CLACKAMAS COUNTY BOARD OF COUNTY COMMISSIONERS

Policy Session Worksheet

Presentation Date: Feb. 23, 2022 **Approx. Start Time:** 10 AM **Approx. Length:** 30 min

Presentation Title: Five-Year Transportation Capital Improvement Program, Fiscal Years: 2021-2025

Department: Transportation and Development (DTD) – Long Range Planning

Presenters: Mike Bezner, Assistant Director of Transportation; Karen Buehrig, Long Range Planning Manager

Other Invitees: Dan Johnson, Director, DTD; Brett Setterfield, Transportation Planner

WHAT ACTION ARE YOU REQUESTING FROM THE BOARD?

Direction to place the FY 2021-25 Five-Year Transportation Capital Improvement Program (CIP) on the Board of Commissioners Business Meeting consent agenda for approval.

EXECUTIVE SUMMARY:

The CIP is the exclusive list of capital transportation projects expected to cost more than $50,000 that are scheduled for construction for the next five years (Attachment A). It reflects Board policy decisions on projects to be constructed and includes:

- A list of all projects that have identified or anticipated funding in the following sources over the next five years for the full project or for preliminary planning and design:
  - 20-Year Capital Improvement Plan,
  - Transportation Safety Action Plan (TSAP),
  - Intelligent Transportation System (ITS) Plan,
  - Bridge and culvert review system,
  - ADA Transition Plan,
  - Needed emergency repairs identified by Transportation Maintenance.
- The capital project work schedule, and
- The funding source for each project, which connects transportation planning to the capital construction budget.

We are also pleased to be able to add two new components to the plan this year:

- Projects constructed with monies from the Community Road Fund,
- A transportation equity index assessment that provides maps and a brief assessment of how the planned improvements are distributed across areas with higher percentages of people that historically have had less of a voice in transportation planning or that currently experience greater barriers in navigating the transportation system.

This CIP includes 64 programmed projects over the five-year period with total project costs of more than $122 million.

- Approximately 25% of the project costs (~$30 million) will paid for by the Road Fund.
- The remaining project costs (~$92 million) are planned to be covered through grants, tax-increment financing, Community Road Fund, and other state, federal or regional funding sources.

The CIP is updated periodically to provide more detailed information regarding the capital project priorities. Policy 5.CC.2 of the Transportation System Plan (TSP) directly addresses the need for updating the plan:

> *Maintain a current and complete 5-Year Capital Improvement Program (CIP), which contains the programmed transportation projects in priority order, with estimated costs and assigned responsibility for funding. Update and adopt the 5-Year Capital Improvement Program periodically.*

Finally, the CIP supports the county's concurrency policy (ZDO Section 1007.09, 1/18/2017 -- "approval of a development shall be granted only if transportation facilities are adequate or will be made adequate in a timely manner") by requiring that the improvements be fully funded in the five-year program and be scheduled for construction within three years of land use approval.

FINANCIAL IMPLICATIONS (current year and ongoing):

Is this item in your current budget? ☒ YES ☐ NO

What is the cost? **$122,373,380 over the next five years**

What is the funding source? **No General Fund; various other sources, as listed in Table A – Five-year Capital Improvement Program**

STRATEGIC PLAN ALIGNMENT:

- How does this item align with your Department's Strategic Business Plan goals?

  The Five-Year CIP supports the goal of providing "design, construction and project management services to users of the transportation system so they can experience well-managed projects and connect with goods, services and people, now and in the future."

- How does this item align with the County's Performance Clackamas goals?

  The Five-Year CIP directly aligns with the County's Goal of *Build a Strong Infrastructure* – "By 2026, 100% of County residents and businesses - where served - have access to safe and affordable infrastructure: multimodal transportation including roads, sewer and broadband services".

LEGAL/POLICY REQUIREMENTS:

Comprehensive Plan Chapter 5: Transportation Systems Plan, includes the policy:

> "5.CC.2 Maintain a current and complete 5-Year Capital Improvement Program (CIP), which contains the programmed transportation projects in priority order, with estimated costs and assigned responsibility for funding. Update and adopt the 5-Year Capital Improvement Program periodically."

PUBLIC/GOVERNMENTAL PARTICIPATION:

All the projects in the CIP have been reviewed and previously approved by the Board through review of grant applications, the Development Agency work program and other project funding requests.

OPTIONS:

1. Place the FY 2021-25 Five-Year Transportation Capital Improvement Program (Five-year CIP) on the BCC Business Meeting consent agenda for approval.

2. Direct staff to update the proposed Five-Year CIP per BCC discussion and bring it back to the BCC for further review.

RECOMMENDATION:

Staff respectfully recommends placing the FY 2021-25 Five-Year Capital Improvement Program (Five-year CIP) on the BCC Business Meeting consent agenda for approval.

ATTACHMENTS:

A: Five-Year Transportation Capital Improvement Program, Fiscal Years: 2021-2025

B: Five-Year Transportation Capital Improvement Program, Fiscal Years: 2021-2025 BCC Policy Session Presentation

SUBMITTED BY:

Division Director/Head Approval _____
Department Director/Head Approval _____
County Administrator Approval _____

For information on this issue or copies of attachments, please contact Karen Buehrig, karenb@clackamas.us or 971-291-8127

ATTACHMENT A

Five-Year Transportation Capital Improvement Program

FISCAL YEARS: 2021 – 2025

CLACKAMAS COUNTY

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TRANSPORTATION SYSTEM PLANNING AND PROJECT PROGRAMMING

Introduction

Clackamas County is responsible for an extensive transportation network that is part of a larger regional transportation system serving the needs of residents, businesses and travelers in the county. The vast majority of the county road system (96%) is located outside of cities. Approximately 56 miles of county-maintained roads are inside cities, with the largest portion in Happy Valley.

The public ownership of all roads in Clackamas County is as follows:

- City -- 823 miles
- County -- 1,414 miles
- State -- 265 miles

There are also many miles of local access roads, private roads and forest service roads maintained largely by property owners and the National Forest Service.

The entire county-maintained transportation network encompasses the structures listed below, as well as a substantial system of sidewalks and bike lanes.

- 1,414 miles of road
- 723 miles of striped roads
- 2,359 miles of gravel shoulder
- 67,992 traffic signs
- 115,758 feet of guardrail
- 186 bridges
- 8,421 culverts
- 2,135 manholes
- 10,200 catch basins
- 1 ferry
- 179 traffic signals
- 76 school zone flashers
- 76 traffic surveillance cameras
- 45 miles of fiber optic cable

Transportation System Plan (TSP)

The major capital improvements needed for the transportation system are identified in the Clackamas County Transportation System Plan (TSP), which is Chapter 5 of the County Comprehensive Plan (http://www.clackamas.us/planning/comprehensive.html). The TSP is updated about every 10 years.

As defined by the TSP, transportation capital projects are primarily located on arterial and collector roads. Similarly, federal transportation funding is only available for capital improvement projects on roads classified as arterials and collectors, with an emphasis on maintaining the operations of the principal arterial system.

The TSP includes the 20-Year Capital Improvement Plan (20-Year CIP). This Board-adopted plan is divided into three lists, described below, based on funding possibilities. Criteria for assigning projects to the lists and other TSP background information is at https://www.clackamas.us/transportation/tsp.html.

- **20-Year Capital Projects**: The prioritized list of transportation projects and investments that can reasonably be undertaken given the estimates of available funding.
- **Preferred Capital Projects**: A second group of prioritized transportation projects that the county would undertake if additional funding becomes available during the next 20 years. (Additional funding would include grants that are more suitable for specific projects in the Preferred Capital list than in the 20-Year Capital list.)
- **Long-Term Capital Projects**: The remainder of the projects would help meet the county's transportation needs over the next 20 years if funds were available, but not expected to be funded or constructed by the county without acquiring suitable grant funding

5-Year Capital Improvement Program (5-Year CIP)

The 5-Year CIP is the list of capital projects that are scheduled for construction for the next five years. It reflects the Board of Commissioners' past policy decisions on which capital transportation projects will be constructed. As such, it is the exclusive list of such projects, with costs reasonably expected to exceed $50,000, that will be pursued, and the mechanism for funding and building transportation capital projects. The 5-Year CIP list contains:

- All projects that have identified or anticipated funding from the following sources over the next five years for the full project or only for preliminary planning and design:
    - 20-Year CIP,
    - Transportation Safety Action Plan (TSAP),
    - Intelligent Transportation System (ITS) Plan,
    - Bridge and culvert review system, and
    - ADA Transition Plan.

- Other projects that emerged through the Transportation Maintenance Work Program or have been identified by Transportation Maintenance as needed emergency repairs
- The capital project work schedule, and
- The funding source for each project to connect transportation planning to the county's capital construction budget.

The Board of Commissioners adopts the 5-Year CIP with the understanding that funds are limited. The 5-Year CIP is the Board's expression of policies, directives, and goals adopted through the transportation system planning process as recommended by county staff. County staff consider, evaluate, and prioritize all known capital transportation projects within county roadways and intersections. Professional expertise and discretion is used to find outside funding (see *Funding Sources and Future Projects*, below) for the projects, and to use limited Road Funds to maximize public dollars and work towards a safer, more efficient transportation system. Not all known deficiencies can be mitigated due to funding shortages.

The 5-Year CIP is updated periodically to provide a more detailed implementation of the capital project priorities. Policy 5.CC.2 of the TSP directly addresses the need for the updated plan:

> *Maintain a current and complete 5-Year Capital Improvement Program (CIP), which contains the programmed transportation projects in priority order, with estimated costs and assigned responsibility for funding. Update and adopt the 5-Year Capital Improvement Program periodically.*

Finally, the 5-Year CIP supports the county's concurrency policy (ZDO Section 1007.09, 1/18/2017), which states that "approval of a development shall be granted only if transportation facilities are adequate or will be made adequate in a timely manner," requiring that the improvements be fully funded in the five-year program and scheduled for construction within three years of land use approval.

Capital Project Categories

The broadly defined capital project descriptions used in the TSP, the 20-Year CIP and the 5-Year CIP allow for the development of individual projects within a larger project. These categories are loosely based on the road user or system that the project benefits or impacts (e.g., bicycle project, pedestrian project or transit project), as follows:

1. **Upgrade** – Projects that add vehicle capacity to an existing roadway or intersection. This may require reconstructing existing sidewalks and/or bicycle lanes, adding intersection turn lanes or installing traffic signals. In the 20-year CIP, the upgrade projects are separated into urban

and rural, depending on whether they are located inside or outside the Portland Metropolitan Urban Growth Boundary (UGB). Some projects are designated as "new roadways" if an extension or new road is needed to increase capacity or add connectivity.

2. **Bridge/Culverts** – Constructing, replacing or upgrading a bridge or culvert.

3. **Safety** – Projects or studies focused on reducing crashes and/or the risk for crashes, including at railroad crossings. The Transportation Safety Action Plan (TSAP) outlines a strategy to build and implement a county-wide safety culture with the ultimate goal of reducing transportation-related injuries and fatalities. The TSAP was updated and adopted in March 2019. TSAP policy and action items will achieve the desired goals when implemented; however, successful implementation depends upon a number of factors, including strong safety leadership at all levels, cohesive safety partnerships, funding and working together toward a common goal. Success will result in reduced injuries and fatalities on county roadways.

   Appendix A is a list of projects that support the TSAP. In order to make the needed investments, these projects will have to be matched to a funding source so that they can be programmed into the 5-Year CIP.

4. **Community Road Fund: Safety** – Similar to safety projects, but with funding coming specifically from the Community Road Fund (CRF), which is identified under Local Funding Sources.

5. **Community Road Fund: Congestion** – Projects that specifically address congestion issues along county roadways, financed through the CRF.

6. **Community Road Fund: Strategic Investment** – Projects that support shared county and city initiatives using funding through the CRF.

7. **Active Transportation** – Projects related to pedestrian and bicyclists. Inside the UGB, projects add needed sidewalks, bicycle lanes or multi-use paths; projects outside the UGB include adding paved shoulders or multi-use paths. There are also more general projects that add needed facilities such as way-finding signage.

8. **Intelligent Transportation Systems (ITS)** – Projects that incorporate treatments such as coordinated signal systems. The Clackamas County ITS Action Plan includes a range of projects that address the needs of the region, grouped into the following categories:

   - Traffic Management and Operations (TMO)
   - Multimodal Operations (MMO)
   - Traveler Information (TI)
   - Data Collection and Management (DCM)
   - Incident and Emergency Management (IM)
   - Maintenance and Construction Management (MCM)

9. **Repairs** – Capital repairs of major damage caused by storms, flooding, landslides or other natural events that damage portions of the transportation system.

10. **Paving** – Specifically identified paving projects that improve road surfaces.

11. **Community Road Fund**: **Paving** – Specifically identified paving projects that improve road surfaces financed through the CRF.

Table A: 5-Year Capital Improvement Program Project List – FY 21/22 – FY 25/26

Project Category	Map ID	TSP ID	Prospectus #	Project Name	Project Extent	Description	Funding Source	Cost Estimate ($2021)	Anticipated Road Fund Match	FY-21/22	FY-22/23	FY-23/24	FY-24/25	FY-25/26
1-Upgrade	CRC 2	1034 2008	DD-25	Linwood Ave Improvements	Johnson Creek Blvd to Monroe St	Improve to minor arterial standards; add sidewalks, bicycle lanes and stormwater control	Tax Increment Financing	$6,000,000	$0	X	X			
1-Upgrade	CRC 3	1035 1036	30324	Monroe St Improvements	Linwood Ave to Fuller Rd	Improve to minor arterial standards; add sidewalks, bicycle lanes and stormwater control. First Phase Project Planning. (Design Phase)	Tax Increment Financing	$7,500,000	$0	X	X	X		
2-Bridge/Culvert	SW 4	NA	22257	Bear Creek (Canby Marquam Hwy) Bridge Replacement	On Canby Marquam Hwy near Barnards	Replace bridge	Highway Bridge Replacement & Rehab Grant; Road Fund	$2,313,800	$238,940	X	X			
2-Bridge/Culvert	SW 5	NA	22276	Woodcock Ck (Grimm Rd) Bridge Protection	Grimm Rd	The existing Grimm Road Bridge over Woodcock Creek is experiencing significant scour and evaluation of repair or replacement is required	Road Fund	$819,202	$489,202	X	X			
2-Bridge/Culvert	SW 11	NA	22348	Molalla River (Knights Bridge Rd) Bridge Rehab	Knights Bridge	Bridge rehab	Local Bridge Program (LBP); Road Fund	$3,601,086	$369,831	X	X	X		
2-Bridge/Culvert	DMB 4	NA	22284	Badger Creek (Rugg Rd) Culvert	Rugg Rd at Badger Creek	Replace existing culverts with larger sized, fish friendly culvert or modular bridge	Road Fund	$444,529	$444,529	X	X	X		
2-Bridge/Culvert	M 1	1077	22329	Kellogg Creek Culvert Repair	Thiessen Rd at Aldercrest Ct	Replace failing joint in culvert and examine similar joints to prevent future failing, and repair roadway damage	Road Fund	$265,000	$265,000	X				
2-Bridge/Culvert	M 2	NA	22330	Clackamas River (Trolley Trail) Bridge Final Design	Clackamas River at Portland Ave	Continue work from feasibility study and move onto preliminary and final design phase (once a bridge structure type is recommended)	Regional Flexible Fund Allocation (RFFA) Grant; City of Gladstone	$1,228,000	$0	X	X	X		
2-Bridge/Culvert	DMB 5	NA	22349	Johnson Creek Tributary (Hideaway Ct) Culvert Replacement	Hideaway Ct at Johnson Creek Tributary	Replace the culvert under the Hideaway Ct temporary bridge	Damascus Road Fund	$522,000	$522,000	X	X			
3-Safety	DMB 1	NA	22282	SE 242nd Ave and SE 222nd Dr RSA Implementation	OR 212 to County line	Implement RSA recommendations	Damascus Road Fund	$592,743	$592,743	X				
3-Safety	DMB 2	NA	22279	242nd / Borges Realignment	SE 242nd Ave / SE Borges Rd	Realign/regrade intersection of SE 242nd & SE Borges Rd	Damascus Road Fund	$592,743	$592,743	X	X			
3-Safety	DMB 6	NA	22346	Rugg Rd Landslide Repair	Rugg Rd at Hideaway Ct	Construct permanent stabilization measure along Rugg Rd where downhill slope collapsed	Damascus Road Fund	$350,000	$350,000	X	X			
3-Safety	SW 6	NA	22254	S Central Point Rd and S New Era Rd Intersection Realignment	Central Point / New Era	Changes in traffic control / intersection enhancements	Road Fund	$1,764,922	$1,764,922	X				
3-Safety	NW 1	1087 1090	22327	Stafford Rd Intersection Safety Improvements	Stafford Rd & Gage Rd, Stafford Rd & Schatz Rd	Remove excess pavement at intersections of Stafford Rd and Gage Rd, Schatz Rd, Johnson Rd and Childs Rd	Road Fund	$403,142	$403,142		X	X	X	
3-Safety	SW 7	1097	TBD	RSA -Beavercreek Recommendations	OC Limits to Ferguson	Finish RSA implementation work, primarily shoulder work	Road Fund	$50,000	$50,000	X				
3-Safety	CRC 4	3027	22280	ADA Ramps Project #2: Sunnyside Rd. 132nd Ave - 162nd Ave	132nd Ave to 162nd Ave	Twelve (12) non-signalized intersections to have curb ramp retrofits, along with twenty-four (24) signalized corners to have signal modifications	Road Fund	$2,053,535	$2,053,535	X				
3-Safety	CRC 5	3027	22292	ADA Ramps Project #3: Sunnyside Rd. 122nd Ave - 132nd Ave	122nd Ave to 132nd Ave	Sixteen (16) non-signalized intersections to have curb ramp retrofits, along with one (1) signalized corner to have curb ramp upgrades and signal modifications	Road Fund	$1,078,437	$1,078,437	X				
3-Safety	CRC 1	2001	22319	72nd and Luther Intersection Improvements	72nd Ave and Luther Rd	Evaluate safety issues at the intersection and identify low to medium cost improvements to reduce the number and severity, of crashes	Road Fund	$26,860	$26,860	X				
3-Safety	SW 1	1001	22272	Dryland Rd Guardrail	Dryland Rd	Design and install guardrail and end treatments on 400 ft of Dryland Rd; fund acquisition of right of way	Road Fund	$212,389	$188,781	X				
3-Safety	C 2	1001	22285	Rural Systemic Horizontal Alignment Signs	Countywide	Design and install horizontal alignment warning signs	Road Fund	$254,776	$254,776	X				
3-Safety	C 3	1001 1045 1031 1070	22271	ARTS Rural Systemic Safety Countermeasures	Countywide	Design and install various safety countermeasures to reduce crashes at 78 rural intersections	Highway Safety Improvement Program (HSIP); Road Fund	$1,790,184	$371,766	X	X			
3-Safety	CRC 6	3022	22328	122nd & Mather Intersection Control Feasibility Study	122nd Ave and Mather Rd	Feasibility study for at least three potential intersection control scenarios: (1) no-build, (2) roundabout; and (3) traffic signal	Road Fund	$40,000	$40,000	X				

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3-Safety	C 4	NA	22331	Guardrail System Upgrades - Systemic	TBD	Develop priority list of upgrade guardrail needs and complete projects to meet current ODOT and MASH standards	Road Fund	$476,414	$476,414	X	X	X	X	
3-Safety	CW 1	NA	22332	Recessed Reflectorized Pavement Markings	Arndt from Airport to Arndt (1.55mi); Arndt from Arndt to Barlow (0.4 mi); Barlow from Knights Bridge to Hwy 211 (8.9mi); Canby-Marquam from Canby city limits to Hwy 211 (6.7mi); Springwater Road from Hwy 224 to Hayden Rd(10.4 mi); Hayden Rd from Springwater to Hwy 211 (1.2 mi); Amsigger from Hwy 225 to Kelso Rd (2.4mi); Richey from Amsigger to Hwy 212 (0.8), Wilsonville Rd from City of Wilsonville to County line (4.5mi)	Installation of recessed reflectorized centerline buttons on about 40 miles of major arterial roads that are not scheduled to be paved in the next 5 years	Road Fund	$279,100	$279,100	X	X	X	X	
3-Safety	CW 2	1048 1087	22337	Radar Sign Project	Stafford Rd and 282nd Ave	Design and construction of six radar speed feedback signs	Road Fund	$279,669	$279,669	X				
4-Community Road Fund: Safety	CRC 7	1028	22345	SE Johnson Creek Blvd at 79th Place - 82nd Ave	Johnson Creek Blvd at 79th Pl	Add a signal at the intersection of Johnson Creek Blvd and 79th Pl and install median	Community Road Fund (CRF)	$2,485,420	$162,641	X	X	X	X	
4-Community Road Fund: Safety	East 3	2016	22323	282nd & Haley Intersection Safety Improvements	282nd Ave and Haley Rd	Evaluate safety issues at the intersection and identify low to medium cost improvements to reduce the number and severity, of crashes	Community Road Fund (CRF)	$27,249	$0	X				
4-Community Road Fund: Safety	East 5	NA	22338	Bluff/327th Intersection Enhancements	Bluff Rd at 327th Ave	Rechanelize to provide lower speeds on movements onto and off Bluff Rd using signs, pavement markings and delineation, and pavement removal	Community Road Fund (CRF)	$180,317	$0	X	X			
4-Community Road Fund: Safety	CRC 8	1027	22340	Johnson Creek Blvd at 74th Safety Enhancements	Johnson Creek Blvd at 74th Ave	Provide safety enhancements at intersection using pavement markings, signs and delineation	Community Road Fund (CRF)	$12,860	$0	X				
4-Community Road Fund: Safety	CRC 9	NA	22341	King Road at 66th Intersection Safety Enhancements	King Road at 66th Ave	Provide additional signs and pavement parking at intersection	Community Road Fund (CRF)	$13,860	$0	X				
4-Community Road Fund: Safety	CRC 10	1027 3016	22299	Johnson Creek Blvd (82nd Ave to End County Maintenance) Improvements	Johnson Creek Blvd from 82nd Ave to Multnomah Co. line	Widen roadway to three lanes, add sidewalks and bicycle lanes, replace non-ADA compliant curb ramps	Community Road Fund (CRF)	$13,775,563	$6,949,313	X	X	X	X	X
5-Community Road Fund: Congestion	NW 1	1088 1089 1090	22297	Stafford Rd (Pattulo Wy to Rosemont Rd) Improvements	Stafford Rd from Pattulo Wy to Rosemont Rd	Add traffic signal or roundabout at intersection of SW Childs Rd, add turn lanes, realign intersection, add bicycle lanes	CRF & Transportation System Development Charge (TSDC)	$10,054,876	$0	X	X	X	X	
5-Community Road Fund: Congestion	East 6	4061	22300	Amisigger Rd / OR 224 Intersection Improvements	Amisigger Rd at OR 224	Add east and southbound left-turn lanes, westbound right-turn lane, and a traffic signal	Community Road Fund (CRF)	$3,136,445	$0	X	X	X	X	
5-Community Road Fund: Congestion	SW 3	1099	22291	Canby-Marquam Hwy at Lone Elder Rd Intersection Improvement	Canby-Marquam Hwy at Lone Elder Rd	Reconstruct the intersection and add a northbound left turn lane	CRF & Transportation System Development Charge (TSDC)	$708,189	$0	X	X			
5-Community Road Fund: Congestion	East 2	1059	CRF01	Welches Rd	US 26 to Birdie Ln	Add sidewalks from US 26 to Stage Stop Rd and paved shoulders from Stage Stop Rd to Birdie Ln. Pedestrian crossing at Fairway Ave	CRF & Transportation System Development Charge (TSDC)	$3,388,582	$0	X	X	X	X	
5-Community Road Fund: Congestion	SW 8	1121 2041	22294	Redland Rd Turn Lanes at Ferguson and Bradley	Redland Rd at Ferguson and Bradley	Add left-turn lanes along Redland Rd at Ferguson Rd and Bradley Rd intersections	Community Road Fund (CRF)	$1,348,533	$0	X	X	X		
5-Community Road Fund: Congestion	SW 9	1094	22351	Arndt Rd/Barlow Rd Traffic Improvement Study	Intersections of Barlow Rd with Arndt Rd and OR99E	Conceptual study for intersection improvements	Community Road Fund (CRF); Road Fund	$210,000	$38,000	X	X			
6-Community Road Fund: Strategic Investment	East 7	1054 1055	22339	Duus Rd/Eagle Creek Rd Intersection, Relocation, and Turn Lane	Duus Rd at Eagle Creek Rd	Add new turn lanes and relocate intersection to provide adequate sight distance	CRF Strategic Investment Fund	$993,970	$0	X	X	X		

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6-Community Road Fund: Strategic Investment	SW 12	1115	CRF02	Bear Creek Bridge & Molalla Ave Shoulders	Molalla Ave from Sawtell to Molalla City Limits and Bear Creek Bridge	Bear Creek Bridge replacement and Molalla Ave shoulders (gravel)	CRF Strategic Investment Fund	$1,651,650	$0			X	X	X
6-Community Road Fund: Strategic Investment	East 8	2017	22322	362nd Ave Paved Shoulders and Safety Improvements	Skogan to OR 211	Pave shoulders and evaluate safety issues	CRF Strategic Investment Fund	$1,611,174	$0	X	X			
6-Community Road Fund: Strategic Investment	NW 2	1081	CRF03	Borland - Bike/Ped to Rolling Hills	Borland Rd to Rolling Hills Church	Construct sidewalks and multi-use path	CRF Strategic Investment Fund	$1,771,200	$0				X	X
7-Active Transportation	SW 2	NA	22239	S Ivy St Pedestrian Intersection Improvements	Hwy 99E in Canby	Construct bike lanes and sidewalks. Construction traffic signal at intersection of Township Rd.	STIP - Enhance; Road Fund	$4,859,007	$406,918	X	X	X	X	
7-Active Transportation	M 3	1068	22234	Jennings Ave - Sidewalk and Bike lanes	McLoughlin Blvd to Oatfield	Construct curb-tight sidewalk on the north side of Jennings Ave and bike lanes on both sides. Widening the roadway to accommodate bike lanes and sidewalk will require general excavation, rock excavation and new water quality and detention facilities, including new storm water collection infrastructure, removal and construction of a retaining wall and replacement of a guardrail	MTIP - Regional Flexible Funds; Road Fund	$5,277,910	$652,627	X	X			
7-Active Transportation	CRC 12	1136	22289	Fuller Rd-Causey Ave Crosswalk	Fuller Rd & Causey Ave	Construct a crosswalk across Fuller Rd. at Causey Ave/Harmony Dr with signage, RRFB, pedestrian refuge & ADA compliant curb ramps	ODOT Safe Routes to School Infrastructure Grant; Road Fund	$185,588	$61,822	X				
7-Active Transportation	M 9	1063 1064	22335	Courtney Ave Complete Street	River Rd to OR 99E	Construct separated sidewalks, buffered bike lanes, rain gardens, lighting, ADA compliant curb ramps, and crosswalk enhancements	Metro RFFA Grant; Road Fund	$5,761,420	$591,698	X	X	X	X	X
7-Active Transportation	M 4	1076 2025	22347	Bilquist Elementary Sidewalks	Webster Rd from Roots Rd to Bilquist School	Construct sidewalks along both sides of road, widen existing bike lanes, crosswalk upgrades including illumination, pedestrian refuge and ADA compliant curb ramps	ODOT Safe Routes to School Infrastructure Grant; TSDC	$2,637,300	$0	X	X	X	X	X
8-ITS	CRC 11	1000	22218	Clackamas County Regional Freight ITS Project Phase 1 – Planning and Design and Phase 2 A - Construction	Clackamas Industrial Area to Wilsonville	Construct ITS improvements in the following freight corridors/employment areas: 1) OR 224 (Milwaukie Expressway); 2) OR 212 / 224 Clackamas Highway; 3) 82nd Drive between the Gladstone Interchange and OR 213 (82nd Avenue); 4)The City of Wilsonville; and 5) Other areas identified in the planning process	MTIP - Regional Flexible Funds; Road Fund	$2,173,447	$247,564	X	X			
8-ITS	C 5	1000	SA001	Clackamas County Regional Freight ITS Project Phase 2B	Countywide (UGB Area)	Design and install truck priority signal timing at 18 signalized intersections, battery backup system at 21 traffic signals, traffic monitoring cameras at 3 intersections, and traffic count stations at 3 intersections	Metro RFFA Grant; Road Fund	$1,359,284	$139,597	X	X	X	X	
8-ITS	C 6	1000	SA002	Clackamas County Regional ATC Controller & Signal Optimization	Countywide	Replace 99 older model traffic signal controllers to the latest Advanced Traffic Controllers (ATC)	Local Cities; State Revenue; Road Fund	$820,103	$24,670	X	X			
8-ITS	NW 3	1000	22235	Canby Ferry ITS Project	Canby Ferry	Extend fiber optic cable from the existing county fiber from Advance Road to Ferry signals, add up to two pan-tilt-zoom CCTV cameras to view the ferry and have images posted on the County's Travel Information website; upgrade ferry notification signs to display green "OPEN" and red "CLOSED"	FHWA Ferry Boat Discretionary Program; Road Fund	$799,820	$250,628	X	X			
8-ITS	C 1	1106 1000	22286	Clackamas County I-5/I-205 ICM Project	I-5 and I-205	Engage stakeholders and develop a collection of operation strategies and advanced technologies to collaboratively manage transportation corridor as a multimodal system	Surface Transportation Program; Road Fund	$444,864	$50,000	X	X			
9-Repairs	CRC 16	NA	22252	SE 90th Ave Reconstruction	Monterey Ave to Causey Ave	Road reconstruction	STP; Road Fund	$1,433,764	$1,258,764	X				

