Agenda

Metro
600 NE Grand Ave.
Portland, OR 97232-2736

Meeting:	Metro Technical Advisory Committee (MTAC) and Transportation Policy Alternatives Committee (TPAC) Workshop
Date:	Wednesday April 19, 2023
Time:	9:00 a.m. to 12:00 p.m.
Place:	Virtual meeting held via Zoom Connect with Zoom Passcode: 721459 Phone: 888-475-4499 toll free

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9:00 a.m.	**Call meeting to order, introductions, and committee updates**	TPAC Chair Kloster
9:07 a.m.	**Public communications on agenda items**	
9:08 a.m.	**Consideration of MTAC/TPAC workshop summary, February 15, 2023** Edits/corrections sent to Marie Miller marie.miller@oregonmetro.gov	TPAC Chair Kloster
9:10 a.m.	**2023 Regional Transportation Plan: Draft Chapter 3 (Policy) – Continue discussion** Purpose: Update and discussion of revisions to the staff recommended Chapter 3 of the Regional Transportation Plan (RTP).	Kim Ellis, Metro
10:10 a.m.	**2023 Regional Transportation Plan: Project list summaries and draft high-level assessment results** Purpose: Receive TPAC feedback on draft summaries of the RTP project list and high-level assessment, which form part of the information used to evaluate the RTP's progress toward goals.	Eliot Rose, Metro
11:40 a.m.	**2024-27 State Transportation Improvement Program (STIP) Region 1: 100% project lists and public comment** Purpose: Share draft 100% project list, development process, and public comment opportunities for the 2024-27 Statewide Transportation Improvement Program.	Chris Ford, ODOT
12:00 p.m.	**Adjournment**	MTAC Chair Kehe

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សេចក្តីជូនដំណឹងអំពីការមិនរើសអើងរបស់ Metro

ការគោរពសិទ្ធិពលរដ្ឋរបស់ ។ សំរាប់ព័ត៌មានអំពីកម្មវិធីសិទ្ធិពលរដ្ឋរបស់ Metro ឬដើម្បីទទួលពាក្យបណ្តឹងរើសអើងសូមចូលទស្សនាគេហទំព័រ www.oregonmetro.gov/civilrights។
បើលោកអ្នកត្រូវការអ្នកបកប្រែភាសានៅពេលអង្គប្រជុំសាធារណៈ សូមទូរស័ព្ទមកលេខ 503-797-1700 (ម៉ោង 8 ព្រឹកដល់ម៉ោង 5 ល្ងាច ថ្ងៃធ្វើការ) ប្រាំពីរថ្ងៃ
ថ្ងៃធ្វើការ មុនថ្ងៃប្រជុំដើម្បីអាចឲ្យគេសម្រួលតាមសំណើរបស់លោកអ្នក ។

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2023 Metro Technical Advisory Committee (MTAC) Work Program

As of 4/12/2023

NOTE: *Items in* ***italics*** *are tentative;* ***bold*** *denotes required items*

All meetings are scheduled from 9am - noon

	MTAC/TPAC joint workshop, April 19, 2023 Agenda Items • 2023 RTP: Draft Chapter 3 (Policy) – continue discussion (Kim Ellis, Metro; 60 min) • 2023 RTP: Project list summaries and draft high-level assessment results (Eliot Rose, Metro; 90 min) • 2024-27 STIP Region 1; 100% project lists and public comment (Chris Ford, ODOT, 20 min)
MTAC meeting, May 17, 2023 Comments from the Chair • Committee member updates around the region (Chair Kehe and all) Agenda Items • 2024 Urban Growth Management Decision: middle housing potential (Ted Reid, Metro/ TBD, EcoNorthwest); 45 min) • High Capacity Transit Strategy Update: Draft Report (Ally Holmqvist, Metro; 30 min) • TriMet's TOD Strategic Plan (Fiona Cundy, TriMet; 20 min) • 2023 RTP: Draft system analysis results (Eliot Rose, Metro; 45 min)	**MTAC/TPAC joint workshop, June 21, 2023** Agenda Items • Climate Smart Strategy Discussion (Kim Ellis and Eliot Rose, Metro; 60 min) • 2024 Urban Growth Management Decision: housing market filtering and displacement trends (Ted Reid, Metro, 60 min) • Construction Career Pathways Overview & Update (Sebrina Owens-Wilson, Andre Bealer, Metro; 45 min)
MTAC meeting, July 19, 2023 Comments from the Chair • Committee member updates around the region (Chair Kehe and all) Agenda Items • 2024 Urban Growth Management Decision: office-to-residential conversion potential (Ted Reid, 45 min) • 2023 RTP update (Kim Ellis, Metro; 45 min)	**MTAC/TPAC joint workshop, August 16, 2023** Agenda Items • 2023 RTP: Begin discussion on public comments on Public Review Draft RTP, Project List and Appendices (Kim Ellis, Metro; 60 min)

MTAC meeting, September 20, 2023 Comments from the Chair • Committee member updates around the region (Chair Kehe and all) Agenda Items • Draft regional buildable land inventory (Ted Reid, Metro; 60 min) • 2023 RTP: Draft Public Comment Report and Recommended Changes (Kim Ellis, Metro; 90 min)	**MTAC meeting, October 18, 2023** Comments from the Chair • Committee member updates around the region (Chair Kehe and all) Agenda Items • Draft regional buildable land inventory (continued) (Ted Reid, Metro; 45 min) • **23-XXXX - 2023 RTP** Recommendation to MPAC (Kim Ellis, Metro; 90 min)
MTAC meeting, November 15, 2023 Comments from the Chair • Committee member updates around the region (Chair Kehe and all) Agenda Items • UGB discussion topic: Town & regional centers and CFEC (Update to Title 6) (Ted Reid, Metro; 60 min)	**MTAC meeting, December 20, 2023** Comments from the Chair • Committee member updates around the region (Chair Kehe and all) Agenda Items • State of the Centers update (Ted Reid, Metro; 60 min)

