

M E M O R A N D U M
600 NORTHEAST GRAND AVENUE PORTLAND, OREGON 97232 2736
TEL 503 797 1700 FAX 503 797 1794



DATE: February 4, 2008
TO: RTP interested parties
FROM: John Mermin, Associate Transportation Planner
SUBJECT: Analysis of Environmental Considerations for 2035 RTP Update

Purpose

The purpose of this memo is to summarize the systems level environmental analysis of the 2035 Regional Transportation Plan (RTP) project list. Analysis was done for the projects in both the 2035 RTP Investment Pool and the 2035 RTP Financially Constrained System. A separate background report complements this analysis, documenting key environmental issues and trends in the Portland metropolitan region and specific federal and state environmental requirements that must be addressed through the RTP.¹

The analysis responds to federal SAFETEA-LU requirements for the RTP to discuss potential environmental mitigation activities and potential areas to carry out these activities, and to consult with appropriate resource agencies. This analysis of the 2035 RTP Investment Pool was the basis for consultation with Collaborative Environmental and Transportation Agreement for Streamlining (CETAS) on October 16, 2007.

Background

Transportation impacts the natural and built environment in many ways, potentially having significant effects on the region's air quality, water quality, noise, fish and wildlife habitat, historic resources and tribal lands. These impacts are particularly important to Metro since the natural and social environment is deeply connected to the identity and quality of life of the Portland metropolitan region. When asked what they enjoy most about the quality of life in the region, citizens have consistently chosen environmental quality, access to nature and scenery as things they value and want to protect.

The Portland metropolitan region is situated at the northern end of the Willamette valley ecoregion, a fertile river valley surrounded by dramatic natural features - the Coast range to the west, the Cascades to the east, and the Columbia River to the north (including the Columbia River Gorge National Scenic area).

¹ The background report is available to download from Metro's website at www.metro-region.org/rtp (Click on "2035 RTP Publications").

Inside of the region, natural landscape is created by broad river valleys with wetlands, narrow river canyons with riparian vegetation, buttes and forests, mountains and meadows, foothills and farms.

The protection of natural and cultural resources has long been a key responsibility of Metro. The preamble of the 1992 Metro Charter proclaims that “Metro’s most important service is to preserve and enhance the quality of life and the environment for ourselves and future generations.” This ethic of sustainability is central to several Metro plans and programs, including the Regional Transportation Plan, Greenspaces Master Plan, Nature in Neighborhoods and the region’s overarching long-range plan, the 2040 Growth Concept. Environmental health is one of the 2040 Fundamentals adopted by the region in 1997.

Environmental Considerations Analysis

The analysis provided in this memo identifies areas of potential conflicts where proposed RTP projects intersect with protected environmental features. This memo and a series of maps demonstrate the areas of potential conflicts. Identifying these areas of potential conflict early in the transportation planning process allows for more meaningful consideration of mitigation strategies, including project alignment, design and construction features that avoid or minimize impacts on the resource area. Many of these strategies are addressed specifically during the project development phase as part of the environmental and land use review, consultation and permitting processes all construction projects must undergo.

The analysis is organized into seven sections:

1. Regionally Significant Fish and Wildlife Habitat Inventory Analysis
2. Wildlife Incident Hotspots and Fish Passage Barriers Analysis
3. Floodplains and Wetlands Analysis
4. Historic Properties and Districts Analysis
5. Air Quality Analysis
6. Tribal Lands Analysis
7. Environmental Justice Analysis

This analysis complements other Metro efforts to incorporate and encourage environmental mitigation strategies during the long-range planning and project development processes:

- **Livable Streets program** - published three handbooks (*Creating Livable Streets: Street Design Guidelines for 2040*, *Green Streets: Innovative Solutions for Stormwater and Stream Crossings and Trees for Green Streets*) to provide design and construction guidelines to minimize transportation impacts on natural resources when avoidance is not possible. A fourth handbook, *Wildlife Crossings*, is under development.
- **2002 Culvert Inventory** - identifies areas where fish passage was blocked.
- **Nature in Neighborhoods Initiative** - includes Metro’s fish and wildlife protection program (Goal 5), conservation education, restoration, habitat-friendly development practices guidelines, and on-going monitoring and reporting of key natural resource indicators.
- **Regional Environmental Information Network (REIN)** - provides a comprehensive website that allows for information sharing and networking among the individuals, community groups, public agencies and nonprofit organizations that are working to protect, restore and monitor the region’s natural resources.
- **Regional Natural Areas Acquisition program** - initiated in 1996 and expanded in 2006, directs Metro to purchase natural areas, trails and greenways to be held for future use as open space, parks, trails and fish and wildlife habitat. More than 8,100 acres have been acquired by Metro

since the program was initiated, and thousands more acres are expected to be projected with the \$227 million bond measure passed last year.

- **Metropolitan Greenspaces Master Plan** - adopted in 1992 by the Metro Council, provides a vision for a regional system of parks, natural areas, greenways, and trails and identifies 57 urban natural areas and 34 trail and greenway corridors that define the green infrastructure for the Portland metropolitan region.
- **State of Watersheds Monitoring** - Biennial reporting of the health of watersheds in the Portland metropolitan region, beginning in 2006.
- **Consultation Activities** - Ongoing environmental mitigation consultation with relevant resource agencies through Metro's Transportation Policy Alternatives Committee (TPAC) and Joint Policy Advisory Committee on Transportation (JPACT), which includes representatives from the Oregon Department of Environmental Quality (DEQ); the Metro Technical Advisory Committee (MTAC) and Metro Policy Advisory Committee (MPAC) which include representatives from the Oregon Department of Land Conservation and Development (DLCD). To date, consultation with resource agencies has occurred as part of Metro region major project development activities, such as EIS and EA's, on a project by project basis through CETAS (Collaborative Environmental and Transportation Agreement for Streamlining) collaboration. This will be expanded to occur as part of updates to the RTP.

Methodology

Metro used the best available regional scale data to identify the potential areas of conflict between the proposed RTP project and protected environmental features identified in the planning area. Using Geographic Information System (GIS) mapping software, different environmental features of the planning area were overlaid with the projects identified in the pool of projects identified for the RTP. It is important to note that the potential alignments for proposed projects are conceptual until more detailed project development work is conducted.

The environmental analysis used the regionally significant fish and wildlife habitat (Goal 5/Title 13) inventory completed by Metro in 2005 as its basis. Metro developed the inventory based on the best science and data available and mapped regionally significant fish and wildlife habitat with input from local partners, resource agencies, technical review committees, and the public. Metro conducted fieldwork to validate and adjust the inventory. Identified habitat was ranked in importance based on its capacity to provide benefits to fish and wildlife.

Two types of habitat are included in the inventory:

- Riparian habitat – land and vegetation near streams, rivers, wetlands and lakes. A Riparian zone or corridor may include tree canopies, grassland, wild shrubs, woodland, and sometimes natural rocky embankments essential to the stability of the soils around the waterway.
- Upland habitat – natural areas that provide wildlife with food and shelter and corridors to move from one habitat area to another

Highly ranked riparian habitat areas within the current urban growth boundary were identified as “habitat conservation areas” to be protected by appropriate development standards contained in the proposed model ordinance or through other equivalent approaches identified by local jurisdictions. As new areas are added to the urban growth boundary, highly valued upland habitat areas will also be identified as habitat conservation areas. Habitat conservation areas (HCAs) are designated on based habitat value, with protection level adjusted depending on the area's economic importance to the region.

Metro's Goal 5 inventory² includes much of the environmental data recommended by the Federal Highway Administration (FHWA) for consideration to meet SAFETEA-LU requirements. Metro's Goal 5 inventory includes: wetlands identified in the National Wetland Inventory (NWI), Endangered Species Act (ESA) habitat and ESA listed streams, forest land, 100-year floodplains identified by the Federal Emergency Management Agency (FEMA), city/county/regional/state public parks, trails and recreational facilities, including the Willamette River Greenway.

The Goal 5 inventory also includes resource areas that go beyond federal requirements such as natural hazard areas with steep slopes greater than 25 percent, local wetland inventories, 1996 flood areas of inundation, and species and habitat of concern. For each resource site in the inventory, Metro gathered existing and new data on sensitive species sighting locations, sensitive bird sites, and wildlife species and habitats of concern; linked sensitive wildlife species to their habitat needs; and estimated the amount of potential habitat available. It should be noted that due to the lack of site-specific data for many sensitive or threatened species within the planning area, these species cannot be spatially mapped to appropriately reflect location.

Other data sources that were consulted beyond Metro's Goal 5 inventory include: the Oregon Department of Fish and Wildlife (ODFW) conservation opportunity areas, Division of State Lands existing mitigation banks, wildlife hotspot incident locations, culverts that are barriers to fish passage, and national historic properties.

Other inventories suggested by FHWA, but not included in this analysis due to a lack of a comprehensive regional database include: Scenic/Historic/Backcountry Roads, Superfund sites, archeologically sensitive areas, previous ODOT mitigation sites, potential ODOT mitigation banks, water quality limited bodies (defined by the Department of Environmental Quality), National Marine Fisheries and U.S. Fish and Wildlife recovery/conservation plans.

Metro also estimated future carbon monoxide, precursors of smog (volatile organic compounds and oxides of nitrogen) and carbon dioxide emissions from cars and trucks operating within the Portland Air Quality Management Area (AQMA) air shed to the year 2035 using EMME/2 modeling software and Mobile 6.2, the latest model approved by the U.S. Environmental Protection Agency (EPA). A conformity determination has been prepared for the financially constrained element of the 2035 RTP consistent with state and federal requirements.

Metro also reviewed tribal lands data available from the Bureau of Indian Affairs to identify potential federally recognized tribal lands in the planning area. None were identified in this analysis.

Finally, Metro compiled data from the 2000 Decennial Census to assess the distribution of environmental justice populations in the Portland metropolitan region. The data were aggregated and incorporated into a Geographic Information Systems database, and combined with base layers from Metro's Regional Land Information System (RLIS). The base layers used included: Metropolitan Planning Organization (MPO) Boundary from 2004, Major Rivers, Major Arterials, Metro Urban Growth Boundary, 2000 Census Block Groups and Freeways. A map was created to assess the distribution of each environmental justice population regionally. The region was defined using the MPO Boundary from 2004. Data shown is for Census Block Groups within the MPO Boundary.³

² See http://www.metro.dst.or.us/library_docs/nat_resource/inventory_narrative.pdf for a full description of the Goal 5 methodology.

³ A complete description of the analysis and findings is included in *Environmental Justice in Metro's Transportation Planning Process Background Paper* (September 18, 2006).

I. Regionally Significant Fish and Wildlife Habitat Inventory Analysis

Staff intersected the 2035 RTP Investment Pool and Financially Constrained project lists with regionally significant Goal 5 resource areas and ODFW conservation opportunity areas. This data is shown in Attachment 1, “Environmental Considerations” and Attachment 5 (corresponding map for the Financially Constrained system).

2035 RTP Investment Pool Analysis

- 27 percent of Investment Pool projects (292 out of 1,025) intersect high value habitat areas. High value habitat areas are based on the September 2004 Inventory and Economic, Social, Environmental and Energy Analysis Data. High value areas provide the best riparian habitat, with adjustments made for economic importance to the region.
- The portions of these projects that intersect high value habitat areas represent 5 percent of the total linear project mileage (125 of 2,325 miles).