Table A: 5-Year Capital Improvement Program Project List – FY 21/22 – FY 25/26

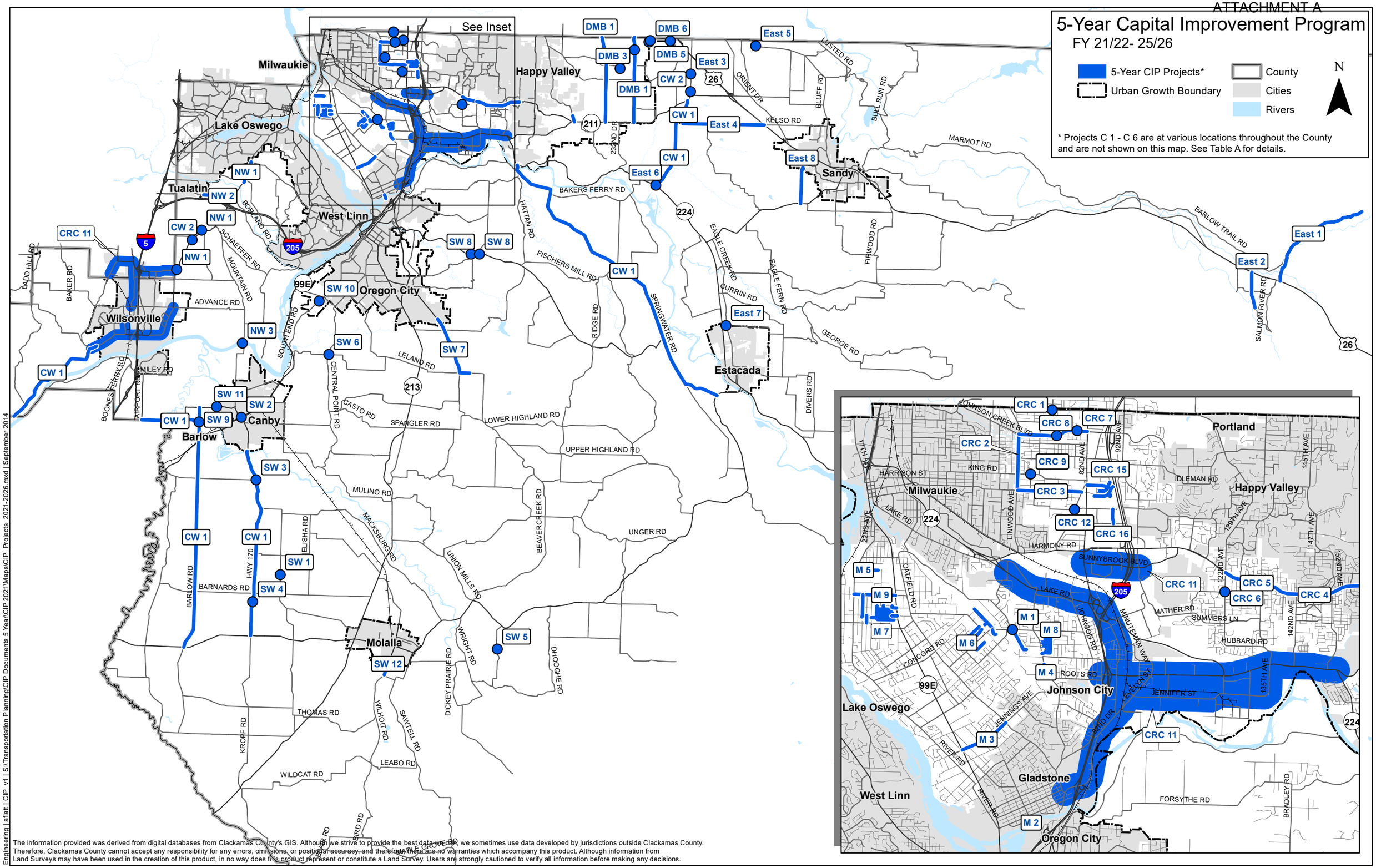
Project Category	Map ID	TSP ID	Prospectus #	Project Name	Project Extent	Description	Funding Source	Cost Estimate ($2021)	Anticipated Road Fund Match	FY-21/22	FY-22/23	FY-23/24	FY-24/25	FY-25/26
9-Repairs	East 1	NA	22275	Lolo Pass Rd Paving	US 26 to near Muddy Fork Rd	Improving and preserving the road surface and extending a revetment	Federal Lands Access Program; Road Fund	$4,104,731	$862,809	X	X			
9-Repairs	DMB 3	NA	22269	232nd Drive at MP 0.3	232nd Dr	Install a deep patch of pavement with improved drainage	FHWA Emergency Relief Grant; Road Fund	$732,132	$255,933	X				
9-Repairs	SW 10	NA	22270	South End Rd at MP 3.8	South End Rd	Construct a permanent fix to slope instability	FHWA Emergency Relief Grant; Road Fund	$4,588,471	$556,175	X	X			
10-Paving	East 4	1049 1058 3046	22306	Contract Paving: Kelso / Richey Rd Package	Kelso Rd from Richey Rd to Hwy 26. Richey Rd from Kelso Rd to Hwy 212	Pave 3.64 miles of road	Rural STP; Road Fund	$1,566,697	$366,697	X				
10-Paving	CRC 13	1045	22342	Contract Paving: Sunnyside Rd (122nd - 132nd)	122nd Ave to 132nd Ave	Pave Sunnyside Rd	Road Fund	$1,983,314	$1,983,314	X	X			
10-Paving	CRC 14	1045	22343	Contract Paving: Sunnyside Rd (132nd - 162nd)	132nd Ave to 162nd Ave	Pave Sunnyside Rd	Road Fund	$3,651,287	$3,651,287	X	X			
10-Paving	DMB 6	NA	DR002	Contract Paving: Foster Rd	Hwy 212 to 250 ft north of Damascus Ln	Replace failing asphalt on Foster Rd between mile points 0 and 0.2	Damascus Road Fund	$267,337	$250,000	X				
11-Community Road Fund: Paving	M 5	NA	22308	Arista Area Package	Lee Ave, Arista Dr, Silversprings Rd	Pave 0.74 miles of local road in the Arista Dr area	Community Road Fund (CRF)	$473,129	$0	X				
11-Community Road Fund: Paving	M 6	NA	22309	Thiessen Area Package	El Centro Wy, El Centro Ct, La Mesa Wy, Sierra Vista Dr, Harmon Ct, Vista Ln, Anaconda Ct, Bantam Ct, Cornish Ct	Pave 1.41 miles of local road in the Thiessen area	Community Road Fund (CRF)	$1,908,451	$0	X				
11-Community Road Fund: Paving	CRC 15	NA	22310	Boyer/King Rd Area Package	Owen Dr, King Rd, Spencer Dr, Spencer Ct	Pave 0.94 miles of local road in the Boyer/King Rd area	Community Road Fund (CRF)	$1,101,165	$0	X	X	X		
11-Community Road Fund: Paving	M 7	NA	22311	McLoughlin Neighborhood Package	Woodland Wy, Park Rd, Chestnut St, Laural St, Pine Ln, Bunnell St, Maple St, Park Entrance Rd	Pave 1.32 miles of local road in the McLoughlin area	Community Road Fund (CRF)	$887,300	$0	X	X			
11-Community Road Fund: Paving	M 8	NA	22314	Webster Area Package	San Marcos Ave, Antigua Ave, Cypress Ave, Renada St, Eldorado Ct, Delray Ave, Aldercrest Ct, Kern Ct	Pave 1.15 miles of local road in the Webster Rd area	Community Road Fund (CRF)	$1,048,440	$0	X				

5-Year Capital Improvement Program

FY 21/22- 25/26

5-Year CIP Projects*
Urban Growth Boundary
County
Cities
Rivers
N

* Projects C 1 - C 6 are at various locations throughout the County and are not shown on this map. See Table A for details.



TRANSPORTATION EQUITY INDEX ASSESSMENT

The county's Transportation System Plan (TSP) outlines six policies related to equity, health and sustainability (TSP Policy 5.C) that focus on:

- *Supporting walking, biking, and transit connections in areas with identified transportation-disadvantaged populations,*
- *Coordinating land use and transportation planning to minimize environmental pollution, and*
- *Continuing to provide public transit services to under-served areas, particularly for seniors and people with disabilities.*

In 2019, the county established a transportation equity index to help identify groups that have been historically and/or are currently underserved, marginalized, or negatively impacted by the transportation system. The methodology for this equity index is modeled after approaches from other regional jurisdictions across the country. It uses a threshold-based approach to identify higher concentrations of communities of interest using census data at the block group level, in comparison to the county as a whole. Thresholds are assigned a score and combined with other variables to create a composite score. See Appendix B for a full description of the Transportation Equity Index.

The Clackamas County Transportation Equity Index combines seven demographic indicators into a single index score for each census block group. A higher index score indicates a higher concentration of the groups below in comparison to the county as a whole. Scores range from zero (well below county average) to four (well above county average), with two being the county average.

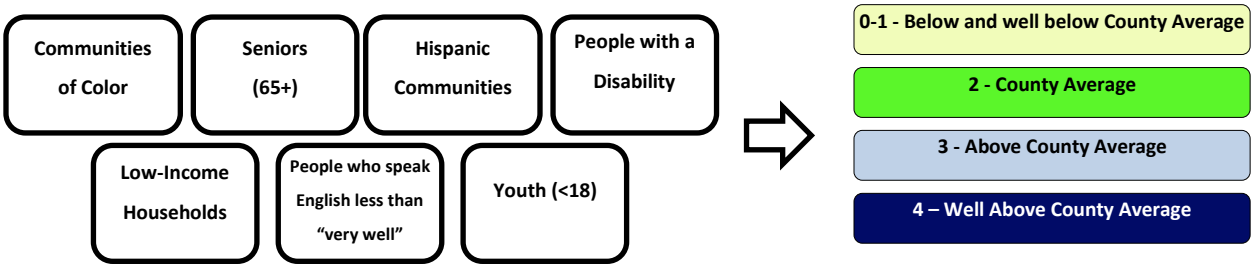
What is Equity?

***Equity:** Providing varying levels of support – based on specific needs – to achieve greater fairness of treatment and outcomes.

Equity Index: A number or score that conceptualizes demographic patterns quantitatively. The score makes it easier to compare one area to another, and visualize the patterns against other factors on a map.

**Definition derived from language in the State of Oregon Equity Framework*

Relative concentrations of focus communities are combined into…



…a composite Equity Index Score for each census block group.

Including the Equity Index in the 5-Year CIP evaluates how the planned improvements are distributed across areas in the county with higher percentages of people that historically have had less of a voice in transportation planning or that currently experience greater barriers in navigating the transportation system. Figure 2 shows the county's composite Transportation Equity Index and the 5-Year CIP projects. This map displays the relationship between where county investments are being made through the 5-Year CIP and places that have a higher Transportation Equity Index score.

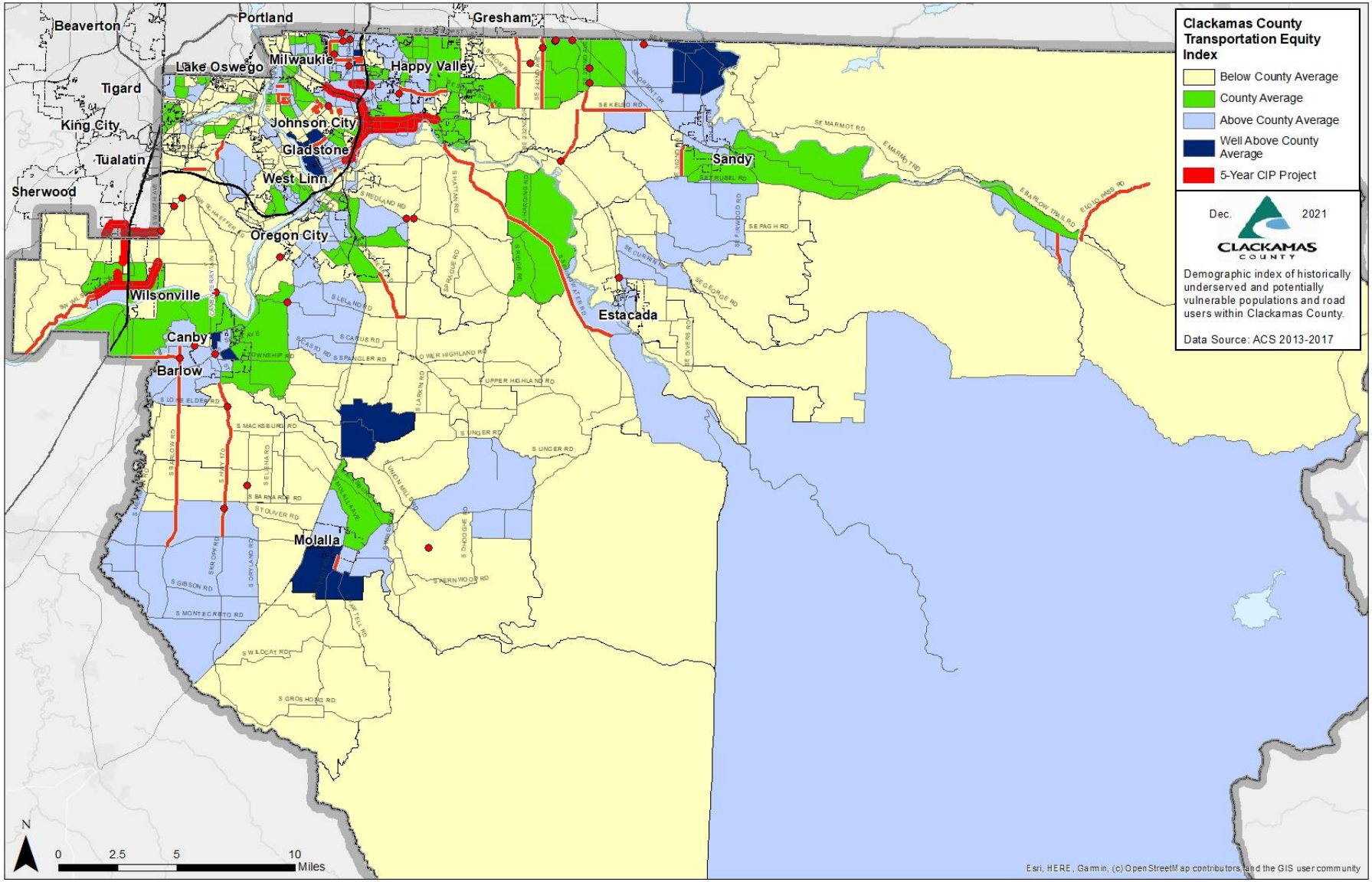


Figure 1: Transportation Equity Index & 2021-2025 CIP Projects

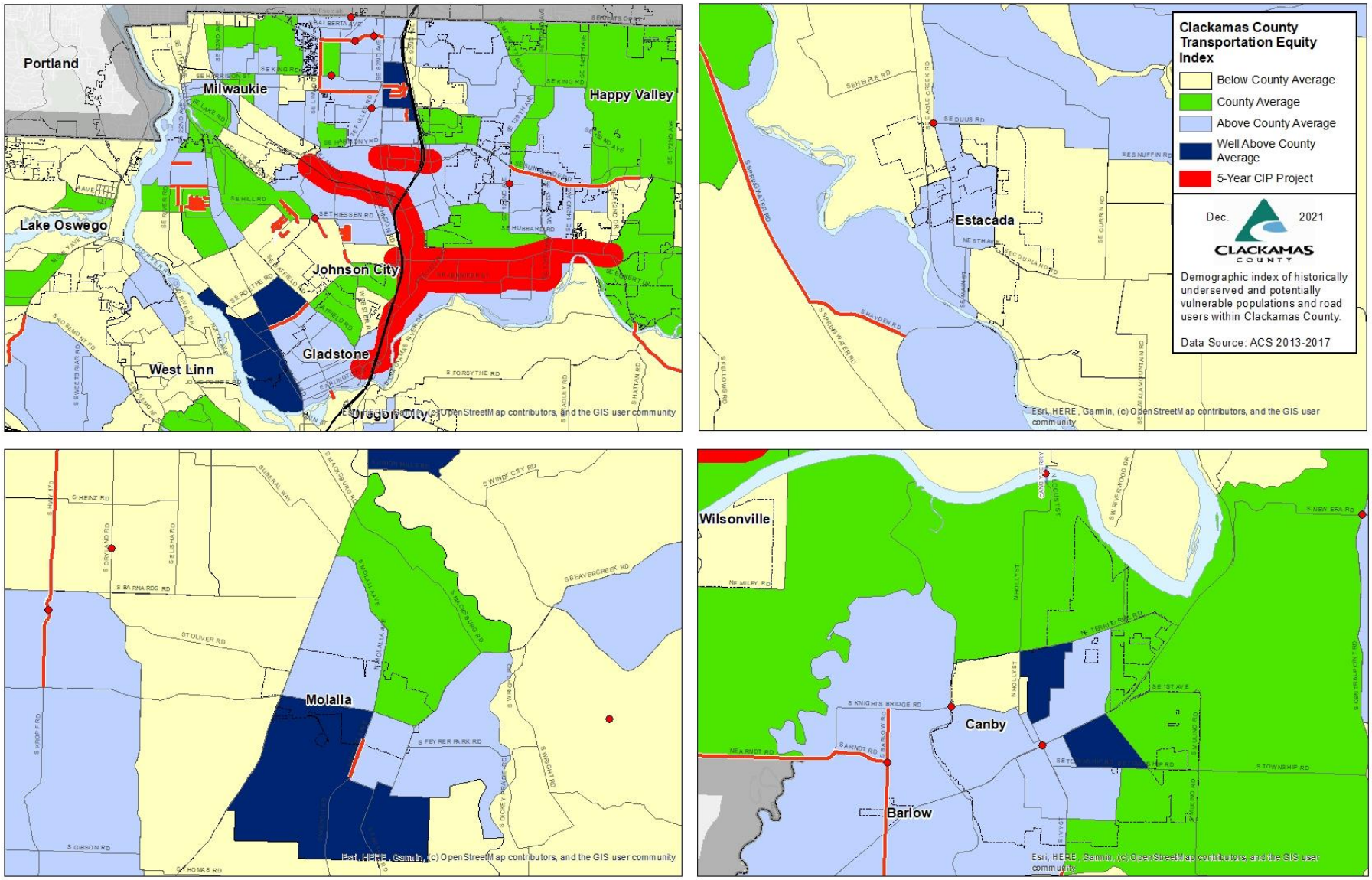


Figure 2: Transportation Equity Index (urban area, Estacada, Canby, Molalla) & 2021-2025 CIP Projects

During the next five years, over $122 million will be invested in the transportation system in Clackamas County. As described previously, there are 11 different capital project categories with funding from an assortment of sources. The Clackamas County Road Fund, which is often thought to be the primary source of funding for the transportation system, actually only funds approximately 25% of the projects, with the remainder from other sources such as the Community Road Fund, Transportation System Development Charges (TSDC), Urban Renewal and other sources described in *Funding Sources and Future Projects*.

Over the next five years, almost 2/3 of the CIP budget, $84.6million, will be spent on transportation investments in areas with an above average Transportation Equity Index score. The amount of investment in these areas can be reported by the individual demographic indicators that make up the index. Figure 3 shows the total funding of projects in the 5-Year CIP in areas that have an above average overall Transportation Equity Index score by individual demographic group. Based on these variables, over the next five years the county is projected to spend 67% of total project costs ($84.6 million) and 72% of anticipated road fund match ($21.6 million) in census tracts that have an "above average" or "well above average" total transportation equity index score.

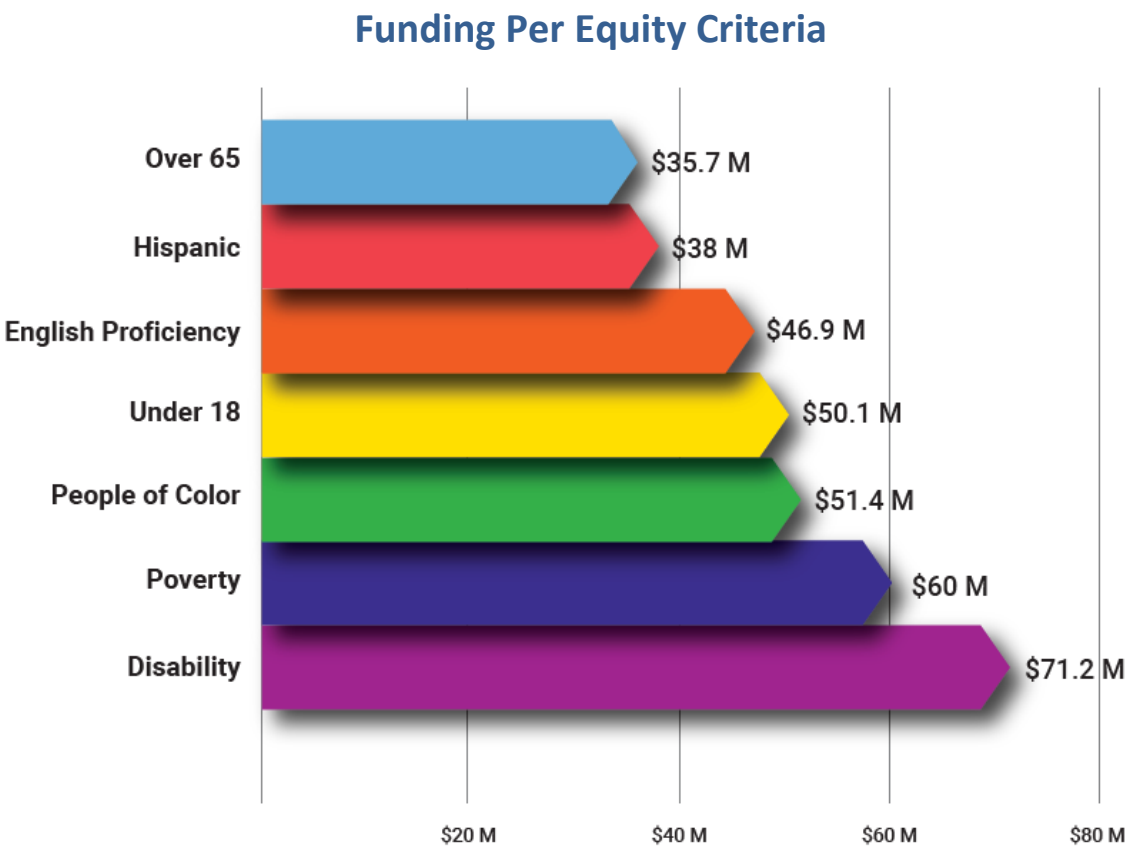


Figure 3: Funding per demographic group in areas with above average Transportation Equity Index scores. Funds are not specific to a single category, as a single project may impact multiple demographic groups with above average Equity Index Scores.

TSP Policy 5.C.1 directs the county to "Support programs and projects, such as pedestrian and bike connections to transit stops that expand and improve transportation options for residents in area with identified transportation-disadvantaged populations." To better understand how the investments in the 5-Year CIP support this policy, Figure 4 includes the anticipated total expenditure by project type for census tracts with a Transportation Equity Index score above the county's average, as well as the expenditure by project type for all the 5-Year CIP.