Parking Lot/Bike Rack: Future Topics (These may be scheduled at either MTAC meetings or combined MTAC/TPAC workshops)

- SW Corridor Updates
- Status report on equity goals for land use and transportation planning
- Regional city reports on community engagement work/grants
- Regional development changes reporting on employment/economic and housing as it relates to growth management
- Update report on Travel Behavior Survey
- Updates on grant funded projects such as Metro's 2040 grants and DLCD/ODOT's TGM grants. Recipients of grants.
- Transit-Oriented Development (TOD) annual report/project profiles report
- Reports from regional service providers affecting land use and transportation, future plans
- Best Practices and Data to Support Natural Resources Protection
- Employment & industrial lands
- 2040 grants highlights update
- 2024 UGB cycle

For MTAC agenda and schedule information, e-mail marie.miller@oregonmetro.gov
In case of inclement weather or cancellations, call 503-797-1700 for building closure announcements.

2023 TPAC Work Program

As of 4/12/2023

NOTE: *Items in* ***italics*** *are tentative;* ***bold*** *denotes required items*

All meetings are scheduled from 9am - noon

	MTAC/TPAC joint workshop, April 19, 2023 **Agenda Items:** • 2023 RTP: Draft Chapter 3 (Policy) – Continue discussion (Kim Ellis, Metro, 60 min) • 2023 RTP: Project list summaries and draft high-level assessment results (Eliot Rose, Metro, 90 min) • 2024-27 STIP Region 1; 100% project lists and public comment (Chris Ford, ODOT; 20 min)

TPAC meeting, May 5, 2023 Comments from the Chair: • Committee member updates around the Region (Chair Kloster & all) • Monthly MTIP Amendments Update (Ken Lobeck) • Fatal crashes update (Lake McTighe) • 2024-27 MTIP – Public Comment Report (Grace Cho) **Agenda Items:** • **MTIP Formal Amendment 23-XXXX** Recommendation to JPACT (Lobeck, 10 min) • **Carbon Reduction Program – Funding Allocation** Recommendation to JPACT (Leybold/Cho/, Metro; 60 min) • 2023 RTP: Discuss policymaker and public input and technical findings to develop recommendation on finalizing draft RTP and list of project and program priorities for public review (Kim Ellis, 90 min) • Climate Smart Strategy (Kim Ellis/ Eliot Rose, Metro, 45 min) • Recommended Projects for Implementing the 2021 TSMO Strategy (Caleb Winter, Metro/Kate Freitag, ODOT/A.J. O'Connor, TriMet; 45 min) • Committee Wufoo reports on Creating a Safe Space at TPAC (Chair Kloster; 5 min)	**TPAC workshop, May 10, 2023** **Agenda Items:** • High Capacity Transit Strategy Update: Draft Report (Ally Holmqvist, Metro; 30 min) • 2023 RTP: Draft system analysis results (Kim Ellis and Eliot Rose, Metro, 90 min) • Montgomery Park Streetcar expansion project (Dan Bower, Portland Streetcar, Inc., 30 min)

TPAC meeting, June 2, 2023 Comments from the Chair: • Committee member updates around the Region (Chair Kloster & all) • Monthly MTIP Amendments Update (Ken Lobeck) • Fatal crashes update (Lake McTighe) • Cascadia Corridor Ultra High-Speed Ground Transportation program update (Ally Holmqvist) **Agenda Items:** • **MTIP Formal Amendment 23-XXXX** Recommendation to JPACT (Lobeck, 10 min) • **2023 RTP: Finalizing draft RTP and list of project and program priorities for public review** Recommendation to JPACT (Kim Ellis, 90 min) • 2024-2027 MTIP – Adoption Draft and Public Comment Report (Cho, 30 min) • Committee Wufoo reports on Creating a Safe Space at TPAC (Chair Kloster; 5 min)	**MTAC/TPAC joint workshop, June 21, 2023** **Agenda Items:** • Climate Smart Strategy Discussion (Kim Ellis/ Eliot Rose, Metro, 60 min.) • 2024 Urban Growth Management Decision: housing market filtering and displacement trends (Ted Reid, Metro, 60 min.) • Construction Career Pathways Overview and Update (Sebrina Owens-Wilson & Andre Bealer, Metro, 45 min.)
TPAC meeting, July 7, 2023 Comments from the Chair: • Committee member updates around the Region (Chair Kloster & all) • Monthly MTIP Amendments Update (Ken Lobeck) • Fatal crashes update (Lake McTighe) **Agenda Items:** • **MTIP Formal Amendment 23-XXXX** Recommendation to JPACT (Lobeck, 10 min) • **2024-2027 MTIP – Adoption Draft** Recommendation to JPACT (Cho, 30 min) • 2023 RTP: Public Review Draft RTP, Project List and Appendices (Kim Ellis, 45 min) • Committee Wufoo reports on Creating a Safe Space at TPAC (Chair Kloster; 5 min)	**TPAC workshop, July 12, 2023** **Agenda Items:** • Freight Commodity Study: Draft Finding (Tim Collins, Metro, 60 min)

TPAC meeting, August 4, 2023 Comments from the Chair: • Committee member updates around the Region (Chair Kloster & all) • Monthly MTIP Amendments Update (Ken Lobeck) • Fatal crashes update (Lake McTighe) **Agenda Items:** • **MTIP Formal Amendment 23-XXXX** Recommendation to JPACT (Lobeck, 10 min) • 2023 RTP: Draft Ordinance and Outline of Adoption Package (Kim Ellis, 45 min) • Committee Wufoo reports on Creating a Safe Space at TPAC (Chair Kloster; 5 min)	**MTAC/TPAC joint workshop, August 16, 2023** **Agenda Items:** • 2023 RTP: Begin discussion of public comments on Public Review Draft RTP, Project List and Appendices (Kim Ellis, 60 min)

