Technical Appendix

www.oregon**metro.gov**

2035

REGIONAL TRANSPORTATION PLAN

December 13, 2007

Approved by the Federal Highway Administration and the Federal Transit Administration on February 29, 2008.

Metro | *Joint Policy Advisory Committee on Transportation*

Metro | *People places. Open spaces.*

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy and good transportation choices for people and businesses in our region. Voters have asked Metro to help with the challenges that cross those lines and affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to protecting open space, caring for parks, planning for the best use of land, managing garbage disposal and increasing recycling. Metro oversees world-class facilities such as the Oregon Zoo, which contributes to conservation and education, and the Oregon Convention Center, which benefits the region's economy.

Your Metro representatives
Metro Council President – David Bragdon
Metro Councilors – Rod Park, District 1; Carlotta Collette, District 2; Carl Hosticka, District 3; Kathryn Harrington, District 4; Rex Burkholder, District 5; Robert Liberty, District 6.
Auditor – Suzanne Flynn

Metro's web site: www.oregonmetro.gov

Project web site: www.oregonmetro.gov/rtp

Metro is the federally mandated metropolitan planning organization designated by the governor to develop an overall transportation plan and to allocate federal funds for the region.

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council.

The established decision-making process assures a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating transportation funds.

The preparation of this report was financed in part by the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration. The opinions, findings and conclusions expressed in this report are not necessarily those of the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration.

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METRO

2035 Regional Transportation Plan
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Appendix 1.1
2035 RTP Financially Constrained System Project List

Metro Project ID	Nominating Agency	Facility Owner / Operator	Project/Program Name	Project Start Location (Identify starting point of project)	Project End Location (Identify terminus of project)	Description	Estimated Cost ($2007)	Estimated Cost (YOE$)	Time Period
10000	Clackamas Co.	Clackamas Co.	Linwood/Harmony Rd./ Lake Rd. Overcrossing/ Intersection	Linwood/ Harmony/ Lake Rd.		Add NB right turn lane, add EB right turn lane, add WB left turn lane and grade separate UPRR.	$20,000,000	$29,604,886	2008-2017
10001	Clackamas Co.	ODOT	Johnson Creek Blvd. Interchange Improvements	JCB/I-205 interchange		Add loop ramp and NB on-ramp; realign SB off-ramp.	$9,800,000	$14,506,394	2008-2017
10002	Clackamas Co.	Clackamas Co.	Johnson Creek Blvd. Improvements	45th Ave.	82nd Ave.	Widen from three to five lanes and widen bridge over Johnson Creek.	$40,790,000	$82,633,056	2018-2025
10003	Clackamas Co.	Clackamas Co.	Harmony Rd. Improvements	Hwy 224	SE 84th Ave.	Widen to five lanes, add bike lanes and sidewalks.	$23,400,000	$34,637,716	2008-2017
10004	Clackamas Co.	Clackamas Co.	Otty Rd. Improvements	82nd Ave.	92nd Ave.	Widen, add turn lanes, sidewalks, on-street parking, central median and landscaping.	$7,340,000	$10,864,993	2008-2017
10005	Clackamas Co.	Clackamas Co.	West Monterey Extension	82nd Ave.	Fuller Rd.	New two-lane extension.	$6,200,000	$12,560,062	2018-2025
10007	Clackamas Co.	Clackamas Co.	Causey Ave. Overcrossing	over I-205	Bob Schumacher Rd.	Extend new three-lane crossing over I-205.	$14,800,000	$29,982,084	2018-2025
10008	Clackamas Co.	Clackamas Co.	79th Ave. Extension	Johnson Creek Blvd.	King Rd.	Build N-S collector west of 82nd Ave..	$12,780,000	$18,917,522	2008-2017
10009	Clackamas Co.	Clackamas Co.	Fuller Rd. Improvements	Otty Rd.	Johnson Creek Blvd.	Widen street and add turn lanes, sidewalks, on-street parking, central median and landscaping.	$4,000,000	$5,920,977	2008-2017
10012	Clackamas Co.	Clackamas Co.	Fuller Rd. Improvements	Harmony Rd.	Monroe St.	Widen to three lanes to include disconnecting auto access to King Road.	$5,300,000	$15,893,128	2026-2035
10013	Clackamas Co.	Clackamas Co.	Boyer Dr. Extension	82nd Ave.	Fuller Rd.	New two-lane extension.	$2,520,000	$3,730,216	2008-2017
10014	Clackamas Co.	Clackamas Co.	82nd Ave. Multi-Modal Improvements	Clatsop Ave.	Monterey Ave.	Widen to add sidewalks, lighting, central median, planting strips and landscaping.	$13,600,000	$40,782,365	2026-2035
10018	Clackamas Co.	Clackamas Co.	82nd Ave. Blvd. Design Improvements	Monterey Ave.	Sunnybrook Blvd.	Complete boulevard design improvements.	$5,400,000	$7,993,319	2008-2017
10019	Clackamas Co.	Clackamas Co.	West Sunnybrook Rd. Extension	82nd Ave.	Harmony Rd.	Construct three-lane extension.	$6,970,000	$10,317,303	2008-2017
10020	Clackamas Co.	Clackamas Co.	Clackamas County ITS Plan	Countywide		Deploy traffic responsive signal timing, ramp metering, traffic management equipment for better routing of traffic during incidents along the three key ODOT corridors - I-205, I-5, 99E. Install signal controller upgrades and update county ITS plan.	$6,500,000	$9,621,588	2008-2017
10021	Clackamas Co.	Clackamas Co.	102nd Ave./Industrial Way Improvements	Hwy 212	Lawnfield Rd.	Extend Industrial Way from Mather Road to Lawnfield Road.	$8,570,000	$12,685,694	2008-2017
10022	Clackamas Co.	Clackamas Co.	SE 82nd Dr. Improvements	Hwy 212	Lawnfield Rd.	Widen to five lanes to accommodate truck movement.	$12,350,000	$37,033,986	2026-2035
10025	Clackamas Co.	Clackamas Co.	Beavercreek Rd. Improvements Phase 2	Hwy 213	Clackamas Community College	Widen to 5 lanes with sidewalks and bike lanes.	$5,800,000	$8,585,417	2008-2017
10026	Clackamas Co.	Clackamas Co.	Beavercreek Rd. Improvements Phase 3	Clackamas Community College	Urban Growth Boundary	Widen to 4 lanes with sidewalks and bike lanes.	$12,920,000	$19,124,756	2008-2017
10029	Clackamas Co.	Clackamas Co.	Stafford Rd Improvements	I-205	Rosemont Rd.	Widen to three lanes including bike lanes and sidewalks.	$46,300,000	$93,795,305	2018-2025
10033	Clackamas Co.	Clackamas Co.	172nd Ave. Improvements	Foster Rd./190th	Hwy. 212	Widen to five lanes including new bridge. Construct connection to 190th.	$38,480,000	$56,959,800	2008-2017

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10038	Clackamas Co.	Clackamas Co.	242nd	Multnomah County line	Hwy. 212	Reconstruct 242nd and widen to three/five lanes. The Damascus/Boring Concept Plan identifies 242nd as a community bus transit classification.	$53,340,000	$108,057,053	2018-2025
10040	Happy Valley	Clackamas Co.	162nd Ave. Extension North	Hagen Rd.	Clatsop St.	Construct a new 3 lane roadway with traffic signals.	$27,970,000	$56,662,088	2018-2025
10041	Happy Valley	Clackamas Co.	162nd Ave. Extension South	157th Ave.	Hwy. 212	Construct a new 3 lane roadway with traffic signals, bridge over Rock Creek.	$22,610,000	$45,803,711	2018-2025
10042	Clackamas Co.	Clackamas Co.	97th realignment	Lawnfield Rd.	Sunnybrook Blvd.	Realign the existing Lawnfield Rd. Road from 98th to 97th, reduce the grade from 18% to 8%.	$20,650,000	$30,567,044	2008-2017
10047	Clackamas Co.	Clackamas Co.	Holcomb Blvd.	Abernethy Rd.	Bradley Rd.	Reconstruct & widen (urban).	$22,790,000	$33,734,767	2008-2017
10048	Clackamas Co.	Clackamas Co.	Holly Lane	Redland Rd.	Maple Lane	Turn lanes, bike lanes, sidewalks, intersection improvements, bridge replacement.	$20,740,000	$42,015,435	2018-2025
10052	Clackamas Co.	Clackamas Co.	Mather Rd.	SE 82nd Dr.	Industrial Way	Extend Mather Rd. across railroad to SE 82nd Dr.	$17,250,000	$25,534,214	2008-2017
10057	Clackamas Co.	Clackamas Co.	Redland Rd.	Abernethy Rd.	UGB	Turn lanes, bike lanes, sidewalks, intersection improvements, bridge replacements (2).	$17,060,000	$25,252,968	2008-2017
10066	Clackamas Co.	Clackamas Co.	92nd/Johnson Creek Blvd. intersection	92nd/JCB intersection		Add turn lanes on 92nd (northbound left at JCB, and northbound right at Idleman).	$1,000,000	$1,480,244	2008-2017
10067	North Clackamas PRD	Clackamas Co.	Phillips Creek Trail	I-205 Trail	N Clackamas Greenway	Build trail through Clackamas Town Center for access to light rail.	$2,270,000	$3,360,155	2008-2017
10069	Gresham	Gresham	East Buttes Powerline Trail	Springwater/Gresham-Fairview trail	Clackamas Greenway	Build trail linking Gresham and the Clackamas River.	$1,900,000	$2,812,464	2008-2017
10070	North Clackamas PRD		Mt. Scott Creek Trail	Mt. Talbert	Springwater corridor	Build trail to Mt. Talbert regional park.	$5,100,000	$7,549,246	2008-2017
10071	North Clackamas PRD		Scouter's Mt. Trail	Springwater/Powell Butte	Springwater corridor	Build trail to/on Scouter's Mt.	$9,070,000	$13,425,816	2008-2017
10072	Damascus		Sunnyside Rd. Frequent Bus	Clackamas TC	Damascus TC	Construct improvements that enhance Frequent bus service.	$1,000,000	$1,480,244	2008-2017
10073	Damascus	ODOT	Hwy.-212 intersections	SE 162nd	Anderson Rd.	Existing Highway 212 remains two lanes with turn pockets from 162nd Ave. to Anderson Road south of limited access parkway. Design elements to be included are sidewalks, bike lanes, and a landscaped buffer.	$5,970,000	$8,837,058	2008-2017
10074	Damascus		New Connection	Parkway Interchange Near 190th Ave.	Arterial #3	Rock Creek junction interchange to 172nd Ave through Rock Creek industrial area.	$19,800,000	$40,111,167	2018-2025
10075	Damascus	Damascus	Royer Rd. Connection	Royer Rd. North Segment End	Royer Rd. South Segment	Construct a roadway connection between the northern and southern sections of Royer Road.	$5,980,000	$17,932,246	2026-2035
10076	Damascus	Damascus	SE Sunnyside Rd East Extension	SE 172nd Ave.	SE 242nd Ave.	Extend Sunnyside Road east from 172nd Ave to 242nd Ave. Evaluate alignment options between Bohna Park Road and Tillstrom Road for the connection from Foster Road to 242nd Ave.	$101,500,000	$205,620,376	2018-2025

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10077	Damascus	Damascus	222nd Ave.	Hwy. 212	Tillstrom Rd.	Widen 222nd Ave. from Highway 212 to Tillstrom Road to four lanes with turn pockets at intersections. All major arterials are to be designed with sidewalks, bike lanes, and a landscaped buffer between sidewalk and curb or on-street parking in town center.	$30,370,000	$91,070,620	2026-2035
10078	Damascus	ODOT	Hwy. 224	Sunrise End	Carver Bridge	Widen Highway 224 to four lanes with turn pockets at intersections to Carver bridge. The Damascus/Boring Concept Plan identifies Highway 224 as a community bus transit classification.	$12,150,000	$24,613,671	2018-2025
10079	Damascus	Damascus	Widen Tillstrom Rd.	Foster Rd.	242nd Ave.	Widen Tillstrom Rd to 4 lanes with turn pockets at intersections. Damascus/Boring Concept Plan identifies Tillstrom Rd as a transit street.	$18,480,000	$55,416,037	2026-2035
10081	Happy Valley		122nd/129th Improvements	Sunnyside Rd.	King Rd.	Widen to three lanes, smooth curves.	$13,360,000	$19,776,064	2008-2017
10082	Happy Valley		Mt. Scott Blvd./King Rd. Improvements	Happy Valley City Limits	145th Ave.	Widen to three lanes.	$20,820,000	$62,433,003	2026-2035
10083	Happy Valley		Clatsop St. Extension West	132nd Ave.	Mt. Scott Blvd	Construct a new 3 lane roadway with traffic signals.	$17,190,000	$34,823,786	2018-2025
10088	Lake Oswego		Lower Boones Ferry Rd.	Madrona Street	Kruse Way	Widen to inlcude bike lanes and turn lanes.	$20,720,000	$41,974,918	2018-2025
10089	Lake Oswego		Lake Oswego Transit center	Lake Oswego downtown	Near street car	Move existing transit center closer to the street car for better connectivity.	$7,790,000	$15,781,111	2018-2025
10092	Wilsonville		Tonquin Trail	Washington/Clackamas County line	Boones Ferry Landing	Shared use path with some on-street portions.	$2,000,000	$2,960,489	2008-2017
10095	Milwaukie	Milwaukie	Railroad Ave. Bike/Ped Improvement	37th Ave.	Linwood Ave.	Construct sidewalks and bike lanes. Key E-W connection parallel route for Highway 224 mobility corridor.	$21,500,000	$31,825,252	2008-2017
10096	Milwaukie	Milwaukie	37th Ave. Bike/Ped Improvement	Hwy. 224	Harrison St.	Construct sidewalks and bike lanes. Key connection between Highway 224 and Harrison Street (Arterial).	$2,800,000	$5,672,286	2018-2025
10099	Milwaukie	Milwaukie	Monroe Bike Boulevard	21st Ave.	Linwood Ave.	Minor widening to allow shared lanes, improve signage, striping. Bicycle Boulevard treatment.	2,400,000	$3,552,586	2008-2017
10100	Milwaukie	Milwaukie	Downtown Station Area Streetscaping (21st & Main)	TBD	TBD	Reconstruct streetscape, including street trees, rain gardens, ADA ramps, street furniture, parking meters, and pedestrian-scale lighting.	$6,700,000	$9,917,637	2008-2017
10101	Milwaukie	Milwaukie	Kellogg Creek Dam Removal/Bridge Replacement/Milwaukie TC River Access Improvements	Washington	Adams	Remove dam and bridge; replace bridge with full bike and pedestrian facilities and a multi-use path undercrossing.	$12,400,000	$18,355,029	2008-2017
10103	Milwaukie	Milwaukie	King Rd. Blvd. Project	42nd Ave.	Linwood Ave.	Construct boulevard, including new sidewalks, bus stop shelters, planter strips, medians, pedestrian scale lighting.	$14,300,000	$28,969,176	2018-2025
10104	Milwaukie	Milwaukie	17th Ave. Trolley Trail Connector	17th Ave. & McLoughlin	17th Ave. & Ochoco	Construct sidewalks; improve bus stops; and correct gaps in bike lanes on 17th Ave. to provide connection between Trolley Trail and Springwater Corridor. Alternative alignment: multi-use path along Johnson Creek from Lava Drive to Ochoco.	$3,200,000	$4,736,782	2008-2017
10109	Milwaukie	Milwaukie	Kellogg Creek Trail	99-E	Miramonte Lodge	Construct low-impact trail-type sidewalk.	$3,100,000	$4,588,757	2008-2017

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10110	Milwaukie	Milwaukie	Milwaukie TC reconstruction (including layover improvements)	Downtown TC	Milwaukie Park & Ride	Construct new bus shelters/stops at Transit Center, consolidating multiple bus stops. Build bus layover facility at Milwaukie Park and Ride.	$4,900,000	$7,253,197	2008-2017
10113	Milwaukie		River Rd. Sidewalks	99-E	City Limit	Construct sidewalks.	$2,400,000	$7,196,888	2026-2035
10118	Oregon City	ODOT	McLoughlin Blvd. Improvements - Phase 3	Railroad Tunnel	10th St.	Complete boulevard design improvements and viaduct improvements.	$14,300,000	$28,969,176	2018-2025
10124	Oregon City	Oregon City	Molalla Ave. Streetscape Improvements Phase 3	Holmes	Warner Milne	Streetscape improvements including widening sidewalks, sidewalk infill, ADA accessibility, bike lanes, reconfigure travel lanes, add bus stop amenities.	$700,000	$1,418,072	2018-2025
10125	Oregon City	Oregon City	Molalla Ave. Streetscape Improvements Phase 4	Beavercreek	Hwy. 213	Streetscape improvements including widening sidewalks, sidewalk infill, ADA accessibility, bike lanes, reconfigure travel lanes, add bus stop amenities.	$8,000,000	$11,841,954	2008-2017
10126	Oregon City	Oregon City	Swan Extension	Swan	UGB	Through lanes, sidewalks, bike lanes, turn lanes to serve UGB expansion area.	$41,000,000	$83,058,477	2018-2025
10127	West Linn	ODOT	Hwy. 43 Improvements	Holly St.	Arbor Dr.	Although the project is now in the conceptual design stage (to be completed by June 30, 2007), the project should consist of roadway improvements such as widening, installation of medians, turn lanes, street trees, signal interconnections, bike lanes.	$21,400,000	$31,677,228	2008-2017
10128	West Linn	West Linn	Willamette Falls Dr./bicycle lanes and streetlights	Hwy. 43	10th St.	Widen street to provide bike lanes and sidewalks on a narrow roadway. This will provide a direct connection between two town center areas. Bicycle lanes will be 6' wide adjacent to 12' wide travel lanes. The addition of streetlights to this roadway will.	$2,500,000	$3,700,611	2008-2017
10129	West Linn		Willamette River Greenway Trail	Willamette Park	Lake Oswego - Willamette River trail	Paved trail running parallel to the Willamette River from Willamette Park at the mount of the Tualatin River eventually to the Lake Oswego City Limits facilitating connection to the Willamette River Trail with neighboring cities as part of the Metro Region.	$2,000,000	$4,051,633	2018-2025
10130	Wilsonville	Wilsonville	Kinsman Rd. Extension from Barber St. to Boeckman Rd.	Barber St.	Boeckman Rd.	Extend 3 lanes with sidewalks and bike lanes.	$5,750,000	$8,511,405	2008-2017
10131	Wilsonville	Wilsonville	Tooze Rd. Improvements	110th Ave.	Grahams Ferry Rd.	Widen Tooze Rd to 3 lanes, add bike/pedestrian connections to regional trail system.	$3,800,000	$5,624,928	2008-2017
10132	Wilsonville	Wilsonville	Boeckman Rd./I-5 Overcrossing Improvements	Boberg Rd.	Parkway Ave.	Widen Boeckman Road bridge over I-5 to 3 lanes. Add bike/pedestrian connections to regional trail system.	$13,600,000	$20,131,322	2008-2017
10133	Wilsonville	Wilsonville	French Prairie Bicycle/Pedestrian Bridge	Boones Ferry Rd.	Butteville Rd..	New bicycle/pedestrian/emergency vehicle only bridge crossing the Willamette River.	$15,000,000	$22,203,664	2008-2017
10134	Wilsonville	Wilsonville	SW 65th, Elligsen Rd. and Stafford Rd. Intersection Improvements	Intersection of SW 65th, Elligsen Rd. and Stafford Rd.	Intersection of SW 65th, Elligsen Rd. and Stafford Rd.	Currently there are two intersections with a dangerous grade difference and within 100 ft of one another. Combining them into one or the construction of a round-about will help with safety and navigability concerns.	$1,000,000	$1,480,244	2008-2017
10135	West Linn	West Linn	19th St. Improvements	Blankenship Rd.	Willamette Falls Dr.	Improvements to include curb, gutter, pavement widening and sidewalks.	$1,200,000	$1,776,293	2008-2017

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10137	Damascus	Damascus	Multi-Use Local/Regional Trail and PRT Study	Damascus	N/A	Study for a multi-use path for bikes, pedestrians, horses that provides local access and connects with Happy Valley and Gresham. Study will also evaluate potential for personal rapid transit.	$2,000,000	$2,960,489	2008-2017
10138	Damascus	Damascus	Hwy 212 widening to 5 lane boulevard	Sunrise Unit 1 Terminus	East City Limits	Widen Highway 212 to a 5 lane boulevard section through Damascus.	$58,500,000	$118,510,266	2018-2025
10141	Oregon City	ODOT	I-205/Hwy. 213 Interchange Phase 1	Redland Rd.	I-205	Grade separate SB Hwy. 213 at Washington Street and add a northbound lane to Hwy. 213 from just south of Washington Street to the I-205 on-ramp. Reconstruct I-205 SB off-ramp to Hwy. 213 to provide more storage and enhance freeway operations and safety.	$22,000,000	$32,565,374	2008-2017
10146	Oregon City	ODOT	McLoughlin Blvd. Improvements - Phase 2	Dunes Dr.	Clackamas River Bridge	Complete boulevard and gateway improvements.	$4,000,000	$5,920,977	2008-2017
10147	Oregon City	Oregon City	Newell Creek Canyon Trail (East)	Hwy 213 and Redland Rd.	Beavercreek Rd.	Regional trail would follow the Oregon City-Molalla interurban railroad bench on the east side of Newell Creek Canyon.	$3,000,000	$6,077,450	2018-2025
10148	Oregon City	Oregon City	Oregon City Loop Trail	Beavercreek Rd.	Hwy 213	Regional trail would generally follow the Oregon City UGB on a collection of local roads, through new development, along Powerline right-of-way, and down the bluff to link up with the Promenade in downtown Oregon City	$3,000,000	$4,440,733	2008-2017
10149	Oregon City	Oregon City	Beaver Lake Trail	Clackamas Community College	Oregon City UGB	Regional trail would travel from Clackamas Community College through the Oregon City High School campus to the airstrip area. The trail would skirt the golf course area and continue to Beaver Lake.	$500,000	$740,122	2008-2017
10150	Oregon City	Oregon City	Barlow Rd. Trail	Abernethy Rd.	Oregon City limits	Regional trail would follow the perceptive alignment of the historic Barlow Road from Abernethy Green to the Oregon City UGB. The trail would primarily utilize existing and proposed roadways.	$1,000,000	$1,480,244	2008-2017
10153	Wilsonville	Wilsonville	Barber St. Extension from Kinsman Rd. to Villebois Village	Kinsman Rd.	Villebois Village	Extend 3 lanes with sidewalks and bike lanes.	$8,900,000	$13,174,174	2008-2017
10154	Wilsonville	ODOT	Wilsonville Rd./I-5 Interchange Improvements - Setback Abutments & Widen Wilsonville Rd.	Town Center Loop W	Boones Ferry Rd.	Provide additional left-turn lanes, setback abutments, improves signal synchronization, fixes sight distance problems, and provides for enhanced bike/pad safety.	$11,000,000	$16,282,687	2008-2017
10155	Wilsonville	ODOT	Wilsonville Rd./I-5 Interchange Improvements - On/Off Ramps	N. of Interchange	S. of Interchange	Widen and lengthen on/off ramps.	$12,000,000	$17,762,931	2008-2017
10158	ODOT		I-5 Northbound Off Ramp at SW Macadam	I-5	I-405	Construct new off-ramp at NB I-5 to NB Macadam Ave and provide safety and modernization improvements to I-5 S.	$40,000,000	$59,209,771	2008-2017
10159	Portland		Springwater [Trail Connection] - Sellwood Gap	SE Umatilla	SE 19th Ave.	Construct trail-with-rail shared use path between Springwater on the Willamette and Springwater Three Bridges.	$3,032,411	$4,488,709	2008-2017

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10160	Portland	ODOT	Lloyd District Access Improvements	I-5		Add traffic signals and improve intersections at NE 2nd and Broadway and NE 2nd and Weidler Streets.	$998,243	$1,477,643	2008-2017
10161	Portland		5th/6th, NW/SW (Irving - Jefferson): Portland Transit Mall Restoration and reconstruction for Light Rail Transit	Irving	Jefferson	Extend mall and reconfigure to accommodate light rail tracks and stations. Repairs to Transit Mall including sidewalk brick work, reconstruction, curbs, gutters, and other pedestrian improvements.		$0	2018-2025
10162	Portland		Willamette Greenway Trail - South Waterfront	Marquam Bridge (overhead)	SW Lowell	Provide two paths in order to separate bicyclists from pedestrians in remaining gaps (Marquam Bridge to SW Gibbs, SW Lowell to SW Lane, Benz Springs) of South Waterfront's Willamette Greenway trail.	$2,650,000	$3,922,647	2008-2017
10163	Portland	ODOT	I-5 at Gibbs, SW: Pedestrian/Bike Overcrossing		I-5/SW Gibbs Bridge	Construct a bike and pedestrian bridge of I-5 at SW Gibbs to connect the Corbett-Terwilliger-Lair Hill neighborhood to North Macadam.	$12,259,000	$18,146,315	2008-2017
10164	Portland		South Portal, Phase I & II	Intersection Bancroft/Hood/Macadam	Bancroft/Hood/Macadam	Improve SW Bancroft, SW Moody and SW Bond Streets.	$57,330,684	$84,863,417	2008-2017
10165	Portland		Moody/Bond Ave, SW (Sheridan to Gibbs)	River Parkway	SW Bancroft	Five lane street improvement from SW Sheridan to SW Gibbs Street.	$18,834,515	$27,879,683	2008-2017
10166	Portland		NW Burnside at Skyline Rd.	Intersection NW Burnside/ Skyline Rd.		Intersection improvements.	$1,850,716	$5,549,748	2026-2035
10169	Portland		Burnside/Couch, East [Blvd/Streetscape]	E 12th	Burnside Bridge	Implements a one-way couplet design including new traffic signals, widened sidewalks, curb extensions, bike lanes on-street parking and street trees.	$23,908,393	$35,390,262	2008-2017
10171	Portland		Burnside/Couch, West [Blvd/Streetscape]	Burnside Bridge	W 15th	Implements a one-way couplet design including new traffic signals, widened sidewalks, curb extensions, bike lanes on-street parking and street trees.	$75,895,353	$112,343,663	2008-2017
10173	Portland/ODOT		Macadam, SW (Bancroft - Sellwood Br): ITS	SW Bancroft	Sellwood Bridge	Install needed ITS infrastructure (communication network, new traffic controllers, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system.	$401,794	$813,961	2018-2025
10174	Portland		Going, N (Interstate - Greeley): ITS	Interstate	Greeley	Install needed ITS infrastructure (communication network, new traffic controllers, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system.	$950,024	$1,406,268	2008-2017
10175	Portland/ ODOT		Yeon/St. Helens, NW (US 30): ITS	NW Yeon/St. Helens		Install needed ITS infrastructure (communication network, new traffic controllers, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system.	$885,499	$1,310,755	2008-2017
10176	Portland		PSL - Eastside Extension	NW Lovejoy/10th	NE 7th/ Oregon.	Construct streetcar from NW Lovejoy/10th to NE 7th / Oregon.	$147,000,000	$297,795,028	2018-2025
10177	Portland		PSL - OMSI to Riverplace or South Waterfront (close loop)	NE Oregon	SE Water	Construct streetcar from NE Oregon to SE Water.	$19,000,000	$38,490,514	2018-2025

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10178	Portland		Going St Bridge, N: Seismic Retrofit	Going St Overpass	n/a	Seismic retrofit project will include work to both the substructure and superstructure to help minimize the risk of a structural collapse in a major earthquake.	$4,000,000	$5,920,977	2008-2017
10181	Portland		Fifties Bikeway, NE/SE (Tillamook to Woodstock)	SE Woodstock	NE Tillamook	Curb extensions, median refuges, signal modifications, and striping changes to create a north-south bicycle boulevard, along various interconnected portions of 52nd-57th streets between NE Thompson and SE Woodstock Blvd.	$1,595,049	$4,783,079	2026-2035
10182	Portland/ODOT		St. Johns Pedestrian District, N			Enhance pedestrian access to transit, improve safety, and enhance the streetscape such as better lighting and crossings. Improvements including realigning the "ivy" island, curb extensions, a new traffic signal at Richmond/Lombard, and pedestrian connections between St. Johns and the riverfront based on the St. Johns/Lombard Plan.	$5,000,000	$7,401,221	2008-2017
10185	Portland		Foster & Woodstock, SE (87th - 94th): Street Improvements, Phase I	SE 87th	SE 94th	Implement Lents Town Center Business District Plan with new traffic signals, pedestrian amenities, wider sidewalks, pedestrian crossings, street lighting, increased on-street parking.	$13,812,000	$20,445,134	2008-2017
10186	Portland		Foster & Woodstock, SE (94th - 101st): Street Improvements, Phase II	SE 94th	SE 101st	Implement Lents Town Center Business District Plan with new traffic signals, pedestrian amenities, wider sidewalks, pedestrian crossings, and street lighting.	$11,510,000	$17,037,612	2008-2017
10187	Portland		Foster Rd., SE (82nd - 87th): Lents Town Center Street Improvements	SE 82nd	SE 87th	Implement Lents Town Center Business District Plan with new traffic signals, pedestrian amenities, wider sidewalks, pedestrian crossings, street lighting, and on-street parking as appropriate.	$4,625,000	$6,846,130	2008-2017
10189	Portland		Capitol Hwy, SW	SW Multnomah Blvd	SW Taylors Ferry	Improve SW Capitol Highway from SW Multnomah Boulevard to SW Taylors Ferry Road per the 1996 Capitol Highway Plan.	$9,613,958	$14,231,006	2008-2017
10190	Portland		23rd Ave., NW (Lovejoy - Burnside): Rd. Reconstruction	NW Lovejoy	W Burnside	Rebuild street.	$3,350,000	$4,958,818	2008-2017
10191	Portland		Garden Home Rd., SW (Capitol Hwy - Multnomah): Multi-modal Improvements	SW Capitol Hwy	SW Multnomah Blvd	Improve and signalize the intersection at SW Garden Home and SW Multnomah Blvd.	$1,931,033	$2,858,401	2008-2017
10192	Portland		Division Streetscape and Reconstruction	SE 6th Ave. SE 39th Ave.	SE 39th Ave.	The project will design and build streetscape and transportation improvements between SE 12th Ave and SE 39th Ave, complete base repair and pavement reconstruction between SE 6th Ave and SE 10th Ave, and grind and overlay asphalt in the area between SE 10th Ave and SE 39th Ave.	$5,848,135	$8,656,668	2008-2017

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10194	Portland		Killingsworth, N (Interstate - MLK Jr Blvd): Street Improvements	N Interstate	MLK Jr Blvd	Construct street improvements to improve pedestrian connections to Interstate MAX LRT and to establish a main street character promoting pedestrian-oriented activities. Commentary: Update project to reflect recommendations in the Killingsworth Street Improvements Planning Project.	$4,900,000	$7,253,197	2008-2017
10196	Portland		Cully Blvd. Green St.	NE Prescott St.	NE Killingsworth	The project will plan, design and rebuild NE Cully Boulevard between NE Prescott Street and NE Killingsworth Street. Project planning and preliminary engineering will analyze alternatives for the roadway with public input and involvement.	$5,255,633	$10,646,948	2018-2025
10197	Portland		Russell St. Improvements, N	N Williams	N Interstate	Construct improvements to Russell (Williams - Interstate), Albina & Mississippi (Russell - Interstate) to enhance ped connections from Eliot neighborhood and Lower Albina dist to the LRT station. Improve the N Williams at N Stanton intersection.	$3,300,000	$6,685,195	2018-2025
10198	Portland		122nd, NE/SE (NE Airport Way to SE Powell Blvd): ITS	Airport Way	SE Powell Blvd	Install needed ITS infrastructure (communication network, new traffic controllers, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system.	$515,703	$1,044,720	2018-2025
10199	Portland		SE 136th Ave. (Division to Powell) Bikeway	SE Division	SE Foster	From SE Division Street to SE Powell Boulevard: Improve to 36' curb-to-curb with 2-13' traffic lanes and 2-5' bike lanes; 6" curbs, 9' swales and 6' sidewalks on both sides.	$6,090,590	$18,263,872	2026-2035
10201	Portland		102nd Ave., NE (Weidler - Glisan): Gateway Plan District Multi-modal Improvements, Phase I	NE Weidler	NE Glisan	Implement Gateway Regional Center plan with boulevard design retrofit, new traffic signals, improved pedestrian facilities and crossings, street lighting, bicycle lanes, and multi-modal safety improvements.	$3,234,000	$4,787,110	2008-2017
10202	Portland		102nd Ave, NE/SE (Glisan - Stark): Gateway Plan District Multi-modal Improvements, Phase II	NE Glisan	SE Market	Implement Gateway regional center plan with boulevard design retrofit, new traffic signals, improved pedestrian facilities and crossings, street lighting and new bicycle facilities.	$2,137,561	$3,164,112	2008-2017
10203	Portland		Glisan St, NE (122nd - City Limits): Multi-modal Improvements	NE 122nd	City Limits	Infill missing sidewalk, add curb ramps at corner, add 3 median island crossings, and add a signal.	$3,100,241	$6,280,519	2018-2025
10204	Portland		Gateway Regional Center, Local and Collector Streets	NE Weidler/97th	NE Glisan/102nd	High priority local and collector street and pedestrian improvements in the Gateway Regional Center.	$32,648,540	$48,327,815	2008-2017
10206	Portland		Marine Drive bike lanes 6th to 28th & off-street trail gaps between I-5 and 185th	I-5	NE 185th Ave.	Close gaps in Marine Dr bike lanes (NE 6th to 28th);and trail (Bridgeton levee & one connector, 28th to 33rd, 112th to 122nd, gaps near 185th)	$2,130,835	$3,154,156	2008-2017

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10208	Portland		MLK O-Xing/Turn Lanes (Columbia-Lombard)	Intersections of MLK and NE Columbia Blvd/Lombard		Intersection and signalization improvements with right turn lane.	$2,228,909	$3,299,330	2008-2017
10209	Portland		92nd Dr. (Columbia Slough to Alderwood)	Columbia Slough	NE Alderwood	Improve NE 92nd Drive from Columbia Slough to Alderwood Rd.	$2,406,547	$3,562,277	2008-2017
10210	Portland		47th, NE (Columbia - Cornfoot): Roadway & Intersection Improvements	NE 47th	NE Columbia Blvd	Widen and reconfigure intersections to better facilitate truck turning movements to the cargo area located within the airport area. Project includes sidewalk and bikeway improvements.	$5,541,678	$8,203,037	2008-2017
10212	Portland		Airport Way/122nd, NE: Intersection Improvement	NE Airport Way/122nd		Add northbound left turn lane, modify traffic signal, and reconstruct island.	$1,100,000	$1,628,269	2008-2017
10213	Port/ Portland		Airport Way, NE (I-205 to NE 158th Ave.): ITS	I-205	NE 158th	Install needed ITS infrastructure (communication network, new traffic controllers, CCTV cameras, and vehicle /pedestrian detectors). These ITS devices allow us to provide more efficient and safe operation of our traffic signal system.	$278,251	$411,879	2008-2017
10214	Portland/ ODOT		Lombard, N (Rivergate - to T-6): Multi-modal Improvements	Rivergate	T-6	Widen N Lombard to include two travel lanes, a non-continuous center turn lane, medians, bike lanes, sidewalks and planting strips.	$34,517,517	$51,094,357	2008-2017
10215	Portland		Foster Rd., SE (136th - Jenne): Multi-modal Improvements	SE 136th	SE Jenne Rd.	Widen street to three lanes to provide two travel lanes, continuous turn lane, bike lanes, sidewalk, and drainage.	$16,963,856	$25,110,651	2008-2017
10216	Portland		Smart Trips Portland, a city-wide individualized marketing strategy			Smart Trips Portland is a comprehensive approach to reduce drive-alone trips and increase biking, walking and public transit in targeted geographic areas or key transportation corridors of the city. It incorporates the innovative and highly effective “individualized marketing” methodology, which hand delivers packets of information to residents who wish to learn more about transportation options. Key components feature biking and walking maps and organized activities which get people out in their neighborhoods or places of employment to shop, work, and discover how many trips they can easily, conveniently, and safely make without using a car. Success is tracked by evaluating qualitative and quantitative results from surveys and other performance measures.	$4,450,000	$6,587,087	2008-2017
10217	Region		Lombard at Columbia Slough, N: Overcrossing	N Lombard/Columbia Slough Overcrossing		Add sidewalk and bike lanes to strengthened bridge.	$9,767,000	$14,457,546	2008-2017
10218	Portland		Burgard-Lombard, N: Street Improvements	Intersection of N Burgard/Columbia	UPRR Bridge on N. Lombard	From UPRR Bridge to N Columbia Blvd. Widen street to include 2 12-foot travel lanes, continuous left turn lane, bike lanes and sidewalk.	$24,884,000	$36,834,399	2008-2017
10219	ODOT/ Portland		Argyle on the Hill, N Columbia to N Denver Ave.	Columbia Blvd	N Denver	New N Argyle street connection, west of I-5.	$11,773,032	$23,850,003	2018-2025

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10220	Portland		Seventies Greenstreet and Bikeway, NE	NE Killingsworth Ave.	Clatsop St.	Develop a combined pedestrian greenway and bike boulevard including crossing improvements at arterials, streetlighting, and public art from Killingsworth to Clatsop. Develop a combined pedestrian greenway and bike boulevard including crossing improvements at arterials.	$4,120,727	$8,347,837	2018-2025
10221	Portland		Skyline, NW (Hwy 26 - City Limits): Shoulder Improvements	Hwy 26	City Limits	Widen existing 22' of pavement to 32', and add 2' shoulders adjacent to lanes.	$8,088,812	$24,255,947	2026-2035
10222	Portland		Flavel Dr, SE	SE 45th	Clatsop	Fully improve street from SE 45th to Clatsop Street with travel lanes, curbs, swales, sidewalks, and some bike lanes.	$7,294,088	$21,872,806	2026-2035
10223	Portland		122nd, SE (at Morrison): Pedestrian Overcrossing			Provide an at-grade improved pedestrian crossing on SE 122nd Ave.	$1,993,000	$5,976,416	2026-2035
10224	Portland		Barbara Welch Rd., SE: Multimodal Improvements	SE Foster	City Limits	Widen existing 20' of pavement to new 34' roadway with travel lanes, bike lanes, curb and sidewalk.	$20,191,557	$60,548,489	2026-2035
10225	Portland		Powellhurst/Gilbert Pedestrian Improvements to SE 122nd Ave.	SE Harold	SE Raymond	Add sidewalks to SE 122nd Ave. between SE Harold Street and SE Raymond Street.	$1,473,288	$4,417,954	2026-2035
10226	Portland		Hamilton St., SW	SW Dosch Rd.	SW Scholls Ferry Rd.	Improve SW Hamilton Street between SW Dosch and Scholls Ferry Road.	$12,420,360	$37,244,975	2026-2035
10227	Portland		Stephenson, SW (Boones Ferry - 35th): Multi-modal Improvements	SW Boones Ferry	SW 35th	Install bikeway, pedestrian facilities, and improve and signalize the intersection at SW Stephenson and SW Boones Ferry Road.	$3,813,000	$11,434,056	2026-2035
10228	ODOT/ Portland/ Port		82nd Ave./Columbia, NE: Intersection Improvements	Intersection of NE 82nd/Columbia Blvd		Widen and reconfigure intersection.	$3,408,000	$5,044,673	2008-2017
10229	Portland		Columbia Blvd./Portland Rd., N: Intersection Improvements	Intersection of Columbia Blvd/Portland Rd.		Redesign intersection.	$1,214,000	$1,797,017	2008-2017
10230	Portland		Twenties Bikeway, NE/SE (Lombard - Clinton)	NE Lombard	SE Clinton	Design & implement bikeway along SE 29th,30th/NE 26th/28th / NE Oregon, Wasco, from SE Clinton to NE Lombard using bike blvds. & bike lanes.	$1,837,573	$5,510,336	2026-2035
10232	Portland		Flanders, NW (Steel Bridge to Westover): Bicycle Facility	Steel Bridge	NW Westover	Add bike boulevard from NW 24th Ave to the Steel Bridge, new bike/pedestrian bridge over I-405 on Flanders, connections to bikeways on Vista, 18th, 14th, 13th, Broadway, 3rd, 2nd, Glisan and Everett.	$2,392,337	$3,541,243	2008-2017
10234	Portland		Columbia Slough Trail system	Confluence of Columbia Slough and North Slough	NE 158th Ave.	Close gaps in Columbia Slough Trail: North Slough to North Portland Rd; Landfill to Pier Park; I-5 to NE Elrod; NE Elrod to NE 82nd Ave; NE 82nd Ave to 92nd Ave; I-205 to approx. NE 128th; NE 145th to 158th, Peninsula Canal, Cross-Levee, Delta Park Trail.	$8,460,000	$12,522,867	2008-2017
10334	Portland		11th/13th, NE (at Columbia Blvd.): Crossing Elimination	NE Columbia Blvd	NE Lombard	If feasible, eliminate the at-grade crossing and improve alternate roadway access.	$1,000,000	$1,480,244	2008-2017

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10336	Portland		Alderwood/Columbia Blvd/Cully, NE: Intersection Improvements	Intersection of NE Alderwood/Columbia Blvd/Cully		Reconstruct intersection to provide left turn pockets, enhancing turning radii and improving circulation for trucks serving expanding air cargo facilities south of Portland.	$1,460,000	$2,161,157	2008-2017
10343	Portland/ Port		West Hayden Crossing, N	N Marine Dr.	Hayden Island	New four-lane bridge between Marine Drive to Hayden Island.	$99,258,000	$146,926,087	2008-2017
10354	Portland		Fanno Creek Greenway (Red Electric) Trail	SW Dover near Multnomah County line	Willamette Park	Provide east-west route for pedestrians in cyclists in SW Portland that connects and extends the existing Fanno Creek Greenway Trail to Willamette Park.	$17,653,000	$26,130,752	2008-2017
10355	Portland		North Portland Willamette Greenway Study	N Burlington Ave.	Steel Bridge	Study mostly off-street trail near the river for both bicycle and pedestrian commuting and recreational use.	$200,000	$296,049	2008-2017
10357	Port of Portland		Channel Deepening	mouth of Columbia River	Portland/Vancouver harbor	Deepening the Columbia River channel to 43 feet between mouth of Columbia River and Portland/Vancouver Harbor.	$150,573,000	$222,884,823	2008-2017
10358	Port of Portland		Airport Way Terminal Entrance Roadway Relocation	PDX Terminal Area		Relocate and widen Airport Way northerly at Terminal entrance (to be scoped by PDX Master Plan).	$12,818,000	$18,973,771	2008-2017
10360	Port of Portland		Airport Way Return and Exit Roadways	PDX Terminal Area		Relocate Airport Way exit roadway and construct new return roadway (Terminal Access Study, projects R4 and R5; to be scoped by PDX Master Plan).	$6,400,900	$9,474,896	2008-2017
10361	Port of Portland		Widen Airport Way West of 82nd	82nd Ave.	PDX Terminal	Widen Airport Way from terminal to 82nd Ave.	$8,588,400	$12,712,930	2008-2017
10362	Port of Portland		82nd Ave./Airport Way Grade Separation			Construct grade-separated overcrossing.	$92,000,000	$136,182,474	2008-2017
10363	Port of Portland		SW Quad Access	NE 33rd Ave.	SW Quad	Provide street access from 33rd Ave. into SW Quad.	$5,917,500	$8,759,346	2008-2017
10364	Port of Portland		PDX Light Rail Station/Track Realignment			Realign light rail track into terminal building.	$16,330,700	$24,173,425	2008-2017
10366	Port of Portland		Alderwood Rd. and Cornfoot Intersection Improvements			Add signals and/or improve turn lanes at Alderwood Rd/82nd Ave, Alderwood Rd/Cornfoot Rd, AirTrans Way/Cornfoot Rd.	$2,206,000	$3,265,419	2008-2017
10367	Port of Portland		CS/PIC Access Improvements			Intersection improvements (installation of stop signs, signalization and/or channelization) at Sandy Blvd/105th Ave, Airport Way/Holman St, Alderwood Rd/Holman St, Alderwood Rd/Cascades Pkwy.	$1,217,000	$1,801,457	2008-2017
10368	Port of Portland		PIC Ped/Bike Network			Construct bike and pedestrian facilities as shown in the CS/PIC Plan District.	$1,163,835	$1,722,760	2008-2017
10369	Port of Portland		Leadbetter St. Extension/Overcrossing			Complete Leadbetter St. loop to Marine Dr. (Pacific Gateway/T-6 intersection) and construct road bridge over rail line.	$11,203,600	$16,584,065	2008-2017
10370	Port of Portland		PDX ITS			Intelligent Transportation Systems in the PDX area.	$3,000,000	$4,440,733	2008-2017
10371	Port of Portland		Airport Way Braided Ramps			Construct braided ramps between the I-205 interchange and Mt. Hood Interchange.	$59,000,000	$119,523,174	2018-2025

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10373	Port of Portland		Rivergate ITS			Intelligent Transportation System in Rivergate.	$480,000	$710,517	2008-2017
10375	Port of Portland		Cathedral Park Quiet Zone			Address rail switching noise related to the Toyota operations at T-4 by improving multiple public rail crossings in the St. Johns Cathedral Park area.	$5,198,900	$7,695,642	2008-2017
10376	Port of Portland		Columbia Blvd. Widening	60th Ave.	82nd Ave.	Widen Columbia Blvd. to five lanes between 60th Ave and 82nd Ave.	$14,859,000	$21,994,950	2008-2017
10377	Port of Portland		PSU ITS Expansion, incl. freight data repository			Expand PSU's existing web based ITS "count sensor" program beyond the freeway to some key arterials throughout the region. Create a repository of freight data (primarily truck data) from the region's Freight Data Collection project.	$0	$0	2008-2017
10378	Port of Portland		T-6 Internal Overcrossing	Marine Dr.	Terminal 6	Construct an elevated roadway between Marine Dr. and Terminal 6.	$3,649,084	$5,401,536	2008-2017
10379	Port of Portland		Marine Dr. Improvement Phase 2			Construct rail overcrossing on Marine Dr.	$13,644,200	$27,640,646	2018-2025
10380	Port of Portland		PDX Transportation Demand Management (TDM)			Implement strategies at PDX and PIC properties that reduce auto trips in the airport area. Programs to be undertaken with other area businesses/developers to maximize effectiveness; possible administration through a transportation management association.	$0	$0	2008-2017
10382	Multnomah Co.	Multnomah Co.	Improve Stark St. to arterial standards by widening the existing 2 lanes to provide for 4 traffic lanes, a continuous left-turn lane, bike lanes, sidewalks, and intersection improvements.	257th Ave.	Troutdale Rd.	Upgrades road from rural 2 land facility to urban standards with sidewalks and bicycle lanes.	$3,150,000	$4,662,769	2008-2017
10384	Multnomah Co.	Multnomah Co.	Reconstruct Scholls Ferry Rd.	US 26	Washington County	Widen roadway to add 4th lane for turns and uphill bicycle lanes and sidewalks.	$3,500,000	$10,495,462	2026-2035
10385	Multnomah Co.	Multnomah Co.	Reconstruct Halsey St.	238th Ave.	Historic Columbia River Hwy	Widen Halsey St to 3 lane arterial with center turn lane/median, sidewalk and bicycle lanes.	$3,600,000	$5,328,879	2008-2017
10386	Gresham & Multnomah County	Gresham & Multnomah County	Reconstruct Glisan St.	202nd Ave.	207th Ave.	Construct Glisan Street to arterial standards including bike lanes, sidewalks, two travel lanes in each direction, center turn lane/median and drainage improvements. South side of Glisan St is City of Gresham.	$9,842,749	$14,569,673	2008-2017
10387	Multnomah Co.	Multnomah Co.	Reconstruct Arata Rd.	223rd Ave.	238th Ave.	Construct to 3 lane collector standards with center turn lane/median, sidewalks, bicycle lanes.	$2,300,000	$3,404,562	2008-2017
10388	Multnomah Co.	Multnomah Co.	Reconstruct 223rd Ave.	Halsey St.	Sandy Blvd	Reconstruct 223rd Ave to major collector standards with 2 travel lanes, center turn lane/median, sidewalks and bicycle lanes. Requires reconstruction of RR bridge under another project.	$1,400,000	$2,072,342	2008-2017

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10389	Multnomah Co.	Multnomah Co.	Reconstruct 223rd Ave.	Sandy Blvd	Marine Dr.	Improve 223rd Ave to major collector standards including 2 travel lanes, center turn lane/median, sidewalks, bicycle lanes. Possible culvert replacement for fish passage could add $120,000 to cost. Requires replacement of RR bridge not included in this proposal.	$2,267,000	$4,592,526	2018-2025
10390	Multnomah Co.	Multnomah Co.	Reconstruct Troutdale Rd.	Strebin Rd.	Cherry Park Rd.	Reconstruct to major collector standards with 2 travel lanes, center turn lane/median, sidewalks, bicycle lanes. Requires new fish culvert at Beaver Creek.	$6,297,000	$18,882,835	2026-2035
10391	Multnomah Co.	Multnomah Co.	Reconstruct Historic Columbia River Hwy.	244th Ave.	Halsey St.	Reconstruct to minor arterial standards with 2 travel lanes, center turn lane/median, bicycle lanes and sidewalk. Reconstruction of railroad bridge is not included in this project.	$6,151,000	$18,445,024	2026-2035
10392	Multnomah Co.		Columbia/Cascade River District Projects	Various streets		Implement findings of traffic management plan.	$9,200,000	$13,618,247	2008-2017
10393	Multnomah Co.	Multnomah Co.	Replace RR Over-crossing on 223rd Ave.	At I-84		Reconstruct railroad bridge on 223rd Ave, at I-84 to accommodate wider travel lanes, sidewalks and bike lanes.	$7,000,000	$10,361,710	2008-2017
10394	Multnomah Co.	Multnomah Co.	Replace RR Over-crossing on 223rd Ave.	2000' north of I-84		Reconstruct railroad bridge on 223rd Ave, 2000' north of I-84 to accommodate wider travel lanes, sidewalks and bike lanes.	$7,000,000	$14,180,716	2018-2025
10395	Multnomah Co.	Multnomah Co.	Replace RR over crossing.	Half mile east of 244th Ave.		Reconstruct railroad bridge to accommodate wider travel lanes, sidewalks and bike lanes.	$7,000,000	$20,990,923	2026-2035
10396	Multnomah Co.	Multnomah Co.	Reconstruct Cornelius Pass Rd.	Hwy. 30	Mile Post 3	Reconstruct Cornelius Pass Road including passing lane, safety, shoulder and drainage improvements.	$37,000,000	$110,952,023	2026-2035
10397	Gresham		Reconstruct 242nd Ave.	Stark St.	Glisan St.	Construct 242nd Ave to principal arterial standards with 4 travel lanes, center turn lane/median, sidewalks and bicycle lanes, and install traffic signal at 23rd St. Project is southern segment of 242nd Ave Connector. (West half of road is in Gresham).	$1,925,000	$2,849,470	2008-2017
10398	Multnomah Co.	Multnomah Co.	Wood Village Blvd Extension	Arata Rd.	Halsey St.	Construct new extension of Wood Village Blvd as a major collector with 2 travel lanes, center turn lane/median, sidewalks and bicycle lanes.	$1,573,000	$2,328,424	2008-2017
10399	Multnomah Co.	Multnomah Co.	Reconstruct Sandy Blvd.	207th Ave.	238th Ave.	Reconstruct Sandy Blvd to arterial standards with bike lanes, sidewalks and drainage improvements, utilizing recommendations from TGM grant.	$7,438,000	$15,068,023	2018-2025
10400	Multnomah Co.	Multnomah Co.	Construct new bicycle/pedestrian facility on Morrison Bridge	East Bridge head	West bridge head	Existing sidewalk on bridge is narrow, not accessible to persons with disability and presents major obstacles to bicycle and pedestrian use. Project would provide a multi-use bicycle and pedestrian facility providing improved access for non-motorized travelers.	$2,100,000	$3,108,513	2008-2017
10401	Multnomah Co.	Multnomah Co.	Reconstruct Marine Dr.	Interlachen	I-84	Reconstruct Marine Drive between Intelachen and the frontage roads in Troutdale.	$14,000,000	$28,361,431	2018-2025
10402	Multnomah Co.	Multnomah Co.	Construct new road north of I-84, Exit 16	Sandy Blvd	Marine Dr.	Construct new connector between Sandy Blvd. and Marine Dr, linking industrial sites with I-84	$14,500,000	$29,374,339	2018-2025

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Metro Project ID	Nominating Agency	Facility Owner / Operator	Project/Program Name	Project Start Location (Identify starting point of project)	Project End Location (Identify terminus of project)	Description	Estimated Cost ($2007)	Estimated Cost (YOE$)	Time Period
10403	Multnomah Co.	Multnomah Co.	257th Ave. Pedestrian improvements at intersections and mid-block crossings	Stark St.	Cherry Park Rd. north	Improve sidewalks, crossings, lighting and bus stops.	$1,600,000	$2,368,391	2008-2017
10404	Multnomah Co.	Multnomah Co.	Beaver Creek Culvert Replacement	Troutdale Rd.	Cochran Rd.	Replace culverts with fish friendly structures allowing for passage to federally endangered species	$6,000,000	$8,881,466	2008-2017
10405	Multnomah Co.	Multnomah Co.	Pedestrian Improvements	Various streets		Install pedestrian improvements--crossings, lighting, sidewalks.	$1,940,000	$3,930,084	2018-2025
10406	Multnomah Co.	Multnomah Co.	Reconstruct Stark St. to arterial standards	Troutdale Rd.	Hampton Rd.	Reconstruct road to arterial standards with 1 travel lanes in each direction, center turn lane/median, sidewalks and bicycle lanes.	$1,810,000	$3,666,728	2018-2025
10407	Multnomah Co.	Multnomah Co.	Fish passage culvert replacement	Fairview and Arata Creeks		Replace 5 culverts with fish friendly structures allowing for passage to federally endangered species.	$1,511,000	$4,531,041	2026-2035
10408	Multnomah Co.	Multnomah Co.	40 mile loop trail	Marine Dr.	Historic Columbia River Hwy	Constructs new multi-use trail adjacent to Columbia and Sandy Rivers.	$3,500,000	$7,090,358	2018-2025
10409	Multnomah Co.	Multnomah Co.	Beaver Creek Trail	Mt. Hood Comm. Coll.	Historic Columbia River Hwy	Constructs new trail adjacent to Beaver Creek.	$1,400,000	$2,836,143	2018-2025
10410	Multnomah Co.	Multnomah Co.	Broadway Bridge Rehabilitation			Rehabilitate mechanical system, approach structure, corrosion control, phase 1 seismic.	$22,700,000	$33,601,545	2008-2017
10411	Multnomah Co.	Multnomah Co.	Burnside Bridge Rehabilitation			Rehabilitate mechanical system, approach structure, corrosion control, phase 1and 2 seismic.	$41,600,000	$61,578,162	2008-2017
10412	Multnomah Co.	Multnomah Co.	Morrison Bridge Rehabilitation			Rehabilitate mechanical system, approach structure, corrosion control, phase 1 seismic.	$42,000,000	$62,170,260	2008-2017
10413	Multnomah Co.	Multnomah Co.	Hawthorne Bridge Rehabilitation			Rehabilitate mechanical system, approach structure, corrosion control, phase 1 seismic.	$13,300,000	$19,687,249	2008-2017
10414	Multnomah Co.	Multnomah Co.	Sellwood Bridge Rehabilitation/Replacement			Implement results of alternatives analysis.	$25,100,000	$37,154,132	2008-2017
10419	Gresham	Gresham	Civic Neighborhood. LRT station plaza	Max line west of City Hall	728' to the northwest	Constructs new light rail station to max blue line.	$5,600,000	$8,289,368	2008-2017
10420	Gresham	Gresham	Palmquist Rd. Improvements	242nd Ave.	US 26	Improves to five lane collector standards, intersection improvements.	$7,784,844	$15,770,666	2018-2025
10421	Gresham	Gresham	Burnside Rd. Blvd Improvements	181st	197th	Complete boulevard improvements.	$7,873,990	$11,655,429	2008-2017
10423	Gresham	Gresham	Cleveland St. Reconstruction.	Powell	Burnside	Reconstructs street from Burnside to Powell.	$1,100,000	$1,628,269	2008-2017
10424	Gresham	Gresham	Wallula St. Reconstruction, + intersections	Division	Stark	Widen road, add curb/gutter, sidewalks. At Burnside, add northbound, southbound, left turn lanes. Signalize Stark.	$8,347,988	$16,911,492	2018-2025
10425	Gresham	Gresham	Bull Run Rd.. Reconstruction	242nd Ave.	257th Ave.	Brings to standards, adds pedestrian, bicycle facilities.	$4,466,312	$9,047,929	2018-2025
10427	Gresham	Gresham	Regner Rd. Reconstruction	Roberts	City Limits	Brings to standards, adds pedestrian, bicycle facilities, improves Regner/Butler intersection by adding NB left-turn pocket and signalizing intersection.	$29,265,570	$59,286,675	2018-2025

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10428	Gresham	Gresham	257th Corridor Improvements	Division	Powell Valley Rd.	Brings to standards, adds pedestrian, bicycle facilities.	$8,623,103	$12,764,299	2008-2017
10430	Gresham	Gresham	Orient Dr. Imps.	South City Limits	257th Ave.	Upgrades to arterial 4 lane standards.	$9,000,000	$18,232,349	2018-2025
10431	Gresham	Gresham	Highland/190th Rd. Widening	200' south of SW 11th	Ending at the intersection of Pleasant View Dr./SE 190th and Butler	Reconstruct and widen street to five lanes with sidewalks and bike lanes. Widen and determine the appropriate cross-section for Highland Drive and Pleasant View Drive from Powell Boulevard to 190th Ave..	$19,646,521	$29,081,650	2008-2017
10434	Gresham	Gresham	Burnside St. Improvements	NE Wallula St.	Hogan	Complete boulevard design improvements Wallula to Hogan (2004 RTP 2048), also improve intersection of Burnside at Division (2002 TSP #15) by adding eastbound RT and signal, and also improve the intersection of Burnside and Hogan (2004 RTP #2032).	$32,545,601	$48,175,440	2008-2017
10436	Gresham	Gresham	Max Trail	Cleveland	Ruby Junction	Construct new shared use path.	$1,897,279	$2,808,436	2008-2017
10437	Gresham	Gresham	Gresham/Fairview Trail	Halsey	Marine Dr.	Springwater trail connect. incl. Trailhead @ Marine Dr.	$4,608,799	$9,336,581	2018-2025
10438	Gresham	Gresham	Springwater Trail Connections	Pl. View/190th	N/A	Provide ped, bike and equestrian access to regional trail.	$271,562	$550,135	2018-2025
10439	Gresham	Gresham	Main City Park Trailhead	Main City Park		Improves parking lot, facilities (MTIP project).	$570,299	$844,182	2008-2017
10441	Gresham	Gresham	Gresham RC Ped and Ped to Max	all stations		Improve sidewalks, lighting, crossings, bus shelters, benches.	$584,820	$865,676	2008-2017
10442	Gresham	Gresham	Phase 3 Signal Optimization	System Wide		Optimize signals, provide message boards.	$6,227,280	$9,217,896	2008-2017
10443	Gresham	Gresham	Sandy Blvd. Widening	165th	202nd	Widens street to 5 lanes w. sidewalks, bikelanes.	$26,040,578	$52,753,433	2018-2025
10444	Gresham	Gresham	181st Ave. Widening	Halsey St.	EB on-ramp to I-84	Widens street to three lanes southbound.	$1,797,270	$2,660,399	2008-2017
10445	Gresham	Gresham	181st Ave. Intersection Improvement (181st/Glisan)	181st./Glisan	"	Improve Intersection.	$1,041,867	$2,110,631	2018-2025
10446	Gresham	Gresham	181st Ave. Intersection Improvement (181st/Burnside)	181st/Burnside		Improve Intersection.	$831,210	$1,683,879	2018-2025
10447	Gresham	Gresham	162nd Ave. Imps. Plus TIF project	Glisan	Halsey	Reconstruct, widen to 5 lanes, plus EB RT at Glisan.	$7,915,303	$16,034,952	2018-2025
10449	Gresham	Gresham	201st: Halsey to Sandy	Halsey	Sandy	Improve to collector standards, signalize 201st/Sandy Blvd.	$8,335,400	$12,338,428	2008-2017
10450	Gresham	Gresham	2 Birdsdale Projects, at Division,	at Division	at Stark	Division: SB, EB turn lanes. At Stark: add 2nd NB LT lane and exclusive RT lane.	$1,375,500	$2,036,076	2008-2017
10453	Gresham	Gresham	Stark St. Improvements	190th	197th	Complete boulevard design improvements.	$6,774,280	$13,723,448	2018-2025
10454	Gresham	Gresham	181st Ave. Improvements	Glisan	Yamhill	Complete boulevard design improvements.	$11,440,061	$16,934,085	2008-2017
10455	Gresham	Gresham	Rockwood TC Ped and Ped to Max:188th LRT Stations and Ped to Max			Improve sidewalks, lighting, crossings, bus shelters, benches.	$8,919,615	$18,069,503	2018-2025
10458	Gresham		Halsey St. Improvements	190th	201st	Widen to 4 lanes w. sidewalks and bikelanes.	$4,430,961	$6,558,905	2008-2017