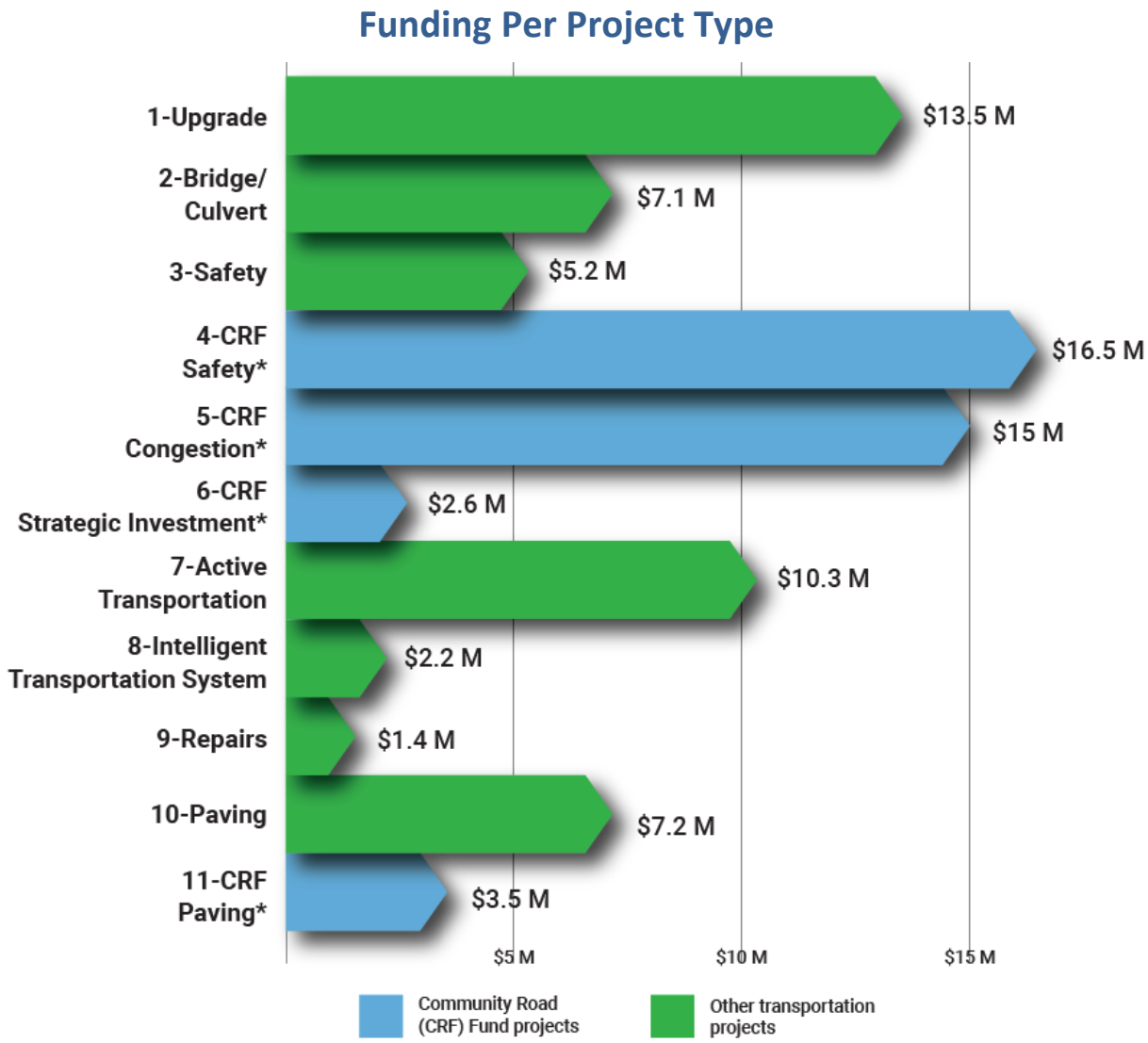


Figure 4: Funding per project type in areas with above average Transportation Equity Index scores. Note – two Upgrade projects are focused on active transportation, but with added components that differentiate it from the Active Transportation project type.

By applying this index to the FY 2021/22-2026/27 5-Year CIP, we can clearly see the levels of investment that impact specific communities that have been and/or are currently underserved, marginalized, or negatively impacted by the transportation system. This highlights the different levels of investment across the county, specifically in areas with above average concentrations of communities of interest. The Transportation Equity Index is a lens that helps to identify inequities created and perpetuated by investments in the transportation system. This assessment is a point in time snapshot of how current project selection processes result in benefits, through investment in transportation system projects, to groups that face greater barriers. The next step is to incorporate the Transportation Equity Index into the project selection processes to evaluate current practices and implement strategies to reduce disparities.

FUNDING SOURCES AND FUTURE PROJECTS

Projects in the 5-Year CIP are funded through a variety of sources, connecting transportation planning to the county's capital construction budget. To be on the 5-Year CIP list, a project must have an identified funding source. A funding forecast completed in October 2012 as a part of the TSP update outlines funding expected to be received over the next 20 years.

One of the key funding themes is that *the County Road Fund is only anticipated to play a minor role (as match money for other funding sources) in future capital projects.* Therefore, reliance upon other funding sources for capital projects is essential. Recently used sources to help match projects to appropriate funding sources are reviewed below. *Table B: Key Projects Matched with Potential Grant Funding Sources* highlights TSP projects that should be considered when the next grant cycle is open. While we need to identify potential projects as the programs become open for applications, ultimately the selection of appropriate projects is determined when the application is developed.

Local Funding Sources

Clackamas County Road Fund

The County Road Fund is made up of revenue received through the Oregon State Highway Trust Fund from state gas tax, weight-mile tax, vehicle registration fees (VRF) and vehicle titling fees distributed to the county based on allocation schedules set out in state law. The passage of the Keep Oregon Moving House Bill 2017 in 2017 is projected to provide nearly $100 million to the County Road Fund over the next 15 years.

The state constitution and Oregon Revised Statues require State Highway Trust Fund revenue to be used "…for the construction, reconstruction, improvement, repair, maintenance, operation and use of public highways, roads, and streets…" (including a minimum 1% annual expenditure on bicycle and pedestrian facilities). Road fund money is often used as the local contribution (match) for projects funded by federal, state and other local funding programs.

The County Road Fund also includes federal funds from the Secure Rural Schools program.

Community Road Fund (CRF)

The CRF is a funding source that became effective in January 2020 with revenue from a new countywide vehicle registration fee. County residents pay a $30 per year fee when they register their car, truck, van, trailer or other passenger vehicle or motorcycle. The funds go toward projects that maintain county roads, build improvements to relieve congestion and make the road system safer.

A 15-member CRF Advisory Committee developed criteria to analyze potential capital congestion relief projects, applies that criteria to high priority projects, recommends the order in which the projects should be constructed, and reviews the project list annually.

It is expected that the CRF will generate over $11 million each year, with the county receiving about $5.5 million and the rest being allocated to the cities within the county based on population and how much of that population resides within the county borders. (Some cities like Portland and Tualatin have only a small portion of their boundaries within the county.)

Transportation System Development Charges (TSDCs)

TSDCs are one-time assessments on new developments based on the number of vehicle trips the developments are forecast to generate. This equitably spreads the cost of road projects that increase capacity to new and expanding development that rely on road network improvements. These funds are dedicated to projects on an adopted list within a specific geographic area that improve capacity. The funds may not be used for road maintenance.

Improved capacity can include operational efficiencies (e.g., signalization) that increase the number of travelers accommodated by the system or added facility miles.

Urban Renewal (Tax Increment Financing [TIF])

Urban renewal raises money for public improvements through Tax Increment Financing (TIF) in blighted areas. Local investments focus on creating jobs, helping businesses, improving communities and increasing the tax base to result in long-term financial stability for local service providers and property owners. The use of the funds is customized to meet the needs of the approved plan for the urban renewal area.

Expenditures are restricted to making improvements within the geographic limits of the urban renewal area in which the funds were raised, and focus on funding infrastructure consistent with the adopted urban renewal plan. Urban renewal frequently provides matching funds for money from federal, state, regional and other local sources.

There are three county urban renewal districts -- one, the North Clackamas Revitalization Area (NCRA), still collects revenue and the other two, the Clackamas Town Center District and the Clackamas Industrial Area (CIA), are forecast to invest revenue in transportation projects over the next 20 years.

Fee in Lieu of (FILO)

Clackamas County Code 1007.10 provides for a fee in lieu of (FILO) required frontage improvements, primarily for sidewalks, on county roads. FILO is typically used when a development is being proposed in an area with few or no sidewalks. The developer pays a fee instead of building the required sidewalk improvements on the frontage, allowing the county to build continuous sidewalks in an area with a high need once enough fees are collected.

Federal, State and Regional Funding Sources

Federal Highway Trust Fund-Fixing America's Surface Transportation Act (FAST Act)

Federal funds can be used to help pay for projects on National Highway System facilities. Periodically, federal legislation reauthorizes federal highway, transit and transportation safety programs funded through the Highway Trust Fund. Between 2012 and 2015, MAP-21 was the reauthorization law. The current reauthorization, FAST Act, enacted in 2016 and set to expire in 2022, contains the following federal aid highway programs and mass transit funding:

- National Highway Performance Program,
- Surface Transportation Block Grant Program (STBGP),
- Highway Safety Improvement Program (HSIP),
- Congestion Mitigation & Air Quality Improvement Program (CMAQ),
- Metropolitan Transportation Planning, and
- Surface Transportation Program (STP).

Funding for local projects on the National Highway System can be applied for through programs managed directly by federal agencies (BUILD and Federal Lands Access), the state (the STIP, Highway Safety Program and Highway Bridge Program) or programs directed through the local Metropolitan Planning Organization (Metro) such as the Metropolitan Transportation Improvement Program (MTIP).

Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Transportation Grant

RAISE provides a unique opportunity for the US Department of Transportation to invest in road, rail, transit and port projects that promise to have a significant impact on the nation, a region or a

metropolitan area. Previously known as TIGER and BUILD Discretionary Grants, Congress has dedicated more than $8.9 billion for 13 rounds of TIGER/BUILD/RAISE since 2009.

Projects must be multi-modal, multi-jurisdictional or otherwise challenging to fund through existing programs, and must be regionally significant and closely aligned with economic benefits. RAISE uses a rigorous process to select projects with exceptional benefits that explore ways to deliver projects faster and save on construction costs, and that invest in the nation's infrastructure to make communities more livable and sustainable. In urban areas, the minimum project amount is $5 million; in rural areas the minimum project amount is $1 million.

Underinvestment in rural transportation systems has allowed a slow and steady decline in the transportation routes connecting rural communities. To address these needs, a greater share of RAISE/BUILD grant funding awards are designed to go toward projects in rural areas compared to TIGER. At least 30% ($450 million) of funding is to be utilized for rural projects.

Western Federal Lands Access Program (FLAP)

FLAP was created by MAP-21 to improve access to federal lands. The program is directed towards public highways, roads, bridges, trails and transit systems that are under state, county, town, township, tribal, municipal or local government jurisdiction or maintenance, and that provide access to federal lands. The following activities are eligible for consideration:

- Preventive maintenance, rehabilitation, restoration, construction and reconstruction,
- Adjacent vehicular parking areas,
- Acquisition of necessary scenic easements and scenic or historic sites,
- Provisions for pedestrians and bicycles,
- Environmental mitigation in or adjacent to federal land to improve public safety and reduce vehicle/wildlife mortality while maintaining habitat connectivity,
- Construction and reconstruction of roadside rest areas, including sanitary and water facilities, and
- Operation and maintenance of transit facilities.

Proposed projects must be on a public highway, road, bridge, trail or transit system that is located on, adjacent to or provides access to federal lands for which title or maintenance responsibility is vested in a state, county, town, township, tribal, municipal or local government.

Federal Highway Administration (FHWA) Accelerated Innovation Deployment (AID) Demonstration Program

AID provides funding as an incentive for eligible entities to accelerate the implementation and adoption of innovation in highway transportation. FHWA encourages the use of AID funds to promote the deployment of the *Every Day Counts* (EDC) initiatives, which provide ways to improve highway planning, design, construction and operation.

This program is one aspect of the multi-faceted Technology and Innovation Deployment Program (TIDP) approach that provides funding and other resources to offset the risk of trying an innovation. AID funds are available for any project eligible for assistance under Title 23, United States Code. Eligible projects may involve any aspect of highway transportation that addresses TIDP goals, and must include proven innovative practices or technologies such as those included in the EDC initiative. Innovations may include infrastructure and non-infrastructure strategies or activities that the applicant or sub-recipient intends to implement and adopt as a significant improvement from the conventional practice.

FHWA Emergency Relief Program

Title 23, United States Code, Section 125, authorizes a special program from the Highway Trust Fund for the repair or reconstruction of federal-aid highways and roads on federal lands that have suffered

serious damage as a result of natural disasters or catastrophic failures from an external cause. This program, commonly referred to as the emergency relief or ER program, supplements the commitment of resources by states, their political subdivisions or other federal agencies to help pay for unusually heavy expenses resulting from extraordinary conditions.

The applicability of the ER program to a natural disaster is based on the extent and intensity of the disaster. Damage to highways must be severe, occur over a wide area and result in unusually high expenses to the highway agency. Applicability of ER to a catastrophic failure is based on the criteria that the failure was not the result of an inherent flaw in the facility, but was sudden, caused a disastrous impact on transportation services and resulted in unusually high expenses to the highway agency.

Clackamas County has used funds from this program to fund projects needed due to federal emergencies, including Lolo Pass / Zig Zag River bridge, South End Road at milepost 3.8, 232nd Drive at milepost 0.3 and E. Barlow Trail Road.

FHWA Ferry Boat Discretionary (FBD) Program

FBD provides funding for ferry facilities on a non-interstate public road that is publicly-owned, publicly-operated or majority publicly-owned, providing substantial public benefits. Projects selected for funding under this program are funded at 80% Federal share.

Statewide Transportation Improvement Program (STIP)

The STIP, Oregon's four-year transportation capital improvement program, identifies the funding for and scheduling of transportation projects and programs on federal, state, city and county transportation systems, multimodal projects (highway, passenger rail, freight, public transit, bicycle and pedestrian), and projects in the National Parks, National Forests and Indian tribal lands.

The STIP includes a process for identifying projects that receive federal FAST Act funds as well as a portion of Oregon State Highway Fund. The current STIP process divides funding into two main categories -- Enhance and Fix-it.

- *Enhance:* Enhance, expand or improve the transportation system. Eligible project activities include bicycle and/or pedestrian facilities, Development STIP (D-STIP), modernization projects that add system capacity, most projects previously eligible for Transportation Enhancement funds, projects eligible for Flex Funds, protective right-of-way purchases, public transportation, Safe Routes to Schools, Scenic Byways, Transportation Alternatives, and Transportation Demand Management (TDM).
- *Fix-It:* Includes all the capital funding categories that maintain or fix ODOT's portion of the transportation system.

These categories do not include non-capital maintenance and operations programs because they are not included in the STIP.

Oregon State Highway Fund

Highway revenues in the State of Oregon have several major sources:

- Motor vehicle registration and title fees,
- Driver's license fees,
- Motor vehicle fuel taxes, and
- Weight-mile taxes.

Net revenues from these taxes and fees are deposited into an account known as the State Highway Fund. With minor exceptions, the Oregon Constitution (Article IX, Section 3a) dedicates highway

revenues for the construction, improvement, maintenance, operation and use of public highways, roads, streets and roadside rest areas.

Keep Oregon Moving (HB 2017)

House Bill 2017, approved in 2017, increases the state gas tax, and vehicle title and registration fees over seven years. When all taxes and fees are in place in 2024, HB 2017 will produce $500 million in State Highway Fund revenue annually with investments in public transportation, walking and biking.

Incorporated with this funding is the former Jobs and Transportation Act (JTA) passed in 2009 by the Oregon Legislature. The JTA was designed to address funding shortfalls for some long-standing transportation needs, including Sunrise Project Phase 1, which was completed in June 2016.

Highway Safety Improvement Program (HSIP)

This ODOT program has been continued under the FAST Act to incorporate the functions and funding that were previously contained in the High-Risk Rural Roads Program. The HSIP is focused on projects on local agency roads and ODOT facilities to increase awareness of safety on all roads, promote best practices for infrastructure safety, complement behavioral safety efforts, and focus limited resources to reduce fatal and serious injury crashes. The program, data-driven to achieve the greatest benefits in crash reduction, was developed to be blind to jurisdiction. ODOT recently transitioned the safety program and the completed jurisdictionally-blind safety program was finalized in early 2021. During the transition, funding for local agency roads were allocated to primarily focus on a few systemic low-cost fixes that could be implemented in the shorter timeframe.

Highway Bridge Program (HBP)

HBP is a part of the National Highway Performance Program and the Surface Transportation Program. Bridge improvement and replacement is a major priority of ODOT. To qualify for this funding, a bridge typically needs to have a sufficiency rating of less than 50.

Oregon Watershed Enhancement Board (OWEB)

The OWEB is a state agency that provides grants to help Oregonians take care of local streams, rivers, wetlands and natural areas. Community members and landowners use scientific criteria to decide jointly what needs to be done to conserve and improve rivers and natural habitat. OWEB grants are funded from the Oregon Lottery, federal dollars and salmon license plate revenue.

OWEB will accept applications for restoration, technical assistance and land acquisition. These grants support voluntary efforts by Oregonians to protect and restore healthy watersheds, including actions in support of the Oregon Plan for Salmon and Watersheds, and the Oregon Conservation Strategy.

Fish America Foundation

Fish America, in partnership with the National Oceanic and Atmospheric Association (NOAA) Restoration Center, awards grants to local communities and government agencies to restore habitat for marine and anadromous fish species. Successful proposals include community-based restoration efforts with outreach to the local communities. These small grants help with bridge scour projects.

National Fish Passage Program - US Fish and Wildlife Service

The National Fish Passage Program is a voluntary, non-regulatory conservation assistance program that provides financial and technical support to remove or bypass artificial barriers that impede the movement of fish and other aquatic species, and contribute to their decline. The program implements fish passage improvement-based, cost-shared projects to protect, restore or enhance habitats that support fish and other aquatic species and their populations. All or a portion of project funds may be transferred to partner organizations through cooperative agreements if the service isn't able to implement a project.

Connect Oregon

Connect Oregon is a lottery bond-based initiative to invest in air, rail, marine and bicycle/pedestrian infrastructure to ensure Oregon's transportation system is strong, diverse and efficient. Projects are eligible for up to 80% of project costs for grants and 100% for loans. A minimum 20% cash match is required from the recipient for all grant-funded projects. Projects eligible for funding from state fuel tax revenues are not eligible.

HB 2017 removed public transit projects from Connect Oregon and directed the Oregon Transportation Commission to distribute the funds to five specific projects:

- Treasure Valley Intermodal Facility ($26 million),
- Rail expansion in East Beach Industrial Park at the Port of Morrow ($6.55 million),
- Brooks rail siding extension ($2.6 million),
- Mid-Willamette Valley Intermodal Facility ($25 million), and
- Oregon International Port of Coos Bay Rail Line Repairs and Bridge Replacement ($5 million)

With funding going to these projects, no funding is expected to be available until the end of the 2021-2023 biennium.

Immediate Opportunity Funds (IOF)

The IOF supports primary economic development in Oregon through construction and improvement of streets and roads. The 1987 Legislature created state funding for immediate economic opportunities with certain motor vehicle gas tax increases. Access to this fund is discretionary and the fund may only be used when other sources of financial support are unavailable or insufficient; it is not a replacement or substitute for other funding sources.

The IOF is designed to meet the following objectives:

- Provide needed street or road improvements to influence the location, relocation or retention of a firm in Oregon;
- Provide procedures and funds for the Oregon Transportation Commission (OTC) to respond quickly to economic development opportunities, and
- Provide criteria and procedures for the Oregon Economic and Community Development Department, other agencies, local governments and the private sector to work with ODOT to provide road improvements needed to ensure specific job development opportunities for Oregon, or to revitalize business or industrial centers

Use of the IOF is limited to:

- Type A: Specific economic development projects that affirm job retention and job creation opportunities,
- Type B: Revitalization of business or industrial centers to support economic development,
- Type C: Preparation of Oregon Certified Project-Ready Industrial Sites.

Special Public Works Fund (SPWF)

The SPWF provides funds for publicly-owned facilities that support economic and community development in Oregon. Funds are available to public entities for:

- Planning;
- Designing;
- Purchasing;
- Improving and constructing publicly-owned facilities;
- Replacing publicly-owned essential community facilities; and
- Emergency projects as a result of a disaster.

Metropolitan Transportation Improvement Program (MTIP)

MTIP is the federally-mandated four-year implementation schedule of expenditures of federal transportation funds and significant state and local funds in the Portland metropolitan region. For projects to receive federal transportation funding, they must be included in the Regional Transportation Plan (RTP). MTIP coordinates spending of federal and state transportation funds for four different public agencies: Metro, ODOT, TriMet and South Metro Area Transit District. More information can be found on Metro's website: http://www.oregonmetro.gov/metropolitan-transportation-improvement-program.

Regional Flexible Fund Allocation (RFFA)

The RFFA process is used to determine which locally identified priorities are awarded funding to advance the goals of the RTP. Regional flexible funds are distributed to Metro from three federal grant programs: the Surface Transportation Program, the Congestion Mitigation/Air Quality Program, and the Transportation Alternatives Program. Metro then distributes those funds to cities and counties for projects designed to make getting around the region easier and safer. The RFFA process typically takes place on a two-year funding cycle to match closely with the MTIP update schedule. More information can be found on Metro's website: http://www.oregonmetro.gov/public-projects/regional-flexible-funding-transportation-projects.

Table B: Key Unfunded Projects Matched with Possible Grant Funding Sources

Project Name (TSP Number)	Description	Possible Funding Source
Sunrise Project Phase II (4036)	Extend the Sunrise Project from I-205 to 172nd Avenue	STIP Enhance / Federal Grant
I-205 Bottleneck Project (4016)	Improvement to I-205 between the Stafford interchange and the east end of the Abernethy Bridge to address congestion issues	STIP Enhance / BUILD
McLoughlin Sidewalk, Safety and ETC (4015)	Add bicycle and pedestrian improvements from Milwaukie city limit to Gladstone city limit	STIP
65th/Elligsen/Stafford (1079)	Construct roundabout	Federal Grant
OR 211 (4040)	Canby Marquam Hwy / OR 211 intersection improvements	STIP Fix-it / HSIP
172nd Ave / 190th Ave Connector	Environmental assessment and project construction to connect 172nd Avenue to 190th Avenue as envisioned in the 172nd / 190th Corridor Management Plan	MTIP / New regional funding source
Bakers Ferry Road – Pathway from Barton Park to Hwy 224 (3101)	Add paved shoulders and turn lanes at major intersections; remove horizontal curve and relocate intersection from Eaden Rd to OR 224	Oregon Community Paths Program
I-205 Multi-use Path Gap (1026)	Study I-205 multi-use path gap (OR 212 to OR 224) to create a plan for connection and path completion	Transp. Growth Management (TGM)
142nd Bike/Ped (1006)	Add bike & pedestrian facilities between Sunnyside & Hwy 212	RFFA
Cazadero Trail – Boring to Barton (1051)	Construct multi-use path	Oregon Community Paths Program
Childs Rd Pedway (1084)	Construct pedestrian path from 65th Ave to Terry Ave	Safe Routes to School (SRTS) Infrastructure
Alberta St / 72nd Ave (2000)	Add sidewalks, bicycle lanes and stormwater facilities	TIF
Luther Rd (2001)	Add sidewalks, bicycle lanes and stormwater facilities	TIF
Overland St	Add sidewalks, bicycle lanes and stormwater facilities	TIF
Newland Creek (Advance Rd) Bridge (2027)	Replace culverts and roadway embankment with a bridge on the same approximate alignment to improve fish passage.	FHWA AID Demonstration
Bull Run Truss (3038)	Replace bridge	STIP / HBR / RAISE
Dodge Park Bridge (1053)	Replace bridge and include paved shoulders	STIP / HBR / RAISE
Holly Lane Bridge (1109)	Replace bridge and include paved shoulders	STIP / HBR / RAISE
Badger Creek (Rugg Rd) Culvert	Rugg Road / Springwater Trail culvert replacement – This is underway with Road Fund (and potential future OWEB) money	OWEB / ODFW
Woodcock Creek (Grimm Rd) Bridge	Bridge replacement – This is underway with OWEB grant decision upcoming soon and Road Funds	HBR / OWEB / Nat. Fish Passage (NFP)
Aschoff Rd	Culvert repair project	OWEB / NFP
Wyland Road Bridge	Bridge replacement	STIP / HBR
E. Barlow Pass Bridge	Bridge replacement	FLAP
OR 212 Freight Mobility Corridor Improvement	Freight mobility improvements on OR 212 between Rock Creek Junction and US 26	MTIP / STIP
S Hillockburn Rd	Pave road where alligator cracking and surface is delaminating	FLAP
S Butte Creek Rd	Pave 7-mile section not built to withstand heavy use by log trucks.	Federal Grant

Appendix A

TRANSPORTATION EQUITY INDICATORS

Review & Methodology

Purpose

Local Plan Review

Cross Sector Review

Indicator Selection Recommendation

Index Methodology

ATTACHMENT A

Date: 12/5/19 *(Updated August 2020)*
Subject: Transportation Equity Indicators – Review & Methodology - DRAFT
From: Abe Moland, Health and Transportation Impact Planner, CCPHD

Purpose

In Clackamas County, a resident's zip code can be a better predictor of health than their genetic code. This is why it is essential to adopt an equity lens to make data informed decisions to consider the unique needs of vulnerable populations in planning and transportation projects and address disparities occurring throughout the county.

There are various equity-based initiatives occurring within the Department of Transportation and Development and other jurisdictions that influence the built environment within the county. This memo 1) reviews existing, publically available methodologies that have been used to understand geospatial distribution patterns of vulnerable populations within Clackamas County, and 2) explores a method for the county to use to incorporate an equity lens to transportation and planning work (draft).

Definitions

- **Transportation Equity Lens** – A geospatial analysis of the community that a) acknowledges that individuals and groups differ in transportation ability or need and b) attempts to address this disparity through intentional distribution of resources to accommodate all users.
- **Transportation Inequity –** Barriers in the transportation system or planning process that prevent individuals or groups from meaningfully participating in the planning process or accessing needed transportation modes to obtain their highest quality of life.

Local Plan Review

Publically available transportation and planning documents (n=40) were collected and analyzed for methodologies to map vulnerable populations. **Appendix A** outlines the collection approach. Plans were included in the analysis if they:

- Included demographic analysis of variables that were framed through a vulnerability, equity, opportunity, environmental justice, or transportation disadvantage lens, or included language that was people-focused and attempted to account for disparities between demographic categories that create and perpetuate inequities;
- Mapped the demographic variables identified, and;
- Were completed after 2005.

Appendix B documents the complete list of plans reviewed. Some plans may have conducted equity analysis in the development stages, but were not included in this review because the final public document did not include mention of the equity lens or documentation of developmental progress memos describing this analysis were not publically available. Of the plans reviewed, less than a quarter (n=9, 22.5%) were found to incorporate an equity lens. The plans included in analysis listed in Table 1.

Table 1. Transportation Plans that included geospatial analysis of equity variables

Plan	Year	Variables Used
Sandy Transit Existing Conditions Report	2019	65 and older per square mile per census block, people who identify as Asian, Black, White, Native American/other, and People who identify as Hispanic
Clackamas County Safety Action Plan	2019	Youth between 15-25, rural populations, and 65 and older
City of Milwaukie Transportation System Plan	2018	More than ¼ mile walk to a transit stop
Gladstone Transportation System Plan	2017	Residents younger than 18 per acre, 65 and older per acre, Hispanic or Latino, disability status by employment rate for the 20-60 population, people who earn 0-1.99x the poverty level
Canby Area Transit Plan	2017	Under 18 by square mile per census block, 65 and older per square mile per census block, People who identify as Asian, Black, White, Native American/other, people who identify as Hispanic, and residents in poverty per square mile by census block group
SMART Transit Plan	2017	Under 18 by square mile per census block, 65 and older per square mile per census block, non-white population by census block, median household income by census block
West Linn Transportation System Plan	2016	Younger than 16, 65 and older, racial minority (undefined, non-English speakers undefined, population with a disability, people who earn 0-1.99 times the federal poverty line
Lake Oswego Transportation System Plan	2013	Residents younger than 18 per acre, 65 and older per acre
Clackamas County Transportation System Plan	2015	17 and younger normalized by census block, 65 and older normalized by census block, Non-white normalized by census block, Non-Hispanic normalized by census block, Households where no adult speaks English well normalized by census block, Households under 200% poverty line normalized by census block, Households with 0-1 vehicles normalized by census block, living within 500ft of a freeway or highway

The plans integrated an equity lens in the following ways:

- **Sandy Transit Existing Conditions Report. (2019)** The report identifies seniors and people of color to understand where need is for transit in the area, what delivery might look like for specific populations (language considerations), and if transit service changes will affect people equitably. It is frames as less of a "need assessment" and more as a civil rights assessment to avoid unequal treatment on the basis of race or ethnicity.
- **Clackamas County Transportation Safety Action Plan. (2019)** The plan updates the 2012 County Safety Action Plan and incorporated an interdisciplinary stakeholder group to inform the discussion defining vulnerable road users. Under contributing factors to serious and fatal crashes, the plan found 36% involved drivers under the age of 25 and 17% involved older adults 65 years and older. The plan also identifies a higher rate of severe crashes occurring in rural areas (45% despite only 20% of the population living in these areas). The Safety Action Plan is the only document to highlight the rural/urban inequity.
- **City of Milwaukie Transportation System Plan. (2018)** The plan defines "transportation disadvantaged" as individuals who have difficulty obtaining transportation because of their age, income, physical, or mental disability. The plan includes a summary of environmental justice findings that make an effort to identify underserved and vulnerable populations to improve

transportation options and avoid future impacts. Findings highlight areas where households are not within ¼ mile of a bus stop, as well as a lack of system connectivity for people who walk or bike.