<u>TPAC meeting, September 1, 2023</u> Comments from the Chair: • Committee member updates around the Region (Chair Kloster & all) • Monthly MTIP Amendments Update (Ken Lobeck) • Fatal crashes update (Lake McTighe) **Agenda Items:** • **MTIP Formal Amendment 23-XXXX** <u>Recommendation to JPACT</u> (Lobeck, 10 min) • *Great Streets Program updates: Final project list (Chris Ford, ODOT; 30 min)* • Committee Wufoo reports on Creating a Safe Space at TPAC (Chair Kloster; 5 min)	**<u>TPAC workshop, September 13, 2023</u>** **Agenda Items:** • 2023 RTP: Draft Public Comment Report and Recommended Changes in Response to Public Comment (Kim Ellis, 90 min)
<u>TPAC meeting, October 6, 2023</u> Comments from the Chair: • Committee member updates around the Region (Chair Kloster & all) • Monthly MTIP Amendments Update (Ken Lobeck) • Fatal crashes update (Lake McTighe) **Agenda Items:** • **MTIP Formal Amendment 23-XXXX** <u>Recommendation to JPACT</u> (Lobeck, 10 min) • Ordinance 23-XXXX 2023 RTP: Adoption Package, Draft Public Comment Report and Recommended Changes in Response to Public Comment (Kim Ellis, 90 min) • Committee Wufoo reports on Creating a Safe Space at TPAC (Chair Kloster; 5 min)	

<u>TPAC meeting, November 3, 2023</u> Comments from the Chair: • Committee member updates around the Region (Chair Kloster & all) • Monthly MTIP Amendments Update (Ken Lobeck) • Fatal crashes update (Lake McTighe) **Agenda Items:** • **MTIP Formal Amendment 23-XXXX** <u>Recommendation to JPACT</u> (Lobeck, 10 min) • **Ordinance 23-XXXX on 2023 RTP, Projects and Appendices** <u>Recommendation to JPACT</u> (Kim Ellis, 90 min) • Committee Wufoo reports on Creating a Safe Space at TPAC (Chair Kloster; 5 min)	**<u>TPAC workshop, November 8, 2023</u>** **Agenda Items:** • Regional Transportation Safety Performance Report (Lake McTighe, 30 min)

<u>TPAC meeting, December 1, 2023</u> Comments from the Chair: • Committee member updates around the Region (Chair Kloster & all) • Monthly MTIP Amendments Update (Ken Lobeck) • Fatal crashes update (Lake McTighe) **Agenda Items:** • **MTIP Formal Amendment 23-XXXX** <u>Recommendation to JPACT</u> (Lobeck, 10 min) • Committee Wufoo reports on Creating a Safe Space at TPAC (Chair Kloster; 5 min)	

<u>Parking Lot: Future Topics/Periodic Updates</u>

- Columbia Connects Project
- 82nd Avenue Transit Project update (Elizabeth Mros-O'Hara & TBD, City of Portland)
- Best Practices and Data to Support Natural Resources Protection
- Regional Emergency Transportation Routes Update Phase 2 (John Mermin, Metro & Carol Chang, RDPO)
- Cost Increase & Inflation Impacts on Projects
- TV Highway Corridor plan updates
- 82nd Avenue updates
- TSMO updates
- MTIP Formal Amendment I-5 Rose Quarter discussion (Ken Lobeck)
- I-5 Rose Quarter Project Briefing (Megan Channell, ODOT)
- I-5 Interstate Bridge Replacement program update
- Ride Connection Program Report (Julie Wilcke)
- Get There Oregon Program Update (Marne Duke)
- RTO Updates (Dan Kaempff)
- Update on SW Corridor Transit
- High Speed Rails updates (Ally Holmqvist)

Agenda and schedule information E-mail: marie.miller@oregonmetro.gov or call 503-797-1766.
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Meeting minutes

Metro
600 NE Grand Ave.
Portland, OR 97232-2736

Meeting:	**Metro Technical Advisory Committee (MTAC) and Transportation Policy Alternatives Committee (TPAC) workshop meeting**
Date/time:	Wednesday, February 15, 2023 | 9:00 a.m. to noon
Place:	Virtual conference meeting held via Zoom

Members, Alternates Attending	**Affiliate**
Ted Leybold, Vice Chair, TPAC	Metro
Eryn Kehe, Chair, MTAC	Metro
Karen Buehrig	Clackamas County
Allison Boyd	Multnomah County
Sarah Paulus	Multnomah County
Lynda David	SW Washington Regional Transportation Council
Eric Hesse	City of Portland
Mark Lear	City of Portland
Jaimie Lorenzini	City of Happy Valley and Cities of Clackamas County
Dayna Webb	City of Oregon City and Cities of Clackamas County
Jay Higgins	City of Gresham and Cities of Multnomah County
Mike McCarthy	City of Tualatin and Cities of Washington County
Tara O'Brien	TriMet
Neelam Dorman	Oregon Department of Transportation
Glen Bolen	Oregon Department of Transportation
Karen Williams	Oregon Department of Environmental Quality
Carol Chesarek	Multnomah County Representative, MTAC
Tom Armstrong	Largest City in the Region: Portland
Colin Cooper	Largest City in Washington County: Hillsboro
Aquilla Hurd-Ravich	Second Largest City in Clackamas County: Oregon City
Laura Terway	Clackamas County: Other Cities, City of Happy Valley
Steve Koper	Washington County: Other Cities, City of Tualatin
Katherine Kelly	City of Vancouver
Jamie Stasny	Clackamas County
Adam Barber	Multnomah County
Chris Deffebach	Washington County
Kelly Reid	OR Department of Land Conservation & Development
Manuel Contreas, Jr.	Clackamas Water Environment Services
Heather Koch	North Clackamas Park & Recreation District
Cindy Detchon	North Clackamas School District
Fiona Lyon	TriMet
Jerry Johnson	Johnson Economics, LLC
Bret Marchant	Greater Portland, Inc.
Aaron Golub	Portland State University
Jacqui Treiger	Oregon Environmental Council
Rachel Loftin	Community Partners for Affordable Housing
Preston Korst	Home Builders Association of Metropolitan Portland
Erik Cole	Revitalize Portland Coalition, Schnitzer Properties
Mike O'Brien	Green Infrastructure, Mayer/Reed, Inc.
Andrea Hamberg	Mult. County Public Health & Urban Forum
Brendon Haggerty	Mult. County Public Health & Urban Forum