Table 1a. Summary of RTP Investment Pool Projects Crossing High Value Habitat

	# of RTP investments crossing high value areas	% of all RTP investments crossing high value areas	Mileage of investments crossing high value areas	% of all RTP investments (mileage) crossing high value areas
Bike/Ped	40	4%	9	0.4%
Freight	15	1%	13	0.6%
Regional Trail	39	4%	57	2.5%
Road/Bridges	127	12%	13	0.6%
Throughways/Highways	24	2%	7	0.3%
Transit	33	3%	15	0.6%
Other*	14	1%	11	0.5%
Total	292	27%	125	5.0%

* “Other” refers to projects with no mode associated with them, such as system and demand management programs and investment strategies.

Tables 1a and 1b show that for both the RTP Investment Pool and Financially Constrained system, more road/bridge projects cross high value areas compared to other project modes, but that trail projects compose more mileage of intersecting areas. This is explained by the fact that many regional trail projects travel alongside waterways, i.e. rivers, streams, creeks, for much of their potential alignments. Metro's Green Trails guidebook, provides a comprehensive source of information about planning, construction and maintenance of environmentally friendly or "green trails" – trails that avoid or minimize impacts to water resources and fish and wildlife habitat.

It is important to note that the potential alignments for proposed projects are conceptual until more detailed project development work is conducted. Projects that intersect high value areas should consider mitigation strategies as well as alignment options that avoid the resource area during future project development. Attachment 9 includes a complete list of projects intersecting high-value areas.

2035 RTP Financially Constrained System Analysis

- 36 percent of Financially Constrained projects (166 out of 461) intersect high value habitat areas. High value habitat areas are based on the September 2004 Inventory and Economic, Social, Environmental and Energy Analysis Data. High value areas provide the best riparian habitat, with adjustments made for economic importance to the region.

- The portions of these projects that intersect high value habitat areas represent 8 percent of the total linear project mileage (73 of 861 miles).

Table 1b. Summary of RTP Financially Constrained Investments Crossing High Value Habitat

	# of RTP investments crossing high value areas	% of all RTP investments crossing high value areas	Mileage of investments crossing high value areas	% of all RTP investments (mileage) crossing high value areas
Bike/Ped	20	4%	7	0.8%
Freight	8	2%	3	0.3%
Regional Trail	32	7%	51	5.9%
Road/Bridges	76	16%	8	0.9%
Throughways/Highways	10	2%	1	0.1%
Transit	16	3%	4	0.5%
Other*	4	1%	0	0.0%
Total	166	36%	73	8.5%

* “Other” refers to projects with no mode associated with them, such as system and demand management programs and investment strategies.

Table 2 displays ESA species that were considered during the Goal 5 inventory. This list is based on the best professional opinion of more than two-dozen local wildlife experts.

Table 2. ESA species in the Portland Region⁴

Common name	Scientific name	ODFW Strategy Species?
Aleutian Canada Goose (wintering)	<i>Branta canadensis leucopareia</i>	Yes
American Bald Eagle	<i>Haliaeetus leucocephalus</i>	Yes
Oregon Slender Salamander	<i>Batrachoseps wrighti</i>	No
Tailed Frog	<i>Ascaphus truei</i>	No
Northern Red-legged Frog	<i>Rana aurora aurora</i>	No
Northwestern Pond Turtle	<i>Clemmys marmorata marmorata</i>	No
Harlequin Duck	<i>Histrionicus histrionicus</i>	No
Northern Goshawk	<i>Accipiter gentilis</i>	Yes
Band-tailed Pigeon	<i>Columba fasciata</i>	Yes
Lewis's Woodpecker (extirpated as breeding species)	<i>Melanerpes lewis</i>	Yes
Acorn Woodpecker	<i>Melanerpes formicivorus</i>	Yes
Olive-sided Flycatcher	<i>Contopus cooperi (= borealis)</i>	Yes
Streaked Horned Lark	<i>Eremophila alpestris strigata</i>	Yes
Purple Martin	<i>Progne subis</i>	Yes
Yellow-breasted Chat	<i>Icteria virens</i>	Yes

⁴ These species (as of 2001) are classified under the ESA as either Endangered, Listed Endangered, Threatened, Listed Threatened, Proposed Endangered, Proposed Threatened, Candidate, or a Species of Concern. This list includes all known native vertebrate species (and nonnative vertebrate species with established breeding populations) that currently exist within the Metro region for at least a portion of the year. Vagrant species (those that do not typically occur every year) are not included on this list. The species list is based on the opinion of more than two-dozen local wildlife experts.

Common name	Scientific name	ODFW Strategy Species?
Oregon Vesper Sparrow	<i>Poocetes gramineus affinis</i>	Yes
Tricolored Blackbird	<i>Agelaius tricolor</i>	No
Yuma Myotis	<i>Myotis yumanensis</i>	No
Long-legged Myotis	<i>Myotis volans</i>	Yes
Fringed Myotis	<i>Myotis thysanodes</i>	Yes
Long-eared Myotis	<i>Myotis evotis</i>	No
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	Yes
Pacific Western Big-eared Bat	<i>Corynorhinus townsendii townsendii</i>	No
Camas Pocket Gopher	<i>Thomomys bulbivorus</i>	No
White-footed Vole	<i>Arborimus (= Phenacomys) albipes</i>	No
Red Tree Vole	<i>Arborimus (= Phenacomys) longicaudus</i>	Yes

II. Wildlife Incident Hotspots and Fish Passage Barriers Analysis

The purpose of the wildlife incident hotspot inventory is to identify key areas in the region where wildlife mortalities are caused by motor vehicles. This information highlights key areas where wildlife crossings designs should be considered in the transportation planning and project development process. In August, 2002, Metro completed a study that compiled wildlife mortality data for the three county Portland region. It used several sources, including: city, county and state road maintenance department road kill pick-up records; ODOT's Crash Analysis and Reporting Unit; County animal control agencies; and animal care and rehabilitation centers.

The study reported more than 2,000 deer and elk deaths between 1992 and 2001 due to collisions with vehicles. The analysis began with a wider scope but was restricted to elk and deer due to limitations of available data—many agencies do not consistently report other wildlife mortalities. In a second study in 2005, the Oregon Department of Transportation used an expert-opinion approach to identify 86 hot spots along state maintained roads in ODOT Region 1. Most of these hot spots are locations where deer-vehicle collisions are frequent, although the experts also identified hot spots that served as crossing locations. Attachments 2 and 6 map data from both sources to show the wildlife incident hot spots around the region.

In 2002, Metro inventoried culverts in the region to identify barriers to fish passage. Fish passage barriers can be man-made or natural blockages to the free movement of fish species through a waterway. Upstream blockages that prevent spawning of fish, especially those that are identified as threatened or endangered, are of significant importance. Fish barriers can come in the form of culvert blockages, dams, shallow water, or a combination of factors that prevent fish from reaching their spawning grounds. Transportation projects that may develop new barriers, or intersect existing barriers will require adequate fish passage as directed by State law. ODFW is currently working on a statewide fish passage culvert inventory. Metro will participate in this effort, and incorporate that information as it becomes available.

Attachment 2, "Wildlife Incident Hotspots and Fish Passage Barriers in the Portland Region" and Attachment 6, (corresponding map for Financially Constrained System) show the RTP projects overlaid on areas with culverts that serve as barriers to fish passage and high numbers of wildlife incidents.⁵ In addition, Table 3 and Table 4 list the RTP projects that intersect with culverts that serve as barriers to fish

⁵ Data collection efforts were better in Clackamas County, thus there are more hotspots identified in this part of the region.

passage and high-priority wildlife incident locations, respectively. Identification of these projects early in the planning process provides an opportunity to consider wildlife corridor acquisition/restoration, wildlife crossing design treatments and other strategies as part of future project development. Metro has begun development of a Wildlife Crossings handbook that will provide design options to planners, engineers, developers, biologists and citizens for reducing wildlife fatalities on roadways.

At the state level, ODFW and ODOT have undertaken steps to identify wildlife linkages, important wildlife habitat areas that are near or span paved roads. ODFW and ODOT are working with regional groups to identify these linkage areas through four different workshops that bring together state, regional and federal agency personnel; transportation maintenance workers; and transportation and land use planners. Currently the group is looking at terrestrial species. ODOT will combine this information gained from this effort with its wildlife mortality data, daily usage modeling and other information to start identifying possible high priority sites for wildlife crossings.

Table 3. RTP Projects and Fish Passage Barriers

RTP ID	Project Name	Part of the Financially Constrained System	Owner/Operator	Proposed Timing
10057	Redland Rd	Yes	Clackamas County	2008-2017
10075	Royer Rd connection	Yes	Damascus	2026-2035
10404	Beaver Creek culvert replacement	Yes	Multnomah County	2008-2017
10427	Regner Rd reconstruction	Yes	Gresham	2018-2025
10428	257 th corridor improvements	Yes	Gresham	2008-2017
10451	202 nd : Burnside to Powell		Gresham	2008-2017
10461	Towle Ave Improvements		Gresham	2008-2017
10462	Butler Rd Improvements	Yes	Gresham	2008-2017
10488	282 nd Ave	Yes	Gresham	2008-2017
10540	162 nd Ave	Yes	Gresham	2008-2017
10544	Butler Rd bike and ped improvements		Gresham	2018-2025
10644	110 th Ave Sidewalks	Yes	Beaverton	2018-2017
10653	Sexton Mountain Rd gaps in sidewalks	Yes	Beaverton	2018-2025
10667	155 th Ave bike lanes	Yes	Beaverton	2018-2025
10682	Brookman Rd	Yes	Sherwood	2018-2025
10859	Pleasant View Dr, Powell Loop to Binford Parkway		Gresham	2008-2017

Table 4. RTP projects that intersect high-priority wildlife incident locations

RTP ID	Project Name	Owner/Operator	Proposed Timing	Part of the Financially Constrained System
10027	Rosemont Rd Improvements	Clackamas County	2026-2035	
10047	Holcomb Blvd	Clackamas County	2008-2017	Yes
10061	142 nd Ave	Clackamas County	2026-2035	
10069	E Buttes powerline trail	N Clackamas PRD	2008-2017	Yes
10070	Mt Scott Creek trail	N Clackamas PRD	2008-2017	Yes
10597	Evergreen Rd improvements	Washington County	2008-2017	Yes
10814	Evergreen Rd	Hillsboro	2008-2017	Yes
10822	253 rd	Hillsboro	2008-2017	Yes
10915	BRT: Hwy 224/Sunnyside	TriMet	2020	

Attachment 10 includes a complete list of projects intersecting high, medium and low priority wildlife incident locations.

III. Wetlands and Floodplains Analysis

Generally, wetlands are lands where saturation with water is the dominant factor determining the nature of soil development and the types of plant and animal communities living in the soil and on its surface. For regulatory purposes under the Clean Water Act, the term wetlands means "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas."⁶

A floodplain is an area designated either by the State or Federal Governments as being susceptible to flooding (the inundation of water in an otherwise dry area). Floodplains are usually flat areas near a prominent water feature such as a river, creek, or lake. Typically properties within a floodplain incur certain land use restrictions and higher insurance rates. Thus, identifying a floodplain is critical in land use designation and development.

Staff intersected the 2035 RTP Investment Pool with inventoried wetland and floodplain areas in the Portland metropolitan region. This data is shown in Attachment 3, "Wetlands, Floodplains and Watersheds." As noted earlier, this data is also included in Metro's Regionally Significant Fish and Wildlife Habitat (Goal 5) Inventory and analysis described in Section 1.

Wetland Mitigation Banks

A mitigation bank is a wetland, stream, or other aquatic resource area that has been restored, established, enhanced, or (in certain circumstances) preserved for the purpose of providing compensation for unavoidable impacts to aquatic resources permitted under Section 404 or a similar state or local wetland regulation. A mitigation bank may be created when a government agency, corporation, nonprofit organization, or other entity undertakes these activities under a formal agreement with a regulatory agency.