- **Gladstone Transportation System Plan. (2017)** The plan identifies socio-economically sensitive populations as minorities, elderly people, people with low incomes, and people with disabilities. Evaluation criteria for project prioritization gave one point for a project being in an area with a high concentration of children, disabled, low-income, or elderly people.
- **Canby Area Transit System Master Plan. (2017)** In the existing conditions the transit plan outlines seniors, youth, and low-income residents as populations of focus for transit planning. It also maps residents by race/ethnicity.
- **SMART Master Plan. (2017)** The plan maps median household income and percent non-white populations by census block group.
- **West Linn Transportation System Plan. (2016)** The city identifies equity as one of the six desired outcomes of the planning efforts, defined as "equity exists relative to the benefits and burdens of growth and change to the region's communities". Within the context of the TSP, is also outlined as a goal and identified as "transportation facilities that are accessible to all members of the community". To prioritize projects, the evaluation criteria give points if a project increased the number of transportation disadvantaged populations (elders, youth, and transit riders) within a 20-minute walk, bike, or bus-shed of schools, parks, schools, and employment areas.
- **Lake Oswego Transportation System Plan. (2013)** The plan highlights growing senior populations and system updates that allow people to age in place as important considerations. Within the transit needs analysis, the plan suggest strategies to accommodate people with disabilities or visual impairment and connect disadvantaged communities with community/employment centers. The plan does not define "disadvantaged community". The plan conducts spatial analysis on senior and youth population densities.
- **Clackamas County Transportation System Plan. (2012)** The plan outlines six policies related to equity, health and sustainability. The policies focus on supporting walking, biking, and transit connections in area with identified transportation-disadvantaged populations, coordinating land use and transportation planning to minimize environmental pollution, and continue to provide public transit services to under-served areas, particularly for seniors and people with disabilities.

Several plans (n=11) included discussion of demographic information through an equity lens or incorporated equity-based language in the guiding principles of the document. **Appendix C** captures descriptions of the language used.

Review Observations

A majority of the plans included reviewed indicators that described youth, seniors, communities of color, and low-income households. Indicators on limited English proficiency, disability, and ethnicity appeared less frequently. Equity indicators related to travel access and the physical environment appeared least frequently. Figure 1 shows the frequency of indicators in plans included.

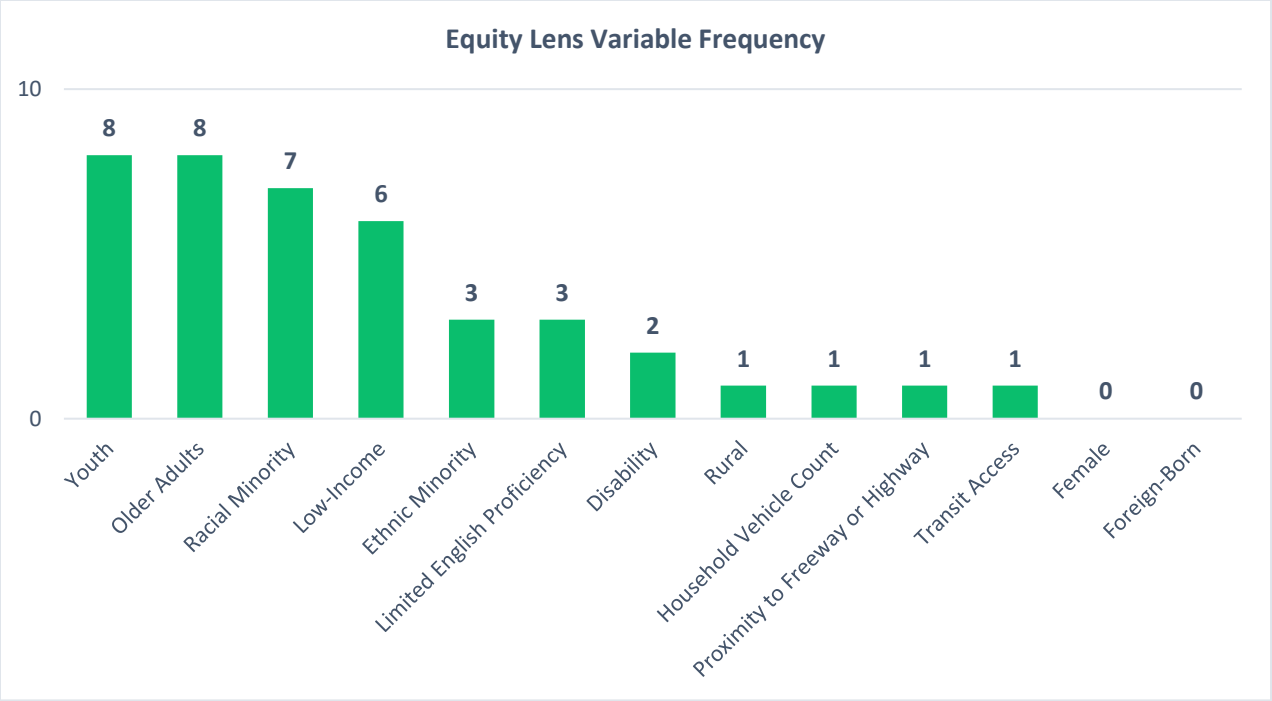


Figure 1. Frequency of variables used to conduct equity-type analysis in transportation and comprehensive plans within Clackamas County boundaries.

When a plan discusses equity and the transportation planning process, it is almost exclusively within the context of transit development, citing transit-dependent populations as one of the most transportation disadvantaged groups.

Cross Sector Review

To inform future direction of transportation equity within Clackamas County, the following plans related to equity within the county were reviewed, as well as leading practices from across the region and nation in developing indices to identify populations with differing needs within the community.

Clackamas County Community Health Improvement Plan (2017)

The Clackamas County Community Heath Improvement Plan (CHIP) describes priorities, goals, and objectives to improve the health and quality of life in Clackamas County. These directives are informed through three guiding principles: 1) Assessing life across the lifespan, 2) Grounded in Health Equity, and 3) Trauma-informed approaches. All acknowledge that not all residents in Clackamas County have equitable access to opportunities and systems that contribute to good health due to discrimination and other structural inequities like poverty, institutional racism, and gender inequality.

The CHIP maps percent non-English speakers per census block group (CBG), percent of population within 1 km of a bus stop per CBG, percent children with Medicaid per CBG, and median household income by CBG,

Oregon Metro (2018)

As part of the regional transportation planning process, Metro evaluated the region through an equity lens to evaluate the investment strategy against historically marginalized communities in the region.

The final indicators used were people of color, people with low incomes, and English language learners where densities were higher than the regional average.

Delaware Valley Regional Planning Commission (2018)

The Delaware Valley Regional Planning Commission (DRVPC) Communities of Concern report explores the idea that the risk of being in a severe crash is linked to where one lives. The analysis expands the definition of environmental justice communities to include a variety of demographic and socioeconomic indicators of disadvantage beyond race and income.

Variables included were single female headed households, carless households, older adults, and people with limited English proficiency. After creating an index of the demographic and social variables, and normalizing crashes by population and area, they found that in 91% of the census tracts where crash rates were above average, the census tract was also above average for at least one correlated indicator of potential disadvantage. This analysis informed the TIP project benefit evaluation criteria.

Broward Metropolitan Planning Organization (2018)

The Broward MPO in South Florida developed a systematic process to consistently evaluate transportation plans and programs within its region against federal and state nondiscrimination authorities, produce meaningful outcomes for the community through transportation planning programs for vulnerable populations, and identifying adverse impacts early on in the planning process rather than at the project funding or delivery stage. The MPO used a threshold-based approach to analysis with the goals of: 1) Using accessible data, 2) be flexible depending on project needs, 3) be easy to use, 4) be objective, and 5) be open-sourced.

Based on review of existing MPO plans and programs and feedback from a working group, the final indicators selected were racial minority, ethnic minority, youth ages 10-17, older adults aged 65+, population below the poverty line, LEP populations, and populations with a disability. Optional indicators to be used with caution for reliability due to small number included zero vehicle households, female heads of household, and no high school diploma (25+).

Indicator Selection Recommendation (Draft)

Based upon review of existing plans and best practice, the following indicators are proposed to best capture potential disadvantage in the county:

1. Populations 65 and older
2. Populations younger than 18
3. Communities of Color
4. Hispanic/Latino Ethnicity
5. Low Income Households
6. Limited English Proficiency
7. Disability status

Ultimately, the criteria used in an index of this type should be grounded in feedback and experience of DTD staff and the community members they serve.

Index Methodology

The described below was used to create the index. It is modeled after approaches used by the Delaware Valley Regional Planning Commission and the Broward County Metropolitan Planning Organization. The methodology uses a threshold-based approach to identifying higher concentrations of the population of interest at the census block group level in comparison to the County as a whole. Thresholds were assigned score and then combined with other variables to create a composite score.

The methodology has involves five steps:

1. Calculate mean value (county average) of indicator.
2. Calculate standard deviation (SD) of indicator range.
3. Create 5 bins centered on mean value using SD.
4. Normalize values using 0-4 score based on SD bins to develop indicator score.
    a. Block groups with a zero percent estimate within individual indicator were assigned a score value of zero.
5. Sum individual indicator scores for index score.

Index Interpretation *(Draft)*

The scores can be interpreted in the following way for an individual indicator:

Table 2. Individual variable score meaning.

Score	Interpretation
0	Well below county average
1	Below county average
2	County average
3	Above county average
4	Well above county average

The summed score can be interpreted as below.

Table 3. Composite score interpretation.

Score	Interpretation
≤12	Below county average
13-14	County average
15-19	Above county average
≥20	Well above county average

A map of the composite equity index is shown in Figure 2.

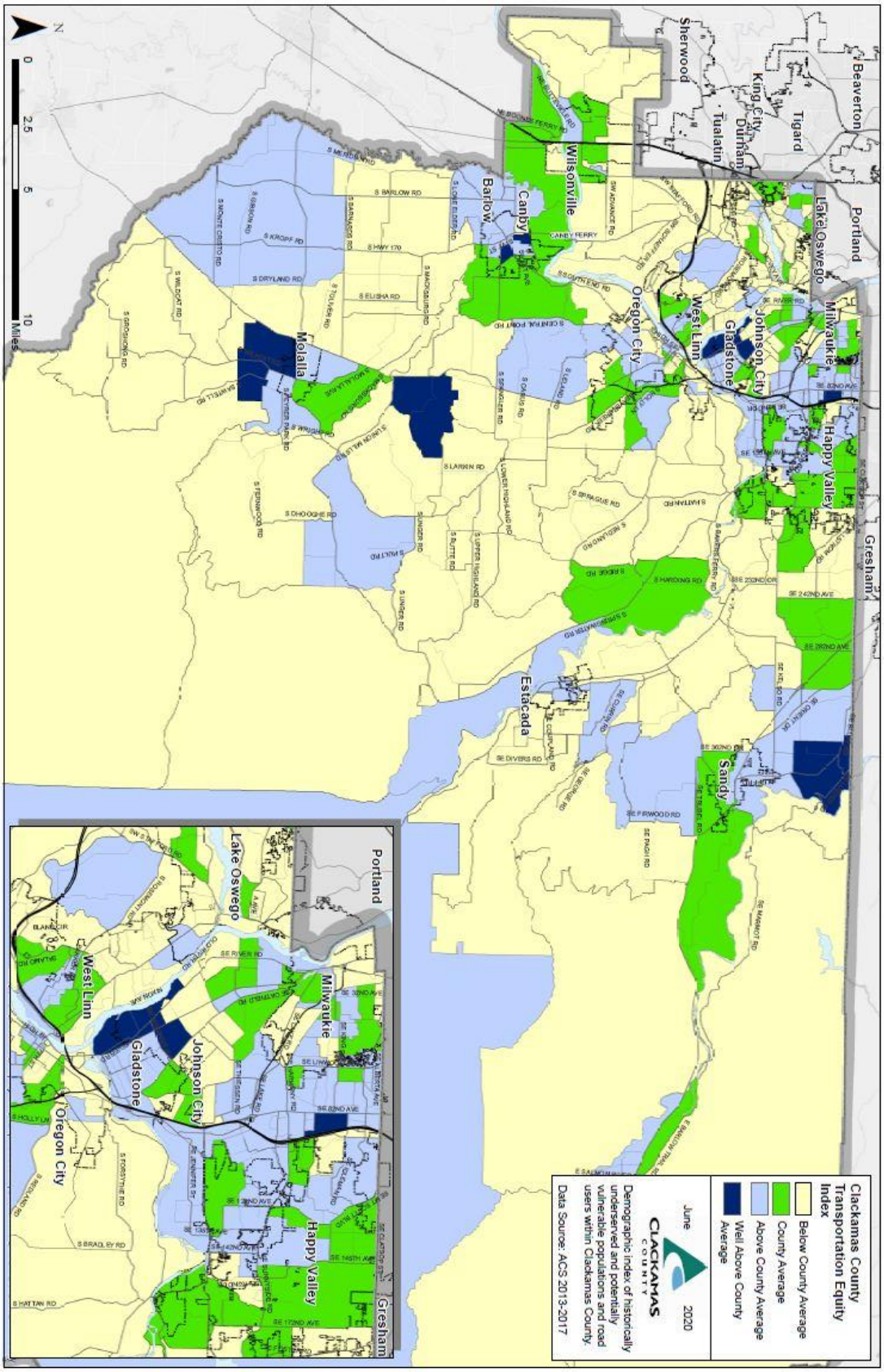


Figure **2. Sample map of the composite equity index score mapped.**

Appendix A. Plan Review Methodology

To collect plans, the following search process was followed:

- Review of existing Clackamas County transportation documents
- Review of state transportation documents
- Key word search of city websites
- Key word search of transportation and planning documents including: “equity”, “vulnerable”, “justice”, “opportunity”, “diversity”, and “disadvantage”.
- Snowball collection process from identified plan efforts including staff memos, interim development reports, technical appendices and glossaries, and public meeting notes.

Appendix B. Complete Plan Review List

1. Oregon City Comprehensive Plan (2004)
2. Oregon City Transportation Demand Management Plan (2017) *(strategies for walking/biking access)*
3. Oregon City Beavercreek Road Concept Plan (2008 and readopted 2016)
    a. January 17th, 2019 Citizen Involvement Presentation *(acknowledges zoning updates will unlock development opportunities in areas historically underserved that need to drive to reach destinations)*
4. Oregon City Park Place Concept Plan and Appendix (2008)
5. Oregon City South End Concept Plan (2014)
    a. Planning Commission Issues Matrix (2014) *(Highlights concern for senior citizen needs, specifically mobility options related to TriMet service and housing options that allow aging in place, like first floor unit options)*
6. City of Milwaukie Central Milwaukie Land Use & Transportation Plan (2015)
7. City of Milwaukie Downtown and Riverfront Land use Framework Plan (2015)
8. City of Milwaukie Lake Road Multimodal Plan (1997)
9. City of Milwaukie Tacoma Station Area Plan (2013)
10. Lake Oswego Uplands Neighborhood Plan (2017)
11. Lake Oswego First Addition/Forest Hills Neighborhood Plan (2008) *(mentions diverse age range)*
12. Lake Oswego Evergreen Neighborhood Association Plan (2005) *(“Values broad range of housing types and price levels to bring people of diverse ages and incomes into daily interaction”)*
13. Sandy Comprehensive Plan (1997)
14. Estacada Active Transportation Plan (2018)
15. Estacada Downtown & Riverside Area Plan (2011)
16. Happy Valley Transportation System Plan (2014)
17. Happy Valley Comprehensive Plan (2017)
18. Pleasant Valley North Carver Comprehensive Plan CAC Concept Overview (2019)
19. West Linn Highway 43 Concept Plan (2016)
20. West Linn Comprehensive Plan (2017)
21. Canby Comprehensive Plan (2019) *(acknowledges there are areas of transportation disadvantage and limited transit service)*
22. Canby Transportation System Plan (2010)

23. Molalla Transportation System Plan (2018) *(includes transportation disadvantaged in evaluation criteria but does not define)*
24. Molalla Comprehensive Plan (2014)
25. Wilsonville Active Transportation Plan (2013)
26. Downtown Molalla Development and OR 211 Streetscape Plan (2007)
27. Villebois Village Master Plan (2013)
28. Wilsonville Comprehensive Plan (2019)
29. Mt Hood Multimodal Transportation Plan (2014)

Appendix C. Description of Plans that Discussed Equity but Did Not Map.

The following plans documented an assessment of demographic indicators, but did not map them:

- **Estacada Transportation System Plan (2018).** The plan defines transportation disadvantaged as people who do not have automotive transport of their own due to disability or income status. The plan outlines people with low incomes, seniors, and people with disabilities specifically.
- **Wilsonville Transportation System Plan (Updated 2019).** The plan uses the EPA definition of environmental justice, "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." The plan further describes it as an effort to identify underserved and vulnerable populations to improve transportation options and reduce future inequalities. The plan identifies Charbonneau and the southern edge of Villebois as focus areas due to higher proportions of seniors and low income groups, but does not provide maps.

In the planning stages of the Wilsonville TSP, the framing of how environmental justice was discussed at length. Many projects in the plan fulfilled environmental justice goals, they just weren't documented through that lens. Environmental justice language was important to include for applying for Metro or federal funding. Mapping environmental justice indicators and underserved population areas was cautioned against for avoiding the possible discomfort it might raise if someone was identified as living in one of those areas.

Inequities are not commonly identified in planning documents, however, guiding principles occasionally incorporate language around equitable outcomes that are goals of transportation and land use planning efforts:

- **City of Milwaukie Downtown and Riverfront Land Use Framework Plan (2015)** – Provide for people of all ages, cultures, ethnic groups, and incomes.
- **City of Milwaukie Community Vision (2017) -** Milwaukie is an inclusive community of diverse people from a variety of backgrounds that honors our differences and shared similarities. We are engaged and come together in many ways through various events and community gathering places, where we can celebrate our interests and passions.
- **City of Milwaukie Comprehensive Plan (draft) –** Ensure that [pedestrian and bicycle] improvements are inclusive and provide access for people of all ages and abilities. Provide

housing options and reduce housing barriers for people of all ages and abilities, with a special focus on people of color, aging populations, and people with low incomes.

- **Lake Oswego Transportation System Plan (2014) –** Goal D Accessibility – Provide a multimodal transportation system that is suitable for community members of all ages, income levels and physical abilities to access daily needs and services. Goal G Sustainability - Provide a transportation system that maintains and improves economic vitality, environmental health, social equity and well-being for citizens today and in the future. *(While Goal 4 was people-oriented, the evaluation criteria used for project selection for this goal were mode focused)*
- **Gladstone Transportation System Plan 2017) –** Goal III Accessibility – Provide a multimodal transportation system that is accessible to all members of the community and minimizes out of area travel. Objective A. Ensure adequate access for children, disabled, low-income or elderly people.
- **Sandy Transportation System Plan (2011) –** Transportation Goal: Mobility – Improve mobility for the transportation disadvantaged. *(The plan does not define transportation disadvantaged but outlines transit-dependent individuals as people with disabilities, youth, elderly, and people with low incomes)*
- **West Linn Transportation System Plan (2016) –** Goal 3. Equity - Develop transportation facilities that are accessible to all members of the community. 3B. Ensure transportation services (and impacts) are equitably distributed to all segments of the population.
- **Downtown Molalla Development and OR 211 Streetscape Plan (2007) –** Guiding Principle 3 – Improve walking and bicycling conditions – Strive for universal access to all important destinations for all residents regardless of age, physical capabilities, or skill.
- **Villebois Village Master Plan (2013) –** Diversity: Refers to Villebois' commitment to providing a community that offers many options and choices for those who live, work, and play there (referring to housing, the village center, parks and open space, and transportation).

While not a transportation-related document, the City of Milwaukie integrates a racial equity lens into their housing policy decision-making structure. Milwaukie defines equitable housing as, "diverse, quality, physically accessible, affordable housing choices with access to opportunities, services, and amenities". The lens tool that Milwaukie developed asks questions about unintended consequences, how policy supports historically marginalized communities, and who benefits and is burdened from decisions. The lens also highlights that people of color in Milwaukie are more likely to be cost-burdened from rent, have lower rates of homeownership, and have been historically underrepresented in the decision –making process in comparison to white people.

Additionally, the City of West Linn Sustainable West Linn Strategic Plan outlines a goal to work towards transportation affordability, aiming to have all households in West Linn spending 15% of their income on transportation costs.

Appendix B

TRANSPORTATION EQUITY INDICES MAPPING

MAPS

Map 1: Communities of Color

Map 2: Seniors (over 65 yrs)

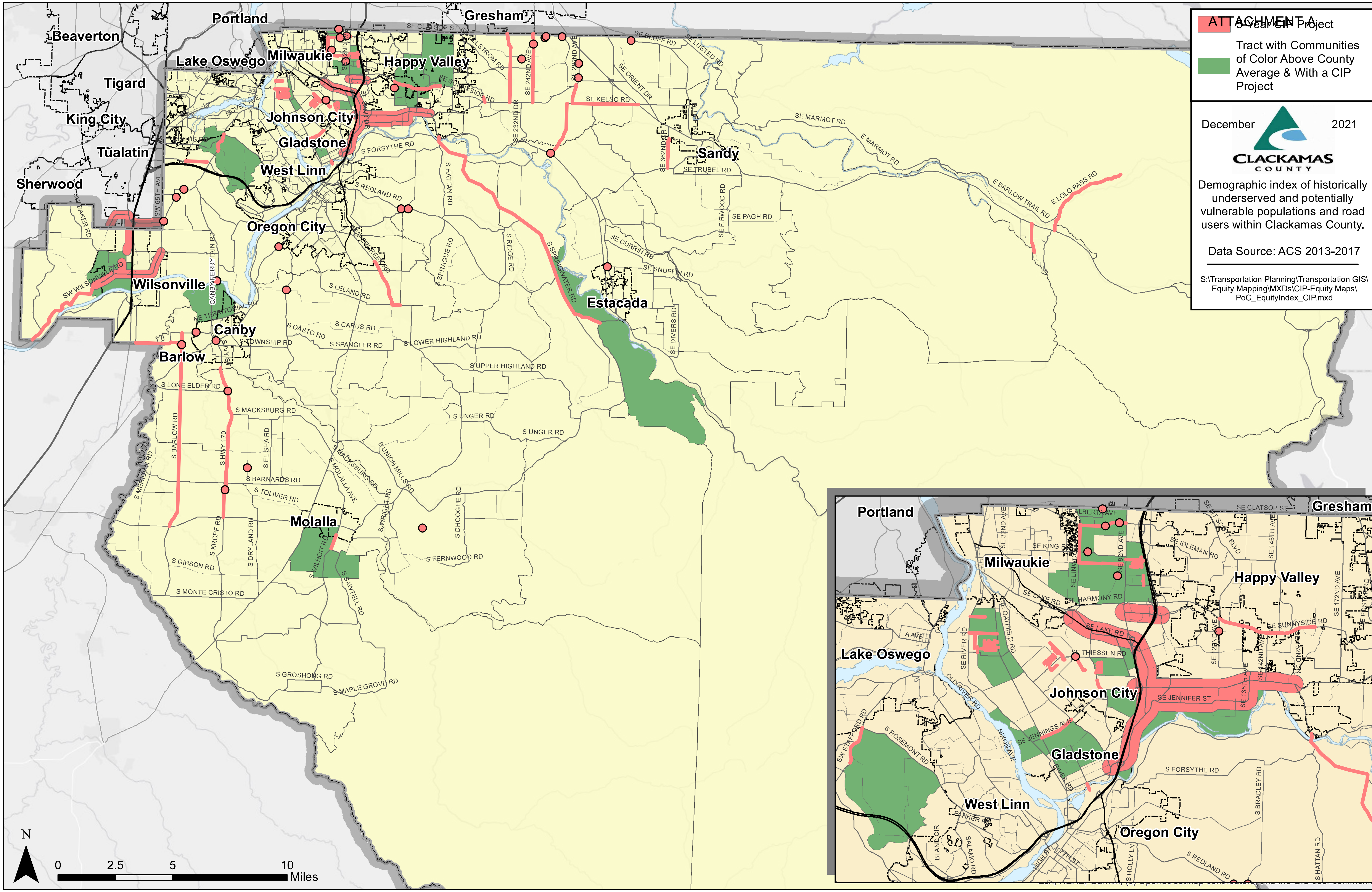
Map 3: Hispanic Communities

Map 4: People with a Disability

Map 5: Low-Income Households

Map 6: Low English Proficiency

Map 7: Youth (under 18 yrs)