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10459	Gresham	Gresham	Burnside SC Pedestrian Imps.	172nd, 197th, Glisan, Stark & intersecting streets		Improve sidewalks, lighting, crossings, bus shelters, benches.	$1,192,669	$2,416,129	2018-2025
10462	Gresham	Gresham	Butler Rd. Improvements	190th	Towle Rd.	Improve Butler Rd. in new alignment to collector standards, at intersection, add northbound and westbound turn pockets and signalize.	$13,166,455	$19,489,570	2008-2017
10463	Gresham	Gresham, Portland	Foster Rd. Extension (north)	Jenne	172nd	New north extension of Foster.	$15,417,627	$22,821,854	2008-2017
10464	Gresham	N/A	Giese Rd. Extension	182nd	172nd	New ext. of Giese Rd. to Foster Road.	$17,987,232	$36,438,832	2018-2025
10465	Gresham	N/A	172nd Ave. Improvements	Giese Rd.	Foster Rd.	Upgrade street to urban standards w. sidewalks, bikelanes.	$11,520,364	$23,338,144	2018-2025
10466	Gresham	N/A	172nd Ave. Improvements	Butler Rd.	Cheldelin Rd.	Upgrade street to urban standards w. sidewalks, bikelanes, and add roundabout or traffic signal at 172nd/Foster.	$7,112,978	$14,409,588	2018-2025
10468	Gresham	Gresham	Giese Rd. Improvements	182nd Ave.	190th Ave.	Upgrade street to urban standards w. sidewalks, bikelanes.	$5,430,469	$11,001,134	2018-2025
10469	Gresham	N/A	Foster Rd. Bridge	Foster Rd.		Construct bridge crossing.	$2,642,220	$5,352,653	2018-2025
10470	Gresham	N/A	Giese Rd. Extension Bridge	Giese Rd.		Construct bridge crossing.	$2,642,220	$5,352,653	2018-2025
10471	Gresham	N/A	Butler Rd. Extension and Bridge	Binford	Rodlun	Construct new Butler road extension and bridge crossing.	$12,268,899	$18,160,968	2008-2017
10472	Gresham	Gresham	Eastman at Division			Add 2nd NB and SB LT lanes.	$912,928	$1,351,356	2008-2017
10473	Gresham	Gresham	Eastman at Stark			Add EB and NB RT lanes and 2nd NB and SB LT lanes.	$1,196,756	$1,771,491	2008-2017
10474	Gresham	N/A	Rugg Rd. Ext.	Orient Dr.	US 26	Construction of new roadway that adds e/w capacity in vicinity Rugg Rd and connects Springwater Industrial area to Highway 26.	$30,672,208	$45,402,361	2008-2017
10475	Gresham	N/A	Rugg Rd. Ext.	US 26	252nd Ave.	Construction of new roadway that adds e/w capacity in vicinity Rugg Rd and connects Springwater Industrial area to Highway 26.	$39,329,973	$58,217,968	2008-2017
10476	Gresham	N/A	Rugg Rd.	252nd Ave.	242nd. Ave.	Construction of new roadway that adds e/w capacity in vicinity Rugg Rd and connects Springwater Industrial area to Highway 26.	$12,770,187	$18,902,996	2008-2017
10477	Gresham	Gresham	Springwater Road Section 4	242nd Ave.	252nd Ave.	Construction of new street for implementation of Springwater Plan.	$13,148,679	$19,463,257	2008-2017
10478	Gresham	Gresham	252nd Ave.	Palmquist Rd.	10	Construction of new street for implementation of Springwater Plan.	$26,162,462	$38,726,835	2008-2017
10479	Gresham	Gresham	252nd Ave.	10	Rugg Rd.	Construction of new street for implementation of Springwater Plan.	$9,808,690	$14,519,257	2008-2017
10480	Gresham	Gresham	Springwater Road Section 7	242nd Ave.	9	Construction of new street for implementation of Springwater Plan.	$8,008,421	$11,854,419	2008-2017
10481	Gresham	Gresham	Springwater Road Section 8	242nd Ave.	9	Construction of new street for implementation of Springwater Plan.	$5,519,551	$8,170,284	2008-2017
10482	Gresham	Gresham	Springwater Road Section 9	7	252nd Ave.	Construction of new street for implementation of Springwater Plan.	$8,008,421	$11,854,419	2008-2017

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10483	Gresham	Gresham	Springwater Road Section 10	252nd Ave.	Telford Rd.	Construction of new street for implementation of Springwater Plan.	$12,202,421	$18,062,564	2008-2017
10484	Gresham	Gresham	Springwater Road Section 11	Telford Rd.	Orient Dr.	Construction of new street for implementation of Springwater Plan.	$21,031,280	$31,131,432	2008-2017
10485	Gresham	Gresham	Hogan	Palmquist Rd.	Rugg Rd.	Improvement of existing roadway to arterial 4 lane standards.	$47,291,190	$70,002,514	2008-2017
10486	Gresham	Gresham	Telford Rd.	Springwater Boundary	252nd Ave.	Improvement of existing roadway to collector standards, add bike and ped facilities, intersection improvements.	$29,419,888	$43,548,621	2008-2017
10488	Gresham	Gresham	282nd Ave.	Springwater Boundary	20	Improvement of existing roadway to collector standards, add bike and ped facilities, intersection improvements.	$7,146,436	$10,578,471	2008-2017
10490	Gresham	Gresham	201st RR Bridge at I-84	201st/I-84	"	Construct new RR bridge to accommodate alternative modes.	$2,359,125	$3,492,081	2008-2017
10493	Gresham	Gresham	181st Ave. Sandy to I-84	Sandy	I-84	Add southbound aux lane & widen RR overcrossing.	$827,659	$1,676,685	2018-2025
10494	Gresham	Gresham	162nd at Stark St.			Exclusive southbound and eastbound right turns at Stark.	$888,209	$1,314,766	2008-2017
10495	Gresham	Gresham	181st Ave. at Halsey	181st/Halsey		add 2nd LT lane to N & S legs, add RT lane to EB WB SB.	$1,025,038	$1,517,307	2008-2017
10496	Gresham	Gresham	181st at I-84	181st/I-84		Freight mobility improvements subject to refinement study.	$250,000	$506,454	2018-2025
10497	Gresham	Gresham	181st at Sandy, at Stark			At Sandy: Northbound right turn, 2nd westbound left turn. Overlap eastbound right turn. At Stark, add 2nd left turn lane on east and west legs.	$1,884,390	$2,789,358	2008-2017
10498	Gresham	Gresham	181st (182nd) at Division/Powell Intersections	181st at Division, Powell		At Division: add second westbound left turn lane (TIF P1). At Powell, add northbound and southbound double left turn lanes (TIF P2 and TSP8).At Powell add SB and NB lanes.	$1,682,670	$2,490,763	2008-2017
10499	Gresham	Gresham	192nd Ave. Wilkes to Halsey	192/Wilkes	192/Halsey	Improve to collector street standards.	$3,833,031	$5,673,822	2008-2017
10501	Gresham	Gresham	Barnes Rd.: Powell Valley to City Limits: only Orient to So. City Limits	Powell Valley	Orient Dr.	Widen road and add improvements.	$7,135,229	$14,454,665	2018-2025
10502	Gresham	Gresham	Bike signs	various locations		Add directional signs to bike network.	$1,400,000	$2,072,342	2008-2017
10503	Gresham	Gresham	Burnside at Powell			At Powell: eliminate EB and WB left turn lanes.	$683,517	$1,011,772	2008-2017
10504	Gresham	Gresham	Ped to Max: Hood St.	Powell	Division	Improve ped access/multi-modal on Hood St.	$986,467	$1,460,212	2008-2017
10505	Gresham	Gresham	Civic Neighborhood TOD	16th and NW Norman		Support construction of street infrastructure improvements.	$4,765,219	$7,053,688	2008-2017
10506	Gresham	Gresham	Transit: Columbia Corridor TMA			Transit/bus service improvements, 2 locations.	$185,258	$274,227	2008-2017
10507	Gresham	Gresham	Glisan, 162nd to 202	162nd/I-84	202nd	Retrofit bikelanes.	$104,850	$155,204	2008-2017
10508	Gresham	Gresham	Glisan, Eastman (223rd) to Hogan	223rd (Eastman)	Hogan	Construct bike lane.	$62,910	$93,122	2008-2017
10509	Gresham	Gresham	Safe walking routes, missing links	various locations		Construct missing links and safe routes to school.	$4,089,150	$6,052,941	2008-2017
10511	Gresham	Gresham	Hogan Rd. at Stark St.	Stark		Add right turn lanes on all approaches and second northbound and southbound left turns.	$1,908,431	$3,866,131	2018-2025

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10512	Gresham	Gresham	Hogan: Powell to Burnside boulevard improvements plus three intersection improvements	Powell	Burnside	Improve to boulevard standards, and intersection improvements at Burnside, Division and Powell.	$8,739,328	$17,704,275	2018-2025
10516	Gresham	Gresham	San Rafael, 181st to 201st	181st	201st	Complete collector and remove frontage road.	$9,990,952	$14,789,050	2008-2017
10518	Gresham	Gresham	Wilkes St., 181st to 192nd	181st	192nd	Improve Wilkes to collector standards and provide slip ramp connection from Eastbound I-84 on ramp.	$6,781,698	$13,738,476	2018-2025
10519	Gresham	Gresham	Pedestrian enhancements	162nd/Bside, and	181st Burnside	Pedestrian enhancements.	$75,492	$111,747	2008-2017
10521	Gresham	Gresham	Signalize intersections			Signalize intersections.	$768,590	$1,557,022	2018-2025
10527	Gresham	Gresham	Hogan, Powell Blvd to Palmquist	Powell	Palmquist	Improve to arterial standards.	$8,444,619	$17,107,249	2018-2025
10530	Gresham	Gresham	Towle Ave. Butler Rd. to Binford Lake	Butler Rd.	Binford Lake Parkway	Improve to collector standards. Add roundabout at Towle/Binford.	$11,897,840	$24,102,841	2018-2025
10533	Gresham	Gresham	190th:30th to So. Boundary of Pleasant Valley	30th	Southern boundary of Pleasant Valley	Improve existing road to major arterial standards, signalize 190th @ Giese, Butler, Richey, Cheldelin.	$28,644,245	$42,400,480	2008-2017
10534	Gresham	Gresham	Cheldelin: 172nd to 190th	172nd	190th	Improve existing road to minor arterial standards, signalize Cheldelin at 172nd, 182nd, and Foster.	$19,795,513	$29,302,195	2008-2017
10535	Gresham	Gresham	Clatsop: New extension	162nd	172nd	Extend Clatsop into Pleasant Valley, and construct bridge.	$20,163,595	$29,847,046	2008-2017
10536	Gresham	Gresham	Clatsop: Improvements	162nd	Portland Boundary	Improve Clatsop to minor arterial standards, and signalize Clatsop at 162nd.	$4,202,582	$6,220,848	2008-2017
10537	Gresham	Gresham	Richey	182nd	190th	Improve to collector standards, and signalize 190th/Richey.	$7,925,735	$11,732,024	2008-2017
10538	Gresham	Gresham	Sager	162nd	Foster	Improve to collector standards, and signalize Sager @172nd.	$15,794,720	$23,380,044	2008-2017
10539	Gresham	Gresham	Foster South: new road	County Line	Sager	Build new road section to collector standards.	$7,120,992	$10,540,808	2008-2017
10540	Gresham	Gresham	162nd	Foster	southern boundary of Pleasant Valley	Improve 162nd to collector standards, add signal at Foster @ 162nd.	$21,236,546	$31,435,276	2008-2017
10541	Gresham	Gresham	182nd	Giese	Cheldelin	Improve 182nd to collector standards.	$11,797,690	$17,463,463	2008-2017
10542	Gresham	Gresham	Foster Rd. Improvements	162nd	Jenne Rd.	Improve Foster Rd. to Minor Arterial (Parkway) standards, 2 lanes, with turn pockets where appropriate.	$3,014,698	$4,462,489	2008-2017
10543	Gresham	Gresham	172nd: Cheldelin south to Pleasant Valley boundary	Cheldelin	So. Boundary of Pleasant Valley	Improve 172nd Ave. to major arterial standards.	$8,651,396	$12,806,179	2008-2017
10545	Washington Co.		OR 10: Oleson Rd. Improvement	Oleson Rd. south of OR10	Oleson Rd. at Scholls Ferry	Realign Oleson Rd. 500 feet to east and reconfigure Oleson intersections with OR10 and Scholls Ferry Rd.	$30,888,000	$62,573,421	2018-2025
10546	Washington Co.	Washington Co.	170th Ave. Improvements	Alexander St.	Merlo Rd.	Widen roadway to 4 lanes with left turn lanes at major intersections and bike lanes and sidewalks.	$28,093,000	$56,911,263	2018-2025
10547	Washington Co.	Washington Co.	173rd/174th Under Crossing Improvement	Cornell Rd.	Bronson Rd.	Construct three-lane under crossing of Hwy. 26 with bike lanes and sidewalks.	$58,641,000	$118,795,906	2018-2025
10549	Washington Co.	Washington Co.	Cornell @ 143rd Improvements	Science Park Dr.	143rd Ave.	Realign 143rd with Science Park Dr. @ Cornell as a 4-way signalized intersection.	$12,400,000	$18,355,029	2008-2017

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10551	Washington Co.	Washington Co.	185th to West Union Improvement	North of Westview H.S.	West Union Rd.	Add 1 thru-lane in each direction with continuous center turn lane, bikelanes and sidewalks.	$6,794,000	$10,056,780	2008-2017
10554	Washington Co.	Washington Co.	Bethany Blvd. Improvements	Kaiser Rd.	West Union Rd.	Widen to 5 lanes with bikelanes and sidewalks.	$22,046,000	$44,661,151	2018-2025
10558	Washington Co.	Washington Co.	Cornell Rd. Improvements	113th Ave.	107th Ave.	Widen from two to three lanes with bike lanes and sidewalks.	$9,941,000	$20,138,642	2018-2025
10559	Washington Co.	Washington Co.	Cornell to Murray Improvements	Murray Blvd.	Hwy. 26	Widen Cornell from three to five lanes with bike lanes and sidewalks.	$40,620,000	$82,288,667	2018-2025
10560	Washington Co.	Washington Co.	Farmington Rd. Improvements	170th Ave.	185th Ave.	Widen roadway from 2/3 lanes to 5 lanes with bike lanes and sidewalks.	$17,676,000	$26,164,798	2008-2017
10561	Washington Co.	Washington Co.	Jenkins Rd. Improvements	Murray Blvd.	158th Ave.	Widen roadway from three to five lanes with bike lanes and sidewalks.	$15,530,000	$31,460,930	2018-2025
10563	Washington Co.	Washington Co.	Kaiser/143rd Ave. Improvements	Bethany Blvd.	Cornell Rd.	Widen from two to three lanes with bike lanes and sidewalks.	$38,357,000	$77,704,244	2018-2025
10567	Washington Co.	Washington Co.	Taylors Ferry Extension	Oleson Rd.	Washington Dr.	Construct new two lane extension with bike lanes and sidewalks	$4,390,000	$13,164,308	2026-2035
10568	Washington Co.	Washington Co.	Tualatin-Sherwood Rd. Improvements	Hwy. 99W	Teton Ave.	Widen from three to five lanes with bike lanes and sidewalks.	$49,150,000	$99,568,882	2018-2025
10569	Washington Co.	Washington Co.	Walker Rd. Improvements	185th Ave.	Stucki Ave.	Widen from two to five lanes with bike lanes and sidewalks.	$14,776,000	$29,933,465	2018-2025
10570	Washington Co.	Washington Co.	Walker to Hwy. 217 Improvements	185th Ave.	Hwy. 217	Widen from two to five lanes with bike lanes and sidewalks.	$89,612,000	$181,537,470	2018-2025
10571	Washington Co.	Washington Co.	West Union Rd. Improvements	185th Ave.	143rd Ave.	Widen from two to three lanes with bike lanes and sidewalks.	$34,870,000	$104,564,785	2026-2035
10572	Washington Co.	Washington Co.	Barnes Rd. Improvements	St. Vincent's Hosp. entrance	Leahy Rd.	Widen from two to five lanes with bike lanes and sidewalks.	$8,933,000	$18,096,619	2018-2025
10574	Washington Co.	Washington Co.	Farmington to 198th Improvements	185th Ave.	198th Ave.	Widen from two to three lanes with bike lanes and sidewalks.	$17,326,000	$51,955,534	2026-2035
10576	Washington Co.	Washington Co.	Saltzman Rd. Improvements	Cornell Rd.	Burton Rd.	Widen from two to three lanes with bike lanes and sidewalks.	$12,550,000	$18,577,066	2008-2017
10578	Washington Co.	Washington Co.	Merlo/158th Improvements	170th Ave.	Walker Rd.	Widen roadway to five lanes with bike lanes and sidewalks	$24,735,000	$50,108,572	2018-2025
10579	Washington Co.	Washington Co.	Barnes to 119th Improvements	Hwy. 217	119th (future)	Widen to five lanes with bike lanes and sidewalks	$30,316,000	$44,875,086	2008-2017
10581	Washington Co.	Washington Co.	Brookwood Rd. Improvements	T.V. Hwy.	Baseline Rd.	Widen roadway to three lanes with bike lanes and sidewalks.	$11,970,000	$17,718,524	2008-2017
10583	Washington Co.	Washington Co.	185th to Bany Rd. Improvements	Farmington Rd.	Bany Rd.	Widen to three lanes with bike lanes and sidewalks	$7,706,000	$23,108,008	2026-2035
10587	Washington Co.	Washington Co.	Cornelius Pass Rd. Improvements	Amberwood Dr.	T.V. Hwy.	Widen to five lanes with bike lanes and sidewalks	$59,872,000	$88,625,186	2008-2017
10590	Washington Co.	Washington Co.	Tonquin Rd. Improvements	Grahams Ferry Rd.	Oregon St.	Realign and widen to three lanes with bike lanes and sidewalks.	$28,406,000	$57,545,344	2018-2025
10592	Washington Co.	Washington Co.	205th Ave. Improvements	Quatama Rd.	Baseline Rd.	Widen road to 5 lanes with bike lanes and sidewalks. Widen bridge over Beaverton Creek to four lanes with bike lanes and sidewalks.	$18,061,000	$26,734,692	2008-2017
10596	Washington Co.		Scholls Ferry Rd. Improvements	Hwy. 217	121st Ave.	Widen to seven lanes with bike lanes and sidewalks.	$19,749,000	$40,007,850	2018-2025
10597	Washington Co.		Evergreen Rd. Improvements	253rd Ave.	Sewell Ave.	Widen to 5 lanes with bike lanes and sidewalks.	$11,242,000	$16,640,906	2008-2017

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10600	Washington Co.	ODOT	Hwy. 26/Shute Interchange Improvements	Hwy. 26/Shute Rd./Helvetia Rd.	N/A	Add westbound to southbound loop ramp, additional northbound through lane and relocate Jacobsen intersection.	$29,272,000	$43,329,711	2008-2017
10601	Washington Co.	ODOT	Hwy. 26/Bethany Interchange Improvements	Cornell Rd.	Bronson Rd.	Rebuild overpass to accommodate additional northbound thru-lane.	$8,720,000	$17,665,120	2018-2025
10602	Washington Co.	Washington Co.	Scholls Ferry ATMS	Hall Blvd.	Murray Blvd.	Install integrated surveillance and management equipment.	$1,109,000	$1,641,591	2008-2017
10603	Washington Co.	Washington Co.	Tualatin-Sherwood Rd. ATMS	I-5	Teton Ave.	Install integrated surveillance and management equipment.	$1,594,000	$2,359,509	2008-2017
10604	Washington Co.	Washington Co.	185th Ave. ATMS	Baseline Rd.	Hwy. 26	Install integrated surveillance and management equipment.	$1,095,000	$1,620,867	2008-2017
10605	Washington Co.	Washington Co.	Cornell Rd. ATMS	Cornelius Pass Rd.	Wash. Co. TOC	Install integrated surveillance and management equipment.	$2,043,000	$3,024,139	2008-2017
10606	Washington Co.	Washington Co.	Washington Square Regional Center Pedestrian Improvements	Wash. Sq. Regional Center		Complete 7400 feet of sidewalk improvements.	$8,954,000	$13,254,107	2008-2017
10607	Washington Co.	Washington Co.	Sunset TC Station Community Pedestrian Improvements	Sunset TC Station Community		Complete 9100 feet of sidewalk improvements.	$6,006,000	$8,890,347	2008-2017
10608	Washington Co.	Washington Co.	Aloha TC Pedestrian Improvements	Aloha Town Center		Complete23,500 feet of sidewalk improvements.	$10,105,000	$14,957,868	2008-2017
10610	Washington Co.	Washington Co.	Saltzman Rd. Bike	Cornell Rd.	Barnes Rd.	Complete 950 feet of bike lanes in town center.	$823,000	$1,218,241	2008-2017
10611	Washington Co.	Washington Co.	Locust Ave. Bike	Hall Blvd.	80th Ave.	Completes 1650 feet of bike lanes in regional center.	$3,417,000	$5,057,995	2008-2017
10612	Washington Co.	Washington Co.	Greenburg Rd. Bike	Hall Blvd.	Hwy. 217	Completes 3400 feet of bike lanes in regional center.	$3,610,000	$5,343,682	2008-2017
10613	Washington Co.	Washington Co.	Cornell Rd. Bike	Saltzman Rd.	119th Ave.	Completes 1750 feet of bike lanes in town center.	$1,036,000	$1,533,533	2008-2017
10614	Washington Co.	Washington Co.	Butner Rd. Bike	Cedar Hills Blvd..	Park Way	Completes 7800 feet of bike lanes to transit corridor.	$3,524,000	$5,216,381	2008-2017
10615	Washington Co.	Washington Co.	Bronson Rd. Bike	185th Ave.	Bethany Blvd.	Completes 7500 feet of bike lanes to transit corridor.	$5,490,000	$8,126,541	2008-2017
10616	Beaverton	Beaverton	Rose Biggi Ave.: Crescent Street to Hall Blvd. Complete right-of-way and construction of multimodal street extension with Boulevard Design	Crescent St.	Hall Blvd.	Extend 2-lane Rose Biggi Ave. to Hall Blvd. (via Westgate Drive) to fill a gap; boulevard design; add sidewalks, bikeway (PE funded STIP Key #14400).	$3,500,000	$5,180,855	2008-2017
10617	Beaverton	Washington County	Farmington Rd.: Murray Blvd. to Hocken Ave. Safety, turn lanes, bicycle, and pedestrian improvements	Murray Blvd.	Hocken Ave.	Construct turn lanes and intersection improvements; signalize where warranted; add bike lanes and sidewalks in gaps.	$8,700,000	$12,878,125	2008-2017
10618	Beaverton	Beaverton	Dawson/Westgate multimodal extension from Rose Biggi Ave. to Hocken Ave.	Rose Biggi Avenue	Hocken Ave. via Dawson to Westgate at Rose Biggi	Extend 2 lane street from Hocken via Dawson and Westgate at Rose Biggi to fill a gap; realign Dawson/Westgate at Cedar Hills; add turn lanes at intersections, sidewalks, bikeway.	$8,900,000	$13,174,174	2008-2017

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10619	Beaverton	Beaverton	Crescent St. multimodal extension to Cedar Hills Blvd.	Rose Biggi Ave.	Cedar Hills Blvd.	Extend 2 lane Crescent from Cedar Hills to Rose Biggi Ave. to fill a gap; add sidewalks, bikeway.	$3,500,000	$5,180,855	2008-2017
10620	Beaverton	Beaverton	Millikan Way multimodal extension from Watson Ave. to 114th Ave.	Watson Ave.	114th Ave.	Extend 2 lane Millikan Way to 114th to fill a gap; add turn lanes at intersections, sidewalks, bikeway.	$13,800,000	$27,956,268	2018-2025
10621	Beaverton	Beaverton	New street connection from Broadway to 115th Ave.	Broadway	115th Ave.	Construct new 2 lane street with bikeway and sidewalks.	$4,500,000	$9,116,174	2018-2025
10622	Beaverton	Beaverton	Electric to Whitney to Carousel to 144th multimodal street connections	Electric	144th Ave.	Connect existing streets and improve to standard with bikeways and sidewalks.	$7,200,000	$14,585,879	2018-2025
10624	Beaverton	Beaverton	120th Ave.: new 2 lane multimodal street	Center St.	Canyon Rd.	Construct new multimodal street with bikeways and sidewalks; turn lanes and signals as needed.	$8,900,000	$18,029,767	2018-2025
10625	Beaverton	Beaverton	Rose Biggi Ave.: 2 lane multimodal street extension	Tualatin Valley Hwy	Broadway	Construct 2 lane boulevard extension with bikeways and sidewalks.	$3,000,000	$4,440,733	2008-2017
10626	Beaverton	Beaverton	114th Ave./115th Ave. 2 lane multimodal street	LRT	Beaverton Hillsdale Hwy/Griffith Drive	Construct 2 lane street with bike and pedestrian improvements.	$10,000,000	$14,802,443	2008-2017
10627	Beaverton	Beaverton	Tualaway 2 lane multimodal street extension	Electric	Millikan	Extend existing street to Millikan with bikeways and sidewalks.	$3,900,000	$7,900,684	2018-2025
10628	Beaverton	Beaverton	Center Street and 113th Ave. safety, bike, and pedestrian improvements	Hall Blvd.	Cabot Street	Add sidewalks and bikelanes; add turn lanes where needed.	$5,400,000	$7,993,319	2008-2017
10630	Beaverton	Beaverton	Hall Blvd. multimodal extension from Cedar Hills Blvd. to Hocken Ave.	Hocken Ave.	Cedar Hills Blvd.	Extend Hall Blvd. from Cedar Hills to Hocken to fill a gap; add turn lanes at intersections, sidewalks and bikeway.	$5,500,000	$8,141,344	2008-2017
10631	Beaverton	Beaverton	141st/142nd/144th multimodal street extension connections	141st Ave.	144th Ave.	Connect streets, add bikeways, sidewalks, turns lanes and signalize as warranted.	$6,400,000	$9,473,563	2008-2017
10632	Beaverton	Beaverton	Allen Blvd. safety, bicycle and pedestrian improvements	Highway 217	Murray Blvd.	Widen street adding turn lanes and signals where needed, construct bike lanes and sidewalks.	$41,600,000	$124,746,058	2026-2035
10633	Beaverton	Beaverton	Allen Blvd. safety, bicycle and pedestrian improvements	Highway 217	Western Ave.	Widen street to 4/5 lanes adding turn lanes and signals where needed, construct bike lanes and sidewalks.	$6,300,000	$12,762,644	2018-2025
10634	Beaverton	Beaverton	Cedar Hills Blvd. safety, bicycle and pedestrian improvements	Farmington Rd.	Walker Rd.	Add turn lanes, bike lanes and sidewalks.	$19,000,000	$38,490,514	2018-2025
10635	Beaverton	Beaverton	125th Ave. multimodal extension Brockman to Hall Blvd.	Brockman St.	Hall Blvd.	Construct new multimodal street with bike lanes and sidewalks.	$13,900,000	$20,575,396	2008-2017
10636	Beaverton	Beaverton	Millikan Way safety, bike and pedestrian improvements	141st Ave.	Hocken Ave.	Add turn lanes as needed, bike lanes and sidewalks, signalize as warranted.	$2,600,000	$5,267,123	2018-2025

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10638	Beaverton	Beaverton	Davies Rd. multimodal street extension	Scholls Ferry Rd.	Barrows Rd.	Extend 2 lane street with turn lanes, bike lanes and sidewalks.	$4,900,000	$7,253,197	2008-2017
10639	Beaverton	Beaverton	Weir Rd. safety, bicycle and pedestrian improvements	155th Ave.	175th Ave.	Add turn lanes, bikelanes and sidewalks in gaps, turn lanes.	$4,100,000	$8,305,848	2018-2025
10640	Beaverton	Beaverton	Nimbus Ave. 2 lane multimodal street extension from Hall Blvd. to Denney Road	Hall Blvd.	Denney Rd.	Extend 2 lane street with turn lanes, bikelanes and sidewalks.	$15,400,000	$31,197,574	2018-2025
10642	Beaverton	Beaverton	Adaptive Traffic Signal Systems	Adaptive Traffic Signal Systems	Allen Blvd., Cedar Hills Blvd., Hall Blvd., Farmington Road	New signals and signal upgrades.	$10,000,000	$20,258,165	2018-2025
10643	Beaverton	ODOT	Hall Blvd. sidewalk gaps at Hwy 217	217 SB ramp	740' w/o ramp	Construct sidewalks.	$400,000	$592,098	2008-2017
10644	Beaverton	Washington County	110th Ave. sidewalk gaps	Beaverton Hillsdale Hwy	Canyon Rd	Construct sidewalks.	$1,400,000	$2,836,143	2018-2025
10645	Beaverton	Beaverton	117th Ave. sidewalk gaps	LRT	Center St.	Construct sidewalks.	$400,000	$592,098	2008-2017
10646	Beaverton	Beaverton	Hall Blvd. / Watson Ave. pedestrian improvements	Cedar Hills Blvd..	Allen Blvd.	Add pedestrian improvements at intersections and amenities (lighting, plazas).	$2,400,000	$3,552,586	2008-2017
10648	Beaverton	Beaverton	Denney Rd. sidewalks	Nimbus Rd.	Scholls Ferry Rd.	Construct sidewalks.	$2,200,000	$6,597,147	2026-2035
10649	Beaverton	Beaverton	Allen Blvd sidewalks	Western Ave.	Arctic Dr.	Construct sidewalks.	$200,000	$405,163	2018-2025
10650	Beaverton	Beaverton	Western Ave. sidewalks	5th Street	800 ft s/o 5th Street	Construct sidewalks.	$600,000	$1,215,490	2018-2025
10651	Beaverton	Beaverton	Allen Blvd. sidewalks	King Blvd.	Western Ave.	Construct sidewalks.	$3,100,000	$6,280,031	2018-2025
10652	Beaverton	Beaverton	141st Ave. sidewalks	Farmington Rd	Allen Blvd	Construct sidewalks.	$300,000	$444,073	2008-2017
10653	Beaverton	Beaverton	Sexton Mountain Drive multimodal street extension from 155th Ave. to Sexton Mtn. across the Powerline	155th Ave.	Sexton Mountain Drive	Extend 2 lane street with bikelanes and sidewalks	$2,500,000	$5,064,541	2018-2025
10654	Beaverton	Beaverton	Nora Road sidewalks and bike lanes	175th Ave.	155th Ave.	Construct sidewalks and bike lanes.	$2,000,000	$4,051,633	2018-2025
10656	Beaverton	Beaverton	Jamieson Rd. sidewalks	Pinehurst/Cypress	Woodlands Dr.	Construct sidewalks.	$400,000	$810,327	2018-2025
10659	Beaverton	Beaverton	Laurelwood Ave., Birchwood Road, 87th Ave. sidewalks	Scholls Ferry Road	Canyon Road	Construct sidewalks.	$700,000	$1,036,171	2008-2017
10661	Beaverton	Beaverton	155th Ave. sidewalks	Beard Rd.	Weir Rd.	Construct sidewalks.	$2,700,000	$3,996,660	2008-2017
10662	Beaverton	Beaverton	155th Ave. sidewalks	Davis Rd.	Beverly Beach Ct	Construct sidewalks.	$1,800,000	$2,664,440	2008-2017
10663	Beaverton	Beaverton	Hall Blvd. bike lanes & turn lanes to Cedar Hills	Farmington Road	Cedar Hills Blvd.	Construct bike lanes and turn lanes.	$5,200,000	$10,534,246	2018-2025
10664	Beaverton	Beaverton	Watson Ave. bike lanes	Hall Blvd.	Cedar Hills Blvd.	Construct bike lanes.	$4,500,000	$9,116,174	2018-2025
10665	Beaverton	Beaverton	6th Ave. bikelanes	Murray Blvd.	Erickson Ave.	Construct bike lanes.	$3,600,000	$7,292,939	2018-2025
10666	Beaverton	Beaverton	Greenway Dr. bike lanes	Hall Blvd.	125th Ave.	Construct bike lanes.	$3,700,000	$7,495,521	2018-2025

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10667	Beaverton	Beaverton	155th Ave. bike lanes	Davis Rd.	Weir Rd.	Construct bike lanes in gaps.	$5,400,000	$10,939,409	2018-2025
10668	Beaverton	Beaverton	Farmington Rd Bike lane retrofit	Hwy 217	Hocken Ave.	Construct bike lanes.	$12,600,000	$25,525,288	2018-2025
10669	Beaverton	Beaverton	Hall Blvd. bike lanes & turn lanes	12th St.	s/o Allen Blvd.	Construct bike lanes and turn lanes.	$5,200,000	$10,534,246	2018-2025
10670	Beaverton	Beaverton	Denney Rd. bike lanes	Hall Blvd.	Scholls Ferry Rd.	Construct bike lanes.	$6,100,000	$12,357,481	2018-2025
10671	Beaverton	Beaverton	Allen Blvd. bike lanes	200' e/o Western	Scholls Ferry Rd.	Construct bike lanes.	$4,300,000	$8,711,011	2018-2025
10672	Beaverton	Beaverton	Western Ave. bike lanes	Beaverton Hillsdale Hwy	Allen Blvd.	Construct bike lanes.	$5,000,000	$10,129,083	2018-2025
10674	Sherwood	Sherwood	Oregon-Tonquin Intersection & Street Improvements	Oregon St.	at Tonquin	Intersection improvements (consider roundabout) on Oregon at Tonquin Road; sidewalks and bike access through the intersection.	$1,945,000	$3,940,213	2018-2025
10677	Sherwood	Sherwood	Adams Ave Phase 2	T-S Rd.	99W	Construct 3 lane road, landscaping and multi-use path.	$8,580,000	$17,381,506	2018-2025
10680	Sherwood	Sherwood	Elwert Rd & 99W Intersection Improvements	99W	Kruger Rd	Intersection safety improvements.	$2,700,000	$5,469,705	2018-2025
10681	Sherwood		Elwert Rd	99W	Edy Rd	Upgrade road to arterial standards.	$11,430,000	$23,155,083	2018-2025
10682	Sherwood	Sherwood	Brookman Rd	99W	Ladd Hill Rd	Reconstruct road to collector standards.	$20,510,000	$41,549,497	2018-2025
10691	Sherwood		Edy Rd/Sherwood Blvd	Borcher Dr	3rd St.	Reconstruct road to arterial standards; add sidewalks.	$7,740,000	$15,679,820	2018-2025
10692	Sherwood		Edy Rd	Borcher Dr	City limits	Reconstruct road to collector standards w/ sidewalks and bike lanes.	$8,760,000	$12,966,940	2008-2017
10693	Sherwood	Sherwood	Ladd Hill Rd.	Sunset Blvd	UGB	Upgrade street to arterial standards.	$6,340,000	$19,011,779	2026-2035
10694	Sherwood	Sherwood	Murdock	UGB	Oregon St	Add bike lanes.	$1,340,000	$1,983,527	2008-2017
10695	Sherwood	Sherwood	Meinecke	99W	1st	Add bike lanes.	$1,150,000	$2,329,689	2018-2025
10699	Sherwood	Sherwood	Oregon Street	Murdock	Railroad Crossing	Construct road to 3 lane collector standards.	$6,712,000	$20,127,297	2026-2035
10701	Sherwood	Sherwood	Regional Trail System / West fork of Tonquin Trail	Middle fork of Tonquin Trail	Wildlife Refuge	Construct regional trail to connect SE City limits with trail system north of City limits.	$2,465,000	$4,993,638	2018-2025
10702	Sherwood	Sherwood	2040 Corridor Signal & Intersection Improvements	Borcher Dr	Century	Improve 3-leg intersection at Edy & Borchers; remove traffic signal at Baler; remove traffic signal at Langer; add traffic signal at Century.	$2,812,000	$8,432,354	2026-2035
10703	Sherwood	Sherwood	Pedestrian Links to Schools & Town Center			Pedestrian upgrades, new sidewalks, sidewalk infill at: Sunset, Division, Edy, Elwert, Meinecke, Pine, Roy, Ladd Hill, Timbrel, Washington, Willamette, Old Pacific Hwy.	$6,983,000	$14,146,277	2018-2025
10709	Tualatin	Tualatin	Sagert	Martinazzi	N/A	Signalize intersection and change grades to provide better sight distance.	$1,700,000	$2,516,415	2008-2017
10714	Tualatin	Tualatin	105th Ave/Avery Street	Blake	105th	Realign curves, signalize intersection of Avery/105th, sidewalks on 105th from Avery to 108th.	$5,000,000	$7,401,221	2008-2017
10715	Tualatin	Tualatin	Herman	Teton	Tualatin	Reconstruct and widen to 3 lanes from Teton to Tualatin.	$2,500,000	$3,700,611	2008-2017
10716	Tualatin	Tualatin	Myslony	112th	124th Ave	Reconstruct/widen from 112th to 124th to fill system.	$9,400,000	$13,914,296	2008-2017
10718	Tualatin	Tualatin	Herman	Cipole	124th Ave	Reconstruction from Cipole to 124th.	$4,100,000	$6,069,002	2008-2017

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10720	Tualatin	Tualatin	Boones Ferry	Tualatin-Sherwood	Ibach	Widen to 5 lanes from Tualatin-Sherwood to Ibach.	$16,500,000	$49,478,605	2026-2035
10721	Tualatin	Tualatin	McEwan	65th	Lake Oswego	Widen to 3 lanes from 65th to Lake Oswego.	$3,520,000	$10,555,436	2026-2035
10722	Tualatin	Tualatin	65th	Nyberg	Childs Rd	Extension across the Tualatin River from Nyberg to Childs Road.	$15,000,000	$44,980,550	2026-2035
10725	Tualatin	Tualatin	65th	Sagert	Nyberg	Widen to 5 lanes from Sagert to Nyberg.	$19,000,000	$56,975,363	2026-2035
10728	Tualatin	Tualatin	Boones Ferry	N/A	N/A	Interconnect signals on Boones Ferry Road from Tualatin-Sherwood Road to Ibach (6 signals).	$78,000	$115,459	2008-2017
10729	Tualatin	Tualatin	Loop Rd	Martinazzi	Boones Ferry	Construct street from Tualatin-Sherwood to Boones Ferry Rd to Martinazzi.	$6,900,000	$20,691,053	2026-2035
10730	Tualatin	Tualatin	E-W connection	108th	112th	Construct new street.	$18,200,000	$26,940,446	2008-2017
10735	Tualatin	Tualatin	Herman	108th	Teton	Widen to 5 lanes from 108th to Teton.	$1,250,000	$2,532,271	2018-2025
10736	Tualatin	Tualatin	124th Ave	Tualatin-Sherwood	Tonquin	Construct new street from Tualatin-Sherwood to Tonquin Rd - 5 lanes.	$82,500,000	$122,120,154	2008-2017
10737	Tualatin	Tualatin	Central Design District Pedestrian Improvements			Pedestrian improvements & bike lanes.	$10,600,000	$15,690,589	2008-2017
10738	Tualatin	Tualatin	Teton	Herman	Tualatin-Sherwood	Add bikelanes to Teton from Avery to Tualatin Rd.	$3,800,000	$11,395,073	2026-2035
10739	Tualatin	Tualatin	Nyberg	Tualatin-Sherwood	65th	Add bikelanes on Nyberg from I-5 to 65th.	$7,000,000	$20,990,923	2026-2035
10740	Tualatin	Tualatin	65th Ave.	Borland	Childs Rd	Add bikelanes on 65th Ave from Sagert to Nyberg. Construct a pedestrian bridge over the River from Tualatin to Childs Rd.	$8,000,000	$23,989,627	2026-2035
10741	Tualatin	Tualatin	95th Ave.	Avery	Tualatin-Sherwood	Add bikelanes from Avery to Tualatin-Sherwood Rd.	$2,400,000	$7,196,888	2026-2035
10742	Tualatin	Tualatin	108th Ave.			Pedestrian bridge over Tualatin River and connecting paths.	$2,000,000	$5,997,407	2026-2035
10744	Tualatin	Tualatin	Tualatin River Pathway				$8,600,000	$17,422,022	2018-2025
10745	Tualatin	Tualatin	Pedestrian Trail	65th	Martinazzi	Pedestrian trail from 65th to Martinazzi.	$1,600,000	$3,241,306	2018-2025
10746	Tigard		Washington Square Connectivity Improvements	Washington Square local street connections	Washington Square local street connections	Increase local street connections at Washington Square Center based on recommendations in regional center plan.	$6,912,000	$14,002,444	2018-2025
10747	Tigard		Hwy. 217 Overcrossing - Cascade Plaza	Nimbus	Locust	Provide a new connection from Nimbus to Washington Square south of Scholls Ferry Road.	$5,166,000	$10,465,368	2018-2025
10748	Tigard		Greenburg Road Improvements, South	Shady Lane	North Dakota	Widen to 5 lanes with bikeways and sidewalks. Includes bridge replacement.	$14,330,000	$21,211,901	2008-2017
10749	Tigard		Washington Square Regional Center Pedestrian Improvements	Various	Various	Improve sidewalks, lighting, crossings, bus shelters, and benches at Washington Square.	$5,720,000	$11,587,670	2018-2025
10750	Tigard		Greenburg Road Improvements	Tiedeman Ave.	Hwy. 99W	Widen to 5 lanes.	$15,017,000	$30,421,687	2018-2025
10751	Tigard	ODOT	Hwy. 217 Overcrossing	Hunziker Road	72nd Ave.	Realign Hunziker Road to meet Hampton Street at 72nd Ave. and removes existing 72nd/Hunziker Road intersection.	$9,635,000	$19,518,742	2018-2025
10753	Tigard	Tigard	Durham Road Improvements	Upper Boones Ferry Road	Hall Blvd.	Widen to 5 lanes.	$21,093,000	$31,222,793	2008-2017
10754	Tigard	Tigard	Walnut Street Extension	99W	Hunziker Road	Extend street east of 99W to connect to Hunziker Road. (PE Phase only)	$3,770,000	$5,580,521	2008-2017
10755	Tigard	Tigard	72nd Ave. Improvements	99W	Hunziker Road	Widen to 5 lanes with bikeways and sidewalks. Includes bridge replacement.	$50,964,000	$75,439,170	2008-2017

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10759	Tigard	Tigard	Dartmouth Street Improvements	72nd Ave.	68th Ave.	Widen to 4 lanes with turn lanes and sidewalks.	$4,412,000	$6,530,838	2008-2017
10760	Tigard	Tigard	Tigard Town Center Pedestrian Improvements	Tigard Town Center	Throughout TC area	Improve Sidewalks, lighting, crossings, bus shelters and benches throughout the Town Center including: Highway 99W, Hall Blvd, Main Street, Hunziker, Walnut and neighborhood streets.	$4,882,000	$9,890,036	2018-2025
10762	Tigard		Nimbus Ave. Extension	Nimbus Ave.	Greenburg Road	2 lane extension with sidewalks and bike lanes.	$4,680,000	$9,480,821	2018-2025
10763	Tigard		Washington Square Regional Center Greenbelt Shared Use Path	Hall Blvd.	Hwy. 217	Complete shared-use path construction.	$1,821,000	$2,695,525	2008-2017
10764	Tigard	Tigard	Durham Road Improvements	Hall Blvd.	99W	Widen to 5 lanes with bikeways and sidewalks.	$30,515,000	$61,817,791	2018-2025
10766	Tigard		Regional Trail Gap Closure	multiple sections on Fanno, Wash Sq Loop, and Westside Trails	Multiple sections on Fanno, Wash Sq Loop, and Westside Trails	Infill gaps in regional trail network. Affected trails include Fanno Creek, Washington Square Loop and Westside Trails.	$6,890,000	$10,198,883	2008-2017
10767	Tigard		72nd Ave. Intersection Improvements	Hwy 99W	Upper Boones Ferry	Southbound right turn lane, northbound right turn overlap at Hwy 99W and 72nd; Southbound or Eastbound right turn lane at 72nd/Hampton/Hunziker.	$2,000,000	$2,960,489	2008-2017
10768	Tigard	Tigard	Upper Boones Ferry Intersection Improvements	Durham Road	I-5	Reconfigure intersection of Durham & Upper Boones Ferry to create a through route between Durham & I-5/Carmen Interchange; 2nd Northbound Turn Lane at 72nd/Carmen; 72nd/Boones Ferry assuming Boones Ferry/72nd widened to 5 lanes; eastbound right turn lane at Carman/I-5 southbound.	$9,630,000	$14,254,752	2008-2017
10769	Tigard	Tigard	Greenburg Intersection Improvements	Hall	Tiedeman Ave	2nd Northbound turn lane, modify signal timing at Greenburg/Oleson/Hall; install boulevard treatment at Greenburg/Washington Square Road; improve geometry/alignment and extend cycle length at intersection of Greenburg/Tiedeman.	$9,512,000	$14,080,084	2008-2017
10770	Tigard	ODOT	Hwy. 99W Intersection Improvements	68th	Beef Bend Road	Provide increased capacity at priority intersections, including bus queue bypass lanes in some locations, improved sidewalks, priority pedestrian crossings, and an access management plan, while retaining existing 4/5-lane facility from I-5 to Durham Road.	$19,669,000	$29,114,925	2008-2017
10771	Forest Grove	TriMet	High Capacity Transit: Blue Line west : Hwy. 8 extension	Hillsboro	Forest Grove	The Cities of Forest Grove, Cornelius, Hillsboro, and Washington County have identified a need to extend the MAX system to Forest Grove. The proposed line would run from the end of the existing HCT system in Hillsboro to downtown Forest Grove.	$1,500,000	$2,220,366	2008-2017
10773	Forest Grove		Thatcher/Gales Creek	Thatcher	Gales Creek	Re-align Thatcher Road at its intersection with Gales Creek Road.	$3,600,000	$5,328,879	2008-2017

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10774	Forest Grove	Forest Grove	23rd/24th	Hawthorne	Quince	Construct collector level roadway between Hawthorne Ave. and Quince Street.	$15,000,000	$22,203,664	2008-2017
10775	Forest Grove	Forest Grove	E/Pacific/19th Intersection	E	Pacific	Extend 19th west and connect up to E and Pacific with a round-about.	$4,800,000	$7,105,173	2008-2017
10776	Forest Grove	Forest Grove	HWY 8/HWY 47 Intersection	HWY 8	HWY 47	Turn Lanes, modify traffic signal.	$3,300,000	$4,884,806	2008-2017
10778	Forest Grove	Forest Grove	Heather Industrial Connector	Mountain View	HWY 47	Extend westerly from existing terminus to connect to Hwy 47 and the City of Cornelius.	$5,800,000	$8,585,417	2008-2017
10779	Forest Grove	Forest Grove	Hwy 8/Pacific/19th	Cornelius City Limits	B	Retrofit the street with a boulevard design from Quince Street to B Street including wider sidewalks, curb extensions, safer street crossings, bus shelters and benches.	$12,100,000	$17,910,956	2008-2017
10781	Forest Grove	Forest Grove	West UGB Trail	Ritchey	David Hill	Multi-use trail.	$3,100,000	$4,588,757	2008-2017
10782	Forest Grove	Forest Grove	Thatcher / Willamina / B St Pedestrian and Bicycle Improvements	Gales Creek-David Hill /Gales Creek - Sunset / 26th-Willamina	Gales Creek-David Hill /Gales Creek - Sunset / 26th-Willamina	Bike lanes and sidewalks.	$5,600,000	$8,289,368	2008-2017
10784	Forest Grove	Forest Grove	David Hill Bicycle Pedestrian	Thatcher	Forest Gale Dr.	Multi-use trail.	$4,900,000	$7,253,197	2008-2017
10785	Cornelius	Cornelius	14th Ave	Dogwood	Holladay	Regulate OR8 traffic flow; widen local collector to improve Main Street/Industrial Area north/south connectivity.	$2,800,000	$4,144,684	2008-2017
10786	Cornelius		Susbauer Rd	TV Hwy	Zion Church Rd	Improve County Freight Connector route to urban standard w/in City (sidewalks & bike lanes); widen rural road with shoulder bike lane, reconstruct Dairy Creek Bridge to eliminate frequent road flooding.	$1,000,000	$1,480,244	2008-2017
10788	Cornelius	Cornelius	10th Ave	TV Hwy	Golf Course Rd	Improve to urban standard w/in City (sidewalks & bike lanes); widen rural road with shoulder bike lane, reconstruct Council Creek Bridge.	$700,000	$1,418,072	2018-2025
10795	Cornelius	Cornelius	Holladay St Extension	4th	Yew	Construct new collector.	$2,500,000	$5,064,541	2018-2025
10796	Cornelius	Cornelius	Holladay St Extension	10th	Gray	Construct new collector.	$1,300,000	$1,924,318	2008-2017
10797	Cornelius	Cornelius	Holladay St Extension	Gray	19th	Construct new collector.	$1,300,000	$2,633,561	2018-2025
10798	Cornelius	Cornelius	Davis St. Extension	4th Ave	10th Ave	Construct new collector.	$2,500,000	$5,064,541	2018-2025
10799	Cornelius	Cornelius	Davis St. Extension	19th Ave	29th Ave	Construct new collector.	$4,500,000	$9,116,174	2018-2025
10800	Cornelius	Cornelius	Dogwood St. Extension	E. City Limits	345th Ave.	Construct new collector.	$1,500,000	$2,220,366	2008-2017
10801	Cornelius	Cornelius	29th Ave.	TV Hwy	345th Ave.	Construct new collector.	$4,200,000	$6,217,026	2008-2017
10802	Cornelius	Cornelius	29th Ave	TV Hwy		Signalize intersection.	$600,000	$888,147	2008-2017
10803	Cornelius	Cornelius	TV Hwy	4th Ave	29th Ave	Interconnect OR 8 signal system in Cornelius.	$450,000	$666,110	2008-2017
10804	Cornelius	Cornelius	Collector Bike Lanes			Sign & stripe about 50 blocks of collectors.	$350,000	$518,085	2008-2017
10805	Cornelius	ODOT	TV Hwy Ped Infill			Build out sidewalk gaps on TV Hwy. in Cornelius.	$1,020,000	$1,509,849	2008-2017
10806	Cornelius		Council Creek Trail System	See Metro Trail Map	See Metro Trail Map	Build a bike/ped trail system along Council Creek in Cornelius.	$2,040,000	$3,019,698	2008-2017
10807	Cornelius	Cornelius	HCT Park & Ride	26th Ave	N/A	Build station area and park & ride facilities.	$850,000	$1,721,944	2018-2025
10808	Cornelius	Cornelius	HCT Park & Ride	10th Ave	N/A	Build station area and park & ride facilities.	$850,000	$1,721,944	2018-2025
10809	THPRD	THPRD	Bronson Creek Community Trail	Bronson Creek Park Cornell Rd. (THPRD)	Laidlaw Rd.	To design and construct a community trail segment in a greenway corridor, 8'-10' wide paved.	$3,500,000	$7,090,358	2018-2025
10810	THPRD	THPRD	Westside Trail (Regional)	Hwy 26	THPRD Nature Park	To design and construct a regional trail multi-use segment in a utility corridor, 10'-12' wide paved.	$4,000,000	$5,920,977	2008-2017

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10811	THPRD	THPRD	Beaverton Creek Trail (Regional)	SW 194th Ave.	Fanno Creek Trail	To design and construct a regional trail multi-use segment in a utility corridor, 10'-12' wide paved.	$7,000,000	$14,180,716	2018-2025
10813	THPRD	THPRD	Westside Trail (Regional)	Farmington Rd.	Scholls Ferry Rd.	To design and construct a regional trail multi-use segment in a utility corridor, 10'-12' wide paved.	$4,000,000	$5,920,977	2008-2017
10814	Hillsboro	Hillsboro	Evergreen Rd	25th Ave	Sewell Rd	Widen to 5 lanes with bike lanes and sidewalks.	$4,000,000	$5,920,977	2008-2017
10815	Hillsboro	Hillsboro	Cornell Rd Signal Coordination	185th	Cornelius Pass	Interconnect Traffic Signals (Extends County ATMS).	$1,000,000	$1,480,244	2008-2017
10816	Hillsboro	Hillsboro	TV Hwy. Signal Coordination	209th	10th Ave.	Interconnect traffic signals.	$2,350,000	$3,478,574	2008-2017
10818	Hillsboro	Hillsboro	231st Ave./Century Blvd	Baseline	Lois	Bridge and 3 lanes with bike lanes and sidewalks.	$26,248,000	$53,173,632	2018-2025
10819	Hillsboro	Hillsboro	231st Ave./Century Blvd	Baseline	Dogwood	Widen to 3 lanes with bike lanes and sidewalks.	$6,800,000	$10,065,661	2008-2017
10820	Hillsboro	Hillsboro	Brookwood (247th)	TV Hwy.	River Road	Widen to 3 lanes with bike/ped TV Hwy to Alexander, 2 lanes with onstreet parking and bike/ped Alexander to UGB.	$2,094,000	$3,099,632	2008-2017
10821	Hillsboro	Hillsboro	Huffman	Shute	West UGB (Sewell)	Build 3 lane with bike lanes and sidewalks.	$9,282,000	$13,739,627	2008-2017
10822	Hillsboro	Hillsboro	253rd	Evergreen	North UGB	Build 3 lane with bike lanes and sidewalks.	$6,162,000	$9,121,265	2008-2017
10823	Hillsboro	Hillsboro	Amberwood	206th	Cornelius Pass	Improve to 3 lane with bike lanes and sidewalks.	$2,312,000	$4,683,688	2018-2025
10824	Hillsboro	Hillsboro	Cornell Rd	Arrington	Main Street	Improve to 5 lane with bike lanes and sidewalks.	$9,248,000	$18,734,751	2018-2025
10827	Hillsboro	Hillsboro	Quatama Road	LRT	Cornelius Pass	Widen to 3 lane with bike lanes/sidewalks.	$1,800,000	$2,664,440	2008-2017
10828	Hillsboro	Hillsboro	Edgeway (Salix)	LRT	Walker Rd	Extend as 2/3 lane with bike/sidewalks.	$6,664,000	$13,500,041	2018-2025
10831	Hillsboro	Hillsboro	Century Blvd	Bennett	West Union Rd	Extend 2/3 lane with US 26 Overpass, connect existing segments.	$12,920,000	$26,173,549	2018-2025
10833	Hillsboro	Hillsboro	Grant Street Extension	28th	Brookwood	Extend 3 lane road with bike lanes/sidewalks.	$12,240,000	$24,795,994	2018-2025
10834	Hillsboro	Hillsboro	28th Ave.	Main	25th	Widen to 3 lanes with bike/sidewalks.	$4,352,000	$8,816,353	2018-2025
10835	Hillsboro	Hillsboro	185th Ave.	Cornell Rd	Walker Rd	Widen to 7 lanes.	$4,896,000	$9,918,398	2018-2025
10836	Hillsboro	Hillsboro	Evergreen Rd	Glencoe Rd	25th	Widen to 5 lanes with bike lanes and sidewalks.	$5,440,000	$16,312,946	2026-2035
10838	Hillsboro	Hillsboro	Davis Road	Brookwood	234th (Century)	Extend 3 lane road with bike lanes/sidewalks.	$4,474,000	$6,622,613	2008-2017
10839	Hillsboro	Hillsboro	Century Blvd (234th)	Alexander	South UGB	Extend 3 lane road with bike lanes/sidewalks.	$11,636,000	$17,224,122	2008-2017
10840	Hillsboro	Hillsboro	Regional Center Improvements	N/A	N/A	Miscellaneous Improvements to maintain capacity.	$10,470,000	$21,210,299	2018-2025
10841	Hillsboro	Hillsboro	Other Traffic Signals	N/A	N/A	Future Traffic Signals (Town Centers, 2040 Corridors).	$5,700,000	$8,437,392	2008-2017
10842	Hillsboro	Hillsboro	Other Collector Reconstruction	N/A	N/A	Miscellaneous locations.	$35,000,000	$70,903,578	2018-2025
10843	Hillsboro	Hillsboro	Intersection Improvements	N/A	N/A	Miscellaneous locations.	$25,000,000	$50,645,413	2018-2025
10846	Hillsboro	ODOT	TV Hwy.	185th	Brookwood	Expand to 7 lanes with bike/sidewalks.	$42,000,000	$125,945,539	2026-2035
10847	Hillsboro	Hillsboro	Regional Center Ped Improvements	N/A	N/A	Infill missing pedestrian sidewalks.	$4,550,000	$9,217,465	2018-2025
10848	Hillsboro	Hillsboro	Industrial/Town Center Ped Improvement	N/A	N/A	Infill missing pedestrian sidewalks.	$1,300,000	$2,633,561	2018-2025
10849	Hillsboro	Hillsboro	Regional Center- Bike Improvement	N/A	N/A	Infill missing bike lane connections.	$2,110,000	$4,274,473	2018-2025

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10850	Hillsboro	Hillsboro	Beaver Ck Trail, Bronson Ck Trail,			Construct bike/ped trail.	$1,000,000	$2,025,817	2018-2025
10851	Hillsboro	Hillsboro	Rock Ck Trail - Multi Use	River Road	Orchard Park (East of Cornelius Pass Rd)	Construct bike/ped trail.	$5,520,000	$11,182,507	2018-2025
10852	Wilsonville	ODOT	95th Ave/Boones Ferry Rd/Commerce Circle Intersection Improvements	95th Ave.	Southbound off-ramp I-5/Stafford Rd Interchange	Provide dual left-turn and right-turn lanes, improve signal synchronization, access management measures, fix sight-distance problems, and add extra lanes.	$2,500,000	$3,700,611	2008-2017
10853	Wilsonville	Wilsonville	Kinsman Rd Extension from Ridder Rd to Day St	Ridder Rd	Day St	Extend 3 lanes with sidewalks and bike lanes.	$6,500,000	$9,621,588	2008-2017
10854	Wilsonville		Tonquin Trail	Tualatin/Sherwood	Washington/Clackamas County line	Shared use path with some on-street portions.	$2,000,000	$2,960,489	2008-2017
10855	Metro		Regional TOD Implementation Program	2040 Centers, Stations Areas and Corridors	2041 Centers, Stations Areas and Corridors	Metro, the government of the Portland metropolitan region responsible for growth management, is implementing a highly integrated land use and transportation plan calling for substantial amounts of the region's growth to occur in medium- to high-density mixed-use, walkable urban "centers" linked by high quality transit service. TOD Program funding helps cause the construction of "transit villages" and other catalyst projects by the private sector. These projects mix of moderate- to high-intensity land uses, are physically or functionally connection to the transit system (including MAX light rail, Portland streetcar, commuter rail and high frequency bus), and create a walkable communities through design features that reinforce pedestrian relationships and scale.	$67,500,000	$146,357,193	2008 - 2035
10856	Gresham		Richey/Foster Connection	Intersection Richey/Foster		Construct roundabout and related improvements to Foster.	$656,452	$1,329,851	2018-2025
10857	Gresham	Gresham	Jenne/Foster	Intersection Jenne/Foster		Add second EB left turn lane. Requires widening of Jenne North.	$540,780	$1,095,521	2018-2025
10858	Gresham	Gresham	174th/Powell	Intersection of 174th/Powell		Improve intersection to 5 lane section.	$1,860,824	$3,769,688	2018-2025
10860	Gresham	Gresham	Collector 72 (Knapp)	172nd	182nd	Build new road to green street collector standards.	$10,703,002	$15,843,058	2008-2017
10861	Gresham	Gresham	Collector 72 (Knapp)	182nd	190th	Build new road to green street collector standards.	$10,368,393	$15,347,754	2008-2017
10862	Gresham	Gresham	Community Street 72	190th	Binford Parkway	Build new road to green street community standards.	$9,991,393	$14,789,702	2008-2017
10863	ODOT	ODOT	Convert Marine Dr. one-way southbound to two-way under I-84 and widen to five lanes.	Troutdale interchange (exit 17)		Convert Marine Drive one-way southbound to two-way under I-84 and widen to five lanes.	$20,400,000	$41,326,657	2018-2025
10864	ODOT	ODOT	New interchange on US 26 to serve industrial area.	US 26 and Callister Road	US 26 and 267th Ave.	New interchange on US 26 to serve industrial area.	$29,500,000	$59,761,587	2018-2025