Members, Alternates Attending	**Affiliate**
Ryan Ames	Washington County Public Health & Urban Forum

Guests Attending	**Affiliate**
Barbara Fryer	City of Cornelius
Brian Hurley	Oregon Department of Transportation
Bryan Graveline	Portland Bureau of Transportation
Chris Smith	
Cody Meyer	Oregon Depart. of Land Conservation & Development
Danielle Maillard	Oregon Walks
Dave Roth	City of Tigard
Elin Michel-Midelfort	
Indi Namkoong	Verde
Jairaj Singh	Multnomah County Environmental Health
Jasia Mosley	
Jessica Pelz	Washington County
Jonathan Slason	RSG
Joy Change	City of Sherwood
Katie Mangle	Alta Planning & Design
Katie Selin	Alta Planning & Design
Ken Rencher	
Lewis Kelly	Oregon Department of Transportation
Marc Farrar	Metropolitan Land Group
Max Nonnamaker	Multnomah County
Michah Meskel	Portland Audubon Society
Miranda Bateschell	City of Wilsonville
Reid Haefer	RSG
Sarah Iannarone	The Street Trust
Schuyler Warren	City of Tigard
Susie Wright	Kittelson & Associates
Suzanne Savin	Washington County
One phone caller	

Metro Staff Attending
Ally Holmqvist, Andrea Pastor, Caleb Winter, Cindy Pederson, Daniel Audelo, Eliot Rose, Glen Hamburg, Grace Cho, Grace Stainback, John Mermin, Kim Ellis, Lake McTighe, Laura Combs, Marie Miller, Matt Bihn, Matthew Hampton, Noel Mickelberry, Ted Reid, Thaya Patton, Tim Collins

Call meeting to order, introductions and committee updates (Vice Chair, Ted Leybold, TPAC)
Ted Leybold, Vice Chair TPAC, called the workshop meeting to order at 9:00 a.m. Introductions were made. The meeting format held in Zoom with chat area for shared links and comments, screen name editing, mute/unmute, and hands raised for being called on for questions/comments were among the logistics reviewed. Workshops will be held openly for all onscreen for full participation. No committee updates given.

Public Communications on Agenda Items – none provided

Consideration of MTAC/TPAC workshop summary of October 19, 2022 – No edits or corrections were submitted; summary of October 19, 2022 workshop approved.

Metro School Walkshed Map & Regional Transportation Plan Crash Summary Map Demos (Noel Mickelberry & Matthew Hampton, Metro) Noel Mickelberry introduced development work done for the 2023 School Walkshed. Work included development of network datasets, updated data analysis, and creating an interactive map tool for partners to easily view individual school and district data. Matthew Hampton explained that walksheds are built using a Network Dataset, shown in the presentation on maps.

Updated methodology and new variables have been added to reflect equity and safety factors. Ms. Mickelberry noted that each school received a quintile score for each variable. These were presented by radar chart and a new interactive map that was demonstrated.
https://gis.oregonmetro.gov/schoolwalksheds/

Mr. Hampton presented information on Regional Transportation Plan (RTP) Fatal and Serious Crashes from ODOT data (2016-2020). The maps shown had data on fatal and serious crashes for those on bicycles and walking. https://experience.arcgis.com/experience/f9cdb4b5c12d4574aeb7ebc4fbf56915 there's also a shortened URL at https://tinyurl/rtpcrashes

Comments from the committee:

- Chris Deffebach asked is there any factor for size of school population? How will this data be used? Is it part of the RFFA Safe Routes to Schools? Ms. Mickelberry noted ODOT grants are used for infrastructure at schools, which include similar criteria for the tool developed. Populations vary with high schools tending to be larger, elementary schools smaller. It might be possible to compare types of pools with the data. The data will be used as a tool for partners applying for Metro grants that can help with school programming.
- Colin Cooper asked if the overall scores were used in funding priorities for projects. Ms. Mickelberry noted the scores were not used in any prioritization of funding but used for informational purposes.
- Michael O'Brien noted It would be very interesting to apply this tool to parks and green spaces.
- Cindy Detchon noted school district requirements from ODE is 1-mile or 1.5 mile radius walkzone that includes safety, terrains, known criminal activity and other factors not seen within the data sets. ODE's collection of schools demographics is based on our student information systems. Ms. Mickelberry noted the focus of this project was on transportation and safety but it would welcome to have further information for better understanding to include with planning walkzones and bridge any gaps in data between Metro and the school districts.
- Adam Barber asked about seeing a SE/NW alignment when all the regional walksheds were turn on, and interpreting this to mean it would be easier to walk in these directions. Matthew Hampton noted this shown just in the way the walksheds were drawn in a layered way and would check into this.
- Glen Bolen asked if areas with infrastructure involved could be replicated with other data to see where collations are possible. Ms. Mickelberry noted site work with bike infrastructure helps on scores but it is not the only element. Availability for schools and teachers to provide access and safety helps to find what is needed and make this happen.
- Manuel Contreras asked regarding the school walkshed map is the data coming from the school districts or other independent sources. Ms. Mickelberry noted all the data comes from ODE (Oregon Department of Education).