ATTACHMENT A
5-Year CIP Project
Tract with Communities of Color Above County Average & With a CIP Project
December 2021
CLACKAMAS COUNTY
Demographic index of historically underserved and potentially vulnerable populations and road users within Clackamas County.
Data Source: ACS 2013-2017
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Portland
Gresham
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Happy Valley
Tigard
King City
Johnson City
Gladstone
Tualatin
West Linn
Sherwood
Oregon City
Wilsonville
Estacada
Sandy
Canby
Barlow
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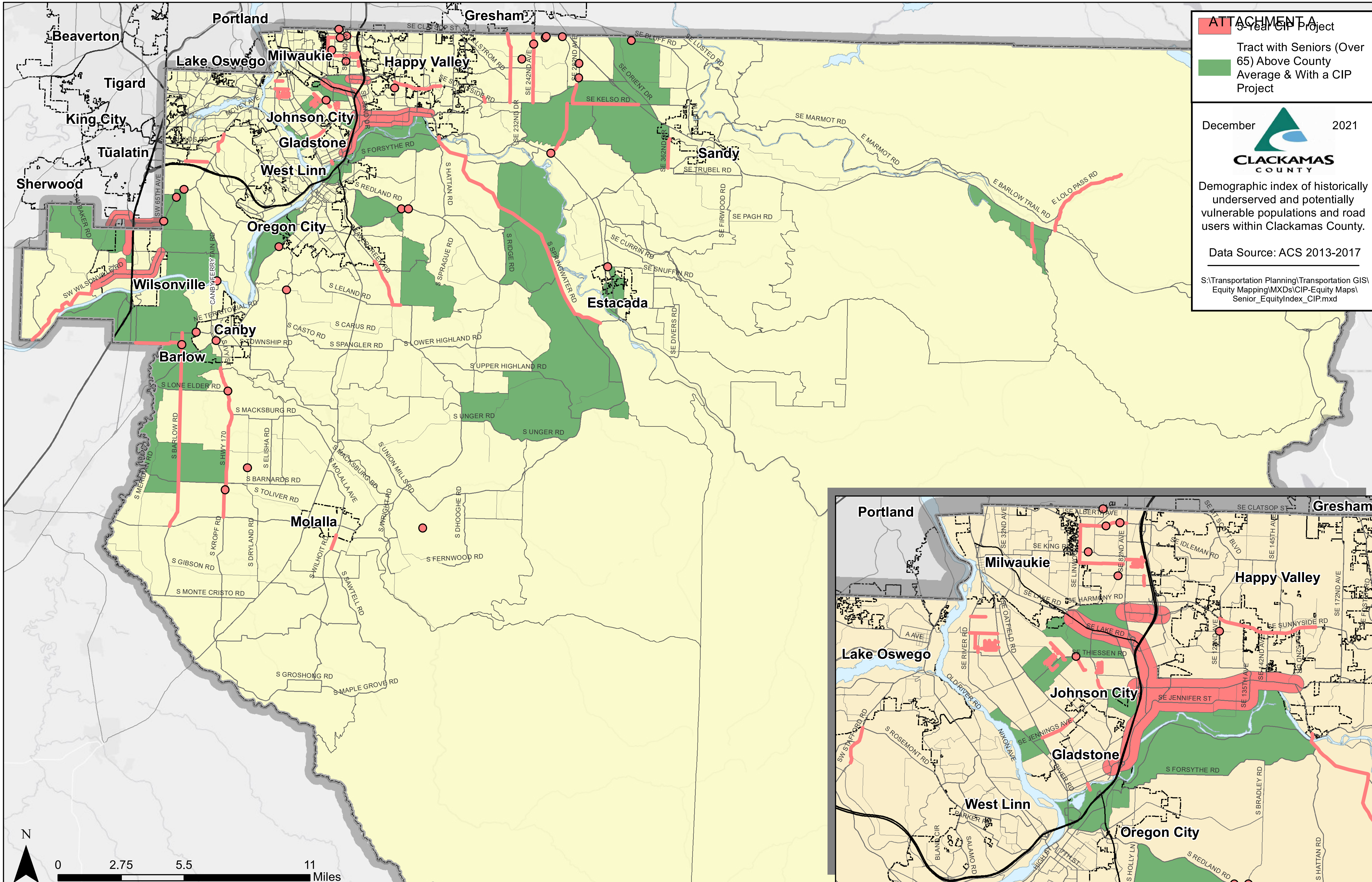
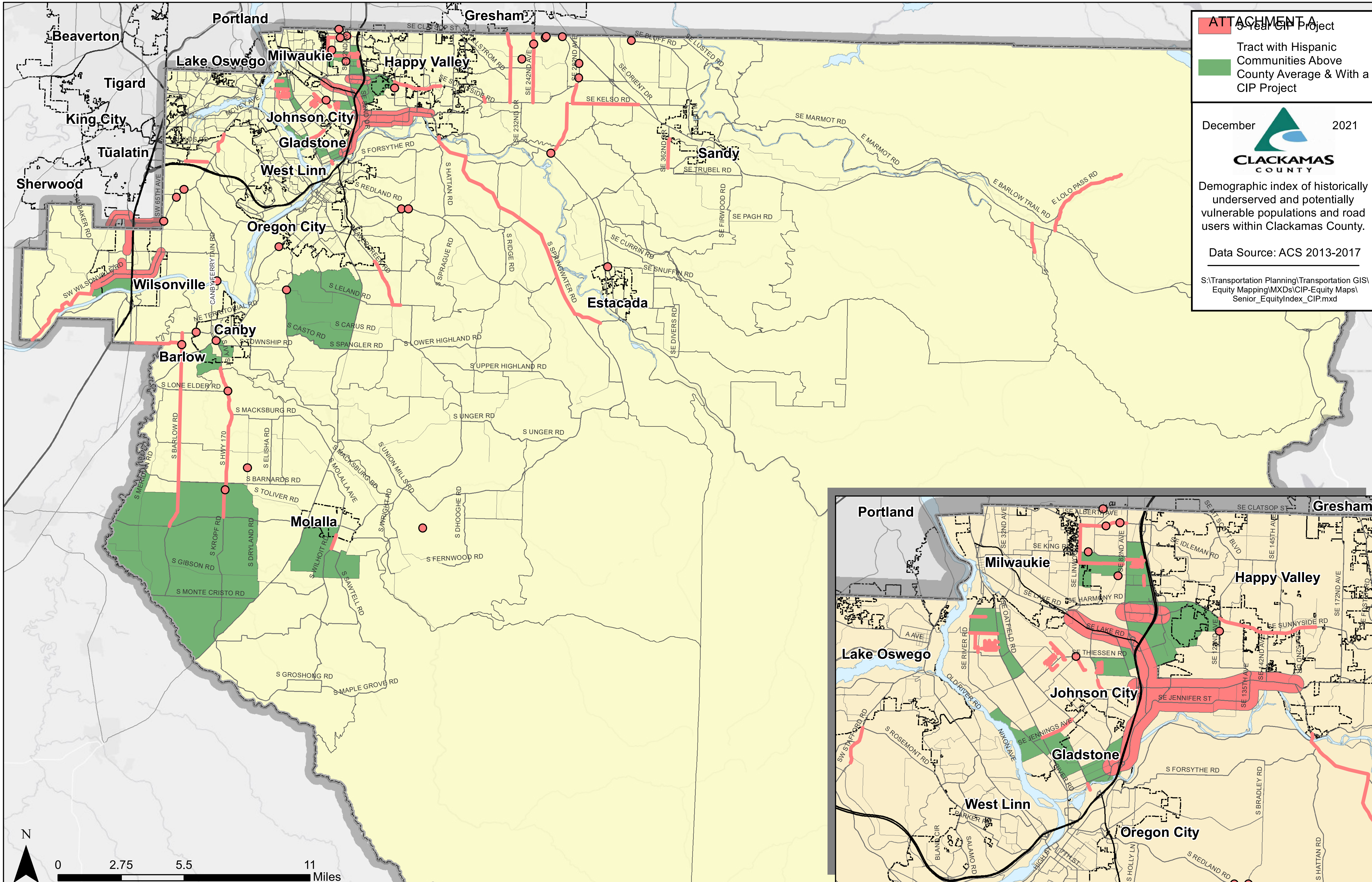
S HATTAN RD

ATTACHMENT A




ATTACHMENT A
🟥 5-Year CIP Project
🟩 Tract with Hispanic Communities Above County Average & With a CIP Project
December 2021
CLACKAMAS COUNTY
Demographic index of historically underserved and potentially vulnerable populations and road users within Clackamas County.
Data Source: ACS 2013-2017
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S SAWTELL RD
S GROSHONG RD
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S BRADLEY RD
PARKER RD
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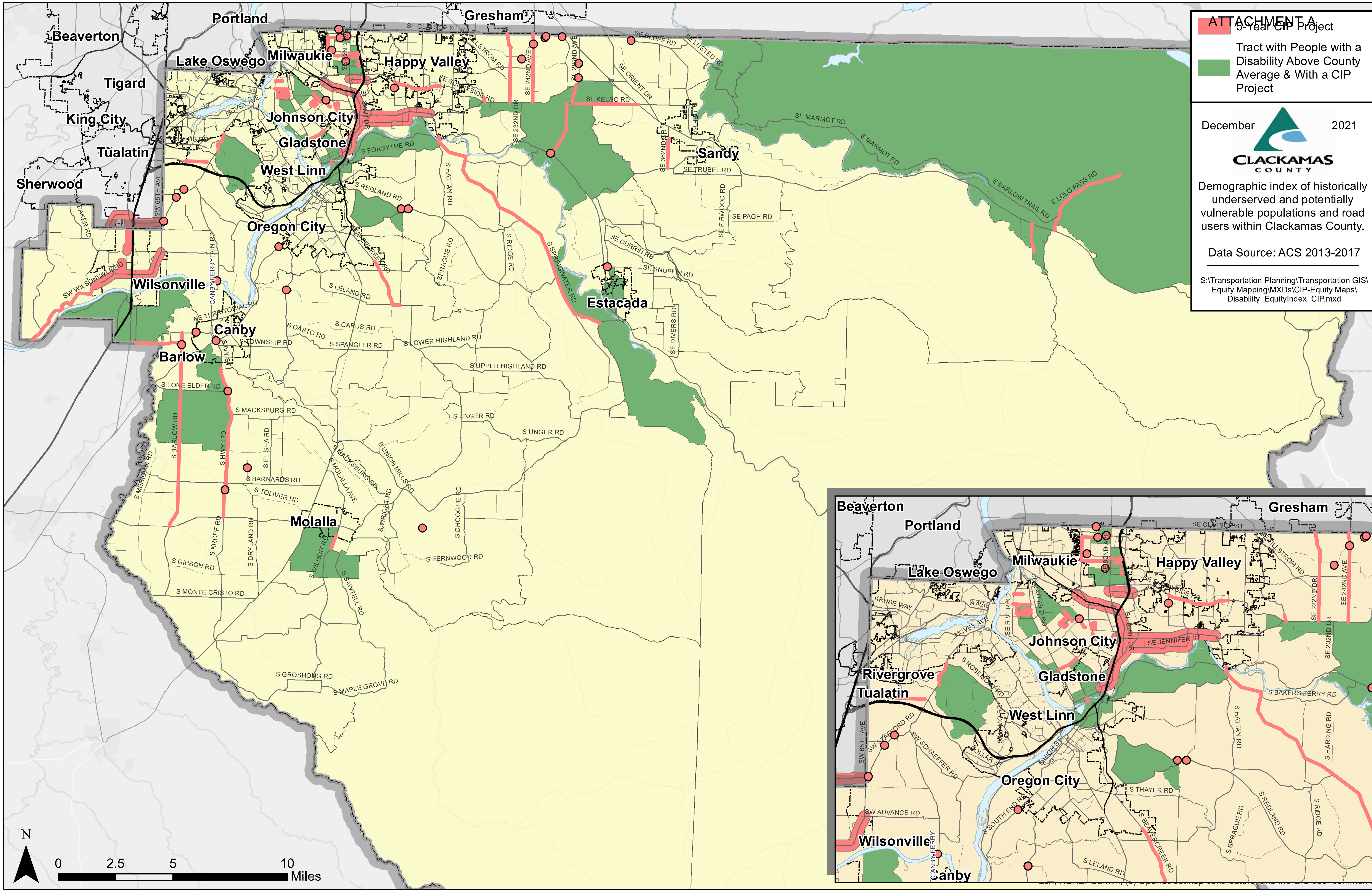
ATTACHMENT A



ATTACHMENT A

5-Year CIP Project

Tract with Low-Income Households Above County Average & With a CIP Project

December 2021

CLACKAMAS COUNTY

Demographic index of historically underserved and potentially vulnerable populations and road users within Clackamas County.

Data Source: ACS 2013-2017

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Portland
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Johnson City
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West Linn
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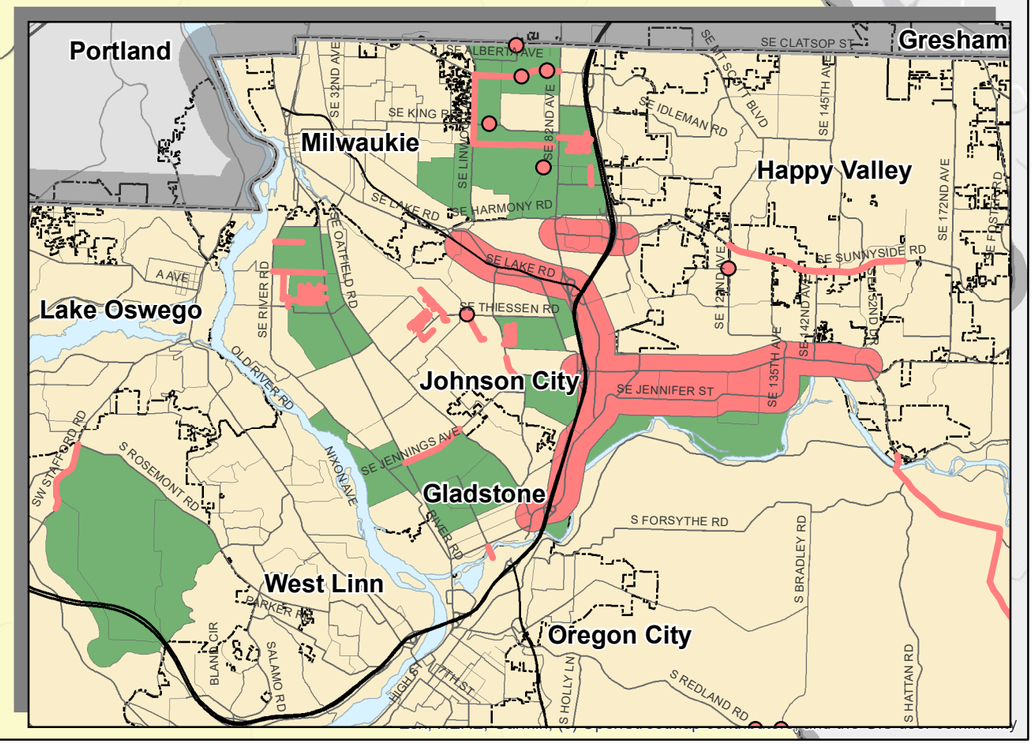
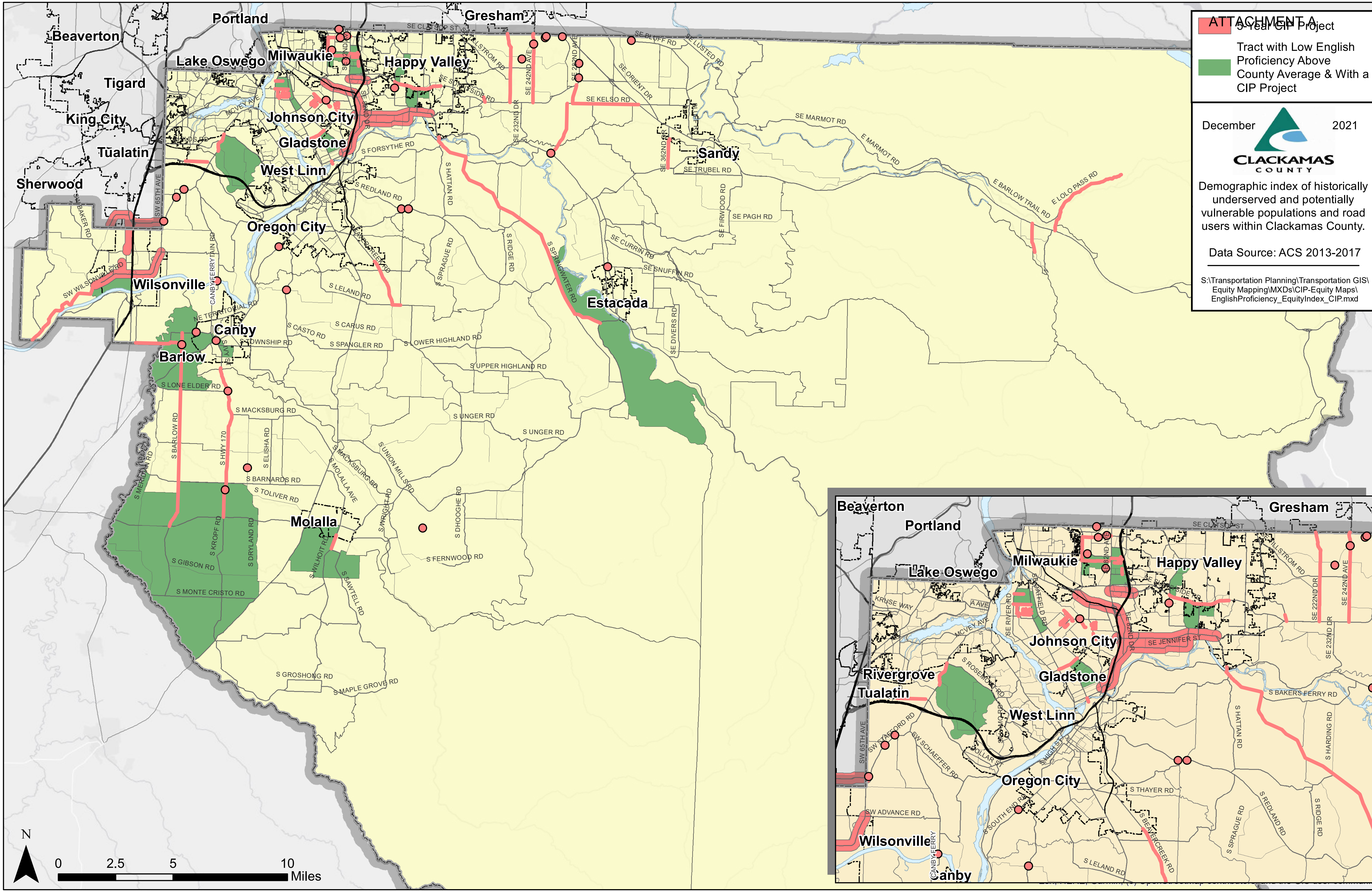
SE FIRWOOD RD
SE PAGH RD
SE CURRIN RD
SE SNUFFIN RD
SE DIVERS RD
SE 232ND DR
S FORSYTHE RD
S HATTAN RD
S REDLAND RD
S RIDGE RD
S SPRINGWATER RD
S SPRAGUE RD
S LELAND RD
S CARUS RD
S CASTO RD
S SPANGLER RD
S LOWER HIGHLAND RD
S UPPER HIGHLAND RD
S UNGER RD
S LONE ELDER RD
S MACKSBURG RD
S BARLOW RD
S HWY 170
S ELISHA RD
S BARNARDS RD
S TOLIVER RD
S KROPF RD
S DRYLAND RD
S GIBSON RD
S MONTE CRISTO RD
S WILHOIT RD
S WRIGHT RD
S DHOOGHE RD
S FERNWOOD RD
S SAWTELL RD
S GROSHONG RD
S MAPLE GROVE RD
S UNION MILLS RD
S MOLALLA AVE
SW 65TH AVE
SW BAKER RD
SW WILSONVILLE RD
CANBY FERRY RAIN RD
NE TERRITORIAL RD
S MACKSBURG RD
S MOLALLA AVE
S MERIDIAN RD

N

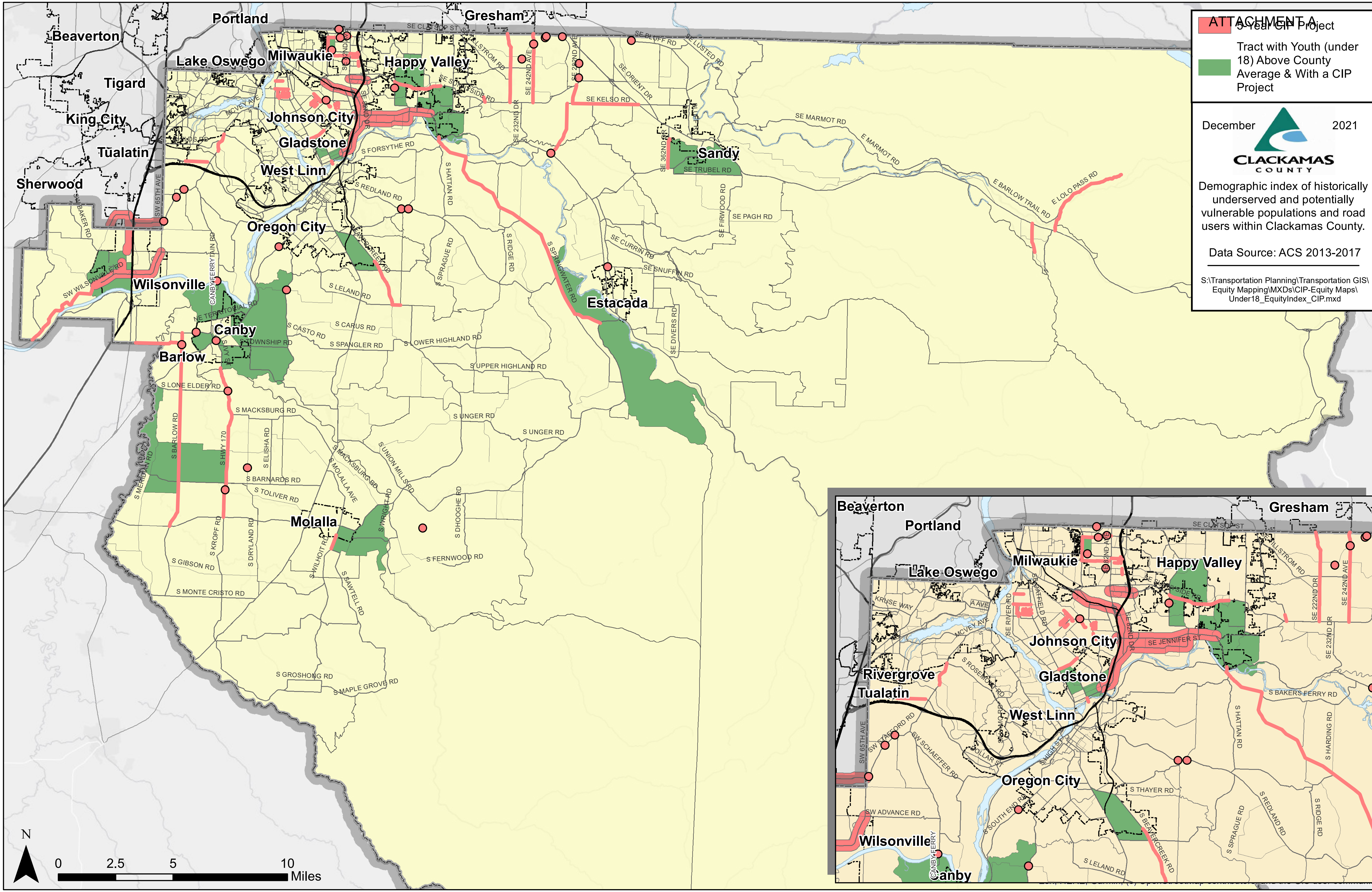
0 2.75 5.5 11 Miles





ATTACHMENT A
🟥 5-Year CIP Project
🟩 Tract with Low English Proficiency Above County Average & With a CIP Project
December 2021
CLACKAMAS COUNTY
Demographic index of historically underserved and potentially vulnerable populations and road users within Clackamas County.
Data Source: ACS 2013-2017
S:\Transportation Planning\Transportation GIS\Equity Mapping\MXDs\CIP-Equity Maps\EnglishProficiency_EquityIndex_CIP.mxd
Portland
Gresham
Beaverton
Lake Oswego
Milwaukie
Happy Valley
Tigard
King City
Johnson City
Gladstone
Tualatin
West Linn
Sherwood
Oregon City
Sandy
Wilsonville
Estacada
Canby
Barlow
Molalla
SE CLATSOP ST
SE BLUFF RD
SE LUSTED RD
SE ORIENT DR
SE KELSO RD
SE MARMOT RD
E MARMOT RD
SE 232ND DR
SE 242ND AVE
SE 282ND AVE
SE 362ND DR
SE TRUBEL RD
SE FIRWOOD RD
SE PAGH RD
SE CURRIN RD
SE SNUFFIN RD
SE DIVERS RD
E BARLOW TRAIL RD
E LOLO PASS RD
S FORSYTHE RD
S REDLAND RD
S HATTAN RD
S RIDGE RD
S SPRAGUE RD
S SPRINGWATER RD
S LELAND RD
S CASTO RD
S CARUS RD
S SPANGLER RD
S LOWER HIGHLAND RD
S UPPER HIGHLAND RD
S UNGER RD
S TOWNSHIP RD
NE TERRITORIAL RD
CANBY FERRY
S LONE ELDER RD
S MACKSBURG RD
S BARLOW RD
S HWY 170
S ELISHA RD
S BARNARDS RD
S TOLIVER RD
S MERIDIAN RD
S KROPF RD
S DRYLAND RD
S GIBSON RD
S MONTE CRISTO RD
S MOLALLA AVE
S UNION MILLS RD
S WRIGHT RD
S DHOOGHE RD
S FERNWOOD RD
S WILHOIT RD
S SAWTELL RD
S GROSHONG RD
S MAPLE GROVE RD
SW 65TH AVE
SW BAKER RD
SW WILSONVILLE RD
MCVEY AVE
N
0
2.5
5
10
Miles
Rivergrove
KRUSE WAY
A AVE
SE RIVER RD
SE OATFIELD RD
SE 82ND AVE
SE 82ND DR
SE JENNIFER ST
SE SUNNYSIDE RD
SE TILLSTROM RD
SE 222ND DR
S ROSEMONT RD
SW STAFFORD RD
SW SCHAEFFER RD
DOLLAR ST
S HIGH ST
S SOUTH END RD
S THAYER RD
S BEAVERCREEK RD
S BAKERS FERRY RD
S HARDING RD
SW ADVANCE RD

ATTACHMENT A



Appendix C

TRANSPORTATION SAFETY ACTION PLAN 2021

PROJECTS

Transportation Safety Action Plan Projects

APPENDIX A: Transportation Safety Action Plan Projects

CIP Category	Link to Project code	Project Name	Description/Application	Cost Estimate	Potential Funding Source	Annual Cost
ITS						
ITS	1000 - ITS Plan	FYA (only 5-section heads "doghouse" to FYA)	All signalized intersections with 5-section (doghouse) signals	$ 120,000	RF, TG	$ 120,000
ITS	1000 - ITS Plan	Reflective strips on backplates	Signalized intersection with a high crash history	$ 80,000	RF, TG, JC	$ 40,000
ITS Year 1	1001 - ITS Plan	Support County communications		$ 10,000		$ 10,000
ITS	1000 - ITS Plan	Red/Green Light Extension Project	Signalized intersection with high red-light crashes	$ 300,000	RF, TG, JC	$ 30,000
ITS Years 1 - 3	1000 - ITS Plan	Advance Ped Crossing - Upgrade all push buttons at all signalized intersections to a new standard accessible pedestrian signal (APS) Buttons	At all signalized intersections	$ 1,000,000	RF, JC, TG	$ 333,333
ITS Years 1 - 4	1000 - ITS Plan	Advance Ped Crossing - install pedestrian countdown heads	At all signalized intersections	$ 500,000	RF, JC, TG	$ 125,000
ITS	1000 - ITS Plan	School zone beacon signs	Evaluate 7-5 school zones and replace static *School Zones* with *When Flashing School Zones* when warranted	$ 750,000	RF, TG, JC	$ 150,000
ITS	1000 - ITS Plan	Advance Ped Crossing - Install rectangular rapid-flashing beacons at mid-block crossings	All crossings near school frontage and mid-block locations based on an evaluation.	$ 400,000	RF, TG, JC	$ 80,000
ITS Years 2 - 4	1000 - ITS Plan	Improve Bike Detection - deploy radar or bike loops at all signals	At all signalized intersections with bike lanes	$ 2,500,000	RF, TG	$ 833,333
ITS Years 2 - 5	1000 - ITS Plan	Illumination (convert incandescent to LED to match the corridor and add illumination at location without lighting)	Signalized intersections	$ 300,000	RF, TG	$ 100,000
Safety Programs						
Safety Programs	1001	Radar Speed Feedback Program	Install feedback signs on county roads based on crash statistics criteria	$ 1,250,000		$ 250,000
Safety Programs	1001	Traffic Calming Program - Collector Streets	Develop a program to support traffic calming on collector streets in the urban area	$ 30,000		$ 15,000
Safety Programs	1001	Neighborhood Greenway Streets	Develop 20 mph residential street criteria and annual budget for signs	$ 50,000		$ 10,000
Safety ADA						
Safety ADA	1025	I-205 Multi-Use Path Connection	Construct ADA compliant access to the commercial area from the I-205 Multi-Use Path	$ 80,000		$ 26,667
Safety ADA	1000 - ITS Plan	ADA sidewalk ramp improvements at push button locations and mid-block crossing locations	At all non-compliant sidewalk ramps at/near push buttons and mid block crossings	$ 3,000,000	RF, DA, TG	$ 600,000
Safety SPIS						
Safety SPIS	1067 / 1068	SPIS - Jennings Av/Addie Rd	Regrade Jennings (lower) to create improved sight distance	$ 800,000		$ 400,000
Safety SPIS	1044	Springwater Rd/Hattan Rd	Evaluate intersection safety and make improvements	$ 100,000		$ 50,000
Safety SPIS	3046	SPIS - Kelso Rd/312th Av	Evaluate intersection safety and make improvements	$ 25,000		$ 12,500
Safety SPIS	3089	Ladd Hill Rd/Bell Ave	Vegetation/fixed object removal to improve safety and sight distance	$ 100,000		$ 50,000
Safety SPIS	1130	SPIS - Thiessen Rd/Oetkin Rd	Evaluate intersection safety and make improvements	$ 250,000		$ 83,333
Safety SPIS	3101	SPIS - Bakers Ferry Rd/Barton Park Rd	Construct roundabout or realign intersection to improve safety and clarity	$ 2,000,000		$ 666,667
Safety SPIS	1005	SPIS - Sunnyside Rd/132nd Ave	Evaluate intersection safety and make improvements	$ 50,000		$ 16,667
Safety SPIS	1003 / 2009 / 3022	SPIS - SE 122nd/Mather Rd	Evaluate intersection safety and make improvements	$ 2,000,000		$ 2,000,000
Safety SPIS	1092 / 3081 / 3089	362/Deming and Wilsonville@Ladd Hill	Remove crest vertical curve to improve sight distance	$ 1,100,000		$ 1,100,000

