements in the IMSAs, this section identifies and reviews the land use and population in the IMSAs. The information gathered was taken primarily from published documents and maps, GIS data, and email correspondence with appropriate professional contacts. A summary of the research that includes the mapped known environmental resources is provided. It identifies areas where existing conditions may constrain transportation improvement projects.

3.3.1. Socioeconomic and Environmental Justice

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations of February 11, 1994, requires agencies undertaking federal projects to identify low-income and minority populations; assess whether high and adverse human health or environmental impacts would result from the alternatives; and ensure participation of low-income and minority populations in the transportation decision making process. The Federal Highway Administration (FHWA) defines a disproportionately high and adverse impact on minority and low-income populations as one that:

- Is predominantly borne by a minority population and/or a low-income population; or
- Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

EO 12898 states that agencies must consider whether human health effects, in terms of risks and rates, are significant or above accepted norms.

Additional underserved populations are the “transportation disadvantaged.” The “transportation disadvantaged” are those persons who because of physical or mental disability, income status, or age are unable to transport themselves or to purchase transportation and are, therefore, dependent upon others to obtain access to health care, employment, education, shopping, social activities, or other life-sustaining activities. Projects receiving federal assistance must also evaluate impacts to these populations to comply with the Age Discrimination Act of 1975, Federal-Aid Highways Act, Rehabilitation Act of 1973 and Americans with Disabilities Act of 1990.

Socioeconomic data for the IMSA was drawn primarily from the U.S. Census Bureau 2000 Census, 2010 Census, and American Community Survey (ACS) 2007 to 2011. The census tracts reviewed for this memorandum represent the following geographical areas:

- Census tract 1100 represents the south eastern edge of the Exit 40 IMSA, south of Access Road and Upper River Road and extending to Central Point.
- Census tract 2800 represents the north eastern edge of the Exit 40 IMSA.
- Census tract 2900 represents the Exit 43 IMSA east of the Rogue River.
- Census tract 3001 represents most of the areas west of the Rogue River in both IMSAs.

The census data documents a 12 percent population increase in Jackson County between 2000 and 2010 which is the same as the state’s increase, see Table 3-10. The City of Gold Hill had a slightly larger population between 2000 and 2010 increase at 14 percent. Surrounding census tracts vary from an increase of 49 percent in census tract 1100 to a decrease of 3 percent in census tract 3001. These variances could be attributed to population losses in rural areas and gains in urban areas.

Table 3-10. Population and % Population Change, 2000, 2010, 2040

Geography	2000 Population	% Population Change	2010 Population	Estimated 2040 Population	% Population Change
Oregon	3,421,399	12%	3,831,074	5,425,408	42%
Jackson County	181,269	12%	203,206	297,496	46%
Gold Hill	1,073	14%	1,220	1,901	56%
Census Tract	1100	49%	5,689		
	2800	2%	4,686		
	2900	2%	7,258		
	3001	-3%	3,822		

Sources: 2010 Census, Census 2000 Summary File 1 (SF 1) 100-Percent Data, P001: TOTAL POPULATION [1] - Universe: Total population, Portland State Population Research Center

Jackson County and Gold Hill have an older population than the state as a whole as shown in Table 3-11. Within the IMSAs, the more urban census tract 1100 has a substantially younger population than the rural census tracts (2800, 2900, and 3001).

Table 3-11. Age of Census Tracts, 2010

Geography	Median Age; Total (Estimate)	19 and under	20 to 39 years	40 to 64 years	65 and older
Oregon	38.4	25.4%	26.9%	33.9%	13.8%
Jackson County	42.1	24.4%	23.1%	34.8%	17.7%
Gold Hill	43.9	22.2%	23.2%	40.2%	14.4%
Census Tract	1100	25.7%	22.6%	36.7%	15.1%
	2800	20.7%	17.5%	43.3%	18.7%
	2900	18.6%	15.9%	39.7%	25.8%
	3001	17.2%	15.8%	44.6%	22.5%

Source: 2010 Census QT-P1-Geography Age Groups and Sex

The U.S. Bureau of Census identifies minorities as individuals who identify themselves as Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and other Pacific Islander, other race, two or more races, and of Hispanic origin. Based on U.S. Census 2010 data, Jackson County, Gold Hill, and the IMSAs, are less diverse than the state as shown in Table 3-12. In particular, the more rural census tracts are less diverse than the state and the county.

Table 3-12. Race and Ethnicity, 2010

Geography		White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some Other Race	Two or More Races	Not Hispanic	Hispanic
Oregon		83.6%	1.8%	1.4%	3.7%	0.3%	5.3%	3.8%	88.3%	11.7%
Jackson County		88.7%	0.7%	1.2%	1.2%	0.3%	4.5%	3.5%	89.3%	10.7%
Gold Hill		93.5%	0.2%	1.6%	0.5%	0.0%	0.7%	3.6%	97.3%	2.7%
Census Tract	91.3%	0.3%	1.6%	0.9%	0.2%	2.8%	2.9%	91.5%	8.5%	
	93.6%	0.3%	1.0%	0.6%	0.1%	1.1%	3.4%	96.2%	3.8%	
	94.0%	0.5%	1.2%	0.5%	0.0%	1.2%	2.7%	95.8%	4.2%	
	94.3%	0.3%	0.8%	0.5%	0.1%	1.0%	2.9%	96.1%	3.9%	

Source: 2010 Census QT-P4-Geography-Oregon: Race, Combinations of Two Races, and Not Hispanic or Latino: 2010, QT-P10-Geography-Census Tract

Persons are considered to be in poverty status when income earned is less than the income threshold. As shown in the Table 3-13, the census tracts in the IMSA and Gold Hill have a lower percentage of individuals living in poverty than Jackson County or the state. However, except for Census Tract 3001 which has the same percent of persons with disability than the state, Jackson County, Gold Hill and all the other census tracts the IMSA have more persons with disability than the state. Census tract 1200 has a higher percentage of persons with disability and female head of households with children. Gold Hill has more Female Head of Households than the County and State. However, the rural IMSA census tracts have less. Census tract 1100 is the same as the state and a little lower than the County.

Table 3-13. Poverty, Disability, Female Head of Household, 2010

Geography		Percent Population for Whom Poverty Status is Determined	% Persons with Disability over the Age of 5	% Female Head of Household w/Children
Oregon		14.8%	18.8%	10.1%
Jackson County		15.8%	20.2%	11.0%
Gold Hill		13.7%	22.4%	12.3%
Census Tract	1100	4.4%	21.6%	10.1%
	2800	8.5%	25.1%	8.5%
	2900	12.4%	24.5%	7.5%
	3001	10.9%	18.8%	6.8%

Source: 2010 Census, QT-P11 Households and Families, ACS S1701. Poverty Status in the Past 12 Months by Sex by Age - Universe: Population for Whom Poverty Status Is Determined, Source: Census 2000 (SF 3) QT-P21: Disability by Sex 2000

IAMP Considerations: Disproportionate impacts to environmental justice populations by potential projects may be avoided. Potentially affected populations, businesses, and impacts to public resources should be determined through more thorough site analysis, interviews, and other public outreach efforts, as appropriate.

3.3.2. Land Use and Zoning

Both IMSAs are located within Jackson County, Oregon, one east and one west of the City of Gold Hill Urban Growth Boundary (UGB), between Grants Pass and Medford Oregon. The Rogue River runs west to east through the both IMSAs. The City of Gold Hill lies north of the river, between the two interchanges. The immediate area around the interchanges and I-5 is a narrow valley floor with largely undeveloped hills to the west and east.

Community Features

Figure 3-4 shows community features overlaid on aerial photography of the Exit 40 IMSA. Observations show undeveloped land adjacent and southeast of Exit 40. Beyond the undeveloped areas, to the east, are agricultural and rural residential uses. To the east is a KOA Kampground. North of the interchange is the Lampman Road Baptist Church and a fire station along Access Road along with rural and agricultural uses. The Rogue River is approximately one-quarter-mile north of the interchange. Southeast of the interchange are rural residential uses including a mobile home park and a golf course. Southwest of the interchange is undeveloped land and a creek with rural agricultural uses. West of Old Stage Road is the Rogue Valley Zipline Adventure and Moose Family Center with rural and agricultural use beyond.

Aerial observations surrounding Exit 43 show rural residential uses east of the interchange and undeveloped land with one commercial use west of Exit 43. No community features are highlighted at this interchange. The Rogue River is less than 0.15 miles from I-5 in the vicinity of Exit 43.

Tax Lots

Figure 3-5 shows the tax lots and estimated right-of-way in the IMSAs. Lots are mostly larger to support the rural uses in the area.

Jacksons County Comprehensive Plan

Most of the land surrounding the interchanges is undeveloped and designated for rural uses, as shown in Figure 3-6. Because of the terrain in the area, property with development potential is adjacent to major roads and highways, in particular those south of Gold Hill along Blackwell Road.

The Jackson County Comprehensive Plan map identifies most of the parcels immediately around I-5 Exit 40 interchange as Rural Residential or Agricultural land. There are some Commercial lands to either side of Old Stage Road, where it intersects the Access Road. In addition, there is an area designated limited use between I-5 and Old Stage Road.

Land use surrounding Exit 43 is primarily Agricultural but includes some other uses as well. Rural Residential designations are located on both sides of I-5, mostly west of the interchange but also in the northeast corner of the IMSA. North of the interchange, there is commercial land north of Main Street along OR 99. There is also an area designated industrial southwest of the interchange.