2023 Climate Smart Analysis: estimating the Greenhouse Gas Reduction gap (Kim Ellis & Eliot Rose, Metro) The presentation began with an overview detailing how our regional climate targets and the Climate Smart strategy work, providing an initial estimate of the gap in greenhouse gas (GHG) reductions that we need to close in the 2023 RTP update in order to meet our targets, and how we will refine this initial estimate as we update it to reflect the RTP Call for Projects.

Kim Ellis reminded the committees that these "GHG reduction targets" are in effect vehicle miles traveled (VMT) reduction targets. Our region is expected to meet GHG targets by reducing VMT. Targets reflect the need to reduce GHG reductions beyond what state and federal clean vehicle/fuel policies and investments can achieve. We can only count actions to promote clean vehicles/fuels if they are locally funded. Targets apply to household-based emissions from light-duty vehicles. (In other words, freight trips don't count.) Targets are based on 2005 baseline emissions.

Eliot Rose described how updating the Climate Smart analysis worked. This is a combination of Local/regional transportation/land use plans and investments (RTP), and assumptions about State vehicle/fuel programs and policies (STS). The 2014 Climate Smart Strategy reduced 2035 emissions by 29% (vs. a 20% target) based on then-current state, regional, and local plans to implement GHG reduction strategies. We update the analysis each RTP cycle to review our progress and reflect changes to those plans.

The Climate Smart analysis update process shown:
1. Review Climate Smart policies and priorities assumed in 2018 RTP and progress/what's changed (done)
2. Consult with State on background assumptions and methodology (ongoing)
3. Share the initial estimate of the GHG emissions reduction gap that the 2023 RTP needs to close to meet the target for 2045 (today)
4. Update the initial estimate to reflect the 2023 call for projects (March-April)
5. Identify further changes as needed to address any remaining gap (April-May)

Current policy priorities and updates were presented:
• Increasing transit service remains a high-priority strategy.
• There are both strong hopes and concerns regarding congestion pricing.
• Local implementation of CFEC may expand the use of parking pricing.
• The region should rely on a mix of strategies to meet its GHG reduction targets.
• The analysis should account for teleworking and other changes to travel patterns.
• Land use has a significant impact on GHG emissions – this will be the focus of the 2040 Growth Concept update, not the RTP.

Initial gap estimate was described. The **Target scenario** shows the region's VMT reduction target.
The **STS+RTP18 scenario** shows the VMT reductions due to adopted State and local/regional plans.
• State agencies developed the **STS assumptions** to reflect the Statewide Transportation Strategy. They describe vehicle and fuel mix and cost.
• Metro staff and consultants developed the **RTP18 inputs** to reflect implementation of the 2018 RTP out to 2050.
The **RTP23 gap** is estimated gap between the Target and STS+RTP18 scenarios for the year 2045. We will update this estimate to reflect the Call for Projects. We expect these estimates to change as we adjust them to reflect reduced transit service and ridership, increased teleworking, implementation of

road pricing and questions about how to account for it, and the potential increase in parking due to new CFEC rules. We may have questions about how these changes should be reflected in the final climate analysis.

The Climate Smart analysis update timeline was presented through June, when the release of the draft final climate analysis as part of the public comment draft of the 2023 RTP update is scheduled.

Comments from the committee:

- Karen Buehrig appreciated the detailed information. It was noted in the materials that land use as part of the growth concept update was important. Pricing is an important tool that we would be using and applying in this RTP. And pricing is effective if providing good transit. The pricing we are trying to do is mode shift but in order to have successful transit we need to have the land uses that are appropriate to support the transit. It is important to not be disconnected from land use work because we need to have the right land uses in order to make these strategies work.

  It was noted that RTP 2023 gaps in projects were similar to those from Clackamas County. Not many new projects from Clackamas County are planned for the 2023 RTP, so the process talked about in the scenarios is important in which to close the gap. Regarding scenarios, in the initial work of the mobility policy we discussed VMT. VMT is the greatest in the subregions away from the center of the region. It was suggested to have a scenario that applies to transit service in farther out areas to address VMT, if trying to reduce VMT with strategies with most need.

  In the materials is stated "Before finalizing the RTP, Metro needs to further review the assumptions behind the climate analysis to understand the assumed division of responsibilities between State and local/regional transportation agencies in implementing pricing, understand how to account for locally funded clean vehicle/fuel strategies, and ensure that the analysis accounts for the increase in teleworking and online shopping and potentially for other recent changes to travel behavior. As Metro and its partners review and update the regional climate analysis, they need to pay close attention to updating the level of implementation of particular strategies that are either priorities for JPACT and Metro Council or are the focus of new state/regional policies that create new opportunities for implementation, including parking and road pricing." It was asked to share what the expectations were to pricing and expected additional work going to be done to understand the impacts of pricing and how best to spend these revenues.

  Mr. Rose noted that to respect to land use the RTP always accounts for the land use vision that is outlined in the 2040 growth concept and accounts for how we are building projects in the RTP to interact with land use processes and projected growth and development. What is doesn't do in the 2023 RTP (but will do in the 2040 update) is look at changing that vision overall to better achieve climate targets. Updating the vision provides better reductions in GHG emissions.