Safety SPIS	1081	Borland Rd/Ek Rd	Reconfigure intersection for improved safety and operations	$ 1,100,000		$ 1,100,000
Safety Study						
Safety Study	1001	Bike / ped facilities	Systemic review of urban collectors and arterials for possible reallocation of space for bike/ped facilities	$ 200,000	RF	$ 40,000
Safety Study	1001	DTZ - CPO safety RSA grant program	Grants for CPO's to conduct RSA/HIA within their boundaries	$ 200,000		$ 40,000
Safety Study	1001	DTZ - DDACTS - neighborhood safety - crime prevention by environmental design	Data driven crime-safety analysis to identify linkage between high crash/safety concern areas and crime - set up system	$ 40,000	CCSO, JC, RF, SC	$ 8,000
Safety Study	1001	DTZ - Transportation options for transportation disadvantaged	Work with transit partners to maximize ability to transport people who need rides - reduce driving of elderly/others by providing alternative transportation	$ 25,000	JC	$ 5,000
Safety Study	1001	DTZ - Young Driver Education Program	Outreach to young drivers (ages 15-25); one of top 3 TSAP risk factors	$ 50,000	JC, SC	$ 10,000
Safety Study	1001	DTZ-TSAP-Safety Outreach	Community outreach/PSA's - PCN work with the public	$ 250,000	JC, SC, RF, TG, HG	$ 50,000
Safety Study	1001	Systemic - "T" Intersection sign/markings treatments	Create standard list of treatments to improve safety at all T-intersections County-wide, focusing first on rural area and evaluating need at intersections in the urban area	$ 750,000		$ 150,000
Safety Study	1001	Systemic - 2-way stop controlled intersection treatments	Create standard list of treatments to improve safety at all 2-way stop-controlled intersections County-wide, focusing first in rural area and evaluating need at intersections in the urban area	$ 900,000		$ 180,000
Safety Study	1001	Systemic - School zone evaluations/safety upgrades	Evaluate all school zones and implement improvements when necessary including sidewalks, curb ramps, crosswalks, radar speed signs, flashers, rapid flashing beacons, traffic calming	$ 4,000,000		$ 800,000
Safety Study	1001	Systemic- All-way stop-controlled intersection treatments	Create standard list of treatments to improve safety at all all-way stop-controlled intersections County-wide, focusing first in rural area and evaluating the need at intersections in urban area	$ 150,000	RF, JC, TG	$ 30,000
Safety - Fix-It Programs						
Safety Fix-it	1001	Maintenance - Buttons	Annual program to support installation/maintenance of centerline buttons on all rural collectors and arterials	$ 400,000	RF, JC	$ 80,000
Safety Fix-it	1001	Maintenance - Guardrails	Annual program to support installation/removal/ maintenance/cleaning/repair and delineation of guardrails	$ 750,000	RF, JC	$ 150,000
Safety Fix-it	1001	Maintenance - Roadway General	Shoulders, safety edge, centerline rumble strips, pavement markings, clear zone	$ 750,000	RF, JC	$ 150,000
Safety Fix-it	1001	Maintenance - Signs	Clean, repair and/or replace if not current with MUTCD requirements	$ 200,000	RF, JC, TG	$ 40,000
Safety Fix-it	1001	Maintenance - Vegetation	Remove overgrown vegetation inhibiting sight distance along all roads	$ 250,000	RF, JC	$ 50,000

Appendix D

TRANSPORTATION SYSTEM PLAN 2013

PROJECTS

Table 5-3a, 20-Year Capital Projects

Table 5-3b, Preferred Projects

Table 5-3c, Long-Term Capital Projects

Table 5-3d, Regional Capital Projects

MAPS

Map 5-11a, Greater Clackamas Regional Center / Industrial Area

Map 5-11b, East County

Map 5-11c, Greater McLoughlin Area

Map 5-11d, Northwest County

Map 5-11e, Southwest County-Northern Portion

Map 5-11f, Southwest County-Southern Portion

Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1000	County-wide	ITS Plan Program	N/A	Develop a program to support the implementation of the County's ITS Plan and support the County's efforts to make improvements to traffic operations based on the ITS Plan. 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.
1001	County-wide	Transportation Safety Action Plan Program	N/A	Develop a program to support the implementation of the County's TSAP and support the County's efforts to make improvements based on the outcomes of the road safety audits and other safety studies.
1002	5-11a	122nd Ave	Eagle Glen Dr to Hubbard Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1003	5-11a	122nd Ave	Sunnyside Rd to Hubbard Rd	Fill gaps in pedestrian facilities, turn lanes at Mather Rd
1004	5-11a	122nd Ave	Sunnyside Rd to Timber Valley Dr	Add bikeways and turn lanes at major intersections
1005	5-11a	132nd Ave	Sunnyside Rd to OR 212	Add bikeways, pedestrian facilities, traffic calming and turn lanes at major intersections
1006	5-11a	142nd Ave	Sunnyside Rd to OR 212	Add bikeways and pedestrian facilities
1007	5-11a	72nd Ave Multi-Use Path Connection	Thompson Rd to Harmony Rd	Construct multi-use path
1008	5-11a	82nd Dr	OR 212 to Lawnfield Rd	Fill in bikeways and pedestrian facilities gaps
1009	5-11a	85th Ave	Causey Ave to Monterey Ave	Add sidewalks and bikeways. Perform Pedestrian Safety Audit to verify lighting, crosswalk striping and signing at Causey Ave.
1010	5-11a	92nd Ave	Johnson Creek Blvd to Emmert View Ct	Fill gaps in pedestrian facilities
1011	5-11a	97th Ave / Mather Rd	Lawnfield Rd to Summers Ln	Add bikeways, pedestrian facilities and eastbound left turn lanes at Mather Rd / Summers Ln
1012	5-11a	Boyer Dr	OR 213 to Fuller Rd	Construct new 2 lane roadway with turn lanes at OR 213 and Fuller Rd, bikeways and pedestrian facilities; install flashing yellow arrow for left turns on northbound and southbound approaches at OR 213 intersection.
1013	5-11a	Boyer Dr / 85th Ave / Spencer Dr	OR 213 to I-205 bike path	Add bikeways
1014	5-11a	Causey Ave	Fuller Rd to I-205	Add bikeways and shared facility markings in accordance with the Active Transportation Plan.
1015	5-11a	Clackamas Industrial area multi-modal improvements	N/A	Complete bike and pedestrian connections within the Clackamas Industrial area on Jennifer St., Evelyn St., 106th Ave, 122nd Ave, 130th Ave and 135th Ave.
1016	5-11a	Clackamas Regional Center Bike/Pedestrian Corridors	N/A	Construct pedestrian and bike improvements as described in the Clackamas Regional Center Pedestrian / Bicycle Plan
1017	5-11a	Clackamas Town Center Alternative Performance Standards Study	Clackamas Regional Center	Develop alternative performance standards for the intersections within the Clackamas Regional Center.
1018	5-11a	Clackamas Town Center Circulation Plan	West of the Town Center	Study area circulation and create plan
1019	5-11a	Flavel Dr	Alberta Ave to County boundary	Add bikeways in accordance with the Active Transportation Plan.
1020	5-11a	Fuller Rd	Otty St to Johnson Creek Blvd	Add pedestrian facilities, turn lanes, on-street parking, central median and landscaping.
1021	5-11a	Fuller Rd / King Rd Improvements	Fuller Rd / King Rd intersection	Restrict access to right-in/right-out only

Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1022	5-11a	Harmony Rd	OR 213 to OR 224	Construct bikeways and pedestrian facilities. Linwood Ave to Aquatic Center, construct in accordance with the Active Transportation Plan. Provide left turn movement for cyclists from Harmony Rd to CCC Harmony Campus and a pedestrian crossing.
1023	5-11a	Harmony Rd	Railroad Ave / Linwood Ave / Harmony Rd	Railroad crossing and intersection improvements based on further study of intersection operations including bikeways and pedestrian facilities to be undertake jointly by the City of Milwaukie and the County
1024	5-11a	Harmony Rd / Sunnyside Rd	Harmony Rd / Sunnyside Rd / OR 213 intersection	Extend queue storage and double left turn lanes on westbound approach and rebuild median, including pedestrian island; extend queue storage on eastbound approach and install median; convert to right-in-right-out accesses on frontage road.
1025	5-11a	I-205 Multi-Use Path Connection	Between Sunnyside Rd and Sunnybrook Blvd	Construct ADA compliant access to the commercial area from the I-205 Multi-Use Path
1026	5-11a	I-205 Multi-Use Path Gap	OR 224/OR 213 to OR 212	Study the I-205 multi-use path gap to create a plan for connection and path completion in accordance with the Active Transportation Plan
1027	5-11a	Johnson Creek Blvd	55th Ave to I-205	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1028	5-11a	Johnson Creek Blvd	Johnson Creek Blvd near 79th Pl	Add signal to either Johnson Creek Blvd and 79th Pl or 80th Ave
1029	5-11a	Johnson Creek Blvd	55th Ave to Bell Ave	Widen to 3 lanes with bikeways and pedestrian facilities
1030	5-11a	Johnson Creek Blvd	Johnson Creek Blvd / OR 213 intersection	Extend westbound left-turn lane and rebuild median; install dual northbound and southbound left-turn lanes
1031	5-11a	Johnson Creek Blvd	OR 213 to 92nd Ave	Add pedestrian facilities with a crossing near 77th Ct, restripe for bikeways. Analyze for turn lane improvements at 92nd Ave.
1032	5-11a	Johnson Rd	SE Lake Rd to North Clackamas Park Trail	Identify bike/pedestrian connections to fill gaps along 82nd Ave
1033	5-11a	Lake Rd	Lake Rd / International Way intersection	Add northbound right-turn lane
1034	5-11a	Linwood Ave	Monroe St to Johnson Creek Blvd	Add pedestrian facilities in accordance with the Active Transportation Plan.
1035	5-11a	Monroe St	72nd Ave to Fuller Rd	Add bikeways, pedestrian facilities and traffic calming in accordance with the Active Transportation Plan.
1036	5-11a	Monroe St / 72nd Ave / Thompson Rd / Fuller Rd	Linwood Ave to Causey Ave	Add bikeways and traffic calming in accordance with the Active Transportation Plan.
1037	5-11a	Monterey Ave	Stevens Rd to Bob Schumacher Rd	Construct collector roadway with bikeways and pedestrian facilities
1038	5-11a	Monterey Ave	OR 213 to Fuller Rd	Construct new 2 lane extension with pedestrian facilities and bikeways. Install flashing yellow arrow for left-turns on northbound and southbound approaches at OR 213 intersection.
1039	5-11a	North Clackamas Regional Park Trail	Linwood Ave to North Clackamas Park Complex	Construct multi-use path
1040	5-11a	North Clackamas Regional Parks Trail	OR 213 to Linwood Ave	Construct multi-use path
1041	5-11a	Otty Rd	OR 213 to 92nd Ave	Improve to minor arterial standard consistent with Fuller Road Station Plan; improve curb radius; add turn lanes, on-street parking, central median, landscaping, bikeways and pedestrian facilities. Install pedestrian crossings between Fuller Rd and I-205 and near 91st Ave.
1042	5-11a	Otty St	Otty St / OR 213 / Otty Rd	Realign Otty St with Otty Rd at OR 213; install dual westbound left-turn lanes; install flashing yellow arrow for left-turns on northbound and southbound approaches.
1043	5-11a	Southwest Connector Multi-Use Path	North Clackamas Aquatic Center access road to 82nd Ave	Construct multi-use path in accordance with the Active Transportation Plan.

Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1044	5-11a	Springwater Rd	OR 224 to Hattan Rd	Widen to 3 lanes with shoulders (in accordance with the Active Transportation Plan between Clackamas River Dr and Gronlund Rd) and pedestrian facilities; bridge remains two lanes
1045	5-11a	Sunnyside Rd	93rd Ave to 126th Ave	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1046	5-11a	Sunnyside Rd	Sunnyside Rd / Stevens Rd intersection	Intersection improvements, such as additional turn lanes, turn lane extensions, and/or signal timing modifications
1047	5-11a	Tolbert St Overcrossing	82nd Dr to Industrial Way	Construct new 2 lane overcrossing with bikeways and pedestrian facilities
1048	5-11b	282nd Ave	US 26 to OR 212	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1049	5-11b	Amisigger Rd / Kelso Rd	OR 224 to Kelso / Richey Rd	Add paved shoulders; turn lanes at Amisigger/OR 212 and Kelso/Richey; smooth curves.
1050	5-11b	Arrah Wanna Blvd	US 26 to Fairway Ave	Add paved shoulders. In the interim, add 4-foot paved shoulders.
1051	5-11b	Cazadero Multi-Use Trail	Community of Boring to City of Estacada	Construct multi-use path in accordance with the Active Transportation Plan.
1052	5-11b	Compton Rd	US 26 to 352nd Ave	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1053	5-11b	Dodge Park Rd Bridge	~192 feet south of Pipeline Rd	Replace bridge nearing the end of its useful life and include paved shoulders
1054	5-11b	Eagle Creek Rd	Firwood Rd to Duus Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1055	5-11b	Eagle Creek Rd	Currin Rd to Duus Rd	Remove horizontal curve, relocate intersection, add paved shoulders and turn lanes at major intersection; investigate speed zone south of Currin Rd
1056	5-11b	Fairway Ave	Arrah Wanna Blvd to Salmon River Rd	Add paved shoulders
1057	5-11b	OR 211	OR 211 / Judd Rd intersection	Realign roadway
1058	5-11b	Richey Rd	Kelso Rd to OR 212	Add paved shoulders and left turn lane at Richey Rd and OR 212
1059	5-11b	Welches Rd	US 26 to Birdie Ln	Add paved shoulders; add pedestrian facilities in Welches rural center; evaluate pedestrian crossing near Stage Stop Rd; add multi-use path. Improve pedestrian crossing near Fairway Ave with advance signs and split flashing beacons
1060	5-11c	Aldercrest Dr	Thiessen Rd to Oatfield Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1061	5-11c	Concord Rd	River Rd to Oatfield Rd	Fill gaps in pedestrian facilities
1062	5-11c	Concord Rd	River Rd to Oatfield Rd	Add turn lanes at major intersections
1063	5-11c	Courtney Ave	OR 99E to Oatfield Rd	Fill gaps in pedestrian facilities and bikeways
1064	5-11c	Courtney Ave	River Rd to OR 99E (McLoughlin Blvd)	Construct pedestrian facilities / complete gaps on the south side; add bikeways
1065	5-11c	Harold Ave	Concord Rd to Roethe Rd	Add pedestrian facilities and traffic calming
1066	5-11c	Hull Ave	Wilmot St to Tims View Ave	Fill gaps in pedestrian facilities
1067	5-11c	Jennings Ave	Webster Rd to OR 99E	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1068	5-11c	Jennings Ave	River Rd to Oatfield Rd	Widen to 2-lane urban minor arterial standard with bikeway and pedestrian facilities infill
1069	5-11c	Oak Grove Blvd	Oatfield Rd to River Rd	Fill gaps in pedestrian facilities and bikeways
1070	5-11c	Oatfield Rd	Jennings Ave to Lake Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1071	5-11c	Oatfield Rd	Oatfield Rd / Park Rd intersection	Install traffic signal and add turn lanes

Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1072	5-11c	Oatfield Rd	Oatfield Rd / McNary Rd intersection	Add southbound and eastbound left-turn lanes
1073	5-11c	Park Ave	River Rd to OR 99E (McLoughlin Blvd)	Add pedestrian facilities
1074	5-11c	River Rd	Lark St to Courtney Ave	Add pedestrian facilities
1075	5-11c	River Rd	Oak Grove Blvd to Risley Ave	Fill gaps in bikeways in accordance with the Active Transportation Plan and fill gaps in pedestrian facilities
1076	5-11c	School Pedways	Johnson Rd / Clackamas Rd / Webster Rd	Fill gaps in pedestrian facilities on Johnson Rd, Clackamas Rd and Webster Rd within 1/4 mile of schools
1077	5-11c	Thiessen Rd	Thiessen Rd / Aldercrest Rd intersection	Add turn lanes on Thiessen Rd; consider converting to two-way stop controlled
1078	5-11c	Torbank Rd	River Rd to Trolley Trail	Fill gaps in pedestrian facilities
1079	5-11d	65th Ave	65th Ave / Elligsen Rd / Stafford Rd intersection	Construct roundabout
1080	5-11d	Advance Rd	53rd Ave to 43rd Dr	Grade and sight distance improvements
1081	5-11d	Borland Rd	Tualatin city limits to Stafford Rd	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections
1082	5-11d	Borland Rd	Stafford Rd to West Linn city limits	Add paved shoulders in accordance with the Active Transportation Plan
1083	5-11d	Carman Dr	Lake Oswego city limits to Roosevelt Ave	Add bikeways and pedestrian facilities; analyze for turn lanes
1084	5-11d	Childs Rd	Sycamore Ave to 65th Ave	Transfer roadway to local jurisdiction
1085	5-11d	French Prairie Bridge	Willamette River near I-5	Construct a bridge in accordance with the Active Transportation Plan
1086	5-11d	Rosemont Rd	Stafford Rd to West Linn	Add paved shoulders and turn lanes at major intersections
1087	5-11d	Stafford Rd	I-205 to Boeckman Rd / Advance Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1088	5-11d	Stafford Rd	Rosemont Rd to I-205	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections
1089	5-11d	Stafford Rd	Stafford Rd / Childs Rd intersection	Install traffic signal and southbound and northbound turn lanes or roundabout
1090	5-11d	Stafford Rd	Rosemont Rd to I-205	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1091	5-11d	Tonquin Trail	Willamette River through Wilsonville	Construct bike / pedestrian facilities pursuant to the Tonquin Trail Master Plan
1092	5-11d	Wilsonville Rd / Ladd Hill Rd	Wilsonville Rd / Ladd Hill Rd	Install Collision Countermeasure System
1093	5-11e	Airport Rd	Airport Rd / Miley Rd intersection	Install traffic signal
1094	5-11e	Barlow Rd	Barlow Rd / OR 99E intersection	Add dual left-turn lanes on southbound Barlow Rd
1095	5-11e	Beavercreek Rd	Lower Highland Rd to Butte Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1096	5-11e	Beavercreek Rd	Ferguson Rd to Spangler Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1097	5-11e	Beavercreek Rd	Henrici Rd to Yeoman Rd/Steiner Rd	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections.
1098	5-11e	Beavercreek Rd	Beavercreek Rd / Leland Rd / Kamrath Rd intersection	Construct roundabout with additional analysis

Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1099	5-11e	Canby-Marquam Highway	Canby-Marquam Hwy / Lone Elder Rd intersection	Reconstruct intersection; install northbound left-turn lane and southbound right-turn lane
1100	5-11e	Canby-Marquam Highway	~1,900 ft south of Barnards Rd	Replace bridge nearing the end of its useful life with 2-lane structure including paved shoulders
1101	5-11e	Clarkes Four Corners Intersection	Beavercreek Rd / Unger Rd	Reconstruct intersection
1102	5-11e	Emerald Necklace Trail	To Canby Ferry	Extend Molalla Forest Rd to Locust St in accordance with the Active Transportation Plan.
1103	5-11e	Ferguson Multi-Use Path	Thayer Rd to Ferguson Rd	Multi-use path to connect Ferguson Rd to Thayer Rd
1104	5-11e	Fischers Mill Rd	Fischers Mill / Hattan Rd intersection	Install eastbound left-turn lane
1105	5-11e	Graves Rd/Passmore Rd/Mulino Rd/ OR 213	Graves Rd/Passmore Rd/Mulino Rd/ OR 213	Work in conjunction with the Molalla River School District, ODOT and community stake-holders to complete a safety audit to look at all options for the safe movement of Mulino Elementary School students in relation to the adjacent transportation system. Utilize the results from the audit to develop a list of projects and/or programs to maximize safety for all users.
1106	5-11e	Greater Arndt Rd/I-5/Canby Access Feasibility Study	Southwest County in the vicinity of Arndt Rd/I-5/Canby	Conduct an alternatives analysis and land use study to identify and consider roadway improvements to address access to I-5 within the Southwest County and address capacity deficiencies.
1107	5-11e	Hattan Rd	Hattan Rd / Gronlund Rd intersection	Install southbound right-turn lane
1108	5-11e	Henrici Rd	Beavercreek Rd to Ferguson Rd	Add paved shoulders and turn lanes at major intersections. Remove horizontal and vertical curves
1109	5-11e	Holly St	Territorial Rd to Canby Ferry	Add paved shoulders in accordance with the Active Transportation Plan.
1110	5-11e	Hult Rd	OR 211 to Unger Rd	Re-open and improve Hult Rd
1111	5-11e	Klang's Mill Bridge	~1,000 ft north of OR 211	Replace bridge nearing the end of its useful life
1112	5-11e	Lone Elder Rd Bridge	~5,800 feet east of Barlow Rd	Replace bridge (nearing the end of its useful life) and include paved shoulders
1113	5-11e	Maplelane Rd	Beavercreek Rd to Ferguson Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1114	5-11e	Meridian Rd	Meridian Rd / Whiskey Hill Rd intersection	Limit access/egress points to and from school on NE corner of intersection
1115	5-11e	Molalla Ave Flooding	Just south of city of Molalla	Construct bridge to resolve flooding issues
1116	5-11e	Mulino Rd	Mulino Rd / 13th Ave	Relocate intersection to south away from railroad trestle
1117	5-11e	OR 170	OR 99E to Macksburg Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1118	5-11e	Redland Rd	OR 213 to Hattan Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1119	5-11e	Redland Rd	Redland Rd / Springwater Rd intersection	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1120	5-11e	Redland Rd	Redland Rd / Holly Rd intersection	Install traffic signal and westbound and northbound left-turn lanes or roundabout
1121	5-11e	Redland Rd	Redland Rd / Ferguson Rd intersection	Construct roundabout
1122	5-11e	Ridge Rd	~1 miles north of Lower Highland Rd	Fix sinkhole
1123	5-11e	Springwater Rd	Springwater Rd / Clackamas River Dr intersection	Install signal at Clackamas River Dr

Table 5-3a 20-Year Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
1124	5-11e	Springwater Rd	400 ft east of Hattan Rd	Construct bridge to accommodate paved shoulders
1125	5-11e	Springwater Rd	Hattan Rd to Bakers Ferry Rd	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections
1126	5-11e	Township Rd	Central Point Rd to Canby City limit	Add paved shoulders and turn lanes at major intersections
1127	5-11e	Union Mills Rd	OR 213 to OR 211	Add turn lanes at major intersections
1128	5-11e	Union Mills Rd	OR 213 to OR 211	Construct a shoulder on the south side of the roadway
1129	5-11e	Upper Highland Rd	Beavercreek Rd to Lower Highland Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements
1130	5-11c	Oetkin Rd - Naef Rd	Thiessen Rd to River Rd	Construct bike boulevard consistent with the Active Transportation Plan
1131	5-11c	River Rd	Park Ave to Glen Echo Ave	Construct buffered bike lane in accordance with the Active Transportation Plan.
1132	5-11a	Bob Schumacher Rd	Otty Rd to Sunnyside Rd	Investigate improved striping including centerline rumble stripe.
1133	5-11a	97th Ave	Sunnybrook Blvd to Mather Rd	Investigate improved striping including outside fog lines and rumble striping. Verify lighting, drainage and surface friction.
1134	5-11a	92nd Ave	Phillips Pl	Install a pedestrian crossing near Phillips Pl
1135	5-11a	Otty St	80th Ave	Install a pedestrian crossing near 80th Ave
1136	5-11a	Fuller Rd	Boyer Dr to Sunnyside Dr	Install pedestrian crossings near Boyer Dr, Causey Ave, Stephanie Ct and Southgate St
1137	5-11b	Brightwood Loop Rd	US 26 to US 26	Add 4-foot paved shoulders

ATTACHMENT A

Table 5-3b Preferred Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
2000	5-11a	Bell Ave / Alberta St / 72nd Ave	King Rd to County line	Add bikeways and pedestrian facilities
2001	5-11a	Clatsop St / Luther Rd	72nd Ave to Fuller Rd	Add turn lanes and signals at OR 213 intersection; add bikeways, pedestrian facilities and traffic calming
2002	5-11a	Evelyn St	OR 224 to Jennifer St	Add bikeways and pedestrian facilities
2003	5-11a	Evelyn St / Mangan Dr	Jennifer St to Water Ave	Add bikeways
2004	5-11a	Hubbard Rd	122nd Ave to 132nd Ave	Fill gaps in pedestrian facilities
2005	5-11a	Jennifer St	82nd Dr to 135th Ave	Add pedestrian facilities
2006	5-11a	Lake Rd	Milwaukie City limits east to OR 224	Fill gaps in pedestrian facilities
2007	5-11a	Linwood Ave	Linwood Ave / Monroe St intersection	Add curbs/sidewalks, improve horizontal alignments
2008	5-11a	Linwood Ave	Queen Rd to Johnson Creek Blvd	Add bikeways in accordance with the Active Transportation Plan
2009	5-11a	Mather Rd	Summers Ln Rd to 122nd Ave	Add bikeways, pedestrian facilities and eastbound left turn lanes at Mather Rd / 122nd Ave
2010	5-11a	Monroe St / 72nd Ave / Thompson Rd	Linwood Ave to Fuller Rd	Add pedestrian facilities
2011	5-11a	Scouters Mountain / Mt Scott Loop Trail	Loop trail through Happy Valley, Damascus, Clackamas County and Portland	Construct multi-use path in accordance with the Active Transportation Plan
2012	5-11a	Stevens Rd / Stevens Way	Causey Ave to Idleman Rd	Add pedways and optional traffic calming
2013	5-11a	Strawberry Ln	Strawberry Ln / 82nd Dr intersection	Install traffic signal and eastbound turn lane
2014	5-11a	Sunnybrook Blvd	Sunnybrook Blvd / 82nd Ave intersection	Add dual southbound left-turn lanes, extend queue storage for southbound lefts and westbound lefts
2015	5-11a	Sunnyside Rd	OR 213 to 97th Ave	Modified boulevard treatment including lane redesign, medians, beautification, curb extensions, reconstructed sidewalks, landscaping, south side bikeways. Consider flashing yellow arrow for left-turns at signalized intersections.
2016	5-11b	282nd Ave	282nd / Haley Rd intersection	Install traffic signal and reduce speed limit on 282nd
2017	5-11b	362nd Ave	Skogan Rd to OR 211	Add paved shoulders
2018	5-11b	Eagle Creek Rd	OR 211 to Duus Rd	Add paved shoulders
2019	5-11b	Firwood Rd	Wildcat Mountain Dr to US 26	Add paved shoulders and turn lanes at major intersections.
2020	5-11c	Clackamas Rd	Johnson Rd and Webster Rd	Fill gaps in bikeways and pedestrian facilities
2021	5-11c	Jennings Ave	Oatfield Rd to Webster Rd	Widen to 2-lane urban minor arterial standard with bikeway and pedestrian facilities infill
2022	5-11c	Lake Oswego to Milwaukie Bridge	Between Sellwood and Oregon City	Construct bike/pedestrian crossing over the Willamette River in accordance with the Active Transportation Plan
2023	5-11c	Roots Rd	Webster Rd to McKinley Rd	Add pedestrian facilities