⁶ <http://www.epa.gov/owow/wetlands/what/definitions.html>

In the Metro planning area, there are two mitigation banks identified by the Oregon Department of State Lands and the United States Army Corps of Engineers. They are:

Bank Name – Fern Hill in the Tualatin Watershed
Nearest City – Forest Grove
Approval Status - Approved
Approximate Size - 28 acres
Maximum credits to be developed – 16.75 credits potential; not selling credits at this time

Bank Name – Foster Creek in the Clackamas Watershed
Nearest City - Damascus
Approval Status - Approved July 2006
Approximate Size - 72 acres
Maximum credits to be developed – 28 credits

IV. Historic Properties and Districts Analysis

Potential transportation project related impacts may include physical changes to historic transportation infrastructure, effects of road widening on historic settings or structures, effects on historic roadside elements, effects of air pollution on resources due to increased traffic, and disturbance or infringement on cultural landscapes. The nature of these impacts is highly site and project specific, and the information about historic and cultural resources is constantly evolving. It is important for each project to be evaluated in the specific context and timeframe in which it is designed with up-to-date information.

There are several state and federal laws and regulations that call for preservation and/or enhancement of cultural resources. Of specific relevance to transportation projects are Section 106 of the National Historic Preservation Act (NHPA) of 1966 and Section 4(f) of the Department of Transportation Act of 1966. The Historic properties are any historic district, site, building, structure or object included in, or eligible for inclusion in, the National Register of Historic Places. More than 650 historic sites and districts have been identified in the Metro region. This list is available upon request.⁷ Staff intersected the 2035 RTP Financially Constrained system with historic properties within the Portland metropolitan region that are listed in the National Register of Historic Places. This data is displayed in Attachment 7 “Historic Properties in the Portland Metro region”.

V. Air Quality Analysis

Metro estimated future carbon monoxide, precursors of smog (volatile organic compounds and oxides of nitrogen) and carbon dioxide emissions from cars and trucks operating within the greater Portland air shed to the year 2035 using EMME/2 modeling software and Mobile 6.2, the latest model approved by the U.S. Environmental Protection Agency. Metro has demonstrated that the region, with the additional transportation investments included in the Financially Constrained 2035 Regional Transportation Plan will meet federal and state air quality standards.⁸

Further, the region has estimated that other pollutants, for which there are not federal or state regulations, but which nevertheless can have health or environmental concerns, will be reduced in the future. The

⁷ For more information on each site visit http://www.nationalregisterofhistoricplaces.com/or/state.html#pick_em and click on Clackamas, Multnomah or Washington County. Metro’s Data Resource Center can provide a list for the portions of these Counties within the Metro region.

⁸ See http://www.metro-region.org/files/planning/2008_aq_conformity_2035_rtp_08-11_mtip_1-15-08.pdf for the full air quality conformity document.

amount of air toxics and ozone generated from on-road transportation sources are estimated by Metro on a voluntary basis and reported on Metro's website. Both air toxics and ozone are estimated to decrease substantially in the future to the year 2035, the furthest year analyzed. A table showing these pollutants for the region is available on Metro's website.

VI. Tribal Lands Analysis

There is no federally recognized Indian reservation within or adjacent to the Metro planning area.

VII. Environmental Justice Analysis

Title VI of the Civil Rights Act of 1964 mandates, "No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."⁹ As the designated Metropolitan Planning Organization (MPO) for the Portland metropolitan region, Metro is responsible for transportation planning and implementation of transportation projects, and is thus required to comply with this law.

In 1994, President Clinton enacted Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" to reinforce Title VI of the Civil Rights Act of 1964. The order states that the duty of each public agency is to identify and address "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."¹⁰

As an entity utilizing federal funds, Metro is responsible to successfully integrate environmental justice standards into its transportation program and planning activities. Any program or activity receiving federal financial assistance cannot discriminate against people based on race, color, national origin, age, sex, disability, religion or income status.

E.O. 12898 expands upon the law set forth in Title VI, and three main actions that Metro and public agencies receiving federal financial assistance need to address:

- "Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects on minority populations and low-income populations"
- "Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process"
- "Prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations"

In a memorandum dated October 7, 1999, the Federal Highway Administration and the Federal Transit Administration describe the procedure for assuring state and metropolitan agency's compliance with Title VI requirements. The memorandum states that it is important for agencies to complete the following actions¹¹:

- Develop a demographic profile of the metropolitan planning area that identifies the locations of socio-economic groups.

⁹ United States Department of Justice. (1964). Title VI of the 1964 Civil Rights Act. Retrieved July 12, 2006 from <http://www.usdoj.gov/crt/cor/coord/titlevistat.htm>.

¹⁰ Clinton, William J. (1994). Executive Order 12898: Federal Actions to Address Environmental Justice in Minority and Low-Income Communities. Retrieved July 12, 2006 from <http://www.fs.fed.us/land/envjust.html>.

¹¹ FHWA and FTA. (1999). Action: Implementing Title VI Requirements in Metropolitan and Statewide Planning. Accessed July 12, 2006 from <http://www.fhwa.dot.gov/environment/ejustice/ej-10-7.htm>

- Identify the transportation needs of low-income and minority populations.
- Assess the regional benefits and burdens of transportation system investments in the RTP and TIP for different socio-economic groups.
- Have a public involvement strategy for engaging minority and low-income populations in transportation decision-making.

Data from the 2000 Decennial Census was used to overlay RTP projects with identified environmental justice populations in the Portland metropolitan region. Table 1 explains each population analyzed and its definition and source within the Census.

Table 1: Census 2000 Data Sources and Definitions

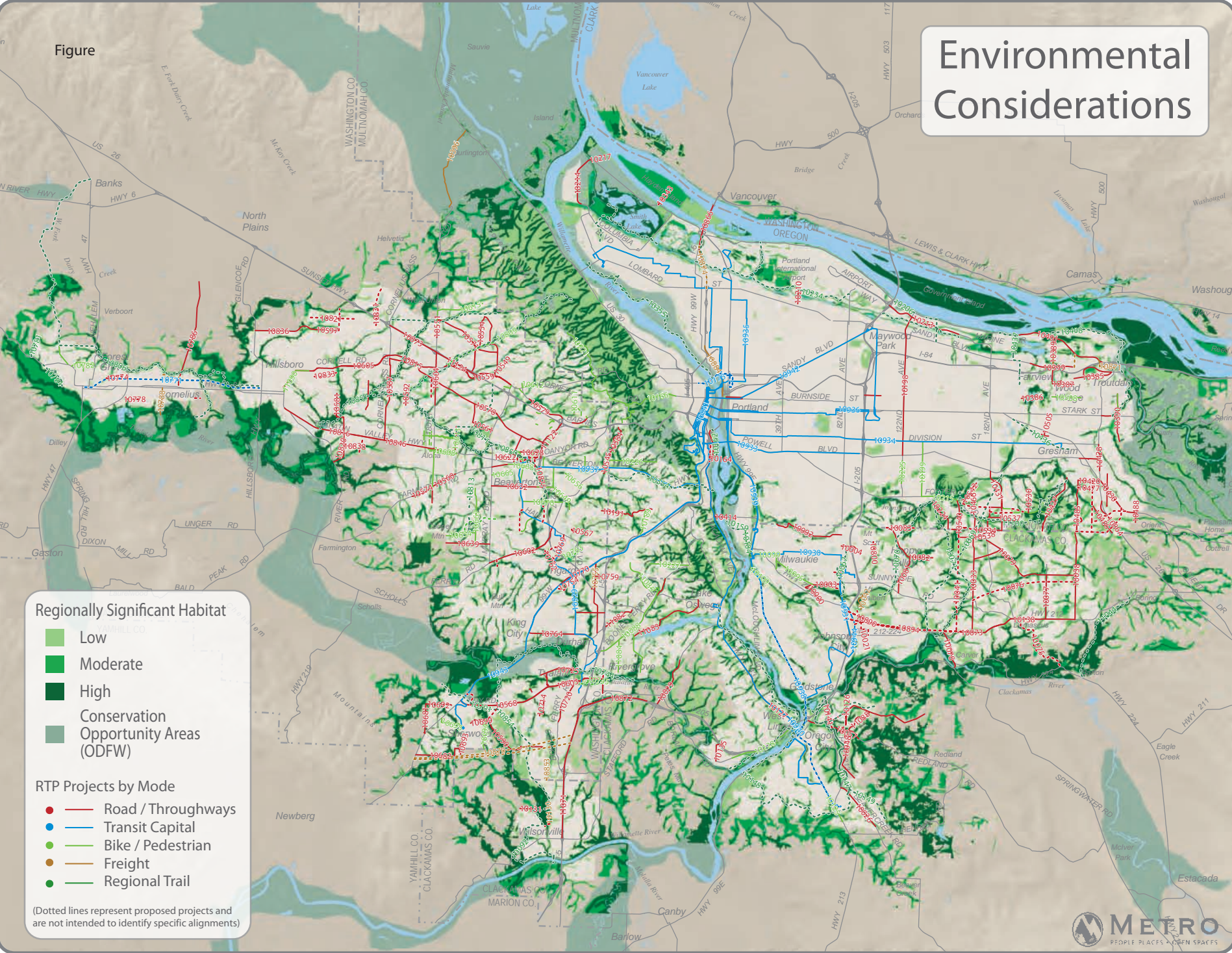
Demographic Category	Definition	Source Table(s) within the 2000 Census
White Alone	Persons who identified themselves as only White (no other racial category)	Summary File 1, P7: Race (Total Population)
Minority	All persons who did not self-identify as White, non-Hispanic	Summary File 1, P7: Race (Total Population) and P4: Hispanic or Latino, and Not Hispanic or Latino by Race (Total Population)
Black Alone	Persons who identified themselves as only Black (no other racial category)	Summary File 1, P7: Race (Total Population)
American Indian or Alaska Native Alone	Persons who identified themselves as only American Indian or Alaska Native (no other racial category)	Summary File 1, P7: Race (Total Population)
Asian Alone	Persons who identified themselves as only Asian (no other racial category)	Summary File 1, P7: Race (Total Population)
Hawaiian or Pacific Islander Alone	Persons who identified themselves as only Hawaiian or Pacific Islander (no other racial category)	Summary File 1, P7: Race (Total Population)
Hispanic	Persons of any racial group who identified as Hispanic	Summary File 1, P4: Hispanic or Latino, and Not Hispanic or Latino by Race (Total Population)
Non-English-Speaking	Persons who stated that they didn't speak any English at all in 2000	Summary File 3, P19: Age by Language Spoken at Home by Ability to Speak English for the Population 5+ Years
Very Low-Income	Persons who earned between 0 and .99 times the federal Poverty Level in 1999	Summary File 3, P88: Ratio of Income in 1999 to Poverty Level and P151A: Household Income in 1999 (White Alone Householder)
Low-Income	Persons who earned between 1 and 1.99 times the federal Poverty Level in 1999	Summary File 3, P88: Ratio of Income in 1999 to Poverty Level and P151A: Household Income in 1999 (White Alone Householder)
Total Low-Income	Persons who earned between 0 and 1.99 times the federal Poverty Level in 1999	Summary File 3, P88: Ratio of Income in 1999 to Poverty Level and P151A: Household Income in 1999 (White Alone Householder)
Disabled	All persons 5 years or older with any type of disability: sensory, physical, mental, self-care, go-outside-the-home, or employment.	Summary File 3, P41: Age by Types of Disability for the Civilian Noninstitutionalized Population 5+ Years with Disabilities
Elderly	Persons 65 years of age or older in 2000	Summary File 1, P12: Sex by Age (Total Population)
Total Population	All persons residing within the census-defined area in 2000	Summary File 1, P1: Total Population

Source: U.S. Census Bureau, 2000

Attachment 4 Social Equity Considerations and Attachment 8 (corresponding map for Financially Constrained System) displays RTP projects (colored by mode) intersected with identified Environmental Justice Target Areas - 2000 census block groups with two or more socio-economically sensitive populations.