  Regarding the transit scenario with shift to where more investment occurs, it was noted that any scenarios we look at needs to be consistent with the constrained RTP investments. There is limited time to adopt the RTP and limited amount of resources to invest in the region. We need to look at scenarios that fit within these constraints in order to keep on the critical path.

To respect to pricing, Metro is still working with ODOT to develop the basic information that will be included in the RTP around which facilities will be priced, how much priced and how revenues will be invested. We expect to better understand how revenues are impacting travel behavior. Ms. Ellis added this will continue to evolve. The statewide pricing strategy still has pricing assumptions that is part of the coordination work. More is being discussed on what pertains and applies to the RTP.

- Jerry Johnson asked does the national average represent urban areas? It seems like the shift to remote work had the most significant impact on the timeline. Is that a pattern we will or should be encouraging, and do changing commute patterns factor into the model? Ms. Ellis noted It is important to note that "urban areas" nationally are a bit different than our urban area since we have a UGB. Here is a link to data Metro monitors: https://www.oregonmetro.gov/transportation-system-monitoring-daily-vehicle-miles-travel

  It was asked if we have any data on transit usage rates and patterns since 2020? I am interested in the impact of shifting commute patterns on transit utilization. Ms. Ellis noted we use the regionally coordinated growth distribution that is based on local plans and 2040 growth concept implementation locally. That was adopted by the Metro Council, reflecting the 2018 growth management decision. Tara O'Brien added here is the evaluation that TriMet conducted on transit trends since 2020. This is what we used to help redesign future bus service which will be implemented through Forward Together, beginning this year. These changes will be incorporated into Metro's near term Transit Network map. https://trimet.org/forward/#background

- Andrea Hamberg noted that past analysis of active transportation shows the importance increasing physical activity, a way to achieve reduced GHG emissions and a key strategy for changes in transit. It was suggested to show active travel more prominently as part of this strategy. It was asked what is planned with changes around ebikes and how this fits in strategies. From the scenario standpoint interest was shown in land use with active transportation that go beyond infrastructure. More information was asked about tools to analyze changes with active transportation.

  Ms. Ellis noted these were important factors with the Climate Smart strategies and have limited resources with tools until the "tool kit" is built forward. Jonathan Slason with RSG noted that ebikes can be accounted for with assumptions on travel lengths, such as over five miles. The shift from a regular bike to an ebike carries assumptions with variables and changes that can put into modeling. It can be developed and be explicit with data for the RTP. Mr. Rose added active transportation is a critical part of the Climate Smart strategy with more discussions on them in the future.
- Heather Koch added parks agencies also are interested in the active transportation piece as park systems contribute to the trail network and support of ebikes to support GHG reductions via reduced VMT. Are there Active Transportation targets in the RTP list formation? Since counties are now coordinating the finalization of lists and projects to be uploaded, I'm unclear if there is any goal or threshold in those RTP lists of projects that will be eligible for federal funding, and whether there is a lever there to ensure that projects on that list support active transportation to any degree/threshold.

- Karen Williams asked of the importance of including assumptions about other protection program strategies besides clean fuels. Was it important to dig deeper or because they are state programs with assumptions about GHG reductions they are not relevant to these strategies? Mr. Rose noted our state agencies have the ultimate strategies for reaching our targets. ODOT gives us the set of assumptions in the STS. It might be worth having coordination between state agencies.
- Michael O'Brien noted strategies with tolling and parking rely on individual outlays of funding. How are factors of naturally challenged households being analyzed and plan to be used in relation to those that are challenged. Mr. Rose noted pricing comes into the RTP though ODOT's Regional Mobility Policy Project, and the other facilities ODOT is planning to price is planning in the area that is part of the programs' developing considerations on how to address these issues with low-income households. Glen Bolen added the legislative directive includes language about this, and the committee EMAC was formed to address the issues.
- Chris Deffebach noted on page 17 of the memo in the packet "**STS+RTP18 Scenario** (STS state inputs + 2018 Regional Adopted Plans). The scenario is a specific analysis that assumes the state and federal actions are occurring as expected (per the assumptions in the target rule) to evaluate the impact of the current trajectory of regional actions on per capita VMT reductions. The analysis suggests a gap of 1.8 DVMT per capita to be addressed by regional policies by 2050. The gap is the different of the STS+RTP18 scenario achieving a 26% point reduction in per capita DVMT relative to the target of 35%, leaving a 9% point gap."

  With 2 miles reduction in VTM for every household, where are these households located, what tools will reflect these changes, what affect comes from home deliveries and online ordering, what do we need to address these and make the targets set, and if targets are not met, what options do we have with possible state support to the regional level? Mr. Rose noted as the analysis is refined the gaps may close or open. A mix of elements will help us reach our targets. Results in better ridership from service changes is being shown from TriMet. The significance of pricing to reduce GHG emissions will be shown in teleworking but less impact expected from home deliveries. It's too early to know if the gap goes up or down and where we are to our targets. The 2050 target in the memo should be noted for the next RTP update. For the current update the 2045 target is used.

  Jonathan Slason noted the 1 mile per capita is correct. This is an average across the entire Metro region which means some individuals would have a substantially larger reduction and some households would have a smaller reduction. Some of the methods with tools to help us identify approaches come geographically, households of certain income, size of household and type of vehicle used. The surgical approach will come when more is known after Call for Projects in the April/May timeline. It was noted that adjacent areas to counties may affect targets. Further analysis can report on these possible changes.

- Mike McCarthy agreed with comments of feeling the traffic coming in from outside the region. It was asked how the model accounted for these trips. Mr. Rose referred to the comment in chat from Cody Meyer (DLCD); Targets don't count households coming into your region. Mr. Rose added what our targets do or do not apply to, and if they are not counting these households, that's the way our targets are constructed. Thaya Patton (Metro) added the tool we are using for this analysis has been developed by the state which is a household based tool. Our targets are written for household DVMT.