Table 5-3b Preferred Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description
2024	5-11c	Thiessen Rd	Oatfield Rd to Webster Rd	Add bikeways and pedestrian facilities. For the Oetkin Rd to Webster Rd section, construct in accordance with the Active Transportation Plan
2025	5-11c	Webster Rd	OR 224 to Gladstone	Fill gaps in bikeways and pedestrian facilities
2026	5-11d	Advance Rd	~2,900 ft west of Mountain Rd	Realign roadway and grade improvements
2027	5-11d	Advance Rd	65th Ave to Mountain Rd	Add paved shoulders
2028	5-11d	Stafford Rd / 65th Ave	I-205 to Boeckman Rd / Advance Rd	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections
2029	5-11e	Arndt Rd Extension	Barlow to OR 99E	Construct new 2 or 3 lane roadway
2030	5-11e	Barlow Rd	Knights Bridge Rd to OR 99E	Add paved shoulders
2031	5-11e	Beavercreek Multi-Use Path	Loder Rd to Ferguson Rd	Construct multi-use path consistent with the Beavercreek Road Concept Plan
2032	5-11e	Boones Ferry Rd	Boones Ferry Rd / Butteville Rd intersection	Remove bank, remove/decrease horizontal curve
2034	5-11e	Dryland Rd	Macksburg Rd S to Macksburg Rd N	Realign to form one intersection at Dryland Rd
2035	5-11e	Hattan Rd	Fischers Mill Rd to Gronlund Rd	Add paved shoulders and turn lanes at major intersections
2036	5-11e	Henrici Rd	OR 213 to Beavercreek Rd	Add paved shoulders and turn lanes at major intersections
2037	5-11e	Henrici Rd	Ferguson Rd to Redland Rd	Add paved shoulders and turn lanes at major intersections. Remove horizontal and vertical curves
2038	5-11e	Molalla Forest Rd	City of Canby to City of Molalla	Pave to provide bicycle access in accordance with the Active Transportation Plan
2039	5-11e	Mulino Rd (13th St segment)	Canby city limits to OR 213	Add paved shoulders and turn lanes at major intersections
2040	5-11e	Newell Creek Trail / Oregon City Loop Trail	Loop around the perimeter of Oregon City	Construct Oregon City Loop Trail and Newell Creek Trail in accordance with the Active Transportation Plan
2041	5-11e	Redland Rd	Redland Rd / Bradley Rd intersection	Install eastbound left-turn lane
2042	5-11e	Redland Rd	Redland Rd / Fischers Mill Rd / Henrici Rd intersection	Install eastbound left-turn, eastbound right-turn and westbound right-turn lanes at Henrici Rd
2043	5-11e	Springwater Rd	Springwater Rd / Bakers Ferry Rd intersection	Install southbound left-turn lane; realign intersection to fix skew
2044	5-11b	Sleepy Hollow Rd	Barlow Trail Rd to US 26	Add 4-foot paved shoulders

Clackamas County Comprehensive Plan

Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment/ Locations	Project Description
3000	5-11a	106th Ave	OR 212 to Jennifer St	Add bikeways and pedestrian facilities
3001	5-11a	152nd Ave Phase 2	Sunnyside Rd to OR 212	Add bikeways, pedestrian facilities and turn lanes at major intersections
3002	5-11a	162nd Ave	Sager Rd north to County line	Add bikeways, pedestrian facilities, turn lanes at major intersections
3003	5-11a	172nd Ave Bridge	N140 feet south of Troge Rd	Replace bridge nearing the end of its useful life
3004	5-11a	82nd Dr	OR 212 to Gladstone	Widen to Slane with bikeways and pedestrian facilities
3005	5-11a	84th Ave	Sunnyside Rd to Sunnybrook Blvd	Fill in bikeways and pedestrian facilities gaps
3006	5-11a	93rd Ave	Sunnyside Rd to Sunnybrook Blvd	Add bikeways in accordance with the Active Transportation Plan
3007	5-11a	Cheldelin Rd	Foster Rd to 190th Dr	Add bikeways and pedestrian facilities
3008	5-11a	Cheldelin Rd (Ciatsop St extension)	172nd Ave to Foster Rd	Construct new two lane roadway with bikeways and pedestrian facilities
3009	5-11a	Cornwell Ave	OR 213 to Fuller Rd	Add pedestrian facilities; connect to 1-205 Multi-Use Path
3010	5-11a	Fuller Rd	Otty Rd to King Rd / OR 213	Construct new 2 lane extension with pedestrian facilities and bikeways
3011	5-11a	Fuller Rd	Johnson Creek Blvd to County line	Add pedestrian facilities
3012	5-11a	Hillcrest St	92nd Ave to Stevens Rd	Add pedestrian facilities
3013	5-11a	1-205 Pedestrian / Bike Overpass	Between Causey Ave and Sunnyside Rd	Construct a bike / pedestrian crossing over 1-205 to connect transit services, businesses and residents in accordance with the Active Transportation Plan
3014	5-11a	Idleman Rd	92nd Ave to Westview Ct	Fill gaps in bikeways and pedestrian facilities
3015	5-11a	Jennifer St	106th Ave to 130th Ave	Add bikeways
3016	5-11a	Johnson Creek Blvd	Bell Ave to OR 213	Widen to 3 lanes from Bell Ave to 76th Ave and 5 lanes from 76th Ave to 82nd Ave ; add bikeways and pedestrian facilities
3017	5-11a	King Rd	Milwaukie City Limits to Spencer Dr	Fill gaps in pedestrian facilities in accordance with the Active Transportation Plan
3018	5-11a	Lake Rd	OR 224 west to Milwaukie city limits	Add pedestrian facilities and turn lanes at major intersections
3019	5-11a	Lake Rd	Johnson Rd to Webster Rd	Fill gaps in pedestrian facilities and bikeways
3020	5-11a	Linwood Ave Bridge over Johnson Creek	Bridge	Construct bridge with bike lanes and sidewalks in accordance with the Active Transportation Plan
3021	5-11a	Luther Rd Bridge	Bridge crossing Johnson Creek	Replace bridge
3022	5-11a	Mather Rd	Mather Rd / 122nd Ave intersection	Install traffic signal or compact roundabout
3023	5-11a	Mather Rd	122nd Ave to 132nd Ave	Construct new 2 lane roadway with pedestrian facilities and bikeways
3024	5-11a	Mather Rd	Industrial Way to 98th Ave	Maintain as pedestrian facilities and bikeway. Construct undercrossing at Sunrise Expressway.

Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment/ Locations	Project Description
3025	5-11a	Michael Dr	72nd Ave to Fuller Ave	Fill gaps in pedestrian facilities
3026	5-11a	Phillips Creek Multi-Use Path	Causey Ave to North Clackamas Regional Parks Trail	Construct multi-use path
3027	5-11a	Sunnyside Rd Adaptive Signal Timing	OR 213 to 172nd Ave	Add adaptive timing to traffic signals
3028	5-11a	Valley View Terrace	Sunnyside Rd to Otty Rd	Add bikeways and pedestrian facilities
3029a	5-11a	West 82nd Ave Parallel Road	Luther Rd to Johnson Creek Blvd	Construct collector road parallel to OR 213 with bikeways and pedestrian facilities
3029b	5-11b	West 82nd Ave Parallel Road	Johnson Creek Blvd. to King Rd	Construct collector road parallel to OR *213* with bikeways and pedestrian facilities
3030	5-11b	282nd Ave	282nd Ave / OR 212 intersection	Add second right-turn lane on 282nd Ave and additional intersection improvements as needed
3031	5-11b	282nd Ave	OR 212 to Multnomah County line	Add paved shoulders
3032	5-11b	352nd Ave / Dunn Rd	Bluff Rd to Bluff Rd	Add paved shoulders
3033	5-11b	362nd Dr	Colorado Rd to Dubarko Rd	Remove or decrease horizontal and vertical curves
3034	5-11b	362nd Dr	362nd Ave / Deming Rd intersection	Remove or decrease vertical curve, relocate intersection
3035	5-11b	Barlow Trail Rdl Lolo Pass Rd	Between communities of Timberline, Welches and Zig Zag	Add paved shoulders in accordance with the Active Transportation Plan. In the interim, install 4-foot shoulders or 4-foot shoulders at specific areas with limited sight distance or steep uphill sections.
3036	5-11b	Bluff Rd	City of Sandy to County line	Add paved shoulders in accordance with the Active Transportation Plan
3037	5-11b	Bull Run Rd	Ten Eyck Rd to Multnomah County line	Add paved shoulders and turn lanes at major intersections.
3038	5-11b	Bull Run Truss	Bull Run truss between Waterworks Rd and Bowman Rd	Replace bridge nearing the end of its useful life
3039	5-11b	Coalman Rd / Cherryville Dr	Ten Eyck Rd to US 26	Add paved shoulders. In the interim, add 4-foot paved shoulders.
3040	5-11b	Compton Rd	US 26 to 352nd Ave	Remove vertical curve near Orient Dr and relocate intersection; add paved shoulders
3041	5-11b	Coupland Rd	Estacada City limits to Divers Rd	Add paved shoulders and turn lanes at major intersections
3042	5-11b	Eagle Creek Rd	Keegan Rd to Currin Rd	Realign Eagle Creek Rd to remove or decrease downgrade
3043	5-11b	Firwood Rd	Firwood Rd / Trubel Rd intersection	Realign Trubel Rd to remove or decrease downgrade
3044	5-11b	Hayden Rd	Springwater Rd to OR 211	Add paved shoulders in accordance with the Active Transportation Plan

Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment/ Locations	Project Description
3045	5-11b	Howlett Rd	OR 211 to Wildcat Mountain Dr	Add paved shoulders
3046	5-11b	Kelso Rd	Richey Rd to Orient Dr	Add paved shoulders
3047	5-11b	Kelso Rd	Orient Dr to Sandy Urban Growth Boundary	Remove vertical curve, relocate intersection, add paved shoulders and turn lanes at major intersections; investigate speed zone
3048	5-11b	Lolo Pass Rd	US 26 to Barlow Trail Rd	Safety analysis; add paved shoulders in accordance with the Active Transportation Plan
3049	5-11b	Mt Hood Aerial Transportation Link	Between Ski Bowl, Government Camp Village and Timberline Lodge	Aerial transportation link
3050	5-11b	Orient Dr	US 26 north to County line	Add paved shoulders
3051	5-11b	Porter Rd Bridge over Delph Creek	-100ft east of Wilcox Rd	Replace bridge
3052	5-11b	Salmon River Rd	US 26 to Welches Rd	Add paved shoulders. Between US 26 and Fairway Ave, add paved shoulders or multi-use path
3053	5-11b	Springwater Rd	Hayden Rd to OR 211	Add paved shoulders
3054	5-11b	TenEyck Rd	Lusted Rd to City of Sandy	Remove vertical curve, relocate intersection, add paved shoulders, turn lanes at major intersections; investigate speed zone. For paved shoulders between City of Sandy and Marmot Rd, refer to the Active Transportation Plan
3055	5-11b	Tickle Creek Trail	Springwater Corridor to Sandy city limits	Construct multi-use path in accordance with the Active Transportation Plan
3056	5-11b	Welches Rd	Birdie Ln to Salmon River Rd	Add paved shoulders *or* add multi-use path
3057	5-11b	Wildcat Mountain Dr	OR 224 to Firwood Rd	Add paved shoulders
3058	5-11c	Aldercrest Dr	Thiessen Rd to Oatfield Rd	Add pedestrian facilities to one side of the road and bikeways
3059	5-11c	Clackamas Rd	Clackamas Rd / I-205 interchange	Construct bike/pedestrian bridge over I-205
3060	5-11c	Hill Rd	Oatfield Rd to Thiessen Rd	Add bikeways and pedestrian facilities
3061	5-11c	Johnson Rd / McKinley Rd	OR 224 to I-205 multi-use path	Bikeway and pedestrian facilities infill. From Thiessen Rd to I-205 Multi-use Path, construct in accordance to the Active Transportation Plan
3062	5-11c	McNary Rd / Mabel Ave	Oatfield Rd to Webster Rd	Add bikeways and pedestrian facilities
3063	5-11c	Naef Rd	Oatfield Rd to River Rd	Add pedestrian facilities in accordance with the Active Transportation Plan
3064	5-11c	Oatfield Rd	Oatfield Rd / Hill Rd intersection	Add left-turn lanes, install signal if warranted
3065	5-11c	Oatfield Rd	Milwaukie city limits to Gladstone city limits	Fill gaps in pedestrian facilities and bikeways

Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment/ Locations	Project Description
3066	5-11c	Oatfield Ridge Connection	Between Jennings Ave and Thiessen Ave over Oatfield Ridge	Construct multi-use path
3068	5-11c	Portland Ave	Jennings Ave to Hull Ave	Fill gaps in pedestrian facilities
3069	5-11c	Risley Ave	Arista Dr to Hager Rd	Fill gaps in pedestrian facilities
3070	5-11c	River Rd	Courtney Ave to Oak Grove Blvd	Add pedestrian facilities
3071	5-11c	River Rd	Risley Ave to Rinearson Rd	Add pedestrian facilities
3072	5-11c	Roethe Rd	River Rd to OR 99E (Mcloughlin Blvd)	Add bikeways, pedestrian facilities and traffic calming
3073	5-11c	Rusk Rd	OR 224 South to Aldercrest Rd	Add pedestrian facilities on one side of the roadway and bikeways
3074	5-11c	Strawberry Ln	Webster Rd to 82nd Dr	Add pedestrian facilities and fill bikeway gaps
3075	5-11c	Thiessen Rd	Thiessen Rd / Hill Rd intersection	Add right-turn lane on Thiessen Rd; consider converting to two-way stop controlled or installing roundabout
3076	5-11c	View Acres Rd	Oatfield Rd to Hill Rd	Add pedestrian facilities and traffic calming
3077	5-11c	Webster Rd	Webster Rd / Jennings Ave and Webster Rd / Roots Rd intersections	Construct traffic signals, turn lanes
3078	5-11c	Webster Rd	Webster Rd / Strawberry Ln intersection	Add signal; construct southbound and westbound left-turn lane
3079	5-11d	65th Ave	Stafford Rd to Tualatin city limits	Add paved shoulders
3080	5-11d	Baker Rd	Tooze Rd to County line	Add paved shoulders
3081	5-11d	Bell Rd	Ladd Hill Rd to Wilsonville Rd	Add paved shoulders
3082	5-11d	Bonita Rd	Carman Dr to 1-5	Add bikeways and pedestrian facilities
3083	5-11d	Childs Rd	Stafford Rd to Lake Oswego city limits	Add pedestrian facilities, bikeways and turn lanes at major intersections
3084	5-11d	Graham's Ferry Rd	County line to Westfall Rd	Add paved shoulders
3085	5-11d	Graham's Ferry Rd	Wilsonville Rd to Wilsonville city limits	Add paved shoulders
3086	5-11d	Hoffman Rd / Peach Cove Rd / Riverwood Rd	Mountain Rd to Tualatin River	Add paved shoulders
3087	5-11d	Homesteader Rd	Stafford Rd to Mountain Rd	Add paved shoulders
3088	5-11d	Johnson Rd	Stafford Rd to West Linn city limits	Add paved shoulders and turn lanes at major intersections

Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment/ Locations	Project Description
3089	5-11d	Ladd Hill Rd	Wilsonville Rd to Washington County line	Add paved shoulders and turn lanes at major intersections
3090	5-11d	Mountain Rd	Stafford Rd to Canby Ferry	Add paved shoulders in accordance with the Active Transportation Plan
3091	5-11d	Petes Mountain Rd	West Linn city limits to Hoffman Rd	Add paved shoulders and turn lanes at major intersections
3092	5-11d	Pleasant Hill Rd / McConnell Rd / Tooze Rd	Ladd Hill Rd to Westfall Rd	Add paved shoulders
3093	5-11d	Schaeffer Rd	Mountain Rd to Petes Mountain Rd	Add paved shoulders
3094	5-11d	Schatz Rd / 55th Ave / Meridian Way	65th Ave to Stafford Rd	Add paved shoulders
3095	5-11d	Tualatin / Lake Oswego Pedestrian and Bicycle Bridge	Tualatin River Bridge	Construct bike / pedestrian bridge
3096	5-11d	Wilsonville Rd	Wilsonville Rd / Bell Rd intersection	Realign roadway and grade improvements
3097	5-11d	Wilsonville Rd	Wilsonville Rd / Edminston Rd intersection	Remove bank, remove horizontal curve, relocate intersection
3098	5-11d	Wilsonville Rd Bridge	-300 feet south of Bell Rd	Replace bridge nearing the end of its useful life
3099	5-11d	Wisteria Rd / Woodbine Rd	Rosemont Rd to Johnson Rd	Add paved shoulders
3100	5-11e	Airport Rd	Arndt Rd to Miley Rd	Add turn lanes at major intersections
3101	5-11e	Bakers Ferry Rd	Springwater Rd to OR 224	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections; remove horizontal curve and relocate intersection from Eaden Rd to OR 224
3102	5-11e	Barnards Rd	Meridian Rd to Canby-Marquam Hwy	Add paved shoulders
3103	5-11e	Barnards Rd	Needy Rd to Stuwe Rd	Reconstruct bridge and widen to 36 feet
3104	5-11e	Beavercreek Rd	Yeoman RdiSteiner Rd to OR 211	Add paved shoulders
3105	5-11e	Bradley Rd	Redland Rd to Holcomb Blvd	Add turn lanes at major intersections
3106	5-11e	Bradley Rd	Gronlund Rd to Redland Rd	Add paved shoulders
3107	5-11e	Buckner Creek Rd	Gard Rd to Cochell Rd	Add paved shoulders
3108	5-11e	Canby-Marquam Highway	OR 170 / Macksburg Rd intersection	Reconstruct intersection; install southbound left-turn lane and northbound right-turn lane
3109	5-11e	Canby-Marquam Highway	City of Canby to OR 211	Add paved shoulders
3110	5-11e	Carus Rd	Central Point Rd to Beavercreek Rd	Add paved shoulders in accordance with the Active Transportation Plan
3111	5-11e	Casto Rd	Spangler Rd to Central Point Rd	Add paved shoulders and turn lanes at major intersections

Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment/ Locations	Project Description
3112	5-11e	Central Point Rd	Parrish Rd to Mulino Rd	Smooth curves; add paved shoulders (Parrish Rd to Bremer Rd in accordance with the Active Transportation Plan)
3113	5-11e	Clackamas River Dr	Oregon City limits to Springwater Rd	Construct bikeway in accordance with the Active Transportation Plan. Add turn lanes at Springwater Rd and Forsythe Rd.
3114	5-11e	Fellows Rd	Redland Rd to Lower Highland Rd	Add paved shoulders and turn lanes at major intersections
3115	5-11e	Ferguson Rd	Beavercreek Rd and Henrici Rd	Reduce the speed limit and install traffic calming
3116	5-11e	Fischers Mill Rd	Redland Rd to Springwater Rd	Add paved shoulders in accordance with the Active Transportation Plan
3118	5-11e	Forsythe Rd	Oregon City limit to Bradley Rd	Add center turn lane and paved shoulders
3119	5-11e	Forsythe Rd	Forsythe Rd/Victory Rd intersection	Realign, widen Victory Rd; remove or decrease curves along Forsythe Rd; relocate intersection
3120	5-11e	Gard Rd	-100 ft south of Old Clarke Rd	Reconstruct bridge to accommodate paved shoulders
3121	5-11e	Gronlund Rd / Hattan Rd	Bradley Rd to Springwater Rd	Add paved shoulders and turn lanes at major intersections
3122	5-11e	Henrici Rd	Between Driftwood Dr and Shore Vista Dr	Widen bridge to accommodate paved shoulders
3123	5-11e	Holcomb Blvd	Edenwild Ln to Bradley Rd	Add paved shoulders and turn lanes at Holcomb Blvd / Bradley Rd
3124	5-11e	Kamrath Rd	Carus Rd to Spangler Rd	Safety analysis at Carus Rd, add paved shoulders, remove or decrease horizontal curves north of Spangler Rd
3125	5-11e	Knights Bridge Rd Bridge	-3,200 feet east of Barlow Rd	Replace bridge (nearing the end of its useful life)
3126	5-11e	Leland Rd	Oregon City line to Beavercreek Rd	Add paved shoulders
3127	5-11e	Leland Rd	-1,000 ft north of Warnock Rd	Reconstruct bridge to accommodate paved shoulders
3128	5-11e	Lone Elder Rd	County line to Canby-Marquam Hwy	Add paved shoulders
3129	5-11e	Lower Highland Rd	Beavercreek Rd to Fellows Rd	Add paved shoulders and turn lanes at major intersections
3130	5-11e	Macksburg Rd	Canby Marquam Hwy to OR 213	Add paved shoulders and turn lanes at major intersections
3131	S-11e	Maplelane Rd	1,800 ft west of WalkerRd	Add paved shoulders
3132	5-11e	Maplelane Rd	Oregon City Urban Growth Boundary to Ferguson Rd	Add paved shoulders
3133	5-11e	Mattoon Rd	Fischers Mill Rd to Redland Rd	Add paved shoulders in accordance with the Active Transportation Plan and turn lanes at major intersections; remove vertical curves, remove horizontal curves north of Redland Rd
3134	5-11e	Meridian Rd	Lone Elder Rd to OR 211	Add paved shoulders
3135	5-11e	Meridian Rd	Elliott Prairie Rd to Barlow Rd	Add paved shoulders; remove or decrease horizontal and vertical curves

Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment/ Locations	Project Description
3136	5-11e	Miley Rd	Airport Rd to Eilers Rd	Add paved shoulders
3137	5-11e	Molalla Ave	OR 213 to Molalla City limits	Add paved shoulders
3138	5-11e	New Era Rd / Haines Rd	OR 99E to leland Rd	Add paved shoulders
3140	5-11e	Redland Rd	goo ft west of Holly Ln	Reconstruct bridge to include shoulders and bikeways
3141	5-11e	Redland Rd	-400ft west of Holly In	Reconstruct bridge to include shoulders and bikeways
3142	5-11e	Redland Rd	Henrici Rd to Oregon City limit	Add paved shoulders and bikeway in accordance with the Active Transportation Plan
3143	5-11e	Redland Rd	Henrici Rd to Springwater Rd	Add paved shoulders and turn lanes at major intersections. For the section between Mattoon Rd and Jubb Rd, see the Active Transportation Plan.
3144	5-11e	Ridge Rd	Lower Highland Rd to Redland Rd	Add paved shoulders
3145	5-11e	Rock Creek (Kropf Rd) Bridge	3,500 ft north of Gibson Rd	Replace bridge
3146	5-11e	S Killdeer Rd	Ferguson Road and Yeoman Road	ExtendS Killdeer Rd to connect with S. lvel Rd. and provide bike/pedestrian access
3147	5-11e	South End Rd	Oregon City limits to OR 99E	Smooth curves; add paved shoulders
3148	5-11e	Spangler Rd	Casto Rd to Beavercreek Rd	Add paved shoulders and turn lanes at major intersections
3149	5-11e	Springwater Rd	Bakers Ferry Rd to Hayden Rd	Add paved shoulders and turn lanes at major intersections. For paved shoulders between Eaden Rd and Hayden Rd, see the Active Transportation Plan.
3150	5-11e	Thayer Rd/Ferguson Rd	Oregon City line to Redland Rd	Add paved shoulders
3151	5-11e	Toliver Rd	Dryland Rd to Molalla city Limits	Add paved shoulders in accordance with the Active Transportation Plan
3152	5-11e	Unger Rd	Beavercreek Rd to OR 211	Add paved shoulders and turn lanes at major intersections
3153	5-11e	Union Hall Rd	Central Point Rd to El Dorado Rd	Add paved shoulders
3154	5-11f	Bird Rd	Groshong Rd to Wilhoit Rd	Add paved shoulders and turn lanes at major intersections
3155	5-11f	Blair Rd	Groshong Rd to Maple Grove Rd	Add paved shoulders and turn lanes at major intersections
3156	5-11f	Callahan Rd S / Ramsby Rd	Dickey Prairie Rd to Fernwood Rd	Add paved shoulders and turn lanes at major intersections
3157	5-11f	Dhooghe Rd	OR 211 to Fernwood Rd	Add paved shoulders and turn lanes at major intersections
3158	5-11f	Fernwood Rd	Dhooghe Rd to Callahan Rd	Add paved shoulders and turn lanes at major intersections
3159	5-11f	Gray's Hill Rd	Green Mountain Rd to OR 211	Add paved shoulders
3160	5-11f	Maple Grove Rd	Nowlens Bridge Rd to Sawtell Rd	Add paved shoulders and turn lanes at major intersections

Table 5-3c Long Term Capital Projects

Project ID	Map	Project Name / Street Name	Segment/ Locations	Project Description
3161	5-11f	Nowlens Bridge Rd	OR 213 to Maple Grove Rd	Add paved shoulders and turn lanes at major intersections
3162	5-11f	Sawtell Rd	Maple Grove Rd to Wilhoit Rd	Add paved shoulders and turn lanes at major intersections
3163	5-11f	Wildcat Rd	Wilhoit Rd to OR 213	Add paved shoulders and turn lanes at major intersections
3164	5-11f	Wright Rd	OR 211 to Callahan Rd	Add paved shoulders
3165	5-IIa	Sunnyside Rd	93rd Ave to OR 212	Add pedestrian facilities and bikeways in accordance with the Active Transportation Plan
3167	5-IIb	Marmot Rd	Ten Eyck to Barlow Trail Rd	Add paved shoulders in accordance with the Active Transportation Plan. In the interim, widen to 4-feet within Wildwood/Timberline, Zigzag, Rhododendron and WemmeiWelches .
3168	5-IIc	Thiessen Rd	Webster Rd to Johnson Rd	Add pedestrian facilities and bikeways in accordance with the Active Transportation Plan
3169	5-IId	Willamette River Greenway	Lake Oswego north to County Line	Construct multi-use path in accordance with the Active Transportation Plan.
3170	5-IId	Willamette River Greenway	Canby Ferry to City of Wilsonville	Construct multi-use path in accordance with the Active Transportation Plan.
3171	5-IIe	Bremer Rd	Central Point Rd to Haines Rd	Add paved shoulders in accordance with the Active Tranportation Plan
3172	5-IIe	Butteville Rd	Willamette River to County line	Add paved shoulders in accordance with the Active Tranportation Plan
3173	5-IIe	Dryland Rd	Macksburg Rd to Toliver Rd	Add paved shoulders in accordance with the Active Tranportation Plan
3174	5-IIe	Eaden Rd	Bakers Ferry Rd to Springwater Rd	Add paved shoulders in accordance with the Active Tranportation Plan
3175	5-IIe	Haines Rd	Bremer Rd to Territorial Rd	Add paved shoulders in accordance with the Active Transportation Plan
3176	5-IIe	Harms Rd	Kraxberger Rd to Macksburg Rd	Construct bikeway in accordance with Active Transportation Plan
3177	5-IIe	Hwy 170 / Kraxberger Rd	City of Canby to Harms Rd	Add paved shoulders in accordance with the Active Transportation Plan
3178	5-IIe	Jubb Rd	Redland Rd to Springwater Rd	Add paved shoulders in accordance with the Active Tranportation Plan
3179	5-IIe	Kamrath Rd	Leland Rd to Carus Rd	Add paved shoulders in accordance with the Active Transportation Plan
3180	5-IIe	Knights Bridge Rd / Barlow Rd / Arndt Rd	Canby boundary to Airport Rd	Add bikeway in accordance with the Active Tranportation Plan
3181	5-IIe	Territorial Rd	Haines Rd to OR 99E	Add bikeways in accordance with the Active Transportation plan
3182	5-IIe	Willamette River Greenway	Oregon City to Canby	Construct multi-use path in accordance with the Active Transportation Plan.