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10865	ODOT	ODOT	New I-205 NB on-ramp at I-205/Airport Way interchange based on I-205/Airport Way Study	I-205 and Airport Way		New I-205 NB on-ramp at I-205/Airport Way interchange based on I-205/Airport Way Study.	$27,200,000	$40,262,645	2008-2017
10866	ODOT	ODOT	Improve I-5/Columbia River bridge (Oregon share)	Victory Blvd.	Washington state line	Improve I-5/Columbia River bridge (Oregon share).	$50,000,000	$74,012,214	2008-2017
10867	ODOT	ODOT	I-5: Conduct preliminary engineering and environmental work to modernize freeway and ramps to improve access to the Lloyd District and Rose Quarter	I-5 and I-84	I-5 and Greeley St.	Conduct preliminary engineering and environmental work to modernize freeway and ramps to improve access to the Lloyd District and Rose Quarter.	$30,000,000	$44,407,329	2008-2017
10869	ODOT	ODOT	Sunrise Project: Construct new highway facility from I-205 to 122nd and interim connection to 122nd Ave as defined by supplemental EIS	I-205	172nd Ave.	Construct improvements as defined by supplemental EIS.	$116,000,000	$171,708,337	2008-2017
10870	ODOT	ODOT	I-5/99W Connector Phase 1: Conduct study, complete environmental design work and NEPA for I-5 to OR-99W Connector and acquire ROW	OR 99W	I-5	Phase 1: Conduct study, complete environmental design work and NEPA for I-5 to OR-99W Connector and acquire ROW.	$100,500,000	$148,764,551	2008-2017
10871	ODOT	ODOT	Marine Dr. extension (Backage road), from I-84 EB off-ramp to 257th Dr.	I-84 EB off ramp	257th Dr.	Marine Drive extension (Backage road), from I-84 EB off-ramp to 257th Drive.	$8,200,000	$12,138,003	2008-2017
10872	ODOT	ODOT	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.	I-205	Stafford Road	Add lane to SB I-205 to SB I-5 interchange ramp and extend acceleration lane and add auxiliary lane on SB I-5 to Stafford Road.	$9,700,000	$14,358,370	2008-2017
10873	ODOT	ODOT	US 26W: Widen highway to 6 lanes	185th Ave.	Cornelius Pass Road	Widen highway to 6 lanes.	$36,119,034	$53,464,994	2008-2017
10874	ODOT	ODOT	I-5: Construct new roadway between Columbia Blvd and Denver Ave near Argyle Street; replace Denver Viaduct; Relocate/reconstruct and signalize Denver/Schmeer Rd intersection	Victory	Lombard	Construct new roadway between Columbia Blvd and Denver Ave near Argyle Street; replace Denver Viaduct; Relocate/reconstruct and signalize Denver/Schmeer Rd intersection.	$46,000,000	$68,091,237	2008-2017

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10875	ODOT	ODOT	OR 217: Braid OR 217 ramps between Beaverton-Hillsdale Hwy. and Allen Blvd. in both directions.	Beaverton-Hillsdale Hwy.	Allen Blvd.	Braid OR 217 ramps between Beaverton-Hillsdale Highway and Allen Boulevard in both directions.	$79,600,000	$117,827,445	2008-2017
10876	ODOT	ODOT	I-84: Extend Halsey exit lane to I-205 NB exit	Halsey exit	I-205 NB exit	I-84 Lane Extension: Halsey to I-205 NB ramp.	$6,446,790	$9,542,824	2008-2017
10884	ODOT	ODOT	I-5/I-84 Interchange: Acquire R-O-W	I-5 and I-84	I-5 and Greeley St.	Acquire right-of-way.	$30,000,000	$60,774,495	2018-2025
10890	ODOT	ODOT	Sunrise Project: Acquire right-of-way: I-205 to SE 172nd Ave	I-205	SE 172nd Ave	Acquire right-of-way: I-205 to SE 172nd Ave.	$129,000,000	$190,951,513	2008-2017
10894	ODOT	ODOT	Sunrise Hwy. PE: I-205 to SE 172nd Ave	I-205	SE 172nd Ave	Preliminary engineering and EIS from I-205 to 172nd.	$25,000,000	$37,006,107	2008-2017
10899	TriMet		Washington County Commuter Rail spare DMUs	N/A	N/A	1 powered and 2 trailer DMUs for spares and service reliability.	$9,000,000	$13,322,199	2008-2017
10901	TriMet		MAX light rail: South Corridor Ph 2: Portland to Milwaukie	N/A	N/A	Portland, N Macadam, OMSI, Brooklyn, Milwaukie, (Park Ave.).	$816,500,000	$1,208,619,459	2008-2017
10912	TriMet		Streetcar Extension: Portland to Lake Oswego via Willamette Shore	N/A	N/A	Portland to Lake Oswego extension of Portland Streetcar.	$250,000,000	$370,061,071	2008-2017
10916	TriMet		Bus Rapid Transit: SE McLoughlin to Oregon City and CCC	N/A	N/A	Milwaukie, Gladstone, Oregon City, CCC (possible predecessor to LRT).	$8,500,000	$12,582,076	2008-2017
10921	TriMet		MAX LRT on Steel Bridge: Capacity and operations improvements	N/A	N/A	Possible additional tracks, bridge rehabilitation, seismic upgrade.	$50,000,000	$74,012,214	2008-2017
10926	TriMet		Transit dispatch center upgrade	N/A	N/A	To accommodate increasing operating complexities.	$7,600,000	$11,249,857	2008-2017
10927	TriMet		MAX LRT: Operational upgrades	N/A	N/A	Sidings, powered turnouts, block and signal control infill.	$18,862,000	$40,897,620	2008 -2035
10928	TriMet		New MAX LRT vehicles	N/A	N/A	See below.	$49,000,000	$72,531,970	2008-2017
10929	TriMet		Frequent Bus: Line 76 - Beaverton / Tualatin	N/A	N/A	390 additional service hours upgrade and related bus stop and ROW improvements.	$3,075,000	$4,551,751	2008-2017
10930	TriMet		Frequent Bus: Line 31 - Milwaukie to Clackamas Regional Center	N/A	N/A	240 additional service hours upgrade and related bus stop and ROW improvements.	$1,100,000	$1,628,269	2008-2017
10931	TriMet		Frequent Bus: Line 31 - Clackamas Regional Center to 152nd	N/A	N/A	125 additional service hours upgrade and related bus stop and ROW improvements.	$1,100,000	$2,228,398	2018-2025
10933	TriMet		Frequent Bus: Line 9 - Powell Blvd. to I-205	N/A	N/A	80 additional service hours for span of service and related bus stop and ROW improvements.	$1,600,000	$2,368,391	2008-2017
10934	TriMet		Frequent Bus: Line 4 - Division to Gresham TC	N/A	N/A	50 additional service hours for span of service and related bus stop and ROW improvements.	$3,375,000	$4,995,824	2008-2017

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10935	TriMet		Frequent Bus: Line 8 - Jackson Park	N/A	N/A	25 additional service hours for span of service and related bus stop and ROW improvements.	$1,200,000	$1,776,293	2008-2017
10936	TriMet		Frequent Bus: Line 15 - Belmont	N/A	N/A	75 additional service hours for span of service and related bus stop and ROW improvements.	$2,600,000	$3,848,635	2008-2017
10937	TriMet		Frequent Bus: Line 54 - Beaverton Hillsdale Hwy. to Beaverton TC	N/A	N/A	225 additional service hours for FS extension and related bus stop and ROW improvements.	$2,450,000	$4,963,250	2018-2025
10938	TriMet		Frequent Bus: Line 33 - McLoughlin to Clackamas Community College	N/A	N/A	260 additional service hours for FS extension and related bus stop and ROW improvements.	$875,000	$1,772,589	2018-2025
10939	TriMet		Frequent Bus: Line 33 - McLoughlin to Oregon City	N/A	N/A	1601 additional service hours for span of service and related bus stop and ROW improvements.	$1,675,000	$3,393,243	2018-2025
10940	TriMet		Frequent Bus: Line 35 - Macadam Ave. to Oregon City	N/A	N/A	605 additional service hours upgrade and related bus stop and ROW improvements.	$3,600,000	$7,292,939	2018-2025
10941	TriMet		Frequent Bus: Line 12 - Barbur to Durham Road	N/A	N/A	60 additional service hours for span of service and related bus stop and ROW improvements.	$3,500,000	$7,090,358	2018-2025
10942	TriMet		Frequent Bus: Line 12 - Sandy to Parkrose TC	N/A	N/A	40 additional service hours for span of service and related bus stop and ROW improvements.	$4,175,000	$8,457,784	2018-2025
10943	TriMet		Frequent Bus: Line 12 - Barbur from Durham to Sherwood	N/A	N/A	140 additional service hours for FS extension and related bus stop and ROW improvements.	$1,050,000	$2,127,107	2018-2025
10944	TriMet		Frequent Bus: Line 79 - Clackamas Town Center to Oregon City via Webster Road	N/A	N/A	305 additional service hours for upgrade of service and related bus stop and ROW improvements.	$2,825,000	$5,722,932	2018-2025
10945	TriMet		Frequent Bus: Line 87 - 181st/182nd Ave., NE Sandy to SE Powell Blvds	N/A	N/A	380 additional service hours for upgrade of service and related bus stop and ROW improvements.	$2,025,000	$4,102,278	2018-2025
10979	City of Portland		Burnside/Couch Streetcar, East & West [NW 23rd to E 14th]	NW 23rd	E 14th	Construct streetcar from NW 23rd Avenue to E 14th Avenue.	$118,500,000	$175,408,948	2008-2017
10981	TriMet		Regional Bus: North Macadam / Line 35 realignment	N/A	N/A	Shift of Line 35 through this fast-growing area.	tbd	$0	2008-2017
10984	TriMet		Reconfiguration of Millikan Way Park & Ride	N/A	N/A	Reconfigure lot in response to lease expiration.	$2,000,000	$2,960,489	2008-2017
10990	TriMet		Park & Ride management strategy implementation	N/A	N/A	Convert major park & ride lots for shared use and/or pay lots.	$0	$0	2008-2035
10993	TriMet		Milwaukie bus layover facility	N/A	N/A	Modification to Milwaukie Park & Ride.	$627,000	$928,113	2008-2017
10995	TriMet		Rose Quarter Bike Improvements	N/A	N/A	Modify Rose Quarter to accommodate through bike traffic.	$250,000	$370,061	2008-2017
10997	TriMet		Willow Creek Transit Center	N/A	N/A	Reconstruct TC portion of MAX/bus facility for TOD opportunity (PCC).	tbd	$0	2008-2017
10998	TriMet		Bus replacements	N/A	N/A	40 buses.	$355,200,000	$770,164,072	2008-2035
10999	TriMet		Bus purchases for congestion	N/A	N/A	40 buses.	$0	$0	2008-2035

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11015	TriMet		Bus purchases for expansion	N/A	N/A	Allocate to individual routes, above.	$0	$0	2008-2035
11016	TriMet		LIFT vehicle replacement	N/A	N/A	36 buses.	$145,350,000	$315,155,822	2008-2035
11032	TriMet		Ruby Junction light rail operating base expansion	N/A	N/A	Stub yard expansion on west side of Eleven-Mile Ave. Cost is included as part of the Milwaukie light rail project cost estimate.	tbd	$0	2008-2017
11035	TriMet		Powell bus operating base expansion	N/A	N/A	Good deadhead site, land already available, shop annex and parking.	$11,637,609	$17,226,504	2008-2017
11036	TriMet		Merlo fuel / service house replacement	N/A	N/A	Over due replacement, creates new entrance.	$6,411,300	$9,490,290	2008-2017
11038	TriMet		Center Street bus operating base expansion	N/A	N/A	Phase 1 to include parking structure.	$10,386,000	$15,373,817	2008-2017
11042	TriMet		Bus priority treatment	N/A	N/A	Traffic signal priority treatments, jump lanes, etc.	$5,000,000	$10,841,274	2008 -2035
11043	TriMet		Pedestrian access improvements	N/A	N/A	Sidewalks, crosswalks and ADA improvements to transit access.	$5,000,000	$10,841,274	2008 -2035
11044	Metro		Regional Trail Master Plans	N/A	N/A	Develop trail master plans, working with local jurisdictions, trail advocate organizations, local residents, property owners, railroad companies, and businesses, for the following locations: Hillsboro to Council Creek & Gales Creek Trail, East Buttes Loop Trail Master Plan: Gresham and Happy Valley to Damascus; Springwater Corridor to Clackamas Bluffs and Greenway, Gateway to the Columbia Gorge Trail: Gresham/Fairview to Troutdale to Columbia Gorge Trail Connections, Portland South Waterfront to Lake Oswego to West Linn Trail, Columbia Slough Trail, Regional Trails Strategy and Master Plan for the Portland Metro Area (including relationship of regional trails to on-street bikeways and local trail system).	1,100,000	$1,628,269	2008-2017
11054	Metro		Regional Travel Options Program	Employment Areas, 2040 Centers, new corridor projects and congested corridors	Employment Areas, 2040 Centers, new corridor projects and congested corridors	RTO is the region's tool to manage congestion and reduce air pollution. RTO implements transportation demand management strategies such as employer outreach to encourage employers to subsidize and provide end-of-trip facilities to help employees choose options other than driving alone. RTO supports Transportation Management Associations and other public/private partnerships that reduce VMT. RTO also addresses non-commute trips through individualized marketing; helping residents try new travel options fro some or all of their trips. As the region's population and economy grows, the RTO program will gain efficiencies moving people and goods on built-out transportation infrastructure.	$ 74,250,000	$160,992,912	2008-2035
11071	ODOT	ODOT	I-5/Wilsonville Road Interchange: Phase 1	Hubbard cut-off	Wilsonville Road	Reconstruct NB and SB on ramps, and NB off ramp. Add NB auxiliary lane from Hubbard cut-off to Wilsonville Rd.	$ 18,500,000	$27,384,519	2008-2017

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11074	Gresham		East Buttes Loop Trail: From Springwater Trail to Rodlun Road	Springwater Trail	Rodlun Road	Construct new shared use trail (12' wide pervious asphalt)	$8,300,000	$12,286,028	2008-2017
11081	Lake Oswego		Boones Ferry Rd bike lanes	Country Club	North City Limits	Bike lanes	$ 5,710,000	$8,452,195	2008-2017
11082	Lake Oswego		Carman Dr. sidewalks & bike lanes	Meadows Rd	I-5	bike lanes	$ 760,000	$1,124,986	2008-2017
11083	Lake Oswego		Iron Mountain	10th St.	Bryant Rd.	bike lanes	$ 3,900,000	$5,772,953	2008-2017
11084	Lake Oswego		Pilkington Rd bike lanes/ sidewalk	Boones Ferry Rd	Childs Rd	park & ride relocation	$ 1,510,000	$2,235,169	2008-2017
11085	Lake Oswego		Kerr Parkway bike lanes	Stephenson	Boones Ferry Rd	bike lanes	$ 1,560,000	$2,309,181	2008-2017
11087	Lake Oswego		Bryant Rd bike lanes/pathway	Childs Rd	Boones Ferry Rd		$ 610,000	$902,949	2008-2017
11088	Oregon City	Clackamas Co.	Holly Lane	Redland Rd.	Holcomb Rd.		$ 21,000,000	$42,542,147	2018-2025
11089	Washington Co.	Washington Co.	92nd Ave. Ped.	Garden Home Blvd.	Allen Blvd.	Completes 3800 feet of sidewalk improvements to transit corridor	$3,922,000	$5,805,518	2008-2017
11090	Washington Co.	Washington Co.	10th Ave/Cornell Bike	Baseline Rd.	25th Ave.	Completes 5400 feet of bike lanes in transit corridor	$7,911,000	$11,710,213	2008-2017
11091	Portland/Port of Portland	Portland/Port of Portland	Columbia Blvd./I-205 Interchange: SB On-Ramp Improvement			Expand the on-ramp to three lanes, including for truck/HOV	$ 750,000	$1,110,183	2008-2017
11092	Port of Portland		Ramsey Rail Yard	Bonneville Yard	BNSF Ford Facility	Construct up to six yard tracks and one lead track	$ 13,900,000	$20,575,396	2008-2017
11093	Washington Co.	Washington Co.	Flashing Yellow Arrow Program (ITS)	Various locations in urban Washington Co.		Install flashing yellow arrow signal phase at more than 200 intersections	$1,326,000	$1,962,804	2008-2017
11094	Cornelius		Baseline Boulevard Improvement	10th	19th	Build sidewalks & other pedestrian amenities	$ 3,600,000	$5,328,879	2008-2017
11095	Cornelius		11th-17th Avenue	Baseline	Adair	Ped improvement of Main Street Dist local streets	$ 3,400,000	$5,032,831	2008-2017
11100	Gresham		East Buttes Loop Trail: From Rodlun Road to 190th	Rodlun	190th	Construct new shared use trail (12' wide pervious asphalt)	$2,800,000	$4,144,684	2008-2017
11102	City of Portland		Burnside/Couch Streetcar Extension to Hollywood via Sandy Blvd	E 14th	Hollywood District	Extend streetcar from E 14th Avenue to the Hollywood District.	$70,000,000	$103,617,100	2008-2017
11103	Metro		Regional Planning				$67,500,000	$146,357,193	2008-2035
11104	Metro		Regional ITS/TSMO				$40,500,000	$87,814,316	2008-2035
11105	SMART		Current Fixed Route and Dial-a-Ride Services			Continuation of 5 fixed routes with scheduled service and dial-a-ride service for seniors and people with disabilities	$ 228,700,000	$338,531,868	2008-2017
11106	SMART		Extension of transit service to connect with regional commuter rail			Expansion of transit service to coordinate and connect with the commuter rail service.	$ 33,750,000	$49,958,245	2008-2017
11107	SMART		Extension of transit service from Wilsonville to downtown Portland			Provide an intercity transit connection between Wilsonville and Portland.	$ 19,100,000	$28,272,666	2008-2017

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11108	SMART		Extension of transit service within Wilsonville			Extend transit service to connect newly-developed residential areas with other areas of Wilsonville and with multi-modal connections.	$ 24,550,000	$36,339,997	2008-2017
11109	SMART		Bus Replacements			Purchase buses to replace those that are no longer safe or reliable.	$ 13,100,000	$28,404,137	2008-2035
11110	SMART		Wilsonville Commuter Rail Station Park & Ride Improvements			Provide paved parking spaces at the Wilsonville commuter rail station.	$ 4,500,000	$6,661,099	2008-2017
11111	SMART		Wilsonville SMART Offices			Design and construct SMART offices near the Wilsonville commuter rail station	$ 2,000,000	$2,960,489	2008-2017
11112	SMART		Wilsonville SMART Fleet Services Facility			Design and construct a transit fleet services facility near the Wilsonville commuter rail station	$ 8,000,000	$11,841,954	2008-2017
11113	SMART		Transportation Management Association (TMA)			Form a transportation management association (TMA) to provide transportation services and information on alternatives to local employers and employees	$200,000	$405,163	2018-2025
11114	Portland		Foster & Woodstock, SE (87th - 101st): Streetscape	SE 87th	SE 101st	Implement Lents Town Center Business District Plan with new traffic signals, pedestrian amenities, wider sidewalks, pedestrian crossings, street lighting, increased on-street parking.	$2,151,724	$3,185,077	2008-2017
11115	TriMet		Merlo ATP Administration Building	N/A	N/A	Replaces lease space in CWS offices.	$1,048,537	$1,552,091	2008-2017
11118	Washington Co.		185th Ave. to Kinnaman Improvements	TV Hwy.	Kinnaman Rd.	Widen to 3 lanes with bike lanes and sidewalks.	$5,820,000	$8,615,022	2008-2017
11119	Washington Co.		Murray Blvd. to Cornell Improvement	Hwy. 26	Cornell Rd.	Widen to 5 lanes with bike lanes and sidewalks.	$4,770,000	$7,060,765	2008-2017
11120	Washington Co.		Bethany Blvd. to Bronson Improvements	West Union Rd.	Bronson Rd.	Widen to 5 lanes with bike lanes and sidewalks.	$14,328,000	$21,208,940	2008-2017
11121	ODOT	ODOT	I-5 Delta Park Phase 1	Victory	Lombard	Widen I-5 to 3 lanes and realign ramps.	$73,079,000	$108,174,772	2008-2017
11122	ODOT	ODOT	OR 217: Sunset Hwy to TV Hwy	US 26	OR 8	Widen OR 217 and structures.	$37,676,000	$55,769,684	2008-2017
11123	ODOT	ODOT	I-5 North Macadam	I-5 MP 298.93	I-5 MP 298.93	Construct flyover at I-5 NB off-ramp to North Macadam/South Waterfront area.	$28,416,000	$42,062,622	2008-2017
11124	ODOT	ODOT	US 26W Cornell to 185th	Cornell Rd	185th Ave.	Widen US 26 to 6 lanes from Cornell Rd. to 185th Ave.	$21,312,000	$31,546,966	2008-2017
11125	ODOT	ODOT	US 26E Springwater at grade intersection	N/A	N/A	Construct at-grade intersection connecting Springwater area to US 26.	$6,700,000	$9,917,637	2008-2017
11126	Milwaukie	Milwaukie	Milwaukie Town Center: Main/Harrison/21st	SE Scott and SE Main	SE Jackson and SE Main	Improvements include renovated block faces, two travel lanes, bike lanes, 15 foot sidewalks, planter strips, lighting, benches and ADA-compliant sidewalks.	$501,505	$742,350	2008-2017
							$9,171,688,674	############	

Appendix 1.2
2035 RTP Other Projects Not Included in the Financially Constrained System

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10006	Clackamas Co.	Clackamas Co.	Monterey Improvements	82nd Ave.	90th Ave.	Widen to three lanes from 82nd to I-205, add main street amenities.	$8,000,000	$9,733,223	2008-2017
10015	Clackamas Co.	Clackamas Co.	Causey Ave. Extension	Bob Schumacher Rd.	W.Otty Rd.	Construct new two lane extension.	$13,629,000	$16,581,762	2008-2017
10024	Clackamas Co.	ODOT	McLoughlin Blvd. Improvement	Milwaukie	Gladstone	Complete multi-modal improvements, such as boulevard treatment at intersections, and appropriate TSM strategies such as signal intertie.	$5,000,000	$6,083,265	2008-2017
10034	Happy Valley	Clackamas Co.	SE Sunnyside Rd. Widening	SE 172nd Ave.	Hwy. 212	Widen to five lanes in preferred/3 lanes in strategic. Sunnyside is identified as a potential high capacity transit route in the Damascus/Boring Concept Plan.	$11,709,084	$14,245,891	2008-2017
10054	Clackamas Co.	Clackamas Co.	Oatfield Rd.	Oatfield /Park Intersection		Signal, left turn lanes.	$1,358,150	$1,652,397	2008-2017
10055	Clackamas Co.	Clackamas Co.	Oatfield Rd.	Oatfield / Hill Intersection		Left turn lanes, signal if warranted.	$1,653,700	$2,011,979	2008-2017
10056	Clackamas Co.	Clackamas Co.	Oatfield Rd.	Oatfield/McNary Intersection		Add turn lanes.	$1,043,510	$1,269,589	2008-2017
10058	Clackamas Co.	Clackamas Co.	River Rd.	River Rd./Courtney intersection		Add turn lanes to four legs of the intersection.	$1,560,550	$1,898,648	2008-2017
10064	Clackamas Co.	Clackamas Co.	Webster Rd.	Webster/Jennings and Roots intersection		Construct traffic signals, turn lanes.	$3,722,090	$4,528,492	2008-2017
10068	North Clackamas PRD	Clackamas Co.	Clackamas Bluffs Trail	Mt. Talbert	Clackamas Greenway/Rock Creek	Build east/west trail in urban Clackamas County.	$3,400,000	$4,136,620	2008-2017
10085	Lake Oswego		Lake Oswego to Milwaukie Trail	Willamette Shoreline	Trolley Trail	Build trail linking Lake Oswego to Milwaukie.	$1,700,000	$2,068,310	2008-2017
10086	Lake Oswego		Turf to Surf Rail with Trail	downtown Lake Oswego	Tualatin River Trail	Build trail linking Tualatin and Lake Oswego.	$6,800,000	$8,273,240	2008-2017
10087	Lake Oswego		Willamette Shoreline Trail	Willamette Park, Portland	downtown Lake Oswego	Build trail connecting Lake Oswego and Portland.	$4,533,333	$5,515,493	2008-2017
10090	Metro	ODOT	Powell Blvd./Foster Rd. Corridor Study - Phase 2	I-205	Damascus	Conduct the next phase of a corridor study that develops multi-modal transportation strategies and specific roadway, bicycle, and pedestrian projects that provide access to Pleasant Valley, Damascus, and the urban growth boundary expansion areas.	$1,200,000	$1,459,983	2008-2017
10091	Metro		Hogan/242nd Corridor Plan	Palmquist Rd.	Hwy. 212	Develop traffic management plan in urban growth boundary. Damascus/Boring Concept plan identifies 242nd as a community bus route.	$1,000,000	$1,216,653	2008-2017
10093	Milwaukie		82nd Ave. Bridge Reconstruction	Gladstone	Oregon City	Reconstruct bridge that was previously burned out.	$700,000	$851,657	2008-2017
10098	Milwaukie		OR 99-E Blvd.	Kellogg Creek Bridge	River Rd.	Construct sidewalks and bike lanes, median strips, planter strips, and pedestrian scale lighting. Reconfigure or construct new signal for entrance to Riverfront Park.	$3,900,000	$4,744,946	2008-2017
10114	Clackamas Co.	ODOT	Sunrise Parkway	Rock Creek Junction	US 26	Preliminary engineering and EIS.	$6,000,000	$7,299,917	2008-2017
10115	Clackamas Co.	ODOT	Sunrise project ROW Preservation	I-205	Rock Creek Junction	Acquire right-of-way.	$100,000,000	$121,665,290	2008-2017
10116	ODOT		Hwy. 43 Bridge	Oregon City	West Linn	Historic preservation and restoration.	tbd	tbd	2008-2017

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10117	Clackamas Co.	ODOT	Sunrise Project	I-205	Rock Creek Junction	Conduct preliminary engineering and final design to construct a new limited access facility.	$25,000,000	$30,416,323	2008-2017
10120	Oregon City	Oregon City	Washington St. Improvements	Abernethy Rd.	Hwy. 213	Complete boulevard design improvements.	$5,000,000	$6,083,265	2008-2017
10123	Oregon City	Oregon City	Willamette River Shared-Use Path	10th St.	Blue Heron	Construct shared use path.	$2,000,000	$2,433,306	2008-2017
10139	Oregon City	ODOT	I-205 Climbing Lanes	Willamette River	West Linn	I-205 Abernethy Bridge Widening.	$20,000,000	$24,333,058	2008-2017
10142	Oregon City	ODOT	I-205/Hwy. 213 Interchange Phase 2	Redland Rd.	I-205	Complete interchange improvements.	$50,000,000	$60,832,645	2008-2017
10143	Oregon City	ODOT	Hwy. 213 Intersection Improvements	Abernethy Rd.	Redland Rd.	Intersection improvements.	$10,000,000	$12,166,529	2008-2017
10144	Oregon City	ODOT	SB 99E/I-205 Interchange Access	Dunes Dr.	I-205 SB Ramp Terminus	Dual left turn lanes on 99E approach to SB I-205 ramp, ramp widening to accommodate approach.	$3,000,000	$3,649,959	2008-2017
10145	Oregon City	ODOT	McLoughlin Blvd. Improvements - Phase 1	10th St.	I-205	Complete boulevard design improvements.	$6,000,000	$7,299,917	2008-2017
10152	Wilsonville	ODOT	Wilsonville Rd./I-5 Interchange Improvements - Auxiliary Lanes	N. of Interchange	S. of Interchange	Provide auxiliary lanes for enhanced safety and capacity.	$12,500,000	$15,208,161	2008-2017
10156	Wilsonville	Wilsonville	Boeckman Rd. at Boeckman Creek	Canyon Creek Rd. N	Arbor Homes	Widen Boeckman Road to 3 lanes with bike lanes, sidewalks and connections to regional trail system, remove culvert and install bridge.	$5,800,000	$7,056,587	2008-2017
10157	Clackamas Co.	Clackamas Co.	Carver (Springwater Rd.) Bridge	Hattan Rd.	Hwy 224	widen Carver bridge to 5 lanes, realign to Hattan Road.	$23,600,000	$28,713,008	2008-2017
10167	Portland		Central Eastside Bridgehead	SE Grand bridgehead		Improve pedestrian and bicycle access to bridge approaches.	$4,100,000	$4,988,277	2008-2017
10193	Portland		Division St., SE (Grand -60th): Multi-modal Improvements, Phase I	SE Grand	SE 60th	Construct improvements that enhance access to transit, improve safety and enhance streetscape such as traffic signals, alt lane and on-street parking configuration, stormwater mgmt, lighting, bus shelters, benches, and crossings. Add bike lanes (52nd - 60th).	$2,786,000	$3,389,595	2008-2017
10246	Portland		7th/8th Ave., SE: New Street Connection	SE 7th	SE 8th	Construct new street connection from SE 7th to 8th Ave. at Division Street.	$577,500	$702,617	2008-2017
10247	Portland		Corbett/Hood/Sheridan, SW: Pedestrian and Bike Improvements	SW Sheridan	SW Sheridan/I-5	Construct bike and pedestrian improvements under I-5 to the CTLH neighborhood at SW Sheridan St.	$150,000	$182,498	2008-2017
10248	Portland/ ODOT		South Waterfront District, SW: Bicycle and Pedestrian Improvements			Implement pedestrian and bicycle district access improvements identified in the North Macadam Framework Plan.	$2,316,500	$2,818,376	2008-2017

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10250	Portland		Burnside, W (NW 15th to NW 23rd): Blvd. Improvements	NW 15th	NW 23rd	Boulevard design improvements including pavement reconstruction, wider sidewalks, curb extensions, safer crossings, traffic signals at 20th Plan and 22nd, and traffic management to limit motorist delays.	$10,000,000	$12,166,529	2008-2017
10251	Portland		Bancroft St., SW (River Parkway - Macadam): Street Improvements	River Parkway	Macadam	Widen SW Bancroft in conformance with district street standards.	$1,000,000	$1,216,653	2008-2017
10253	Portland		Arthur, Gibbs & Lowell, SW (River Parkway - Moody): Street Improvements	River Parkway	SW Moody	Arthur, Gibbs, and Lowell are the primary connectors between Moody-Bond and River Parkway and will be constructed in phases as development occurs in North Macadam District.	$3,750,000	$4,562,448	2008-2017
10254	Portland		River Parkway, SW: New Street	SW (new St.)		New north-south local access street in the emerging North Macadam District. This street will have an enhance pedestrian environment and will be built to accommodate future streetcar. It will constructed in four phases beginning FY00/01.	$3,500,000	$4,258,285	2008-2017
10255	Portland/ ODOT		Macadam/Curry, SW: Intersection Improvements	Intersection Macadam/Curry	SW Macadam/Curry	Design and construct improvements to the Macadam/Curry intersection.	$1,000,000	$1,216,653	2008-2017
10256	Portland		Broadway/Weidler, NE (15th - 28th): Multi-modal Improvements, Phases II & III	NE 15th	NE 28th	Boulevard retrofit of street including street trees, traffic signals, curb extensions, and wider sidewalks (15th - 24th) and stripe bike lanes (24th-28th).	$6,456,450	$7,855,259	2008-2017
10259	ODOT/ Portland		Powell, SE (Ross Island Bridge - 92nd): Multi-modal Improvements	Ross Island Bridge	SE 50th	Retrofit existing street with multimodal and safety improvements including enhanced pedestrian and bicycle crossings, pedestrian and bike activated signals, median islands with trees, redesign of selected intersections and stormwater management facilities.	$5,700,000	$6,934,922	2008-2017
10261	Portland/ TriMet		Central City Streetcar Phase 3b, SW (Riverplace to Gibbs)	Riverplace	Gibbs	Extend streetcar from Riverplace to Gibbs, into the emerging South Waterfront District.	$20,000,000	$24,333,058	2008-2017
10263	Portland		Naito Parkway (Broadway Br - north of Terminal One): Street and Pedestrian Improvements	Broadway Bridge	North of Terminal One	Construct streetscape improvements include pedestrian amenities.	$3,250,000	$3,954,122	2008-2017
10269	Portland		Lombard/St. Louis/Ivanhoe: Multi-modal Improvements	Intersection N Lombard/St. Louis/Ivanhoe		Restripe, construct curb extensions, realign, and signalize as needed to improve pedestrian-bicyclist amenities while not impeding truck movements.	$1,400,000	$1,703,314	2008-2017

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10271	Portland		92nd Ave., SE (Powell - City Limits): Bicycle & Pedestrian Improvements	SE Powell	City Limits	Construct sidewalks, crossing improvements and bike lanes.	$3,500,000	$4,258,285	2008-2017
10274	Portland		Beaverton-Hillsdale /Bertha/Capitol Hwy, SW: Intersection Improvements	Intersection B-H Hwy/Bertha/Capitol Hwy	B-H Hwy/Bertha/Capitol Hwy	Redesign intersection to improve safety.	$1,000,000	$1,216,653	2008-2017
10281	Portland		Beaverton-Hillsdale Hwy, SW: ITS	SW Terwilliger	Shattuck	CCTV at Terwilliger, Berth, Shattuck; changeable signs.	$225,000	$273,747	2008-2017
10285	Portland/ODOT		Barbur Blvd, SW (Terwilliger - City Limits): Multi-modal Improvements	SW Terwilliger	City Limits	Complete boulevard design improvements including sidewalks and street trees, safe pedestrian crossings, enhance transit access and stop locations, traffic signal at Barbur/30th, and bike lanes (Bertha - City Limits).	$17,700,000	$21,534,756	2008-2017
10292	Portland		Belmont St., SE (25th - 43rd): Street and Pedestrian Improvements	SE 25th	SE 43rd	Identify improvements along Belmont to enhance pedestrian access to transit, improve safety, and enhance streetscape such as traffic signals, lighting, bus shelters, benches, and crossings.	$2,310,000	$2,810,468	2008-2017
10299	Portland		Lombard, N (I-5 - Denver): Street Improvements	I-5	N Denver	Establish a landscaped boulevard to promote pedestrian-oriented uses and to create a safe, pleasant pedestrian link over I-5 w/ new traffic light and road access to Fred Meyer development.	$1,214,000	$1,477,017	2008-2017
10306	Portland		Holgate Blvd., SE (39th - 52nd): Street Improvements	SE 39th	SE 52nd	Reconstruct SE Holgate pavement structure, stormwater drainage facilities, corner curb ramps to ADA standards, improve pedestrian crossings, and add bike lanes.	$797,000	$969,672	2008-2017
10315	Portland		39th Ave., NE/SE (Sandy - Woodstock): Safety & Pedestrian Improvements	NE Sandy Blvd	SE Woodstock	Reconstruct street (Burnside-Holgate). Construct sidewalks and crossing improvements (Stark - Schiller). Upgrade three pedestrian signals to full signals, remodel two full signals, and provide channelization improvements to three other signals to improve safety at high accident locations.	$2,200,000	$2,676,636	2008-2017
10320	Portland		Halsey, NE (39th - I-205): Bikeway	NE 39th	I-205	Retrofit bike lanes to existing street.	$115,000	$139,915	2008-2017
10322	Portland		Stark, SE (75th - I-205): Bikeway	SE 75th	I-205	Retrofit bike lanes to existing street.	$173,250	$210,785	2008-2017
10325	Portland		Glisan St., NE (47th - I-205): Bikeway	NE 47th	I-205	Retrofit bike lanes to existing street.	$57,750	$70,262	2008-2017
10327	Portland		Gateway District Plan, NE/SE: Traffic Management			Implement a comprehensive traffic management plan throughout the regional center to reduce cut-through traffic on residential streets and improve traffic flow on regional streets. Project includes utility improvements.	$1,386,000	$1,686,281	2008-2017

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10329	Portland		Marine Dr./122nd, NE: Intersection Improvements	NE Marine Dr/122nd		Signalize and widen dike to install left turn lane on Marine Drive.	$1,683,000	$2,047,627	2008-2017
10340	Portland		Cornfoot, NE (47th - Alderwood): Road Widening & Intersection Improvements	NE 47th	NE Alderwood	Road widening project including lighting and landscaping, left turn lanes, and bike lanes (47th - AirTrans Way). Signalize Cornfoot/AirTrans intersection and reconfigure traffic flow. Stripe bike lanes (AirTrans - Alderwood).	$2,000,000	$2,433,306	2008-2017
10342	Portland		Columbia Blvd, N/NE(I-205 - Burgard): ITS	I-205	N Burgard	Communications infrastructure including closed circuit TV cameras, variable message signs for remote monitoring and control of traffic flow for six signals.	$420,000	$510,994	2008-2017
10351	Portland		Wildwood Bridge at West Burnside	Wildwood Trail north of W Burnside	Wildwood Trail south of W Burnside	Provide pedestrian bridge over W Burnside instead on dangerous at-grade crossing.	$1,516,000	$1,844,446	2008-2017
10374	Port of Portland		Terminal 4 Second Access			Regrade hillslope to provide two-lane truck access.	$7,000,000	$8,516,570	2008-2017
10416	Gresham	Gresham	Hogan Corridor Improvements	Stark	Burnside	Interim capacity improvements and access controls.	$19,140,461	$23,287,297	2008-2017
10433	Gresham	Gresham	Division St. Improvements	Kelly	Burnside	Complete boulevard design improvements.	$10,331,749	$12,570,152	2008-2017
10435	ODOT		I-84 to US 26 Study	I-84	US 26	Study to id access management, freight, alignment.	$1,360,590	$1,655,366	2008-2017
10440	Gresham	Gresham	Division St. Bikeway	west city limits	Wallula	Retrofit street to add bikelanes, improve sidewalks.	$4,939,693	$6,009,892	2008-2017
10448	Gresham	Gresham	201st: Glisan to Halsey	Glisan	Halsey	Improve to collector standards.	$6,100,075	$7,421,674	2008-2017
10451	Gresham	Gresham	202nd: Burnside to Powell	Burnside	Powell	Upgrade to collector standards.	$10,174,125	$12,378,379	2008-2017
10452	Gresham	Gresham	202nd Projects: Stark to Glisan	Stark	Glisan	Improve to collector standards.	$8,028,609	$9,768,030	2008-2017
10457	Gresham	Gresham	223rd Ave. Improvements	Glisan	Stark	Improve sidewalks, lighting, crossings, bus shelters, benches.	$102,229	$124,377	2008-2017
10460	Gresham	Gresham	SE 174th N/S Improvements	Giese	174th/Jenne	Construction of new roadway that adds n/s capacity in vicinity of 174/Jenne.	$27,498,638	$33,456,298	2008-2017
10461	Gresham	Gresham	Towle Ave. Improvements	Butler	Eastman Parkway	Construct sidewalks, bike lanes and intersection improvements.	$3,302,775	$4,018,331	2008-2017
10489	ODOT	Gresham	US 26 Springwater Interchange			Construction of interchange linking US 26 and arterial to serve Springwater Community.	$5,000,000	$6,083,265	2008-2017
10492	Gresham	Gresham	162nd RR bridge@I-84	162nd/I-84	N/A	Reconstruct RR bridge to accommodate alternative modes.	$2,621,250	$3,189,151	2008-2017
10515	Gresham	Gresham	Riverside Dr. ext. to Sandy Blvd	190th	Sandy	Extend collector from 190th to Sandy to improve industrial access.	$10,975,110	$13,352,899	2008-2017
10517	Gresham	Gresham	Welch Rd., Anderson to 282nd	Anderson Rd.	282nd	Widen roadway and construct improvements.	$9,507,235	$11,567,005	2008-2017
10553	Washington Co.	Washington Co.	209th Improvements	T.V. Hwy.	Farmington Rd.	Widen and realign to three lanes with bike lanes and sidewalks.	$29,700,000	$36,134,591	2008-2017
10588	Washington Co.	Washington Co.	Grahams Ferry Rd Improvements	Helenius St.	Washington/Clackamas County line	Widen Grahams Ferry Rd to 3 lanes, add bike/pedestrian connections to regional trail system and fix undersized railroad overcrossing.	$28,000,000	$34,066,281	2008-2017
10609	Washington Co.	Washington Co.	Science Park Dr. Bike	Murray Blvd.	Cornell Rd.	Complete 3600 feet of bike lanes in town center.	$2,124,000	$2,584,171	2008-2017

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10675	Sherwood		Adams Ave Signal & Interconnect on T-S Rd.	T-S Rd.	at Adams	Install traffic signal at Adams Ave. and interconnect the signals along T-S road between Cipole and Borchers.	$1,875,000	$2,281,224	2008-2017
10676	Sherwood	Sherwood	Adams Ave Phase 1	Oregon/Ash	T-S Rd.	Construct 3 lane road, landscaping and multi-use path.	$8,012,000	$9,747,823	2008-2017
10678	Sherwood	Sherwood	Century Dr.	Adams Ave	T-S Rd.	Construct 3 lane road and sidewalks.	$5,170,000	$6,290,096	2008-2017
10684	Sherwood	Sherwood	Cedar Brook Way	99W	99W	Construction of 2 lane road.	$2,640,000	$3,211,964	2008-2017
10689	Sherwood	Sherwood	Cannery Arterials			Phase 2 of Downtown Streetscapes Master Plan.	$6,667,000	$8,111,425	2008-2017
10734	Tualatin	ODOT	I205 SB - I5 SB	I205	I5	Merge lane to I-5 south.		$0	2008-2017
10752	Tigard	Tigard	Bonita Road Improvements	Hall Blvd.	Bangy Road	Widen to 4 lanes.	$12,570,917	$15,294,443	2008-2017
10756	Tigard	Tigard	72nd Ave. Improvements	Hunziker Road	Bonita Road	Widen to 5 lanes with bikeways and sidewalks	$28,166,850	$34,269,280	2008-2017
10757	Tigard	Tigard	72nd Ave. Improvements	Bonita Road	Durham Road	Widen to 5 lanes with bikeways and sidewalks	$15,425,000	$18,766,871	2008-2017
10772	Forest Grove	Forest Grove	David Hill	HWY 47	Brook St.	Extend easterly from Thatcher Road to Sunset Drive (Highway 47) as a arterial facility with left-turn lanes at major intersections, traffic signal and turn lanes at Hwy47.	$10,500,000	$12,774,855	2008-2017
10777	Forest Grove	Forest Grove	Forest Grove-Cornelius Industrial Connector	Yew	Holladay	Construct east-west industrial collector from Yew Street to connect to Holladay in Cornelius.	$4,500,000	$5,474,938	2008-2017
10780	Forest Grove	Forest Grove	Hwy 47 Intersection Improvements	Elm	Maple	Add traffic signal.	$1,000,000	$1,216,653	2008-2017
10783	Forest Grove	Forest Grove	A Bicycle / Pedestrian	Pacific	HWY 47	Multi-use trail.	$1,000,000	$1,216,653	2008-2017
10787	Cornelius		10th Ave/Cornelius-Schefflin Rd	TV Hwy	Verboort Circle	Improve to urban standard w/in City (sidewalks & bike lanes); widen rural road with shoulder bike lane, reconstruct Council Creek Bridge.	$9,000,000	$10,949,876	2008-2017
10812	THPRD	THPRD	Fanno Creek Trail (Regional)	Greenwood Inn	Scholls Ferry Rd.	To design and construct a regional trail multi-use segment in a utility corridor, 10'-12' wide paved.	$1,700,000	$2,068,310	2008-2017
10825	Hillsboro	Hillsboro	Amberglen Parkway	Walker	206th	Extend 3 lane road with bike lanes/sidewalks.	$3,264,000	$3,971,155	2008-2017
10859	Gresham	Gresham	Pleasant View Dr., Powell Loop to Binford Parkway	Powell Loop	Binford Parkway	Widen roadway and construct curb and gutter, sidewalks, bike lanes and storm drainage.	$8,965,420	$10,907,804	2008-2017
10868	ODOT	ODOT	Grade separate southbound OR 213 at Washington Street and add a northbound lane to OR 213 from just south of Washington Street to the I-205 on-ramp.	Washington St.	I-205 on ramp	Convert existing OR 213 at Washington Street intersection to right-in/right-out only. Realign Clackamas River Drive under OR 213 to intersect with Washington St. New signalized intersection on Clackamas River Drive with OR 213 connector. New stop sign controlled intersection on Washington St at realigned Clackamas River Dr. Extend the bridge over the railroad by 100' to the south over realigned Clackamas River Dr.	*$16,000,000*	$19,466,446	2008-2017

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10877	ODOT	ODOT	Modernize freeway and ramps to improve access to the Lloyd District and Rose Quarter (Greeley ramp improvements in financially constrained system). I-84/I-5 interchange would include two phases (phase 1 is project #390, phase 2 is #427, and phase 3 is #4	I-84	I-405	Modernize freeway and ramps to improve access to the Lloyd District and Rose Quarter (Greeley ramp improvements in financially constrained system). I-84/I-5 interchange would include two phases (phase 1 is project #390, phase 2 is #427, and phase 3 is #4.	$521,000,000	$633,876,162	2008-2017
10878	ODOT	ODOT	I-5/99W Connector Phase 2: Minimum Operable Segment - construct minimal connection to I-5 and two lane arterial to Tonquin Road/124th extension	OR 99W	I-5	Phase 2: Minimum Operable Segment - construct minimal connection to I-5 and two lane arterial to Tonquin Road/124th extension.	$263,000,000	$319,979,713	2008-2017
10879	ODOT	ODOT	I-5/99W Connector Phase 3: Additions to Minimum Operable Segment - Extend two lanes to OR 99W and construct interchange	OR 99W	I-5	Phase 3: Additions to Minimum Operable Segment - Extend two lanes to OR 99W and construct interchange.	$148,000,000	$180,064,630	2008-2017
10880	ODOT	ODOT	I-5/99W Connector Phase 4: Additions to minimum operable segment - Improve I-5 interchange connections and add braids on I-5	OR 99W	I-5	Phase 4: Additions to minimum operable segment - Improve I-5 interchange connections and add braids on I-5.	$113,000,000	$137,481,778	2008-2017
10881	ODOT	ODOT	I-5/99W Connector Phase 5: Additions to minimum operable segment - Construct mid-point interchanges	OR 99W	I-5	Phase 5: Additions to minimum operable segment - Construct mid-point interchanges.	$56,500,000	$68,740,889	2008-2017

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10882	ODOT	ODOT	I-5/99W Connector Phase 6: Additions to minimum operable segment - Widen from two lanes to four lanes in corridor	OR 99W	I-5	Phase 6: Additions to minimum operable segment - Widen from two lanes to four lanes in corridor.	$56,500,000	$68,740,889	2008-2017
10883	ODOT	ODOT	I-5: Acquire right-of-way	Victory Blvd.	Columbia River	Acquire right-of-way.	$20,000,000	$24,333,058	2008-2017
10885	ODOT	ODOT	Sunrise Project Phase 2 Construction			Construct new highway facility and interchanges SE 122nd Ave with transition to 172nd.	$247,900,000	$301,608,255	2008-2017
10891	ODOT	ODOT	Sunrise Project Phase 2: Conduct preliminary engineering to construct new highway facility and interchanges.	122nd Ave.	172nd Ave.	Conduct preliminary engineering to construct new highway facility and interchanges.	$25,000,000	$30,416,323	2008-2017
10892	ODOT	ODOT	Sunrise Project: Acquire right-of-way for Phase 2: SE 122nd to 172nd	122nd Ave.	172nd Ave.	Acquire right-of-way for Phase 2: SE 122nd to Rock Creek Jct.	$74,000,000	$90,032,315	2008-2017
10893	ODOT	ODOT	Improve I-5/Columbia River bridge (Oregon share)	Victory Blvd.	Washington state line	Improve I-5/Columbia River bridge (Oregon share).	$550,000,000	$669,159,096	2008-2017
10896	TriMet	ODOT	Commuter Rail: Willamette Valley Corridor	N/A	N/A	Wilsonville, Donald, West Woodburn, St Louis, Hopmere, Salem.	$319,000,000	$388,112,276	2008-2017
10898	Amtrak	Amtrak	Amtrak Cascades Service	N/A	N/A	Amtrak Cascades service upgrade - Eugene to Vancouver.	############	############	2008-2017
10900	TriMet		Washington County Commuter Rail improvements	N/A	N/A	Beaverton to Wilsonville service upgrade (frequency and times of day). Will require capital improvements including DMUs.	$167,610,000	$203,923,193	2008-2017
10902	TriMet		MAX light rail: Yellow Line: CRC / I-5 North extension	N/A	N/A	CRC - Expo to Vancouver, north on Main to Lincoln.	$553,500,000	$673,417,381	2008-2017
10903	TriMet		MAX light rail: I-205 North Bi-State Corridor	N/A	N/A	Parkrose to Clark County and Vancouver Mall.	$759,000,000	$923,439,553	2008-2017
10905	TriMet		MAX light rail: Blue Line east : station upgrades	N/A	N/A	Refurbish older MAX station platforms along Banfield / Burnside.	$15,000,000	$18,249,794	2008-2017
10906	TriMet		High Capacity Transit: Green Line : I-205 South extension	N/A	N/A	Clackamas Town Center, Oregon City (extension option vs. McLoughlin).	############	############	2008-2017

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10907	TriMet		High Capacity Transit: Barbur / I-5 / 99W Corridor	N/A	N/A	Portland, Burlingame, Tigard, King City, Sherwood (possible OHSU connection).	###########	###########	2008-2017
10908	TriMet		High Capacity Transit: South Corridor : SE McLoughlin extension	N/A	N/A	Milwaukie, Gladstone, Oregon City.	tbd	#VALUE!	2008-2017
10913	TriMet		Bus Rapid Transit: Hwy. 26 - Powell / Foster	N/A	N/A	Powell Boulevard - Portland to Lents.	$6,300,000	$7,664,913	2008-2017
10920	TriMet		MAX LRT: Rose Quarter junction track and intersection improvements	N/A	N/A	Improve operations, possible grade separation, bike accommodation.	$25,000,000	$30,416,323	2008-2017
10951	TriMet		Regional Bus: Johnson Creek Blvd. - Tacoma Street MAX Station to Clackamas Regional Center	N/A	N/A	Cross-county route.	$408,000	$496,394	2008-2017
10952	TriMet		Regional Bus: SE Thiessen, Hill, Oak Grove Road - River Road to Clackamas Regional Center	N/A	N/A	Cross-county route.	$464,000	$564,527	2008-2017
10953	TriMet		Milwaukie local service	N/A	N/A	New local route in central Milwaukie (between Railroad Ave. / King Rd.).	$320,000	$389,329	2008-2017
10960	TriMet		Tigard Local Service	N/A	N/A	McDonald, Gaarde, 121st, Walnut, 135th, Washington Square (or Murray Road interline with #62).	$320,000	$389,329	2008-2017
10961	TriMet		Regional Bus: Cornelius Pass Road	N/A	N/A	Hillsboro Sports Complex to TV Highway.	$352,000	$428,262	2008-2017
10962	TriMet		Regional Bus: Brookwood Parkway	N/A	N/A	South Hillsboro, Brookwood Ave, Brookwood Pkwy, Shute Road.	$424,000	$515,861	2008-2017
10963	TriMet		Regional Bus: Line 67 extension on SW 170th	N/A	N/A	Full N/S route. Adds Merlo to Farmington. Reconcile w/ Line 88.	$192,000	$233,597	2008-2017
10972	TriMet		Troutdale employment circulator (connecting with routes 77 and 20)	N/A	N/A	Service to Reynolds on Sundial Road N. of Marine Dr. (new 400,000 sf FedEx facility on adjacent property).	$200,000	$243,331	2008-2017
10973	TriMet		Regional Bus: Sandy Blvd.	N/A	N/A	Service coverage on NE Sandy between 223rd and 238th including Wal-Mart (route reconfiguration).	$72,000	$87,599	2008-2017
10980	City of Portland		Streetcar Master Plan	N/A	N/A	Planning program for future Portland streetcar lines.	tbd	#VALUE!	2008-2017

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10982	TriMet		Regional Bus: Columbia South Shore service improvements	N/A	N/A	Route TBD.	$448,000	$545,061	2008-2017
10983	TriMet		Hayden Island circulator bus	N/A	N/A	Distributes trips to / from HCT station.	$80,000	$97,332	2008-2017
10987	TriMet		Gresham City Hall Park & Ride reconfiguration	N/A	N/A	Reconfigure / structure City Hall P&R for TOD opportunity.	tbd	#VALUE!	2008-2017
10988	TriMet		Pocket park & ride lots	N/A	N/A	50-space +/- lots in communities. 20 lots region-wide.	$20,000,000	$24,333,058	2008-2017
10989	TriMet		Rockwood park & ride lot	N/A	N/A	Redevelop site in conjunction with TOD opportunity.	tbd	#VALUE!	2008-2017
10991	TriMet		Gateway Phase 2 TOD development	N/A	N/A	Coordinate with development and garage expansion.	tbd	#VALUE!	2008-2017
10992	TriMet		Gateway Phase 3 TOD development	N/A	N/A	Reconfigure bus TC function alongside P&R structure per master plan.	tbd	#VALUE!	2008-2017
10994	TriMet		Parkrose Park & Ride expansion	N/A	N/A	Possible structured parking.	$5,000,000	$6,083,265	2008-2017
10996	TriMet		Rose Quarter Transit Center reconstruction	N/A	N/A	Reconstruct TC to better suit circulation and redevelopment needs.	tbd	#VALUE!	2008-2017
11039	TriMet		Center Street bus operating base expansion	N/A	N/A	Phase 2 to include administrative offices.	$11,997,000	$14,596,185	2008-2017
11053	Port of Portland		I-205 SB/Airport Way Improvement	N/A	N/A	Add a SB right turn lane.	$5,555,000	$6,758,507	2008-2017
11055	Lake Oswego		Boones Ferry Rd widening	Kruse Way	Madrona St	Widen to 5 lanes, including bike lanes and adequate sidewalks.	$2,675,000	$3,254,547	2008-2017
11059	ODOT	ODOT	I-205 Corridor Refinement Planning: OR/WA state line to I-5	OR/WA state line	I-5	I-205 refinement planning.	$5,000,000	$6,083,265	2008-2017
11060	ODOT	ODOT	I-205/Airport Way Refinement Planning	Airport Way	Columbia Blvd	I-205/Airport Way refinement planning.	$1,400,000	$1,703,314	2008-2017
11061	ODOT	ODOT	I-84 to US 26 Corridor Refinement	I-84	US 26	I-84 to US 26 Corridor refinement.	$1,300,000	$1,581,649	2008-2017
11062	ODOT	ODOT	I-5 South Corridor Refinement Plan - Wilsonville to North Tigard	Wilsonville	North Tigard	I-5 South Corridor refinement plan - Wilsonville to North Tigard.	$3,000,000	$3,649,959	2008-2017
11063	ODOT	ODOT	North Tigard to I-405 Refinement Plan	North Tigard	I-405	North Tigard to I-405 refinement plan.	$4,000,000	$4,866,612	2008-2017

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11064	ODOT	ODOT	I-205 Widening: Stafford Road to Willamette River (two phases, not including Abernethy Bridge	Stafford Road	Willamette River	Widen I-205 by one lane in each direction from Willamette River to Stafford Road.	$74,900,000	$91,127,302	2008-2017
11065	ODOT	ODOT	I-205: Abernethy Bridge Widening (Willamette River crossing)	Willamette Dr.	McLoughlin Blvd	Widen Abernethy Bridge by one lane in each direction.	$106,400,000	$129,451,869	2008-2017
11066	ODOT	ODOT	I-205: Truck climbing lane	10th St.	Willamette River	Construct southbound truck climbing lane.	$56,800,000	$69,105,885	2008-2017
11067	ODOT	ODOT	I-205/OR 213 Interchange: Stage 1: Southbound flyover ramp to OR 213	OR 213 interchange		Construct southbound I-205 flyover ramp to OR 213.	$49,102,000	$59,740,091	2008-2017
11068	ODOT	ODOT	I-5 Auxiliary Lanes: Stafford Interchange to Wilsonville Road	Stafford Road	Wilsonville	Add auxiliary lane to I-5 southbound between Wilsonville Rd. and Elligsen Rd. Extend Boeckman Rd. overcrossing bridge on both ends.	$8,000,000	$9,733,223	2008-2017
11069	ODOT	ODOT	I-5/Wilsonville Road Interchange: Phase 2	Wilsonville Road	Hubbard cut off	Reconstruct southbound off-ramp and add southbound auxiliary lane from Wilsonville Rd. to Hubbard cut-off.	$13,300,000	$16,181,484	2008-2017
11070	ODOT	ODOT	I-205/OR 213 Interchange: Stage 5 - I-205 Improvements, OR 99E to Gladstone interchange	OR 99E	Gladstone interchange	Auxiliary lanes/braided ramp enhancements and freeway modifications needed to support I-205/OR 213 interchange improvements.	$200,800,000	$244,303,903	2008-2017
11072	ODOT	ODOT	I-205/OR 213 Interchange: Stage 3 - NB Washington grade separation segment	Washington St.	Washington St.	Build new northbound OR 213 ramp to I-205 starting at Redlands and merging into I-205 northbound. Grade separate new ramp over Washington. Rebuild Washington St. to five lanes with two traffic signals.	$26,000,000	$31,632,975	2008-2017
11073	ODOT	ODOT	I-205/OR 213 Interchange: Stage 6 - Redland Road Interchange	Abernethy Road	Abernethy Road	Construct interchange on OR 213 at Redland Rd. Widen OR 213 Bridge over Redland Rd. Lengthen Redland.	$72,000,000	$87,599,009	2008-2017
11075	Gresham		East Buttes Loop Trail (S) (Informally known as "Kelly Creek Trail"	East Buttes Loop Trail approx. 0.7 mile south of the	South of Kelley Creek approx. 2.2 miles then back to the	Construct 8' wide "soft surface" trail	$1,450,527	$1,764,788	2008-2017
11076	Metro		Westside Trail (Regional)	Springwater Trail	East Buttes Loop Trail	Connects Willamette River greenway / 40 mile loop to Westside trail system and Washington County communities, I.e. Bethany	$4,000,000	$4,866,612	2008-2017
11077	Metro		Westside Trail (Regional)	South side of Tualatin River	Bull mountain (Beef Bend Rd)	Connects Westside trail to Tonquin trail, includes a bike/ped bridge over the Tualatin River	$6,000,000	$7,299,917	2008-2017

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11078	North Clackamas PRD		River to River Trail	Willamette Greenway	Tualatin River Trail	Widen to 5 lanes, including bike lanes and adequate sidewalks	$8,774,473	$10,675,488	2008-2017
11079	North Clackamas PRD		Willamette Greenway Loop trail	Willamette Park, Portland	Tualatin River Trail	Provide Bike Lanes Both sides and add Ped pathway on east side.	$36,560,304	$44,481,200	2008-2017
11080	Lake Oswego		Boones Ferry Rd widening	Kruse Way	Madrona St	sidewalks & bikelanes on both sides	$15,681,767	$19,079,267	2008-2017
11086	Lake Oswego		Downtown LO transit center	East of State St			$7,781,227	$9,467,053	2008-2017
11096	Gresham	Gresham	Cleveland St. Reconstruction.	Burnside	Stark	Reconstructs street from Stark to Burnside.	$13,838,103	$16,836,168	2008-2017
11116	Portland		Garden Home Rd., SW (Capitol Hwy - Multnomah): Multi-modal Improvements	SW Capitol Hwy	SW Multnomah Blvd	Reconstruct road with drainage, bike lanes, sidewalks, and curbs.	$10,973,967	$13,351,509	2008-2017
11117	Portland		St. Helens Rd. (US 30), (in vicinity of NW Balboa) Connectivity Improvements	NW Balboa		Provide an alternative crossing of the BNSF Railroad to improve connectivity and safety between US 30 and the industrial properties served by NW Front Avenue in the Willbridge area of the NW Industrial District.	$16,474,000	$20,043,140	2008-2017
11101	Gresham		East Buttes Loop Trail: 190th west to Springwater Trail	190th	Springwater Trail	Construct new shared use trail (12' wide pervious asphalt)	$5,515,000	$6,709,841	2008-2017
10895	TriMet	ODOT	Commuter Rail: SW Corridor	N/A	N/A	Milwaukie, Lake Oswego, Tualatin, Sherwood, McMinnville.	$402,500,000	$696,999,770	2018-2025
10897	TriMet	ODOT	Commuter Rail: Northwest Corridor	N/A	N/A	Portland, Linnton, Sauvie Island, Scappoose, St Helens.	$337,500,000	$584,440,801	2018-2025
10910	TriMet		High Capacity Transit: Blue Line west : Hwy. 8 extension	N/A	N/A	Hillsboro, Cornelius, Forest Grove (extension).	$213,500,000	$369,712,922	2018-2025
10911	TriMet		High Capacity Transit: Blue Line east : NE 257th extension	N/A	N/A	Gresham, Mt Hood Community College, possibly Troutdale.	$252,000,000	$436,382,465	2018-2025
10914	TriMet		Bus Rapid Transit: Foster Road / Damascus	N/A	N/A	Extension of BRT from Lents to Damascus.	$8,400,000	$14,546,082	2018-2025
10915	TriMet		Bus Rapid Transit: Hwy. 224 / Sunnyside Road	N/A	N/A	Milwaukie, Clackamas Regional Center, Happy Valley, Damascus.	$9,900,000	$17,143,597	2018-2025
10922	TriMet		MAX LRT: Gateway junction restructuring	N/A	N/A	Track reconfiguration to provide direct N/S operations and eliminate single track section.	$70,000,000	$121,217,351	2018-2025
10932	TriMet		Frequent Bus: Line 31 - 152nd to Damascus	N/A	N/A	XXX additional service hours upgrade and related bus stop and ROW improvements.	$1,050,000	$1,818,260	2018-2025