Jackson County Zoning

The zoning designations within the IMSAs generally correspond to the comprehensive plan designations as shown on Figure 3-7.

The purpose of each zoning designation is described below:

- **EFU:** The purpose of the Exclusive Farm Use (EFU) District (Section 4.2) is to conserve agricultural land and to implement the Oregon Agricultural Land Use Policy, ORS 215.243, Statewide Planning Goal 3 (Agricultural Lands), and OAR 660-033. Depending on the type of transportation improvement, a Type 1 to Type 4 permitting review is required.
- **FR, WR:** Forest Resource (FR); Woodland Resource (WR). These districts are intended to conserve forest lands and implement the Oregon Administrative Rules, and Statewide Planning Goal 4 (Forest Lands) (Section 4.3).
- **IC:** The purpose of the Interchange Commercial district is provide for commercial uses that serve the immediate needs of the traveling public, and are located at freeway interchanges with state highways or county roads. Depending on the type of transportation improvement, the project may be permitted outright or require a Type 1 to Type 2 permitting review.
- **RR:** The purpose of the rural residential zoning districts is to provide for large-lot residential areas, consistent with the predominant rural character of the area and the physical capability of the land.
- **AR:** The purpose of the Aggregate Removal (AR) District is to allow for the protection and utilization of aggregate and other mineral resources, and to ensure the reclamation of mined land. Transportation improvements typically require a Type I review.
- **RLI:** The purpose of the Rural Light Industrial district is to provide for industrial uses that rely on site-specific natural resources for their processes and activities, or create a byproduct of substantial direct benefit to resource-producing lands or uses.
- **LU:** The purpose of the Limited Use (LU) district is to limit uses and activities to those justified in a Comprehensive Plan Amendment "Reasons" exception statement adopted by the County and acknowledged by the state pursuant to ORS 197.732(1)(c) as required by OAR 660-004-0018(4)(a), or to recognize existing lawfully established nonconformities as permitted uses.

IAMP Considerations: During project development, ODOT will need to determine whether any prime, unique, or statewide importance farmland may be converted to nonagricultural (e.g. transportation facilities) uses, and may need to comply with the federal Farmland Protection Policy Act. Conversion of farmland also may require a Goal Exception to the Oregon Statewide Planning Goals, depending on the type and function of a proposed transportation improvement. OAR 660-012-0065 identifies transportation facilities, services and improvements which may be permitted on rural lands consistent with Goals 3, 4, 11, and 14 without a goal exception. OAR 660-012-0070 outlines the exception process for transportation improvements on rural land.

3.3.3. Section 4(f) Resources

Section 4(f) refers to a part of federal law that protects public parks, recreation lands, wildlife and waterfowl refuges, and public or private historic sites. Section 4(f) applies only to Departments of Transportation (DOTs) and their agencies. Highway projects that use public parks must fulfill the requirements of Title 23, USC, Section 138, Section 4(f) of the Department of Transportation Act of 1966, as amended.

A “use” that is subject to the provisions of Section 4(f) occurs:

- When land is permanently incorporated into a transportation facility;
- When there is a temporary occupancy of land that is adverse in terms of the statute’s preservationist purpose; or
- When there is constructive use of the land.

DOTs must demonstrate that a proposed project will not “use” the publicly owned parks and recreation land, where “use” can mean both actual conversion of recreation lands into a transportation use, or a “constructive use,” where off-site impacts of the transportation project substantially impair the site’s vital functions. Findings of “no feasible and prudent alternatives” and “all possible planning to minimize harm” must be well-documented and supported. A feasible alternative is an alternative that is possible to engineer, design, and build. To find that an alternative that avoids a Section 4(f) resource is not “prudent,” one must document that there are unique problems or unusual factors involved with the use of such an alternative. This means that the cost, the social, economic, and environmental impacts, and/or community disruption resulting from such alternatives reach extraordinary magnitudes.

Section 4(f) resource lands within the IMSA consist of the resources identified in *Section 3.2. Existing Environmental Summary*. Future resources north of the Rogue River include the Rogue River Greenway Trail. In addition, structures and resources eligible or potentially eligible for inclusion on the NRHP within the IMSA but not yet identified may be potential candidates for Section 4(f) status.

IAMP Considerations: *Transportation improvements should try to avoid areas of new ground disturbance due to the identified and potential cultural resources in the IMSAs. A Section 4(f) evaluation will require ODOT to assess all reasonable alternatives that adversely affect protected lands. If every potential alternative that can meet the purpose and need for the project would impact some Section 4(f) property, then the alternative with the least impact must be selected unless it is not feasible and prudent.*

3.3.4. Section 6(f) Resources

The Land and Water Conservation Fund (LWCF) Act of 1965 established grants-in-aid funding to assist states in the planning, acquisition, and development of outdoor recreational land and water areas and facilities. Section 6(f) of the LWCF Act prohibits the conversion of property acquired or developed with the assistance of the LWCF for anything other than public outdoor recreation use without the approval of the Secretary of the U.S. Department of the Interior.

Section 6(f) of the LWCF Act applies to transportation projects that propose impacts to, or the permanent conversion of, outdoor recreation property that was acquired or developed with LWCF Act grant assistance. Section 6(f) requires that replacement lands of equal value, location, and usefulness are provided as conditions to approval of land conversions.

IAMP Considerations: No Section 6(f) resources were identified in the IMSAs.

3.3.5. Potential Design Constraints

This review identified a “red flag” for ground disturbing transportation improvement actions in the I-5 Exit 40 IMSA due to the cultural resources in the area. In addition, the baseline data identifies several other land use and environmental conditions that could potentially be affected by transportation improvements. Special attention should be given to avoiding or minimizing:

- Cultural Resources
- Habitat and riparian corridor impacts
- Wetlands impacts
- Impacts to T&E species
- Exclusive Farm Use or other resource lands

Table 3-14 summarizes resources that may present potential design constraints. These resources are also summarized in the figures presented in this memorandum. The table considers federal regulations and standards because potential projects identified in the IAMP may be partially federally funded or require federal permits, and therefore would need to comply with federal regulations and standards.

Other design constraints which were not reviewed in this memorandum may include fish passage at stream crossings and stormwater treatment requirements.

This memo identifies baseline resource information in the IMSA from a “visual windshield validation” perspective. ODOT will need to undertake detailed studies of specific areas to determine design limitations for specific proposed projects. Potential projects identified in the IAMP may require permits, regulatory requirements, or authorizations.

Table 3-14. Environmental and Land Use Summary

Feature	Summary of Key Resources and Concept Guidance	Key Potential Conflict Location(s)	Potential Approval/Permit If Resource Impacted
Wildlife Habitat & Wetlands	Riparian corridors, aquatic habitat, wildlife habitat and wetlands along the Rogue River and Kane and Blackwell Creek. <i>Disturbance to undeveloped areas should be avoided if possible. Wetland delineations should be conducted once concept areas are identified. Impacts to wetlands should be avoided. Mitigation and permitting will be necessary if impacts cannot be avoided. BMPs incorporated into project design and construction can help minimize impacts.</i>	Rogue River and Kane and Blackwell Creek	U.S. Army Corps of Engineers Oregon Department of State Lands Oregon Department of Fish and Wildlife Local land use approvals
Threatened and Endangered Species	T&E Species are found in the IMSA. <i>Concepts should avoid disturbance of areas where the species are found and water quality impacts and physical impediments in T&E species contributing waterways.</i>	Rogue River and Kane and Blackwell Creek	Oregon Department of Fish and Wildlife NMFS, USFWS, ODA (State and Federal Endangered Species Act Consultation)
Floodplains and Floodways	Rogue River floodway and floodplain, Kane Creek floodplain. <i>Fill in floodways and floodplains should be avoided. No net rise will have to be demonstrated if improvements involve any sort of fill in floodways. Cut and fill requirements will need to be adhered to in floodplains.</i>	Rogue River and Kane Creek	FEMA regulations administered through local land use approvals
Socioeconomic and Environmental Justice	Community resources. <i>Displacements should be avoided or minimized.</i>	Moose Family Center and Church (Exit 40)	The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act) Title VI Compliance
Land Use and Zoning	EFU, Areas of Special Concern Overlays. <i>Impacts to resource zones should be avoided. Impacts to EFU zones may require goal exception.</i>	Throughout IMSAs	Local land use approvals Potential goal exception for use of Agricultural lands
Historical and Archaeological Resources	Historical and cultural resources. <i>Further surveys will need to be completed, especially if improvements will include ground-disturbing activities and or right-of-way acquisition of lots with potential historical resources.</i>	Throughout IMSAs	Local land use approvals State Historic Preservation Office, and FHWA – 4(f)
Parks and Recreation and Section 4(f) Resources	Parks and Historical/Cultural Resources. <i>Avoid resources if possible. Any “use” of Section 4(f) lands will need to demonstrate that it is either a “de minimis” impact or that there was no alternative for the impact.</i>	Throughout IMSAs	Federal Highway Administration Consultation and Approval Local land use approvals Oregon Parks and Rec/National Parks Service
Section 6(f) Resources	None.	N/A	National Parks Service Consultation and Approval
Hazmat	Areas along highly traveled roads and highways.	Throughout IMSAs	Coordination with DEQ

Attachments:

Figure 3-1. Access Management Inventory

Figure 3-2. Natural Features

Figure 3-3. Hazardous Sites

Figure 3-4. Community Features

Figure 3-5. Tax Lot Maps

Figure 3-6. Comprehensive Plan Designations

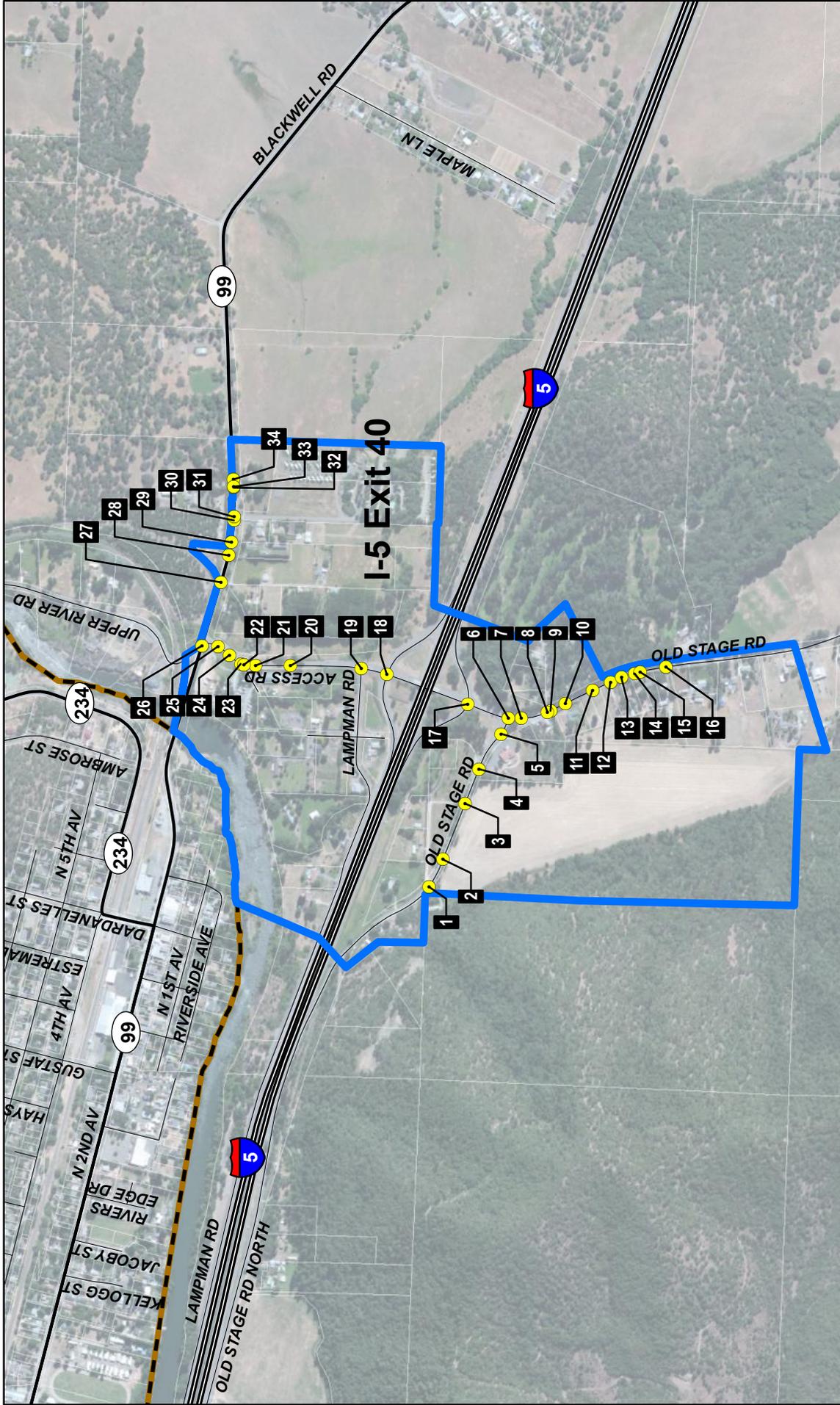
Figure 3-7. Zoning Map Designations

Appendix A. Methodology Memorandum*

Appendix B. Truck Turning Movement Diagrams*

Appendix C. Hazardous Materials*

*Available upon request



I-5 Exits 40 and 43 Interchange Area Management Plans

Legend

- Interchange Management Study Area (IMSA)
- Access Points
- Interstate
- Highway
- Local Road
- Urban Growth Boundary (UGB)
- Taxlot Boundaries indicated in white

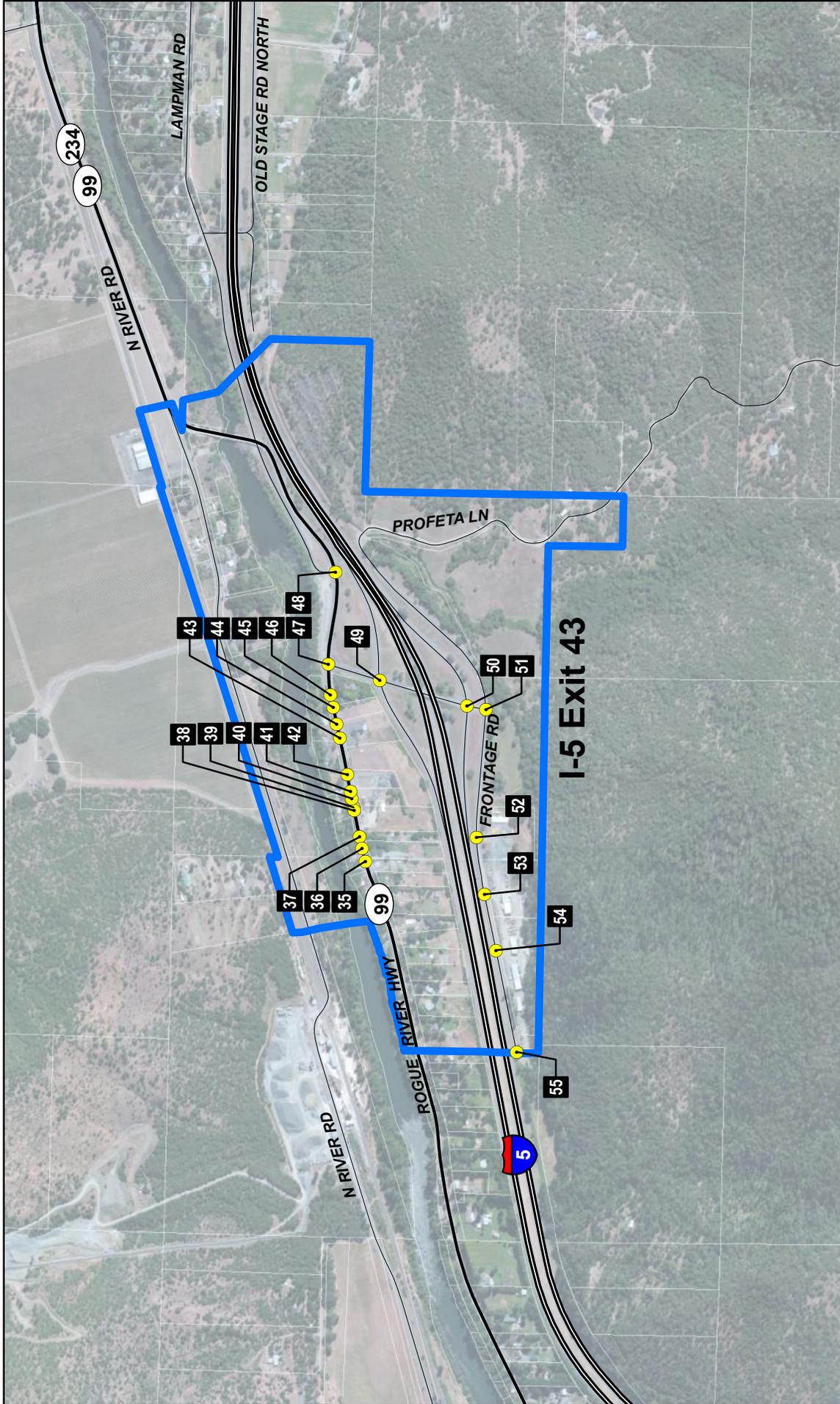
DRAFT Figure 3-1a
Access Management
I-5 Exit 40

1,000
0
1,000

Feet

Source Data: ESRI, Jackson County, NAIP 2009

Document Path: P:\ODOT\0000078310600\INFO\GIS\Maps\Fig_1a_and_1b_AccessMgmt.mxd Date: 1/21/2013 Time: 11:48:32 AM User Name: aaro