Table 5-3d Regional Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description	Priority
4000	County-wide	TSP Refinement	State facility locations applicable where mobility target is not met in 2035	TSP Refinement to develop alternative mobility targets for state facilities consistent with Oregon Highway Plan (OHP) 1F3.	High
4001	5-11a	I-205 / Sunnyside Road interchange	I-205 / Sunnyside Road interchange	Add dual northbound right-turns; install bike signal; construct sidewalk extension / bulb to accommodate pedestrians and bicyclists around signal pole.	High
4002	5-11a	OR 212	OR 212 / 172nd Ave intersection	Add second eastbound left-turn lane	High
4003	5-11a	OR 212	SE 162nd to Anderson Rd	Add bikeways, pedestrian facilities ways, and landscape pedestrian facilities buffer; widen to 6 lanes within Happy Valley; add center turn lane within Damascus	High
4004	5-11a	OR 213	Sunnybrook Blvd to Portland City Limits	Extend fiberoptic communications, CCTV at key intersections and adaptive signal timing	High
4005	5-11a	OR 224	OR 224 / Lake Rd / Webster Rd intersection	Add turn-lanes, including second left-turn lane on westbound OR 224, second left-turn lane and right-turn lane on northbound SE Webster Rd, and second left-turn lane on southbound SE Lake Rd	High
4006	5-11a	OR 224	OR 224 / Johnson Rd intersection	Add second left-turn lane on westbound OR 224	High
4007	5-11a	OR 224	OR 224 / Hubbard Rd / 135th Ave intersection	Add intersection improvements, including right-turn lanes	High
4008	5-11a	OR 224	Springwater Rd / OR 224 intersection	Add signal and turn lanes on all approaches	High
4009	5-11a	OR 224	Rock Creek Junction to Midway St	Widen to four lanes; add bikeways.	High
4010	5-11a	Sunrise Project - Preliminary Engineering	Webster Rd/ OR 224 to 172nd Ave / OR 212	Preliminary engineering from Webster Rd to 172nd Ave	High
4011	5-11a	Sunrise Project - Right-of-Way	Webster Rd/ OR 224 to 172nd Ave / OR 212	Acquire right-of-way to accommodate 6 lane expressway plus auxiliary lanes	High
4012	5-11a	SunriseProject - Multi-use Path	122nd to Rock Creek Junction	Construct multi-use path from 122nd to Rock Creek Junction parallel to the Sunrise project consistent with FEIS.	High
4013	5-11b	OR 224	OR 224 /232nd Ave intersection	Install traffic signal or roundabout	High
4014	5-11b	OR 224	Eaglecreek Rd / OR 224 intersection	Install signal	High
4015	5-11c	OR 99E	Milwaukie city limit to Gladstone city limit	Add bikeways, pedestrian facilities ways, median enhancements, crosswalks and pedestrian facilities refuges	High
4016	5-11d	I-205	Stafford Rd to OR 99E	Work with ODOT, Metro, Oregon City, West Linn and any other effected jurisdictions to analyze and develop a solution to the transportation bottle neck on I-205 between Oregon City and I-205 / Stafford Road Interchange. Possible solutions include widening to 3-lanes in each direction.	High
4017	5-11e	I-205	Willamette River to West Linn city limit	Add southbound truck climbing lane	High
4018	5-11e	I-205	I-205 Corridor	Corridor-wide operational improvements	High
4019	5-11e	OR 211	Beavercreek Rd, Union Hall Rd to Dhooghe Rd	Widen to include shoulders, bikeways, add passing lanes where needed and turn lanes at major intersections	High
4020	5-11e	OR 213	OR 213 / Spangler Rd intersection	Install traffic signal to replace existing two-way stop	High

Table 5-3d Regional Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description	Priority
4021	5-11e	OR 213	OR 213 / Henrici Rd intersection	Install traffic signal or roundabout and additional intersection improvements as needed	High
4022	5-11e	OR 213	OR 213 / Leland Rd intersection	Add northbound through auxiliary lane	High
4023	5-11e	OR 213	Leland Rd / Union Hall Rd intersection	Add southbound auxiliary lane	High
4024	5-11e	OR 213	Mulino to Molalla	Perform road safety audit or transportation safety review to identify appropriate safety improvements	High
4025	5-11e	OR 99E	OR 99E / Barlow Rd intersection	Add left-turn lane on southbound Barlow Rd - To widen Barlow Rd to add a southbound left turn lane on the north approach would need to modify the existing railroad crossing warning system	High
4026	5-11a	I-205 / Johnson Creek Blvd interchange	I-205 / Johnson Creek Blvd interchange	Add loop ramp and northbound on-ramp; realign southbound off-ramp and install dual right-turn lanes	Medium
4027	5-11a	I-205 / OR 212/224 Interchange	In vicinity of Roots Rd and McKinley Ave	Connect bikeways in accordance with the Active Transportation Plan	Medium
4028	5-11a	OR 212	Rock Creek Junction to 172nd	Construct climbing lane	Medium
4029	5-11a	OR 212	OR 212 / SE 162nd Ave intersection	Add left-turn pockets and traffic signal	Medium
4030	5-11a	OR 213	Sunnyside Rd to Sunnybrook Rd	Widen to 7 lanes with boulevard treatments	Medium
4031	5-11a	OR 213	OR 213 / Harmony Rd / Sunnyside Rd intersection	Add bikeways, pedestrian facilities ways, dual northbound and southbound left-turn lanes, and lighting; convert driveways north of intersection to right-in / right-out	Medium
4032	5-11a	OR 224	OR 224 / Rusk Rd off-ramp	Extend right-turn lane on OR 224	Medium
4033	5-11a	OR 224	Milwaukie city limits to I-205	Construct multi-use path as parallel route to OR 224	Medium
4034	5-11a	OR 224	Lake Rd / Johnson Rd / Pheasant Ct	Realign Lake Rd / Johnson Rd to provide southern OR 224 access via Pheasant Ct; add turn lanes at OR 224 / Pheasant Ct intersection; close access at Lake / Webster south of OR 224	Medium
4035	5-11a	OR 99E	OR 99E / Jennings Ave intersection	Determine safe connection of Trolley Trail at OR 99E / Jennings Ave intersection	Medium
4036	5-11a	Sunrise Project	I-205 to 172nd Ave	Construct improvements to 172nd	Medium
4037	5-11b	OR 211	Hayden Rd to OR 224	Widen to rural arterial standard with shoulders, bikeways in accordance with the Active Transportation Plan and turn lanes at major intersections	Medium
4038	5-11b	US 26	Govt. Camp Loop W to OR 35	Implement Finding of Mt Hood Multimodal Study including phased safety improvements	Medium
4039	5-11b	US 26	OR 35 Junction to Wasco County line	Widen roadway to include bikeways /shoulders, add passing lanes where needed and turn lanes at major intersections	Medium
4040	5-11e	OR 211	OR 170 (Canby-Marquam Hwy) / OR 211 intersection	Install eastbound and westbound left-turn lanes, and eastbound right-turn lane; remove or decrease horizontal curve	Medium
4041	5-11e	OR 211	Marion County line to OR 170 (Canby-Marquam Hwy)	Widen to include shoulders, bikeways, add passing lanes where needed and turn lanes at major intersections	Medium
4042	5-11e	OR 99E	Barlow Rd to Marion County line	Four lane widening with median, left-turn lanes from mile post 24.05	Medium
4043	5-11e/f	OR 213	Oregon City boundary to Marion County line	Add shoulders and bikeways	Medium

Table 5-3d Regional Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description	Priority
4044	5-11a	OR 212	I-205 to OR 224	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4045	5-11a	OR 212	Within the Damascus City Limits (Armstrong Cr to 257th)	Obtain right-of-way for future 4 lane facility with planted median and 5 lanes at major intersections; build as major development occurs and apply access management to reduce number of driveways.	Low
4046	5-11a	OR 213	Clatsop St to Sunnyside Rd	OR 213/82nd Avenue Boulevard Design Improvements - Widen to add sidewalks, lighting, central median, planting strips and landscaping; fill gaps in the bike and pedestrian facilities network. Add pedestrian crossings in the vicinity of Luther Rd, Glencoe Rd and south of Boyer Dr. Install access management median Hinkley Ave to Lindy St and Monterey Ave to Harmony Rd. Install advanced street name signs from Sunnyside Rd to Sunnyside Dr. Remove signal at north entrance of Clackamas Town Center and evaluate traffic diversion. 2014 ODOT OR 213 paving project programmed King to OR 224.	Low
4047	5-11a	OR 213 (82nd Ave)	Luther Road to Sunnybrook Blvd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4048	5-11a	OR 224	Webster Rd and 82nd Ave	Provide frontage connection on the north side of OR 244	Low
4049	5-11a	OR 224	Springwater Rd to 232nd Dr	Shoulder widening, horizontal realignment, realignment of roadway to bluff	Low
4050	5-11b	OR 211	OR 224 to eastbound US 26	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4051	5-11b	OR 211	OR 224 to Hillcockburn Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4052	5-11b	OR 211	Tickle Creek Rd/OR 211 intersection	Remove or decrease horizontal curve, relocate intersection	Low
4053	5-11b	OR 211	362nd Dr / OR 211 intersection	Remove or decrease vertical curve and remove vegetation	Low
4054	5-11b	OR 211	Eagle Creek Rd to Tickle Creek Rd	Widen to include bikeways /shoulders and add passing /climbing lanes where needed	Low
4055	5-11b	OR 211	0.14 miles east of Coop Rd to Jacknife Rd	Widen to add shoulder / bikeways; realign to remove horizontal and vertical curves	Low
4056	5-11b	OR 211	Tickle Creek Rd to 362nd Dr	Widen to include bikeways /shoulders and add passing /climbing lanes where needed	Low
4057	5-11b	OR 211	Bornstedt Rd to City of Sandy	Add shoulders and bikeways	Low
4058	5-11b	OR 224	232nd Ave to OR 211	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4059	5-11b	OR 224	Fish Creek Rd to National Forest Rd 46	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4060	5-11b	OR 224	Bakers Ferry Rd / OR 224 intersection	Add eastbound right-turn lane	Low
4061	5-11b	OR 224	Amisigger Rd / OR 224 intersection	Install traffic signal; add southbound and eastbound left-turn lanes and westbound right-turn lane	Low
4062	5-11b	OR 224	Heiple Rd / OR 224 intersection	Add southbound right-turn lane	Low
4063	5-11b	OR 224	OR 212 to Estacada city limits	Widen to include shoulders and bikeways; add passing lanes where needed	Low
4065	5-11b	US 26	US 26 / Haley Rd intersection	Develop a plan to address to address access and safety issues on US 26 at this intersection and implement that plan	Low

Table 5-3d Regional Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description	Priority
4066	5-11b	US 26	Kelso Rd to Duncan Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4067	5-11b	US 26	Duncan Rd to Langensand Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4068	5-11b	US 26	Firwood Rd to Sleepy Hollow Dr	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4069	5-11b	US 26	Rhododendron to OR 35	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4070	5-11b	US 26	US 26 / Firwood Rd intersection	Add eastbound right-turn lane	Low
4071	5-11b	US 26	US 26 / Brightwood Loop W	Add westbound right-turn lane	Low
4072	5-11b	US 26	US 26 / Brightwood Loop E	Add westbound right-turn lane	Low
4073	5-11b	US 26	Lolo Pass Rd to Govt. Camp Loop Rd. W	Implement Finding of Mt Hood Multimodal Study including ITS approach with variable speed signage; construct multi-use path between Lolo Pass Rd and John Lake Rd; add enhanced pedestrian crossing, sidewalks, curbs, gutters, pedestrian refuge island, pedestrian illumination and access management in Rhododendron; construct multi-use path connecting Mt. Hood Express transit stop and Pioneer Bridle Trailhead	High
4074	5-11c	OR 99E	Park Ave to Gladstone city limits	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4075	5-11d	OR 43	Lake Oswego to Portland	Develop active transportation connection in accordance with the Active Transportation Plan.	Low
4076	5-11e	OR 211	Dhooghe Rd / OR 211 intersection	Remove or decrease horizontal curve, relocate intersection	Low
4077	5-11e	OR 211	OR 170 (Canby-Marquam Hwy) to City of Molalla	Add shoulders and bikeways	Low
4078	5-11e	OR 211	Needy Rd to 0.6 miles west of Needy Rd	Remove or decrease vertical curve to allow passing zone, add passing lane in one or both directions, possible relocation of intersection	Low
4079	5-11e	OR 211	Molalla city limits to Hayden Rd	Widen to rural arterial standard (2 lanes) with shoulders and bikeways	Low
4080	5-11e	OR 211	Beavercreek Rd to Upper Highland Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4081	5-11e	OR 213	OR 213 / Carus Rd intersection	Install traffic signal to replace existing two-way stop See U339	Low
4082	5-11e	OR 213	OR 213 / Beavercreek Rd intersection	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4083	5-11e	OR 213	Carus Rd / OR 213 intersection	Install southbound left-turn and right-turn lanes	Low
4085	5-11e	OR 99E	Oregon City to Canby	Add shoulders and bikeways	Low
4086	5-11e	OR 99E	Sequoia Parkway to Lone Elder Rd	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4087	5-11e	OR 99E	Territorial Rd to Metro boundary	Perform road safety audit or transportation safety review to identify appropriate safety improvements	Low
4088	5-11b	Government Camp Loop Rd	US 26 to US 26	Add bikeways through Government Camp in accordance with the Active Transportation Plan	High
4089	5-11a	OR 213	Causey Ave to King Rd	Work with TriMet and ODOT to evaluate the Business Access Transit lane and identify projects / approaches to improve safety and enhance transit operation.	High

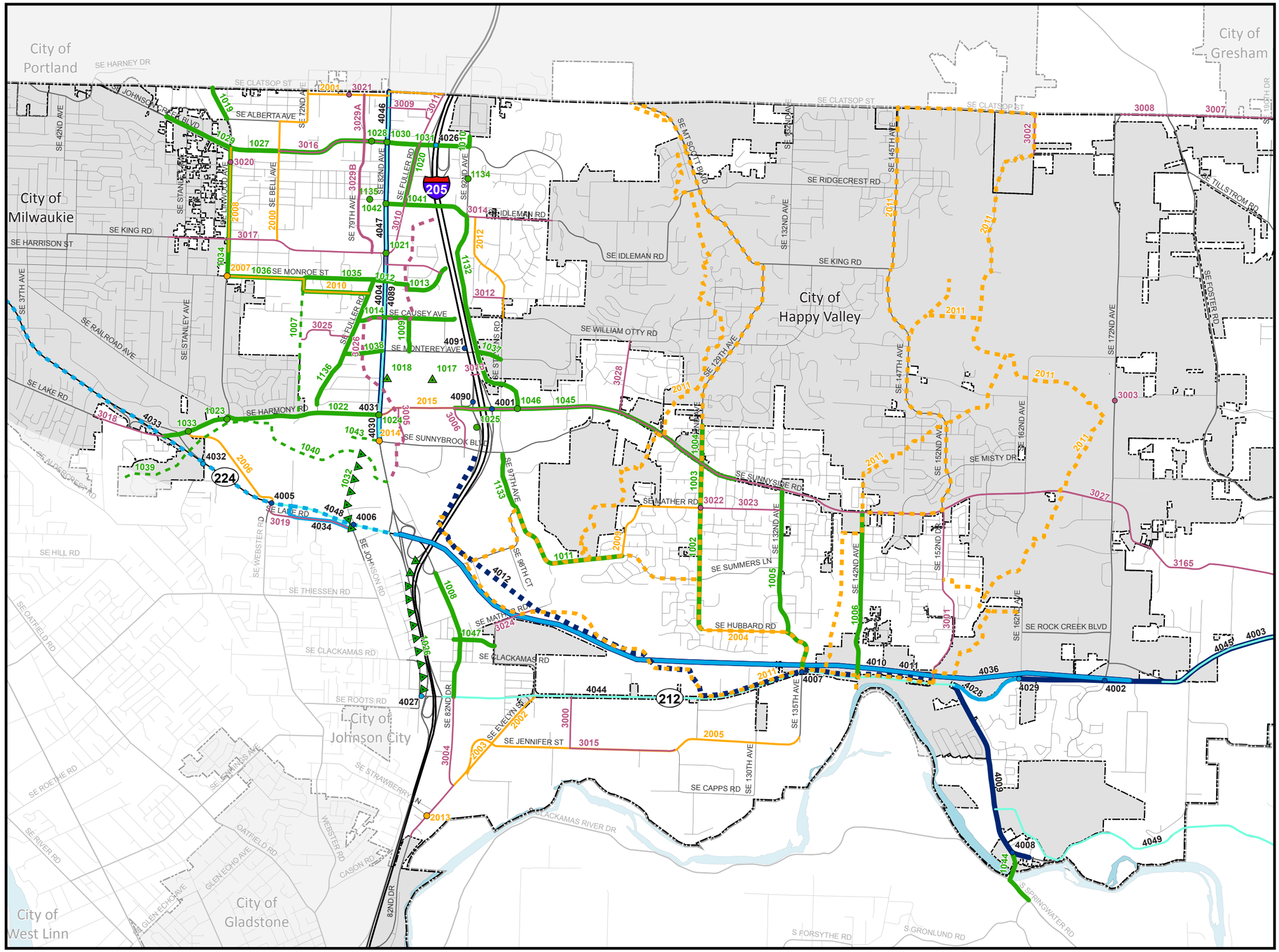
Table 5-3d Regional Capital Projects

Project ID	Map	Project Name / Street Name	Segment / Locations	Project Description	Priority
4090	5-11a	I-205 MUP	I-205 SB Ramp / Sunnyside Rd	Travelling south on the I-205 multi-use path, install a pedestrian signal to cross the I-205 southbound / Sunnyside right turn lane. Perform traffic analysis to evaluate impacts to vehicle queuing. Modification subject to ODOT approval.	High
4091	5-11a	I-205 MUP	Monterey Ave	Install parabolic mirror and/or signage to resolve limited sight distance issues at the intersection of the I-205 MUP and the path extension at Monterey Ave.	High
4092	5-11b	US 26	Arrah Wanna Blvd to Welches Rd	Add multi-use path on north side of US 26	High
4093	5-11b	US 26	Main Park Rd to Salmon River Rd	Add multi-use path on south side of US 26	High
4094	5-11b	US 26 / Welches Rd	US 26 / Welches Rd	Pedestrian and ADA improvments at signal, including crossing improvments on the north side of the intersection.	Medium
4095	5-11b	US 26 / Arrah Wanna Blvd	US 26 / Arrah Wanna Blvd	Install a continental style crosswalk, accompanied by roadway and streetscape improvements	Medium
4096	5-11b	US 26 / Salmon River Rd	US 26 / Salmon River Rd	Install an enhanced pedestrian crossing	High

ATTACHMENT A

Capital Improvement Plan

Greater Clackamas Regional Center / Industrial Area



Priority

- 20-Year Capital Projects (Table 5-3a)
- Preferred Capital Projects (Table 5-3b)
- Long-Term Capital Project Needs (Table 5-3c)

Projects on Non-County Facilities

Priority

- High (Table 5-3d)
- Medium (Table 5-3d)
- Low (Table 5-3d)

NORTH

- Study*
- Multi-Use Path*
- Metro Urban Growth Boundary
- Incorporated City

*Symbol color consistent with Priority symbologies shown above

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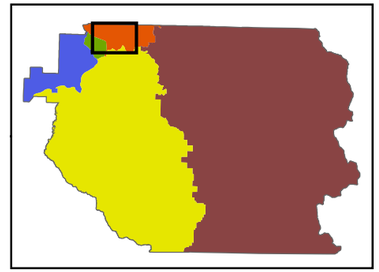


Last Updated November 27, 2018

CLACKAMAS COUNTY

Department of Transportation & Development
150 Beavercreek Rd Oregon City, OR 97045

CLACKAMAS COUNTY COMPREHENSIVE PLAN

MAP 5-11a

ATTACHMENT A

Capital Improvement Plan

East County

Priority

- 20-Year Capital Projects (Table 5-3a)
- Preferred Capital Projects (Table 5-3b)
- Long-Term Capital Project Needs (Table 5-3c)

Projects on Non-County Facilities

Priority

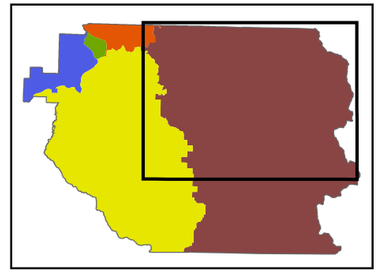
- High (Table 5-3d)
- Medium (Table 5-3d)
- Low (Table 5-3d)

NORTH

- Study*
- Multi-Use Path*
- Metro Urban Growth Boundary
- Incorporated City

*Symbol color consistent with Priority symbologies shown above

0 1.25 2.5 5 Miles



Last Amended May 9, 2017

CLACKAMAS COUNTY

Department of Transportation & Development
150 Beavercreek Rd Oregon City, OR 97045

CLACKAMAS COUNTY COMPREHENSIVE PLAN

MAP 5-11b

See Inset Map

Mt. Hood Corridor Inset Map

ATTACHMENT A

Capital Improvement Plan

Greater McLoughlin Area

Priority

- 20-Year Capital Projects (Table 5-3a)
- Preferred Capital Projects (Table 5-3b)
- Long-Term Capital Project Needs (Table 5-3c)

Projects on Non-County Facilities

Priority

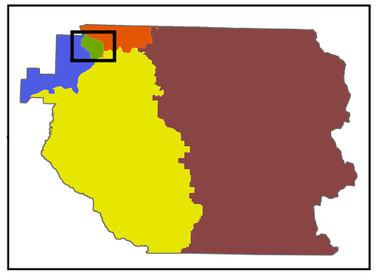
- High (Table 5-3d)
- Medium (Table 5-3d)
- Low (Table 5-3d)

- Study*
- Multi-Use Path*
- Metro Urban Growth Boundary
- Incorporated City

*Symbol color consistent with Priority symbologies shown above

NORTH

0 0.25 0.5 1 Miles



Last Amended June 1, 2015

CLACKAMAS COUNTY

Department of Transportation & Development
150 Beavercreek Rd Oregon City, OR 97045

CLACKAMAS COUNTY COMPREHENSIVE PLAN

MAP 5-11c

ATTACHMENT A

Capital Improvement Plan

Northwest County

Priority

- 20-Year Capital Projects (Table 5-3a)
- Preferred Capital Projects (Table 5-3b)
- Long-Term Capital Project Needs (Table 5-3c)

Projects on Non-County Facilities

Priority

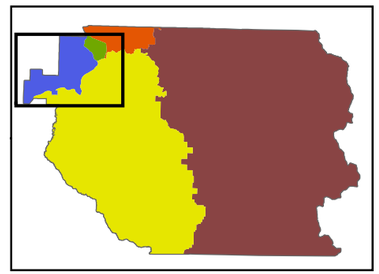
- High (Table 5-3d)
- Medium (Table 5-3d)
- Low (Table 5-3d)

NORTH

- Study*
- Multi-Use Path*
- Metro Urban Growth Boundary
- Incorporated City

*Symbol color consistent with Priority symbologies shown above

0 0.5 1 2 Miles



Last Amended June 1, 2015

CLACKAMAS COUNTY

Department of Transportation & Development
150 Beavercreek Rd Oregon City, OR 97045

CLACKAMAS COUNTY COMPREHENSIVE PLAN

MAP 5-11d

ATTACHMENT A

Capital Improvement Plan

Southwest County - Northern Portion

Priority

- 20-Year Capital Projects (Table 5-3a)
- Preferred Capital Projects (Table 5-3b)
- Long-Term Capital Project Needs (Table 5-3c)

Projects on Non-County Facilities

Priority

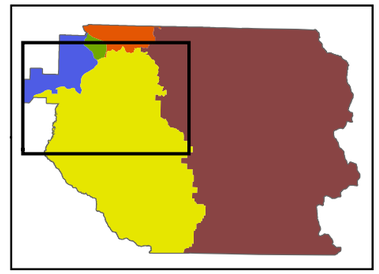
- High (Table 5-3d)
- Medium (Table 5-3d)
- Low (Table 5-3d)

NORTH

- Study*
- Multi-Use Path*
- Metro Urban Growth Boundary
- Incorporated City

*Symbol color consistent with Priority symbologies shown above

0 1 2 4 Miles



Last Amended June 1, 2015

CLACKAMAS COUNTY

Department of Transportation & Development
150 Beavercreek Rd Oregon City, OR 97045

CLACKAMAS COUNTY COMPREHENSIVE PLAN

MAP 5-11e

ATTACHMENT A

Capital Improvement Plan

Southwest County - Southern Portion

Priority

- 20-Year Capital Projects (Table 5-3a)
- Preferred Capital Projects (Table 5-3b)
- Long-Term Capital Project Needs (Table 5-3c)

Projects on Non-County Facilities

Priority

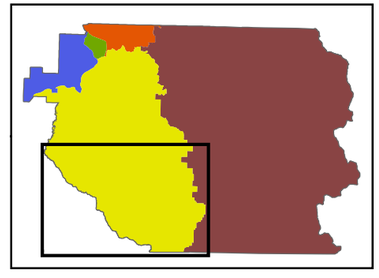
- High (Table 5-3d)
- Medium (Table 5-3d)
- Low (Table 5-3d)

NORTH

- Study*
- Multi-Use Path*
- Metro Urban Growth Boundary
- Incorporated City

*Symbol color consistent with Priority symbologies shown above

0 1 2 4 Miles



Last Amended June 1, 2015

CLACKAMAS COUNTY

Department of Transportation & Development
150 Beavercreek Rd Oregon City, OR 97045

CLACKAMAS COUNTY COMPREHENSIVE PLAN

MAP 5-11f

Prepared by:

Clackamas County
Department of Transportation & Development
150 Beavercreek Rd., Oregon City, OR 97045
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December 28, 2021