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10946	TriMet		Frequent Bus: Line 52 - SW 185th Ave.	N/A	N/A	XXX additional service hours for upgrade of service and related bus stop and ROW improvements.	$2,725,000	$4,718,818	2018-2025
10947	TriMet		Frequent Bus: Line 62 - SW Murray Blvd.	N/A	N/A	XXX additional service hours for upgrade of service and related bus stop and ROW improvements.	$3,350,000	$5,801,116	2018-2025
10948	TriMet		Frequent Bus: Cornell Road / Evergreen Pkwy	N/A	N/A	XXX new service hrs for new service on Shute Road, Tanasbourne, Bethany, Cedar Mills, STC, St Vincents. Priority treatments. Further upgrade to BRT noted above.	$2,520,000	$4,363,825	2018-2025
10954	TriMet		West Linn Community service	N/A	N/A	New local route from Oregon City to Lake Oswego via Sunset and Rosemont. Possible Marylhurst University vs. South Shore return.	$320,000	$554,136	2018-2025
10955	TriMet		Regional Bus: SE 172nd - Foster to Sunnyside	N/A	N/A	Pleasant Valley to Happy Valley.	$144,000	$249,361	2018-2025
10956	TriMet		Regional Bus: SE 232nd / 242nd	N/A	N/A	Gresham TC to Damascus (predecessor to BRT proposed above).	$640,000	$1,108,273	2018-2025
10957	TriMet		Damascus Community Bus	N/A	N/A	3 local bus routes per Concept Plan, including central Damascus loop.	$320,000	$554,136	2018-2025
10959	TriMet		Regional Bus: Line 33 extension: Beavercreek Rd	N/A	N/A	From CCC on Beavercreek to Henrici Rd.	$120,000	$207,801	2018-2025
10967	TriMet		Amberglen Circulator based on Concept Plan outcome	N/A	N/A	Proposed streetcar / bus circulator in Amberglen / Tanasbourne area.	$200,000	$346,335	2018-2025
10968	TriMet		Regional Bus: North Bethany service extension	N/A	N/A	Extension of Line 52 through PCC back door to North Bethany center.	$200,000	$346,335	2018-2025
10969	TriMet		Regional Bus: Lake Oswego / Tualatin / Sherwood service	N/A	N/A	Restructuring of Line 36 for direct South Shore / Tualatin - Sherwood Rd. service.	$200,000	$346,335	2018-2025
10970	TriMet		Regional Bus: NE 148 / 162nd loop	N/A	N/A	Two-way loop service from Airport Way to SE Powell Blvd.	$848,000	$1,468,462	2018-2025
10971	TriMet		Regional Bus: Rockwood - Gresham TC	N/A	N/A	Via NE Glisan and Hogan Dr.	$480,000	$831,205	2018-2025
10974	TriMet		Pleasant Valley community bus	N/A	N/A	Local loop service on SE Geise, 190th, Cheldelin, 172nd.	$320,000	$554,136	2018-2025
10986	TriMet		Flavel Park & Ride reconfiguration	N/A	N/A	Reconfigure / structure Flavel P&R for TOD opportunity.	tbd	#VALUE!	2018-2025
11027	TriMet		LRV replacement - Type 1	N/A	N/A	26 LRVs.	tbd	#VALUE!	2018-2025
11033	TriMet		Ruby Junction light rail operating base expansion	N/A	N/A	Full loop yard and building on west side if Eleven-Mile Ave. Cost is included as part of the CRC light rail project cost estimate.	tbd	#VALUE!	2018-2025
11034	TriMet		3rd light rail operating base	N/A	N/A	To accommodate system expansion.	$116,250,000	$201,307,387	2018-2025
11037	TriMet		Merlo bus operating base expansion	N/A	N/A	Pave graveled property for bus parking expansion.	$1,000,901	$1,733,237	2018-2025

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11040	TriMet		Center Street bus operating base expansion	N/A	N/A	Phase 3 to include bus parking deck.	$20,382,000	$35,295,029	2018-2025
10985	TriMet		Sunset Park & Ride rework to match Peterkort redevelopment	N/A	N/A	Redesign to expand park & ride lot and integrate station with pending site development.	tbd	#VALUE!	2018-2025
10011	Clackamas Co.	Clackamas Co.	122nd/Hubbard/135th Improvement	Sunnyside Rd.	Hwy. 212	Add bike lanes and sidewalk - complete gap.	$1,100,000	$1,904,844	2018-2025
10017	Clackamas Co.	Clackamas Co.	Clackamas Regional Center Bike/Pedestrian Corridors	Clackamas Regional Center area		Provide bike and pedestrian connections in the Regional Center.	$5,775,000	$10,000,431	2018-2025
10030	Clackamas Co.	Clackamas Co.	Stafford Rd. Improvements	I-205	Boeckman Rd.	Reconstruct, widen and add turn lanes.	$28,759,562	$49,802,256	2018-2025
10036	Happy Valley	Clackamas Co.	145th Ave.	Clatsop St.	Monner Rd.	Widen to 3 lanes with sidewalks and bike lanes, add traffic signals.	$7,700,000	$13,333,909	2018-2025
10037	Clackamas Co.	Clackamas Co.	162nd Ave.	Hagen Rd.	Palermo Ave.	Widen to 3 lanes with sidewalks and bike lanes, add traffic signals.	$2,600,000	$4,502,359	2018-2025
10039	Clackamas Co.	Clackamas Co.	132nd Ave.	132nd/Hubbard Rd. intersection		Add traffic signal	$1,265,819	$2,191,989	2018-2025
10043	Clackamas Co.	Clackamas Co.	Borland Rd.	65th Ave.	Stafford Rd.	Widen to 4 lanes with left-turn lanes.	$25,141,861	$43,537,569	2018-2025
10045	Clackamas Co.	Clackamas Co.	Clatsop St.	132nd Ave.	162nd Ave.	Widen to 3 lanes with sidewalks and bike lanes, add traffic signals.	$7,800,000	$13,507,076	2018-2025
10046	Clackamas Co.	Clackamas Co.	Clatsop St. Extension East	162nd Ave.	172nd Ave.	Construct a new 3 lane roadway with traffic signals.	$2,050,000	$3,549,937	2018-2025
10063	Clackamas Co.	Clackamas Co.	Thiessen Rd.	Thiessen/Hill Intersection		Widen, add left turn lane on Thiessen Rd.	$1,248,210	$2,161,496	2018-2025
10065	Clackamas Co.	Clackamas Co.	Webster Rd.	Webster/Strawberry Ln. intersection		Traffic signal.	$1,102,850	$1,909,779	2018-2025
10094	Milwaukie	Milwaukie	Lake Rd. Improvements (Phase 2)	21st Ave.	Hwy. 224	Construct sidewalks, planter strips, medians, and bus stops. Add signal at Oatfield Road.	$8,000,000	$13,853,412	2018-2025
10111	Milwaukie		North Industrial Access Improvements (OR 99-E)	Moores St.	Milport Rd.	Add turn pockets and/or turn lanes. Reconfigure access points. Improve internal circulation to optimize access points.	$10,000,000	$17,316,764	2018-2025
10119	Oregon City	ODOT	Hwy. 213 - Phase 2	Redland Rd.	Beavercreek Rd.	Add through lane in both directions.	$25,000,000	$43,291,911	2018-2025
10122	Oregon City	Oregon City	Oregon City TMA Startup Program	Oregon City Regional Center		Implements a transportation management association program with employers.	n/a	#VALUE!	2018-2025
10136	Clackamas Co.	Clackamas Co.	Kellogg Creek (Oatfield Rd.) Bridge Replacement	Kellogg Creek	n/a	Construct two lane bridge with sidewalks and bike lanes.	$4,702,881	$8,143,868	2018-2025
10140	Oregon City	ODOT	Hwy. 213 - Phase 1	Clackamas Community College	Conway Dr.	Add one SB and NB through lane, bike lanes, and sidewalks.	$5,000,000	$8,658,382	2018-2025
10151	Oregon City	Oregon City	Trolley Trail Bridge	Portland Ave.	Oregon City Clackamas R. Trail	Regional trail would connect the proposed regional Trolley Trail to the Clackamas River Trail via an old railroad bridge spanning the Clackamas River.	$5,000,000	$8,658,382	2018-2025

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10179	Portland		Burnside/Sandy/12th, E: Intersection Improvements	Intersection E Burnside/Sandy/12th		Redesign intersection to improve safety for all modes of travel. Relocate north-south crosswalk on east side of NE/SE 12th to eliminate safety hazards.	$4,620,000	$8,000,345	2018-2025
10180	Portland		Sandy Blvd., NE (47th - 101st): Multi-modal Improvements, Phase II	NE 47th	NE 101st	Retrofit existing street with multi-modal street improvements including bike lanes, redesign of selected intersections to improve pedestrian crossings, streetscape, and safety improvements.	$4,620,000	$8,000,345	2018-2025
10183	Portland		Lents Pedestrian District, SE			Pedestrian facility improvements to key links accessing the Foster-Woodstock couplet.	$1,000,000	$1,731,676	2018-2025
10200	Portland		Killingsworth Pedestrian District, NE			Plan and develop improvements to the pedestrian environment including sidewalks, lighting, crossings, bus shelters and benches.	$1,000,000	$1,731,676	2018-2025
10205	Portland		Gateway Regional Center, Local and Collector Streets			High priority local and collector street and pedestrian improvements in the Gateway Regional Center.	$3,000,000	$5,195,029	2018-2025
10235	Portland/ ODOT		South Portland Improvements, SW	SW Naito Parkway	SW Barbur	Reconstruct Naito Pkwy as two-lane road w/bike lanes, sidewalks, left turn pockets, & on-street parking. Includes realignment/regrading at intersecting streets; removal of Barbur tunnel, Ross Is Br ramps, Arthur/Kelly viaduct & Grover ped bridge.	$28,293,000	$48,994,322	2018-2025
10238	Portland		Columbia Street, SW (Naito Parkway - 18th): Street Reconstruction	Naito Parkway	SW 18th	Rebuild street.	$1,000,000	$1,731,676	2018-2025
10239	Portland		11th/12th/Railroad Crossing, SE (West of Division): Intersection Improvements	Railroad Crossing	12th	Reconstruct intersection to upgrade traffic signalization and establish bike and ped routes.	$400,000	$692,671	2018-2025
10240	Portland		Belmont Ramp, SE (Eastside of Morrison Bridge): Ramp Reconstruction	SE Belmont Ramp at Morrison bridge		Reconstruct ramp to provide better access to the Central Eastside.	$1,500,000	$2,597,515	2018-2025
10249	Portland		South Waterfront Transit Improvements, SW			Implement transit improvements identified in the North Macadam Framework Plan, including central city transit hub and local bus service improvements.	$2,000,000	$3,463,353	2018-2025
10257	Portland		Grand/MLK Jr, SE/NE: CEID/Lloyd District Streetscape Improvements			Complete boulevard design improvements including street trees, tree grates, ornamental lighting, and curb extensions.	$3,465,000	$6,000,259	2018-2025

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10268	Portland		Hollywood Pedestrian District, NE: Multi-modal Improvements			Multi-modal street improvements including traffic signals, restriping, improved pedestrian crossings and connections to transit center.	$7,680,750	$13,300,574	2018-2025
10272	Portland		Capitol Hwy, SW (Vermont - Florida): Intersection Improvements	SW Vermont	SW Florida	Realign the Capitol/Vermont/30th intersection and provide sidewalks, bike lanes, and drainage improvements.	$450,000	$779,254	2018-2025
10273	Portland		Capitol Hwy, SW (Terwilliger - Sunset): Multi-modal Improvements	SW Terwilliger	SW Sunset	Construct sidewalks, crossing improvements for access to transit and bike improvements, and install left turn lane at the Capitol/Burlingame intersection.	$1,000,000	$1,731,676	2018-2025
10275	Portland		Vermont St., SW, (30th - Oleson): Bicycle and Pedestrian Improvements	SW 30th	SW Oleson	Retrofit bike lanes to existing street (45th - Oleson) and construct sidewalk (30th - Shattuck), and redesign intersection at 25th.	$6,600,000	$11,429,065	2018-2025
10276	Portland		30th Ave., SW (Vermont to B-H Hwy): Bicycle & Pedestrian Improvements	SW Vermont	B-H Hwy	Retrofit bike lanes to existing street, construct sidewalks, and improve pedestrian crossing at Beaverton-Hillsdale Hwy/30th.	$1,311,000	$2,270,228	2018-2025
10277	Portland		Bertha, SW (B-H Hwy - Barbur): Multi-modal Improvements	B-H Hwy	Barbur Blvd	Design and implement bike lanes on missing piece of Bertha Blvd (Vermont-B-H Hwy), construct walkway for pedestrian travel and access to schools (Barbur-B-H Hwy); and improve street to City standards (Vermont-Capitol).	$1,500,000	$2,597,515	2018-2025
10278	Portland		Hillsdale Pedestrian District, SW			Pedestrian improvements on town center streets including Capitol, Beaverton-Hillsdale Hwy, Bertha, and neighborhood streets. Provide a Bike Central facility.	$3,465,000	$6,000,259	2018-2025
10282	Portland/ ODOT		Barbur/Capitol/Huber/ Taylors Ferry, SW: Intersection Improvements	Intersection of Barbur/Capitol/Huber/ Taylors Ferry		Construct safety improvements, including traffic signals, at the intersection of Capitol Hwy, Taylors Ferry, Huber, and Barbur. Provide better sidewalks and crossings.	$1,000,000	$1,731,676	2018-2025
10283	Portland/ ODOT		Barbur Blvd, SW (3rd - Terwilliger): Multi-modal Improvements	SW 3rd	SW Terwilliger	Construct Improvements for transit, bikes and pedestrians. Transit improvements include preferential signals, pullouts, shelters, left turn lanes and sidewalks.	$4,700,000	$8,138,879	2018-2025
10284	Portland		Taylors Ferry, SW (Capitol Hwy - City Limits): Bicycle & Pedestrian Improvements	SW Capitol Hwy	City Limits	Provide bicycle lanes, including shoulder widening and drainage, and construct sidewalk for access to transit (40th - 60th).	$3,000,000	$5,195,029	2018-2025
10290	Portland		Division St., SE (I-205 - 174th): Multimodal Improvements, Phase II	I-205	SE 174th	Improve sidewalks, lighting, crossings, bus shelters & benches. Add bike lanes (148th - 162nd).	$4,070,500	$7,048,789	2018-2025

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10291	ODOT/ Portland		82nd Ave., SE (Schiller - City Limits), SE: Street Improvements	SE Schiller	City Limits	Expand into fully curbed, 4-lane, 60-foot wide roadway w/ continuous left-turn lane, sidewalks, street trees, storm drainage improvements, street lighting, & ROW acquisition.	$5,000,000	$8,658,382	2018-2025
10293	Portland		Fremont St., NE (42nd-52nd): Pedestrian and Safety Improvements	NE 42nd	NE 52nd	Construct streetscape and transportation improvements (42nd to 52nd).	$288,750	$500,022	2018-2025
10295	Portland		Milwaukie, SE (Yukon - Tacoma): Bicycle & Pedestrian Improvements	SE Yukon	SE Tacoma	Plan and develop streetscape and pedestrian/bike improvements.	$1,000,000	$1,731,676	2018-2025
10298	Portland		Tacoma, SE (Sellwood Bridge - 45th/Johnson Creek): ITS	Sellwood Bridge	SE 45th	Communications infrastructure; closed circuit TV cameras, variable message signs for remote monitoring and control of traffic flow for four signals.	$165,000	$285,727	2018-2025
10300	Portland		Prescott Station Area Street Improvements, N			Construct improvements to Prescott & Skidmore (Interstate-Maryland) & Maryland (Interstate-Prescott) to provide neighborhood focal point at LRT.	$3,400,000	$5,887,700	2018-2025
10302	Portland		MLK Jr, N (Columbia Blvd. - CEID): ITS	Columbia Blvd	CEID	CCTV at various locations & traffic monitoring stations at Clay and Burnside.	$705,000	$1,220,832	2018-2025
10303	Portland		Capitol Hwy, SW (West Portland Town Center - 49th): Pedestrian Improvements	West Portland Town Center	SW 49th	Complete curb extensions and medians recommended in the Capitol Hwy Plan.	$1,000,000	$1,731,676	2018-2025
10304	Portland		Klickitat/Siskiyou, NE (7th - Rocky Butte Rd.): Bikeway	NE 7th	Rocky Butte Rd.	Design & implement bike boulevard on Klickitat (7th-67th) and Siskiyou (67th-Rocky Butte) including traffic calming and intersection improvements.	$75,075	$130,006	2018-2025
10307	Portland		Holgate Blvd., SE (McLoughlin - 39th): Bikeway, Phase II	McLoughlin	SE 39th	Retrofit bike lanes to existing street.	$19,635	$34,001	2018-2025
10309	ODOT/ Portland		Macadam, SW (Bancroft - County line): Multi-modal Improvements	SW Bancroft	County Line	Complete bikeway connection in the N. Macadam corridor and improve pedestrian crossings (Bancroft, Boundary, Hamilton, Nebraska, and Nevada), and address circulation at west approach to Sellwood Bridge.	$2,530,000	$4,381,141	2018-2025
10310	Portland		Prescott, NE (47th - I-205): Pedestrian and Bicycle Improvements	NE 47th	I-205	Construct bike lanes, sidewalks, and crossing improvements for pedestrian and bike safety and to improve access to transit.	$1,000,000	$1,731,676	2018-2025
10311	Portland		Skidmore, N/NE, (Interstate - Cully): Bikeway	N Interstate	NE Cully	Design & implement bike boulevard including traffic calming techniques and intersection improvements.	$75,075	$130,006	2018-2025

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10312	Portland		Banfield LRT Stations, NE/SE: Pedestrian Improvements			Retrofit existing streets along eastside MAX and at intersecting streets to include better sidewalks and crossings, curb extensions, bus shelters, and benches at 82nd, 148th, and 162nd stations.	$2,250,000	$3,896,272	2018-2025
10313	Portland		Ventura Park Pedestrian District, NE/SE			Improve sidewalks, lighting, crossings, bus shelters & benches to improve ease of crossing and install curb extensions at transit stops.	$1,000,000	$1,731,676	2018-2025
10314	Portland		99th & 96th, NE/SE (Glisan-Market: Gateway Plan District Street Improvements, Phase II & III	NE Glisan	SE Market	Reconstruct primary local main street in Gateway Regional Center. Phase II - 99th (Glisan - Washington). Phase III - 96th (Washington to Market).	$3,500,000	$6,060,868	2018-2025
10321	Portland		Stark, SE (111th - City Limits): Bikeway	SE 111th	City Limits	Retrofit bike lanes to existing street (excluding 92nd - 111th).	$173,250	$300,013	2018-2025
10324	Portland		Glisan St., NE (106th - 122nd): Bikeway	NE 106th	NE 122nd	Retrofit bike lanes to existing street.	$57,750	$100,004	2018-2025
10326	Portland		Gateway Regional Center, NE/SE: Local Street Improvements, Phase II			High priority local street and pedestrian improvements in regional center.	$6,000,000	$10,390,059	2018-2025
10330	Portland		148th, NE (Marine Dr - Glisan): Bicycle & Pedestrian Improvements	NE Marine Dr	NE Glisan	Retrofit bike lanes to existing street (Marine Dr - I-84) and construct sidewalk and safety improvements including signal/ intersection improvements at 148th/Sandy (Airport Way-Glisan).	$1,831,000	$3,170,700	2018-2025
10332	Portland/ ODOT		Lombard, N/NE (MLK Jr - Philadelphia) (US 30): ITS	MLK Jr. Blvd	Philadelphia	Communications infrastructure including closed circuit TV camera, variable message signs for remote monitoring and control of traffic flow at the intersections with MLK Jr, Interstate, Greeley, Portsmouth, Philadelphia/Ivanhoe.	$480,000	$831,205	2018-2025
10337	Portland		33rd/Marine Dr., NE: Intersection Improvements	33rd/Marine Dr.		Signalize intersection for freight movement.	$250,000	$432,919	2018-2025
10338	Portland/ Port		Alderwood St., NE, (Alderwood Trail - Columbia Blvd.): Bikeway	Alderwood Trail	Columbia Blvd	Provide bike lanes. Project includes some shoulder widening.	$400,000	$692,671	2018-2025
10339	Portland		Columbia Blvd., N/NE (MLK Jr BL - Lombard): Bikeway	MLK Jr. Blvd	N Lombard	Retrofit bike lanes to existing street.	$109,725	$190,008	2018-2025
10346	Portland		Marine Dr, N/NE (Portland Rd. to 185th): ITS	N Portland Rd.	NE 185th	CCTV at N Portland Rd. Changeable message signs at Portland Rd, Vancouver and 185th.	$170,000	$294,385	2018-2025

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10348	Portland		Foster Rd., SE (102nd - Foster Pl): Pedestrian Improvements	SE102nd	SE Foster Pl	Construct walkway and crossing improvements to facilitate pedestrian travel and access to transit.	$1,000,000	$1,731,676	2018-2025
10349	Portland		174th & Jenne Rd. , SE (Foster - Powell): Multi-modal Improvements	SE Powell	SE Foster Rd.	Roadway improvements to increase safety and capacity to accommodate increased residential development. Widen roadway to 3 lanes and provide bike lanes, sidewalks to provide better transportation links in this vital north/south link.	$5,100,000	$8,831,550	2018-2025
10352	Portland		Sullivan's Gulch [I-84/Banfield] Trail	Vera Katz Eastbank Esplanade`	NE 122nd Ave.	Implement Sullivan's Gulch Trail Study (pending) in order to provide off-street trail next to I-5 that crosses under bridges over freeway.	$13,685,000	$23,697,992	2018-2025
10356	Portland		Willamette Greenway - St Johns segment [previous called Willamette Greenway Trail Extension']	Cathedral Park	Pier Park	Provide trail route from Willamette Greenway at Cathedral Park to future Columbia Slough Trail at St. Johns Landfill.		$0	2018-2025
10415	Multnomah Co.	Multnomah Co.	Phase 2 Seismic			Phase 2 seismic on Broadway, Morrison and Hawthorne Bridges.	$82,000,000	$141,997,469	2018-2025
10417	Gresham	Gresham	Hogan Corridor Improvements	Palmquist	Springwater Trail	Complete study and construct new principal arterial connection.	$7,507,673	$13,000,861	2018-2025
10422	Gresham	Gresham	Division St. Improvements	257th Ave.	268th Ave.	Improve to community street standards, including bikelanes.	$3,945,711	$6,832,695	2018-2025
10429	Gresham	Gresham	Powell Valley Imps.	Burnside	282nd. Ave.	Improve Powell Valley w. ped and bike facilities.	$14,645,408	$25,361,108	2018-2025
10432	Gresham	Gresham	Division St. Improvements	Birdsdale	Wallula	Complete boulevard design improvements.	$12,162,471	$21,061,465	2018-2025
10510	Gresham	Gresham	Hillyard, Palmblad to Anderson	Palmblad	Anderson	Widen roadway and construct curb and gutter, sidewalks, bike lanes, streetlights, storm drainage and intersection improvements.	$9,628,553	$16,673,538	2018-2025
10514	Gresham	Gresham	Powell: Burnside to Kane	Burnside	Kane	Construct to arterial standards, 4 travel lanes, center turn lane, bike lanes and pedestrian facilities.	$5,294,917	$9,169,083	2018-2025
10520	Gresham	Gresham	184th Ave., Wilkes to San Rafael	Wilkes	San Rafael	Construct new collector street.	$7,353,375	$12,733,666	2018-2025
10522	Gresham	Gresham	Burnside, Hogan to Powell	Hogan	Powell	Safety improvements and reconstruction.	$8,807,400	$15,251,567	2018-2025
10523	Gresham	Gresham	Chase Rd., Orient Dr. to 282nd	Orient	282nd	Widen road and construct improvements.	$2,494,006	$4,318,811	2018-2025
10524	Gresham	Gresham	Cleveland Ave., Glisan to Stark	Glisan	Stark	Construct new collector street.	$15,277,585	$26,455,834	2018-2025
10525	Gresham	Gresham	Clyde, Glisan to Stark	Glisan	Stark	Construct new collector street.	$16,277,585	$28,187,511	2018-2025
10526	Gresham	Gresham	Heiney St./14th, Pl View Dr. to 18th Court	Pl View/Binford	18th Court	Widen road and construct improvements.	$3,583,249	$6,205,028	2018-2025
10529	Gresham	Gresham	Salquist Rd. / Barnes Rd. to 282nd Ave.	Barnes Rd.	282nd Ave.	Widen road and construct improvements.	$5,528,671	$9,573,869	2018-2025

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10532	Gresham	Gresham	Williams Rd., Powell Valley to Div.	Powell Valley Rd.	Division St.	Widen road and construct improvements.	$7,202,147	$12,471,788	2018-2025
10544	Gresham	Gresham	Butler Rd. Bike and Ped Improvements	Towle	Regner	Construct bikelanes and sidewalks.	$5,705,413	$9,879,929	2018-2025
10548	Washington Co.	Washington Co.	174th Ave. Improvements	Bronson Rd.	Meadowgrass Ln.	Add turn lanes, bike lanes and sidewalks	$16,232,000	$28,108,572	2018-2025
10550	Washington Co.	Washington Co.	185th to Springville Improvement	West Union Rd.	Springville Rd.	Widen 185th Ave from two to five lanes with bike lanes and sidewalks.	$11,893,000	$20,594,828	2018-2025
10564	Washington Co.	Washington Co.	Kaiser to Springville Improvements	Springville Rd.	Bethany Blvd.	Widen from two to five lanes with bike lanes and sidewalks.	$9,674,000	$16,752,238	2018-2025
10565	Washington Co.	Washington Co.	Springville Rd. Improvements	185th Ave.	Portland CC Access	Widen from 3 to five lanes with bike lanes and sidewalks.	$8,575,000	$14,849,126	2018-2025
10566	Washington Co.	Washington Co.	Springville to Kaiser Rd. Improvements	Portland CC	Kaiser Rd.	Widen from two to three lanes with bike lanes and sidewalks.	$13,112,000	$22,705,742	2018-2025
10589	Washington Co.	Washington Co.	95th Ave. Extension	Barnes Rd.	Leahy Rd.	Extend two lane road with bike lanes and sidewalks.	$11,546,000	$19,993,936	2018-2025
10591	Washington Co.	Washington Co.	Glencoe Rd. Improvements	Evergreen Rd.	Jackson Ave.	Widen to three lanes with bike lanes and sidewalks.	$26,016,000	$45,051,294	2018-2025
10595	Washington Co.		Hall Blvd. Improvements	Scholls Ferry Rd.	Durham Rd.	Widen to five lanes with bike lanes and sidewalks.	$85,401,000	$147,886,900	2018-2025
10599	Washington Co.	ODOT	Hwy. 217/72nd Ave. Interchange Improvements	N/A	N/A	Complete interchange reconstruction with additional ramps and overcrossings.	$19,537,000	$33,831,763	2018-2025
10629	Beaverton	Beaverton	Hocken Ave. multimodal improvements	Tualatin Valley Hwy	Farmington Rd.	Widen existing street from 3 to 5 lanes, add bike lanes and sidewalks.	$1,600,000	$2,770,682	2018-2025
10637	Beaverton	Beaverton	Millikan Way safety, bicycle and pedestrian improvements and 4/5 lanes from Murray to 141st	Tualatin Valley Hwy	141st Ave.	Add bikelanes in gaps, vehicle and turn lanes as needed, and signals as warranted.	$17,100,000	$29,611,667	2018-2025
10683	Sherwood	Sherwood	Galbreath Dr	T-S Rd/Gerda Lane	Cipole Rd	Construction of 2 lane road.	$4,180,000	$7,238,408	2018-2025
10686	Sherwood	Sherwood	Smith Ave	Meinecke	Woodhaven Dr	Construction of 2 lane road.	$2,090,000	$3,619,204	2018-2025
10687	Sherwood	Sherwood	South Loop Rd.	99W	99W	Construction of 2 lane frontage road.	$3,410,000	$5,905,017	2018-2025
10696	Sherwood	Sherwood	Town Center Pedestrian Improvements			Pedestrian upgrades in town center: 12th St., Century, 99W cross streets, Main St, Washington, Langer, Baler, Borchers.	$1,590,600	$2,754,405	2018-2025
10697	Sherwood	Sherwood	2040 Corridor Pedestrian Improvements			Sherwood Blvd, Edy Rd, Oregon St pedestrian upgrades.	$3,026,000	$5,240,053	2018-2025
10706	Sherwood	ODOT	99W Pedestrian Improvements	UGB South	UGB North	Pedestrian upgrades.	$1,090,000	$1,887,527	2018-2025
10708	Washington County	Washington County	T-S Road	99W	Borchers Dr	Construct road to 5 lane collector standard.	$1,900,000	$3,290,185	2018-2025
10710	Tualatin	Tualatin	Cipole	Herman	N/A	Signalize intersection & realign railroad crossing.	$5,600,000	$9,697,388	2018-2025

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10711	Tualatin	Tualatin	Teton	Tualatin Rd	N/A	Signalize intersection.	$307,000	$531,625	2018-2025
10712	Tualatin	Tualatin	Boones Ferry	Martinazzi	Lower Boones Ferry	Reconstruction/widen from Martinazzi to Lower Boones Ferry Road.	$12,300,000	$21,299,620	2018-2025
10713	Tualatin	Tualatin	Leveton	130th	Cipole Rd	Extension.	$9,070,000	$15,706,305	2018-2025
10717	Tualatin	Tualatin	Cipole	ORE 99W	Tualatin-Sherwood	Reconstruct/widen to 3 lanes from 99W to Tualatin-Sherwood Road.	$13,000,000	$22,511,794	2018-2025
10719	Tualatin	Tualatin	Leveton Ind. Area	108th	118th	Widen Leveton Drive to 5 lanes, signalize the 108th/Leveton intersection, signalize 108th/Tualatin intersection.	$10,400,000	$18,009,435	2018-2025
10731	Tualatin	Tualatin	Lower Boones Ferry	Tualatin	Boones Ferry	Extension from Boones Ferry Rd to Tualatin Rd including a bridge over Tualatin River.	$33,600,000	$58,184,329	2018-2025
10732	Tualatin	Tualatin	Boones Ferry	Norwood	Day	Widen to 5 lanes from Norwood to Day Rd.	$40,050,000	$69,353,642	2018-2025
10758	Tigard	Tigard	Dartmouth Street Extension	Durham Road	Hunziker Road	3 lane extension; new Highway 217 overcrossing.	$58,690,500	$101,632,957	2018-2025
10761	Tigard		Hwy. 217 Overcrossing	Nimbus Dr.	"Northern Mall Area"	2 lane overcrossing with sidewalks and bike lanes.	$73,805,000	$127,806,380	2018-2025
10765	Tigard		Hall Blvd. Extension	Durham Road	Tualatin	Extend Hall Boulevard across Tualatin River.	$87,220,000	$151,036,820	2018-2025
10789	Cornelius	Cornelius	10th Ave	Davis	N/A.	Signalize intersection.	$300,000	$519,503	2018-2025
10790	Cornelius	Cornelius	10th Ave	Holladay	N/A.	Signalize intersection.	$300,000	$519,503	2018-2025
10791	Cornelius	Cornelius	10th Ave	Linden	N/A.	Signalize intersection.	$300,000	$519,503	2018-2025
10792	Cornelius	Cornelius	10th Ave	Dogwood	N/A.	Signalize intersection.	$300,000	$519,503	2018-2025
10793	Cornelius	Cornelius	19th Ave	Davis	N/A.	Signalize intersection.	$300,000	$519,503	2018-2025
10794	Cornelius	Cornelius	19th Ave	Holladay	N/A.	Signalize intersection.	$300,000	$519,503	2018-2025
10817	Hillsboro	Hillsboro	Aloclek	Amberwood	Cornelius Pass	Extend 3 lane road with bike lanes/sidewalks.	$4,012,000	$6,947,486	2018-2025
10826	Hillsboro	Hillsboro	Jackson School Road	Evergreen	Grant	Widen to 3 lane with bike lanes/sidewalks.	$7,022,000	$12,159,832	2018-2025
10832	Hillsboro	Hillsboro	Quatama Road	Cornelius Pass	227th/69th Ave	Widen and extend 2/3 lane with bike/sidewalks.	$1,800,000	$3,117,018	2018-2025
10844	Hillsboro	Hillsboro	Cornelius Pass Road	TV Hwy.	209th	Extend as a 3 lane with bike/sidewalks with rail grade separation.	$21,625,000	$37,447,503	2018-2025
11045	Washington County		Baseline @ 185th Improvement	185th Ave.	Baseline	Grade separate intersection.	$24,700,000	$42,772,408	2018-2025
11056	Tualatin	Tualatin	108th Ave.	Leveton Dr	Herman Rd	Widen 108th Ave from one travel lane in each direction to two travel lanes in each direction with a continuous left turn lane.	$5,600,000	$9,697,388	2018-2025
11097	Gresham	Gresham	Orient Dr. Imps.	South City Limits	East to 282nd Ave.	Upgrades to arterial 4 lane standards.	$9,000,000	$15,585,088	2018-2025
11098	Gresham	Gresham	Rockwood TC 181st LRT station, and Ped enhancements at Stark and other intersecting streets near LRT station			Improve sidewalks, lighting, crossings, bus shelters, benches.	$8,919,615	$15,445,887	2018-2025
11099	Gresham	Gresham	Barnes Rd., Powell Valley to City Limits: only Orient to south city limits	Orient	South City limit	Widen road and add improvements.	$7,135,229	$12,355,908	2018-2025
10010	Clackamas Co.	Clackamas Co.	Mather Rd. Improvements	97th Ave.	122 Ave.	Connect to Summers Lane extension and widen.	$9,643,926	$23,769,534	2026-2035

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10016	Clackamas Co.	Clackamas Co.	Fuller Rd. Extension	Otty Rd.	King Rd.	Construct new two lane extension.	$15,688,097	$38,666,697	2026-2035
10023	Clackamas Co.	Clackamas Co.	SE 82nd Dr. Improvements	Hwy 212	Gladstone PH2	Widen to five lanes.	$17,627,801	$43,447,515	2026-2035
10027	Clackamas Co.	Clackamas Co.	Rosemont Rd. Improvements	Stafford Rd.	Parker Rd/Sunset	Reconstruct and widen to three lanes; add turn lanes.	$17,095,309	$42,135,074	2026-2035
10028	Clackamas Co.	Clackamas Co.	Childs Rd Improvements	Stafford Rd	65th Ave.	Widen to three lanes including bike lanes and sidewalks.	$20,281,717	$49,988,663	2026-2035
10031	Clackamas Co.	Clackamas Co.	Carmen Dr. Improvements	I-5	Quarry	Reconstruct and widen to three lanes to include bike lanes.	$8,979,923	$22,132,956	2026-2035
10032	Clackamas Co.	Clackamas Co.	Bonita Rd. Improvements	SE Bangy Rd.	SE Carman Dr.	Reconstruct and widen to three lanes.	$2,774,008	$6,837,141	2026-2035
10035	Clackamas Co.	Clackamas Co.	Foster Rd. Improvements	Hwy 212	172nd Ave.	Widen to five lanes in preferred/3 lanes in strategic.	$38,715,854	$95,423,567	2026-2035
10044	Clackamas Co.	Clackamas Co.	Central Point Rd.	Partlow Rd.	Mulino Rd.	Widen 2/3 lanes smooth curves.	$36,334,635	$89,554,540	2026-2035
10049	Clackamas Co.	Clackamas Co.	Idleman/Johnson Creek Ext.	Altamont	Idleman Rd.	New 2 lane extension.	$6,452,421	$15,903,382	2026-2035
10050	Clackamas Co.	Clackamas Co.	Johnson Rd., Clackamas Rd., McKinley Rd.	Lake Rd.	Hwy 212	Reconstruct & widen (urban).	$15,239,735	$37,561,612	2026-2035
10051	Clackamas Co.	Clackamas Co.	Luther Rd. - Clatsop St.	82nd/Luther/Clatsop		Upgrade to collector standard and signalize 82nd Ave intersection.	$1,930,129	$4,757,219	2026-2035
10053	Clackamas Co.	Clackamas Co.	Monroe St.	Linwood Ave.	82nd	Improve to collector standard.	$5,900,402	$14,542,813	2026-2035
10059	Clackamas Co.	Clackamas Co.	Roots Rd./McKinley Rd.	Webster Rd.	Hwy 212	Bring to urban standards.	$10,426,862	$25,699,249	2026-2035
10060	Happy Valley	Clackamas Co.	SE 132nd Ave.	King Rd.	Clatsop Rd.	Widen to 3 lanes.	$3,047,500	$7,511,221	2026-2035
10061	Clackamas Co.	Clackamas Co.	SE 142nd Ave.	Sunnyside Rd.	Hwy 212	Widen to 3 lanes.	$10,374,007	$25,568,976	2026-2035
10062	Clackamas Co.	Clackamas Co.	SE 152nd Ave., Phase 2	Sunnyside Rd.	Hwy 212	Reconstruct & widen (urban).	$10,051,070	$24,773,028	2026-2035
10080	Happy Valley		Idleman Rd. Improvements	Johnson Creek Blvd.	Mt. Scott Blvd.	Reconstruct and widen to three lanes.	$9,250,000	$22,798,619	2026-2035
10084	Happy Valley		King Rd.	King Rd./145th Ave. intersection		Traffic signal, realign, turn lanes.	$1,150,000	$2,834,423	2026-2035
10097	Milwaukie	Milwaukie	Stanley N/S bike/ped route	Johnson Creek Blvd.	Railroad Ave.	Construct sidewalks and bike lanes. Key connection between Johnson Creek Boulevard, Harrison Street, and Harmony Road (Arterials).	$3,249,585	$8,009,303	2026-2035
10102	Milwaukie	Milwaukie	Linwood Ave. Pedestrian Improvements	Johnson Creek Blvd.	Harmony Rd.	Construct sidewalks and bike lanes. Key connection between Johnson Creek Boulevard, Harrison Street, and Harmony Road (Arterials).	$2,853,659	$7,033,458	2026-2035
10105	Milwaukie	ODOT	224 Grade Separation	224 & Harrison	224 & 37th	Preferred approach would be burial of 224, with at least one overcrossing (Harrison).	$100,000,000	$246,471,554	2026-2035
10106	Milwaukie		224 Thruway/Local Access Preservation	224 & Harrison	224 & 37th	Convert some intersections to R in/R out; add turn pockets.	$15,000,000	$36,970,733	2026-2035
10107	Milwaukie	Milwaukie	Harrison/UPRR grade separation	Hwy. 224	32nd Ave.	Grade separate UP mainline from principal E-W arterial.	$25,000,000	$61,617,889	2026-2035

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10108	Milwaukie	Milwaukie	Johnson Creek Blvd. Capacity & Signalization	32nd Ave.	42nd Ave.	Replace 3-way stops with signals, add turn pockets.	$1,500,000	$3,697,073	2026-2035
10112	Milwaukie		Ochoco Sidewalks	99-E	17th Ave.	Construct sidewalks, reconstruct bridge over Johnson Creek.	$4,700,000	$11,584,163	2026-2035
10121	Oregon City	Oregon City	Molalla Ave. Frequent Bus	Oregon City Transit Center	Clackamas Community College	Improve sidewalks, lighting, crossings, bus shelters and benches.	$1,000,000	$2,464,716	2026-2035
10184	Portland		Foster Rd., SE (Powell - 90th): Pedestrian/Bicycle/Safety Improvements	SE Powell	SE 90th	Improve sidewalks, lighting, crossings, bus shelters & benches on Foster and improve pedestrian crossing at Foster/82nd intersection to benefit pedestrian access to transit.	$3,850,000	$9,489,155	2026-2035
10188	Multnomah Co/ Portland		Scholls Ferry, SW (Humphrey - County line): Multimodal Improvements	SW Humphrey	County Line	Add bicycle and pedestrian facilities; intersection improvements at Patton.	$2,300,000	$5,668,846	2026-2035
10231			Union Station, NW: Facility Renovation			Renovate Union Station to meet seismic and functional requirements.	$30,000,000	$73,941,466	2026-2035
10236	Portland		Water Ave., SE (Caruthers - Division Pl): Street Extension Phase II	Caruthers	Division Pl	Provide new roadway connection with sidewalks, bike lanes, landscaping, access to Willamette Greenway, & reconstruction of existing roadway.	$288,750	$711,687	2026-2035
10237	Portland		Southern Triangle Circulation Improvements, SE	Powell (12th/Ross Island Bridge)	Hawthorne Bridge (railroad mainline)	Improve local street network and regional access routes in the area between the Powell/12th, Willamette River, railroad mainline and Hawthorne Bridge. Improve freeway access route from CEID to I-5 SB via the Ross Island Bridge.	$2,887,500	$7,116,866	2026-2035
10241	Portland		Clay/MLK Jr, SE: Intersection Improvements	Intersection of SE Clay/MLK		Geometric, signalization and channelization improvements to allow transit and general traffic access to westbound Clay street from southbound MLK.	$924,000	$2,277,397	2026-2035
10242	Portland		N. Interstate Ave. Ramp	N Interstate/Larrabee Bridge		Replacement of the existing N. Interstate to Larrabee flyover ramp with a new structure.	$14,677,225	$36,175,185	2026-2035
10243	Portland		12th, NE (Bridge at Lloyd Blvd): Seismic Retrofit	NE 12th/Lloyd Blvd Bridge		Seismic retrofit.	$415,800	$1,024,829	2026-2035
10244	Portland		Kittridge, NW (Bridge at Yeon): Seismic Retrofit	NW Kittridge/Yeon Bridge		Seismic retrofit.	$1,000,000	$2,464,716	2026-2035
10245	Portland		Steel Bridge, NE (East Ramps): Seismic Retrofit	Steel Bridge		Seismic retrofit.	$1,000,000	$2,464,716	2026-2035
10258	Portland		DivisionSt/9th, SE (7th - Center): Bikeway	SE 7th	SE Center	Retrofit bike lanes to existing street.	$19,635	$48,395	2026-2035
10260	Portland		Clay/2nd, SW: Pedestrian/Vehicle Signal	Intersection Clay/2nd		New signal installation.	$115,500	$284,675	2026-2035

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10262	Portland		14/16th Connections, NW	W Burnside	Yeon	Improve or create connections to W. Burnside, Yeon, and Vaughn and provide directional signage to route non-local traffic to 14th/16th couplet.	$200,000	$492,943	2026-2035
10264	Portland		Central City Traffic Management, N, NW, NE, SE, SW: Transportation System Management improvements			Implement Central City TSM improvements to arterials.	$2,310,000	$5,693,493	2026-2035
10265	Portland		18th/Jefferson St., SW: ITS	Intersection of 18th/Jefferson		Communications infrastructure including closed circuit TV cameras, variable message signs for remote monitoring and control of traffic flow at SW 18th/Jefferson intersection.	$80,000	$197,177	2026-2035
10266	Portland		14th/16th, NW/SW & 13th/14th, SE, (Glisan - Clay): ITS	SW Clay	NW Glisan	Six signals between Clay and Glisan including communications infrastructure; closed circuit TV cameras, variable message signs for remote monitoring and control of traffic flow.	$360,000	$887,298	2026-2035
10267	Portland		Going, N (Interstate - Basin): Bikeway	N Interstate	N Basin	Design & implement bike lanes.	$90,000	$221,824	2026-2035
10270	Portland		Ellis St, SE (92nd - Foster): Bikeway	SE 92nd	SE Foster	Retrofit bike lanes to existing street.	$462,000	$1,138,699	2026-2035
10279	Portland		Beaverton-Hillsdale Hwy, SW (Capitol Hwy - 65th): Multi-modal Improvements	SW Capitol Hwy	SW 65th	Retrofit existing street to include better sidewalks and crossings, bike lanes and other improvements to enhance access to transit. Install median refuge to improve pedestrian crossing at SW 62nd.	$2,541,000	$6,262,842	2026-2035
10280	Portland		Sunset Blvd., SW (Dosch - Capitol): Bicycle & Pedestrian Improvements	SW Dosch	SW Capitol Hwy	Construct bike lanes, sidewalks and crossing improvements.	$1,200,000	$2,957,659	2026-2035
10286	Portland/ODOT		Pedestrian Overpass near Markham School, SW			Construct pedestrian path and bridge over Barbur Blvd. and I-5 to connect SW Alfred and SW 52nd to the rear of Markham School.	$3,465,000	$8,540,239	2026-2035
10287	Portland		West Portland Town Center, SW: Pedestrian Improvements			Improve sidewalks, lighting, crossings, bus shelters & benches on Barbur, Capitol Hwy & neighborhood streets.	$5,000,000	$12,323,578	2026-2035
10288	Portland		Parkrose Connectivity Improvements, NE			Supplement access route for commercial properties in Parkrose by creating a loop road connection (102nd and 109th, NE, Killingsworth - Sandy; Killingsworth, NE, 109th - 102nd) serving truck access functions, pedestrian, and bike connections.	$1,000,000	$2,464,716	2026-2035

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10289	Portland		Division St., SE (60th - I-205): Multimodal Improvements, Phase II	SE 60th	I-205	Construct improvements that enhance access to transit, improve safety and enhance the streetscape such as traffic signals, lighting, bus shelters, benches, and crossings. Add bike lanes (60th - 73rd).	$2,000,000	$4,929,431	2026-2035
10294	Portland		Killingsworth, N (Denver to Greeley): Pedestrian Improvements	N Denver	N Greeley	Plan and develop streetscape and transportation improvements.	$1,320,000	$3,253,425	2026-2035
10296	Portland		Killingsworth Bridge, N (at I-5): Bridge Improvements	N Killingsworth/I-5 Bridge		Improvements to bridge to create a safe and pleasant crossing for pedestrians and bicyclists over I-5.	$2,700,000	$6,654,732	2026-2035
10297	Portland		Spokane & Umatilla, SE (7th - Tacoma Overcrossing): Bikeway	SE 7th	Tacoma Overcrossing	Implement bike boulevard improvements.	$250,000	$616,179	2026-2035
10301	Portland		Sandy Blvd., NE (82nd - Burnside): ITS	NE 82nd	E Burnside	CCTV at various locations; variable signs, changeable signs; monitoring stations.	$370,000	$911,945	2026-2035
10305	Portland		Holgate Blvd., SE (52nd - I-205): Bikeway, Phase I	SE 52nd	I-205	Retrofit bike lanes to existing street.	$30,000	$73,941	2026-2035
10308	Portland		Boones Ferry Rd., SW (Terwilliger - City Limits): Bikeway	SW Terwilliger	City Limits	Retrofit bike lanes to existing street.	$5,000,000	$12,323,578	2026-2035
10316	Portland/ODOT		Halsey, NE (Bridge at I-84): Seismic Retrofit	NE Halsey/I-84		Seismic retrofit bridge.	$92,400	$227,740	2026-2035
10317	Portland		Halsey/Weidler, NE (I-205 - 114th): Multi-modal Improvements	I-205	NE 114th	Implement Gateway Regional Center Plan boulevard design including new traffic signals, improved pedestrian facilities and crossings and street lighting.	$12,127,500	$29,890,838	2026-2035
10318	Portland		Glisan St, NE (I-205 - 106th): Gateway Plan District Multi-modal Improvements	I-205	NE 106th	Implement Gateway regional center plan with boulevard design retrofit, new traffic signals, bike facilities, improved pedestrian facilities and crossings, and street lighting.	$2,310,000	$5,693,493	2026-2035
10319	Portland		Stark & Washington, SE (92nd - 111th): Gateway Plan District Street Improvements	SE 92nd	SE 111th	Implement Gateway regional center plan with boulevard design retrofit including new traffic signals, improved pedestrian facilities and crossings, and street lighting.	$4,389,000	$10,817,637	2026-2035

Appendix 1.2
2035 RTP Other Projects Not Included in the Financially Constrained System

Metro Project ID	Nominating Agency	Facility Owner / Operator	Project/Program Name	Project Start Location (Identify starting point of project)	Project End Location (Identify terminus of project)	Description	Estimated Cost ($2007)	Estimated Cost (YOE$)	Time Period
10323	Portland		111th/112th Ave., SE (Market - Mt. Scott Blvd.): Bicycle & Pedestrian Improvements	SE Market	Mt. Scott Blvd	Retrofit bike lanes to existing street (Market - Mt. Scott Blvd.) and construct sidewalks (Holgate - Mt. Scott Blvd.).	$1,475,500	$3,636,688	2026-2035
10328	Portland		Gateway Regional Center, NE/SE: Local Street Improvements, Phase III			High priority local street and pedestrian improvements in regional center.	$6,000,000	$14,788,293	2026-2035
10331	Portland		Columbia Blvd, N (Bridge at Taft): Seismic Retrofit			Seismic retrofit of bridge.	$415,800	$1,024,829	2026-2035
10335	Portland/ ODOT		42nd Bridge, NE (at Lombard): Bridge Replacement	NE 42nd at Lombard		Replace 42nd bridge over Lombard to remove weight restriction.	$3,000,000	$7,394,147	2026-2035
10341	Portland		Columbia Blvd, N (Swift - Portland Rd. & Argyle Way - Albina): Pedestrian Improvements, Phase I & II	N Swift	N Argyle Way	Construct sidewalk and crossing improvements.	$3,003,000	$7,401,541	2026-2035
10344	Portland		Force/Broadacre/Victory, N: Bikeway	N Marine Dr.	N Whitaker	Signed bikeway connection to I-5 river crossing.	$20,000	$49,294	2026-2035
10347	Portland/ Gresham		Foster Rd., SE (162nd - Giese Rd.): Multi-modal Street Improvements	SE 162nd	SE Giese Rd.	Multimodal improvements based on PV Implementation Plan.	$1,800,000	$4,436,488	2026-2035
10350	Portland/ Clackamas Co.		Clatsop, SE (162nd - City Limits): Street Extension	SE 162nd	City Limits	Extend street east into PV based on PV Implementation Plan.	$3,870,000	$9,538,449	2026-2035
10383	Multnomah Co.		North/South Connector	I-84	US 26	Construct 5 lane arterial, widening N/S arterial to 5 lanes between Stark St and Glisan St, and construct new roadbed from Glisan St to I-84. Includes new traffic signals, direct connection to I-84, bicycle lanes and sidewalks. Requires corridor study before project can move forward. For modeling purposes, project was coded from I-84 to US 26.	$35,000,000	$86,265,044	2026-2035
10552	Washington Co.	Washington Co.	Cornell/Cornelius Pass Interchange	N/A	N/A	Grade separate Cornell at Cornelius Pass	$21,200,000	$52,251,970	2026-2035
10555	Washington Co.	Washington Co.	Baseline Rd. Improvements	185th Ave.	Brookwood Ave.	Widen roadway to 5 lanes with bike lanes and sidewalks.	$32,000,000	$78,870,897	2026-2035
10556	Washington Co.	Washington Co.	Tualatin-Sherwood/Boones Ferry Intersection	N/A	N/A	Grade separate Tualatin-Sherwood/Boones Ferry intersection	$25,000,000	$61,617,889	2026-2035
10557	Washington Co.	Washington Co.	Murray/TV Hwy. Intersection	Farmington Rd.	TV Hwy.	Grade separate the intersections of TV Hwy. and Farmington with Murray Blvd.	$25,000,000	$61,617,889	2026-2035
10562	Washington Co.	Washington Co.	Johnson St. Extension	West of 170th Ave.	170th Ave.	Construct two-lane extension to 170th Ave. with bike lanes and sidewalks.	$6,158,000	$15,177,718	2026-2035

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Metro Project ID	Nominating Agency	Facility Owner / Operator	Project/Program Name	Project Start Location (Identify starting point of project)	Project End Location (Identify terminus of project)	Description	Estimated Cost ($2007)	Estimated Cost (YOE$)	Time Period
10573	Washington Co.	Washington Co.	Barnes Rd. to Multnomah Co. Line Improvements	Leahy Rd.	Multnomah. Co. Line	Widen from two to three lanes with bike lanes and sidewalks.	$17,326,000	$42,703,662	2026-2035
10575	Washington Co.	Washington Co.	West Union to Cornelius Pass Improvements	Cornelius Pass Rd.	185th Ave.	Widen from two to five lanes with bike lanes and sidewalks.	$26,247,000	$64,691,389	2026-2035
10577	Washington Co.	Washington Co.	Scholls Ferry Improvements	Allen Blvd.	Beaverton-Hillsdale Hwy.	Widen roadway from two to three lanes with bike lanes and sidewalks	$22,587,000	$55,670,530	2026-2035
10580	Washington Co.	Washington Co.	Butner Rd. Improvements	Murray Blvd.	Cedar Hills Blvd.	Widen to 3 lanes with bike lanes and sidewalks.	$18,515,000	$45,634,208	2026-2035
10582	Washington Co.	Washington Co.	185th Ave. Improvements	T.V. Hwy.	Farmington Rd.	Widen to five lanes with bike lanes and sidewalks	$26,435,000	$65,154,755	2026-2035
10584	Washington Co.	Washington Co.	Alexander St. Improvements	170th Ave.	209th Ave.	Widen to three lanes with bike lanes and sidewalks.	$26,233,000	$64,656,883	2026-2035
10585	Washington Co.	Washington Co.	Johnson St. Improvements	185th Ave.	Cornelius Pass Rd.	Widen to three lanes with bike lanes and sidewalks.	$24,333,000	$59,973,923	2026-2035
10586	Washington Co.	Washington Co.	198th Ave. Improvements	T.V. Hwy.	Baseline Rd.	Widen to three lanes with bike lanes and sidewalks.	$24,194,000	$59,631,328	2026-2035
10593	Washington Co.	Washington Co.	Kinnaman Rd. Improvements	Farmington Rd.	209th Ave.	Widen to three lanes with bike lanes and sidewalks.	$24,793,000	$61,107,692	2026-2035
10594	Washington Co.	Washington Co.	Greenburg Rd. Improvements	Gomartin Ln.	Washington Square Dr.	Widen to five lanes with bike lanes and sidewalks.	$15,547,000	$38,318,933	2026-2035
10598	Washington Co.		I-5/99W Connector Related Arterial Improvements	I-5/99W corridor	N/A	Improve arterial roads to enhance the function of the I-5/99W Connector.	$50,000,000	$123,235,777	2026-2035
10623	Beaverton	Beaverton	Hall Blvd. multimodal street extension to Jenkins Rd.	Hall Blvd.	Jenkins Rd.	Construct new 4 lane street (2 lane boulevard design if all other Regional Center street connections are complete) with bike lanes and sidewalks.	$14,400,000	$35,491,904	2026-2035
10641	Washington Co.		102nd/103rd 2 lane multimodal connection	Western Ave.	Walker Rd.	Connect streets and construct bike lanes and sidewalks. Realign intersection at BH Hwy and Western.	$16,500,000	$40,667,806	2026-2035
10688	Sherwood	Sherwood	Villa Rd.	Park St	Stellar Dr	Construction of 2 lane road.	$5,010,700	$12,349,950	2026-2035
10698	Sherwood	Sherwood	Sunset Blvd.	Aldergrove	Eucalyptus	Reconstruct road to 3 lane arterial standards; address vertical crest sight distance issue near Pine St.	$8,316,000	$20,496,574	2026-2035
10700	Sherwood	Sherwood	Arrow Street	Adams Ave	Gerda Ln	Construct road to collector standards.	$8,190,000	$20,186,020	2026-2035
10707	Sherwood	ODOT	99W - Sherwood TC Bicycle/Ped Bridges	Sunset Blvd	Edy Rd	Ped/bike bridges over 99W at Sunset, Meinecke, Edy.	$13,300,000	$32,780,717	2026-2035
10723	Tualatin	Tualatin	ORE 99W	Cipole	River	Widen to 6 lanes from Cipole to the Tualatin River.	$14,400,000	$35,491,904	2026-2035

Appendix 1.2
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Metro Project ID	Nominating Agency	Facility Owner / Operator	Project/Program Name	Project Start Location (Identify starting point of project)	Project End Location (Identify terminus of project)	Description	Estimated Cost ($2007)	Estimated Cost (YOE$)	Time Period
10724	Tualatin	Tualatin	Tualatin	Herman	Boones Ferry	Widen to 5 lanes from Herman to Boones Ferry Road.	$11,300,000	$27,851,286	2026-2035
10726	Tualatin	Tualatin	Sagert	Martinazzi	65th	Widen to 5 lanes from Martinazzi to 65th, signalize 65th/Sagert intersection & sidewalks on overpass.	$40,000,000	$98,588,622	2026-2035
10727	Tualatin	Tualatin	90th	Tualatin	Tualatin-Sherwood	Widen to 5 lanes from 90th to Tualatin-Sherwood.	$36,250,000	$89,345,938	2026-2035
10743	Tualatin	Tualatin	99W	City Limits	City Limits	Install sidewalks from Cipole to Tualatin River.	$10,400,000	$25,633,042	2026-2035
10829	Hillsboro	Hillsboro	Wilkins Extension	206th	185th	Extend as 2/3 lane with bike/sidewalks.	$16,058,000	$39,578,402	2026-2035
10830	Hillsboro	Hillsboro	Johnson	Cornelius Pass	Century Blvd	Widen to 3 lanes with bike/sidewalks.	$8,134,000	$20,047,996	2026-2035
10837	Hillsboro	Hillsboro	Campus Court Extension	W. end Campus Ct	Ray Circle	Extend 3 lane road with bike lanes/sidewalks.	$3,270,000	$8,059,620	2026-2035
10845	Hillsboro	Hillsboro	Evergreen Rd	Glencoe Rd	Hornecker	Extend new 3-lane roadway with bike/sidewalks.	$12,512,000	$30,838,521	2026-2035
10904	TriMet		MAX light rail: Red Line extension into Amber Glen	N/A	N/A	Possible extension at Quatama north to Amber Glen and Tanasbourne, subject to further study.	tbd	#VALUE!	2026-2035
10909	TriMet		High Capacity Transit: Powell Blvd.: Hwy. 26 to Lents	N/A	N/A	Upgrade Powell Blvd BRT (early RTP) to LRT (later RTP).	$800,000,000	###########	2026-2035
10917	TriMet		Bus Rapid Transit: 232nd / 242nd (per Damascus Plan)	N/A	N/A	Gresham TC to Damascus (contiguous w/ Hwy 224/Sunnyside service).	$8,600,000	$21,196,554	2026-2035
10918	TriMet		Bus Rapid Transit: I-205 South	N/A	N/A	Clackamas RC, Oregon City, West Linn, Tualatin "beltline" service.	$6,200,000	$15,281,236	2026-2035
10919	TriMet		Bus Rapid Transit: Cornell Road / Evergreen Pkwy	N/A	N/A	Shute Road, Tanasbourne, Bethany, Cedar Mills, STC, St Vincents. Limited stop / priority treatments. (Shown as near-term Frequent Service.).	$6,500,000	$16,020,651	2026-2035
10925	TriMet		MAX LRT: 3rd light rail transit operating base	N/A	N/A	Require to meet system expansion.	tbd	#VALUE!	2026-2035
10949	TriMet		Frequent Bus: Line 87 - 181st / 182nd Ave. Extension to Pleasant Valley via 190th	N/A	N/A	XXX additional service hours for FS extension and related bus stop and ROW improvements.	$720,000	$1,774,595	2026-2035
10958	TriMet		Oregon City Regional Center circulator	N/A	N/A	Local bus / streetcar service in the core with HCT connection.	$200,000	$492,943	2026-2035
10964	TriMet		Hillsboro Regional Center Circulator	N/A	N/A	Local bus / streetcar service in the core with HCT connection.	$200,000	$492,943	2026-2035
10965	TriMet		Beaverton Regional Center Circulator	N/A	N/A	Local bus / streetcar service in the core with HCT connection.	$200,000	$492,943	2026-2035
10966	TriMet		Washington Square Regional Center Circulator	N/A	N/A	Local bus / streetcar service in the core with HCT connection.	$200,000	$492,943	2026-2035
10975	TriMet		Gateway Regional Center Circulator	N/A	N/A	Local bus / streetcar service in the core with HCT connection.	$200,000	$492,943	2026-2035
10976	TriMet		Gresham Regional Center circulator	N/A	N/A	Local bus / streetcar service in the core with HCT connection.	$200,000	$492,943	2026-2035
11028	TriMet		LRV replacement - Type 2	N/A	N/A	46 LRVs.	tbd	tbd	2026-2035

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11029	TriMet		LRV replacement - Type 2	N/A	N/A	6 LRVs.	tbd	tbd	2026-2035
11030	TriMet		LRV replacement - Type 3	N/A	N/A	27 LRVs.	tbd	tbd	2026-2035
11031	TriMet		LRT expansion	N/A	N/A	Allocate to individual extensions, above.	tbd	tbd	2026-2035
11041	TriMet		4th bus base	N/A	N/A	Land acquisition and construction of a 4th bus base.	$77,400,000	$190,768,983	2026-2035
11057	ODOT	ODOT	I-84/US 26 Connector R-O-W Preservation	I-84	US 26	Obtain right-of-way.	$20,700,000	$51,019,612	2026-2035
11058	ODOT	ODOT	Construct Hogan Corridor Improvements	I-84	US 26	Construct new freeway to highway connection.	$11,200,000	$27,604,814	2026-2035
10923	TriMet		MAX LRT: Downtown Portland speed and capacity improvements	N/A	N/A	Train speed and station spacing study, signal upgrades.	$5,000,000	$9,021,741	on-going
10950	TriMet		Frequent Service evening extensions	N/A	N/A	Brings FS to a consistent daily coverage of 6 am to 10 pm.	tbd	tbd	on-going