It was asked what the goal is; are we trying to meet the targets or are we trying to reduce GHG. Mr. Rose noted this is a process designed by states to make sure we work together. Specific responsibilities to reach reductions in GHG is the work to be done collectively towards reaching climate smart goals. Mr. McCarthy noted agreed that the greatest potential for greenhouse gas reduction is out of the suburbs, in particular in areas of new development but unfortunately with no option for transit. It was felt vehicle hours traveled was a better proxy for the GHG emissions with fuel consumption. Fleet changes to electric vehicles combined with all the strategies for VMT reductions would result in double the reductions. Shifts from traffic divergencies will shift to local roads with less walkability and safety.

- Eric Hesse asked for clarification on the timeline and process. It was asked if the assumption questions raised would be part of the discussion at the March 8 TPAC workshop, or come back in April as part of the analytic presentation. It was noted that on page four of the memo Metro's process for updating the Climate Smart analysis in the 2023 RTP to meet the updated targets set by the State were laid out in steps. Assumptions on fleet reductions were not listed. Mr. Rose noted they were not able to update all of the RTP related inputs into the Climate Strategy until the Call for Projects would be completed and most not known until April. This discussion and future discussions will help advance earliest consideration for adjustments.
- Glen Bolen hopes we are looking at what is happening with the CFEC rule changes as applied to land use changes. They are unlocking the development potential in areas of centers that have transit, walkability, and mobility access. Mr. Rose encouraged more local partners to share how they plan to implement CFEC rules in their plans which is useful information.
- Colin Cooper noted the challenges with changes and slow progress to update zoning and regulation standards but remains optimistic that details can be worked out.
- Jamie Stasny noted in chat ODOT sent this out yesterday. They are asserting that the Oregon Toll Program is not a "Program Affecting Land Use." https://content.govdelivery.com/accounts/ORDOT/bulletins/348d734

Workshop break for five minutes
Workshop resumed with MTAC Chair, Eryn Kehe

Draft work program for the 2024 urban growth management decision (Ted Reid, Metro) The presentation began with background of the requirement under state law to adopt – by the end of 2024 – an assessment of the region's capacity to accommodate the next twenty years of housing and job growth inside the urban growth boundary (UGB). Metro seeks to improve its growth management practices every time it undertakes this cyclical process. Metro will continue its emphasis on land readiness to ensure that decisions emphasize the governance, market, and infrastructure conditions that must be present to produce housing and jobs. This process will differ from past decisions by applying a greater focus on the housing needs of all income groups, particularly households with lower incomes. This focus on affordability advances shared goals of increasing housing production for those that have the fewest choices.

Elements noted in the Urban Growth Report were employment:
• Regional employment forecast
• Assessment of trends like work from home, etc.
• Employment site inventory
• Industrial land readiness

Housing:
• Population and household forecast
• Development trends:
– Price, type, size, rent/own
– Redevelopment, infill, vacant lands
• Displacement trends
• Housing needs analysis

New in the 2024 Urban Growth Report is a development proforma approach for assessing growth capacity, including middle housing estimates, housing needs by income group, existing and future housing needs, and consideration of economic aspirations and forecasts. Committees, groups, stakeholders, public and technical groups will have several opportunities to weigh in before late summer 2024 when Metro Council COO makes a recommendation. The 2024 growth management decision timeline overview was provided, including the noted Dec 1, 2023 date for letters of interest from cities that intend to propose UGB expansions.

Comments from the committee:

- Colin Cooper noted guidance used in the past for jurisdictions interested in proposing expansions. It was suggested to use these again. Mr. Reid agreed they can be sent out to cities and counties with the codes needed to be addressed.
- Barbara Fryer asked if this was a potential pathway for Cornelius to get more land added for the UGB or if constrained by the Grand Bargain (referring to HB-748). Mr. Reid noted this process is intended for cities to propose expansions to acknowledge urban reserves. What were previous urban reserves were added to the City of Cornelius out of the UGB in the Grand Bargain. Metro Council is not able to expand the UGB in urban reserves that surround Cornelius.
- Andrea Hamberg asked what the process is for filling seats on the advisory committee. Mr. Reid noted this is just a conceptual plan at the moment. Work is still being developed on what types of expertise should be included. More direction will come from Metro Council on this soon.
- Preston Korst added that builders/developers should be added to those conversations as well.
- Chris Deffebach noted the challenges with planning this cycle from middle housing and new existing needs for housing in the region. It was suggested to have cities and counties engaged that have staff working on development, permits, forecasting, planning and fact checking in models. Technical staff from cities and counties could provide a huge knowledge base that could be reported at MTAC meetings. It was suggested to include asking what input is needed from the committee in next steps from MTAC. The idea of youth involvement was encouraged. It was noted of the importance to have this participation for discussion of future growth management decisions.
- Colin Cooper asked how growth in Vancouver impacts this urban growth management decision. Mr. Reid noted we start with our 7 county forecast that includes part of Southern Washington State. We have to estimate factors such as how much growth will go to Clark County, which becomes a blend of technical and policies issues. It was noted that Clark County was growing faster than the counties in the Metro region. With the work intended to inform the 2040 Growth Concept Update, and with the decision by Council to have a boundary type perspective rather than satellite city perspective, it was asked how we are making sure we are identifying climate smart strategies as significant growth is happening around satellite communities while able to follow our desired outcomes and goals for reducing GHG, VMT and smart housing

decisions. Mr. Reid noted the region needs to produce more housing, and to the extent there are cities in the region that can propose expansion in the urban reserves.