Environmental Considerations

Figure



Regionally Significant Habitat

- Low
- Moderate
- High
- Conservation Opportunity Areas (ODFW)

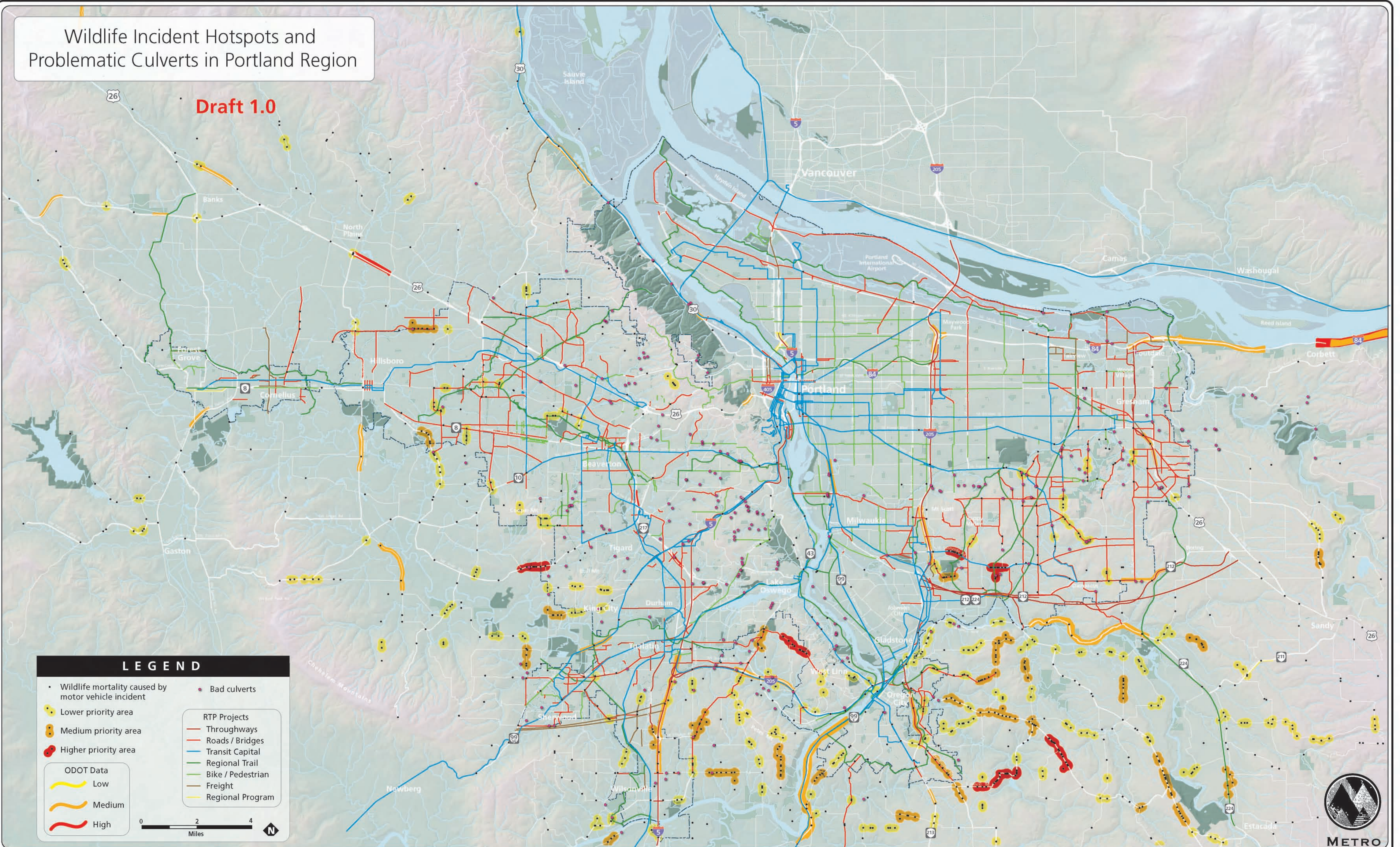
RTP Projects by Mode

- Road / Throughways
- Transit Capital
- Bike / Pedestrian
- Freight
- Regional Trail

(Dotted lines represent proposed projects and are not intended to identify specific alignments)

Wildlife Incident Hotspots and Problematic Culverts in Portland Region

Draft 1.0



The purpose of this map is to identify key areas in the growing region where wildlife mortalities are caused by motor vehicles. This information can then be used by transportation planners to highlight key areas where better wildlife crossings should be built. Key habitat areas are shown on the map in relation to the mortality incidents to provide the environmental context of the wildlife element.

Metro compiled wildlife mortality data for the three-county Portland region from several sources, including:

- City, county and state road maintenance department roadkill pick-up records

- ODOT's Crash Analysis and Reporting Unit
 - County animal control agencies
 - Animal care and rehabilitation centers.
- The study, which was completed in August of 2002, reported more than 2,000 deer and elk deaths between 1992 and 2001 due to collisions with vehicles. The analysis began with a wider scope but was restricted to elk and deer due to limitations of available data—many agencies do not consistently report other wildlife mortalities. Of the reporting agencies, Clackamas County was the most thorough suggesting a regionwide spatial bias in the above map.

Once the locations were geocoded the spatial analysis of

the distribution of wildlife incidents was implemented. Spatialecology.com provides numerous tools for the analysis of wildlife ecology. Hawth's Analysis Tools were used to estimate the kernel density of the wildlife based on the mortality locations. The 95% kernel density volume contours were used to delineate the approximate crossing range and pinpoint the higher priority areas.

State data were supplied by ODOT.

What are Wildlife Crossings?
Wildlife crossings are overpasses and underpasses designed to allow animals to safely cross roadways.

Underpasses can be viaducts or culverts. They have a few distinguishing characteristics, including the following:

- Grade separation
- Vegetation to attract animals and provide habitat
- Fencing and other measures guide animal traffic through crossings
- Strategic location to enhance connectivity of wildlife movement corridors
- Adjacent land use and zoning that is conducive to long-term habitat protection

Although animal-vehicle conflicts are already a safety concern for both humans and animals in this region, the problem is likely to increase as the region's populations

grows. The metropolitan region is projected to add over 500,000 people in the next 20 years, reaching a population of 2.3 million (Metro, 1994). As the region grows, more and more land will be developed for urban uses.⁷ It is inevitable that, as people pave over habitat to make room for their own uses, there will be more and more collisions—both figurative and literal—between humans and animals. Planning for ways to alleviate the conflict between vehicles and animals can greatly improve the safety for both animals and humans.



This map displays 2000 census block groups that have two or more socio-economic groups of concern. The populations used in this analysis are as follows: minority groups, low-income, elderly persons, non-english speakers, and people with disabilities. Portions of RTP projects depicted on the map (colored by mode) intersect areas with two or more socio-economically sensitive populations.

Social Equity Considerations

Draft 3.0

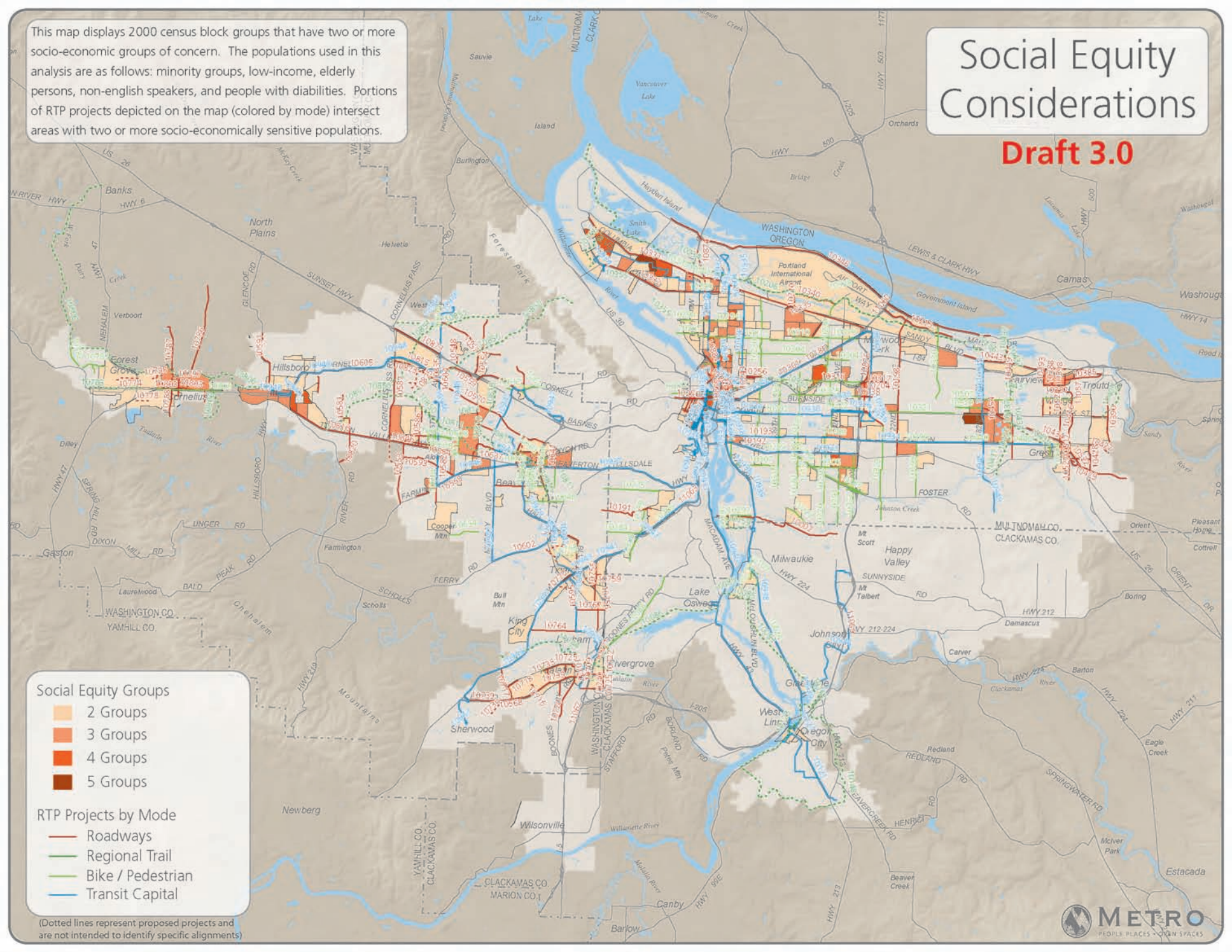
Social Equity Groups

- 2 Groups
- 3 Groups
- 4 Groups
- 5 Groups

RTP Projects by Mode

- Roadways
- Regional Trail
- Bike / Pedestrian
- Transit Capital

(Dotted lines represent proposed projects and are not intended to identify specific alignments)