I-5 Exits 40 and 43 Interchange Area Management Plans

DRAFT Figure 3-1b
Access Management
I-5 Exit 43

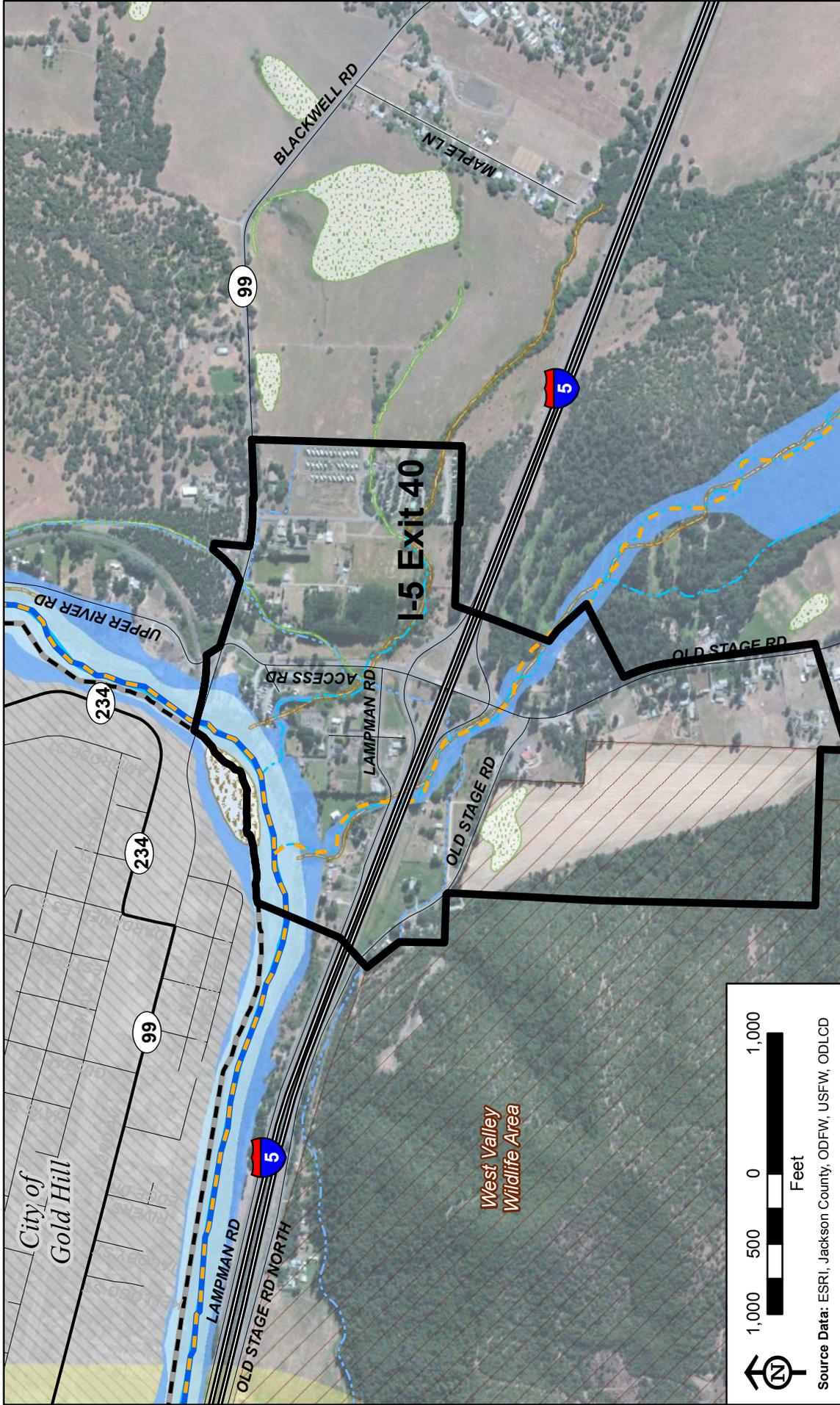
Legend

- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- Taxlot Boundaries indicated in white
- Interstate
- Highway
- Local Road
- Access Points

1,000 500 0 1,000
 Feet

Source Data: ESRI, Jackson County, NAIP 2009

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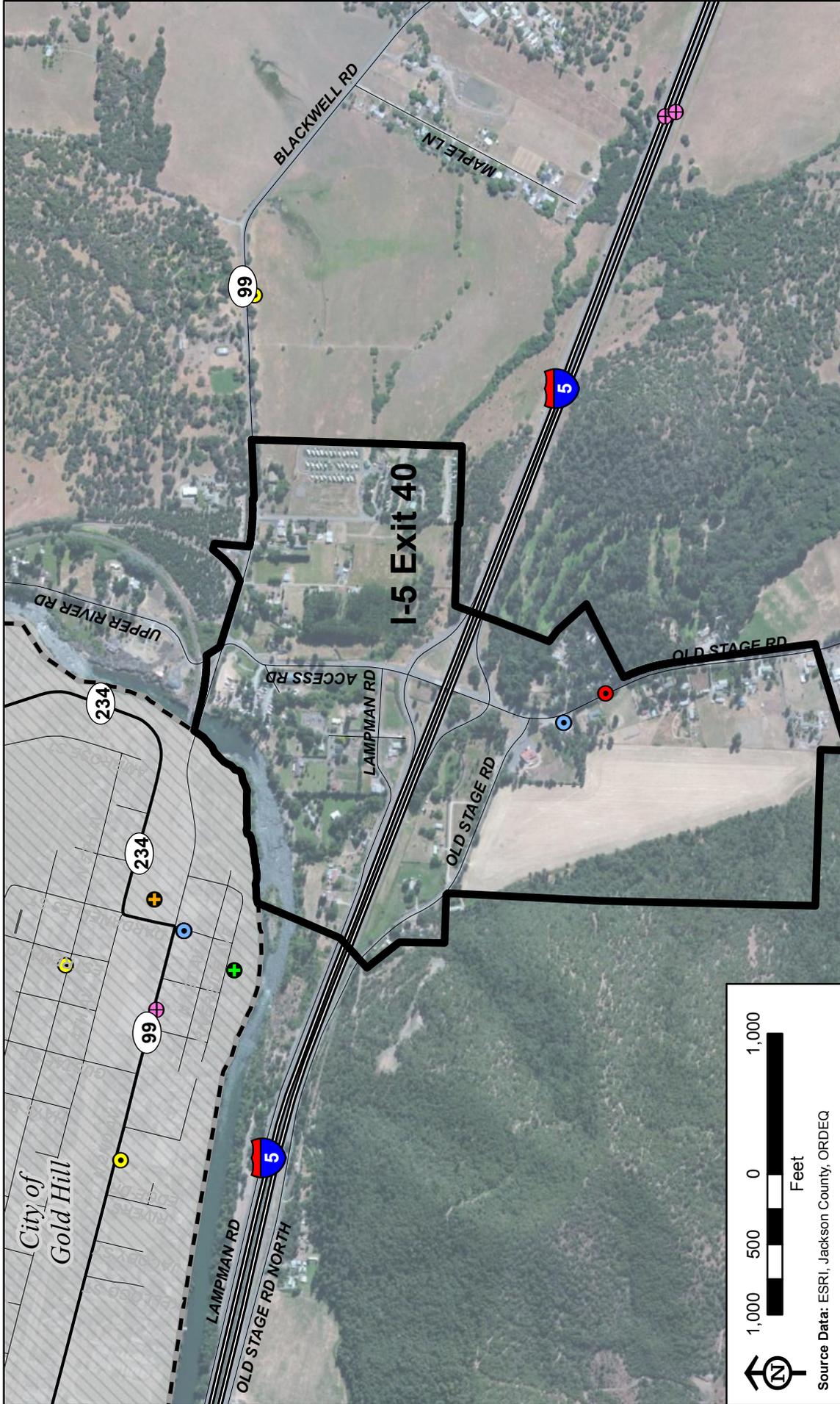
I-5 Exits 40 and 43 Interchange Area Management Plans

DRAFT Figure 3-2a
Natural Features
I-5 Exit 40

Interchange Management Study Area	Urban Growth Boundary	City Limits	Interstate	Highway	Local Road	River	Creek/Stream	Ditch/Irrigation Canal	100-Year Floodplain	Floodway	Wildlife Areas	Wetland Classifications	ODFW Habitat Distribution	Wildlife Priority Ranking
												Freshwater Emergent Wetland	Summer & Winter Steelhead	5 - 6
												Freshwater Forested/Shrub Wetland	Fall & Spring Chinook Salmon, Summer & Winter Steelhead, Coho Salmon, and Pacific Lamprey	7 - 8

Source Data: ESRI, Jackson County, ODFW, USFW, ODLCD

Document Path: P:\ODOT\0000078310600\INFO\GIS\Maps\Fig_Xa_and_Xb_Goals_Nat_Feat.mxd Date: 1/21/2013 Time: 12:35:47 PM User Name: aaro