2035 Regional Transportation Plan (RTP) Update

Appendix 1.3

System Performance Measures for Intra-UGB Trips (within Metro UGB, excludes Clark County, Washington)

1/10/08

(Numbers subject to change due to model refinment)

		2005	2035 No Build	2035 Investment Pool With Toll	2035 FinCon With Toll
Demographic Data					
1	Population	1,365,564	2,001,128	2,001,128	2,001,128
2	Households	565,988	830,066	830,066	830,066
3	Employment	869,582	1,434,165	1,434,165	1,434,165
Network Data					
1 a	Total Miles in Network	3,210	3,226	3,384	3,356
1 b	Freeway Miles	201	201	204	229
1 c	Arterial Miles	3,009	3,025	3,180	3,127
1 d	HOV Miles	3.4	3.4	3.4	3.4
2 a	Total Lane Miles	4,832	4,888	5,427	5,291
2 b	Freeway Lane Miles	539	550	580	624
2 c	Arterial Lane Miles	4,293	4,339	4,847	4,667
3 a	Total Roadway Capacity-Miles	4,410,187	4,465,562	4,966,707	4,880,187
3 b	Freeway Capacity Miles	1,058,214	1,082,115	1,137,376	1,224,264
3 c	Arterial Capacity Miles	3,351,974	3,383,448	3,829,331	3,655,923
4	Total Lane Miles Added (from 2005)		56	595	459
Financial Data					
1	Total System Cost ($2007) in billions			$ 16.12	$ 9.07
Motor Vehicle Data - Average Weekday (AWD)					
1 a	AWD Total Auto Person Trips	5,110,453	7,571,365	7,524,583	7,515,380
b	AWD Total SOV Trips	2,690,158	3,951,046	3,914,100	3,908,736
c	AWD Total HOV Vehicle Trips	1,039,050	1,567,577	1,562,730	1,561,046
d	AWD Total Vehicle Trips	3,729,208	5,518,623	5,476,830	5,469,782
e	AWD Total Shared Ride Person Trips	2,420,295	3,620,319	3,610,483	3,606,644
f	AWD Total Person Trips	5,979,609	9,073,999	9,059,468	9,060,099
2	AWD Total VMT	20,044,778	27,084,711	27,799,893	27,554,939
	AWD Total VMT % change from 2005	-	35%	39%	37%
3	AWD VMT/Capita	14.68	13.53	13.89	13.77
	VMT/Capita % change from 2005	-	-8%	-5%	-6%
4	AWD VMT/Employee	23.05	18.89	19.38	19.21
	VMT/Employee % change from 2005	-	-18%	-16%	-17%
5	Single Occupant Vehicle (SOV) Percent of Person Trips	44.99%	43.54%	43.20%	43.14%
6	Non-SOV Percent of Person Trips (shared ride, walk, bike, transit)	55.01%	56.46%	56.80%	56.86%
7	AWD Motor Vehicle Average Trip Length (miles)	5.16	4.70	4.87	4.83
8	Home-Based-Work Average Trip Length (miles)	7.54	7.03	7.22	7.17
9	Auto Occupancy	1.37	1.37	1.37	1.37
Motor Vehicle Data - PM 2 Hour Peak					
1	PM 2-HR Motor Vehicle Average Travel Time (minutes)	13.15	15.18	14.83	14.91
2	PM 2-HR Average Motor Vehicle Travel Speed (miles per hour)	24.79	19.82	20.96	20.71
3 a	PM 2-HR Total Congested miles (0.9 <= v/c < 1) (percentage of total miles in network)	111(3.47%)	236(7.33%)	218(6.46%)	216(6.45%)
3 b	PM 2-HR Freeway Congested miles (percentage of freeway miles in network)	40(20.06%)	49(24.25%)	52(25.50%)	50(21.81%)
3 c	PM 2-HR Arterial Congested miles (percentage of arterial miles in network)	71(2.36%)	188(6.20%)	166(5.23%)	166(5.32%)
4 a	PM 2-HR Total Severely Congested miles (v/c >=1) (percentage of total miles in network)	68(2.13%)	428(13.28%)	307(9.09%)	330(9.85%)
4 b	PM 2-HR Freeway Severely Congested miles (percentage of freeway miles in network)	18(8.72%)	56(27.93%)	46(22.53%)	50(21.81%)
4 c	PM 2-HR Arterial Severely Congested miles (percentage of arterial miles in network)	51(1.69%)	372(12.30%)	261(8.22%)	281(8.97%)
5	PM 2-HR Motor Vehicle Hours	135,004	231,721	224,820	225,754
6 a	PM 2-HR Motor Vehicle Hours of Delay (percentage of total PM 2 Motor Vehicle Hours)	7,751(5.74%)	44,163(19.06%)	3,414(14.86%)	35,609(15.77%)
6 b	PM 2-HR Freeway VHD (percentage of total PM 2 Motor Vehicle Hours)	4,506(3.34%)	18,591(8.02%)	14,680(6.53%)	15,438(6.84%)
6 c	PM 2-HR Arterial VHD (percentage of total PM 2 Motor Vehicle Hours)	3,245(2.40%)	25,572(11.04%)	18,734(8.33%)	20,171(8.93%)

Vehicle Hours of Delay (VHD) is the time accrued above the travel time at v/c=0.9

2035 Regional Transportation Plan (RTP) Update

Appendix 1.3

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1/10/08

(Numbers subject to change due to model refinment)

		2005	2035 No Build	2035 Investment Pool With Toll	2035 FinCon With Toll
Motor Vehicle Data - Midday 1 Hour					
1	MD 1-HR Motor Vehicle Average Travel Time (minutes)	11.00	11.57	11.46	11.48
2	MD 1-HR Average Motor Vehicle Travel Speed (miles per hour)	27.98	24.31	25.36	25.13
3 a	MD 1-HR Total Congested miles (0.9 <= v/c < 1) (percentage of total miles in network)	32(1.00%)	138(4.29%)	100(2.96%)	119(3.53%)
3 b	MD 1-HR Freeway Congested miles (percentage of freeway miles in network)	17(8.23%)	60(29.73%)	50(24.55%)	51(22.43%)
3 c	MD 1-HR Arterial Congested miles (percentage of arterial miles in network)	16(0.52%)	79(2.60%)	50(1.57%)	67(2.15%)
4 a	MD 1-HR Total Severely Congested miles (v/c >=1) (percentage of total miles in network)	10(0.31%)	80(2.48%)	58(1.72%)	53(1.59%)
4 b	MD 1-HR Freeway Severely Congested miles (percentage of freeway miles in network)	3(1.72%)	19(9.65%)	16(8.04%)	18(7.68%)
4 c	MD 1-HR Arterial Severely Congested miles (percentage of arterial miles in network)	6(0.22%)	61(2.01%)	42(1.31%)	36(1.15%)
5	MD 1-HR Motor Vehicle Hours	44,922	70,859	69,527	69,560
6 a	MD 1-HR Motor Vehicle Hours of Delay (percentage of total MD 1 Motor Vehicle Hours)	478(1.06%)	3924(5.54%)	2831(4.07%)	3432(4.93%)
6 b	MD 1-HR Freeway VHD (percentage of total MD 1 Motor Vehicle Hours)	361(0.80%)	2510(3.54%)	2056(2.96%)	2203(3.17%)
6 c	MD 1-HR Arterial VHD (percentage of total MD 1 Motor Vehicle Hours)	117(0.26%)	1414(2.00%)	775(1.11%)	1229(1.77%)
	Vehicle Hours of Delay (VHD) is the time accrued above the travel time at v/c=0.9				
Freight Data - Average Weekday (AWD)					
1	AWD Total Truck Trips	31,323	45,769	45,769	45,769
2	AWD Truck Average Trip Length (miles)	13.14	13.50	13.47	13.51
4	Freight Network Miles	676	679	703	726
	Freight Network Miles added from 2005	-	2	26	50
3	Freight Network Lane Miles	1,480	1,501	1,637	1,665
	Freight Network Lane Miles added from 2005	-	21	157	186
Freight Data - PM 2 Hour Peak					
1	PM 2-HR Truck Average Travel Time (minutes)	28.28	35.29	33.59	34.28
2	PM 2-HR Truck Hours	1,328	2,422	2,305	2,353
3	PM 2-HR Truck Vehicle Hours of Delay (time accrued above v/c > 0.9)	219	1,492	1,053	1,133
4	PM 2-HR Congested Freight Network Miles (0.9 <= v/c < 1)	71	97	96	95
5	PM 2-HR Severely Congested Freight Network Miles (v/c >=1)	37	186	137	147
Freight Data - Midday 1 Hour					
1	MD 1-HR Truck Average Travel Time (minutes)	24.84	29.76	28.56	29.09
2	MD 1-HR Truck Hours	801	1,416	1,359	1,384
3	MD 1-HR Truck Vehicle Hours of Delay (time accrued above v/c > 0.9)	27	375	279	308
4	MD 1-HR Congested Freight Network Miles (0.9 <= v/c < 1)	22	100	72	84
5	MD 1-HR Severely Congested Freight Network Miles (v/c >=1)	4	47	31	33
Transit Data					
1.	AWD Total Transit Trips (originating riders)	243,216	494,950	517,007	521,399
2.	AWD Transit Revenue Hours	5,663	6,611	7,415	7,623
3.	Transit Percent of Person Trips	4.07%	5.45%	5.71%	5.75%
4.	AWD Originating Riders Per Revenue Hour *	43	75	70	68
5.	Percent Covered Households (w/in 1/2 mile of LRT or 1/5 mile of bus stop)	66%	62%	62%	62%
6.	Percent Covered Employment (w/in 1/2 mile of LRT or 1/5 mile of bus stop)	84%	81%	81%	81%
Pedestrian Data**					
1.	Total Walk Trips (does not include walk trips to transit)	394,105	663,867	677,131	681,787
2.	Walk Percent of Person Trips	6.59%	7.32%	7.47%	7.53%
Bicycle Data***					
1.	Total Bike Trips	64,428	112,584	109,977	110,667
2.	Bike Percent of Person Trips	1.08%	1.24%	1.21%	1.22%

* AWD Transit Revenue Hours were calculated using existing daily peak and off-peak expansion factors.

** Walk trips are consistently understated between systems because they represent only trips 6 blocks or longer in length and improvement in the pedestrian environment is not accounted for.

*** Bike trips are consistently understated between systems due to the broad area of coverage and sample size of the 1994 Metro Travel Behavior Survey.

2035 Regional Transportation Plan (RTP) Update

System Performance Measures for Total Region Trips (includes Clark, Clackamas, Multnomah and Washington counties)

1/10/08

(Numbers subject to change due to model refinment)

		2005	2035 No Build	2035 Investment Pool With Toll	2035 FinCon With Toll
Demographic Data					
1	Population	1,899,407	3,034,596	3,034,595	3,034,595
2	Households	767,020	1,208,686	1,208,686	1,208,686
3	Employment	1,032,246	1,799,244	1,799,244	1,799,244
Network Data					
1 a	Total Miles in Network	6,828	6,913	7,076	7,046
1 b	Freeway Miles	497	510	514	538
1 c	Arterial Miles	6,331	6,403	6,562	6,508
1 d	HOV Miles	3.4	3.4	3.4	3.4
2 a	Total Lane Miles	9,607	9,806	10,380	10,231
2 b	Freeway Lane Miles	1,192	1,247	1,291	1,331
2 c	Arterial Lane Miles	8,415	8,558	9,089	8,900
3 a	Total Roadway Capacity-Miles	8,808,609	9,096,272	9,622,036	9,515,637
3 b	Freeway Capacity Miles	2,085,913	2,219,419	2,280,577	2,356,793
3 c	Arterial Capacity Miles	6,722,697	6,876,854	7,341,459	7,158,844
4	Total Lane Miles Added (from 2005)		199	773	624
Financial Data					
1	Total System Cost ($2007) in billions			$ 16.12	$ 9.07
Motor Vehicle Data - Average Weekday (AWD)					
1 a	AWD Total Auto Person Trips	7,048,654	11,457,519	11,416,726	11,406,050
b	AWD Total SOV Trips	3,721,773	6,027,842	5,990,318	5,984,151
c	AWD Total HOV Vehicle Trips	1,424,394	2,337,356	2,335,236	2,333,212
d	AWD Total Vehicle Trips	5,146,167	8,365,198	8,325,554	8,317,363
e	AWD Total Shared Ride Person Trips	3,326,881	5,429,677	5,426,408	5,421,899
f	AWD Total Person Trips	8,170,426	13,474,974	13,479,726	13,479,726
2	AWD Total VMT	32,611,115	48,753,067	49,882,403	49,514,377
	AWD Total VMT % change from 2005	-	49%	53%	52%
3	AWD VMT/Capita	17.17	16.07	16.44	16.32
	VMT/Capita % change from 2005	-	-6%	-4%	-5%
4	AWD VMT/Employee	31.59	27.10	27.72	27.52
	VMT/Employee % change from 2005	-	-14%	-12%	-13%
5	Single Occupant Vehicle (SOV) Percent of Person Trips	45.55%	44.73%	44.44%	44.39%
6	Non-SOV Percent of Person Trips (shared ride, walk, bike, transit)	54.45%	55.27%	55.56%	55.61%
7	AWD Motor Vehicle Average Trip Length (miles)	6.05	5.54	5.71	5.67
8	Home-Based-Work Average Trip Length (miles)	9.09	8.51	8.68	8.63
9	Auto Occupancy	1.37	1.37	1.37	1.37
Motor Vehicle Data - PM 2 Hour Peak					
1	PM 2-HR Motor Vehicle Average Travel Time (minutes)	14.77	16.82	16.34	16.36
2	PM 2-HR Average Motor Vehicle Travel Speed (miles per hour)	28.37	23.06	24.31	24.11
3 a	PM 2-HR Total Congested miles (0.9 <= v/c < 1) (percentage of total miles in network)	128(1.87%)	309(4.47%)	298(4.21%)	295(4.18%)
3 b	PM 2-HR Freeway Congested miles (percentage of freeway miles in network)	46(9.23%)	59(11.64%)	69(13.40%)	66(12.21%)
3 c	PM 2-HR Arterial Congested miles (percentage of arterial miles in network)	82(1.29%)	250(3.90%)	229(3.49%)	229(3.52%)
4 a	PM 2-HR Total Severely Congested miles (v/c >=1) (percentage of total miles in network)	83(1.21%)	548(7.92%)	407(5.75%)	439(6.23%)
4 b	PM 2-HR Freeway Severely Congested miles (percentage of freeway miles in network)	18(3.66%)	68(13.41%)	52(10.20%)	59(11.03%)
4 c	PM 2-HR Arterial Severely Congested miles (percentage of arterial miles in network)	64(1.02%)	479(7.48%)	354(5.40%)	380(5.83%)
5	PM 2-HR Motor Vehicle Hours	216,980	406,782	393,831	394,014
6 a	PM 2-HR Motor Vehicle Hours of Delay (percentage of total PM 2 Motor Vehicle Hours)	8,540(3.94%)	52,464(12.90%)	39,578(10.05%)	42,232(10.72%)
6 b	PM 2-HR Freeway VHD (percentage of total PM 2 Motor Vehicle Hours)	4,965(2.29%)	23,096(5.68%)	17,525(4.45%)	18,730(4.75%)
6 c	PM 2-HR Arterial VHD (percentage of total PM 2 Motor Vehicle Hours)	3,575(1.65%)	29,367(7.22%)	22,053(5.60%)	23,502(5.96%)

Vehicle Hours of Delay (VHD) is the time accrued above the travel time at v/c=0.9

2035 Regional Transportation Plan (RTP) Update

Appendix 1.3

System Performance Measures for Total Region Trips (includes Clark, Clackamas, Multnomah and Washington counties)

1/10/08

(Numbers subject to change due to model refinment)

		2005	2035 No Build	2035 Investment Pool With Toll	2035 FinCon With Toll
Motor Vehicle Data - Midday 1 Hour					
1	MD 1-HR Motor Vehicle Average Travel Time (minutes)	12.61	13.07	12.93	12.91
2	MD 1-HR Average Motor Vehicle Travel Speed (miles per hour)	31.85	28.29	29.29	29.14
3 a	MD 1-HR Total Congested miles (0.9 <= v/c < 1) (percentage of total miles in network)	33(0.49%)	161(2.33%)	122(1.73%)	139(1.98%)
3 b	MD 1-HR Freeway Congested miles (percentage of freeway miles in network)	17(3.32%)	68(13.39%)	57(11.02%)	61(11.32%)
3 c	MD 1-HR Arterial Congested miles (percentage of arterial miles in network)	17(0.26%)	92(1.44%)	66(1.00%)	78(1.20%)
4 a	MD 1-HR Total Severely Congested miles (v/c >=1) (percentage of total miles in network)	14(0.20%)	100(1.45%)	70(0.99%)	67(0.95%)
4 b	MD 1-HR Freeway Severely Congested miles (percentage of freeway miles in network)	3(0.69%)	22(4.26%)	16(3.20%)	18(3.42%)
4 c	MD 1-HR Arterial Severely Congested miles (percentage of arterial miles in network)	10(0.16%)	79(1.23%)	53(0.81%)	49(0.75%)
5	MD 1-HR Motor Vehicle Hours	71,973	121,969	120,074	119,739
6 a	MD 1-HR Motor Vehicle Hours of Delay (percentage of total MD 1 Motor Vehicle Hours)	497(0.69%)	4364(3.58%)	3035(2.53%)	3671(3.07%)
6 b	MD 1-HR Freeway VHD (percentage of total MD 1 Motor Vehicle Hours)	361(0.50%)	2718(2.23%)	2088(1.74%)	2282(1.91%)
6 c	MD 1-HR Arterial VHD (percentage of total MD 1 Motor Vehicle Hours)	136(0.19%)	1647(1.35%)	947(0.79%)	1389(1.16%)
	Vehicle Hours of Delay (VHD) is the time accrued above the travel time at v/c=0.9				
Freight Data - Average Weekday (AWD)					
1	AWD Total Truck Trips	75,553	124,987	124,987	124,987
2	AWD Truck Average Trip Length (miles)	24.33	24.70	24.66	24.69
4	Freight Network Miles	1,165	1,167	1,191	1,214
	Freight Network Miles added from 2005	-	2	26	49
3	Freight Network Lane Miles	2,408	2,436	2,588	2,612
	Freight Network Lane Miles added from 2005	-	28	180	204
Freight Data - PM 2 Hour Peak					
1	PM 2-HR Truck Average Travel Time (minutes)	40.35	52.38	49.13	49.70
2	PM 2-HR Truck Hours	4,542	9,755	9,149	9,254
3	PM 2-HR Truck Vehicle Hours of Delay (time accrued above v/c > 0.9)	246	1,825	1,247	1,368
4	PM 2-HR Congested Freight Network Miles (0.9 <= v/c < 1)	82	118	128	124
5	PM 2-HR Severely Congested Freight Network Miles (v/c >=1)	40	229	171	187
Freight Data - Midday 1 Hour					
1	MD 1-HR Truck Average Travel Time (minutes)	36.65	44.11	42.44	42.54
2	MD 1-HR Truck Hours	2,997	6,038	5,810	5,824
3	MD 1-HR Truck Vehicle Hours of Delay (time accrued above v/c > 0.9)	28	424	291	329
4	MD 1-HR Congested Freight Network Miles (0.9 <= v/c < 1)	22	114	86	100
5	MD 1-HR Severely Congested Freight Network Miles (v/c >=1)	4	53	34	38
Transit Data					
1.	AWD Total Transit Trips (originating riders)	268,522	532,857	570,405	575,352
2.	AWD Transit Revenue Hours	6,176	7,157	8,014	8,237
3.	Transit Percent of Person Trips	3.29%	3.95%	4.23%	4.27%
4.	AWD Originating Riders Per Revenue Hour *	43	74	71	70
5.	Percent Covered Households (w/in 1/2 mile of LRT or 1/5 mile of bus stop)	61%	54%	55%	55%
6.	Percent Covered Employment (w/in 1/2 mile of LRT or 1/5 mile of bus stop)	81%	75%	76%	76%
Pedestrian Data**					
1.	Total Walk Trips (does not include walk trips to transit)	528,113	944,397	955,189	960,159
2.	Walk Percent of Person Trips	6.46%	7.01%	7.09%	7.12%
Bicycle Data***					
1.	Total Bike Trips	82,496	151,566	148,772	149,531
2.	Bike Percent of Person Trips	1.01%	1.12%	1.10%	1.11%

* AWD Transit Revenue Hours were calculated using existing daily peak and off-peak expansion factors.

** Walk trips are consistently understated between systems because they represent only trips 6 blocks or longer in length and improvement in the pedestrian environment is not accounted for.

*** Bike trips are consistently understated between systems due to the broad area of coverage and sample size of the 1994 Metro Travel Behavior Survey.

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Appendix 1.4

2035 Regional Transportation Plan: Modeling Assumptions

The following is an overview of the travel demand model and the assumptions used in the 2035 Regional Transportation Plan (RTP). The year 2005 was the baseline and travel volumes were forecasted out to 2035. Discussion is provided that details the assumptions for three different model runs. The 2035 No Build assumed a scenario in which no new projects are built that do not currently have funds to complete construction as identified in the 2008 – 2011 Metropolitan Transportation Improvement Program (MTIP) and 2008-2011 Oregon State Transportation Improvement Program (STIP). The 2035 Round 1 modeling assumed a network of projects based on a scenario of 200 percent of forecasted revenue during the plan period. The Financially Constrained (FC) System represents a network of projects based on revenue sources that can reasonably be expected to be available for transportation uses during the plan period and serves as the basis for complying with federal planning and air quality regulations.

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DESCRIPTION OF REGIONAL TRAVEL MODEL

The year 2005 and 2035 forecast travel volumes were estimated using the Metro regional travel demand model, with assignments executed in EMME/2. For travel forecasting purposes, land use assumptions are broken down into geographical areas called transportation analysis zones (TAZs). For the Portland metrpolitan region, 2013 TAZs are identified (approximately five per U.S. census tract). The TAZ is the "unit geography" for travel within the demand model. Households and employment are located within TAZs. All the trips generated by the land use elements at the unit geography are aggregated and analyzed at the TAZ level.

Population and employment information is assigned to each TAZ based on the MetroScope land use model's mapback procedure, which was then reviewed by local jurisdictions. The cost of various forms of transportation, including parking and transit fare costs, and levels of street connectivity are also assigned to each TAZ or TAZ origin-destination zone pairs (as appropriate) based on regional transportation and land use policies.

The travel model estimates the number of trips that will be made, the distribution patterns of the trips throughout the region, the likely mode used for the trip, and the actual roadways and transit lines used for auto and transit trips. Traffic volume projections from these simulations help assess transportation system performance and identify future road and transit needs. Due to the macro-scopic nature of the regional model, the model does not effectively analyze walking, biking or local street traffic volumes at detailed analysis levels.

HOUSEHOLD AND EMPLOYMENT ASSUMPTIONS

Using Metroscope, a 2035 regional household and employment growth forecast was prepared by Metro and serves as the basis for the Regional Transportation Plan. The Metroscope model uses information on accessibility from the regional travel demand model to help determine the relative attractiveness of areas within the region for growth in households and employment. The number of dwelling units and employees were calculated and assigned to TAZs for travel analysis. Table 1 summarizes household and employment information for 2005 and 2035 for the four-county region, which includes Clackamas, Clark, Multnomah and Washington counties.

TABLE 1

2005 - 2035 Modeled Land Use Allocation - April 2007			
Land Use	**# of TAZs**	**2005**	**2035**
Households	2013	767,020	1,208,686
Employees	2013	1,032,246	1,799,245
Population	2013	1,961,144	3,097,402

ROADWAY NETWORK ASSUMPTIONS

It is important to note that projects that included preliminary engineering (PE) and right-of-way acquisition (ROW) were included in the travel demand model. The major projects are in various stages of project development and planning at this time. Locally preferred alternatives have yet been determined, therefore, the assumptions used only represent potential alignments or facility type determinations. Additional refinements may come from the Columbia River Crossing Study, the I-5/99W Connector Study, and other studies currently underway in the region. Updates may be made as part of the state update component of the 2035 RTP.

2005 Roadway Network

The 2005 roadway base case consists of current and existing roadway projects.

2035 No Build Roadway Network

Table 2 highlights some of the larger scale completed projects that were used in the 2035 No-Build model. A complete list of completed roadway projects used in the 2035 No-Build is included as Table 3.

TABLE 2 – Larger Scale Completed Projects Included in 2035 No-Build

Agency	2004 RTP Number	Project Name
City of Gresham	2028	Powell Boulevard: 174th to Eastman Parkway
ODOT	3001	OR 217: NB between TV and US 26
ODOT	3003	US 26/Jackson School Interchange
ODOT	3008	US 26: OR 217 to Murray
ODOT	3009	US 26: Murray to Cornell
Washington County	3133	Cornelius Pass Road Interchange Improvement
Washington County	3186	Murray Boulevard Improvements - Cedar Mill
ODOT	4005	I-5: Delta park to Lombard
Clackamas County	5066	Sunnyside Road
City of Oregon City	5156	Beavercreek Road Phase 1 – Molalla to Highway 213
ODOT	5199	I-205 Aux. Lanes: I-5 to Stafford Road
City of Wilsonville	6138	I-5/Wilsonville Road: PE and ROW
ODOT	2000 RTP	I-5 @ OR 217: Kruse Way

As part of the RTP project solicitation process, local jurisdictions and agencies were asked to identify projects with potential air quality impacts and submit appropriate assumptions for inclusion in the regional travel demand model and subsequent air quality conformity determination analysis. The following highlights major projects included in the Round 1 and FC model runs. The full list of financially constrained RTP projects are recorded in Appendix 1.1. The additional projects included in the Round 1 modeling are listed in Appendix 1.2.

Round 1 2035 Roadway Network
Roadway projects included in the Round 1 network were derived from projects submitted by ODOT and local agencies as part of the 2035 RTP project solicitation process. This includes the following major capital investments:

- I-5 Columbia River Crossing (CRC) 10-lane bridge with tolling, and includes four lanes from Hayden Island to Delta Park, and three lanes south of Delta Park (T9 network from CRC study).
- Sunrise Project from I-205 to 122nd Avenue
- US 26, OR 217, OR 213 and I-205 interchange improvements
- I-5/99W Connector

Financially Constrained 2035 Roadway Network
Roadway projects included in the Financially Constrained network were derived from projects submitted by ODOT and local agencies as part of the 2035 RTP project solicitation process. This includes the following major capital investments:

- I-5 Columbia River Crossing (CRC) 10-lane bridge with tolling, and includes four lanes from Hayden Island to Delta Park, and three lanes south of Delta Park (T9 network from CRC study).
- Sunrise Project from I-205 to 172nd Avenue
- US 26, OR 217, and I-205 interchange improvements
- I-84/I-5 interchange improvements
- I-5/99W Connector

For CRC, the 2035 scenarios assume alternative T9 from the CRC study. This alternative has five lanes in each direction on the I-5 Bridge. Paying for the construction of the five lane I-5 bridge requires assumptions regarding tolling. Therefore, tolling on the I-5 Bridge was assumed as part of both the Round 1 and Financially Constrained 2035 RTP modeling. Round 1 assumed PE, ROW, and construction. The FC modeling included only PE and ROW, which by our interpretation required that the project be modeled for air quality conformity determination analysis.

In Round 1 modeling, the Sunrise Project was assumed to be a four-lane limited access facility with funds assumed for PE, ROW and full construction. In the FC network it is assumed to be a six-lane throughway between I-205 and 172nd Avenue without tolling, including full funding for PE and ROW and partial funds for construction. The differences between the modeling assumptions in Round 1 and the FC were based on consultations between ODOT and FHWA and attempting to better reflect the alternatives being explored by ODOT in the NEPA application for the Sunrise Project.

For the I-5/99W Connector, both the Round 1 and FC modeling networks assumed a four-lane expressway without tolls at the southern corridor. Round 1 identified funds for PE, ROW and construction and the FC contains only funding for PE and ROW.

In Round 1 modeling, the I-5/I-84 Interchange was only identified to have funds for PE and was not included. For the FC System, funds were identified for PE and ROW, and the model assumes full build of the interchange at I-5 and I-84 as well as the area surrounding I-5 and Greeley Street.

TRANSIT NETWORK ASSUMPTIONS
In general, the 2035 transit network includes an extensive mix of high capacity, regional and community service transit service. Lists of all of the bus and MAX service/headways used in the 2005 base year, 2035 No Build, the Round 1, and Financially Constrained 2035 transit network are listed in Table 4.

2005 Transit Base Network
The 2005 transit base case consists of current service and existing MAX lines and frequent service bus lines as well as existing service for other transit districts like C-TRAN, SMART, CAT, SAM and SCTD.

2035 No Build Transit Network
The 2035 No Build transit network includes:

- Current service updated to reflect 2007 headways and TriMet bus routes and MAX lines.
- Existing service routes for CAT, SAM and SCTD. Service additions were added for SMART in accommodating WCCR and the route extension into downtown Portland.
- The assumed C-TRAN transit network for the 2035 No Build is based on the Columbia River Crossing T17.3 scenario, which is light rail on Main St. to Lincoln Park-n-Ride facility with supporting feeder bus network.
- I-205 light rail (MAX Green line)
- Streetcar extension to Lowell
- MAX Red Line extension to Merlo (158th)
- Washington County Commuter Rail (WCCR).
- Slight bus route modifications were made to support the addition of the MAX Green Line and WCCR.
- The Sellwood Bridge project was not included in the 2035 No Build. As a result, the line 41-bus route was modeled as it is today crossing the Hawthorne Bridge.

Round 1 2035 Transit Network
In addition to what was included in the 2035 No Build transit network, the Round 1 transit network includes the following:

- Milwaukie light rail
- Columbia River Crossing light rail (T-17.3 network – light rail on Main Street to Lincoln Park-n-Ride facility)
- Eastside streetcar
- Bus Rapid Transit along McLoughlin Boulevard from Milwaukie to Oregon City.
- All day service for the WCCR

Financially Constrained 2035 Transit Network
In addition to what was included in the 2035 No Build transit network, the Financially Constrained transit network includes the following:

- Milwaukie light rail
- Columbia River Crossing light rail (T-17.3 network – light rail on Main Street to Lincoln Park-n-Ride facility)
- Portland to Lake Oswego streetcar
- Eastside streetcar
- Burnside/Couch streetcar to Hollywood Transit Center
- Bus Rapid Transit along McLoughlin Boulevard from Milwaukie to Oregon City.
- All day service for the WCCR

ASSUMPTIONS FOR CLARK COUNTY AND THE CITY OF VANCOUVER
The 2035 No Build network, the Round 1 and the Financially Constrained 2035 road and transit networks used the Southwest Washington Regional Transportation Council's (RTC) financially constrained 2030 RTP network and corresponding assumptions. Both networks also included projects funded in Clark County by the Washington State Department of Transportation's Nickel and Partnership projects.

Additionally, there are two planning studies underway in SW Washington that may provide significant changes in Clark County's future transportation system. The Transportation Corridor Visioning Study will address how to connect new growth nodes in Clark County. The Clark County High Capacity Transit (HCT) System Plan is conducting a countywide analysis of all potential HCT corridors and an analysis of all potential modes. Both of these studies may yield additional projects to be assumed in future rounds of Metro's 2035 RTP modeling during the state component of the RTP update. As neither of the studies is

completed, further refinements will be made as part of the state component of the 2035 RTP in fall of 2008. Additional refinements may also come from recommendations from Metro's High Capacity Transit masterplan currently underway.

TRAFFIC ANALYSIS ZONE (TAZ) ASSUMPTIONS

The cost of various forms of transportation and levels of street connectivity are key elements in Metro's travel demand model that affect mode choice. The recommended intersection density, parking cost and transit fare factors vary by land use type and reflect regional transportation and land use policies adopted in the *2004 Regional Transportation Plan*.

The assumptions were not used for the purpose of allocating population and employment to individual traffic analysis zones (TAZ). Rather, they were developed to allow transportation variables, such as parking costs, transit subsidies and ease of pedestrian travel, to be adjusted to closely reflect the 2040 Growth Concept land uses at the TAZ level.[1] The net result is a model exercise that better predicts how mode share will respond to different land use types and mixes.

A summary of the transportation analysis zone (TAZ) assumptions for street connectivity, parking costs and transit fares as generally applied to the 2040 Growth Concept design types are included as Table 5.

INTERSECTION DENSITY

The intersection density (e.g., a measure of street connectivity) represents the expected number of street intersections per mile for each 2040 grouping. Intersection density affects mode choice and trip length for all modes. The 2005 intersection density was generated in ArcView using a cleaned TIGER file to establish intersections. The 2035 assumptions for Round 1 and FC were derived by applying minimum density values based on the TAZ's 2040 design type.

PARKING FACTORS

Future year parking factors for the Central City are based upon the 2006 City of Portland's research and recommendations proposing a 1.5 percent above inflation rate. Parking factors for the regional centers, station communities and town centers are scaled from these costs. No parking factors are assumed for main streets, corridors, neighborhoods, employment areas, industrial areas, greenspaces and rural reserves. The parking costs are intended to represent both direct, out-of-pocket expense as well as the difficulty in finding a parking space and walking to your destination. The costs throughout the region are proportionally indexed to the parking prices in downtown Portland. For example, the parking costs in regional centers are 10% that of the Portland CBD.

TRANSIT PASS FACTOR AND FARELESS AREAS

The transit fare factors are reported as a proportion of the full transit fare that transit riders in each 2040 design type will pay. These factors are designed to reflect the presence of a Transportation Management Association (TMA) and/or the implementation of a program similar to the Transportation Demand Management Program, through which employers reduce the cost of transit available to their employees. Generally, TMA's are only assumed to be in place within major employment centers. Typically, industrial areas are not assumed to have reduced transit fares.

APPLICATION OF TAZ ASSUMPTIONS

To simplify the modeling assumptions, the 2040 design types have been grouped according to shared land use and transportation characteristics. Appendix X summarizes the 2040 land use assumptions for specified transportation modeling factors. The left column in Appendix X groups the 2040 design type by location, and the second column provides a brief rationale for the groupings. These groupings will define a set of TAZs in the modeling process. TAZs were assigned to each grouping.

[1] It is important to note TAZ boundaries do not directly correspond to the 2040 Growth Concept design type boundaries or locally adopted comprehensive plans designations.

Table 3. 2035 No-Build Network Projects

Agency	Project Name
TriMet	I-205 LRT to Clackamas Town Center
Multnomah County	Rehabilitation of WRBs—on-going
Multnomah County	WRB Preservation/Painting—on-going
Multnomah County	Broadway and Burnside Bridges—Broadway painting partially completed and deck replacement. Burnside Bridge deck replacement.
City of Portland/TriMet	Street car extension to Riverplace
City of Portland/TriMet	Street car extension to Gibbs Street
City of Portland/TriMet	Street car extension to Bancroft Street
City of Portland	Aerial tram
City of Portland	Bybee Blvd Overcrossing
Multnomah County	Morrison Bridge Bike/Ped Facility—funded, construction delayed until 2008.
Multnomah County	Lovejoy sidewalk—presumably completed with Lovejoy Ramp replacement.
Multnomah County	Burnside Bridge, Esplanade Ramp
City of Portland	SW Moody St. at SW Waterfront (under construction)
City of Portland	St. Johns Bridge Restoration
Washington County	Oleson Road Improvements: bike lanes and sidewalks
City of Portland	NW Champlain Viaduct Reconstruction
City of Gresham	Powell Boulevard: 174th to Eastman Parkway
Multnomah County	257th/Palmquist/US 26 Intersection
Multnomah County	223rd Ave. RR Crossing (south of Sandy Blvd)
Multnomah County	MKC Collector: Arata to Glisan
ODOT	OR 217: NB between TV and US 26
ODOT	US 26/Jackson School Interchange
ODOT	US 26: OR 217 to Murray
ODOT	US 26: Murray to Cornell
Washington County	185th Avenue Improvements
Washington County	170th Improvement
Washington County	Cornell Road Bikeway
Washington County	Baseline Road Improvements
Washington County	Tualatin Valley Highway/Brookwood Avenue Intersection Alignment
Washington County	Cornelius Pass Road Interchange Improvement
Washington County	Cornelius Pass Road Improvements
Washington County	Brookwood Avenue Improvements
Washington County	229th Avenue Extension
Washington County	170th/173rd Improvements
Washington County	Sunset Drive Improvements
Washington County	Martin Road/Cornelius-Schefflin Road Improvements
Forest Grove	Verboort Road Intersection
Washington County	Cornell Road Improvements
Washington County	Cornell Road Improvements - East Cedar Mill
Washington County	Barnes Road Improvement
Washington County	Murray Boulevard Improvements - Cedar Mill
Washington County	Saltzman Road Improvements
Washington County	Bethany Boulevard Improvements, Phase 1
Washington County	Bethany Boulevard Improvements, Phase 2
Washington County	Cornell Road Improvements

Agency	Project Name
Washington County	185th Avenue Improvements
ODOT	I-5: Delta park to Lombard
City of Portland	Cascades Pkwy - Alderwood Rd Street Extension
City of Portland	Airtrans/Cornfoot Rd. Intersection Improvement
City of Portland	North Lombard Overcrossing
Clackamas County	Sunnyside Road
Clackamas County	W.Otty Road extension
Clackamas County	Summers Lane Extension – 122nd to 132nd only, 132nd to 142nd section will be dropped
Clackamas County	Fuller Road pedestrian improvements
City of Oregon City	Main Street Extension bike lanes
City of Oregon City	7th Street Corridor Blvd improvements
City of Oregon City	Washington Street – Abernethy to 11th Street Blvd. Improvements
City of Oregon City	South End Road – bike lanes and sidewalks
City of Oregon City	Beavercreek Road Phase 1 – Molalla to Highway 213
City of Oregon City	Molalla Avenue Streetscape Improvements – have been constructed from Willamette to Holmes/Hilda and Gaffney Lane to Highway 213
ODOT	I-205 Aux. Lanes: I-5 to Stafford Road
Clackamas County	Stafford/Rosemont intersection
Washington County	Commuter Rail
Washington County	Greenburg Road Improvements, South
Washington County	Oak Street Improvements: bikeway and sidewalks
Washington County	Walnut Street Improvements, Phase 3
Washington County	Highway 99W/Hall Boulevard Intersection Signal Improvements
Washington County	Lower Boones Ferry Bikeway and Sidewalks
City of Tualatin	124th Avenue: Myslony to Tualatin Sherwood Road
Washington County	Tualatin River Pedestrian Bridge
City of Wilsonville	Kinsman Road Extension - North Ph 1: Barber Street to Boeckman Road
City of Wilsonville	Boeckman Road Extension: Boeckman to Tooze
City of Wilsonville	Barber Street Extension: Kinsman to Grahams Ferry
Washington County	Beef Bend/175th Avenue Realignment
City of Wilsonville	I-5/Wilsonville Road: PE and ROW
City of Portland	Grand/MLK Viaduct Reconstruct Project
City of Portland	SW 6th Ave. between Sheridan and Broadway
ODOT	I-5 @ OR 217: Kruse Way
Multnomah County	207th Ave Connector

Table 4. 2035 Transit Headway Assumptions

Transit Line Listing		2005 Base		2035 No Build		2035 Financially Constrained		2035 Round 1	
-		peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway
LIGHT RAIL/HCT SERVICE									
01HGAP - Blue Line	LRT - (Hillsboro-Gresham) via cross-mall	7.5	10	7.5	10	**6**	10	**15**	15
01COMR	Commuter Rail (BTC-Wilsonville)	N/A	N/A	22.5	0	**15**	**15**	**15**	**15**
01I205 - Green Line	LRT - (PCBD/PSU-CTC) via mall	N/A	N/A	7.5	15	7.5	15	15	15
01PDXX - Red Line	LRT - (PIA-158th) via cross-mall to	N/A	N/A	15	15	15	15	0	0
01POEM - Yellow Line Mall	LRT - (PCBD/PSU-Expo) via mall	10	15	10	15				
01MVAN	LRT - (Milwaukie - Vancouver CBD) via mall	N/A	N/A	N/A	N/A	**7.5**	**15**	**7.5**	**12**
01SCLP	Streetcar (Riverplace - OMSI Loop)			N/A	N/A	**12**	**12**	**12**	**12**
01SCLW	Streetcar (NW23rd-Lowell)	N/A	N/A	12	12	12	12	15	15
31OBRT	Oregon City - 152nd BRT/Freq Bus	N/A	N/A	N/A	N/A	15	15	0	0
BUS SERVICE									
02GREE	Greeley - (PCBD-UofP)	12	30	12	30	**10**	30	**10**	15
02VCBJ	Vermont - (PCBD-Vermont/Shattuck) Columbia/Jefferson	N/A	N/A	15	30	**10**	**15**	**5**	**15**
04DGTC	Division - (PCBD-Gresham TC) FB	12	12	6	12	**5**	12	**12**	12
04F	Fessenden - (PCBD-St.Johns) FB	12	12	12	12	12	12	10	10
06MLKJ	Collins/Jef-Col/Hawth/MLK/Lomb/Den/Hayd Isld/Vanc (PCBD-Vancouver) FB	N/A	N/A	10	10	10	10	7.5	15
08JVA	Jackson Park/VA Hospital - (PCBD-VA Hospital) - FB	12	15	12	15	**7.5**	15	**7.5**	15

Transit Line Listing		2005 Base		2035 No Build		2035 Financially Constrained		2035 Round 1	
-		peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway
08M15	NE 15th/MLK/Middlefield (PCBD-Middlefield) FB	7.5	15	7.5	15	**7.5**	15	**10**	15
09BWY	Broadway - (PCBD-27th/Saratoga) - via Rose Quarter TC	12	15	12	15	**10**	15	**10**	30
09P98T	Powell/Gresham to 98th Ave-(PCBD-98th)	30	30	30	30	30	30	20	0
09PGL- New Limited, no local service	Powell/Gresham Limited all the way to Gresham- (PCBD-GreshamTC)	20	N/A	20	N/A	20	0	10	15
09PGTC	Powell/Gresham TC - (PCBD-GreshamTC)FB	20	30	15	15	**10**	15	**7.5**	20
10H	Harold - (PCBD-122nd/Foster)	12	20	12	20	**7.5**	20	**7.5**	15
10T	NE 33rd - (PCBD-33rd/Sutherland)	15	20	15	15	**12**	15	**N/A**	N/A
12BKC	Barbur/King City - (PCBD-KC) FB	30	30	30	30	**N/A**	N/A	**N/A**	N/A
12BSHR (PCBD-Sherwood)	Barbur/Sherwood - (PCBD-Sherwood) FB	30	30	30	30	**10**	**15**	**10**	**15**
12SG	Sandy - (PCBD-Gresham) FB	20	20	20	20	**10**	20	**10**	20
12SP	Sandy - (PCBD-Parkrose) FB	15	20	15	20	15	20	15	10
14H	Hawthorne Short - (PCBD-94th/Foster) FB	5	12	5	10	5	10	30	0
14HX	Hawthorne Express - (PCBD-94th/Foster) FB	30	0	30	0	30	0	60	60
152MCT	Milwaukie Shuttle - MTC - CTC	60	60	60	60	60	60	60	60
154WLN	Willamette - (Willamette/W.Linn-Oregon City)	60	60	60	60	60	60	60	60
155S	Sunnyside Rd.	60	60	60	60	60	60	45	60
156MR	Mather Rd. - (147th/OregonTrail-CTC)	60	60	60	60	**45**	60	**45**	60

Transit Line Listing		2005 Base		2035 No Build		2035 Financially Constrained		2035 Round 1	
-		peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway
157HV	Happy Valley - (147th/OregonTrail-CTC)	6	60	6	60	6	60	30	30
15B60	Belmont/Mt.Tabor (PCBD-60th) FB	30	0	30	30	30	30	30	60
15B92	Belmont/Mt.Tabor/92nd (PCBD-92nd) FB	30	0	30	60	30	60	7.5	12
15BELP	Belmont/Mt.Tabor/Parkrose (PCBD-Parkrose) FB	7.5	12	7.5	12	7.5	12	20	30
15THUR	NW 23rd/Thurman-Gordon - (PCBD-27th) FB	20	20	20	30	20	30	20	30
15TMPK	NW 23rd/Montg. Park - (PCBD-27th/Mont.Park) FB	20	20	20	30	20	30	20	0
16FA	Front Ave./St. Johns/Marine Dr-(PCBD-Middlefield) via Fess/Col	30	N/A	30	N/A	**20**	0	**10**	15
17H136	Holgate - (PCBD-136th Powell)	10	15	10	15	10	15	10	20
17SLIN	NW21st/St Johns - (PCBD - St Johns - Linnton)	30	30	30	30	**10**	**20**	**10**	**20**
17SMPK	NW21st/Montg. Park - (PCBD-Montgomery Park)	30	30	30	30	**10**	**20**	**10**	**20**
18HILL	Hillside - (PCBD-Maclay/Burnside) Off-Mall	60	60	60	0	60	0	10	15
19G	Glisan - (PCBD-GatewayTC)	10	15	10	15	10	15	15	30
19W	Woodstock - (PCBD-Mt.Scott/112th)	15	30	15	30	15	30	20	30
19WR	Woodstock/Rex - (PCBD-Mt.Scott/112th)	20	30	20	30	20	30	0	60
201BAR	SMART/Barbur TC	0	60	0	60	0	60	30	60
201BTC	SMART/Barbur TC	30	0	30	0	30	0	30	0
203COM	SMART/Commerce Circle	30	0	30	0	30	0	30	0
204CRS	SMART/Wilsonville Crosstown	30	60	30	60	30	60	60	60
205CAN	SMART/Canby	60	60	60	60	60	60	15	20

Transit Line Listing		2005 Base		2035 No Build		2035 Financially Constrained		2035 Round 1	
-		peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway
20BSTB	Burnside/Beaverton TC - (BTC-Gresham)	12	30	15	20	15	20	0	60
20BSTN	Burnside/23rd Beaverton TC - (BTC-Gresham)	0	30	0	60	0	60	30	30
22ROSE	Parkrose - (Parkrose-GatewayTC)	30	30	30	30	30	30	60	60
23SRAF	San Rafael - 148th (GatewayTC-GreshamTC)	30	30	60	60	60	60	60	60
25G	Glisan/Rockwood - (GatewayTC-RockwoodTC)	60	60	60	60	60	60	60	60
27M	Market/Main - (GatewayTC-RockwoodTC)	60	60	60	60	60	60	60	60
28LINW	Linwood	30	60	60	60	60	60	60	60
29LAKE	Lake-Webster	30	30	60	60	60	60	60	60
300SES	SAM/Sandy-Estacada	60	60	60	60	60	60	30	60
300SGR	SAM/Sandy-Gresham TC	30	60	30	60	30	60	60	60
300SME	SAM/Sandy-Rhodedendron	60	60	60	60	60	60	20	30
301COC	Canby - Oregon City	20	30	20	30	20	30	60	60
302MCC	Molalla/CCC	60	60	60	60	60	60	60	60
302MCN	Molalla/Canby	60	60	60	60	60	60	30	30
31EM	Estacada Local (Milwaukie - Estcada)	0	30	30	30	30	30	N/A	N/A
31MNH	Milw TC - ClackTC - New Hope	N/A	N/A	30	0	N/A	N/A	N/A	N/A
32CCOC	Oatfield - (OC-CCC)	0	60	0	60	N/A	N/A	N/A	N/A
32MOC	Oatfideld (Milwaukie - OC)	N/A	N/A	N/A	N/A	**0**	**60**	**0**	**60**
32OCCC	Oatfield - (PCBD-CCC)	15	0	15	0	**N/A**	**N/A**	**N/A**	**N/A**
32MCCC	Oatfield Milwaukie - CCC	N/A	N/A	N/A	N/A	**15**	**0**	**15**	**0**
32OMIL	Oatfield - (OC-MTC)	0	60	0	60	0	60	0	20
33FRE	Fremont - (PCBD-GTC)	15	20	15	20	**12**	20	**N/A**	N/A

Transit Line Listing		2005 Base		2035 No Build		2035 Financially Constrained		2035 Round 1	
-		peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway
33MCCC	McLoughlin - (PCBD-CCC)	30	30	30	30	**N/A**	**N/A**	**N/A**	**N/A**
33MMCC	McLoughlin - (Milwaukie - CCC)	N/A	N/A	N/A	N/A	**0**	**0**	**0**	**0**
33MGLD	McLoughlin - (PCBD-OC)	0	30	30	30	**N/A**	**N/A**	**N/A**	**N/A**
34CH	Clackmas Heights	60	60	0	60	0	60	0	60
34RCBD	River Rd.	60	60	30	60	30	60	5	15
35MAC	Macadam - (PCBD-OC) FB (no service to Canby)	15	30	15	30	**5**	**15**	**15**	**15**
36TCBD	South Shore - (PCBD-LakeO-Tual-LakeO)	30	0	30	0	**15**	0	**15**	60
36TULO	South Shore - (LakeO-Tual-LakeO)	0	60	0	60	0	60	60	60
37NSHR	North Shore - (LakeO-TualPNR) via Cclub/LowerBoones	60	60	60	60	60	60	30	60
38BKJC	Boones Ferry - (PCBD-Tigard TC) Via Kruse/72nd/Hunziker/Hall, Jefferson/Columbia	N/A	N/A	30	60	30	60	30	60
39LT	Lewis and Clark - (L&C College-BurlingameTC -Terwilliger)	N/A	N/A	30	60	30	60	15	15
40M	Mocks Crest - (PCBD-St.Johns)	20	30	15	15	15	15	15	60
41TACJ	Tacoma - (PCBD-MTC) via McLoughlin (No Sellwood Bridge) Jefferson/Columbia	N/A	N/A	30	60	30	60	15	0
43TFNJ	Taylors Ferry Nimbus - (PCBD-WashSq./Nimbus) Jefferson/Columbia	N/A	N/A	30	0	**15**	0	**15**	30
43TFWJ	Taylors Ferry - (PCBD-WashSq.) Jefferson/Columbia	N/A	N/A	0	60	0	**30**	10	**30**

Transit Line Listing		2005 Base		2035 No Build		2035 Financially Constrained		2035 Round 1	
-		peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway
44CHWY	Capital Hwy. - (PCBD-PCC Sylvania)	15	15	12	15	**10**	15	**0**	0
45G	Garden Home - (PCBD-Tigard)	30	30	N/A	N/A	0	0	0	30
45GJ	Garden Home - (PCBD-Tigard)	N/A	N/A	20	30	20	30	30	30
46NH	North Hillsboro - (WashCo Fairgrounds-Hillsboro)	30	60	30	30	30	30	30	30
47BLEV	Baseline/Evergreen - (WillowCrk/185th-Hillsboro)	30	30	30	30	30	30	30	30
48CORN	Cornell Rd. - (WillowCrk./185th-Hillsboro)	30	30	30	30	30	30	60	60
51CCPL	Vista - (PCBD- Council Crest-Patrick Place)	60	60	60	60	60	60	0	60
51CDHS	Vista - (PCBD-Council Crest-Dosch)	0	60	0	60	0	60	60	0
51CDPD	Vista - (PCBD- Council Crest-Pat-Dosch)	60	0	60	0	60	0	15	15
52O	Farmington-185th (BTC-PCC Rock Crk.)	15	15	15	15	15	15	15	0
53ALLN	Artic/Allen - (BTC-Allen/Mercer Ind.)	30	N/A	30	N/A	30	0	15	15
54B	B-H Hwy. (PCBD-BTC)	20	30	15	15	15	15	30	0
55HAMJ	Hamilton - (PCBD-Scholls/Hamilton) Jefferson/Columbia	N/A	N/A	30	N/A	30	0	0	0
55HAML	Hamilton - (PCBD-Scholls/Hamilton)	30	N/A	N/A	N/A	0	0	15	15
56S	Scholls Ferry - (PCBD-WashSq.) FB	15	30	15	15	15	15	15	15
57FFGV	Forest Grove - (BTC-Forest Gr.) FB	15	15	15	15	15	15	15	30
58CANJ	Canyon Rd. - (PCBD-BTC) Jefferson/Columbia	N/A	N/A	15	30	15	30	0	0

Transit Line Listing		2005 Base		2035 No Build		2035 Financially Constrained		2035 Round 1	
-		peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway
58CANY	Canyon Rd. - (PCBD-BTC)	15	30	N/A	N/A	0	0	30	30
59WP	Walker/Parkway/Cedar Hills - (Willow Crk./185th-SunsetTC)	30	30	30	30	30	30	20	60
60L	Leahy - (Cornell-SusetTC)	20	60	20	60	20	60	30	0
61X	BTC-B-H Hwy. - (Marquam Hill/OHSU-BTC)	30	N/A	30	N/A	30	0	15	20
62MURR	Murray Blvd - (WashSq.-Sunset TC)	15	20	15	20	15	20	15	60
63WSYL	Washington Park (PCBD-Zoo)	60	60	60	60	60	60	30	0
64MT	Tigard/Marquam Hill - (OHSU-Tigard)	30	N/A	30	N/A	30	0	30	0
65MBAR	Barbur/Marquam Hill - (OHSU-Tigard)	30	N/A	30	N/A	30	0	30	0
66MH	Hollywood/Marquam Hill - (OHSU-HollywoodTC)	30	N/A	30	N/A	30	0	20	30
67J158	Jenkins/158th - (BTC-PCC Rock Crk.)	30	30	30	30	**20**	30	**20**	0
68CMH	Collins Circle - (PCBD-OHSU/VA Hospital)	15	N/A	15	N/A	**7.5**	0	**7.5**	30
70T13	12th Ave. - (RoseQtr.-MTC) via 13th	30	30	30	30	30	30	30	20
70T17	12th Ave. - (RoseQtr.-MTC) via 17th	30	20	30	20	30	20	15	15
71T122	60th/122nd - (Woodstock/94th-CTC) via Parkrose LRT	15	15	15	15	15	15	10	10
72K82	82nd/Killingsworth - (Swan Is.-CTC) FB	10	10	10	10	10	10	30	0
74X	SE Portland/Lloyd - (LloydCntr/RoseQtr-Woodstock/52nd)	30	N/A	30	N/A	30	0	12	10

Transit Line Listing		2005 Base		2035 No Build		2035 Financially Constrained		2035 Round 1	
-		peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway
75TMTC	39th/Lombard - (St.Johns-MTC) FB	12	10	12	10	12	10	12	15
76BVTU	Beaverton/Tualatin - (BTC-Tualatin TC) FB	30	30	15	15	**12**	15	**5**	10
77BHTR	Broadway/Lovejoy - (Troutdale-Montgomery Park)	15	15	15	15	**5**	**10**	**5**	**10**
78BVLO	Beaverton/LakeO - (TigardTC-Lake Oswego)	30	30	30	30	30	30	30	30
79CROC	CTC/OC - (CTC-Or.City) via Gladstone - South End Loop	30	30	30	30	30	30	60	60
80TTRT	Kane Rd. - (GreshamTC-Troutdale) via Troutdale Rd	60	60	60	60	60	60	60	60
81T257	Hogan/257th - (GreshamTC-Troutdale)	60	60	60	60	60	60	60	60
82E182	182nd/Eastman - (GreshamTC-RockwoodTC)	60	60	60	60	60	60	60	60
84BOR	Kelso-Boring	60	N/A	60	N/A	60	0	60	0
84KEL	Kelso-Boring	60	N/A	60	N/A	60	0	20	20
85SG	Swan Island - Greeley	20	20	20	20	20	20	30	60
86ALD	Alderwood	30	60	30	60	30	60	30	30
87A181	181st Ave. - (Alderwood/Damascus) via Airport/181st/182nd - no Rockwood	30	30	30	30	30	30	30	30
88H198	198th/Hart - (Willow Crk./185thTC-BTC)	30	30	30	30	30	30	30	60
89TANB	Tanasbourne/North - (Tanasbourne-SunsetTC via Bronson)	30	60	30	60	30	60	30	60
89TANC	Tanasbourne/South - (Tanasbourne-SunsetTC via Cornell)	30	60	30	60	30	60	26	0

Transit Line Listing		2005 Base		2035 No Build		2035 Financially Constrained		2035 Round 1	
-		peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway	peak headway	off-peak headway
92JX	South Beaverton Express - (Murray Hill-WCCR -PCBD) Columbia/Jefferson	N/A	N/A	30	N/A	26	0	N/A	N/A
92X	South Beaverton Express - (Murray Hill-PCBD)	30	N/A	N/A	N/A	N/A	N/A	N/A	N/A
94X	Sherwood Express - (PCBD - Sherwood)	10	N/A	10	N/A	10	0	20	0
95X	Tigard Express (PCBD - Tigard)	20	N/A	20	N/A	20	0	20	60
96TCOJ	Tualatin/I-5 - (PCBD-N Wilsonville Commerce Cir) via Jeff/Col	N/A	N/A	20	60	20	60	N/A	N/A
96TCOM	Tualatin/I-5 - (PCBD-N Wilsonville Commerce Cir)	20	60	N/A	N/A	N/A	N/A	N/A	N/A
96TMOH	Tualatin/I-5 - (PCBD-Mohawk P&R)	20	60	N/A	N/A	N/A	N/A	20	60
96TMOJ	Tualatin/I-5 - (PCBD-Mohawk P&R) via Jefferson/Columbia	N/A	N/A	20	60	20	60	N/A	N/A
99PX	McLoughlin Express - (PCBD-OC/CCC)	12	N/A	12	N/A	**N/A**	**N/A**	**N/A**	**N/A**
99TRAM	Tram (North Macadam-OHSU)	N/A	N/A	5	5	5	5	0	0

Table 5. Transportation Analysis Zone Assumptions

2040 Grouping	Group Characteristics	Intersection Density (connections per mile)		Parking Factors (indexed to CBD in '94 dollars)		Transit Pass Factor (% of Full Fare)	
		2005	2035	2005	2035	2005	2035
Central City 1 Downtown Business District	Highest planned employment and housing density in the region, with highest level of access by all modes. LRT exists and current land uses reflect planned mix and densities.		20	5.71	8.93		60%
Central City 2 Lloyd District	Highest planned employment and housing density in the region, with highest level of access by all modes. LRT exists and current land uses reflect planned mix and densities.		20	2.81	5.98		60%
Central City 3 Central Eastside Industrial District	Planned high employment and housing density, with highest level of access by all modes. LRT exists. Current land uses do not reflect planned densities.		20	…..	5.98		65%
Central City 4 River District and Northwest	Planned high employment and housing density, with highest level of access by all modes. LRT exists and current land uses approach planned mix and densities.		20	4.36	7.9		65%
Central City 5 South Waterfront	Planned high employment and housing density, with highest level of access by all modes. LRT exists and current land uses approach planned mix and densities.		18	…..	7.14		65%
Regional Centers Gateway, Gresham, Beaverton, Hillsboro, Washington Square, Clackamas, Oregon City	Planned high employment and housing density, with highest level of access by all modes. LRT exists in some locations Current land uses do not reflect planned mix and densities.		>14	…..	0.89		80%

Station Communities Banfield Corridor, Westside Corridor, Interstate Corridor, I-205 Corridor, Milwaukie Corridor	Existing and planned high housing density mixed with commercial services; highest level of access for transit, bike and walk; existing and planned LRT. Current land uses do not reflect planned mix and densities.		>12	…..	0.89		80%
Town Centers – Tier 1 Milwaukie, St. Johns, Hollywood, Lents, Rockwood, Lake Oswego, Tualatin, Forest Grove, West Portland, Raleigh Hills, Hillsdale, Gladstone, West Linn, Sherwood, Sunset,Wilsonville, Cornelius, Orenco, Fairview/Wood Village, Troutdale, Happy Valley, Lake Grove, Farmington, Cedar Mill, Tannasbourne	Moderate housing and employment density planned, with high level of access by all modes. Currently has good mix of uses, well connected street system in most locations and good transit.		>12	…..	0.62		85%
Town Centers - Tier 2 Pleasant Valley, Damascus, Bethany, Murrayhill	Moderate housing and employment density planned, with high level of access by all modes. Currently has some mix of uses, poorly connected street system and little or no transit. Existing topography or physical barriers may limit bike and pedestrian travel.		>10	…..	0.27	100%	100%
Mainstreets, Corridors and Inner Neighborhoods Full Region	Moderate housing and employment density planned, with high level of access by all modes. Currently has good mix of uses, well connected street system and good transit.		>10	None	None	100%	100%
Outer Neighborhoods Current urban areas and potential urban reserve areas	Low density housing planned, with moderate level of access by all modes. Currently has poorly connected street system and little transit.		>8	None	None	100%	100%

Industrial and Employment Areas Full Region	Low density employment planned, with moderate level of access by all modes. Currently has poorly connected street system and some transit.		>8	None	None	100%	100%
Open spaces and rural reserves Full Region	Urban uses are not planned in the foreseeable future Recreational , farm or forestry uses are planned, with moderate level of access by all modes		>6	None	None	100%	100%
Special Area 1 Portland International Airport		A separate model is used to estimate airport traffic					
Special Area 2 Oregon Health Sciences University		*	*	5.71	8.93	60%	60%
Special Area 3 Oregon Zoo	(short-term only)	*	*	0.77	0.77	100%	100%

*Use parent zone values.