Environmental Considerations for Financially Constrained System

Regionally Significant Habitat

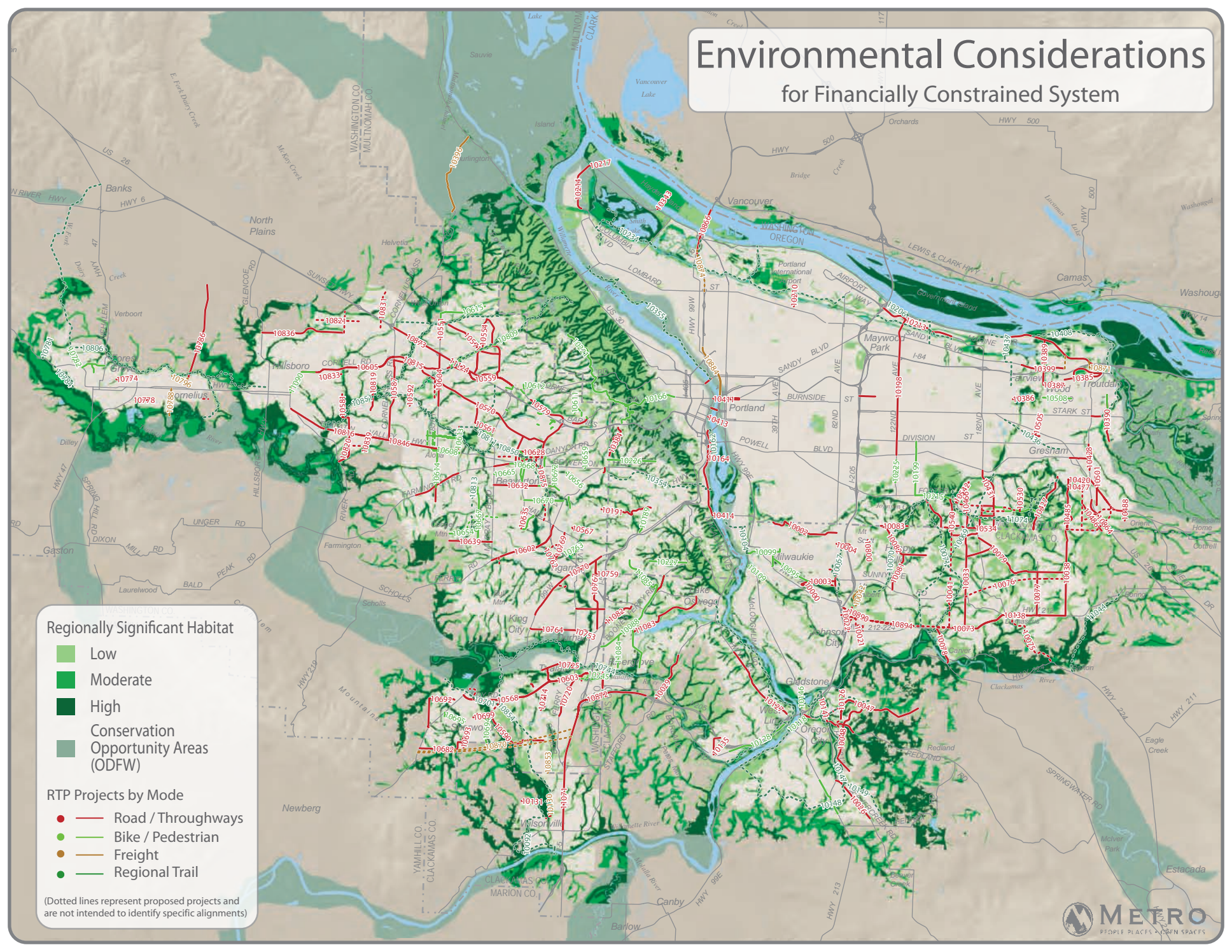
- Low
- Moderate
- High

Conservation Opportunity Areas (ODFW)

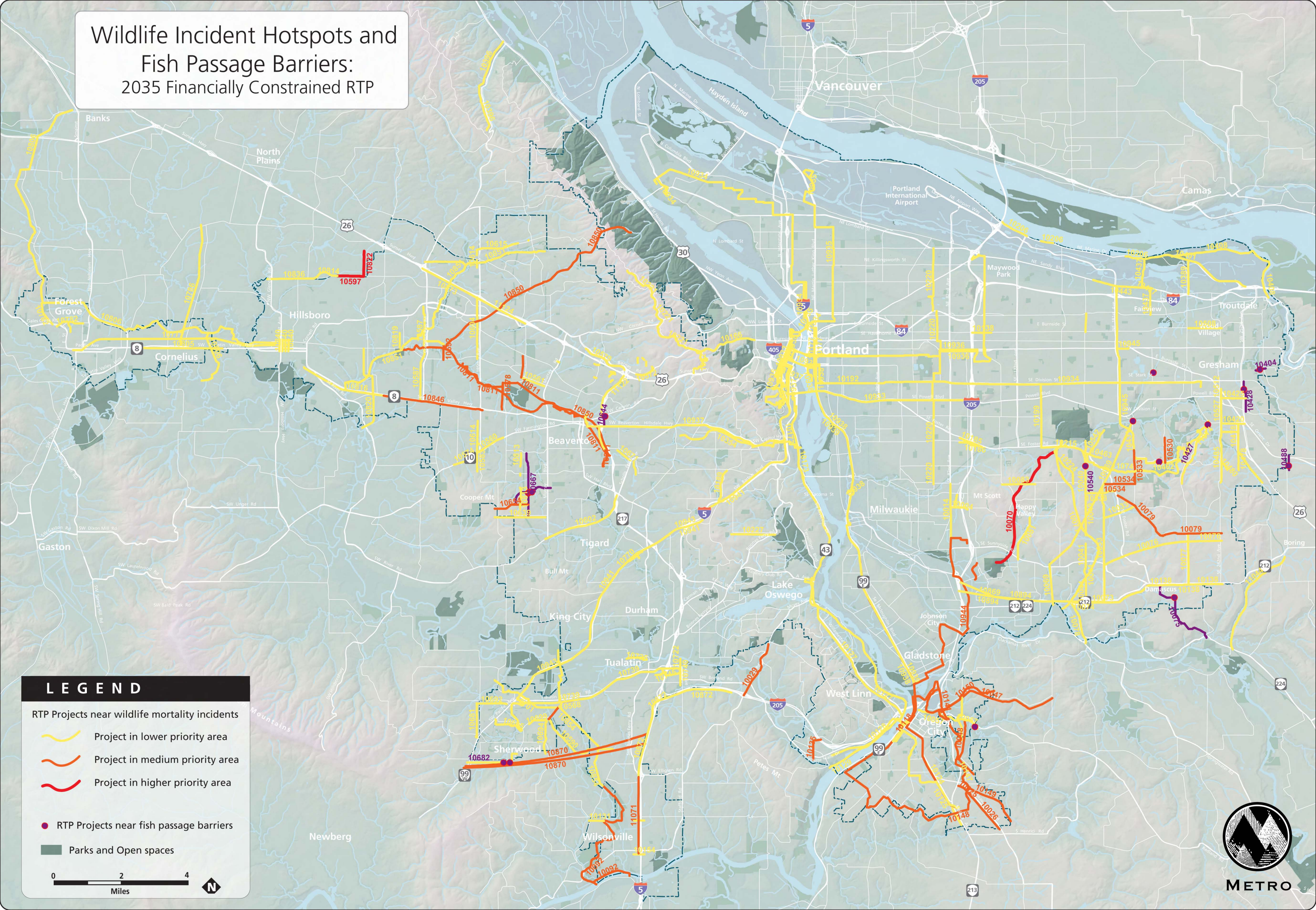
RTP Projects by Mode

- Road / Throughways
- Bike / Pedestrian
- Freight
- Regional Trail

(Dotted lines represent proposed projects and are not intended to identify specific alignments)



Wildlife Incident Hotspots and Fish Passage Barriers: 2035 Financially Constrained RTP



LEGEND

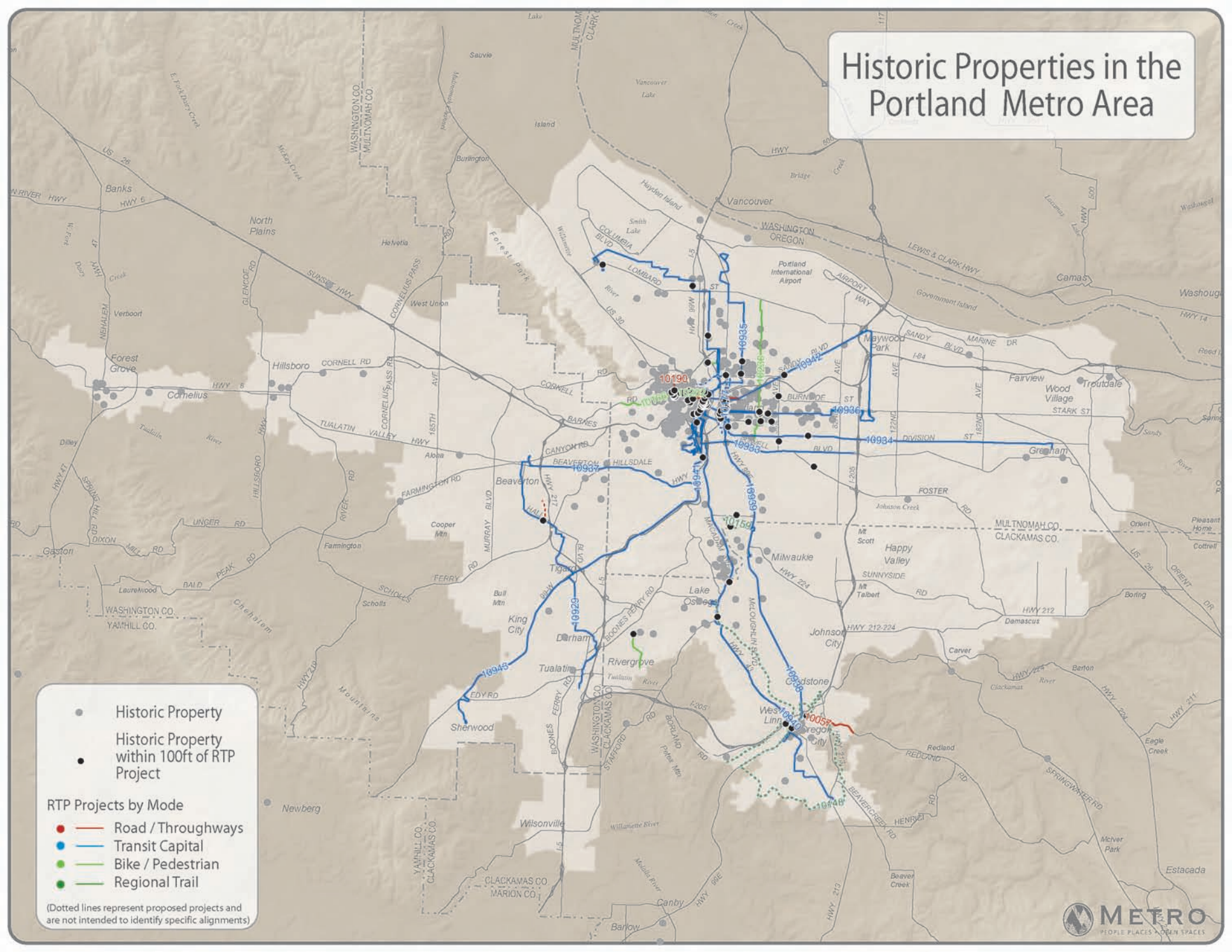
- RTP Projects near wildlife mortality incidents
 - Project in lower priority area
 - Project in medium priority area
 - Project in higher priority area
- RTP Projects near fish passage barriers
- Parks and Open spaces

0 2 4
Miles

N



Historic Properties in the Portland Metro Area



- Historic Property
- Historic Property within 100ft of RTP Project

RTP Projects by Mode

- Road / Throughways
- Transit Capital
- Bike / Pedestrian
- Regional Trail

(Dotted lines represent proposed projects and are not intended to identify specific alignments)

This map displays 2000 census block groups that have two or more socio-economic groups of concern. The populations used in this analysis are as follows: minority groups, low-income, elderly persons, non-english speakers, and people with disabilities. Portions of RTP projects depicted on the map (colored by mode) intersect areas with two or more socio-economically sensitive populations.