I-5 Exits 40 and 43 Interchange Area Management Plans

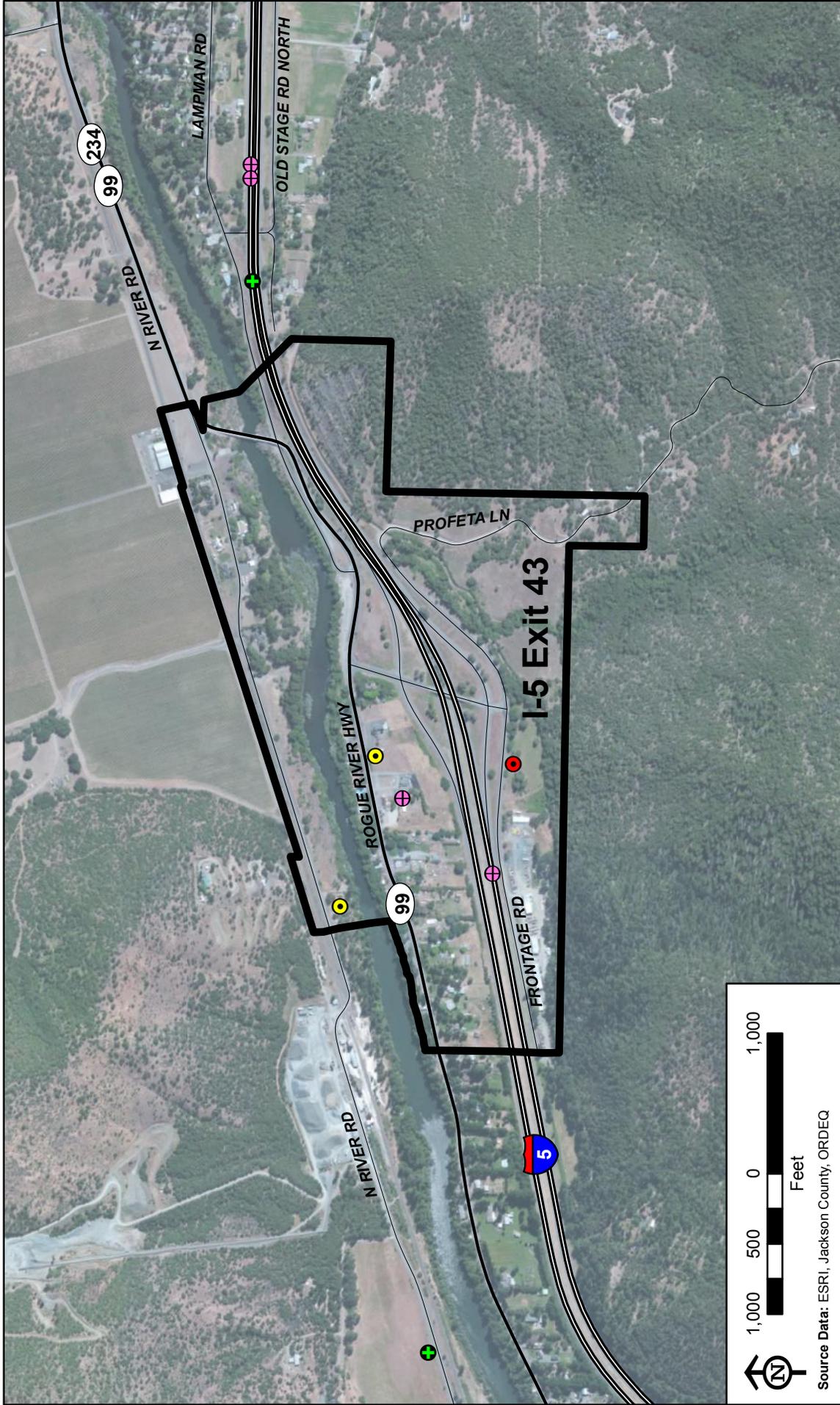
DRAFT Figure 3-3a
Hazardous Sites
I-5 Exit 40

Legend

Interchange Management Study Area	Interstate	Unknown, HazWaste	Active, TRAACS
Urban Growth Boundary	Highway	Complete, LUST	Active, UST
City Limits	Local Road	Complete, ECSI	Active, ECSI
		Active, WQSIS	

Hazardous Sites (by status and type)

Source Data: ESRI, Jackson County, ORDEQ



I-5 Exits 40 and 43 Interchange Area Management Plans

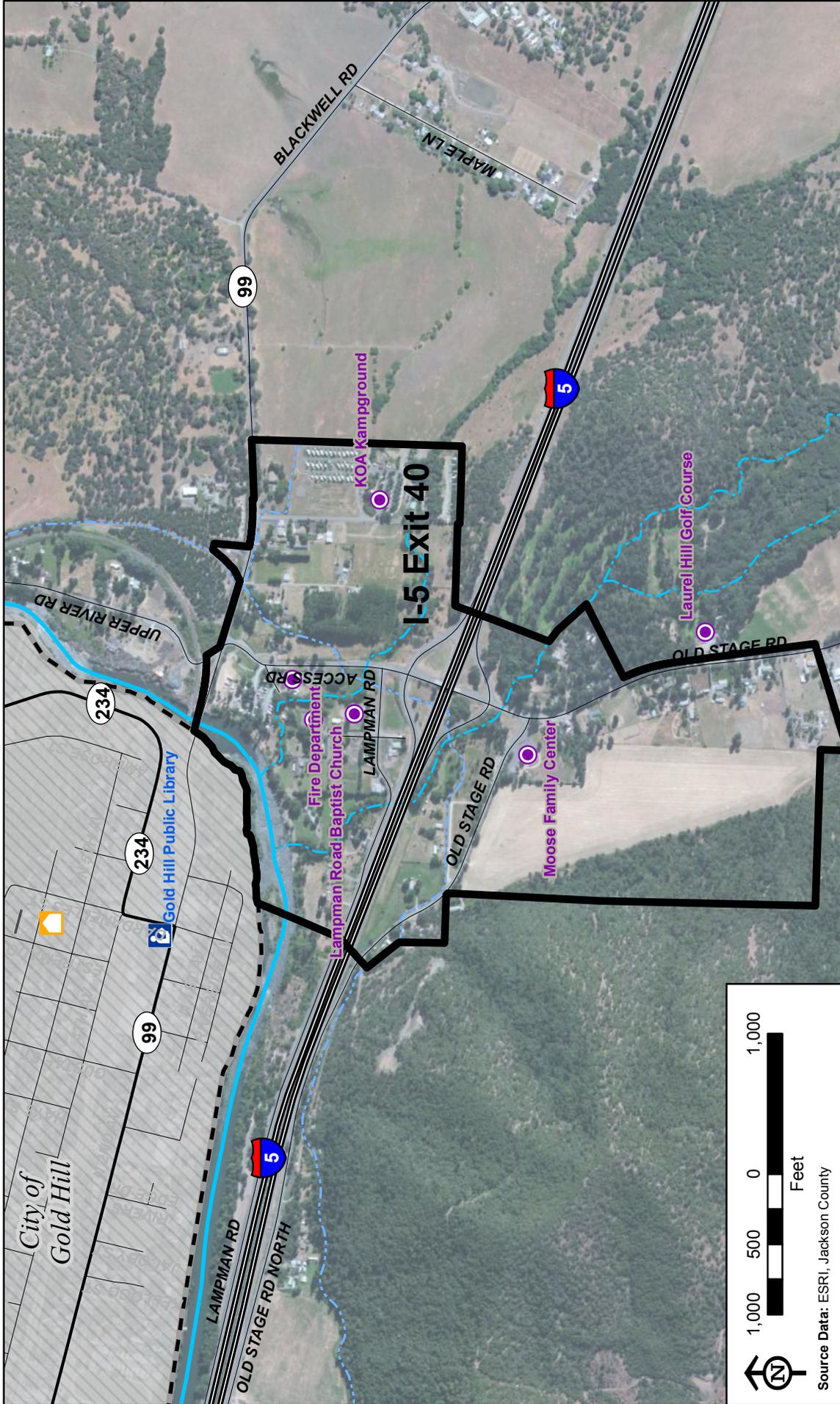
DRAFT Figure 3-3b
Hazardous Sites
I-5 Exit 43

Legend

Interchange Management Study Area	Interstate	Unknown, HazWaste	Active, TRAACS
Urban Growth Boundary	Highway	Complete, LUST	Active, UST
City Limits	Local Road	Complete, ECSI	Active, ECSI
		Active, WQSI	

1,000 500 0 1,000
 Feet

Source Data: ESRI, Jackson County, ORDEQ

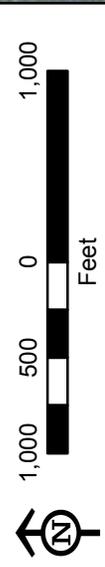
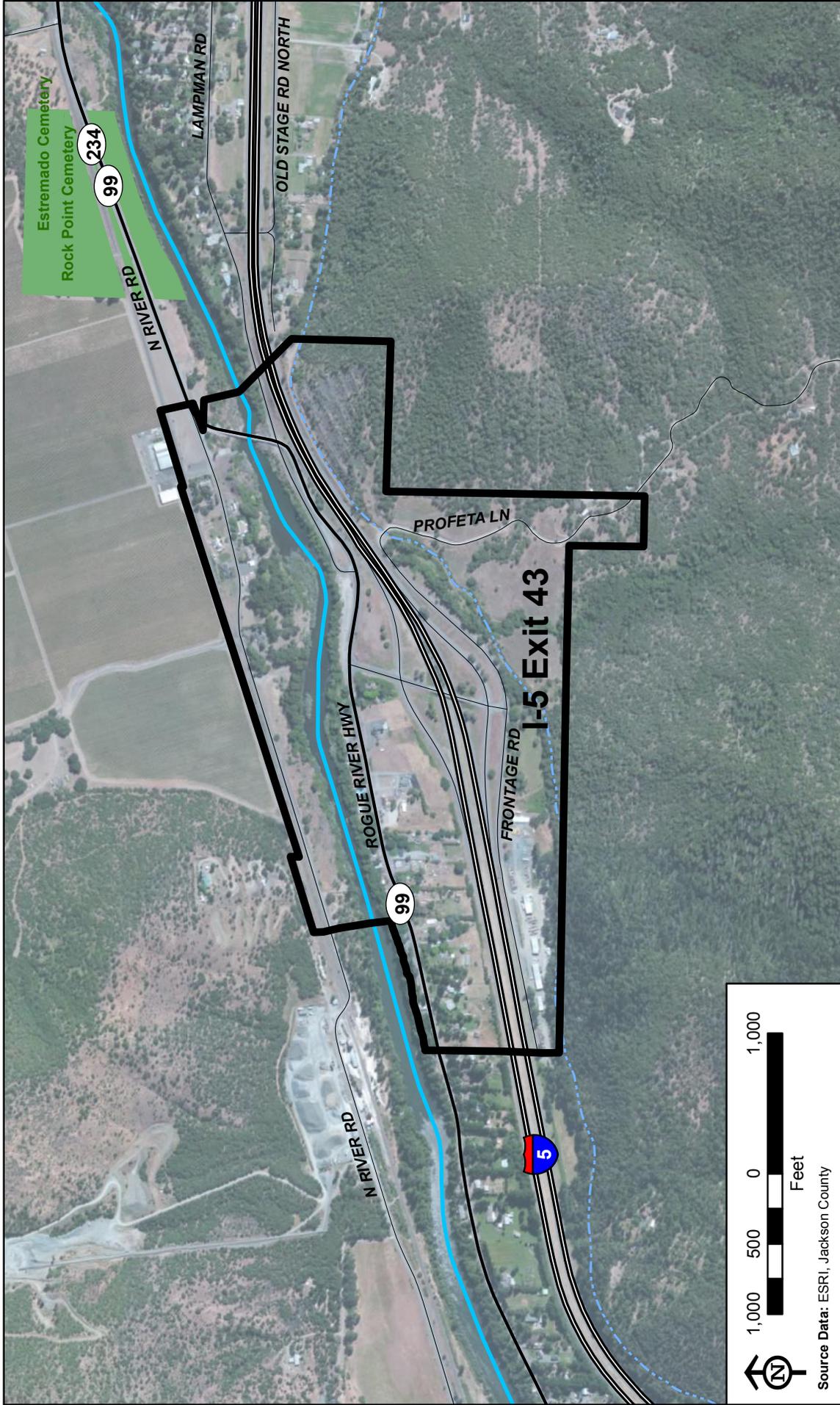