2035 RTP Land Use Assumptions

Appendix 1.5

2005 - RTP Update (IVAN)

	totemp	tothh	pop		totemp	tothh	pop
Multnomah County	493,659	288,955	682,800	Portland	440,825	235,214	538,078
% of total 3-County	54.31%	46.66%	43.84%		48.50%	37.98%	34.55%
Clackamas County	145,583	140,413	373,400	E Mult Co	52,834	53,742	144,722
% of total 3-County	16.02%	22.67%	23.97%		5.81%	8.68%	9.29%
Washington County	269,657	189,926	501,400				
% of total 3-County	29.67%	30.67%	32.19%				
3-County Total	908,899	619,294	1,557,600				
Clark County	123,352	147,724	403,504				
Region Total	1,032,251	767,018	1,961,104				

2035 RTP Update (IVAN)

	totemp	tothh	pop		totemp	tothh	pop
Multnomah County	751,232	390,690	879,700	Portland	637,064	312,445	679,782
% of total 3-County	49.91%	41.27%	36.98%		42.33%	33.01%	28.57%
Clackamas County	268,273	262,101	743,000	E Mult Co	114,168	78,245	199,918
% of total 3-County	17.82%	27.69%	31.23%		7.59%	8.27%	8.40%
Washington County	485,596	293,847	756,300				
% of total 3-County	32.26%	31.04%	31.79%				
3-County Total	1,505,100	946,638	2,379,000				
Clark County	294,143	262,048	718,402				
Region Total	1,799,243	1,208,686	3,097,402				

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Appendix 1.6

Highway Capacity Manual Level of Service Table

Level-of-Service (LOS) Definitions for Freeways, Arterials and Signalized Intersections

LOS	Freeways (average travel speed assuming 70 mph design speed)	Arterials (average travel speed assuming a typical free flow speed of 40 mph)	Signalized Intersections (stopped delay per vehicle)	Traffic Flow Characteristics
A	Greater than 60 mph Average spacing: 22 car-lengths	Greater than 35 mph	Less than 5 seconds; most vehicles do not stop at all	Virtually free flow; completely unimpeded Volume/capacity ratio less than or equal to .60
B	57 to 60 mph Average spacing: 13 car-lengths	28 to 35 mph	5.1 to 15 seconds; more vehicles stop than for LOS A	Stable flow with slight delays; reasonably unimpeded Volume/capacity ratio .61 to .70
C	54 to 57 mph Average spacing: 9 car-lengths	22 to 28 mph	15.1 to 25 seconds; individual cycle failures may begin to appear	Stable flow with delays; less freedom to maneuver Volume/capacity ratio of .71 to .80
D	46 to 54 mph Average spacing: 6 car-lengths	17 to 22 mph	25.1 to 40 seconds; individual cycle failures are noticeable	High density, but stable flow Volume/capacity ratio of .81 to .90
E	30 to 46 mph Average spacing: 4 car-lengths	13 to 17 mph	40.1 to 60 seconds; individual cycle failures are frequent; poor progression	Operating conditions at or near capacity; unstable flow Volume/capacity ratio of .91 to 1.00
F	Less than 30 mph Average spacing: bumper-to-bumper	Less than 13 mph	Greater than 60 seconds; not acceptable for most drivers	Forced flow, breakdown conditions Volume/capacity ratio of greater than 1.00
>F	Demand exceeds roadway capacity, limiting volume that can be carried and forcing excess demand onto parallel routes and extending the peak period			Demand/capacity ratios of greater than 1.10

Source: 1985 Highway Capacity Manual (A through F descriptions)
Metro (>F description)

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Appendix 2.1
Bicycle Travel Demand Model Enhancement

Bicycle use is an important component of the region's strategy to provide a multi-modal, balanced transportation system. Metro's 2035 Regional Transportation Plan (RTP) includes policy language calling for bicycle mobility and accessibility to and within the central city, regional centers, light rail station communities and other mixed-use activity centers. The RTP includes a regional system map of bikeways planned for the next twenty years.

The existing regional transportation demand model probably underestimates bicycle and pedestrian trips, and does not predict bicycle travel according to the transportation network. Instead, the current model predicts bicycle and pedestrian trips as part of the "mode choice" step of the modeling process, but does not assign these trips to a network to predict how they might be distributed. While pedestrian trips are generally short enough to make a network assignment impractical, bicycle trips are of sufficient length to be assigned to a network and evaluated at this level.

Developing a travel demand model for bicycles is an important step in developing a quantitative evaluation method to allocate funding for bicycle projects and improve the region's ability to plan for bicycle travel. Over the next two years, Metro will develop a bicycle travel demand model that can help determine what factors influence the decision to use a bicycle for trips and how bicyclists choose their route of travel. Portland State University (PSU) researchers will soon complete a study examining the various factors influence people's decisions on whether and where to bicycle, including a collection of actual bike routes from study participants (using GPS technology). Over the next two years, Metro will collaborate with PSU to capture the results of the study, and integrate its findings into Metro's route solution code. These data will be used to calibrate the path choice model to better reflect actual behavior. The additional data will allow Metro to improve its modeling capability to include travel demand forecasting for bicycles. The modeling results will assist planners in identifying needs and predicting future use of bikeway facilities, testing planned networks, and evaluating specific projects. Additionally, this project will help create an online bicycle trip planner, that will help bicyclists find a safe and convenient routes to travel around the region,

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Appendix 2.2
2040 Modal Targets

2040 Modal Targets

The 2040 Growth Concept serves as the integrated land use and transportation plan for the Portland metropolitan region, pursuant to Section 660-12-0035(5)(c) of the Oregon Transportation Planning Rule (TPR). A basic construct of the 2040 Growth Concept is to reduce the region's reliance on the automobile by focusing growth in centers and along major transportation corridors where transportation infrastructure is concentrated. This concept was fundamental to the development of the Regional Transportation Plan (RTP).

For the purpose of TPR compliance, the Regional Transportation Plan (RTP) includes 2040 modal targets as the primary "alternative" standard for evaluating the region's progress in reducing reliance on thhe automobile. Table 3.17 in Chapter 3 summarizes the modal targets and represents an aggressive long-term goal for the Portland metropolitan region to reduce non-single occupancy vehicle (non-SOV) travel in the region. The 2040 modal targets are also based on observed travel behavior collected as part of Metro's 1994-1995 survey of more than 7,500 households in the Portland metropolitan region.

1994 Travel Behavior/Activity Survey

In 1994, Metro also conducted a travel behavior survey within the four-county boundary of Clackamas, Multnomah and Washington Counties in Oregon and Clark County, Washington. As part of this survey, more than 7,500 households kept a diary of activities performed during a two-day period, including identification of how individuals traveled to those activities. The study was designed to focus on the relationship between an activity type and the need for travel and highlighted the importance of all activities, whether "big" or "small." Results from the study are summarized in Table 1.

Table 1. Summary of 1994 Metro Travel Behavior/Activity Survey Results (for all trip purposes)

	Mode Share					Vehicle Miles per Capita	Auto Ownership per Household
Land Use Type	% Auto	% Walk	% Transit	% Bike	% Other		
Areas with Good Transit/ Mixed Use In Multnomah County	58.1%	27.0%	11.5%	1.9%	1.5%	9.80	0.93
Areas With Good Transit Only In Multnomah County	74.4%	15.2%	7.9%	1.4%	1.1%	13.28	1.50
Remainder of Multnomah County	81.5%	9.7%	3.5%	1.6%	3.7%	17.34	1.74
Remainder of Region	87.3%	6.1%	1.2%	0.8%	4.6%	21.79	1.93

Source: Metro Travel Forecasting Department

Areas with good transit service and a good mix of land uses showed the highest percentage of alternative mode use (41.9 percent combined). Conversely, the remainder of the region showed the highest percentage of auto use (87.3 percent). This indicates that individuals are likely to use the automobile when no other choices exist, but may choose other alternatives when they are available. The results of this study support this region's effort to link land use and transportation planning as a means to provide a balanced, multi-modal transportation system.

Relationship of 2040 Modal Targets to RTP Modeling Assumptions

Appendix 1.4 identifies specific modeling assumptions by transportation analysis zone (TAZ) that are intended to mirror the expected improvements proposed in the RTP and their impact on mode choice. The following section summarizes how the modeling assumptions relate to transit, walking, bicycling and shared ride.

Transit

Transit ridership is highly dependent on convenient, affordable, frequent service. For transit, the RTP modeling assumes nearly tripling current transit service levels, fareless squares in all regional centers, as well as the central city, and varying levels of parking cost in most centers. The RTP also assumes reduced fare programs for all trips destined for the central city, regional centers and other areas that are currently targeted for transportation demand management (TDM) programs. Finally, the RTP identifies improvements to enhance bicycle and pedestrian access to transit.

Walking

For pedestrian improvements, the RTP uses a modeling surrogate of intersection density (e.g., street connectivity) that the travel survey has demonstrated to be a reliable predictor of pedestrian travel. Using this surrogate, the RTP modeling has assumed a broad range of pedestrian improvements, including full-street "boulevard" retrofits, and improved street connectivity in the central city, regional and town centers, station communities and main streets.

Bicycling

For bicycle travel, the RTP focuses on providing improved bicycle facilities with the recognition that additional information is needed to better quantify the factors that affect the propensity to choose bicycling as a mode of travel, including accessibility to type of land use, presence of bikeway facilities and topography (see Appendix 2.1 for more information).

Shared ride

The travel behavior survey data suggest that the shared ride alternative to driving alone is less responsive to integrated land use and transportation planning than transit, walking and bicycling. For shared ride travel, this is largely due to the complexity of trip-making and social factors that limit the potential for non-family shared ride arrangements. As a result, modeling assumptions were not developed to specifically to reflect this mode choice.

Implementation of the 2040 Modal Targets

Section 7.4.6 of the RTP requires local governments to demonstrate progress toward the 2040 modal targets and to identify actions that will result in progress toward achieving the targets. The targets are for the year 2040. The "progress toward" language is critical in this regard. Some jurisdictions have already met the targets in the most developed areas of the region, while emerging centers are many years from approaching the targets, and development in these areas will likely occur unevenly. Though the modeling assumptions in Appendix 1.4 are tailored to such differences by establishing varying tiers among land use types based on degree of urbanization, there are still significant differences within tiers. Also, the RTP already places a number of very specific requirements on the local TSPs that are part of the effort to work toward meeting the modal targets.

Metro's primary goal is to ensure that the planning programs be adopted, and that on-the-ground progress be demonstrated over time. However, progress toward the non-SOV modal targets is an output of the regional travel demand model, but cannot be generated by local jurisdictions. Therefore, Metro uses the modeling assumptions described shown in Appendix 1.4 as a "checklist" to ensure that the actions called for in local TSPs are generally consistent with the model assumptions made to reach the modal targets. Progress would be periodically evaluated as part of RTP updates.

At a minimum, local transportation system plans are expected to include the following elements to

demonstrate consistency with Section 7.4.7 of the RTP:

1. Adoption of 2040 modal targets in TSP policies

2. Adoption of street connectivity plans and implementing ordinances (consistent with RTP Section 7.4.5) as a surrogate for "intersection density."

3. Adoption of maximum parking ratios to implement the parking requirements of Title 2 of the Urban Growth Management Functional Plan as a surrogate for the "parking factors."

4. Formation/existence of transportation management association (TMA) as a surrogate for "Transit Pass Factor."

5. Adoption of fareless area transit policies in regional centers as a surrogate for the "Fareless Area."

6. Adoption of transit strategies consistent with RTP Section 7.4.10

Other potential actions/strategies that must be considered, and included as appropriate, as local transportation system plans and implementing ordinances are developed include:

1. Land use Strategies
   - Mixed use/concept area and pedestrian district plans and implementing ordinances
   - Transit oriented development district plans and implementing ordinances

2. Shared Ride Strategies
   - Carpooling + matching services
   - Vanpooling
   - HOV Lanes
   - Preferential parking for Carpool/Vanpoolers

3. Non-SOV Mode Strategies
   - Bicycle facilities
   - Pedestrian facilities
   - Bicycle and pedestrian plans and projects
   - Transit:
     - Group/free transit passes
     - Express bus service / frequent bus service
     - Park and ride lots
     - Demand responsive transit service
     - Custom shuttle service (e.g., OHSU shuttle)
     - Bus bypass lanes
     - Projects to improve bike/ped access to transit
   - Carsharing
   - Alternative mode friendly street design

4. Parking Strategies
   - Parking pricing/parking meters
   - Timed parking
   - Subsidized parking structures in mixed use areas
   - Preferential parking for carpools/vanpools/bicycles
   - Shared Parking
   - Parking lot placement / building orientation

5. Employer-based strategies
    - Trip reduction ordinances
    - Compressed or staggered work schedules
    - Flex-time
    - Telecommuting/telework
    - Telecommunications (e.g., internet based strategies like video conferencing)
    - Guaranteed Ride Home program
    - Monetary Incentives (free or reduced transit passes, bike/walk certificates)
    - Participation in TMA
    - Vanpool operation/subsidy
    - Provision of on-site facilities supporting alternative modes, e.g. showers, bike parking
    - Preferential parking for carpools/vanpools/bicycles

6. Pricing Strategies
    - Congestion Pricing
    - Parking Pricing
    - Gas Tax Increase
    - Vehicle Miles Traveled Tax
    - Vehicle Miles Traveled Insurance

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Appendix 3.1
Corridor Planning Priorities

This appendix prioritizes completion of Corridor Plans and Corridor Refinements called for in Chapter 7 of the Regional Transportation Plan (RTP). Section 7.7.4 of the RTP describes the planning scope and responsibilities for refinement planning. Sections 7.7.5 and 7.7.6, respectively, specifically list Corridor Refinements and Corridor Planning studies.

Due to the number of corridor planning needs and the lack of available resources, Metro initiated the Corridor Initiatives Process in December 2000 to establish regional corridor planning priorities. This effort resulted in the attached work program for completion of these studies. The work program is monitored and updated annually as part of the Unified Planning Work Program (UPWP) process. This appendix will be updated as part of the state component of the 2035 RTP update.

The Corridor Initiatives Process

Representatives from the Multnomah, Clackamas, Washington and Clark counties, ODOT, cities in the metropolitan area, the Port of Portland and Tri-Met participated in technical and project management committees. These committees guided the process and formulated recommendations with respect to corridor refinement planning. A technical evaluation was completed, with each corridor evaluated on several criteria and a number of measures related to mobility, 2040 land use relationships, expected 2040 travel modes, reliability and safety. A scoring system was established and points allocated for each technical measure.

In addition to the technical evaluation, the advisory committees considered non-technical factors such as relation to other planning efforts, community interest and available resources for each corridor. Meetings were held with groups of elected officials from around the region to gather further input on the rankings. A public meeting was also held where information was provided and public input solicited.

A resolution describing this process and resulting recommendations for completing the corridor studies was presented to TPAC, JPACT and the Metro Council in the summer of 2001. A final report documenting the entire process was prepared in the Spring of 2002, along with amendments to the RTP necessary to incorporate the recommendations in RTP procedural and project-level plan provisions.

Work Program Description

Based on this process, those corridors that demonstrated the more urgent planning needs and a level of jurisdictional interest considered sufficient to support a successful project were reviewed in more detail. Many of these corridors already had planning activities taking place or planned. Proposed actions were developed for the remaining corridors.

The following work program summarizes the planning activities for each of the 18 corridors by RTP planning time period (e.g. 2001-2005, 2006-2010 and 2011-2020). The corridors are organized into three groups depending on the status of planning efforts. The first group includes six corridors where work was ongoing in 2001. The second group highlights two corridors (Powell/Foster and Highway 217 Corridors) where major new corridor refinements are recommended in the first planning period. The third group lists the ten other corridors where no major planning work was ongoing in 2001. The “Other Corridor” group includes some corridors where significant planning work had already been completed or was planned. It also includes corridors for which no major work was anticipated in the near term.

Appendix 3.1 - Work Program for Corridor Refinement Planning Through 2020

Corridor and Key Facilities Corridor Planning On-Going	First Planning Period (2001 - 2005)	Second Planning Period (2006 - 2010)	Third Planning Period (2011 - 2020)
I-5 (North) Corridor - I-5 from I-84 to Vancouver	I - 5 Trade Corridor Study	Financial Plan/EIS/Preliminary Engineering	
NE Portland Highway Corridor - Columbia Blvd. from Burgard to Killingsworth, Lombard from I - 5 to Killingsworth, and Killingsworth from Lombard to I - 205.	East End Connector Environmental Assessment; Begin Refinement Planning through I-5 Trade Corridor; Adopt St Johns Truck Access Study	Implement St Johns Truck Access Study Recommendations; Environmental Assessment and Engineering on I-5 Trade Corridor Recommendations	
I-205 (North) Corridor - I - 205 from Hwy. 224 to Vancouver.	South Transit Corridor Study and I-5 Trade Corridor Study (transit only)	Corridor Planning for Interchange Improvements	Corridor Planning for Roadway Widening
Banfield (I-84) Corridor - I - 84 from I - 5 to Troutdale.	Light Rail Capacity Analysis	Transit, Transportation System Management Corridor Plan	Transit Improvements and/or Transportation System Management Projects
McLoughlin and Hwy. 224 Corridor - Hwy. 99E from Hawthorne Blvd to Oregon City. Hwy. 224 from McLoughlin Blvd. To I - 205.	South Transit Corridor EIS and Preliminary Engineering		Corridor Planning for Highway Improvements
I-5 to Highway 99W Connector - Tualatin-Sherwood Road from I-5 to Hwy. 99W. Hwy. 99W from Tualatin-Sherwood Road to Bell Road.	Southern Alignment Study; Complete Exceptions; Right-of-Way Preservation Analysis		Complete Corridor Planning
New Major Corridor Refinements Recommended in the First Period			
Powell/Foster Corridor - Powell Blvd. from the west end of Ross Island Bridge to Gresham. Foster Road from Powell to Hwy. 212 Damascus.	**Corridor Planning**	Environmental Impact Study and Preliminary Engineering	
Highway 217 Corridor - Hwy. 217 from Sunset Hwy. to I - 5.	**Corridor Planning**	Environmental Impact Study and Preliminary Engineering	
Other Corridors			
North Willamette Crossing Corridor - Study new crossing near St. Johns Bridge (Hwy. 30 from NW Newberry Road to BN Railroad Bridge).	Adopt Signage and Truck Control Recommendations of St Johns Study; St Johns Town Center Study	Implement Signage and Truck Control Recommendations of St Johns Studies	Corridor Planning
I-84 to US 26 Connector Corridor - 238th/242nd from I - 84 to Burnside, and US 26/Burnside from Hogan Road to 282nd.	National Highway System Truck Study	Corridor Planning for Preservation of Right-of-Way and Arterial Improvements	Complete Corridor Planning
Sunrise Corridor - Hwy. 212/224 from I-205 to US 26.	Complete Refinement Planning and EIS for Unit 1 and Engineering for Phase One; Complete Exceptions		Begin Unit Two Environmental Assessment or Environment Impact Statement Process
Highway 213 Corridor - Hwy. 213 from I-205 to Leland Road.	Construct Southbound Turning lane on Highway 213	Implement Funded Recommendations of Highway 213 Design Study	Corridor Planning
I-205 (South) Corridor I 205 from I-5 to Hwy. 224.	Interchange Ramp Access Study	Corridor Planning for Freeway Improvements	
Macadam/Highway 43 Corridor - Hwy. 43 from Ross Island Bridge to West Linn.	Transit/Pedestrian/Bike Transportation Demand Management Study	Environmental Assessment/ DEIS/and Preliminary Engineering	
I-5 (South) Corridor - I-5 from Hwy. 99W in Tigard to Wilsonville.	Boeckman Road Interchange Study		Corridor Planning
Barbur Blvd./I-5 Corridor - Hwy. 99W and I-5 from I - 405 to Tigard.	Implement Transit Service Improvements and Elements of the Barbur Streetscape Plan	Initiate Corridor Planning	Begin Environmental Assessment/ Environmental Impact Statement Process
TV Highway Corridor - Tualatin Valley Hwy. from Hwy. 217 to downtown Hillsboro.	System Planning for Access Management and Right-of-Way		Corridor Planning (if required)
Sunset Highway Corridor - US 26 from I-405 to Jackson School Road.	Refinement and Environmental Assessment of US Hwy. 26 Widening. Barnes Road Design and Construction	Engineering of US 26 Widening west of Murray Boulevard	

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Appendix 3.2

Beaverton Regional Center
Area of Special Concern Findings

Beaverton has historically been defined as a crossroads of transportation, with both the advantages and limitations that heavy through traffic brings. While the level of access has helped make the Beaverton regional center a focus of commerce in Washington County, it also presents barriers to local circulation where congested through-streets isolate some parts of the area. These congestion problems persisted in the RTP analysis, despite an aggressive strategy to improve connectivity in the Beaverton regional center as identified in Beaverton's updated 2015 Transportation System Plan.

In particular, Beaverton-Hillsdale Highway from Highway 217 to Cedar Hills Boulevard, Canyon Road from Highway 217 to Cedar Hills Boulevard and Farmington Road from 170th Avenue to Cedar Hills Boulevard are expected to exceed the RTP level of service standard, and act as barriers to local travel in the district. Sections of Murray Boulevard are also expected to exceed the LOS standard from Allen Boulevard to Cornell Road. The Beaverton TSP should include a specific action plan and benchmarks for these facilities to ensure that traffic growth is managed in a way that is consistent with overall regional center goals.

As local TSPs are developed, this information will be expanded to provide more detailed findings to support the Area of Special Concern designation, consistent with the provisions in Section 7.7.7.

Beaverton Regional Center Area of Special Concern Action Plan

The Beaverton Regional Center was designated an Area of Special Concern because it experiences some future localized congestion due to its high density, transit oriented, mixed-use functions. The Regional Center includes two light rail stations, one of which is a transit transfer center. Local land use designations and zoning are addressed in Beaverton's Comprehensive Plan and Development Code. Transportation impacts of these designations are specifically addressed in Beaverton's 2020 Transportation System Plan and the Comprehensive Plan and Development Code.

Specifically, Beaverton's 2020 Transportation System Plan addresses the transportation impacts of the land use designations through planned implementation of the Bicycle, Pedestrian, Transit, and Motor Vehicle Master Plans, as well as demand and system management policies and actions.

The following Action Plan for Beaverton's Regional Center Area of Special Concern is identified in the 2020 TSP and implemented through the Comprehensive Plan Transportation Element, Development Code requirements, and Engineering Design Manual and Standards:

1. Adoption of non-single occupant vehicle modal targets. [Goal 6.2.4 Policy (a)]
2. Parking ratios consistent with Title 2 requirements. [Goal 6.2.4. Policy (b) and Development Code Section 60]
3. Comprehensive Plan Transportation Element. [Bicycle, Pedestrian, Transit, and Motor Vehicle Master Plans, and Functional Classification Map]
4. Land Use Element of the Comprehensive Plan that includes mixed-use at densities consistent with the Regional Functional Plan.
5. Comprehensive Plan Policies and Actions: These address all aspects of providing and maintaining a balanced multimodal transportation system that serves all users. These include street design and classifications, safety, connectivity, traffic calming, coordinated actions with the State, Washington County, Tri-Met, neighboring cities and counties, school districts, Tualatin Hills Parks and Recreation District, neighborhoods, freight users, and emergency providers.
6. Land use and transportation provisions that anticipate development impacts and require mitigation: Development Code Traffic Impact Analysis Requirements mandate mitigation that is reasonably related to and roughly proportional to identified impacts, multimodal street standards consistent with Metro Regional Street Designs, level of service standards consistent with regional and State standards, connectivity requirements, access management requirements, street plans that recommend additional connections with development, parking ratio provisions, transportation system management and demand management strategies and actions, zoning designations, and land use related requirements.

References:
2020 Transportation System Plan
Comprehensive Plan Chapter Six – Transportation Element
Comprehensive Plan Chapter Three – Land Use Element
Beaverton Development Code Section 60 Transportation Facilities
Beaverton Zoning Map
Beaverton Engineering Design manual and Standards

Portland Central City
Area of Special Concern Findings

The Portland central city area east of the Willamette River and generally within the I-405 freeway ring has an extensive grid of well-connected arterial, collector and local streets. The Willamette River bridges are a key part of the transportation system, connecting the central city and adjacent neighborhoods to the region. The hilly topography has constrained much of the transportation system in the Northwest and Southwest portions of the central city. Despite these limitations, this area is expected to continue to be served by high-quality transit and be conducive to bicycle and pedestrian travel.

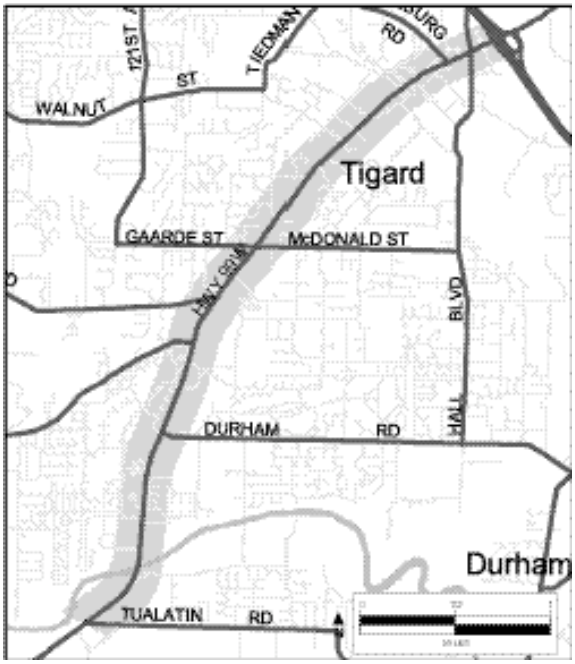
As local TSPs are developed, this information will be expanded to provide more detailed findings to support the Area of Special Concern designation, consistent with the provisions in Section 7.7.7.

Gateway Regional Center
Area of Special Concern Findings

Gateway regional center is defined as a major crossroads of transportation that is impacted by through traffic that is not destined for the regional center such and which presents barriers to local circulation where congested through-streets isolate some parts of the regional center. The Preferred System analysis shows that from the perspective of employers looking at labor markets, the Gateway area is the most accessible place in the Metro region. At the same time, spillover traffic from the Banfield Freeway corridor exceeds the LOS policy established in Table 3.16 on a number of east/west corridors in the Gateway area, including Halsey, Glisan, Burnside, Stark and Division streets.

As local TSPs are developed, this information will be expanded to provide more detailed findings to support the Area of Special Concern designation, consistent with the provisions in Section 7.7.7.

Highway 99W
Area of Special Concern Findings



The Highway 99W corridor between Highway 217 and Durham Road is designated as a mixed-used corridor in the 2040 Growth Concept, and connects the Tigard and King City town centers. This route also experiences heavy travel demand. The City of Tigard has already examined a wide range of improvements that would address the strong travel demand in this corridor. The RTP establishes the proposed I-5 to 99W connector as the principal route connecting the Metro region to the 99W corridor outside the region. This emphasis changes the function of 99W, north of Sherwood, to a major arterial classification, with less need to accommodate longer, through trips.

However, for much of Washington County, Highway 99W will still be a major connection, linking Sherwood and Tigard to the rest of the County and linking the rest of the County to the Highway 99W corridor outside of the region. A number of alternatives for relieving congestion have been tested as part of the RTP update, and by the City of Tigard in earlier planning efforts. These efforts led to the common conclusion that latent travel demand in the Highway 99W corridor is too great to be reasonably offset by capacity projects alone. While the RTP proposed new capacity on 99W between I-5 and Greenburg Road, no specific capacity projects are proposed south of Greenburg Road, due to latent demand and the impacts that a major road expansion would have on existing development. As a result, this section of Highway 99W is not expected to meet the region's motor vehicle level of service policies during mid-day and peak demand periods in the future, and an alternative approach to managing traffic in the corridor is needed.

As local TSPs are developed, this information will be expanded to provide more detailed findings to support the Area of Special Concern designation, consistent with the provisions in Section 7.7.7.

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Findings of Compliance with SAFETEA-LU

TITLE 23 - UNITED STATES CODE
SECTION 134 - METROPOLITAN PLANNING

The Regional Transportation Plan (RTP) is the long-range metropolitan transportation plan for the Portland metropolitan region. The RTP establishes the blueprint to guide the design, management and governance of all regional transportation investments. The RTP is updated regularly to ensure compliance with state and federal regulations, and to reflect changing demographic, financial, travel and economic trends and any subsequent changes in the region's transportation needs.

The following findings are intended to explain how the federal component of the 2035 Regional Transportation Plan ("RTP") complies with applicable requirements of Section 134 in general. These findings are a roadmap to the decision record for the federal component of the 2035 RTP update. Inapplicable subsections of Section 134 and Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) are not cited in these findings.

134(f)(2)(A-B) Interstate Compacts

> *"The consent of Congress is granted to any 2 or more States to enter into agreements or compacts, not in conflict with any law of the United States, for cooperative efforts and mutual assistance in support of activities authorized under this section as the activities pertain to inter-state areas and localities within the States and to establish such agencies, joint or otherwise, as the States may determine desirable for making the agreements and compacts effective."*

Metro has entered into an intergovernmental agreement with the Regional Transportation Commission ("RTC"), the MPO for Clark County, Washington. The RTC is represented on Metro's Transportation Policy Alternatives Committee ("TPAC") and Joint Policy Advisory Committee on Transportation ("JPACT"). Likewise, Metro is represented on RTC technical and policy advisory committees. The function of Metro's interagency coordinating committees is described in Section 1.2 of the 2035 Regional Transportation Plan ("RTP").

134(g)(2) Transportation Improvements Located in Multiple MPOs

> *"If a transportation improvement is located within the boundaries of more than 1 metropolitan planning organization, the metropolitan planning organizations shall coordinate plans and TIPs regarding the transportation improvement."*

Based on a recommendation from the I-5 Partnership Governors Task Force, the Bi-State Transportation Committee became the Bi-State Coordination Committee in early 2003. This joint committee advises the region, state and local jurisdictions on transportation and land use issues of bi-state significance. The intergovernmental agreement between the RTC and Metro states that JPACT and the RTC Board "shall take no action on an issue of bi-state

significance without first referring the issue to the Bi-State Coordination Committee for their consideration and recommendation."

Several projects in the I-205 and I-5 highway corridors, including transit improvement, are near the Metropolitan Planning Organization (MPO) boundary, or span the Metro and RTC MPOs. These projects are listed in Appendix 1.1 of the 2035 RTP. Metro has coordinated these projects with the RTC through the membership of TPAC, JPACT and the Bi-State Coordination Committee, which advises the RTC, and JPACT/Metro on issues of bi-state significance.

134(g)(3) Relationship with Other Planning Officials

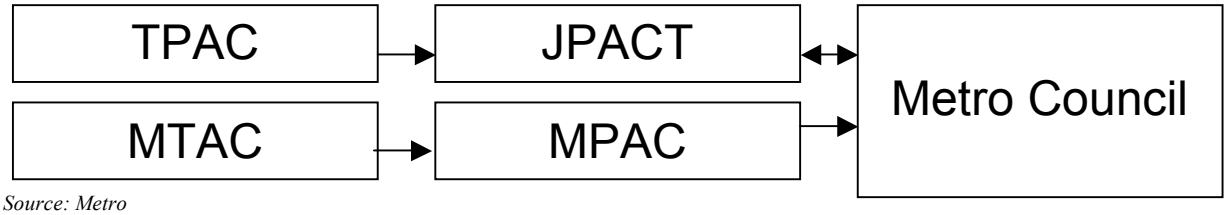
> *'The Secretary shall encourage each metropolitan planning organization to consult with officials responsible for other types of planning activities that are affected by transportation in the area (including State and local planned growth, economic development, environmental protection, airport operations, and freight movements) or to coordinate its planning process, to the maximum extent practicable, with such planning activities. Under the metropolitan planning process, transportation plans and TIPs shall be developed with due consideration of other related planning activities within the metropolitan area."*

The 2035 RTP update coordinated and consulted with other planning officials through a variety of methods, including one-on-one meetings with planning officials, 5 stakeholder workshops that included environmental, business, freight, economic development, public health, and other interests affected by transportation. Metro also coordinates with freight, rail, airport operations and business interests through the Regional Freight and Goods Movement Task Force and Regional Freight and Goods Movement Technical Advisory Committee. Metro is a member of Regional Partners for Economic Development and endorsed the Consolidated Economic Development Strategy (CEDS).

Metro's jurisdictional boundary encompasses the urban portions of Multnomah, Washington and Clackamas counties. Metro's planning partners include the 25 cities, three counties and affected special districts of the region, ODOT, Oregon Department of Environmental Quality (DEQ), Port of Portland, South Metro Area Rapid Transit (SMART), TriMet and other interested community, business and advocacy groups as well as state and federal regulatory agencies such as the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). Metro also coordinates with the City of Vancouver, Clark County Washington, the Port of Vancouver, the Southwest Washington Regional Transportation Council (RTC), C-Tran, the Washington Department of Transportation, the Southwest Washington Air Pollution Control Authority and other Clark County governments on bi-state issues. The Southwest Washington Regional Transportation Council is the federally designated MPO for the Clark County portion of the Portland-Vancouver metropolitan region. Metro consults with planning officials from each of these agencies.

Metro facilitates this consultation, coordination and decision-making through four advisory committee bodies –the Joint Policy Advisory Committee on Transportation (JPACT), the Metro Policy Advisory Committee (MPAC), the Transportation Policy Alternatives Committee (TPAC) and the Metro Technical Advisory Committee (MTAC). In addition, the Metro Committee for Citizen Involvement (MCCI) provides advice to the Metro Council on how to best engage residents in regional planning activities. **Figure 1.1** displays the regional transportation decision-making process.

Figure 1.1
Regional Transportation Decision-Making Process



Source: Metro

All transportation-related actions (including federal MPO actions) are recommended by JPACT to the Metro Council. The Metro Council can approve the recommendations or refer them back to JPACT with a specific concern for reconsideration. Final approval of each item, therefore, requires the concurrence of both bodies. Under state law, the RTP serves as the region's transportation system plan (TSP). As a result, the Metro Policy Advisory Committee (MPAC) also has a role in approving the regional transportation plan as a land use action, consistent with statewide planning goals and the Metro Charter. In addition, Metro has implemented a fish and wildlife habitat protection program through regulations, property acquisition, education and incentives in coordination with MPAC.

In addition, the Bi-State Coordination Committee advises the RTC, and JPACT/Metro on issues of bi-state significance. On issues of bi-state land use and economic significance the Committee advises the local and regional governments appropriate to the issue. Since formation in 1999, the committee has reviewed Federal transportation funding reauthorization, Columbia River Channel deepening and projects and studies focused on the I-5 Corridor. Restructuring in 2004, expanded this role to include examining the connection between land use and transportation in the I-5 corridor and taking a multi-modal approach – including freight and transit – in considering the impacts of land use and transportation decisions within the context of economic development and environmental justice issues. JPACT and the RTC Board cannot take action on an issue of major bi-state transportation significance without first referring the issue to the Bi-State Coordination Committee for their consideration and recommendation.

Goal 10 in the 2035 RTP calls for the region's government, business, institutional and community leaders work together in an open and transparent manner so the public has meaningful opportunities for input in transportation decisions and experiences an integrated, comprehensive system of transportation facilities and services that bridge governance, institutional and fiscal barriers.

134(h)(1) Scope of Planning Process - Metropolitan Planning Factors

This section requires that the metropolitan transportation planning process for a metropolitan area under this section shall provide for consideration of projects and strategies that will satisfy the planning factors (A) through (H), below.

134(h)(1)(A) Plan Supports Economic Viability

"Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency."

The policy component of the RTP is structured around the implementation of the Region 2040 Growth Concept through strategic transportation improvements. As the economic engines of the region's economy, the Portland central city, six regional centers, the region's industrial areas and intermodal facilities are identified as the primary areas for transportation investments (2035 RTP Section 3.2 and Table 3.1).

Transportation improvements in these primary components of the 2040 Growth Concept are also guided by a set of functional maps that establish a series of efficient, high-quality motor vehicle, freight, transit, bicycle and pedestrian systems that are similarly designed to reinforce the growth concept (2035 RTP Section 3.4.3). The RTP recognizes that new transit and road capacity are needed to achieve the Region 2040 vision and support the region's economic vitality. In addition, the plan considers transportation and the economy as inextricably linked, and recognizes investments that serve certain land uses or transportation facilities may have a greater economic return on investment than others. The plan also recognizes that focusing transportation investments and other strategies to support the gateway function of our transportation system is the primary way in which to strengthen that gateway role for the region and the rest of the state. This means ensuring reliable and efficient connections between intermodal facilities and destinations in, beyond, and through the region to promote the region's function as a gateway for trade and tourism. In addition, other elements of the 2035 RTP include:

- RTP policies that are linked to land use strategies that promote economic development (Goal 1 and Goal 2).
- Comprehensive, multimodal freight improvements that link intermodal facilities to industry are detailed for the plan period. (Chapter 6)
- Highway LOS policy tailored to protect key freight corridors. (Table 3.16)
- RTP recognizes need for freight linkages to destinations beyond the region by all modes. (Sections 2.4.7.1 and 3.4.2.3)

Several corridor studies have also been completed since 2000, such as the I-5 Trade Partnership Study, and project recommendations have been included in the 2035 RTP to address the movement of freight in the region. Among the projects aimed at maintaining a robust economy are a number of highway corridor improvements, freight and passenger terminal access improvements, bridge improvements, rail crossing upgrades and channel deepening of the Columbia River. These projects are included in the RTP financially constrained system in Chapter 6.

134(h)(1)(B) Plan Increases Safety

"Increase the safety of the transportation system for motorized and non-motorized users."

Safety issues and activities are summarized in Section 2.4.7.3 of the 2035 RTP. In addition, the policy framework in Section 3.3 of the 2035 RTP includes, "Goal 5: Enhance Safety and Security," and specific safety objectives and potential actions to increase safety of the transportation system for all users. A background research paper was also developed during Phase 2 of the update to document current safety issues and planning efforts in the region. This research is included Appendix 6.0 was considered during the formulation of the 2035 RTP goals, objectives, projects and potential actions included in Chapter 3 and investment priorities in Chapter 6 of the 2035 RTP. The RTP includes a number of investments and actions aimed at further improving safety in the region, including:

- Investments targeted to address known safety deficiencies and high-crash locations.
- Completing gaps in regional bicycle and pedestrian systems.
- Retrofits of existing streets in downtowns and along main streets to include on-street parking, street trees marked street crossings and other designs to slow traffic speeds to follow posted speed limits.

- Intersection changes and ITS strategies, including signal timing and real-time traveler information on road conditions and hazards.
- Expanding safety education, awareness and multi-modal data collection efforts at all levels of government.
- Expand safety data collection efforts and create a better system for centralized crash data for all modes of travel.

This emphasis on safety is also mirrored in Metro's MTIP funding process, where safety improvements are given a priority.

134(h)(1)(C) Plan Increases Security

"Increase the security of the transportation system for motorized and non-motorized users."

Security and emergency management activities are summarized in Section 2.4.7.4 of the 2035 RTP. In addition, the policy framework in Section 3.3 of the 2035 RTP includes, "Goal 5: Enhance Safety and Security," and specific security objectives and potential actions to increase security of the transportation system for all users. A background research paper was also developed during Phase 2 of the update to document current security planning efforts in the region, including: the role of the Regional Emergency Management Group (REMG), which has expanded its scope to include anti-terrorism preparedness, TriMet's responsibility for transit security plans, ODOT's responsibility for coordination of state security plans, Port of Portland's responsibility for air, marine and other Port facilities security plans and implementation of system management strategies to improve security of the transportation system (e.g., security cameras on MAX and at transit stations). This research is included Appendix 6.0 and was considered during the formulation of the 2035 RTP goals, objectives, projects and potential actions included in Chapter 3 and investment priorities in Chapter 6 of the 2035 RTP.

The RTP calls for implementing investments that increase system monitoring for operations, management and security of the regional mobility corridor system. These types of investments would enhance existing coordination and communication efforts in the region, and recognize these facilities would serve as the primary transportation network in the event of an evacuation of the region. The plan also directs Metro to work with local, state and regional agencies to identify critical infrastructure in the region, assess security vulnerabilities and develop coordinated emergency response and evacuation plans. In addition, transportation providers are directed to monitor the regional transportation and minimize security risks at airports, transit facilities, marine terminals and other critical infrastructure. Future RTP updates will consider expanding Metro's role, as the MPO, to increase existing coordination and planning efforts in the region and funding of initiatives to address these issues.

134(h)(1)(D) Plan Increases Accessibility and Mobility

"Increase the accessibility and mobility of people and for freight."

The transportation vision that guides the RTP (2035 RTP Section 3.1) is based on the premise that the system must become more multi-modal in design and function in order to fully implement the 2040 Growth Concept, sustain the region's economic competitiveness, and reduce dependency on the automobile as a sole mode of travel. The vision is translated into motor vehicle, transit, freight, bicycle and pedestrian policies that emphasis mobility and access to 2040 centers, industrial areas, and intermodal facilities (2035 RTP Section 3.2). The RTP policies are organized on the principle of providing accessibility to centers and employment areas with a balanced, multi-modal transportation system. The policies also identify the need for freight mobility in key freight corridors and to provide freight access to industrial areas and intermodal facilities.

The plan emphasizes accessibility and reliability of the system, particularly for commuting and freight, and includes a new, more customized approach to managing and evaluating performance of mobility corridors. This new approach builds on using new, cost-effective technologies to improve safety, optimize the existing system, and ensure that freight transporters and commuters have a broad range of travel options in each corridor. Improving access to and within 2040 Target Areas and completing gaps in pedestrian, bicycle and transit systems is also a critical part of this strategy. The policies resulted in a multi-modal set of recommended projects and programs to increase access and mobility options to people and for freight in Chapter 6. The projects are listed in the Technical Appendix to the 2035 RTP.

134(h)(1)(E) Plan Protects Environment

"Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and State an local planned growth and economic development patterns."

A background research paper was also developed during Phase 2 of the update to document current environmental issues and planning efforts in the region. The research is summarized in Section 2.4.7.5 of the 2035 RTP. This research is also included Appendix 6.0 and was considered during the formulation of the 2035 RTP goals, objectives, projects and potential actions included in Chapter 3 and investment priorities in Chapter 6 of the 2035 RTP. The policy component of the RTP seeks to protect sensitive environmental areas and resources from the potentially negative effects of transportation improvements (2035 RTP Goal 6). The transit, bicycle and pedestrian systems envisioned in the plan (2035 RTP Section 3.2) and corresponding projects that implement these systems, promote energy conservation and enhance air quality by reducing the use of motor vehicles. The region's parking policies (Title 2 of the Urban Growth Management Functional Plan) are also designed to encourage the use of alternative modes, and reduce reliance on the automobile, thus promoting energy conservation and reducing air quality impacts. In addition:

- The region has developed an environmental street design guidebook to facilitate environmentally sound transportation improvements in sensitive areas, and to coordinate transportation project development with regional strategies to protect endangered species.
- The RTP conforms to the Clean Air Act and State Implementation Plan.

- Many new transit, bicycle, pedestrian and TDM projects have been added to the plan to provide a more balanced multi-modal system that maintains livability.
- RTP transit, bicycle, pedestrian and TDM projects planned for the plan period will complement the compact urban form envisioned in the 2040 growth concept by promoting an energy-efficient transportation system.
- Metro coordinates its system level planning with resource agencies to identify and resolve key issues.

134(h)(1)(F) Plan is Multi-modal

"Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight."

The RTP establishes integrated modal systems for motor vehicles, transit, freight, bicycles and pedestrians through a series of functional classification maps and accompanying narrative (2035 RTP Section 3.4.2). The street design classifications (2035 RTP Section 3.4.2.1) serve as the policy tool for integrating these modal systems, and linking them to the 2040 land use components. These modal systems and design classifications emphasize regional travel, as they apply only to the regional transportation system, which includes regional, statewide and interstate travel routes, and intermodal facilities for people and freight. The regional street design classifications (2035 RTP Section 3.4.2.1) link transportation and 2040 land use considerations for all portions of the regional transportation system.

The design classifications establish a modal-orientation on detailed segments of the major street system, reflecting future travel demand that is expected for individual 2040 land use components. In compact, mixed-use areas, the street design classifications emphasize transit, bicycle and pedestrian elements, as well as calmed motor vehicle travel speeds and on-street parking that supports storefront development. In industrial and employment areas, the street design classifications emphasize motor vehicle travel, including freight, with an emphasis on motor-vehicle mobility. However, all of these classifications are multi-modal in design, and embrace the principle that all streets should serve all modes of travel in some manner. The exception to this strategy are limited-access freeway and highway facilities, that are not intended to include pedestrian and bicycle access, due to safety concerns.

The modal systems are also complemented by connectivity provisions that will increase local and major street connectivity in the region. The RTP freight policies and projects address the intermodal connectivity needs at major freight terminals in the region. These policies were considered in the development of investment priorities in Chapter 6 of the 2035 RTP.

134(h)(1)(G) Plan Promotes System Management

"Promote efficient system management and operation."

A background research paper was also developed during Phase 2 of the update to document current system management efforts in the region. The research is summarized in Section 2.4.6 of the 2035 RTP. This research is also included Appendix 6.0 and was considered during the formulation of the 2035 RTP goals, objectives, projects and potential actions included in Chapter 3 and investment priorities in Chapter 6 of the 2035 RTP. The plan implements recent policy direction from the federal and state governments to better link system management with planning for the region's transportation system as well as a growing body of research demonstrates that adding road capacity alone is not a sustainable solution to congestion. The

policy component of the 2035 RTP includes specific provisions for efficient system management and operation (2035 RTP Goal 4), with an emphasis on TSM, ATMS and the use of non-auto modal targets (Table 3.17) to optimize the existing and planned transportation system. The regional congestion management process also requires local jurisdictions to explore system management solutions before adding roadway capacity to the regional system (2035 RTP Section 7.6.3). The plan also calls for consideration of value pricing in the region to better manage capacity and peak use of the throughway system. However, more work is needed to gain public acceptance of this tool. RTP projects in Chapter 6 include many system management improvements along regional mobility corridors and the supporting arterial system.

134(h)(1)(H) Plan Emphasizes System Preservation

"Emphasize the preservation of the existing transportation system."

A background research paper was also developed during Phase 2 of the update to document current operations, maintenance and preservation (OM&P) efforts and costs in the region in addition to other financial trends in the region. The research is summarized in Section 2.5 and Chapter 5 of the 2035 RTP. This research is also included Appendix 6.0 and was considered during the formulation of the 2035 RTP goals, objectives, projects and potential actions included in Chapter 3 and investment priorities in Chapter 6 of the 2035 RTP. RTP policies (Goal 9 and related objectives) emphasize the preservation of the existing transportation system and ensuring land use decisions support preserving the functional integrity of the transit and roadway elements of the transportation system. The asset management policy resulted in a number of major reconstruction and preservation improvements in the projects and programs included in the financially constrained system in the plan. The plan recognizes more work is needed to improve data collection and reporting on OM&P costs and expenditures in the region. Finally, Metro's MTIP process provides funding for reconstruction and preservation improvements that are included in the RTP financially constrained system.

134(i)(1) Timing for Development of Transportation Plan

"Each metropolitan planning organization shall prepare and update a transportation plan for its metropolitan area in accordance with the requirements of this subsection."

The 2035 RTP serves as the long-range transportation plan for the purposes of this section and has been updated within the required 4-year time period required in this section.

134(i)(2) Transportation Plan Required

"A transportation plan under this section shall be in a form that the Secretary determines to be appropriate and shall contain, at a minimum, (A) through (D), below."

134(i)(2)(A) Identify Transportation Facilities

"An identification of transportation facilities (including major roadways, transit, multi-modal and intermodal facilities, and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions. In formulating the transportation plan, the metropolitan planning organization shall consider factors described in subsection (h) as such factors relate to a 20-year forecast period."

Section 3.4.1 defines the regional transportation system. The plan also establishes integrated modal systems for motor vehicles, transit, freight, bicycles and pedestrians through a series of functional classification maps and accompanying narrative (2035 RTP Section 3.4.2). The street design classifications (2035 RTP Section 3.4.2.1) serve as the policy tool for integrating these modal systems, and linking them to the 2040 land use components. These modal systems and design classifications emphasize regional travel, as they apply only to the regional transportation system, which includes regional, statewide and interstate travel routes. The previously established findings of compliance with the eight planning factors in subsection (f) were based on a 28-year planning period, and were considered during the formulation of the 2035 RTP goals, objectives, projects and potential actions included in Chapter 3 and Chapter 6 of the 2035 RTP.

134(i)(2)(B) Mitigation Activities

> *"A long-range transportation plan shall include a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan. The discussion shall be developed in consultation with Federal, State, and tribal wildlife, land management, and regulatory agencies."*

SAFETEA-LU provisions for additional consultation with state and federal resource agencies, and tribal groups that were not already part of Metro's existing committee structure were met through a consultation meeting held on October 16, 2007 with the Collaborative Environmental Transportation Agreement for Streamlining (CETAS) work group, consisting of the Oregon Department of Transportation and ten state and federal transportation, natural resource, cultural resource and land-use planning agencies. A background research paper was also developed during Phase 2 of the update to document current environmental trends, issues and current mitigation strategies in the region. This research was considered during the formulation of the 2035 RTP goals, objectives, projects and potential actions included in Chapter 3 and investment priorities in Chapter 6 of the 2035 RTP. In addition, staff conducted an analysis of the potential environmental effects of transportation investments. The background research report and environmental considerations analysis is included in Appendix 6.0.

134(i)(2)(C) Develop a Financial Plan

> *"A financial plan that demonstrates how the adopted transportation plan can be implemented, indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends any additional financing strategies for needed projects and programs. The financial plan may include, for illustrative purposes, additional projects that would be included in the adopted transportation plan if reasonable additional resources beyond those identified in the financial plan were available. For the purpose of developing the transportation plan, the metropolitan planning organization, transit operator and State shall cooperatively develop estimates of funds that will be available to support plan implementation."*

As required by Metro's 2004 Federal Review the update addressed operating and maintenance costs paid by member jurisdictions. The 2035 RTP revenue forecast and financial analysis for operations and maintenance costs was based on a thorough evaluation of city and county, ODOT, TriMet and SMART cost projections (2035 RTP Sections 5.1 through 5.3). The financially constrained system described in Chapter 6 of the 2035 RTP was specifically developed to comply with SAFETEA-LU planning requirements. The system was developed based on a forecast of expected revenues that was formulated in partnership with the Oregon Department of Transportation, cities and counties in

the Metro region, TriMet and the South Metro Area Rapid Transit (SMART) district. A background research report was also developed during Phase 2 of the update to document current funding trends and sources. The subsequent financial analysis and the background report are included in Appendix 4.3 and Appendix 6.0, respectively.

The projects and programs recommended in the financially constrained system were developed cooperatively with local jurisdictions, ODOT and, port and transit districts, and through workshops sponsored by TPAC. The financially constrained system is intended as the "federal" system for purposes of demonstrating air quality conformity, and allocating federal funds through the MTIP process (2035 RTP Sections 7.1 and 7.5). The RTP financial plan and revenue forecast assumptions are described in Chapter 5 of the 2035 RTP. The total reasonably expected revenue base assumed in the 2035 RTP for the road system is approximately $ 9.07 billion.

In addition to the financially constrained system, the 2035 RTP identifies a larger set of projects and programs for the "Illustrative System," which is double the scale and cost of the financially constrained system. The illustrative system represents the region's objective for implementing the Region 2040 Plan and will be further refined during the state component of the 2035 RTP update in 2008.

134(i)(2)(D) Operational and management strategies

> *"Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods."*

See also findings under 134(h)(1)(G). The system management policies in the RTP (2035 RTP Section 3.4.4) and resulting projects and programs are intended to maximize the use of existing facilities. The regional congestion management process (CMP) also requires local jurisdictions to explore system management solutions before adding roadway capacity to the regional system (2035 RTP Section 7.6.3). These provisions are implemented through potential actions included in Section 3.3 (particularly Goals 4 and 5), and a number of projects and programs recommended in the updated plan, and are listed in Chapter 6 of the 2035 RTP. In addition, Metro has established a Regional Transportation Options Committee as a subcommittee of TPAC to address demand management. The TransPort Committee is a subcommittee of TPAC to address ITS and operations. The regional congestion management process also requires local jurisdictions to explore system management solutions before adding roadway capacity to the regional system (2035 RTP Section 7.6.3). The plan also calls for consideration of value pricing in the region to better manage capacity and peak use of the throughway system. However, more work is needed to gain public acceptance of this tool. RTP projects in Chapter 6 include many system management improvements along regional mobility corridors and the supporting arterial system. Work will continue in the state component of the RTP update to further expand implementation of these strategies.

134(i)(2)(E) Capital investment and other strategies

> *"Capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provide for multimodal capacity increases based on regional priorities and needs."*

See also findings under 134(h)(1)(F), 134(h)(1)(G) and 134(h)(1)(H). In addition, during the plan period, approximately $9.07 billion in forecasted revenue was allocated for capital improvements. This amount represents a major shortfall when compared to the total capital cost to implement the pool of investments identified by local agencies, ODOT, TriMet and Metro in Chapter 4. As a result, the financially constrained system does not attempt to address all transportation needs. Instead, the financially constrained system attempts to focus limited revenue in key 2040 target areas throughout the region, including the central city, industrial areas and intermodal facilities and regional and town centers. Chapter 3 of this plan identifies specific transportation needs for each 2040 Growth Concept land-uses and policies for defining a balanced regional transportation system. Other considerations in developing the financially constrained system included:

- a focus on system and demand management investments and implementation of transportation control measures to meet air quality requirements;
- investments that met multiple goals identified in Chapter 3 of this plan;
- smaller, key phases of larger projects; and
- projects that would complete gaps or address existing deficiencies in the components of the regional transportation systems identified in Chapter 3 of this plan.

This system contains many "placeholder" projects for larger mobility corridor investments, where a specific transportation need is identified, but more work is needed to develop refined projects or programs that serve the identified need. In some cases, work is under way as is the case for the Sunrise Project, Columbia River Crossing, Milwaukie LRT, Portand-to-Lake Oswego Street Car and the Sellwood Bridge. Other corridor work will be completed through future National Environmental Policy Act (NEPA) processes.

134(i)(2)(F) Transportation and transit enhancement activities

> *"Proposed transportation and transit enhancement activities."*

Transportation enhancement activities have been conducted within the MTIP process. As a funding issue, these activities are primarily addressed in the MTIP, not in the 2035 RTP. RTP projects in Chapter 6 include many transit enhancements.

134(i)(3) Coordination With Clean Air Act Agencies

> *"In metropolitan areas which are in non-attainment for ozone or carbon monoxide under the Clean Air Act, the metropolitan planning organization shall coordinate the development of a transportation plan with the process for development of the transportation control measures of the State implementation plan required by the Clean Air Act."*

The Portland Area Carbon Monoxide (CO) Maintenance Plan and Portland Area Ozone Maintenance Plan were prepared in 1996 and received Federal approvals on September 2, 1997 and May 19, 1997 (including corrections made April 17, 1996) respectively based on attainment with Clean Air Act standards for ozone and CO emissions. The CO maintenance plan was last updated in 2004. In 2006, the EPA approved a new CO State Implementation Plan (SIP) finding new CO motor vehicle emission budgets adequate for transportation conformity purposes in the Second Portland Area Carbon Monoxide Maintenance Plan. This second CO maintenance plan is effective through 2017, after which time conformity demonstration will no longer be necessary, if the area continues to not violate the CO National Ambient Air Quality Standards (NAAQS).

As Metro and the region have proposed a new 2035 RTP and 2008-2011 MTIP, an air quality conformity determination has been prepared for the transportation improvements proposed in this latest region-wide transportation plan and the implementing transportation improvement program. In order to demonstrate that the proposed 2035 RTP and 2008-2011 MTIP meet federal and state air quality planning requirements, Metro must complete a technical analysis, consult with relevant agencies and provide for public comment. In addition, the Transportation Policy Alternatives Committee (TPAC) is specifically named in the state rule as the standing committee designated for "interagency consultation," a technical review process. After TPAC review, the draft conformity determination report is then brought to the Joint Policy Advisory Committee on Transportation (JPACT – see http://www.metro-region.org/index.cfm/go/by.web/id=305 for more information about this committee) for consideration and then the Metro Council. A Metro Council (http://www.metro-region.org/index.cfm/go/by.web/id=28) approved air quality conformity determination is submitted to the United

States Department of Transportation (USDOT). In practice, this means review by the Federal Highway Administration and Federal Transit Administration. These USDOT agencies make a conformity determination after consultation with the Environmental Protection Agency. Upon USDOT approval, federal funding of transportation projects may commence. See the Air Quality Conformity Determination prepared for the 2035 RTP and 2008-11 MTIP further document how this provision is addressed.

134(i)(4) Consultation

> *"The metropolitan planning organization shall consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of a long-range transportation plan. The consultation shall involve, as appropriate—*
> *(i) comparison of transportation plans with State conservation plans or maps, if available; or*
> *(ii) comparison of transportation plans to inventories of natural or historic resources, if available."*

SAFETEA-LU provisions for additional consultation with state and federal resource agencies, and tribal groups that were not already part of Metro's existing committee structure were met through a consultation meeting held on October 16, 2007 with the Collaborative Environmental Transportation Agreement for Streamlining (CETAS) work group, consisting of the Oregon Department of Transportation and ten state and federal transportation, natural resource, historic, cultural resource and land-use planning agencies.

A background research paper was also developed during Phase 2 of the update to document current environmental trends, issues and mitigation strategies in the region. This research was considered during the formulation of the 2035 RTP goals, objectives, projects and potential actions included in Chapter 3 and investment priorities in Chapter 6 of the 2035 RTP. In addition, staff conducted an analysis of the potential environmental effects of transportation investments – this analysis included a comparison of the RTP investments with available State Conservation maps and inventories of historic resources. The background research report and environmental considerations analysis is included in Appendix 6.0.

134(i)(5) Participation by Interested Parties

> *"Each metropolitan planning organization shall provide citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan."*

Metro maintains a proactive public involvement process that provides complete information, timely public notice, and full public access to key decisions. Metro supports early and continuing involvement of the public in developing its policies, plans and programs. Public Participation Plans are designed to both support the technical scope and objectives of Metro studies and programs while simultaneously providing for innovative, effective and inclusive opportunities for engagement. Every effort is made to employ broad and diverse methods, tools and activities to reach potentially impacted communities and other neighborhoods and to encourage the participation of low-income and minority citizens and organizations.

The work program and PPP for the 2035 RTP update was developed with input from Metro's Advisory Committees, including Metro's Committee for Citizen Involvement. The 2035 RTP provided several public comment opportunities for the community, affected public agencies, representatives of transportation agency employees,

freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transit, and other interested persons. Public involvement opportunities and key decision points were published in the Oregonian and other community newspapers, posted on Metro's web site, e-mailed via the Planning Department E-News to more than 4,500 individuals, and advertised through Metro's transportation hotline, where citizens could leave comments as well as receive information. All plan documents were simultaneously published (and regularly updated) on the Metro web site, including draft plan amendments, the update schedule, other explanatory materials and summaries of public comments received.

Approval of the 2035 RTP, Resolution No. 07-3831B, followed JPACT and Metro Council consideration of nearly than 300 comments received during the public comment period. The comments were summarized into a comment log and Public Comment Summary Report. Refinements were recommended to respond to the comments received. The comment period for the Air Quality Conformity Determination packet, to be approved by a separate Resolution No. 08-3911, occurred from January 18 – February 19, 2008 and provided an opportunity for public review and comment on the air quality conformity methodology and results.

Section 1.5 in the 2035 RTP and Appendix 4.5 describe the public process in more detail.

134(i)(6) Plan Publication

> *"A transportation plan involving Federal participation shall be:*
>
> *(i) published or otherwise made readily available by the metropolitan planning organization for public review;*
> *(ii) approved by the metropolitan planning organization; and*
> *(iii) submitted for information purposes to the Governor at such times and in such manner as the Secretary shall establish"*

Proposed amendments to the 2035 RTP were organized into a discussion draft 2035 RTP document that was released for public comment from October 15 – November 15, 2007. The subsequent Air Quality Conformity Determination was released for public review and comment from January 18 – February 18, 2008. The proposed amendments and subsequent Air Quality Conformity Determination were posted on Metro's website and available upon request during the public comment periods.

On December 13, 2007, the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council approved the 2035 RTP with amendments identified to respond to public comments, pending air quality conformity analysis. JPACT and the Metro Council approved the subsequent Air Quality Conformity Determination for the 2035 RTP and 2008-11 Metropolitan Transportation Improvement Program on February 26 and February 28, respectively. With U.S. DOT approval, the approved 2035 RTP and Air Quality Conformity Determination for the RTP and the 2008-11 Metropolitan Transportation Improvement Program will be submitted to the Governor for approval.