Social Equity Considerations for Financially Constrained System

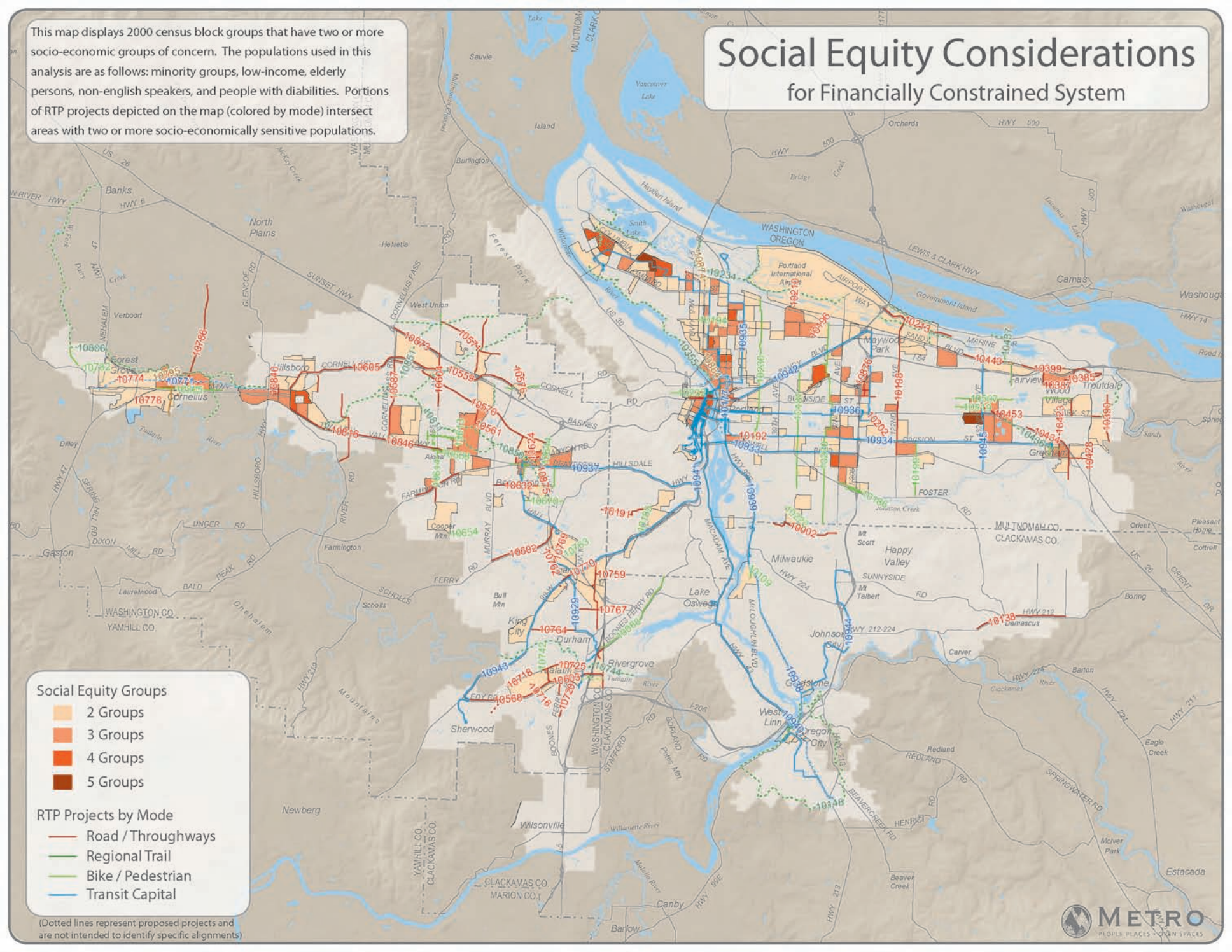
Social Equity Groups

- 2 Groups
- 3 Groups
- 4 Groups
- 5 Groups

RTP Projects by Mode

- Road / Throughways
- Regional Trail
- Bike / Pedestrian
- Transit Capital

(Dotted lines represent proposed projects and are not intended to identify specific alignments)



Attachment 9. RTP projects that intersect high value habitat areas

RTP project ID	Project Name	Part of Financially Constrained System
10002	Johnson Creek Blvd.	
10010	Mather Rd. Improvements	
10015	Causey Ave. Extension	
10028	Childs Rd Improvements	
10029	Stafford Rd Improvements	Yes
10032	Bonita Rd. Improvements	
10033	172nd Ave. Improvements	Yes
10035	Foster Rd. Improvements	
10037	162nd Ave.	
10038	242 nd	Yes
10040	162nd Ave. Extension	Yes
10041	162nd Ave. Extension	Yes
10042	97th realignment	Yes
10043	Borland Rd.	
10044	Central Point Rd.	
10045	Clatsop St.	
10046	Clatsop St. Extension	
10047	Holcomb Blvd.	Yes
10048	Holly Lane	Yes
10057	Redland Rd.	Yes
10061	SE 142nd Ave.	
10062	SE 152nd Ave., Phase 2	
10067	Phillips Creek Trail	Yes
10068	Clackamas Bluffs Trail	
10069	East Buttes Powerline trail	Yes
10070	Mt. Scott Creek Trail	Yes
10071	Scouter's Mt. Trail	Yes
10075	Royer Rd. Connection	Yes
10076	SE Sunnyside Rd East Extension	Yes
10078	Hwy. 224	Yes
10079	Widen Tillstrom Rd.	Yes
10082	Mt. Scott Blvd./Kin	Yes
10083	Clatsop St. Extension	Yes
10085	Lake Oswego to Milwaukie Trail	
10086	Turf to Surf Rail with Trail	
10087	Willamette Shoreline Trail	
10088	Lower Boones Ferry Rd.	
10092	Tonquin Trail	Yes
10093	82nd Ave. Bridge Reconstruction	
10097	Stanley N/S bike/ped route	
10098	OR 99-E Blvd.	
10102	Linwood Ave. Ped improvements	
10104	17th Ave. Trolley Trail	Yes
10109	Kellogg Creek Trail	Yes
10112	Ochoco Sidewalks	
10114	Sunrise Parkway	
10115	Sunrise project ROW	
10116	Hwy. 43 Bridge	
10117	Sunrise Project	
10126	Swan Extension	Yes

Attachment 9. RTP projects that intersect high value habitat areas

RTP project ID	Project Name	Part of Financially Constrained System
10127	Hwy. 43 Improvement	Yes
10129	Willamette River Greenway Trail	Yes
10130	Kinsman Rd. Extension	Yes
10133	French Prairie Bicycle/Pedestrian Bridge	Yes
10136	Kellogg Creek (Oatfield Rd.) Bridge Replacement	
10139	I-205 Climbing Lane	
10146	McLoughlin Blvd. Improvements -Phase 2	Yes
10147	Newell Creek Canyon	
10148	Oregon City Loop Trail	
10149	Beaver Lake Trail	
10151	Trolley Trail Bridge	
10153	Barber St. Extension	Yes
10157	Carver (Springwater	
10159	Springwater Trail (Sellwood gap)	
10162	Willamette Greenway Trail – South Waterfront	Yes
10166	NW Burnside at Skyline	Yes
10173	Macadam, SW (Bancroft – Sellwood Br): ITS	Yes
10176	Eastside Streetcar Phase 1, NE	Yes
10188	Scholls Ferry, SW (Humphrey – County line): Multimodal Improvements	
10206	Marine Dr, NE (6 – 33 rd & Gantenbein – Vancouver Way): Bikeway (Marine dr., 6 th to 185 th)	
10209	92nd Dr. (Columbia to Alderwood)	Yes
10214	Lombard, N (Rivergate – to T6): Multi-modal improvements	Yes
10215	Foster Rd., SE (136 th – Jenne): Multi-modal improvements	Yes
10217	Lombard at Columbia Slough, N: Overcrossing	Yes
10221	Skyline, NW (Hwy 26 – City Limits): Bikeway	
10224	Barbara Welch Rd. SE multimodal improvements	Yes
10226	Hamilton St., SW	Yes
10234	Columbia Slough Trail	Yes
10245	Steel Bridge, NE (East Ramps): Seismic Retrofit	
10259	Powell, SE (Ross Island Bridge – 50 th): Multimodal improvements	
10271	92nd Ave., SE (Powell – City limits): Bicycle & Pedestrian improvements	
10275	Vermont St., SW, (30 th – Oleson): Bicycle & Pedestrian improvements	
10280	Sunset Bl, SW (Dosch – Capitol): Bicycle & Pedestrian improvements	
10281	Beaverton-Hillsdale Hwy, SW: ITS	
10283	Barbur Blvd, SW (3r – Terwilliger): Multi-modal improvements	
10291	82nd Ave., SE (Schiller – City Limits), SE Street Improvements	
10297	Spokane & Umatilla, SE(7 th – Tacoma Overcrossing): Bikeway	
10298	Tacoma, SE (Sellwood Bridge – 45 th /Johnson Creek): ITS	
10308	Boones Ferry Rd., SW Terwilliger – City limits)	

Attachment 9. RTP projects that intersect high value habitat areas

RTP project ID	Project Name	Part of Financially Constrained System
	Bikeway	
10309	Macadam, SW (Bancroft – county line) multi-modal improvements	
10323	111th/112th Ave., SSE 9Market – Mt Scott Blvd): Bike & Ped improvements	
10338	Alderwood St., NE, (Alderwood Trail – Columbia Blvd) Bikeway	
10344	Force/Broadacre/Victory, N: Bikeway	
10350	Clatsop, SE (162nd to City limits): Street extension	
10351	Wildwood Bridge at West Burnside	
10354	Fanno Creek Greenway (Red Electric) trail	Yes
10355	North Portland Willamette Greenway (previously “Willamette Cove Trail”)	Yes
10382	Improve Stark St. to arterial standards	Yes
10384	Reconstruct Scholls Ferry Rd	Yes
10389	Reconstruct 223rd Ave.	Yes
10390	Reconstruct Troutdale Rd.	Yes
10399	Reconstruct Sandy Blvd.	Yes
10400	Construct new bicycle/pedestrian facility on Morrison Bridge	Yes
10401	Reconstruct Marine Dr.	Yes
10403	Construct new road north of I-84, Exit 16	Yes
10404	257th Ave. Pedestrian improvements at intersections and mid-block crossings	Yes
10408	Beaver Creek Culvert Replacement	Yes
10409	Beaver Creek Trail	Yes
10410	Broadway Bridge Rehabilitation	Yes
10411	Burnside Bridge Rehabilitation	Yes
10412	Morrison Bridge Rehabilitation	Yes
10413	Hawthorne Bridge Rehabilitation	Yes
10414	Sellwood Bridge Rehabilitation/Replacement	Yes
10426	Walters Rd. Recon.	
10427	Regner Rd. Reconstruction	Yes
10428	257th Corridor Improvements	Yes
10429	Powell Valley Imps.	
10431	Highland/190th Rd. Widening	Yes
10437	Gresham/Fairview trail	Yes
10460	SE 174th N/S Improvement	
10461	Towle Ave. Improvement	
10462	Butler Rd. Improvement	Yes
10471	Butler Rd. Extension	Yes
10485	Hogan	Yes
10500	257th (Kane) at Stark, and Stark: Kane to Troutdale Rd	
10515	Riverside Dr. ext. to Sandy Blvd	
10528	Hogan Rd., US 26	
10529	Salquist Rd. Barnes to 282nd	
10530	Towle Ave. Butler Rd to Binford Lk	Yes
10533	190th: 30th to So. Boundary of Pleasant Valley	Yes
10534	Cheldelin: 172nd to 190 th	Yes
10535	Clatsop: New extension	Yes