I-5 Exits 40 and 43 Interchange Area Management Plans

DRAFT Figure 3-4a
Community Features
I-5 Exit 40

- Legend**
- Interchange Management Study Area
 - Urban Growth Boundary
 - City Limits
 - Interstate
 - Highway
 - Local Road
 - City Hall
 - Cemetery
 - Library
 - Other Points of Interest

Source Data: ESRI, Jackson County



Source Data: ESRI, Jackson County

I-5 Exits 40 and 43 Interchange Area Management Plans

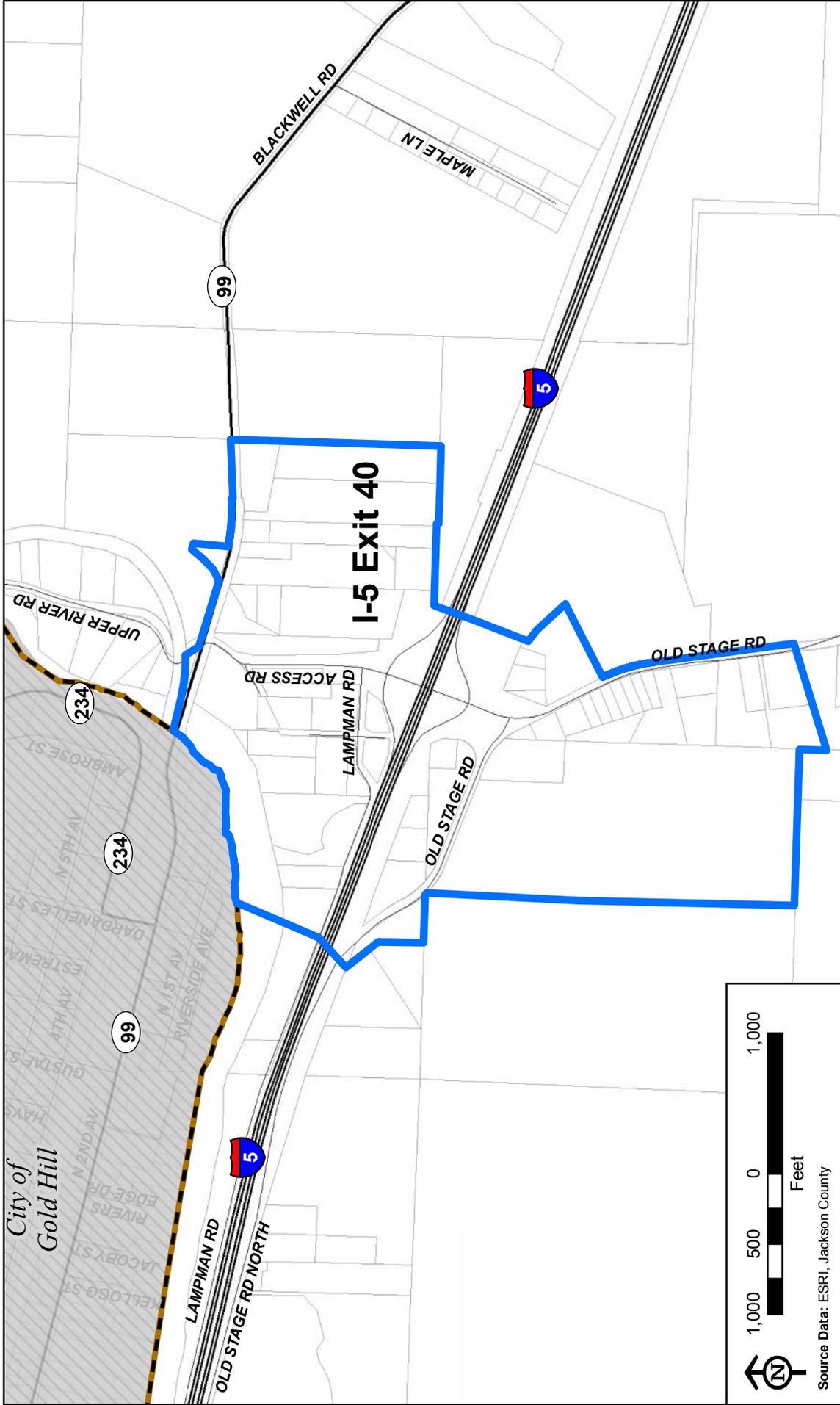
Legend

- Interchange Management Study Area
- Urban Growth Boundary
- City Limits
- Interstate
- Highway
- Local Road

Community Features

- City Hall
- Cemetery
- Library
- Other Points of Interest

DRAFT Figure 3-4b
Community Features
I-5 Exit 43



I-5 Exits 40 and 43 Interchange Area Management Plans

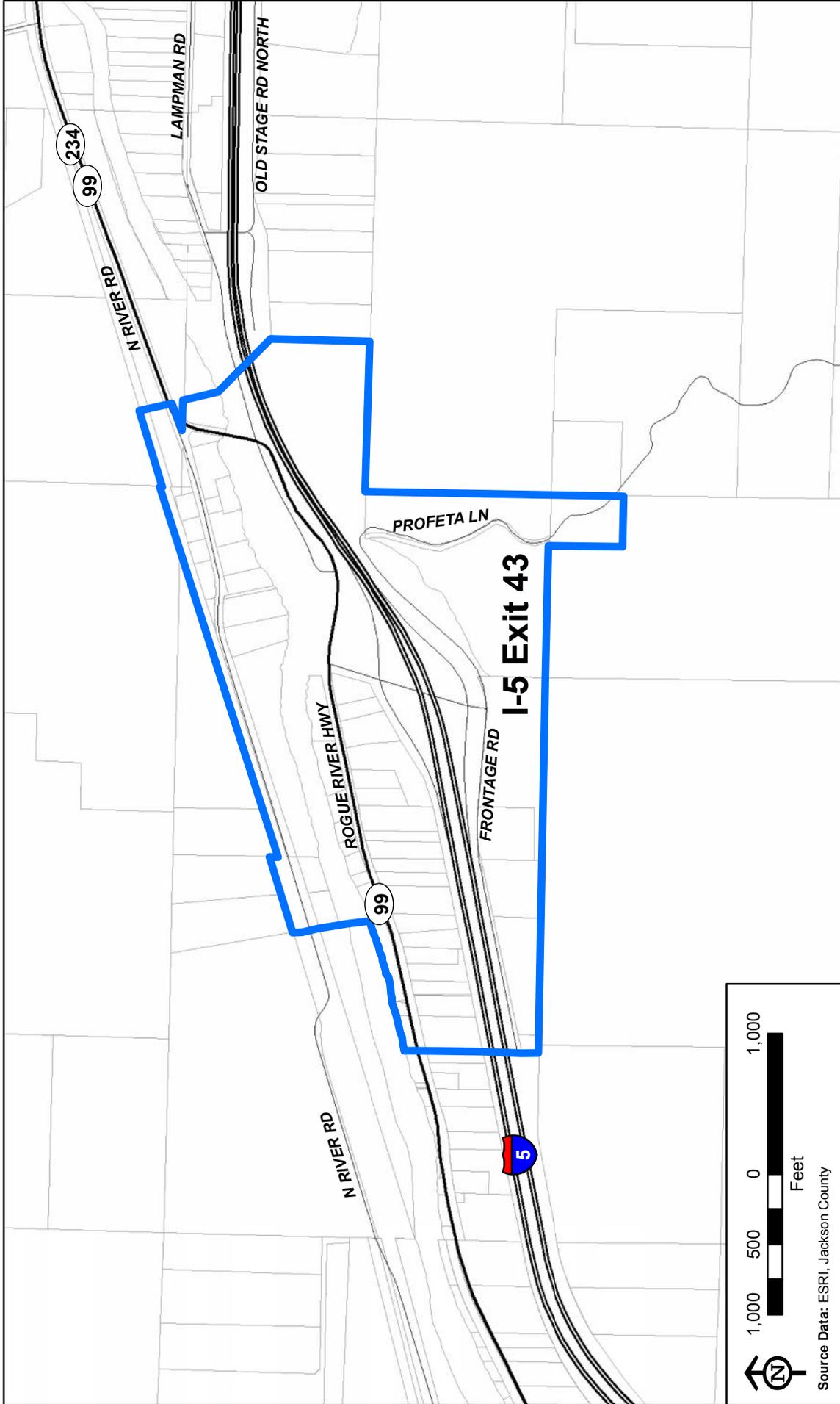
DRAFT Figure 3-5a
Tax Lots
I-5 Exit 40



Source Data: ESRI, Jackson County

Legend

- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- City Limits
- Interstate
- Highway
- Local Road
- Tax Lot Boundaries