134(i)(7) Selection of Projects

> *"Not-withstanding paragraph (2)(C), a State or metropolitan planning organization shall not be required to select any project from the illustrative list of additional projects included in the financial plan under paragraph (2)(C)."*

The implementation provisions of the RTP require the MTIP to select projects for federal funding exclusively from the federally-recognized financially constrained system (2035 RTP Section 7.5.1). The 2035 RTP provides an updated set of financially constrained projects and programs for future MTIP funding allocations.

134(k)(1)(A) Designation of Transportation Management Areas

> *"The Secretary shall identify as a transportation management area each urbanized area (as defined by the Bureau of the Census) with a population of over 200,000 individuals."*

The Portland region exceeds this population threshold, and is designated as a Transportation Management Area. The Metro planning area boundary, Census Urbanized Area boundary, and other relevant boundaries are shown in Figure 1.2 of the 2035 RTP for reference.

134(k)(2) Transportation Plans in Management Areas

> *"In a metropolitan planning area serving a transportation management area, transportation plans and programs shall be based on a continuing and comprehensive transportation planning process carried out by the metropolitan planning organization in cooperation with the State and public transportation operators."*

Metro is the designated metropolitan planning organization for the Portland region, and prepares the regional transportation plan in cooperation with the Oregon departments of Transportation, Environmental Quality and Land Conservation and Development, TriMet, SMART and other transit operators in the region, the Port of Portland, three counties and 25 cities. This cooperation and coordination occurs through TPAC, MTAC, JPACT and MPAC and periodic briefings to the Oregon Transportation Commission, Land Conservation and Development Commission and the TriMet Board.

134(k)(3) Congestion Management Process

> *"Within a metropolitan planning area serving a transportation management area, the transportation planning process under this section shall address congestion management through a process that provides for effective management and operation, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under this title and chapter 53 of title 49 through the use of travel demand reduction and operational management strategies. The Secretary shall establish an appropriate phase-in schedule for compliance with the requirements of this section."*

Metro's congestion relief policies and processes for measuring and managing congestion are contained in the RTP, which guides all Metro transportation planning activities. The policy uses a tiered approach for establishing performance expectations for the motor vehicles system, which seeks to improve bottlenecks and maintain off-peak mobility. However, the two-hour peak period policy acknowledges the RTP analysis findings that capacity increases along major corridors will not necessarily improve mobility or relieve congestion during periods of high demand. For these corridors, the RTP policy seeks to improve travel alternatives in commute corridors, and identify freight corridors where peak period mobility should be considered. This policies and actions are found in Chapter 3.

A background research paper was developed during Phase 2 of the update to document current regional street and highways trends, performance issues and congestion mitigation strategies in the region. This research was considered during the formulation of the 2035 RTP goals, objectives, projects and potential actions included in

Chapter 3 and investment priorities in Chapter 6 of the 2035 RTP. Section 2.4.6.1 of the 2035 RTP also summarizes current congestion mitigation activities in the region and current bottlenecks on the region's highways. The RTP includes a number of other measures that provide a more complete picture of how periods of heavy motor vehicle travel affect the region, including vehicle miles traveled per capita, which FHWA statistics show are declining in the Portland region – an opposite trend from what most other major cities are experiencing, and a positive indicator that the multi-modal strategy of the RTP, combined with the region's urban growth policies, are reducing the amount of personal driving for area residents.

The 2035 RTP retains the congestion management program (2035 RTP Sections 7.4.7 and 7.6.3) that was developed in response the federal ISTEA, and certified as part of Title 6 of the Urban Growth Management Functional Plan in 1996. This section of the RTP and Chapter 3 objectives and actions implement the CMP Roadmap submitted to and approved by FHWA in 2006. The approved CMP roadmap is included in Appendix 4.6 for reference.

134(k)(4)(A) Selection of Projects

> *"All federally funded projects carried out within the boundaries of a metropolitan area serving a transportation management area under this title (excluding projects carried out on the National Highway System and projects carried out under the bridge program or the Interstate maintenance program) or under chapter 53 of title 49 shall be selected for implementation from the approved transportation improvement program by the metropolitan planning organization designated for the area in consultation with the State and any affected public transportation operator."*

All federal funds allocated through Metro are granted through the MTIP, the approved transportation improvement program for the Portland area MPO, and recognized as such by the State, TriMet and SMART (2035 RTP Section 7.5). Projects and programs funded with federal revenue through the MTIP process must be identified as part of the financially constrained system in the RTP. The 2035 RTP provides an updated set of financially constrained projects and programs for future MTIP funding allocations.

134(k)(4)(B) National Highway System Projects

> *"Projects carried out within the boundaries of a metropolitan planning area serving a transportation management area on the National Highway System and projects carried out within such boundaries under the bridge program or the Interstate maintenance program under this title shall be selected for implementation from the approved transportation improvement program by the State in cooperation with the metropolitan planning organization designated for the area."*

The MTIP funding decisions are developed in coordination with the Oregon Department of Transportation. Projects funded in the MTIP are incorporated into the State Transportation Improvement Program (STIP), to ensure consistency between regional and state improvement programs.

134(k)(5)(A) Certification Required

> *"The Secretary shall:*
>
> *(i) ensure that the metropolitan planning process in each metropolitan planning area serving a transportation management area is being carried out in accordance with applicable provisions of Federal law; and*

> *(ii) subject to subparagraph (B), certify, not less often than once every 4 years, that the requirements of this paragraph are met with respect to the metropolitan planning process."*

Metro's planning process is certified annually based on the adoption of the Unified Planning Work Program ("UPWP"), through the federal self-certification process. Metro last completed the self-certification process on April 26, 2007 through Resolution No. 07-3798. The FHWA approved the 2007-08 UPWP and self-certification on July 10, 2007. The next scheduled certification review will occur in February 2008.

134(k)(5)(B) Certification Requirements

> *"The Secretary may make the certification under subparagraph (A) if:*
>
> *(i) the transportation planning process complies with the requirements of this section and other applicable requirements of Federal law; and*
>
> *(ii) there is a transportation improvement program for the metropolitan planning area that has been approved by the metropolitan planning organization and the Governor."*

FHWA and FTA approved the 2004 RTP and the associated air quality conformity determination on March 5, 2004. The 2005-06 Unified Planning Work Program self-certification process confirmed that the 2004 RTP complied with the requirements of this section, and other applicable requirements of federal law, and that Metro's MTIP had been approved by JPACT, the Metro Council and the Oregon Transportation Commission (OTC), on behalf of the Governor.

In Spring 2008, the 2035 RTP and the 2008-11 MTIP will be reviewed for compliance with the requirements of this section as part of the next scheduled certification review.

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Appendix 4.2

2035 Regional Transportation Plan: Use of "Year-Of-Expenditure" Cost and Revenue Estimates

SAFETEA-LU contained a number of requirements for MPOs to address in updating regional transportation plans (RTP). Federal regulations require that a RTP be financially constrained and demonstrate that total project costs not exceed the total revenue level reasonably expected to be available for the Metro region over the life of the plan. Chapter 5 of the 2035 RTP describes the Metro Region's sources of revenue, forecasts of reasonably expected revenue and explains the methodology and assumptions used to forecast the revenue used in developing the Financially Constrained System.

Additionally, SAFETEA-LU also requires that the 2035 RTP consider the effects of inflation in developing project cost estimates and revenues. Under new rules from FHWA and FTA, the financial constraint of the RTP must be demonstrated in "Year-of-Expenditure" dollars or YOE dollars. The rationale behind this requirement is that long-range estimates of transportation costs have understated the deficit between costs and revenues. By converting all costs and revenues to YOE dollars theoretically presents a more accurate picture of costs, revenues, and deficits associated with a long-range transportation plan. The following discusses the methodology used in calculating costs and revenues into YOE dollars.

****

Financially Constrained RTP Project Costs
Metro selected a four percent annual inflation rate to use for the life of the plan. A flat four percent is recommended by FHWA as the default inflationary rate. Additionally, the Oregon Department of Transportation (ODOT) used roughly a four percent average inflationary rate applied to projects in the 2008 – 2011 Metropolitan Transportation Improvement Program (MTIP). Four percent will also be used in developing the 2010 – 2013 MTIP. In developing the revenue forecasts and during the solicitation process for 2035 RTP projects, all costs and revenues were reflected in 2007 dollars. For financially constrained projects, to change to YOE dollars, cost estimates were inflated based on the time period for project implementation.

Projects are reflected in YOE dollars for the last year of each estimated implementation time period (2017, 2025, and 2035). This is intended to reflect the costs of completing the project by the end of the time period. The YOE total was derived by applying the four percent inflationary factor to the final year of each project based upon its estimated project implementation time period. For projects that fall into multiple implementation periods, the total project cost was split evenly among the time periods and inflated by the respective time periods' YOE dollars. Appendix 1.1 lists all the projects included in the Financially Constrained System in 2007 dollars and YOE dollars.

Financially Constrained RTP Revenues
Estimates of financially constrained revenues, discussed in depth in Chapter 5, were based on preliminary revenue estimates conducted by ECONorthwest with assistance from Kittelson and Associates. The report, Preliminary *Financial Analysis for the 2035 Regional Transportation Plan Update*, in combination with ODOT's *Financial Assumptions Report* were used to identify revenues for various revenue categories by year (from 2007 – 2035) for six funding pools:

- ODOT Road Modernization Funding Pool

- Regional Transit and Programs Funding Pool
- Clackamas County/Cities Modernization Funding Pool
- Washington County/Cities Modernization Funding Pool
- City of Portland and Port of Portland Modernization Funding Pool
- Multnomah County/Cities (Excluding City of Portland) Modernization Funding Pool

All forecasted revenues in Chapter 5 are shown in 2007 dollars. YOE dollars were calculated for each of the six funding pool's by applying the four percent inflationary rate to each funding source by year (2007 – 2035). The year-by-year breakdowns for each of the funding sources were derived from the ECONorthwest report. Tables 1 – 6 summarize the funding sources for each of the six funding pools in 2007 dollars and YOE dollars.

Table 1: ODOT Modernization Funding Pool (Millions of $)

Funding Source	Financially Constrained Amount	
	2007 $	YOE $
Metro Region Share of Existing State and Federal Formula Funds excluding Fed Funds Allocated to Local Governments	$273.20	$453.00
ODOT Share of High Priority Projects and Other Discretionary Fed Grants in Metro Region	$376.80	$689.90
Metro Region Share of New Revenues: Assumed for Analytical Purposes to be State Share of $15 Vehicle Registration Fee Increase for Modernization Every 8 Years Beginning 7/1/09	$147.70	$301.10
OTIA	$97.90	$108.10
Other (including other in STIP, local in STIP and unlisted other/carry forward in STIP)	$80.60	$89.00
Financially Constrained Amount Forecasted	**$976.20**	**$1,641.10**

Table 2: Regional Transit and Programs Funding Pool (Millions $)

Funding Source	Financially Constrained Amount	
	2007 $	YOE $
Metro Region CMAQ Funds	$306.00	$561.10
Alternative Mode Share (25%) of Metro Region STP Funds	$120.70	$221.00
Metro Region Enhancement Funds	$44.20	$94.20
SMART Local Revenue	$105.20	$192.20
5309 New Starts/Small Starts Funds	$639.90	$778.50
State Lottery Bonds (Milwaukie LRT)	$250.00	$304.20
Local Match for New Starts/Small Starts Funds	$101.60	$123.60
Value of Willamette Shore ROW for Lake Oswego Streetcar Local Match	$75.00	$91.20
TriMet Local Capital	$702.05	$1,282.20
5309 Discretionary Bus Grants	$29.00	$53.00
Financially Constrained Amount Forecasted	**$2,373.65**	**$3,701.20**

Table 3: Clackamas County/Cities Modernization Funding Pool (Millions $)

Funding Source	Financially Constrained Amount	
	2007 $	YOE $
Regional High Priority Projects/Other Disc. Grants	$88.40	$161.55
Regional STP Funds	$95.50	$174.26
"Other" Federal Funds Exc. Bridge	$13.80	$25.92
Bridge	$14.20	$25.95
General Fund	$0.00	$0.00
SDC-TIF	$585.00	$1,068.33
Urban Renewal	$116.00	$211.87
Private Development	$109.60	$200.11
Special Assessment	$3.20	$5.83
Other Local Sources	$99.50	$181.67
Share of $15 VRF Increase Every 8 Years	$46.90	$96.07
Financially Constrained Amount Forecasted	**$1,172.10**	**$2,151.56**

Table 4: Washington County/Cities Modernization Funding Pool (Millions $)

Funding Source	Financially Constrained Amount	
	2007 $	YOE $
Regional High Priority Projects/Other Disc. Grants	$100.90	$184.30
Regional STP Funds	$109.00	$199.20
"Other" Federal Funds Exc. Bridge	$15.80	$28.60
Bridge	$14.20	$26.00
General Fund	$1,119.30	$2,168.70
SDC-TIF	$327.20	$613.20
Urban Renewal	$43.50	$79.40
Private Development	$89.70	$163.90
Special Assessment	$45.00	$82.10
Other Local Sources	$126.20	$230.04
Share of $15 VRF Increase Every 8 Years	$61.10	$125.20
Financially Constrained Amount Forecasted	**$2,051.90**	**$3,900.64**

Table 5: City of Portland & Port of Portland Modernization Funding Pool (Millions $)

Funding Source	Financially Constrained Amount	
	2007 $	YOE $
Regional High Priority Projects/Other Disc. Grants	$318.20	$459.20
Regional STP Funds	$126.90	$231.70
"Other" Federal Funds Exc. Bridge	$18.40	$33.60
Bridge	$0.00	$0.00
General Fund	$0.00	$0.00
SDC-TIF	$222.00	$405.50
Urban Renewal	$203.00	$370.80
Private Development	$72.90	$133.20
Special Assessment	$17.70	$32.30
State Grants	$41.10	$50.00
Other Local Sources	$58.00	$105.90
Port of Portland Funds	$256.90	$469.20
Share of $15 VRF Increase Every 8 Years	$94.80	$193.60
Financially Constrained Amount Forecasted	**$1,429.90**	**$2,485.00**

Table 6: Multnomah County/Cities (Excluding City of Portland Modernization Funding Pool (Millions $)

Funding Source	Financially Constrained Amount	
	2007 $	YOE $
Regional High Priority Projects/Other Disc. Grants	$28.40	$51.90
Regional STP Funds	$30.60	$55.90
"Other" Federal Funds Exc. Bridge	$4.40	$8.10
Bridge	$113.60	$207.50
General Fund	$0.00	$0.00
SDC-TIF	$393.60	$737.60
Urban Renewal	$66.70	$121.80
Private Development	$307.90	$562.30
Special Assessment	$0.00	$0.00
Other Local Sources	$72.80	$132.90
Share of $15 VRF Increase Every 8 Years	$29.80	$62.70
Financially Constrained Amount Forecasted	**$1,047.80**	**$1,940.70**

Table 7 below shows the total cost of the projects and the expected revenues for the Financially Constrained System.

Table 7: Total Costs and Revenues (Millions $)

Totals	Financially Constrained Amount	
	2007 $	YOE $
Total Cost of 2035 RTP Financially Constrained Projects	$9,171.69	$16,071.34
Total 2035 RTP Financially Constrained Revenues	$9,051.55	$15,820.06
Difference	**-$120.14**	**-$251.28**

Costs exceed revenues by $120 million and $250 million in 2007 and YOE dollars respectively. The difference represents 1.33% in 2007 dollars and 1.59% YOE dollars when compared against the total magnitude of investments in the Financially Constrained System. In addition, project costs reflect planning level estimates that have not yet benefited from project development with more refined cost estimation. For these reasons and given a planning horizon of 29 years the disparities between costs and revenues fall within a reasonable margin of error and reflect a financially constrained RTP.

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Summary of Stakeholder and Community Engagement
Federal Component of 2035 RTP Update

To meet the requirements of SAFETEA-LU, the 2035 RTP Public Participation Plan (PPP) was designed to ensure early and active public participation throughout the updating process and timely, effective notification prior to major decisions. The PPP called for concerted efforts to solicit input from populations that are traditionally underrepresented in transportation decision-making, specifically minorities and low-income people. To help remove barriers to attending meetings, all the public meetings were held at locations served by mass transit. Translators and interpreters were available as needed.

Metro advisory committees—the Transportation Policy Alternatives Committee (TPAC), the Joint Policy Advisory Committee on Transportation (JPACT), the Metro Policy Advisory Committee (MPAC) and the Metro Technical Advisory Committee (MTAC)—were forums for discussion and decision-making by elected officials and their staffs, representing cities and counties of the region, transportation agencies and providers. Three of those committees—TPAC, MPAC and MTAC—have community representatives as regular members, bringing the lay perspective to those discussions and making recommendations on decisions.

Two additional committees played significant roles in providing input from the community—the Metro Committee for Citizen Involvement (MCCI) and a Metro-council appointed task force on Regional Freight and Goods Movement. MCCI is a chartered committee composed of residents of the region that advises the Metro Council on public involvement MCCI reviewed a draft of the PIP, received periodic updates from staff, and provided feedback to staff on public outreach material.

The Regional Freight and Goods Movement task force, composed of multi-modal public-and private-sector freight interests, developed a *Regional Freight and Goods Movement Plan* for the RTP update. This task force received technical input and recommendations from a Regional Freight Technical Advisory Committee (TAC), composed of staff from local, regional, and state agencies operating within Metro's jurisdictional boundaries.

1.1. Public information

Information on RTP developments was provided to the public throughout the update process through briefings of reporters and editorial boards, press releases, media packets, civic journalism, electronic newsletters, and fact sheets available through the Metro website and distributed at meetings and events.

The RTP project website posted information about the update process, with a timeline indicating key decision points and public comment opportunities. A transportation information telephone line presented information about key decision points and directed callers to sources of more information.

Federal SAFETEA-LU provisions for additional consultation with state and federal resource agencies and tribal groups that were not part of Metro's existing committee structure were met through a consultation meeting held on October 16, 2007, with the collaborative Environmental Transportation Agreement for Streamlining (CETAS) work group. That group consisted of representatives from the Oregon Department of Transportation (ODOT) and 10 state and federal transportation, natural resource, cultural resource and land-use planning agencies.

1.2. Stakeholder and community engagement

Methods for engaging public agencies and targeted public and private-sector stakeholder groups included regional forums; stakeholder, task force, and advisory committee workshops; scientific public opinion research; meetings with county coordinating committees (forums for staff and elected officials from the counties to coordinate work with their counterparts from the cities within their boundaries); and public open houses and hearings. Key events are indicated in the graphic below.

2006

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Regional forums/ roundtables				◆		◆				◆		
Stakeholder workshops										◆	◆	◆
Informal feedback (web, card)								◆	◆	◆	◆	
Public opinion survey	◆											

2007

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Public opinion survey	◆											
Regional forums/ roundtables	◆									◆		
Mobility Workshop				◆								
CETAS consultation										◆		
Joint MPAC/JPACT meetings					◆					◆		
JPACT retreat	◆											
Public comment/ hearings										◆	◆	

1.2.1. Regional forums and roundtables

Regional forums held periodically throughout the updating process helped define the scope of the update, identify key issues, shape the public engagement strategy and address issues at milestones in the update process. In April 2006 a regional transportation forum helped define the scope of the update. In June 2006 a "New Look" land-use and transportation forum helped identify key transportation issues related to environmental protection and land-use planning. Participants included mayors and chairs from across the region, representatives of business groups, community-based organizations, academic institutions, non-profits organizations and the general public.

Regional roundtables, a gathering of mayors, county commission chairs, county commissioners and city councilors from the cities and counties in the Metro region as well as those from neighboring cities, provide a forum for all regional elected officials to focus on issues of mutual concern. Regional roundtables, a gathering of mayors, county commission chairs, county commissioners and city councilors from the cities and counties in the Metro region as well as those from neighboring cities, provide a forum for all regional elected officials to focus on issues of mutual concern. Roundtables held on October 25, 2006 and October 26, 2007, discussed the RTP and related land use and funding issues.

1.2.2. Agency and jurisdictional outreach

Metro staff worked with cities, counties, and agencies such as TriMet and the Port of Portland on targeted outreach and communication efforts to address specific needs of each agency or jurisdiction and to facilitate collaboration among the agencies and jurisdictions in the RTP process. Throughout the process, regular standing County Coordinating Technical Advisory Committees meetings and other meetings (e.g., joint MTAC/TPAC and MPAC/JPACT workshops, and briefings to the Regional Travel Options Subcommittee, Transport Subcommittee, Freight TAC, the Southwest Washington Regional Transportation Council [RTC] and the Bi-State Coordination Committee) provided opportunities to share project information and provide input. In May 2007, Metro, TriMet and ODOT together facilitated a joint MPAC/JPACT/Freight Task Force "mobility workshop" to facilitate cross-agency, inter-jurisdictional discussions of regional needs and priorities.

1.2.3. Stakeholder and community workshops

In September and October of 2006, Metro staff met with interested individuals, community advocacy and advisory groups, and professional planners to discuss the current and future state of the region's bicycle and pedestrian systems and a regional trail system.. Metro followed up with a combined bicycle and pedestrian technical workshop to address RTP policy updates to address gaps in the current bike, pedestrian and trail systems. (See summary of bicycle and pedestrian outreach at the end of this section)

From late October through early December 2006, Metro held nine additional stakeholder workshops to inform the policy framework for the RTP. Four of the nine workshops were held with existing policy advisory committees and five with groups that represented specific public interests, public responsibilities, or groups historically underrepresented in the transportation planning and decision-making processes.[1] These workshops engaged 127 individuals and 50 different community organizations and government entities. The five business and community workshops are briefly described below.

Freight and business

This workshop assembled employers and individuals involved in area businesses, industries, agriculture and organizations related to the movement of freight and goods throughout the region. This group included representatives of Metro's Regional Freight and Goods Movement Task Force, Washington Counties Rural Roads Operations and Maintenance Advisory Committee (RROMAC), the Portland Visitor's Association, Oregon Trucking Association and the Westside Business Alliance.

Active living

This workshop assembled professionals, academics and individuals interested in the connection between transportation and public health. Participants were drawn from health departments and nonprofit organizations, such as Elders in Action, Active Living-Healthy Eating Partnership, Salud!, Oregon Institute on Disability and Development (OHSU), Oregon Department of Health Services, and Multnomah County Health Department.

Transportation equity

Two workshops focused on transportation equity. One workshop recruited low-income residents of North Portland through the Environmental Justice Action Group, to bring to hear the perspective of

[1] *2035 Regional Transportation Plan Update Stakeholder Engagement Report* from the Metropolitan Group available through the 2035 RTP Update Publications page: www.metro-region.org/index.cfm/go/by.web/id=25036

urban dwellers who may have reasonably good access to a variety of transportation choices, but who may have safety concerns or other priorities. The other workshop, conducted in Spanish at Centro Cultural in Cornelius, Oregon, sought input from individuals living in an area of the region with the largest, and fastest growing Latino population. The discussions focused on the transportation priorities of day laborers and agricultural workers who may travel to different job locations from day to day and who may live in areas that do not offer viable transportation choices.

Community and environmental health

This workshop included representatives from member organizations of the Coalition for a Livable Future (CLF). The CLF member organizations include a broad range of transportation advocacy groups, environmental protection groups and community-based organizations. Participants included representatives from the CLF parent organization, Oregon Sustainable Agriculture Land Trust (OSALT), Sierra Club, Better People, League of Women Voters, Bicycle Transportation Alliance, and Association of Oregon Rail and Transit Advocates (AORTA).

1.2.4. Scientific public opinion research

In February 2006 by Davis, Hibbits & Midghall[2] published the results of scientific public opinion research that reaffirmed the region's commitment to basic values as expressed in the region's 2040 Growth Concept. The 2040 Growth Concept, adopted by the Metro Council in 1995 after an extensive public involvement effort, recognizes the close relationships among transportation, land-use, economic vitality and wise growth-management. This growth vision formed the foundation for the goals and policies of the RTP.

In January 2007 Moore Information presented the results of another scientific public opinion survey[3] designed to complement and supplement information from prior public input and the stakeholder engagement workshops that were part of the RTP update. That survey sought to better understand regional transportation priorities and values.

1.2.5. Informal presentations and feedback opportunities

Metro staff and Councilors made presentations to community groups, business organizations, local governments, the TriMet Board, the Oregon Transportation Commission, the Land Conservation and Development Commission, the Bi-State Coordination Committee and other interested advisory committees throughout the region. These presentations offered opportunities for participants to provide feedback on the direction of the RTP and the policies and goals under development.

A comment card was created in Fall 2006 to solicit feedback on transportation needs, priorities and gaps. (See copy of comment card at the end of this section.) The card was distributed at presentations given during that time. The card was converted to a web-based format to gather input through SurveyMonkey.com on the project website. The cars were also translated into Spanish and distributed through Centro Cultural. The results from all the responses were compiled and summarized for consideration in addition to the larger body of information gained through the scientific public opinion

[2] Regional Attitudes Toward Population Growth and Land Use Issues, http://www.metro region.org/files/planning/dhm-publicopinionsurvey-report.pdf
[3] Summary of Moore Information survey results, http://www.metro-region.org/files/planning/2007rtpopinionresearch.pdf

surveys and stakeholder workshops to help shape the RTP policies. (See "Summary of Web and Comment Card Responses" at the end of this section.)

1.2.6. Public comment period, open houses, hearings and notification

On October 15, 2007, the review draft of the 2035 RTP was posted on Metro's website for viewing or downloading. Printed copies were sent to all regional jurisdictions and agencies, Metro advisory committee members, and to the general public on request. This marked the start of a formal 30-day public comment period that ended on November 15, 2007.

Forty-five days prior to the October 15 opening of the public comment period, electronic notices were posted on the Metro website and distributed to all neighborhood associations, citizen participation organizations (CPOs) and interested parties who had asked to be included in Metro's RTP notification list. The notices included information on how to access the review draft online, where to call to request a hard copy, how to submit comments (by email, through an online web comment form, by US post, or in person at any of four open houses and public hearings). This information was also distributed via Metro's information telephone line, in articles included in a transportation planning e-newsletter and in each Metro Councilor's monthly newsletter.

Thirty days before the first open house a news advisory was sent to all major and community newspapers in the region. The advisory included information about the open houses, public hearings and comment period. The week before each open house, a newspaper advertisement was placed in the major newspapers as well as in the local ethnic and community newspapers.

All comments, testimonies and supporting material submitted as part of the comment period were compiled into a Public Comment Report. The Public Comment Report was provided to Metro Councilors, TPAC, JPACT, MTAC and MPAC for review. Jurisdictions and agencies that had proposed lists of investments for inclusion in the financially constrained plan had an opportunity to adjust those lists based on public comment. Metro staff created a log of substantive comments, with responses recommending action to suggested changes.

Feedback Card

How should we invest your transportation dollars in the next 30 years?

Metro is working on a long-range transportation plan that fosters healthy economies, protects the environment and supports vibrant communities. We need your help.

Think ahead to 2035 when our region will have a million more people and we need to

- move more freight and goods
- support more regional businesses and industries
- accommodate more people on sidewalks, bikeways, roads and transit
- invest more in maintenance on an aging road system

What do we need most in our transportation system?

_____

_____

_____

_____

What is missing from our transportation system now?

_____

_____

_____

_____

What should we do to improve the safety of our transportation system?

_____

_____

_____

_____

Your ZIP code:_____

To be added to our list of interested parties, go to **www.metro-region.org/rtp** and click on "2035 RTP update."

Summary of Web and comment card responses

To supplement our broad public outreach, we solicited open-ended responses to three general questions by distributing post cards at a variety of meetings and posting the questions on the Metro Website. We received responses from 55 different individuals originating from 33 different area zip codes.

This outreach effort was not a scientific survey, and the results should not be interpreted as such. However, these unprompted, open-ended responses from across the region can provide some insight into how the public experiences the region's transportation system.

The responses are summarized below.

1. What do we need most in our transportation system?

Balanced, multi-modal system (autos, transit, bike and pedestrian)	15
Improve freeway and regional road system	11
Safe/separate/dedicated bike routes	6
Bus rapid transit/faster transit between major centers	5
Reduce congestion/eliminate bottlenecks/improve traffic flow	5
Better freight ways/more freight on rails	4
Reduce number of cars on the roads/more alternatives	4
Improve maintenance of existing system/fix bridges	4
More/expanded/more frequent/later bus service	3
More sidewalks	3
Land use that reduces the need to drive	2
More light rail lines within the region	2
Making environmental impact a priority in any decision	2
New bridges (replace Sellwood; across the Columbia)	2
Safety designed into pedestrian crossings	1
More road connections between Portland and "satellite" cities	1
Transit routes connecting suburbs	1
More attention to aesthetics	1
High-speed mass transit along the entire I-5 corridor	1
More door-to-door public transportation	1
Better law enforcement/ticket inspectors	1

Brief analysis: The most frequent single response—a balanced transportation system—reflects a realization that we need to invest in all modes of transportation to address the region's transportation needs.

Collapsing categories that singled out specific modes, those receiving the most mention included 23 for improving car travel (adding, fixing, or maintaining roads and bridges); 13 for transit (adding, expanding, or improving the speed); and 6 for bicycle, especially dedicated facilities.

Two of the respondents mentioned improved land use as "most needed" for our transportation system, indicating that the connection between land use and transportation needs has reached some.

2. What is missing from our transportation system now?

Bike and pedestrian facilities (sidewalks, lanes, dedicated bridges)	9
More local roads; more freeway lanes; new freeways (eastside; Westside bypass)	9
Mass transit from neighbor cities to employment areas	6
Improved/expanded public transit (light rail, bus routes, express service)	5
Better bus connections/routes/expanded hours	5
Suburb to suburb transit	4
Relieve congestion (217; 99E; NW metro area; general)	4
Improved freight system	3
Creative funding ideas	3
IT (signal coordination)	2
Columbia R. crossing	2
Affordable housing close in	2
Secure parking at transit malls	2
Commuter rail along the entire I-5 corridor	2
Bus rapid transit	2
Regional plan	1
Land uses that concentrate development in centers	1
New bridges (Columbia, Willamette)	1
Water taxis	1
Integrate land use/development with transportation planning	1

Brief analysis: Transit was mentioned 24 times (routes, speed, and service), with half of those responses specifically mentioning the need for connections to neighboring cities or between suburbs. Improving car travel (t improving or building new roads and bridges) was mentioned 14 times. Bicycle and foot travel (adding routes, sidewalks, safety refuges) was mentioned 9 times.

The need for affordable housing close to centers was mentioned twice as "missing." Coupled with two mentions of the need to integrated land-use and transportation planning indicates that, again, the message that land use affects transportation has reached at least some.

3. What should we do to improve the safety of the transportation system?

Separate/improve/increase bike routes	14
Enforcement (red lights, speeding, transit security, bike laws)	13
Reduce number of autos; increase rail/alternative transportation	8
Increase highway capacity	6
Sidewalks/pedestrian crossings	4
Correct poor road designs/engineer for safety (lower speeds; pedestrian refuges on major arterials; crossing facilities at transit stops	4
Public safety education	3
Install surveillance cameras (transit stops; on trains; on buses)	3
Lower speed limit	2
Reduce congestion	2

Dedicated bus lanes	1
More frequent bus service to reduce wait time at stops	1
Identify and fix crash sites	1
Install "help" buttons on transit and at stops	1
Fix existing roads and bridges	1

Brief analysis: We deliberately left the interpretation of safety open, so respondents would feel free to address personal safety or the safety of mode travel. Of a total of 64 suggestions, 59 focused on improving the safety of specific modes of travel; 5 addressed personal safety.

Of improvements to modes of travel, ways to improvement car travel drew 16 suggestions (reduce congestions, add capacity, fix poor or unsafe designs). Ways to improve bicycle safety received 14 specific mentions. Enforcement (red lights, transit security, bike laws) drew 13 specific suggestions.

Feedback from outreach to bicycle and pedestrian groups

In September and October 2006 Metro staff met with the following bicycle and pedestrian planners, advocacy and community groups in different parts of the region to explore barriers to walking and biking and to identify needed improvements.

Beaverton Bicycle Advisory Committee
Portland Bicycle Advisory Committee
Clackamas county Bike and Pedestrian Advisory Committee
Multnomah County Bicycle and Pedestrian Advisory Committee
Washington County Bicycle and Pedestrian Coordinator
City of Portland Pedestrian Advisory committee
Bicycle and Pedestrian Technical Workshop
Regional Trails Working Group

Safety was the top priority

Unsurprisingly, safety arose as the paramount concern for both bicyclists and pedestrians. Suggestions to improve safety for bike riders included designation of bike boulevards and low-traffic routes, addition of bike lanes on connectors and corridors (not arterials), and safe crossings where bike routes intersect arterials. Off-street bike paths were cited as especially important for helping older riders and children feel safe.

Vehicle driver-bike rider conflicts have increased with growth, with more education needed on both sides on ways to improve safety. For pedestrians, suggestions included providing safe crossings at all transit stops and better lighting on sidewalks and pathways.

Barriers were physical

Rail yards, railroad crossings, freeway on-ramps, large intersections and wide, busy streets pose major barriers to both bicyclists and pedestrians. These structures were built as part of a transportation system that was designed for trains and motor vehicles without planning for bikes or pedestrians. Both bicyclists and pedestrians noted that many roads, bike lanes and sidewalks are discontinuous. Many areas, especially those outside of downtown and eastside Portland, lack sidewalks and bike facilities (lanes and parking) entirely.

Solutions included building overpasses, adding medians and crossing islands, adding curb extensions, adding or improving the timing of crossing signals, and connecting discontinuous routes. New developments should integrate bicycle and pedestrian plans into the overall transportation system.

Flexible funding and more data are needed

Bike and pedestrian systems need flexible funding sources that can be used for improvements in areas that fall outside of the 2040 priorities—for example, along corridors and on connectors between centers. Both bike and pedestrian systems would benefit from more hard data to identify gaps and provide measures of progress.

Appendix 4.4

Portland Region Congestion Management System Roadmap

March 15, 2006

METRO

Metro
People places • open spaces

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy and good transportation choices for people and businesses in our region. Voters have asked Metro to help with the challenges that cross those lines and affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to protecting open space, caring for parks, planning for the best use of land, managing garbage disposal and increasing recycling. Metro oversees world-class facilities such as the Oregon Zoo, which contributes to conservation and education, and the Oregon Convention Center, which benefits the region's economy.

Your Metro representatives

Metro Council President – David Bragdon
Metro Councilors – Rod Park, District 1; Brian Newman, District 2; Carl Hosticka, District 3; Susan McLain, District 4; Rex Burkholder, District 5; Robert Liberty, District 6.
Auditor – Alexis Dow

Metro's web site: www.metro-region.org

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Portland Region
Congestion Management System Roadmap

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I. Introduction

The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) required all urbanized areas with a population greater than 200,000 to develop a Congestion Management System (CMS) and implement it as part of the metropolitan transportation planning process. In 23 CFR Part 500 Section 109, the Federal Highway Administration (FHWA) defines a CMS as "a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing mobility." These regulations go on to describe the following required elements of a CMS:

1. An ongoing method to monitor and evaluate the transportation system, identify the causes of congestion, identify and evaluate alternative actions, provide information supporting the implementation of actions and evaluate the efficiency and effectiveness of implemented actions;

2. Defining parameters for measuring the extent of congestion and for supporting the evaluation of the effectiveness of congestion reduction and mobility enhancing strategies;

3. Establishing a program for data collection and system performance monitoring;

4. Identifying and evaluating the anticipated benefits of both traditional and non-traditional congestion management strategies;

5. Identifying an implementation schedule, implementation responsibilities, and possible funding sources for each strategy; and

6. Implementing a process for periodic assessment of the efficiency and effectiveness of implemented strategies, in terms of the area's established performance measures.

In response to ISTEA, Metro adopted a Congestion Management System (CMS) through Title 6 of the Urban Growth Management Plan in 1996, and later incorporated the Title 6 provisions into the Regional Transportation Plan (RTP) in 2000. Appendix 'A' to this report contains a section-by-section description of how the RTP addresses the requirements of 23 CFR 500.109.

The goal of Metro's CMS is to efficiently manage and modernize the transportation system to meet urban demands. To reach this goal Metro has attempted to meet the five basic federal CMS requirements in bullet #1 above[1]. *Metro acknowledges that its current practices are not satisfactorily meeting the requirements.* Figure 1 on the following page is meant to clearly demonstrate:

- Metro's current attempts to meet the requirements,
- Metro's five-year vision to fully meet the requirements, and
- The steps necessary to achieve the vision, i.e. UPWP work items.

The remainder of this document will provide detail to elaborate on Figure 1.

[1] It is Metro's understanding that bullets 2 through 6 elaborate on the five core requirements mentioned in bullet #1.

Figure 1. Roadmap to Metro's CMS

	Current Practices	2010 CMS Vision	Steps to get there
Measure Transportation System Performance	RTP Update Existing Conditions Report based on the following sources: • Available state/federal congestion data • Metro travel surveys and demand model simulations • 2040 Performance indicators report In 2003, Metro entered partnerships with Oregon Department of Transportation (ODOT) and Portland State University (PSU) to collect and monitor transportation data from the ITS network, including peak-period speed data on freeways in the region. In 2005, Metro approved MTIP funding to expand the ITS network in order to include freight data and make other enhancements.	CMS Existing Conditions Report will draw from regional ITS data: • highway and transit commute travel times between key destinations on monitored highway and transit facilities • freight travel time on monitored highway facilities between key destinations • commute travel speed on monitored highway and transit facilities to determine real-time level-of-service • freight travel speed on monitored highway facilities to determine freight level-of-service • off-peak travel speed on monitored highway and transit facilities to determine reliability • peak and off-peak boardings for monitored transit facilities • improved street connectivity over time (as a result of RTP connectivity requirements) • non-SOV travel to and within 2040 centers and station communities • integrated corridor data for select monitored facilities Metro will expand the facilities it monitors to include the corridors containing all RTP Principal Arterials and Light Rail lines. Metro will publish a State of the Region transportation report including key CMS data	*Current UPWP* • Hired freight planner to manage a Regional Freight Plan (engaging stakeholders, collecting/analyzing freight data, etc.) *New UPWP tasks* • Allocate SAFETEA-LU PL Funds to CMS and ITS planning • Develop congestion component to State of the Region transportation report • Organize and facilitate CMS Work Team (including regional transportation data experts from Metro, ODOT, PDOT, PSU, FHWA) *Other* • Work with PSU and ODOT to improve monitoring activities • Update Regional Congestion Management Network map to include facilities within Principal Arterial and light rail corridors
Identify the Causes of Congestion	During an RTP update, Metro uses the regional travel demand model to define areas where congestion is occurring.	Metro will expand its relationship with PSU Center for Transportation Studies (which gathers and archives real-time ITS data) and further study the causes of congestion, - both recurring and non-recurring. Metro will expand the ITS network to include freight data and other enhancements (funded in 2005 MTIP) A newly developed regional freight plan will identify congestion due to freight traffic. The new relationships and data described above will allow Metro to more thoroughly investigate the causes of congestion, i.e. Future RTP updates will identify areas of non-recurring congestion.	*Current UPWP* • Regional freight Plan • Allocate SAFETEA-LU PL Funds to CMS and ITS planning New UPWP tasks • Organize and facilitate CMS Work Team • Develop congestion component to a State of the Region transportation report
Identify and Evaluate Alternative Actions	The RTP requires that local transportation plans include a CMS process for evaluating congestion and potential project solutions. System inadequacies must be evaluated for a series of alternative transportation solutions before a significant road capacity project can be included in a local plan. In the event that no project can be found that adequately meets a local transportation need, the local CMS process must evaluate underlying land use and transportation policies. Local jurisdictions must submit a CMS compliance report upon completion of an applicable plan amendment.	Metro will establish a leadership presence for CMS in the region. Metro will develop a more immediate set of recommendations for mitigating congestion in the short-term thorough the MTIP, and co-ordination of local investments. Metro will create a congestion management toolbox/guidebook to help local jurisdictions identify and evaluate appropriate strategies.	*New UPWP tasks* • Provide continued funding for CMS/ITS position at Metro • Develop congestion management toolbox strategy • Organize and facilitate CMS work team
Implement Cost-Effective Solutions	The process for identifying and evaluating alternative actions is built on the CMS principle that inexpensive, multi-modal solutions should be fully evaluated for their potential to meet transportation needs, before evaluating adding new road capacity. Projects included in the RTP have a defined cost, and thus the efficiency of a project is considered as part of the decision to amend it into the RTP. The federal requirement to create a "financially constrained" project list, a subset of the larger "preferred" list, leads to costly projects of all modes being replaced by less costly interim improvements or phases, in an effort to provide some system benefit at a lower cost.	Metro is in the process of implementing a new "Budgeting for Outcomes" as part of the upcoming RTP update. This is a fiscally driven process to achieve cost-effectiveness in a way that best meets public expectations. This will likely lead to a scaled back RTP project list. MTIP prioritization process: Emphasize cost-effectiveness in the selection of projects. Metro's new congestion management toolbox/guidebook will help local jurisdictions implement cost-effective congestion solutions.	*Current UPWP* • Fund needed public outreach to complete Budgeting for Outcomes RTP update. • Update MTIP Selection Criteria *New UPWP tasks* • Develop congestion management toolbox strategies
Evaluate the Efficiency and Effectiveness of Implemented Actions	During an RTP update, Metro models the performance of the system with the preferred and financially constrained projects built. This includes travel times, travel patterns and future major corridor performance.	Augment RTP update system analysis with evaluation of real-time congestion data.	*New UPWP tasks* • Incorporate near-term recommendations to address observed congestion issues (from real-time analysis)

II. Current CMS Practices

A. Measure Transportation System Performance

RTP Update Existing Conditions Report

Currently, the RTP update process is the primary forum where system performance data is considered. The RTP updates completed in 2000 and 2004 benefited from a detailed review of the available congestion data produced by state and federal agencies, and the Metro travel surveys and demand model. Available congestion data includes:

- Cutline Count information from the City of Portland, Multnomah County, Washington County, Clackamas County, and ODOT
- Vehicle Classification Traffic Count data from Oregon DOT (from their Highway Performance Monitoring System - HPMS – which includes several truck classifications
- Automatic Traffic Recorder data from ODOT for 18 locations in the Portland Area, plus similar data from Washington DOT
- ODOT Traffic Volume Tables Booklets - 1964 through 2003
- National 'Highway Statistics' booklets from the FHWA, 1968 to 2003
- Volume and Classification traffic counts from the Port of Portland's annual report.
- Texas Transportation Institute's data for Portland - for their Urban Mobility Study - through an ODOT contact and directly from TTI
- TriMet Monthly Transit Performance Reports
- Washington State Monthly Speed Data

In 2002, Metro initiated a *2040 Performance Indicators* report, a new system for tracking key performance measures. It is used to evaluate the implementation of the regional land use vision – the 2040 Growth Concept. These measures include economic, demographic, land development, and transportation trends. The report is published biennially and provides an opportunity for Metro to present its CMS performance indicator data in conjunction with other urban tracking statistics used to shape regional policymaking.

Data Collection and Methodology

The following agencies will be the principal partners in collecting and evaluating CMS data. Other agencies will also be involved in the system, with their efforts coordinated through Transport, the regional ITS committee.

- **The Oregon Department of Transportation (ODOT)** has installed a comprehensive monitoring system across the region. Its Traffic Management Operations Center (TMOC) collects intelligent transportation system (ITS) data using roadway sensors to conduct real-time management of the transportation system. The ongoing development of the system is overseen by TransPort, a subcommittee of TPAC (Metro's federal consultation body), which monitors and updates the regional ITS architecture. The architecture is further described below.

- **Portland State University Center for Transportation Studies** collects the archived traffic data for the CMS network and provides some preliminary analysis. See Appendix A for a more detailed description of the Center's data collection efforts.

- **TriMet** provides Metro with boarding and headway data on the CMS high capacity transit network and other transit serving principal arterial routes. TriMet also reports traffic operations data from its GPS-equipped bus fleet.

- **Metro** further analyzes the highway and transit data provided by Portland State and TriMet and presents it in the biennial 2040 Performance Measures Report. Metro has recently taken the lead on the region's demand management program, including the evaluation function. In this role, Metro evaluates commute options survey data and other data sources to estimate non-SOV travel in the region. Metro's travel forecasting program serves as the region's clearinghouse for forecast data and other information collected from federal, state and academic sources. See Appendix A for a more detailed description of Metro's data collection efforts.

- **Southwest Washington MPO** maintains a CMS for the greater Vancouver area. Its efforts are coordinated with the Metro region, using the same technical coordination that is employed in sharing travel forecasting and demographic data.

ITS Architecture

Following ISTEA, the Portland-area was awarded early deployment funding by the federal highway administration to prepare a comprehensive technology inventory and implementation plan called an Advanced Traffic Management System (ATMS) Plan – later changed to "Intelligent Transportations Systems" (ITS) Plan. The regional ITS Plan was completed by DKS Associates in October 1993 and reflected input of an interagency technical committee that included representatives of ODOT, Metro and most of the region's major operating agencies. This group continued to meet after completion of the ITS Plan and worked to implement Plan recommendations on a region-wide, bi-state, cooperative basis. Eventually, the ad-hoc committee adopted the name of TransPort.

As sharing of operations data and communications infrastructure has expanded within the group of agencies that comprise TransPort, the group has evolved into the multi-modal ITS services coordinating body within the greater Portland-Vancouver metropolitan area. When the early deployment phase of the federal ITS initiative moved into its present emphasis on integration of modal infrastructure systems (MDI grants), TransPort submitted successful applications for funding and has been cooperatively managing implementation of priority technology integration projects in the Portland-Vancouver region. In 2005, the committee's role as the leader on ITS matters was formalized when the group was established as a subcommittee of TPAC.

The focus of ITS activity in Portland over the past ten years has largely been to install needed core field devices and communication systems and to perfect the computer hardware and software tools needed to integrate and optimize operation of the devices. National standards have been developed to assure that ITS hardware and software tools produced by different manufactures will all be compatible.

The Transportation Equity Act for the 21st Century (TEA-21) requires that all MPOs develop a regional ITS architecture and to assure that all ITS-related projects using federal funds must comply with the architecture. In 2000, TransPort initiated consultant development of a Draft ITS

Architecture. The committee has continued refinement of the Architecture and has developed procedures for assuring project level compatibility with the information flows and standards

In 2005, Metro and the City of Portland were jointly awarded an FHWA grant to further refine ITS coordination in the region through the development of a regional ITS "concept" that will serve as a blueprint for ITS investments. The TransPort subcommittee will oversee technical work on the 2-year effort, and coordinate CMS objectives with the project.

B. Identify Causes of Congestion

During an RTP update, Metro uses the regional travel demand model to define areas where congestion is occurring. Metro also gains insight into the causes of congestion from studies such as the recently released "Costs of Congestion" (2005), prepared for Metro, the Port of Portland and the Portland Business Alliance. One of the main findings was the region would experience a large growth in "traded sector" industries. The region's economy is "transportation-dependent," due to its role as a gateway and distribution center for domestic inland and international markets.

C. Identify and Evaluate Alternative Actions

Portland's regional transportation planning process is preceded by a local planning process that is guided by policies in the MPO's RTP, including the CMS requirement. Therefore, just as RTP development includes a process for evaluating project alternatives, so must local planning activities. In both cases, capacity expansion can be considered only after other options have been examined. In the event that no project can be found that adequately meets a local transportation need, the process then calls for an evaluation of the underlying land use and transportation policies. In order to ensure that this approach is being followed, local jurisdictions must submit a CMS compliance report upon completion of an applicable plan amendment. Appendix A provides more detail of these processes, which are also specified in the RTP document (Section 6.4.4 Transportation Systems Analysis Required for Local Plan Amendments, Section 6.6.2 RTP Project Amendments, and Section 6.6.3 RTP Congestion Management Requirements).

D. Implement Cost-Effective Solutions

The process for identifying and evaluating alternative actions is built on the CMS principle that inexpensive, multi-modal solutions should be fully evaluated for their potential to meet transportation needs, before evaluating adding new road capacity. However, there is not an actual cost/benefit analysis at the plan level. That level of analysis occurs during project development. Projects included in the RTP have a generalized cost estimate which acts to curb obviously costly solutions from being incorporated without adequate discussion. Finally, the federal requirement to create a "financially constrained" project list – a subset of the larger "preferred" system – leads to costly projects of all modes being replaced by less costly interim improvements or phases, in an effort to provide some system benefit at a lower cost.

E. Evaluate the Efficiency and Effectiveness of Implemented Actions

During an RTP update, Metro models the performance of the system with the preferred and financially constrained projects built. This includes travel times, travel patterns and future major corridor performance.

III. 2010 CMS Vision

In order to relate what Metro plans to achieve in the future relative to its past performance, the CMS Vision is presented in the same structure (five categories) that was used in the previous section about the current (unsatisfactory) status. This presentation assists a line-by-line comparison but, admittedly, does not offer a comprehensive view of how the pieces fit together and how Metro will actually implement and operate the CMS. Indeed, as the Division's February 9th comments accurately point out, the CMS must be an ongoing activity. Following the five categories, therefore, is a description of how these pieces will be put into practice.

A. Measure Transportation System Performance

The ongoing deployment of various intelligent transportation system (ITS) technologies is transforming our ability to collect data and monitor performance, both in real-time and by using archived data to make planning decisions. TriMet's extensive deployment of GPS and other on-board devices has created significant data that can be used for traffic analysis. This transformation is changing and will continue to change how we measure system performance. For example, some of the data and performance measures that we can anticipate using in coming years are listed below. But there are also data and measures that will emerge that we can't anticipate at this time. Therefore, this element of the CMS requires an ongoing collaborative effort to determine how Metro can best monitor performance.

Currently Anticipated Transportation Data and Performance Measures

- Highway and transit commute travel times between key destinations on monitored highway and transit facilities
- Freight travel time on monitored highway facilities between key destinations
- Commute travel speed on monitored highway and transit facilities to determine real-time level-of-service
- Freight travel speed on monitored highway facilities to determine freight level-of-service
- Off-peak travel speed on monitored highway and transit facilities to determine reliability
- Peak and off-peak boardings for monitored transit facilities
- Performance data from CAD/AVL equipped bus fleet
- Improved street connectivity over time (as a result of RTP connectivity requirements)
- Non-SOV travel to and within 2040 centers and station communities
- Integrated corridor data for select monitored facilities

Metro's ability to monitor this data is currently constrained by limited staff resources, but the agency expects to expand its commitment by programming expected future increases to federal planning grants to CMS and ITS activities (as outlined in Table 1). In the interim, Metro will continue to work with Portland State and ODOT to improve monitoring activities to the extent possible.

The freight data components listed above will be available due to the Freight data enhancement project that Metro's Travel Forecasting section has been participating in along with ODOT, the Port of Portland, and others. The project includes:

- Truck counts: identifying locations, taking counts, and recommending a procedure for developing a continuing counting process
- Truck origin/destinations: identifying locations to collect origin-destination profiles (truck terminals, intermodal sites, regional cordon sites

- Truck model enhancements: Using the data collected to enhance the truck model

Additionally, Travel Forecasting is embarking on an update to the regional travel survey. This survey will take advantage of technological advances to more accurately track travel behavior and system performance. These new techniques are likely to include attaching GPS units, health monitoring devices (i.e. pedometers, accelerometers, etc.) to participants in travel surveys as part of data collection. The survey may also involve a tracking technique where participants are monitored annually to identify more subtle shifts in travel behavior than are detected under the current, single survey technique. Metro will likely partner with ODOT and the Southwest Washington Regional Council to develop the updated survey.

Area Monitored

Figure 3 shows the geographic area that contains the transportation system to be evaluated and monitored by the CMS. The area includes Metro's MPO Boundary, plus 2040 Growth Concept Green Corridors, which travel from the MPO boundary to urban growth boundaries of neighboring cities. Because Portland generates travel outside the MPO boundary, the inclusion of these corridors is essential to understanding the full picture of congestion, especially when expansions of the UGB are considered.

Facilities Monitored

Within Metro's MPO Boundary, the CMS network includes all corridors that contain *RTP Principal Arterials*, as shown in Figure 2. These corridors include the most heavily traveled and relied upon corridors, where current and projected congestion is most likely to occur. Beyond the MPO boundary, the CMS also covers Principal Arterials located in the *Green Corridors* that link Portland with neighboring cities. The scope of the monitored facilities is governed by both the relevance of the data and limitations on the amount of monitoring that can be undertaken in the region with available resources. While technological advances are making the current job somewhat easier, however, the scope of work will increase as the region grows, adds more infrastructure, and faces congestion on more roads. For example, significant expansion of the transit network is planned, all of which will require monitoring.

The term "corridor" is used in very different ways. For the purposes of managing congestion, a corridor should be viewed as a combination of facilities serving parallel or strongly related trips (or trip segments). Complementary freeways, rail transit facilities, arterials and the fixed-route transit services that run on them are elements of such corridors. Most corridors have a "backbone" or primary facility and in Portland, to date, this is often a highway. The intent of using a corridor-based approach to the Congestion Management Process is to capture the relationship between complementary facilities in a corridor. One of the major methodological challenges faced, at this time, is the disparity in data volume and quality between the freeways, transit services, and arterials.

Monitored Facilities

RTP Principal Arterials within the MPO Boundary

- **Interstate-5 corridor** (MPO boundary to State boundary)
- **Interstate-84 corridor** (I-5 to MPO boundary)
- **Interstate-205 corridor** (I-5 to State boundary)
- **US 26 corridor** (I-405 to MPO boundary)
- **US 30 corridor** (I-405 to MPO boundary)
- **Highway 8 corridor** (SE Brookwood Ave to Cedar Hills Blvd)
- **Highway 217 corridor** (US 26 to Interstate-5)
- **Highway 99E/212/224 corridor** (Central City to Rock Creek Junction)
- **Highway 213** corridor (I-205 to MPO boundary)
- **Northeast Portland Highway corridor** (N Burgard to Interstate-205)
- **Hogan corridor** (Interstate-84 to US26)

Principal Arterials within the Green Corridors:

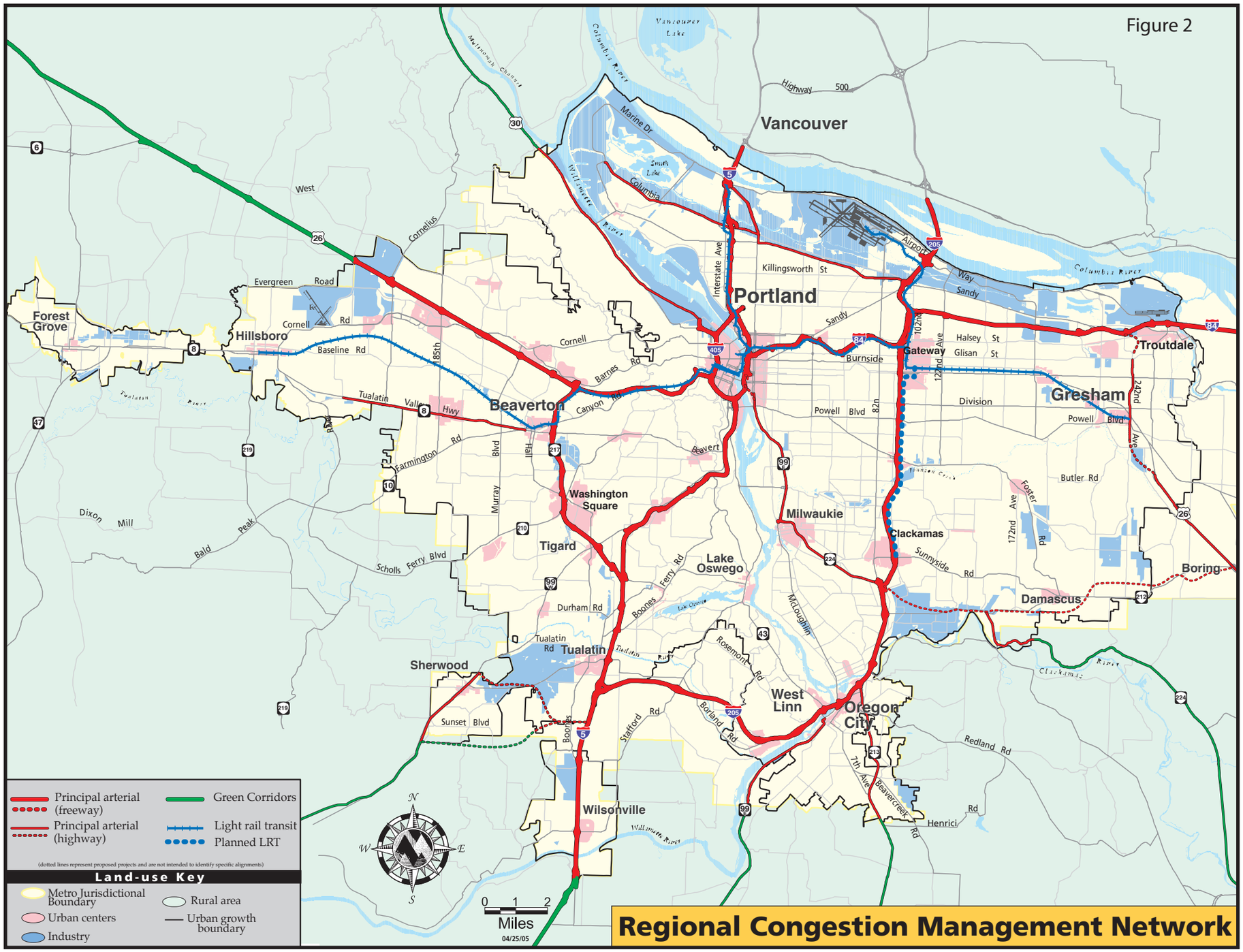
- **Outer Interstate-84 corridor** east to Cascade Locks
- **Outer US 26** corridor east to Sandy
- **Highway 224** southeast to Estacada
- **Highway 213** south to Molalla
- **Highway 99E** south to Canby
- **Interstate-5** south to Salem
- **Outer Highway 99W** southwest to Newberg
- **Outer US 26** west to North Plains
- **US 30** northwest to Scappoose

High Capacity Transit Corridors

- **Banfield LRT corridor** - Central City to Gresham
- **Banfield LRT corridor** - Central City to PDX
- **Westside LRT corridor**- Central City to Hillsboro
- **Interstate LRT corridor** - Central City to Expo Center
- **Clackamas LRT corridor*** - Gateway to Clackamas Regional Center
- **Milwaukie LRT corridor*** - Central City to Milwaukie Town Center

* For the Clackamas and Milwaukie corridors, existing transit service will be monitored until LRT systems are in place.

Figure 2



Regional Congestion Management Network

Data Reporting

Annual State of the Region Report - Metro will soon begin publishing an annual "State of the Region" transportation report to accompany the Council President's annual State of the Region address to the City Club. The report will provide a tracking summary of key CMS data and serve as a media guide to transportation measures and trends. The data will be coordinated with the *2040 Indicators* report, but will include more detail and a special emphasis on CMS objectives.

RTP Existing Conditions Report - CMS performance indicators data will also be presented in a detailed baseline report as part of each RTP update. Base year demand modeling for the existing system will be calibrated with CMS data and travel trends and congestion hot spots will be analyzed with the goal of helping develop an updated program of system improvements. The *Existing Conditions Report* will also detail population and employment trends, revenue trends and recent progress in advancing congestion management projects through state and regional funding.

2040 New Look Scenarios - Metro initiated a two-year update to the Region 2040 plan in late 2005 that will revisit regional growth policies, including a transportation vision for shaping the long-term urban form of the region. The updated transportation vision will be developed from a series of "apples and oranges" land use and transportation modeling scenarios, and will likely generate new categories of congestion data for ongoing monitoring. These scenarios will be completed in early 2007, and recommendations for regional congestion policy and monitoring will be incorporated into the next RTP update. The results of the scenario analysis will be published as a freestanding issue piece on long term growth and congestion management.

B. Identify Causes of Congestion

Identifying the causes of congestion depends in large part on using data and analytical tools to quantitatively diagnose the system. Such efforts should be supplemented however, by input from stakeholders, especially shippers and delivery-oriented business that are very sensitive to congestion. Metro will work on both fronts to enhance its ability to identify the causes of congestion. Metro will expand its relationship with PSU Center for Transportation Studies (which gathers and archives real-time ITS data), and complete projects to further understand causes of congestion, - both recurring and non-recurring. Metro's relationship with PSU has already been established through regional funding allocations from the MTIP, and is expected to become more formalized as PSU evolves into a transportation research center under SAFETEA-LU.

C. Identify and Evaluate Alternative Actions

Metro will establish a greater leadership presence for CMS in the region. Drawing from the findings in the "Congestion Management Systems: Innovative Practices" report prepared for the New York State Association of MPOs, Metro will create a congestion management toolbox/guidebook to help local jurisdictions identify and evaluate appropriate strategies. Additionally, through the MTIP and co-ordination of local investments, Metro will develop a more immediate set of recommendations for mitigating congestion in the short-term. Because these recommendations are likely to have implications for local land use and transportation plans, they will be vetted through the MPO decision-making process. These will include briefings to JPACT and the Council on short-term congestion management options, and

development of a short-term program of investments and management practices to guide funding decisions.

Though the policy direction for implementing this component of the CMS is not established, one possible outcome is for JPACT and the Council to replace the current MTIP "motor vehicle" funding category with one that focuses only on alleviating congestion bottlenecks. Metro staff has already begun working with the Council to advance refinements to the MTIP process that will allow the affecting funding categories to be revisited, and staff will include short-term CMS hot spot projects in the discussion of possible schemes. This discussion will also include standing support for regional ITS investments through the MTIP.