Attachment 9. RTP projects that intersect high value habitat areas

RTP project ID	Project Name	Part of Financially Constrained System
10540	162 nd	Yes
10541	182 nd	Yes
10544	Butler Rd. Bike and improvements	
10545	OR 10: Oleson Rd. Improvement	Yes
10546	170th Ave. Improvement	Yes
10548	174th Ave. Improvement	
10553	209th Improvements	
10554	Bethany Blvd. Improvement	Yes
10555	Baseline Rd. Improvements	
10570	Walker to Hwy. 217	Yes
10571	West Union Rd. Improvements	Yes
10575	West Union to Cornelius Pass Improvements	
10578	Merlo/158th Improvements	Yes
10580	Butner Rd. Improvements	
10581	Brookwood Rd. Improvements	Yes
10586	198th Ave. Improvements	
10587	Cornelius Pass Rd.	Yes
10589	95th Ave. Extension	
10590	Tonquin Rd. Improvements	Yes
10595	Hall Blvd. Improvements	
10602	Scholls Ferry ATMS	Yes
10609	92nd Ave. Transit Corridor ped improvements	
10611	Station Community Bike improvements	Yes
10635	125th Ave. multimodal extension Brockman to Hall Blvd	Yes
10637	Millikan Way safety, bike and ped improvements	
10638	Davies Rd. multimodal street extension	Yes
10640	Nimbus Ave. 2 lane multimodal street extension	Yes
10641	102nd/103rd 2 lane multimodal connection	
10648	Denney Rd. sidewalks	Yes
10654	Nora Rd. and Beard Rd sidewalks	Yes
10670	Denney Rd. bike lanes	
10673	Nora Rd./ Beard Rd. bike lanes	
10678	Century Dr.	
10681	Elwert Rd	Yes
10682	Brookman Rd	Yes
10688	Villa Rd.	
10692	Edy Rd	Yes
10695	Meinecke	Yes
10698	Sunset Blvd.	
10700	Arrow Street	
10701	Regional Trail System / West fork of Tonquin trail	Yes
10712	Boones Ferry	
10714	105th Ave/Avery Street	Yes
10716	Myslony	Yes
10717	Cipole	
10722	65 th	Yes
10723	ORE 99W	
10725	65 th	
10731	Lower Boones Ferry	
10733	Borland	
10740	65th Ave.	Yes

Attachment 9. RTP projects that intersect high value habitat areas

RTP project ID	Project Name	Part of Financially Constrained System
10743	99W	
10744	Tualatin River Pathway	Yes
10745	Pedestrian Trail	Yes
10753	Durham Road Improvements	Yes
10754	Walnut Street Extension	Yes
10758	Dartmouth Street Extension	
10762	Nimbus Ave. Extension	Yes
10763	Washington Square Regional Center Greenbelt shared use path	Yes
10765	Hall Blvd. Extension	
10767	72nd Ave. Intersection Improvements	
10771	High Capacity Transit: Blue Line west: Hwy 8 extension	Yes
10772	David Hill	
10774	23rd/24th	Yes
10778	Heather Industrial Complex	Yes
10781	West UGB Trail	Yes
10782	Thatcher / Willamina / B St Pedestrian and Bicycle improvements	
10784	David Hill / Hartford Bicycle Pedestrian	Yes
10786	Susbauer Rd	Yes
10787	10th Ave/Cornelius-Schefflin Rd	
10788	10th Ave	Yes
10806	Council Creek Trail System	Yes
10809	Bronson Creek Community Trail	Yes
10810	Westside Trail (Regional Trail)	Yes
10811	Beaverton Creek Trail (Regional)	Yes
10812	Fanno Creek Trail (Regional)	
10813	Westside Trail (Regional)	Yes
10814	Evergreen Rd	Yes
10818	231st Ave./Century Blvd	Yes
10820	Brookwood (247th)	Yes
10822	253 rd	Yes
10823	Amberwood	Yes
10826	Jackson School Road	
10828	Edgeway (Salix)	Yes
10832	Quatama Road	
10836	Evergreen Rd	Yes
10837	Campus Court Extension	
10839	Century Blvd (234 th)	Yes
10844	Cornelius Pass Road	
10845	Evergreen Rd	
10850	Beaverton Ck Trail, Bronson	Yes
10851	Rock Ck Trail – Multi Use	Yes
10854	Tonquin Trail	Yes
10859	Pleasant View Dr.,	
10863	Marine Dr.	Yes
10865	New I-205 NB on-ramp at I-205 airport Way interchange	Yes
10866	Improve I-5/Columbia River bridge	
10867	I-5: Conduct PE and environmental work to modernize freeway ramps in Lloyd District /Rose	

Attachment 9. RTP projects that intersect high value habitat areas

RTP project ID	Project Name	Part of Financially Constrained System
	Quarter	
10870	I-5/99W Connector Phase I (study, design, NEPA)	Yes
10873	US 26W: Widen to six lanes	Yes
10874	I-5: Construct new road Columbia Blvd to Denver; replace Denver viaduct	Yes
10877	Modernize freeway access to Lloyd district and Rose Quarter	
10878	I-5/99W Connector Phase 2 (minimum operable segment)	
10879	I-5/99W Connector Phase 3 (additions to minimum operable segment)	
10880	I-5/99W Connector Phase 4 (additions to minimum operable segment)	
10881	I-5/99W Connector Phase 5 (additions to minimum operable segment)	
10882	I-5/99W Connector Phase 6 (additions to minimum operable segment)	
10883	I-5: Acquire right-of-way	
10884	I-5/I-84 Interchange: Acquire ROW	
10885	Sunrise Project Phase 2 Construction	
10890	Sunrise Project: Acquire ROW for phase 1	
10891	Sunrise Project: Conduct PE	
10892	Sunrise Project: Acquire ROW for phase 2	
10893	Improve I-5/Columbia River bridge (Oregon share)	
10895	Commuter Rail: SW Corridor	
10896	Commuter Rail: Willamette Valley Corridor	
10897	Commuter Rail: Northwest Corridor	
10898	Amtrak Cascades Service	
10900	Washington County Commuter Rail spare DMUs	
10902	MAX light rail: Yellow Line: CRC / I-5 North extension	
10907	High Capacity Transit: Barbur / I-5 / 99W Corridor	
10908	High Capacity Transit South Corridor: SE Mcloughlin extension	
10910	High Capacity Transit: Blue Line west: Hwy 8 extension	
10911	High Capacity Transit blue Line east: NE 257 th	
10913	Bus Rapid Transit: Hwy 26 - Powell / Foster	
10914	Bus Rapid Transit: Foster Rd / Damascus	
10915	Bus Rapid Transit: Hwy 224 / Sunnyside Rd	
10916	Bus Rapid Transit: SE Mcloughlin to Oregon City and CCC	Yes
10918	Bus Rapid Transit: I-205 South	
10929	Frequent Bus: Line 76 – Beaverton / Tualatin	
10933	Frequent Bus: Line 9 – Powell Blvd to I-205	Yes
10934	Frequent Bus: Line 4 – Division to Gresham TC	
10935	Frequent Bus: Line 8 – Jackson Park	
10936	Frequent Bus: Line 15 – Belmont	Yes
10937	Frequent Bus: Line 54 – Beaverton Hillsdale Hwy to Beaverton TC	Yes

Attachment 9. RTP projects that intersect high value habitat areas

RTP project ID	Project Name	Part of Financially Constrained System
10938	Frequent Bus: Line 33 – Mcloughlin to CCC	Yes
10939	Frequent Bus: Line 33 – Mcloughlin to Oregon City	Yes
10940	Frequent Bus: Line 35 – Macadam Ave to Oregon City	Yes
10941	Frequent Bus: Line 12 – Barbur to Durham Rd	Yes
10942	Frequent Bus: Line 12 Sandy to Parkrose TC	Yes
10943	Frequent Bus: Line 12 Barbur from Durham to Sherwood	Yes
10944	Frequent Bus: Line 79 Clackamas TC to Oregon City	
10946	Frequent Bus: Line 87 – 181 st /182 nd Ave, NE Sandy to SE Powell	
10947	Frequent Bus: Line 52 – SW 185 th Ave	
10949	Frequent Bus: Line 62 – SW Murray Blvd	
10977	Eastside Streetcar Loop: Phase 1	
11044	Regional Trail Master Plans	Yes
11057	I-84/US 26 Connector ROW preservation	
11059	I-205 Corridor Refinement Planning: OR/WA state line to I-5	
11060	I-205/Airport Way Refinement planning	
11061	I-84 to US 26 Corridor Refinement	
11062	I-5 South Corridor refinement plan – Wilsonville to North Tigard	
11064	I-205 Widening: Stafford Rd to Willamette River	
11065	I-205: Abernethy Bridge Widening (Willamette River crossing)	
11068	I-5 Auxiliary Lanes: Stafford Interchange to Wilsonville Rd	
11070	I-205/OR 213 Interchange: Stage 5 – I-205 improvements	
11074	East Buttes Loop Trail (N)	
11075	East Buttes Loop Trail (S)	
11081	Boones Ferry Rd bike lanes	Yes
11083	Iron Mountain	Yes
11085	Kerr Pkwy bike lanes	Yes
11092	Ramsey Rail Yard	Yes

Attachment 10. RTP projects that intersect wildlife mortality hotspots

(Shaded projects are part of Financially Constrained system)

High Priority Areas		Medium Priority Areas		Low Priority Areas			
10027	Rosemont Rd Improvements	10025	Beavercreek Rd Improvements Phase 2	10004	Otty Rd. Improvements	10555	Baseline Rd. Improvements
10047	Holcomb Blvd	10026	Beavercreek Rd Improvements Phase 3	10009	Fuller Rd. Improvements	10560	Farmington Rd. Improvements
10061	142 nd Ave	10028	Childs Rd Improvements	10014	82nd Ave. Multi-Modal Improvements	10561	Jenkins Rd. Improvements
10069	E Buttes powerline trail	10029	Stafford Rd Improvements	10010	Mather Rd. Improvements	10568	Tualatin-Sherwood R
10070	Mt Scott Creek trail	10030	Stafford Rd. Improvements	10025	Beavercreek Rd. Improvements Phase 2	10572	Barnes Rd. Improvement
10597	Evergreen Rd improvements	10033	172nd Ave. Improvements	10029	Stafford Rd improvements	10574	Farmington to 198 th improvements
10814	Evergreen Rd	10042	97th realignment	10033	172nd Ave. Improvements	10579	Barnes to 119th Improvements
10822	253 rd	10047	Holcomb Blvd.	10035	Foster Rd. Improvements	10581	Brookwood Rd. Improvements
10915	BRT: Hwy 224/ Sunnyside	10048	Holly Lane	10040	162nd Ave. Extension	10583	185th to Bany Rd. Improvements
		10068	Clackamas Bluffs Trail	10041	162nd Ave. Extension	10587	Cornelius Pass Rd. Improvements
		10077	222nd Ave.	10042	97th realignment	10588	Grahams Ferry Rd Improvements
		10079	Widen Tillstrom Rd.	10044	Central Point Rd.	10590	Tonquin Rd. Improvements
		10092	Tonquin Trail	10047	Holcomb Blvd.	10591	Glencoe Rd. Improvements
		10118	McLoughlin Blvd. Improvements - Phase 3	10048	Holly Lane	10592	205th Ave. Improvements
		10121	Molalla Ave. Frequent Bus	10057	Redland Rd.	10602	Scholls Ferry ATMS
		10123	Willamette River Shared-Use Path	10069	East Buttes Powerline trail	10604	185th Ave. ATMS
		10126	Swan Extension	10071	Scouter's Mt. Trail	10611	Locust Ave. Bike improvements
		10127	Hwy. 43 Improvements	10073	Hwy 212 intersections	10614	Butner Rd. Bike improvements