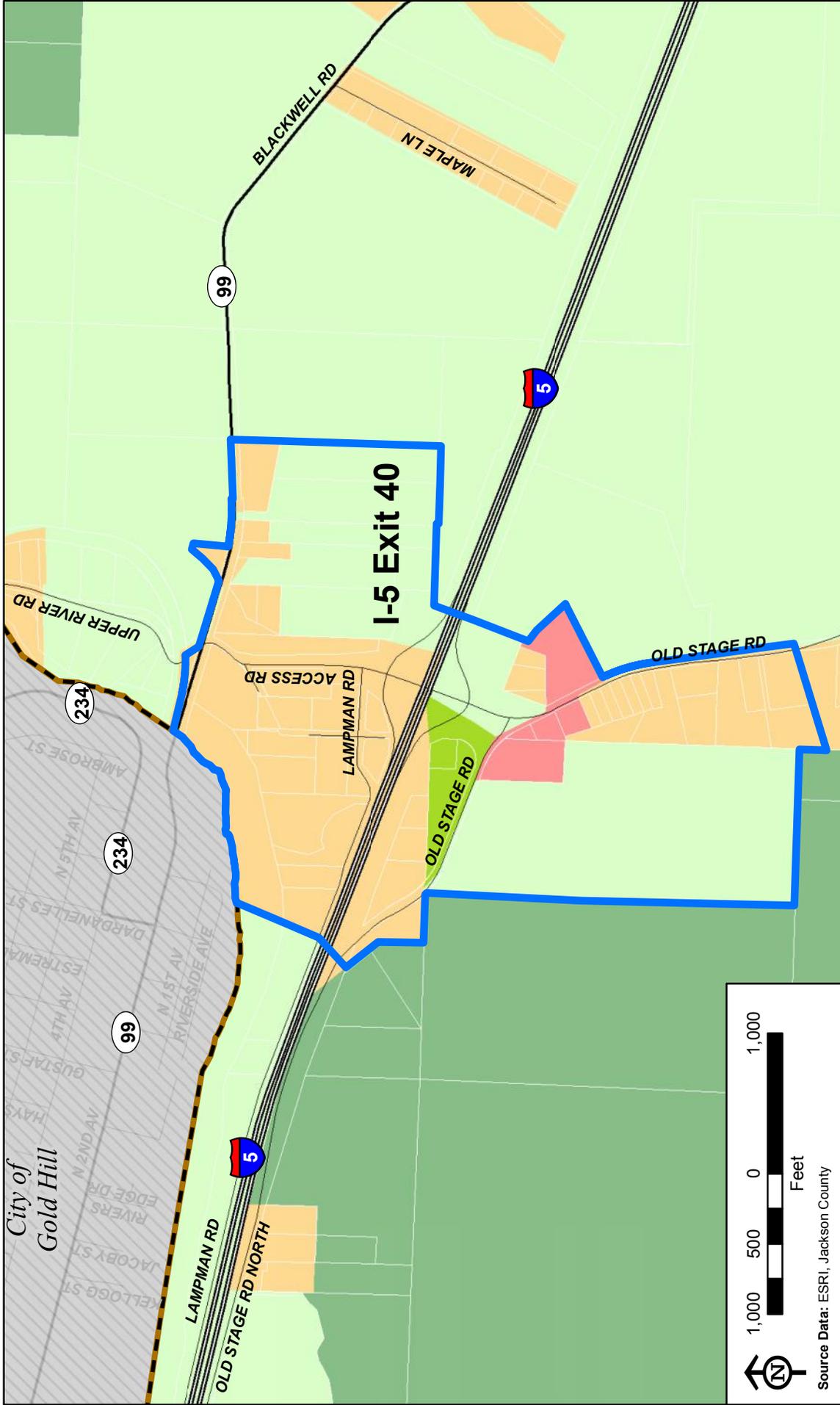
I-5 Exits 40 and 43 Interchange Area Management Plans

Legend

- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- City Limits
- Interstate Highway
- Local Road
- Tax Lot Boundaries

DRAFT Figure 3-5b
Tax Lots
I-5 Exit 43

Source Data: ESRI, Jackson County



I-5 Exits 40 and 43 Interchange Area Management Plans

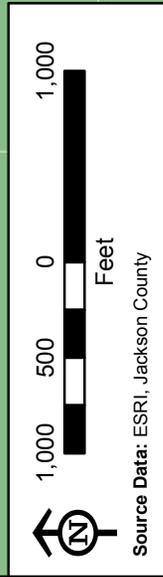
DRAFT Figure 3-6a
Jackson County Comprehensive
Plan Designations
I-5 Exit 40

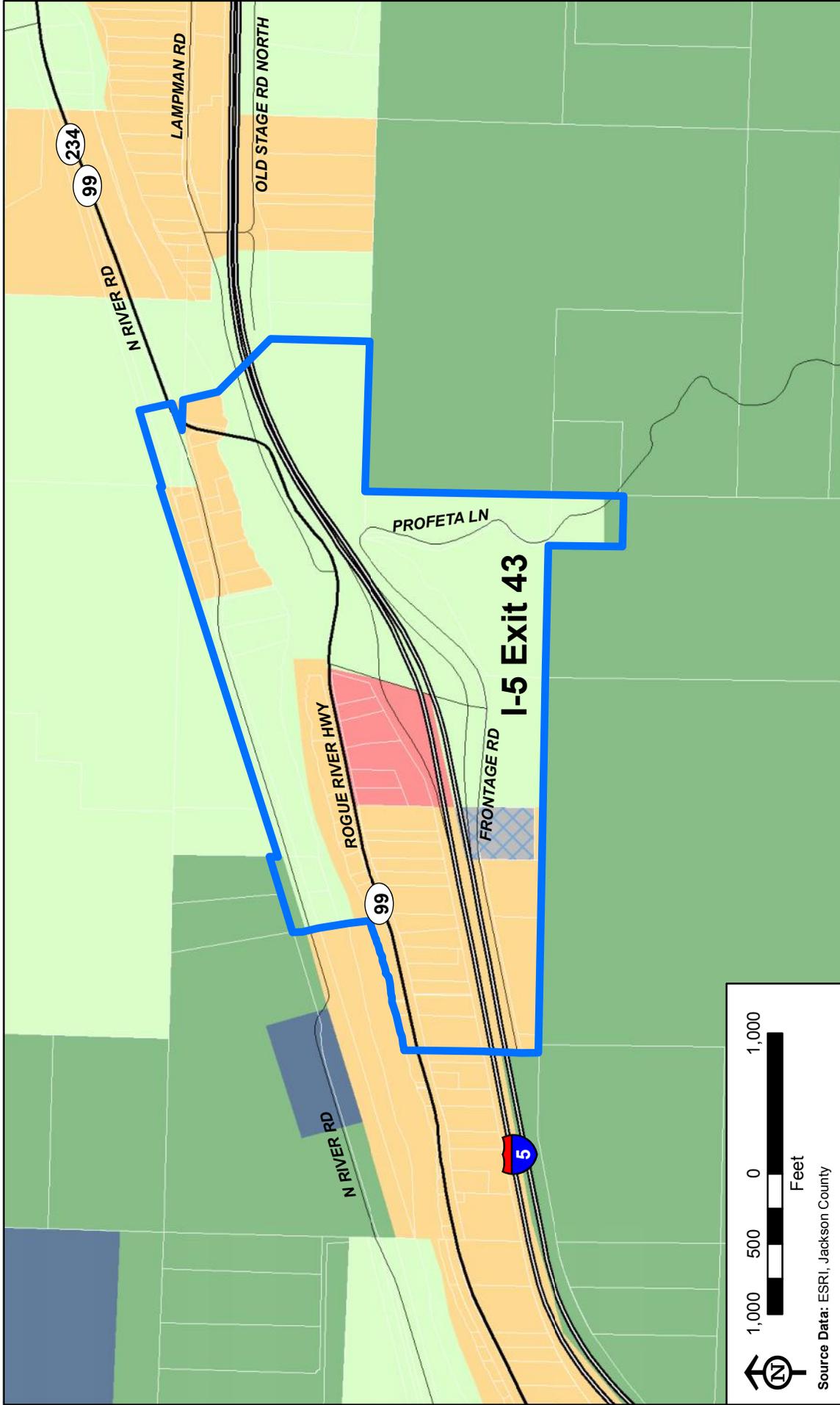
Legend

- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- Taxlot Boundaries indicated in white
- Interstate
- Highway
- Local Road

Jackson County Comprehensive Plan Designations

- Agricultural Land
- Commercial Land
- Forestry / Open Space Land
- Limited Use Land
- Rural Residential Land
- No Data