D. Implement Cost Effective Solutions

The upcoming RTP update will employ the "Budgeting for Outcomes" methodology. This is a fiscally driven process to achieve cost-effectiveness in a way that best meets public expectations. The key steps to the process include:

- Establishing public expectations and the price of transportation
- Setting the transportation priorities
- Setting the price of each priority
- Developing a purchasing plan for each priority
- Soliciting transportation solutions that deliver the desired results
- Identifying transportation solutions to be included in the RTP based on public priorities

This process likely lead to a scaled-back RTP project list that includes fewer expensive capacity projects. Additionally, during the MTIP prioritization process, Metro will advocate for more cost-effective projects.

In addition, the congestion management toolbox/guidebook described in section C, will help local jurisdictions implement cost-effective solutions.

In 2005, Metro and the City of Portland were jointly awarded a demonstration grant from FHWA to develop a Regional Concept of Transportation Operations (RCTO) for the greater Portland metro area. This work supported by this grant will serve as a catalyst for interagency collaboration. FHWA's Offices of Operations and Planning expect these demonstration grants to show how deliberate coordination increases the value of each dollar invested in the transportation system, whether the money is spent on capital projects or system management. Through this work, Metro will be examining how it rewards interagency collaboration and system management approaches in the planning and programming of transportation projects.

E. Evaluate the Efficiency and Effectiveness of Implemented Actions

Metro will augment its RTP update system analysis with the evaluation of real-time congestion data that is currently collected by Portland State University, ODOT and TriMet. This data is already being used to calibrate the regional demand model, and in the next update to the RTP it will replace a model-drive base year for analysis purposes. Early results from this data reveal substantial variations among major travel routes in length and duration of travel peaks. Metro expects to use this data as the centerpiece of the CMS as envisioned in the Road Map.

F. Putting It All Together

As noted in the introduction of this section, the preceding discussion has identified the ingredients Metro envisions for an improved CMS. Turning those ingredients into a meal, however, requires a complete recipe.

Metro's new Congestion Management Process (CMP) will be based on three phases: diagnostic, planning and monitoring and these phases will incorporate the five elements of the CMS discussed throughout this roadmap document. The overall CMS will be managed by Metro staff in coordination with FHWA and specific working groups will be utilized to incorporate stakeholders at relevant points.

Diagnostic Phase

The purpose of this phase is to identify where, when, and why congestion occurs in the metropolitan area. The resulting information can be shared in real-time, as demonstrated by Portland State's PORTAL initiative or periodically through various means, including Metro's Existing Conditions Report and other publications.

Determining where, when and why congestion occurs depends on performance measures and analytical tools, both of which depend, in turn, on transportation data. Rather than starting with the data, however, Metro staff will implement this CMP by first evaluating what performance measures to use and what analytical tools to employ. Subsequently, that evaluation will determine what data are needed and where gaps exist.

To accomplish this, Metro staff will convene two working groups: technical and stakeholder. The technical working group will address issues related to data, performance measures and analytical tools. The stakeholder group will create a venue to get input on selecting performance measures, communicating with the public about congestion, and identifying the causes of congestion.

Planning Phase

Beginning where the diagnostic phase stops, the planning phase will prioritize congestion problems and triage them according to the appropriate type of response. For example, recurring congestion at a poorly designed intersection can be mitigated in the near-term but may require a significant capital project in a forthcoming MTIP. In another example, a major construction site may cause congestion that can be resolved for the duration of the disruption through system management strategies. There are plenty of other examples, some of which require more than one response.

A significant feature of this phase that differs from the traditional approach is that it involves the MPO in the ongoing management and operation of the region's transportation network. This linking of planning and operations is the crux of the "Regional Concept of Transportation Operations" demonstration grant that Portland has received from FHWA. The CMS is a prime example of an opportunity for Metro, as a planning agency, to help several operating agencies work together to identify and respond to real-time congestion problems. In turn, by working more closely together, these relationships can improve Metro's ability to understand the causes of congestion in the region.

Monitoring Phase
Evaluating the effectiveness of congestion remedies is one of the more complicated and essential steps in the CMP. The monitoring phase will involve *consistent* documentation of the congestion problems identified in the diagnostic phase and the responses applied to them in the planning phase. Just as Metro will emphasize communicating about the causes of congestion on an ongoing basis, it will also endeavor to keep stakeholders informed about the status of the congestion management efforts.

While monitoring is simple in concept, it is complex in practice. Monitoring is dependent on the data, performance measures and analytical tools that were emphasized in the diagnostic phase. As such, performing the monitoring function will benefit from input from both the technical and the stakeholder working groups that contributed during the diagnostic phase.

IV. Steps to get there

Receiving the corrective action and developing this roadmap through several iterations has provided Metro staff with a beneficial opportunity reassess its approach to congestion management. The passage of SAFETEA-LU during this same period of time has also offered the opportunity to link the roadmap work with the transition from CMS to CMP and the introduction of new regulations, expected in coming weeks.

Implementing the roadmap presents two basic challenges: implementing a new approach and finding or leveraging the resources to perform the necessary work. To meet the January 2007 deadline specified in the corrective action, Metro is essentially working with existing resources. Therefore, this conclusion section identifies what can be accomplished in the balance of 2006 and other steps that can be implemented subsequently. The bullets represent measurable and observable activities that can provide the basis of monitoring Metro's progress in implementing the roadmap and achieving a fully-operable CMP.

2006

- Efforts have already begun to create the technical and stakeholder working groups that will be utilized throughout the process but especially in the diagnostic phase.
- Metro staff will convene meetings in the late spring to evaluate what performance measures, analytical tools and data are required to identify, on an on-going basis, where, when and why congestion occurs. This assessment will include a gap-analysis to identify what measures/tools/data are not currently available. The analysis will also identify when and how these gaps will be filled.
- Metro staff will begin creating several forms of regular congestion information products, such as a monthly briefing for TPAC.
- Metro staff will develop and implement a new methodology for prioritizing congestion problems, such as bottlenecks, frequent accident locations, etc. If possible, this methodology will be utilized for MTIP project selection (winter 2007); it will certainly be utilized for the 2008 RTP update.
- Metro staff will initiate a process for triaging identified congestion problems according to the appropriate type of response (capital project, system management, etc.)

- Metro staff will work with the technical working group to establish a methodology for monitoring the effectiveness of congestion remedies and a framework for reporting on this information.

Beyond 2006

- Based on the gap analysis mentioned above, develop new data sources, performance measures and analytical tools in collaboration with PSU and other partners. This may involve capital investments, such as for data collection, as well as funding studies and other research.
- Ongoing study of new data sources, performance measures and analytical tools
- Ongoing reporting of congestion status information and development of additional communication strategies
- Ongoing maintenance of congestion problem prioritization, including methodology
- Collecting and monitoring data/information regarding effectiveness of congestion remedies

Not surprisingly, many of these tasks depend on available human resources at Metro. The availability of the operations program manager, by virtue of the RCTO grant, has already proved to be a benefit to this effort and, for the two-year duration of the grant and depending on that person's availability for non-RCTO work, will continue to help. To some extent, additional grant support in the area of ITS and TSMO is expected to help in this regard. The addition of an engineer to the RTP section staff will also be helpful, especially with respect to the technical aspects of the CMP. Additional changes, such as making the operations program manager position permanent, will be addressed in upcoming UPWP discussions.

Figure 1 lists the steps that Metro will take to achieve its CMS vision, including UPWP work tasks. As part of expanding the role of CMS in the Regional Transportation Plan, Metro will include an updated CMS in the 2006-07 Unified Planning Work Program and in the 2008 RTP update work program. TPAC and the TransPort Subcommittee[2] will serve as the technical consultation groups for development of the CMS work program, and periodic evaluation of CMS activities and progress toward reaching program goals. As previously noted, Metro staff will work with FHWA on overall oversight of the CMP and additional working groups will be utilized to direct technical and stakeholder aspects of the process.

For more information on Metro's CMS program, please contact Tom Kloster (klostert@metro.dst.or.us) or Jon Makler (maklerj@metro.dst.or.us) at Metro.

[2] TPAC and TransPort membership includes representation from the region's cities and counties, Oregon Department of Transportation, Oregon Department of Environmental Quality, Federal Highway Administration, TriMet and the Port of Portland. TPAC also serves as the designated consultation group for federal purposes, and thus is well equipped to function as the technical advisor on further development of the CMS program. The CMS steering committee will initially include Metro, City of Portland, ODOT, TriMet, Portland State University, FHWA, the Port of Portland and other local governments.

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(a) For purposes of this regulation, congestion means the level at which transportation system performance is no longer acceptable due to traffic interference. The level of system performance deemed acceptable by State and local officials may vary by type of transportation facility, geographic location (metropolitan area or subarea, rural area), and/or time of day.	**RTP Section 1.3.5, Policy 13.0 Regional Motor Vehicle System** **Objective H** This specifically directs Metro to implement a CMS. Additionally the general policy language supports the mobility goals of a CMS **Table 1.2 Regional Motor Vehicle Performance Measures** This describes what level of congestion is acceptable in the mid-day and A.M/P.M peaks, varying by 2040 design type. The Oregon Transportation Commission approved this policy as an element of the Oregon Highway Plan in 2000. In "Areas of Special Concern" (described in Figures 1.13a,b,c,d,e) an alternative set of performance measures is used, as described in section 6.7.7. Local TSPs have two options: 1) Proscribed approach - Adopt measures (modal targets, parking ratios, street connectivity standards, mixed-use development plan) in TSP or 2) Performance approach - Establish an action plan. Adopted Performance measures for Areas of Special Concern are detailed in RTP Appendix 3.3
(a) cont'd An effective CMS is a systematic process for managing congestion that provides information on transportation system performance and on alternative strategies for alleviating congestion and enhancing the mobility of persons and goods to levels that meet State and local needs. The CMS results in serious consideration of implementation of strategies that provide the most efficient and effective use of existing and future transportation facilities. In both metropolitan and non-metropolitan areas, consideration needs to be given to strategies that reduce SOV travel and improve existing transportation system efficiency. Where the addition of general purpose lanes is determined to be an appropriate strategy, explicit consideration is to be given to the incorporation of appropriate features into the SOV project to facilitate future demand management and operational improvement strategies that will maintain the functional integrity of those lanes.	**RTP Section 1.3.4, Policy 9.0 Clean Air** **Objective A** This directs Metro to encourage use of all modes of travel. In addition to its air quality benefits, this strategy also reduces SOV travel and improves existing transportation efficiency. (as required in 500.109) **RTP Section 1.3.4, Policy 10.0 Energy Efficiency** **Objective A** This directs Metro to reduce energy consumption through multi-modal travel, diminished delay and fuel consumption. **RTP Section 1.3.6, Policy 18.0 Transportation System Management** This policy directs Metro to optimize performance on the regional transportation system. **Objectives B & C** These direct Metro to implement ITS and access management strategies.

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	RTP Section 1.3.4, Policy 19.0 Regional Transportation Demand Management This directs Metro to improving accessibility to public transportation, carpooling, telecommuting, bicycling and walking options. Metro produces an annual report to demonstrate effectiveness of the regional TDM program. (program's name changed to "Regional Travel Options"). Table 1.3 Non-SOV Modal Targets implements this policy and has been acknowledged as an alternative measure for the Oregon Transportation Planning Rule's VMT/capita reduction requirement. **RTP Section 1.3.4 Policy 19.2 Peak Period Pricing** This directs Metro to investigate value pricing whenever new capacity is being added to the regional motor vehicle system. **RTP Section 6.4.5 Design Standards for Street Connectivity** This requires new development to provide local street connections no more than 530 feet apart. This maximizes arterial street capacity (by allowing local trips to use local streets), and decreases the need to widen arterials. **RTP Section 6.1.1 Metropolitan Planning Required by TEA-21** This establishes federal requirements that Metro and local jurisdictions, evaluate CMS strategies before adding SOV projects. **RTP Section 6.4.4 Transportation Systems Analysis Required for Local Plan Amendments** Local plan amendments that would result in an RTP amendment to add significant SOV capacity to first undergo CMS requirements and submit a findings report for CMS compliance. **RTP Section 6.6.2 RTP Project Amendments** This outlines the process Metro follows to add projects to the RTP. The process for adding SOV projects is described in section 6.6.3 **RTP Section 6.6.3 RTP Congestion Management Requirements** Before projects from local transportation plans (or major Metro studies) that add significant SOV capacity can be amended into the RTP, they must first undergo a CMS analysis. **RTP Section 6.7 Project Development and Refinement Planning**

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	This describes Metro's process for getting a project on the ground – the local jurisdiction determines project details, i.e. alignment, design, operations, EIS (if necessary). Metro requires the jurisdiction to take measures to improve operational efficiency at this project refinement level.
b) In addition to the criteria in paragraph (a) of this section, in all TMAs, the CMS shall be developed, established and implemented as part of the metropolitan planning process in accordance with 23 CFR 450.320(c) and shall include:	Metro's CMS policies are evaluated in three ways: 1) Triennially, as part of the RTP update 2) Annually, though Metro's self-certification process 3) Triennially, as part of Metro's federal certification review
(1) Methods to monitor and evaluate the performance of the multimodal transportation system, identify the causes of congestion, identify and evaluate alternative actions, provide information supporting the implementation of actions, and evaluate the efficiency and effectiveness of implemented actions;	Metro monitors and evaluates transportation performance in two main ways: 1) RTP updates • **RTP Section 6.6.2 RTP Project Amendments** – this outlines the project amendment process • **RTP Section 3.2 Regional Congestion Management Findings for the 2020 Preferred System –** this describes CMS actions used as inputs in system performance modeling • **RTP Section 3.3 2020 Preferred System Analysis** – describes the performance of the regional system, travel times, travel patterns and major corridor performance. 2) Between RTP updates • The Metro Performance Measures Report is published biennially, and includes measures that help track the region's progress toward implementing the 2040 Growth Concept. (Most recently published in December 2004) Data Collection/Analysis • Data is collected in four main ways which feeds into the RTP update and Metro Performance measures report 1) Metro Travel Forecasting Division 2) Metro Data Resource Center 3) Portland State University Center for Transportation Studies 4)Transport ITS Subcommittee of TPAC These are described in more detail in text below responding to CFR 500.109 requirement (3) – Data Collection
(2) Definition of parameters for measuring the extent of congestion and for supporting the evaluation of the effectiveness of congestion reduction and	**RTP Table 1.2 Regional Motor Vehicle Performance Measures** is a LOS policy based on the 2040 Growth Concept – the regional blueprint for growth.

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mobility enhancement strategies for the movement of people and goods. Since levels of acceptable system performance may vary among local communities, performance measures and service thresholds should be tailored to the specific needs of the area and established cooperatively by the State, affected MPO(s), and local officials in consultation with the operators of major modes of transportation in the coverage area;	It describes what level of congestion is acceptable in the mid-day and A.M/P.M peaks, varying by 2040 design type. The Oregon Transportation Commission approved this policy as an element of the Oregon Highway Plan in 2000.
(3) Establishment of a program for data collection and system performance monitoring to define the extent and duration of congestion, to help determine the causes of congestion, and to evaluate the efficiency and effectiveness of implemented actions. To the extent possible, existing data sources should be used, as well as appropriate application of the real-time system performance monitoring capabilities available through Intelligent Transportation Systems (ITS) technologies;	Data is collected in four main ways which feeds into the RTP update and Metro Performance measures report: *1) Metro Travel Forecasting Division* This division collects second hand transportation performance data from various sources. Data collected regularly, includes: • Vehicle Miles of Travel Data (VMT) from the Oregon DOT annual data for Portland Only, and Vancouver data from the FHWA in Washington, D.C • Cutline Count information from the City of Portland, Multnomah County, Washington County, Clackamas County, and ODOT • Vehicle Classification Traffic Count data from Oregon DOT (from their Highway Performance Monitoring System - HPMS – which includes several truck classifications • Automatic Traffic Recorder data from ODOT for 18 locations in the Portland Area, plus similar data from Washington DOT. • ODOT Traffic Volume Tables Booklets - 1964 through 2003 • National 'Highway Statistics' booklets from the FHWA, 1968 to 2003 • Volume and Classification traffic counts from the Port of Portland's annual report. • Texas Transportation Institute's data for Portland - for their Urban Mobility Study - through an ODOT contact and directly from TTI. • Consumer Price Index data for the Portland-Salem Index and the National CPI. • Oregon Motor Vehicle Registrations and Drivers License Data • Population and Employment Data from Metro's DRC and PSU, Census • Parking Costs Data for the Portland Central Business District and the Lloyd Area • National Driving Costs Data from the AAA • TriMet Transit Fare Survey Data (annual) - and Monthly Transit Performance Reports • ODOT Daily Road Reports • Weekly Road Report and Oregon Gas Prices listing

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	• Washington State Monthly Speed Data • Oregon Fuels Tax Reports, for Washington and Multnomah Counties (quarterly). Additionally, Travel Forecasting is participating in a Freight data enhancement project with ODOT, the Port of Portland, and others. The project includes: • Truck counts: identifying locations, taking counts, and recommending a procedure for developing a continuing counting process. • Truck origin destinations: identifying locations to collect origin-destination profiles (truck terminals, intermodal sites, regional cordon sites • Truck model enhancements: Using the data collected to enhance the truck model *2) Metro Data Resource Center* DRC acts as a research group within Metro's planning department through. It has created the Regional Land Information System (RLIS) RLIS is a Metro-created GIS application that supports transportation modeling and regional planning applications. It includes land parcel data, the basis for all other data within RLIS, from the 25 cities and 3 counties that form Metro. The DRC creates detailed models and forecasts of future trends in transportation and land use using demographic and economic data. (i.e. U.S. Census data) It also provides estimates of employment in past years and recent employment densities, and has produced many technical documents, socio-economic publications and white papers. DRC's integrated economic/demographic growth simulation model supports Regional Transportation Plan (RTP) planning, and revenue forecasting. *3) Portland State University Center for Transportation Studies* This research center studies how Intelligent Transportation Systems (ITS) apply to the Portland area and throughout the country. CTS staff gather, archive and analyze real-time ITS data using sensors and video cameras placed on roads and other infrastructure in addition to using advanced transportation monitoring instruments. Graduate civil engineering and urban planning students are also an integral part of the center's research force.

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	Recent projects include: • Assessing of freeway bottleneck behavior • Investigating state fuel tax evasion rates • Examining roadway illumination safety effects By using real-time data, the center compliments and further refines more traditional transportation modeling and is a valuable tool for local decision makers, including key partnership agencies: the Oregon Department of Transportation (ODOT), the City of Portland, Tri-Met and Metro. 4*) Transport ITS Subcommittee of TPAC (metro's federal consultation body)* This group develop the regional ITS plan (with DKS Associates) in 1993. It oversees the ongoing development of ODOT's regional Traffic Management Operations Center, and has evolved into the multi-modal ITS services coordinating body within the greater Portland-Vancouver metropolitan area. The focus of ITS activity in Portland over the past ten years has largely been to install needed core field devices and communication systems and to perfect the computer hardware and software tools needed to integrate and optimize operation of the devices. In 2000 Transport initiated consultant development of a Draft ITS architecture, which it will monitors and update. RTP Sections 6.6.2 and 6.6.3 serve as Metro's tool to evaluate the efficiency and effectiveness of implemented congestion reduction actions '
(4) Identification and evaluation of the anticipated performance and expected benefits of appropriate traditional and nontraditional congestion management strategies that will contribute to the more efficient use of existing and future transportation systems based on the established performance measures. The following categories of strategies, or combinations of strategies, should be appropriately considered for each area: Transportation demand management measures, including growth management and congestion pricing; traffic operational improvements; public transportation improvements; ITS technologies; and, where necessary, additional system capacity.	**RTP Section 1.3.6, Policy 19.0 Regional Transportation Demand Management** This directs Metro to improving accessibility to public transportation, carpooling, telecommuting, bicycling and walking options. Metro produces an annual report to demonstrate effectiveness of the regional TDM program. (Program's name changed to "Regional Travel Options" - RTO). Approximately $2 million per year is allocated to the RTO program through the MTIP process. The RTO Annual report evaluates effectiveness of the program toward reaching the Non-SOV modal targets (Table 1.3 of RTP) **RTP Section 1.3.6, Policy 19.1 Regional Parking Management** This directs Metro to manage the use parking to support the 2040 Growth Concept and encourage Non SOV travel. i.e. maximum parking ratios, shared parking, local parking management plans. **RTP Section 1.3.4 Policy 19.2 Peak Period Pricing** This directs Metro to investigate value pricing whenever new capacity is

CFR 500.109 CMS text	RTP Reference
	being added to the regional motor vehicle system.
(5) Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy (or combination of strategies) proposed for implementation; and	**RTP Section 5.1.3 Subarea Performance** – describes a menu of transportation improvements (many of which come from the CMS requirements) to help us achieve the Non-SOV modal targets. The Maps in Chapter 5 of the RTP display the projects by subarea, with 2040 design type areas highlighted. The RTP includes 20 years of projects, which are scheduled as three increments: 2000-2005, 2006-2010, or 2011-2020. A detailed list of these projects is included in RTP Appendix 1.1
(6) Implementation of a process for periodic assessment of the efficiency and effectiveness of implemented strategies, in terms of the area's established performance measures. The results of this evaluation shall be provided to decision makers to provide guidance on selection of effective strategies for future implementation.	RTP Section 6.6.2 and 6.6.3 direct Metro to make CMS findings as seen in RTP Section 3.2 and 3.3. • **Section 3.2 Regional Congestion Management Findings for the 2020 Preferred System –**describes the CMS actions used as inputs in the system performance modeling • **Section 3.3 2020 Preferred System Analysis** – describes the performance of the regional system, travel times, travel patterns and major corridor performance.
c) In a TMA designated as nonattainment for carbon monoxide and/or ozone, the CMS shall provide an appropriate analysis of all reasonable (including multimodal) travel demand reduction and operational management strategies for the corridor in which a project that will result in a significant increase in capacity for SOVs (adding general purpose lanes to an existing highway or constructing a new highway) is proposed. If the analysis demonstrates that travel demand reduction and operational management strategies cannot fully satisfy the need for additional capacity in the corridor and additional SOV capacity is warranted, then the CMS shall identify all reasonable strategies to manage the SOV facility effectively (or to facilitate its management in the future). Other travel demand reduction and operational management strategies appropriate for the corridor, but not appropriate for incorporation into the SOV facility itself shall also be identified through the CMS. All identified reasonable travel demand reduction and operational management strategies shall be incorporated into the SOV project or committed to by the State and MPO for implementation.	This section does not apply to Metro, since the region has met federal Clean Air act amendments, as described below: The Portland/Vancouver area is one interconnected airshed. However, given the State boundary along the Columbia River and the differing jurisdictions and state laws, the Federal government approved each side of the airshed taking responsibility for its area. The Portland region currently meets carbon monoxide standards, although many years ago there were times when carbon monoxide levels were occasionally higher than allowed. (The region met standards in 1996 and has done so since then.) A maintenance plan was required in 1996 and included emission budgets (maximum pollutant levels for future years) and the Metro jurisdictional boundary was established as the geographic extent of concern. The region must demonstrate conformance with the carbon monoxide maintenance plan at least every three years. (Accordingly, the Portland area is said to be in maintenance status for carbon monoxide). The region last demonstrated air quality conformity as of March 5, 2004 and is currently assessing air quality conformity, to be opened to public review, July 2005. For all other air pollutants of national concern (such as ground level ozone

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	and particulates), the Portland airshed is in attainment with national air quality standards and there are no maintenance plans or conformity demonstrations required.
(d) (1) Compliance with the requirement that the planning process in all TMAs include a CMS will be addressed during metropolitan planning process certification reviews for all TMAs specified in 23 CFR 450.334. If the metropolitan planning process in a TMA does not include a CMS that meets the requirements of this section, deficiencies will be noted and corrections will need to be made in accordance with the schedule established in the certification review. (2) Until October 1, 1997, the interim CMS procedures in 23 CFR 450.336(b) may be used to meet the requirement in 23 U.S.C. 134(l) that Federal funds may not be programmed in a carbon monoxide and/or ozone nonattainment TMA for any highway project that will result in a significant increase in single-occupant-vehicle capacity unless the project is based on an approved CMS. After September 30, 1997, such projects must be based on a CMS that meets the requirements of this part.	Metro's CMS was first incorporated into the 2000 RTP, and later expanded in the 2004 RTP.

APPENDIX 'B'
Portland region CMS Policy discussion

Metro's Congestion Policy

Unlike most MPOs, Metro incorporates its CMS into both land use and transportation planning. Thus, Metro's CMS is used to better inform decision making in the region's land use and transportation planning processes with timely, comprehensive congestion data. The 2000 Regional Transportation Plan (RTP) broke new ground when an adaptive congestion policy (based on 2040 Growth Concept land uses) was adopted as part of the plan. The new congestion policy acknowledged the reality that the longstanding national practice of "building your way out" of congestion was not only politically and financially unattainable, it was also functionally impossible in growing regions without aggressive use of peak period pricing. With more than 1 million new residents expected over the next 30 years, the Portland region will face substantial growth in congestion. Despite highway modernization funds declining in real dollars for the past three decades, the RTP policy seeks to satisfy public expectations for managing congestion, and ensuring that the region's economy is not negatively impacted relative to competing economies along the West Coast.

Metro's congestion policy is a hybrid that grew from two independent studies completed in the late 1990s. The first was the 2000 RTP alternatives analysis; a 2-year evaluation of level-of-service options for the plan that examined alternatives to the traditional level-of-service 'D', one-size fits all approach. A concurrent congestion pricing study, funded through a special FHWA grant, examined pricing options for the Portland metropolitan region. The hybrid policy that resulted in the RTP consists of two main components:

- *Graduated Level-of-Service* - this policy recognized that adding capacity, alone, would not relieve congestion during peak periods. Instead, the policy seeks to protect mobility during the off-peak through a 2-hour, graduated policy, and provide travel options to driving alone during the peak periods. The policy also recognizes that the most built-up areas also have the best options to driving alone, and tolerates more peak-period congestion in these areas.

- *Pricing for new highway capacity* - this component is incorporated into all corridor planning for new highway capacity, and requires that pricing strategies be considered along with more traditional solutions. This component was the chief recommendation from the FHWA-funded pricing study.

Metro's level-of-service policy was subsequently adopted as part of the Oregon Transportation Plan (OTP) and Oregon Highway Plan (OHP) by the Oregon Transportation Commission in December 2000, and acknowledged to be in compliance with the Oregon Statewide Planning Goals by the Land Conservation and Development Commission in June 2001. Figure 1 provides the details of Metro's level-of-service policy.

The RTP level-of-service policy is the foundation of the CMS program, since it establishes the region's expectations for coping with congestion, a prerogative set forth for state and local officials in the CMS regulations. Metro expects this policy to continue to evolve in response to the region's rapid growth, state-level aversion to increases in highway funding and frequent local objections to major highway projects. Currently, the policy seeks to maintain the current "status

quo" of congestion as it exists in most corridors during peak periods, and remedy congestion bottlenecks in some areas.

Figure 1 - Regional Transportation Plan Level of Service Policy

Location	Mid-Day One-Hour Peak			A.M./P.M. Two-Hour Peak					
	Preferred Operating Standard	Acceptable Operating Standard	Exceeds Deficiency Threshold	Preferred Operating Standard		Acceptable Operating Standard		Exceeds Deficiency Threshold	
				1st Hour	2nd Hour	1st Hour	2nd Hour	1st Hour	2nd Hour
Central City **Regional Centers** **Town Centers** **Main Streets** **Station Communities**	C	E	F	E	E	F	E	F	F
Corridors **Industrial Areas** **Intermodal Facilities** **Employment Areas** **Inner Neighborhoods** **Outer Neighborhoods**	C	D	E	E	D	E	E	F	E
Banfield Freeway[1] *(from I-5 to I-205)*	C	E	F	E	E	F	E	F	F
I-5 North* *(from Marquam Bridge to Interstate Bridge)*	C	E	F	E	E	F	E	F	F
Highway 99E[1] *(from the Central City to Highway 224 interchange)*	C	E	F	E	E	F	E	F	F
Sunset Highway[1] *(from I-405 to Sylvan interchange)*	C	E	F	E	E	F	E	F	F
Stadium Freeway[1] *(I-5 South to I-5 North)*	C	E	F	E	E	F	E	F	F
Other Principal Arterial Routes	C	D	E	E	D	E	E	F	E
Areas of Special Concern	Areas with this designation are planned for mixed used development, but are also characterized by physical, environmental or other constraints that limit the range of acceptable transportation solutions for addressing a level-of-service need, but where alternative routes for regional through-traffic are provided. Figures 1.13.a-e in this chapter define areas where this designation applies. In these areas, substitute performance measures are allowed by OAR.660.012.0060(1)(d). Provisions for determining the alternative performance measures are included in Section 6.7.7 of this plan. Adopted performance measures for these areas are detailed in Appendix 3.3.								

Level-of-service is determined by using either the latest edition of the Highway Capacity Manual (Transportation Research Board) or through volume to capacity ratio equivalencies as follows: LOS C = .8 or better; LOS D = .8 to .9; LOS E = .9 to 1.0; and LOS F = 1.0 to 1.1. A copy of the level of service tables from the Highway Capacity Manual is shown in Appendix 1.6.

Source: Metro

APPENDIX 'B'
Portland region CMS Policy discussion

CMS: Policy Background

The CMS policy was first implemented in the development of the system component of the 2000 RTP. The update included six rounds of travel demand simulations, with a CMS analysis of plan projects during each round. The Title 6 CMS criteria required a full evaluation of project alternatives where the RTP analysis identified congestion that exceeded the minimum level-of-service thresholds for the planned system. This approach resulted in a dramatic shift in project priorities from the 1995 plan, with more than half the projects in the 2000 plan consisting of new, community-based, multi-modal solutions, and just one-quarter of the projects carried forward from the 1995 RTP. This represented the most dramatic overhaul of the plan since it was first developed in the late 1970s. The project set that resulted from the CMS approach also maintained conformity with clean air standards, and was consistent with the region's air quality maintenance plan.

However, the 2000 update to the RTP also resulted in a set of improvements that were more than three-times the projected revenue for the 20-year planning period. While the region is committed to increasing transportation revenue at the state and regional level, the shortfall will likely cause the level-of-service policy to be revisited in future RTP updates to determine whether the measures are too aggressive in promoting capacity improvements, and whether the CMS could be used to identify less costly solutions to managing congestion.

Data used in the 2000 RTP update was largely based on surveys and model outputs, since Intelligent Transportation Systems (ITS) data was still not fully available in the region. The RTP level-of-service alternatives analysis included a detailed financial account of various congestion scenarios, including the infrastructure implications of expanding the principal arterial system to meet the previous "D" standard. While the system never performed at this level, despite assumptions that included 10 and 12-lane freeways throughout the region, the financial analysis showed more than $13 billion in highway capital costs associated with the "D" level-of-service policy for the peak hour, compared to just over $4 billion for an "F" policy. These figures compared to just over $1 billion on forecasted capital revenue for the planning period. This information was the foundation of the new, graduated level-of-service policy adopted in the 2000 RTP.

The 2000 RTP systems analysis showed the strategic mix of improvements produced by the CMS criteria to be the most efficient, effective approach to managing congestion in the region, given the realities of expected growth and financial realities of highway funding in Oregon. The results echoed the earlier 2040 Growth Concept.

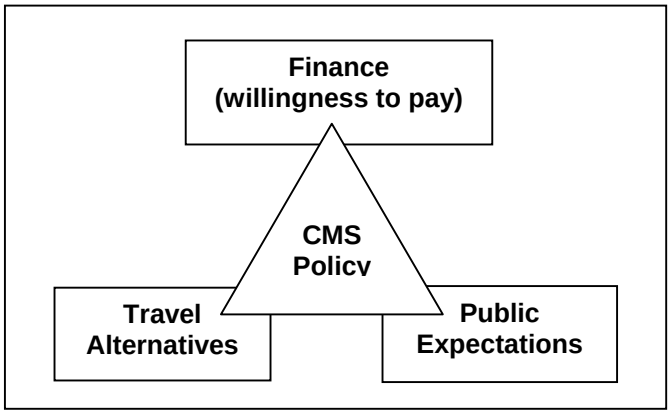
The RTP update process also an analysis of funding scenarios that could be pursued to meet the substantial funding shortfalls that the region faces. The financial analysis also reveals a limitation of the CMS, since the plan is ultimately a political document and statement of public preference. In the Metro region, voter support for spending on major transit improvements and localized arterial, bicycle, pedestrian and boulevard projects has far exceeded any interest in funding highway projects. Likewise, the State has failed to keep pace with inflation with general transportation funding. In fact, the state revenue decline (in real dollars) has been so sharp that some local jurisdictions have resorted to using city and county funds to modernize state

highways. To this extent, the CMS provides an important basis for policy-making, but does not necessarily set regional policy on funding priorities.

These practical and political tradeoffs are illustrated in Figure 5 (below), where the CMS provides the data and analytical rigor in a policy debate that considers travel alternatives as well as willingness and ability to pay. In the 2000 and 2004 updates, elected officials considered the following when adopting the RTP:

- The effects of congestion reported in the CMS Existing Conditions Report
- Revenue constraints presented as part of a regional and statewide forecast
- Public expectations for mobility and willingness and ability to pay for the projected shortfall
- Existence of travel alternatives in congested corridors

Figure 5 - CMS and Regional Policy Making



The region's elected officials concluded that there are limits in the ability to improve the system, though the RTP ultimately included some higher cost improvements in several corridors, such as highway extensions in the Damascus and Sherwood areas, and light rail extensions along I-205 and Highway 99E. In other areas, the plan was more pragmatic, and focused on less capital-intensive improvements.

In many urban corridors, the practical constraints to adding road capacity mean that the CMS alternatives represent the only viable options to managing congestion. An example is the Banfield Freeway, which was expanded to six lanes in 1986, and immediately reached the same levels of congestion that had occurred on the earlier 4-lane profile. The 2000 RTP level-of-service alternatives analysis evaluated a 10-lane profile on the Banfield, which revealed that sufficient latent demand exists here to fill that capacity to the point of failure. In this example, the CMS serves to ensure that as many alternatives as possible to driving the Banfield corridor are provided in the plan, with acknowledgement of the reality that added capacity -- and even a public expectation of added capacity -- were not viable options.

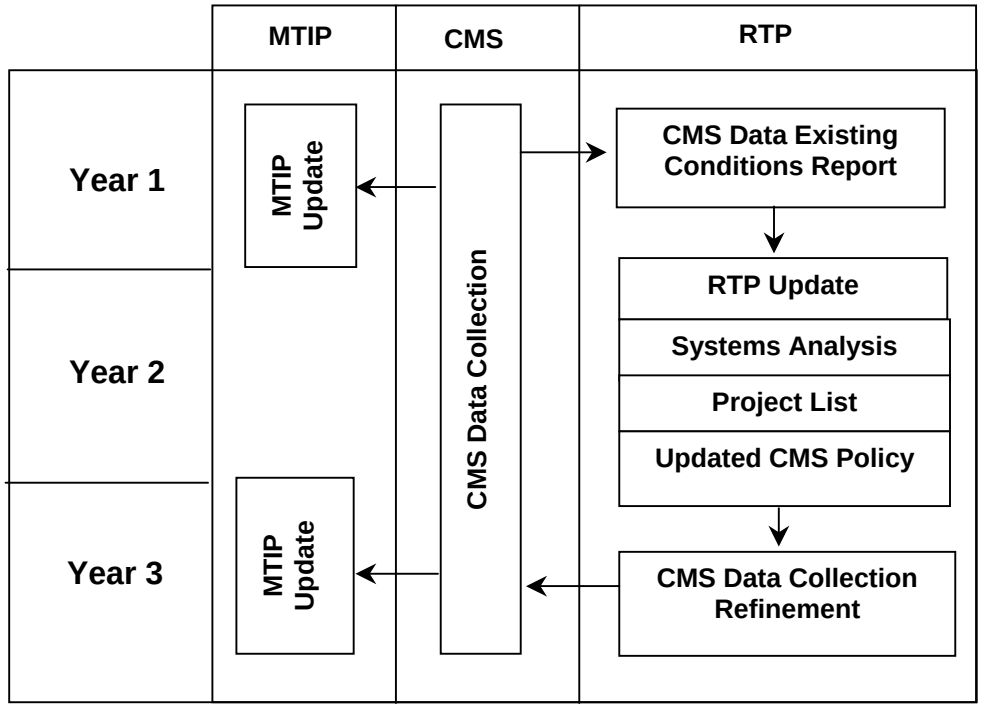
APPENDIX 'B'
Portland region CMS Policy discussion

In corridors without substantial physical constraints, the purpose of treating capacity expansion as a last resort is to ensure that a multi-modal system is in place before expanding SOV capacity. In these areas, which are generally found in newly urbanizing parts of the region, the RTP policy calls for ensuring that the traveling public has the options of transit, bicycling and walking on most regional facilities. The CMS ensures that these options, which often have the advantage of relative cost effectiveness, are established before more costly road capacity is constructed. The purpose of the CMS in these examples is to stage the construction of an urban system, not prevent road capacity from being built.

Integration of System Performance Measurement into RTP and MTIP

Figure 2 illustrates the relationship of the CMS to the periodic updates of the RTP and Metropolitan Transportation Improvement Program (MTIP). The ongoing CMS data monitoring and collection feeds into both planning programs, with the RTP updates functioning as a feedback loop that updates and refines the CMS policy, regulations and data collection. The process revolves around the 3-year RTP update cycle.

Figure 2 - Integration of CMS with Regional Planning and Programming



An RTP update is built upon a CMS existing conditions report that complements a systems "base case" for updating the plan. The existing conditions report is currently limited to highway and transit data collected through the regional ITS system, and model-based data generated by Metro. The existing conditions data is used to evaluate existing congestion hot spots and corridors that provide a baseline for plan-year systems analysis. The RTP update also generates refinements to the CMS as part of developing an updated transportation system. Typical refinements to the CMS that might result from an RTP update are the extent and type of data collected and revised policies for how to use CMS data in the planning process. The MTIP process does not have a

feedback loop into the CMS, however, since the MTIP does not include policy evaluation or a systems analysis beyond an air quality conformity determination.

As Metro's policy umbrella for transportation decisions, the RTP is the framework for collecting and monitoring transportation data. Accordingly, RTP policies frame the CMS data collection methodology. The CMS Existing Conditions Report provides a starting point for an RTP update, though much of the data used in the 2000 and 2004 updates were derived from the Metro travel surveys and demand model. For future updates, the CMS Existing Conditions Report will draw from regional ITS data that is now being collected in the region. In 2003, Metro entered a new partnership with ODOT and Portland State University to collect and monitor transportation data from the ITS network. In 2005, Metro approved MTIP funding to expand the ITS network to include freight data and make other enhancements.

Appendix C. Comparison of Approaches toward meeting federal Congestion Management Requirement

		Metro	San Diego Association of Governments (SANDAG)	Southwest Washington Regional Transportation Council (RTC)	Puget Sound Regional Council (PSRC)[1]
CMS Data	**Area Monitored**	MPO Boundary, plus 2040 Growth Concept Green Corridors - which travel from the MPO boundary to urban growth boundaries of neighboring cities: • I-84 east to Cascade Locks • US 26 east to Sandy • Hwy 224 southeast to Estacada • Hwy 213 south to Molalla • Hwy 99E south to Canby • I-5 south to Salem • Hwy 99W southwest to Newberg • US 26 west to North Plains • US 30 northwest to Scappoose	Not specified	Vancouver metropolitan area, plus major inter-regional corridors and major arterials corridors connecting other cities (Battle Ground, Ridgefield, La Center) to the base congestion management network.	The geographic area of the Regional Council Region: King, Kitsap, Pierce and Snohomish counties.
	Facilities Monitored	Corridors containing RTP Principal Arterials (Freeways and Highways) and Light Rail lines.	Freeways State highways Principal arterials	30 corridors from the Regional Transportation System (defined in the Metropolitan Transportation Plan) with "existing or potential recurring congestion"[2]	Regional roadways (generally principal arterials and higher) and ferry elements of the adopted Metropolitan Transportation System. In addition, local jurisdictions will provide CMS data for minor arterials and collectors that have federally-funded general-purpose capacity projects.

[1] Based on PSRC Draft CMS work plan – 3/18/05
[2] Federal guidelines and professional judgment were used to define "existing or potential recurring congestion."

Appendix C. Comparison of Approaches toward meeting federal Congestion Management Requirement

	Metro	San Diego Association of Governments (SANDAG)	Southwest Washington Regional Transportation Council (RTC)	Puget Sound Regional Council (PSRC)[1]
Performance Measures / Indicators	*Roadways*: Speed characteristics during peak and off-peak periods (defined in RTP Table 1.12), i.e. Avg travel speed during peak and off-peak periods *Transit*: Light Rail Transit (LRT) boardings and headways during peak and off-peak periods (defined in RTP Table 1.12)	*Roadways*: Level of Service (LOS)[3] *Transit*: Service Frequency, Routing and Coordination[4]	*Roadways*: Peak hour volumes, congestion ratios, travel speeds (as well as speeds as percentage of speed limit), intersection delay, Avg auto occupancy rate, truck percentages *Transit*: Peak hour percentage of seat capacity used, seats as percentage of lane capacity, Ridership by type of service	The use of performance measures will occur in two distinct phases: during selection of strategies (as part of each corridor study) and during the follow-up assessment of strategy effectiveness. <u>Selection of strategies (as part of each corridor study)</u> These will be appropriate to the local conditions and interests expressed by agencies and stakeholders for that corridor: some examples – person and vehicle volumes, travel time, peak period transit ridership, hours of travel delay, benefit/cost ratio, and safety. <u>Assessment of strategy effectiveness</u> *Primary measures*: Volume/Capacity ratio by segment; Travel time between centers (auto vs. transit); LOS standards for state highways; Population, employment, housing data by center; *Secondary Measure (where available and appropriate)*: Travel Speeds (general purpose vs HOV lane); Transit frequencies, ridership and occupancy; Ferry ridership; Avg car occupancy; park and ride lot utilization; Commute Trip Reduction employer mode share data; Person throughput; Travel delay per traveler; Freight movement reliability and delay; Incidents & accidents; Local system conditions related to regional facility operations;

[3] If a roadway segment falls below established standard, E, then a Deficiency Plan must be prepared. However F is allowed in circumstances when a roadway was operating at this level when the base year LOS was established.
[4] Routing = percentage of population served by transit. Coordination = how transit is coordinated between different operators in region – uniform fares, timed transfers

Appendix C. Comparison of Approaches toward meeting federal Congestion Management Requirement

	Metro	San Diego Association of Governments (SANDAG)	Southwest Washington Regional Transportation Council (RTC)	Puget Sound Regional Council (PSRC)[1]
Monitoring & Reporting System	The Oregon Department of Transportation (ODOT) has installed a comprehensive monitoring system across the region. Portland State University Center for Transportation Studies collects and archives ODOT traffic data. Metro analyzes this data and presents it in the biennial Metro Performance Measures Report. The ongoing development of the system is overseen by Transport, a subcommittee of TPAC (Metro's federal consultation body). Transport monitors and updates the regional ITS architecture.	*Roadways*: Every 2 years, State DOT and local jurisdictions collect traffic data used to calculate LOS *Transit*: With each CMP update[5], the two transit districts provide updated frequency and coordination information. SANDAG calculates routing within the regional transportation model SANDAG prepares regular progress reports on the status of CMP activities.	RTC coordinates with local transportation agencies to collect needed transportation data.[6] *Roadways* WSDOT – traffic counts Clark County – traffic counts, travel time Local jurisdictions: traffic counts, travel time RTC – traffic county, travel time, auto occupancy *Transit* C-Tran – transit ridership, bus capacity RTC displays results in an annual Congestion Monitoring Report.	The analysis of congested locations and causes will be conducted at a subarea level. One subarea will be studied each year, for six years. The Regional Council will issue annual CMS subarea performance reports. These reports will include an inventory of solutions and initiatives that have been identified or are underway in the corridors, as well as performance monitoring and evaluation of previously implemented strategies. The Regional Council will compile before-and-after studies that have been completed. Effectiveness will be measured through systemwide impacts or improved conditions as well as an evaluation of localized conditions. The reports will compare anticipated benefits (from the originating corridor study) with updated performance analysis. WSDOT uses ITS infrastructure to obtain travel time and other congestion-related real-time data. Local jurisdictions will provide CMS data for minor arterial and collectors that have federally-funded general-purpose capacity expansion projects.

[5] SANDAG is required by the State of California to develop a Congestion Management Program (CMP), updated every 2 years. Due to their similarities, SANDAG has requested that FHWA accept it as a CMS.
[6] RTC organized a process for collecting existing data on a regular basis and initiated the collection of additional data needs.

Appendix C. Comparison of Approaches toward meeting federal Congestion Management Requirement

		Metro	San Diego Association of Governments (SANDAG)	Southwest Washington Regional Transportation Council (RTC)	Puget Sound Regional Council (PSRC)[1]
CMS Implementation	**Evaluation of CMS Reports for Impacts to Regional Plan**	Base year modeling for the existing system is calibrated with CMS data for RTP updates. There is a two step screening process before a project that adds significant SOV capacity can be included in the RTP[7]: 1) Local plan amendments/studies that would require an amendment to the RTP to add significant SOV capacity must go through CMS requirements and the jurisdiction must submit a findings report for CMS compliance. (RTP section 6.4.4) 2) Before projects (from major metro studies or local transportation plans) that add significant SOV capacity can be amended into the RTP, they must first undergo the CMS analysis outlined below: (RTP Sections 6.62 and 6.6.3) The following actions must first be considered. • TDM • TSM • HOV • Transit/bike/ped improvements • Unintended land use / transportation effect • Latent demand	CMP focuses on short-range trip reduction and transportation management strategies that can be implemented earlier than long-term RTP projects. It also provides ongoing transportation system monitoring data used in assessing needed RTP improvements and performance of transportation system.[8]	The system performance data and maps are used to identify system deficiencies and needs.	The subarea reports will propose new corridor studies where needed.

[7] Significant SOV capacity is defined as any increase in general vehicle capacity designed to serve 700 or more additional vehicle trips in one direction in one hour over a length of more than one mile.
[8] The CMP document does not explain how the monitored data is used to assess needed RTP improvements.

Appendix C. Comparison of Approaches toward meeting federal Congestion Management Requirement

	Metro	San Diego Association of Governments (SANDAG)	Southwest Washington Regional Transportation Council (RTC)	Puget Sound Regional Council (PSRC)[1]
Needs Evaluation / Project Identification	CMS elements are incorporated in the MTIP project evaluation criteria in three main ways: 1) Within the road and bridge capacity category, points are awarded for reducing congestion – Volume / Capacity ratio and Vehicle Hours of Delay reduction 2) Funding by modal category ensures that a mix of transportation projects get built: Bicycle, Pedestrian, Transit, Boulevard, Transportation Demand Management, Transit Oriented Development, and Intelligent Transportation Systems. 3) Points are awarded (within all modal categories) for implementing the regional land use strategy – The 2040 Growth Concept. This is demonstrated by locating a project in the central city, regional centers, town centers, station communities, main streets, industrial areas, etc.)	The recommended actions in the RTP to implement the CMP include: 1) Prepare and monitor implementation of deficiency plans as a tool to address congestion "hot spots" in the region. (The findings and recommendations should be incorporated into the RTP) 2) Assemble, update, and disseminate information on low cost, near-term strategies to better manage congestion The CMP is explicitly linked to the RTIP process. A CMP Capital Improvement Program addresses deficiencies identified through transportation system monitoring, CMP land use analysis, and Deficiency Plan efforts. (The 2002 RTIP serves as the CMP CIP) CMP performance measures must be considered when developing the CIP. The RTP, RTIP, and CMP CIP are developed jointly as integrated programs. The criteria to evaluate and rank projects related to the CMP include: *Congestion Relief* – Does the project pride current and future congestion relief? *Transit Mobility* – Does the project benefit a facility used by public transit as measured by number of routes and frequency of service? *Smart growth* – Is the project in an area targeted for smart growth or does it support smart growth strategies? *Encourages Infill Development Strategies* – Does the project support in-fill development? The existing RTIP / CMP CIP project selection criteria will be reevaluated and modified as necessary to provide priority funding for improvements that improve the performance of the CMP system and/or support other CMP policies, including establishment of new performance measures. Equal consideration should be given to projects that either prevent of address existing congestion deficiencies in the CMP network.	Using the individual CMS corridor segment data, Areas of Concern are identified. (volume/capacity >0.9 or travel speed 60% of speed limit). The congestion monitoring report cross-references these areas to the transportation solutions identified in a TIP, MTIP, or other plans. These areas of concern warrant further analysis and monitoring. The CMS is not explicitly linked to the MTIP process. However, some of the CMS performance measures are included in the MTIP Needs Criteria, in its "congestion management" category: *Existing Peak hour V/C ratio* (projects are awarded more points for a higher existing ratio) *Peak hour V/C ratio reduced* (projects are awarded more points for greater reduction in ratio) *Operational Improv*ements (projects are given points for a travel time reduction, TDM improvement, and an intersection/TSM improvement *Reduction of Single Occupancy Vehicles* (projects are awarded points for transit expansion, park and ride construction, carpool/vanpool, improved access to park and ride/transit, bike lanes, sidewalks.)	CMS factors will be required for projects to be included in the Metropolitan Transportation Plan (MTP). Project sponsors will be required to provide CMS-related data for their project such as: 1) Data describing the "origin' of the project in terms of the planning processes the project has undergone to date; 2) A brief description of how the planning process factored in congestion issues; 3) Actual LOS and adopted LOS standards for the facility(ies) affected by the project; 4) Congestion data (V/C ratio, free flow speed, design speed, etc.) for the facility(ies) affected by the project; This new data will be collected for new projects amended in the MTP. This data will be factored into the least-cost planning analysis that will occur as part of the MTP update. The CMS is explicitly linked to the MTIP process. However, CMS elements have been incorporated in both the evaluation of TIP projects competing for Regional Council funds and as part of the application process for all regionally significant projects being submitted into the TIP and STIP. *Project Evaluation Process* Does the project remedy a current or anticipated problem (e.g. congestion, incomplete sidewalk system, inadequate transit service facilities) ? Describe how the project completes a physical gap or provides an essential link in the transportation network. Describe how this project will relieve pressure or remove a bottleneck on the MTS and how this will positively impact overall system performance. *Application Form for New TIP Projects* Does the project add general-purpose capacity (i.e. major widening) AND is the project located on a minor arterial or a collector? If the answer to both is "Yes," there are regional CMS requirements that your project will need to meet. • Describe the existing/future transportation problem and the process used to identify this project as the preferred solution to that problem. • Does the roadway exceed the established LOS? • Provide available data on roadway capacity, traffic volume, delay, accidents, etc. • What alternative strategies (access management, signal improvements, HOV lanes, transit, non-motorized, TDM, etc.) were considered and evaluated? • Briefly describe other closely related improvement projects in the area?

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Appendix 6.0

2035 Regional Transportation Plan: Other Publications and Background Reports

The following list of documents records other publications and background reports prepared during the 2035 Regional Transportation Plan (RTP) update that have not been included in the technical appendix. The documents are listed in chronological order and are available to download from Metro's website at www.metro-region.org/rtp (Click on "2035 RTP Publications").

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2035 Regional Transportation Plan (RTP) Update – Background Documents Review (May 5, 2006)
This document summarizes recent plans and regulatory changes that have implications for the update to the Regional Transportation Plan. The document is organized by federal, state, regional and local planning effort or legislation. This information was used to develop the 2035 RTP update work program and public participation plan and provides guidance for updating the RTP policies, projects and implementation strategies.

2035 Regional Transportation Plan work program (May 31, 2006)
This document is a work program for 2035 RTP update. It describes the new outcomes based approach to addressing transportation problems. It includes a technical and policy development component as well as a stakeholder engagement and outreach component that were used to inform development, evaluation and adoption of an updated 2035 RTP.

Age-Related Shifts in Housing and Transportation Demand (August 14, 2006)
This report, by Portland State University's Institute on Aging, examined the impact age-related shifts on housing and transportation demand. The literature reviewed and the analyses presented are intended to inform Metro's Regional Forecast and modeling assumptions and to stimulate policy discussions pertaining to managing the region's land supply and investing in transportation infrastructure. The report includes four main section: "The Demographic Imperative: Trends in Population Aging," "Housing and Spatial Location Patterns," "Transportation Patterns and Preferences," and "Key Policy Issues Influencing Future Housing and Transportation Demand By Older Adults."

Environmental justice in Metro's transportation planning process (September 18, 2006)
The purpose of this report is to provide information and guidance on ways in which federal environmental justice regulations can be integrated into the planning processes of the 2035 Regional Transportation Plan (RTP) update and the 2008-11 Metropolitan Transportation Improvement Program (MTIP).

Metropolitan mobility the smart way (October 15, 2006)
This report presents a series of case study fact sheets, each describing how an ITS application has supported system management around the Portland metropolitan region. The goals of the report are to increase awareness and understanding among the region's decision makers regarding ITS and the ways in which it can help transportation agencies in the Portland metropolitan area manage congestion and improve safety in a cost-effective manner, and to focus attention on the benefits of collaboratively implementing system management strategies and intelligent transportation systems.

Preliminary financial analysis to support the 2035 Regional Transportation Plan (December 5, 2006)
This report describes future costs and funding for regional transportation projects and programs. It is part of the 2035 update of the Regional Transportation Plan (RTP). It was prepared by ECONorthwest, with assistance from Kittelson and Associates. It compiles information that can be used to estimate the level of funding reasonably available for transportation needs in the Portland region through the planning period for the RTP.

Results of a 2006 opinion survey on the Regional Transportation Plan (January 13, 2007)
This memo contains results of a telephone survey of adult residents (age 18+) of the Metro Service District. A total of 600 interviews were conducted, January 13-17, 2007. The questions focus on transportation issues.

Profile of the regional freight transportation system (January 19, 2007)
This report provides background information on the Portland-Vancouver region's freight transportation system in order to provide context for the Regional Freight and Goods Movement Action Plan (RFGM Action Plan), an element of the 2035 RTP Update. The four key topics in the report include: Economic and industry trends and their opportunities and effects on freight movement, both nationally and regionally; An inventory and description of the regional multimodal freight transportation system and services; The public policy context that governs the public's investments in freight mobility systems; and a review of logistics practices utilized by shippers to ensure that the products shipped by suppliers to their facilities, and the finished products shipped to customers, are delivered according to desired delivery schedules.

Profile of regional trends and travel characteristics (February 14, 2007)
This paper provides an overview of important transportation trends and travel characteristics within the Portland metropolitan region. It is one of a series of papers that provide background research and analysis to guide RTP update policy discussions. The papers describe trends affecting the regional transportation system, current regional transportation planning policies and regulatory requirements, a profile of performance of the existing transportation system and policy implications to be addressed in the RTP to respond to identified policy gaps and key findings of the background research.

Profile of safety in the Portland metropolitan region (February 14, 2007)
The purpose of this memo is to explore safety from a regional perspective and examine safety-related data in the Portland metropolitan region. This paper is one of a series of papers that provide background research and analysis to guide Regional Transportation Plan (RTP) update policy discussions. The papers describe trends affecting the regional transportation system, current regional transportation planning policies and regulatory requirements, a profile of performance of the existing transportation system and policy implications to be addressed in the RTP to respond to identified policy gaps and key findings of the background research. The papers conclude with a list of key findings and policy recommendations to be considered during the RTP update process.

Profile of security in the Portland metropolitan region (February 14, 2007)
The purpose of this memo is to provide background information regarding transportation security in the Portland metropolitan region. It includes a description of the federal legislation relevant to transportation security as well as current and ongoing security planning initiatives in the Portland metropolitan region. This paper is one of a series of papers that provide background research and analysis to guide Regional Transportation Plan (RTP) update policy discussions. The papers describe trends affecting the regional transportation system, current regional transportation planning policies and regulatory requirements, a profile of performance of the existing transportation system and policy implications to be addressed in the RTP to respond to identified policy gaps and key findings of the background research. The papers conclude with a list of key findings and policy recommendations to be considered during the RTP update process.

Profile of the regional bicycle system (February 14, 2007)
This paper provides a profile of the regional bicycle system in the Portland metropolitan region. It is one of a series of papers that provide background research and analysis to guide Regional Transportation Plan (RTP) update policy discussions. The papers describe trends and research affecting the regional transportation system, current regional transportation planning policies and regulatory requirements, a profile of the existing transportation system and policy implications to be addressed in the RTP to respond to identified policy gaps and key findings of the background research. The papers conclude with a list of key findings and policy recommendations to be considered during the RTP update process.

Profile of the regional transit system (February 14, 2007)
This paper provides a profile of the regional transit system in the Portland Metropolitan region. It is one of a series of papers that provide background research and analysis to guide Regional Transportation Plan (RTP) update policy discussions. The papers describe trends and research affecting the regional transportation system, current regional transportation planning policies and regulatory requirements, a profile of the existing transportation system and policy implications to be addressed in the RTP to respond to identified policy gaps and key findings of the background research. The papers conclude with a list of key findings and policy recommendations to be considered during the RTP update process.

Profile of the regional pedestrian system (February 14, 2007)
This paper provides a profile of the regional pedestrian system in the Portland metropolitan region. is one of a series of papers that provide background research and analysis to guide Regional Transportation Plan (RTP) update policy discussions. The papers describe trends and research affecting the regional transportation system, current regional transportation planning policies and regulatory requirements, a profile of the existing transportation system and policy implications to be addressed in the RTP to respond to identified policy gaps and key findings of the background research. The papers conclude with a list of key findings and policy recommendations to be considered during the RTP update process.

Profile of regional travel options and parking management systems (February 14, 2007)
This paper provides a profile of the regional travel options and parking management systems in the Portland metropolitan region. This paper is one of a series of papers that provide background research and analysis to guide Regional Transportation Plan (RTP) update policy discussions. The papers describe trends and research affecting the regional transportation system, current regional transportation planning policies and regulatory requirements, a profile of the existing transportation system and policy implications to be addressed in the RTP to respond to identified policy gaps and key findings of the background research. The papers conclude with a list of key findings and policy recommendations to be considered during the RTP update process.

Key environmental issues and Metro mitigation-related activities (February 14, 2007)
This paper provides a profile of environmental issues in the Portland metropolitan region. It summarizes key environmental trends, describes existing environmental planning and mitigation activities and compiles inventories for cultural and natural resources in the region. This research will be used to identify future environmental mitigation activities for RTP projects to support regional goals for protecting the environment. This paper is one of a series of papers that provide background research and analysis to guide Regional Transportation Plan (RTP) update policy discussions. The papers describe trends and research affecting the regional transportation system, current regional transportation planning policies and regulatory requirements, a profile of the existing transportation system and policy implications to be addressed in the RTP to respond to identified policy gaps and key findings of the background research.

Profile of the regional street and throughway system (April 20, 2007)
This paper provides a profile of the regional street and throughway system in the Portland metropolitan region. This paper is one of a series of papers that provide background research and analysis to guide Regional Transportation Plan (RTP) update policy discussions. The papers describe trends and research affecting the regional transportation system, current regional transportation planning policies and regulatory requirements, a profile of the existing transportation system and policy implications to be addressed in the RTP to respond to identified policy gaps and key findings of the background research.

The papers conclude with a list of key findings and policy recommendations to be considered during the RTP update process.

Ten things you need to know about the region's transportation system (June 2007)
This brochure provides key facts about the region's transportation system including some of the factors that will impact the system, such as population growth, the region's economy, public desires, geopolitical instability and financial realities.

Stakeholder engagement report (July 5, 2007)
This is a report from the Metropolitan Group (MG) to Metro summarizing the results of stakeholder meetings conducted by MG for Metro in the fall of 2006. The stakeholder meetings were part of Metro's larger public involvement strategy for the 2035 Regional Transportation Plan (RTP) update. The larger strategy called for engaging community and public interests through community forums, scientific public opinion research, comment cards and web feedback, business and community group presentations, ongoing Metro advisory committee meetings, public review and comment periods, and targeted stakeholder meetings. The primary goal of the stakeholder meetings was to gather information from community interest groups and individuals to inform development of an updated RTP policy framework that would be used to guide development of the rest of the plan. The meetings were also designed to actively engage people who historically have not been well represented in transportation planning and decision-making in the Portland metropolitan region.

Analysis of Environmental Considerations (February 4, 2008)
This memorandum summarizes 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. 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.

NONDISCRIMINATION NOTICE TO THE PUBLIC

Metro hereby gives public notice that it is the policy of the Metro Council to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil Rights Restoration Act of 1987, Executive Order 12898 on Environmental Justice and related statutes and regulations in all programs and activities. Title VI requires that no person in the United States of America shall, on the grounds of race, color, sex, or national origin, be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which Metro receives federal financial assistance. Any person who believes they have been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with Metro. Any such complaint must be in writing and filed the Metro's Title VI Coordinator within one hundred eighty (180) days following the date of the alleged discriminatory occurrence. For more information, or to obtain a Title VI Discrimination Complaint Form, see the web site at www.metro-region.org or call 503-797-1536.