Attachment 10. RTP projects that intersect wildlife mortality hotspots

(Shaded projects are part of Financially Constrained system)

High Priority Areas		Medium Priority Areas		Low Priority Areas			
		10129	Willamette River Greenway Trail	10074	New Connection	10615	Bronson Rd. Bike improvements
		10135	19th St. Improvements	10076	SE Sunnyside Rd East Extension	10639	Weir Rd. safety, bike/pd improvements
		10138	Hwy 212 widening to 5 lane boulevard	10077	222nd Ave.	10671	Allen Blvd. bike lanes
		10139	I-205 Climbing Lanes	10078	Hwy. 224	10674	Oregon-Tonquin Intersection & Street Improvements
		10141	I-205/Hwy. 213 Interchange Phase 1	10079	Widen Tillstrom Rd.	10681	Elwert Rd
		10142	I-205/Hwy. 213 Interchange Phase 2	10081	122nd/129th Improvements	10682	Brookman Rd
		10145	McLoughlin Blvd. Improvements - Phase 1	10083	Clatsop St. Extension	10692	Edy Rd
		10147	Newell Creek Canyon Trail (East)	10092	Tonquin Trail	10694	Murdock
		10148	Oregon City Loop Trail	10119	Hwy. 213 - Phase 2	10695	Meinecke
		10149	Beaver Lake Trail	10124	Molalla Ave. Street	10699	Oregon Street
		10150	Barlow Rd Trail	10125	Molalla Ave. Street	10701	Regional Trail System
		10159	Springwater [Trail Connection] - Sellwood Gap	10126	Swan Extension	10722	65th
		10530	Towle Ave. Butler Rd. to Binford Lk	10127	Hwy. 43 Improvements	10725	65th
		10533	190th: 30th to So. Boundary of Pleasant Valley	10128	Willamette Falls Dr	10736	124th Ave
		10534	Cheldelin: 172nd to 190th	10129	Willamette River Greenway trail	10739	Nyberg
		10546	170th Ave. Improvements	10131	Tooze Rd. Improvements	10740	65th Ave.
		10561	Jenkins Rd. Improvements	10132	Boeckman Rd./I-5 Overcrossing improvements	10745	Pedestrian Trail
		10568	Tualatin-Sherwood Rd	10135	19th St. Improvements	10770	Hwy. 99W Intersection

Attachment 10. RTP projects that intersect wildlife mortality hotspots

(Shaded projects are part of Financially Constrained system)

High Priority Areas		Medium Priority Areas		Low Priority Areas			
							improvements
		10578	Merlo/158th Improve	10138	Hwy 212 widening to 5 lane blvd	10771	High Capacity Transit: Blue Line west : Hwy. 8 extension
		10581	Brookwood Rd. Improvements	10141	I-205/Hwy 213 Interchange Phase 1	10782	Thatcher / Willamina / B St Ped/Bike improvements
		10590	Tonquin Rd. Improve	10147	Newell Creek Canyon Trail (East)	10786	Susbauer Rd
		10592	205th Ave. Improvements	10148	Oregon City Loop Trail	10805	TV Hwy Ped Infill
		10639	Weir Rd. safety, bicycle and pedestrian improvements	10149	Beaver Lake Trail	10806	Council Creek Trail system
		10654	Nora Rd. and Beard Rd. sidewalks	10150	Barlow Rd. Trail	10811	Beaverton Creek Trail (Regional)
						10813	Westside Trail (Regional)
						10814	Evergreen Rd
		10655	Weir Rd. sidewalks	10154	Wilsonville Rd/I-5 Interchange Improvements	10816	TV Hwy. Signal Coordination
		10673	Nora Rd./ Beard Rd. bike lanes	10166	NW Burnside at Skyline Rd	10819	231st Ave./Century Blvd
		10674	Oregon-Tonquin Intersection and Street Improvements	10173	Macadam, SW (Bancroft-Sellwood Br): ITS	10820	Brookwood (247th)
		10732	Boones Ferry	10177	Portland Streetcar - OMSI to Riverplace or South Waterfront (close loop)	10825	Amberglen Parkway
		10736	124th Ave	10185	Foster & Woodstock, 87 th -94th	10827	Quatama Road
		10739	Nyberg	10186	Foster & Woodstock, 94 th -101st	10832	Quatama Road
		10811	Beaverton Creek Trail	10189	Capitol Hwy, SW	10836	Evergreen Rd
		10816	TV Hwy. Signal Coordination	10192	Division Streetscape and reconstruction	10840	Regional Center Improvements
		10820	Brookwood	10199	SE 136th Ave.	10845	Evergreen Rd

Attachment 10. RTP projects that intersect wildlife mortality hotspots

(Shaded projects are part of Financially Constrained system)

High Priority Areas		Medium Priority Areas		Low Priority Areas			
			(247th)		(Division to Powell) Bikeway		
		10827	Quatama Road	10206	Marine Drive bike lanes	10846	TV Hwy.
		10846	TV Hwy.	10215	Foster Rd., SE (136th - Jenne): Multi-modal Improvements	10850	Beaverton Ck Trail, Bronson Ck Trail,
		10850	Beaver Ck Trail, Bethany Pond Trail, Bronson Ck Trail, Witch Hazel Ck Trail	10220	Seventies Green street and bikeway	10851	Rock Ck Trail - Multi Use
		10851	Rock Ck Trail - Multi-use	10221	Skyline, NW (Hwy 26-City limits) bikeway	10854	Tonquin Trail
		10854	Tonquin Trail	10224	Barbara Welch Rd., multimodal improvements	10869	Sunrise Project: Construct new highway facility from I-205 to 122 nd and interim connecting to 122 nd as defined by supplemental EIS
		10870	I-5/99W Connector Phase 1: Conduct study, complete environmental design work and NEPA and acquire ROW	10227	Stephenson, SW (Boones Ferry-25 th) multimodal improvements	10870	'I-5/99W Connector Phase 1: Conduct study, complete environmental design work and NEPA for I-5 to OR-99W Connector and acquire ROW
		10872	Add lane: SB I-205 to SB I-5 interchange ramp	10349	174th & Jenne Rd. , SE (Foster - Powell): Multi-modal Improvements	10872	'Add lane: SB I-205 to SB I-5 interchange ramp and extend acceleration lane and add auxiliary lane on SB I-5 to Stafford Road.
		10897	Commuter Rail: Northwest Corridor	10354	Fanno Creek Greenway (Red Electric) trail	10873	US 26W: Widen highway to 6 lanes
		10908	High Capacity	10389	Reconstruct	10875	OR 217: Braid

Attachment 10. RTP projects that intersect wildlife mortality hotspots

(Shaded projects are part of Financially Constrained system)

High Priority Areas		Medium Priority Areas		Low Priority Areas			
			Transit: South Corridor : SE McLoughlin extension		223rd Ave		OR 217 ramps between BH hwy and Allen Blvd
		10916	Bus Rapid Transit: SE McLoughlin to Oregon City and CCC			10878	'I-5/99W Connector Phase 2: Minimum Operable Segment - construct minimal connection to I-5 and two lane arterial to Tonquin Road/124th extension
				10396	Reconstruct Cornelius Pass Rd		
		10938	Frequent Bus: Line 33 - McLoughlin to Clackamas Community College			10879	'I-5/99W Connector Phase 3: Additions to Minimum Operable Segment - Extend two lanes to OR 99W and construct interchange
				10401	Reconstruct Marine Dr		
		10939	Frequent Bus: Line 33 - McLoughlin to Oregon City			10880	'I-5/99W Connector Phase 4: Additions to minimum operable segment - Improve I-5 interchange connections and add braids on I-5
				10408	40 mile loop trail		
		10940	Frequent Bus: Line 35 - Macadam Ave. to Oregon City	10420	Palmquist Rd. Improvements	10881	'I-5/99W Connector Phase 5: Additions to minimum operable segment - Construct mid-point interchanges
		10944	Frequent Bus: Line 79 -	10425	Bull Run Rd.. Reconstruction	10882	'I-5/99W Connector

Attachment 10. RTP projects that intersect wildlife mortality hotspots

(Shaded projects are part of Financially Constrained system)

High Priority Areas		Medium Priority Areas		Low Priority Areas			
			Clackamas Town Center to Oregon City via Webster Road				Phase 6: Additions to minimum operable segment - Widen from two lanes to four lanes in corridor
		11062	I-5 South Corridor Refinement Plan - Wilsonville to North Tigard	10427	Regner Rd. Reconstruction	10894	Sunrise Hwy. PE: I-205 to SE 122 nd Ave
		11065	I-205: Abernethy Bridge Widening (Willamette River crossing)	10431	Highland/190th Rd.	10898	Amtrak Cascades Service
		11068	I-5 Auxiliary Lanes: Stafford Interchange to Wilsonville Road	10437	Gresham/Fairview Trail	10914	Bus Rapid Transit: Foster Road / Damascus
		11069	I-5/Wilsonville Road Interchange: Phase 2	10443	Sandy Blvd. Widening	10916	Bus Rapid Transit: SE Mcloughlin to Oregon City
		11070	I-205/OR 213 Interchange: Stage 5 -I-205 Improvements, OR 99E to Gladstone interchange	10447	162nd Ave. Imps. Plus TIF project	10918	Bus Rapid Transit: I-205 South
		11071	I-5/Wilsonville Road Interchange: Phase 1	10461	Towle Ave. Improvements	10933	Frequent Bus: Line 9 – 152 nd to Damascus
				10462	Butler Rd. Improvements	10934	Frequent Bus: Line 4 – Division to Gresham TC
				10463	Foster Rd. Extension (north)	10935	Frequent Bus: Line 8 – Jackson Park
				10477	Springwater Road Section 4	10936	Frequent Bus: Line 15 – Belmont
				10478	252nd Ave.	10937	Frequent Bus: Line 54 – BH Hwy to

Attachment 10. RTP projects that intersect wildlife mortality hotspots

(Shaded projects are part of Financially Constrained system)

High Priority Areas		Medium Priority Areas		Low Priority Areas			
							Beaverton TC
				10480	Springwater Road Section 7	10938	Frequent Bus: Line 33 – Mcloughlin to Clackamas Community College
				10485	Hogan	10939	Frequent Bus: Line 33 – Mcloughlin to Oregon City
				10486	Telford Rd.	10940	Frequent Bus: Line 35 – Macadam to Oregon City
				10487	Palmquist Rd.	10941	Frequent Bus: Line 12 – Barbur to Durham Rd
				10527	Hogan, Powell Blvd to Palmquist	10943	Frequent Bus: Line 12 – Barbur from Durham to Sherwood
				10493	181st Ave. Sandy to I-84	10945	Frequent Bus: Line 87 – 181 st /182 nd extension to Pleasant Valley via 190 th
				10508	Glisan, Eastman (223 rd) to Hogan	10947	Frequent Bus: Line 62 - SW Murray Blvd.
				10512	Hogan: Powell to Burnside blvd improvements	11044	Regional Trails Master Plans
				10527	Hogan, Powell Blvd to Palmquist	11059	I-205 Corridor Refinement Planning: OR/WA state line to I-5
				10528	Hogan Rd., US 26	11064	I-205 Widening: Stafford Road to Willamette River (two phases, not including Abernethy Bridge
				10530	Towle Ave. Butler Rd. to Binford Lk	11066	I-205: Truck climbing lane
				10533	190th:30th to So. Boundary of Pleasant Valley	11071	I-5/Wilsonville Road interchange