I-5 Exits 40 and 43 Interchange Area Management Plans

DRAFT Figure 3-6b
Jackson County Comprehensive
Plan Designations
I-5 Exit 43

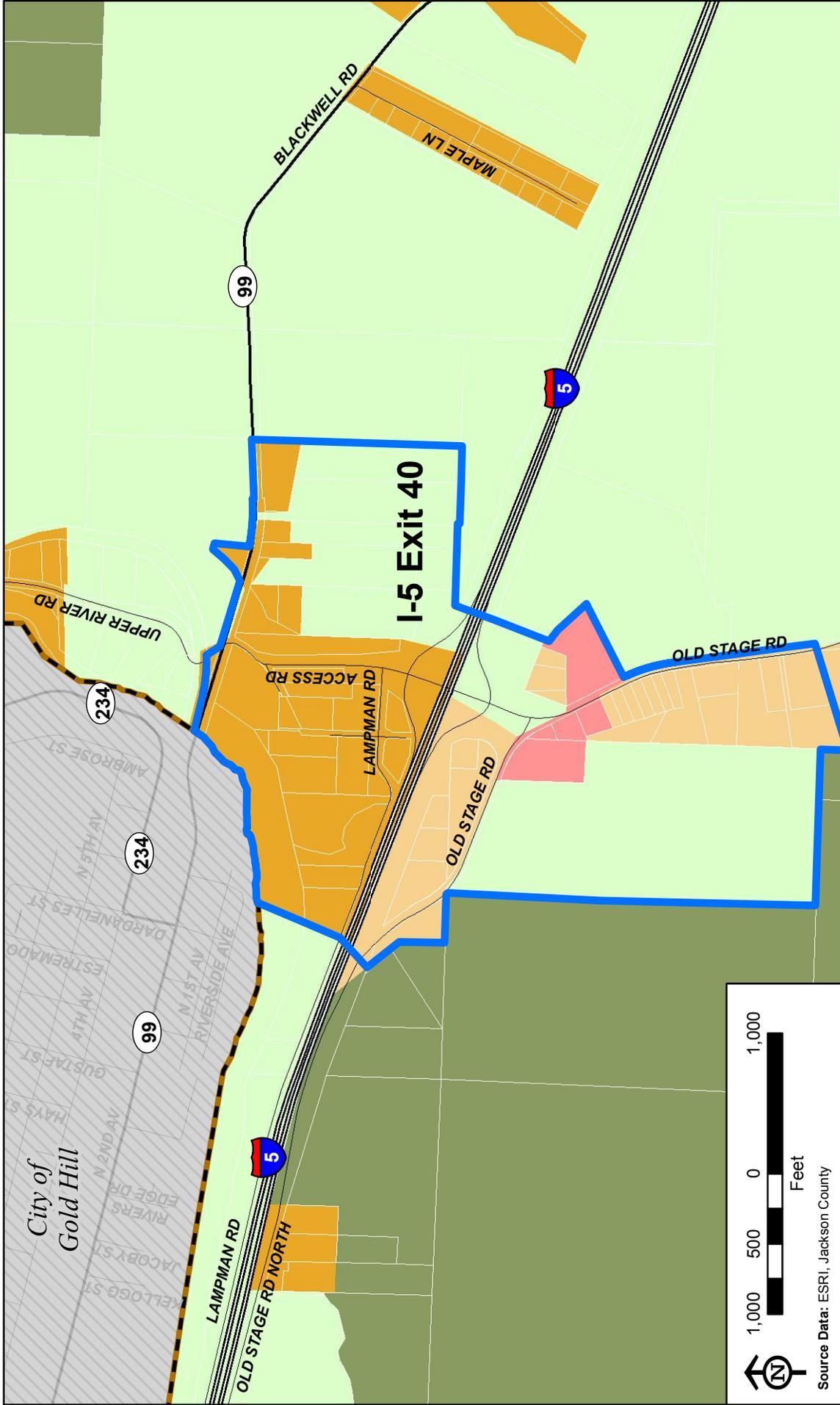
Jackson County Comprehensive Plan Designations

	Forestry / Open Space Land
	Aggregate Removal Land
	Agricultural Land
	Commercial Land
	Industrial Land
	Rural Residential Land

Legend

	Interchange Management Study Area (IMSA)
	Urban Growth Boundary (UGB)
	Taxlot Boundaries indicated in white
	Interstate
	Highway
	Local Road

Source Data: ESRI, Jackson County

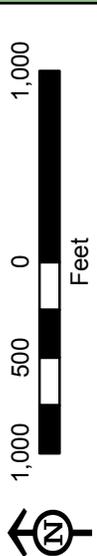
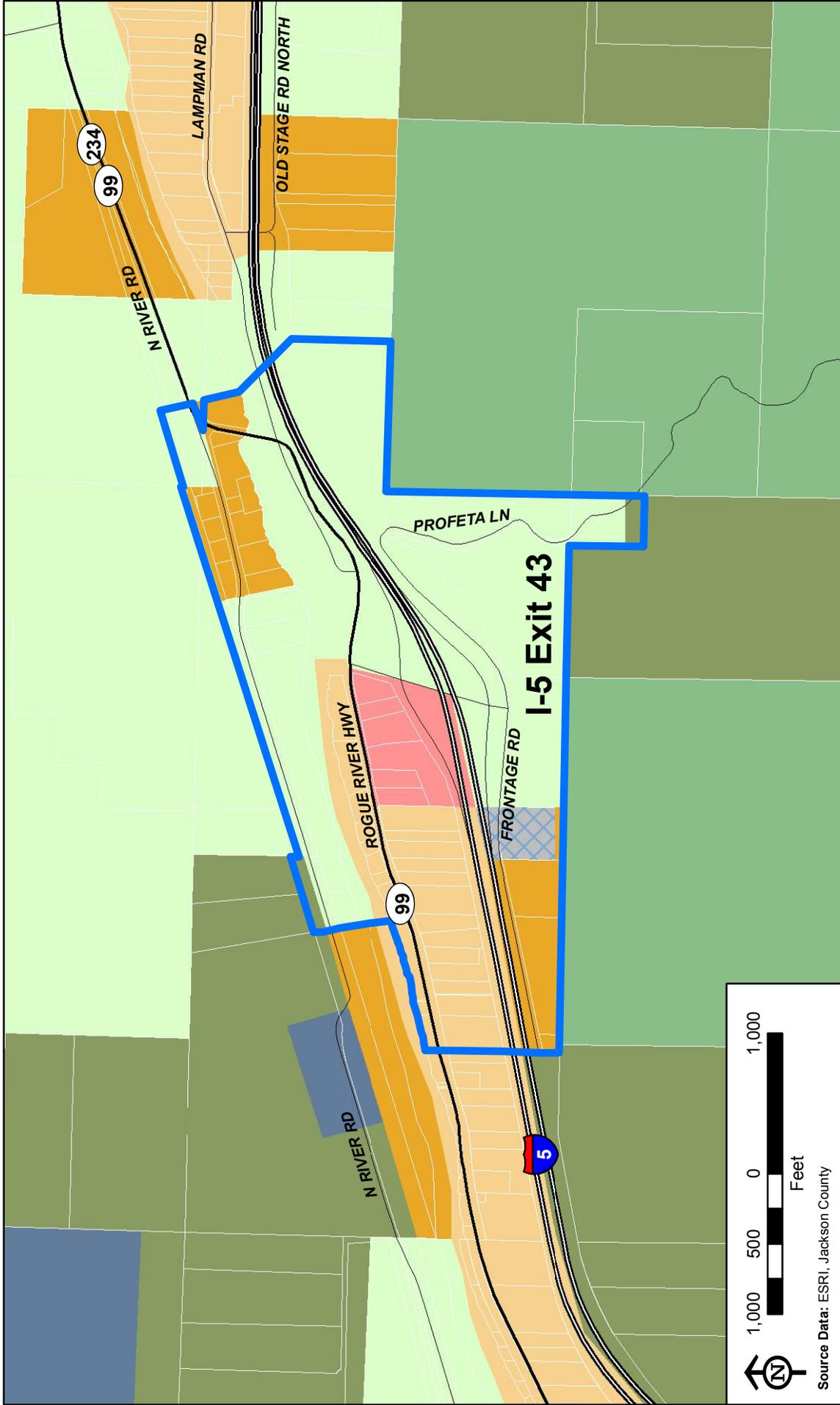


I-5 Exits 40 and 43 Interchange Area Management Plans

DRAFT Figure 3-7a
Jackson County Zoning Designations
I-5 Exit 40

- Jackson County Zoning Designations**
- Exclusive Farm Use (EFU)
 - Rural Residential - 5 (RR-5)
 - Interchange Commercial (IC)
 - Rural Residential - 2.5 (RR-2.5)
 - Woodland Resource (WR)

- Legend**
- Interchange Management Study Area (IMSA)
 - Urban Growth Boundary (UGB)
 - Interstate
 - Highway
 - Local Road
 - Taxlot Boundaries indicated in white



Source Data: ESRI, Jackson County

Legend

- Interchange Management Study Area (IMSA)
- Urban Growth Boundary (UGB)
- Taxlot Boundaries indicated in white
- Interstate
- Highway
- Local Road

Jackson County Zoning Designations

- Aggregate Removal (AR)
- Exclusive Farm Use (EFU)
- Forest Resource (FR)
- Interchange Commercial (IC)
- Rural Light Industrial (RLI)
- Rural Residential - 2.5 (RR-2.5)
- Rural Residential - 5 (RR-5)
- Woodland Resource (WR)

I-5 Exits 40 and 43 Interchange Area Management Plans

DRAFT Figure 3-7b
Jackson County Zoning Designations
I-5 Exit 43