- Katherine Kelly noted thanks for pointing out the need to effectively capture SW WA growth- especially in City of Vancouver.
- Glen Bolen noted to Colin's point, the Census is now saying that places such as Hubbard and Aurora are now part of our "Urban Area".
- Jamie Stasny supports monthly updates at MTAC including status updates and highlights of critical issues with an opportunity for questions.
- Manny Contreras asked what the percentages of land makeup in Clackamas County from the map was in the UGB and what was in rural reserves. Mr. Reid would be following up with more details on this that describe the map categories and overlays in future presentations.
- Barbara Fryer noted the statistics that Manny is asking for would be helpful for all.
- Erik Cole noted that I haven't fully reviewed the roster nor the plan, but do we have workforce development input/representation in the plan? or at least an overlay with their data/plans? Mr. Reid noted we will be coordinating with our Metro Economic Development planner, Greater Portland, Inc and others on economic data plans throughout this process and reported on at meetings.

Adjournment (Chair MTAC, Eryn Kehe)
There being no further business, workshop meeting was adjourned by MTAC Chair Kehe at 11:35 a.m.
Respectfully submitted,
Marie Miller, MTAC and TPAC Recorder

Attachments to the Public Record, MTAC and TPAC workshop meeting, February 15, 2023

Item	Document Type	Document Date	Document Description	Document No.
1	Agenda	2/15/2023	2/15/2023 MTAC and TPAC workshop meeting agenda	021523M-01
2	Work Program	2/8/2023	MTAC work program as of 2/8/2023	021523M-02
3	Work Program	2/7/2023	TPAC work program as of 2/7/2023	021523M-03
4	Draft Minutes	10/19/2022	Draft minutes from October 19, 2022 MTAC TPAC workshop	021523M-04
5	Report	February 2023	2023 Regional Transportation Plan Update Climate Smart analysis: estimating the GHG reduction gap	021523M-05
6	Appendix A	February 2023	Appendix A: Consultant analysis of the 2023 RTP GHG reduction gap	021523M-06
7	Report	February 2023	2024 Metro Council Urban Growth Management Decision: Draft work program summary	021523M-07
8	Presentation	2/15/2023	Regional School Walkshed Tool Data update & new interactive map tool - February 2023	021523M-08
9	Presentation	2/15/2023	2023 RTP Climate Smart Analysis: estimating the “GHG gap”	021523M-09
10	Presentation	2/15/2023	2024 Urban Growth Management Decision: Draft work program	021523M-10

Memo

Metro
600 NE Grand Ave.
Portland, OR 97232-2736

Date: April 11, 2023

To: Transportation Policy Alternatives Committee (TPAC), Metro Technical Advisory Committee (MTAC) and interested parties

From: Kim Ellis, AICP, RTP Project Manager

Subject: 2023 Regional Transportation Plan – Revised Draft Chapter 3 (System Policies)

PURPOSE

This memo provides an update to TPAC and MTAC on revisions to the staff recommendation of Chapter 3 of the Regional Transportation Plan (RTP), for discussion at the April 19 TPAC-MTAC workshop.

Chapter 3 is the policy chapter of the RTP. The staff recommended draft of Chapter 3 will be brought to TPAC on June 2, as part of the 2023 RTP public review draft. On June 2, TPAC will be asked to provide a recommendation to JPACT on release of the draft plan and project list for public review in July.

ACTION REQUESTED

Discussion and feedback on the revised draft policies in Chapter 3 provided in Attachment 1.

- Do you have comments on the revised draft Chapter 3 overall?
- Do you have comments on any revised policy areas in Chapter 3?

BACKGROUND

A major update to the Regional Transportation Plan (RTP) is underway. The RTP is the State- and Federally-required long-range transportation plan for the Portland metropolitan area. The RTP is the blueprint for transportation in our region and a key tool for implementing the region's 2040 Growth Concept and Climate Smart Strategy. Together, these plans will help ensure that greater Portland thrives by connecting people to their jobs, families, schools and other important destinations and by allowing business and industry to create jobs and move goods to market.

Chapter 3 of the RTP defines a broad range of policies for transportation equity, safety,climate, pricing, and mobility as well as a vision and supporting policies for each component of the regional transportation system – motor vehicle, transit, freight, bike and pedestrian, and for the design and management of the system.

RTP policies are informed by stakeholder and community input, research and technical analysis, and Federal and State regulations, and are a key element of the RTP performance-based planning and decision making framework. Regional policies guide the transportation agencies that design and manage roadways, transit and trails to meet the transportation needs and priorities of the region and inform transportation planning and investment decisions made by the Joint Policy Advisory Committee on Transportation (JPACT), the Metro Council, and state and local partners.

Revised Chapter 3

Since adoption of the work plan in May 2022, TPAC, MTAC, JPACT, MPAC, other stakeholders and the Metro Council have developed new and updated existing policies as outlined in the 2023 RTP work plan – these new policies and updates were reflected in the March 1, 2023 staff recommended draft of Chapter 3, which were brought to TPAC and MTAC for review and comment.

TPAC and MTAC provided comments on March 1, 2023 draft Chapter 3 at the March 8 TPAC workshop and March 15 MTAC meeting. Members of TPAC and MTAC also submitted written staff comments to Metro following the discussions. See Attachment 4 for the comments submitted by MTAC and TPAC members.

Metro staff incorporated many of the suggested revisions from the comments, as shown in the track changes version of the revised draft Chapter 3, Attachment 1. At the start of each section of the Chapter, a "What's Changed" callout box summarizes the changes in that section. Revisions made to the March 1, 2023 draft are shown in track changes, excluding corrections to spelling and grammatical errors.

Metro staff welcome comments and discussion on any of the revisions, or any other part of the Chapter. However, for the purposes of the TPAC-MTAC workshop, Metro staff have highlighted the following revisions for discussion:

- **Draft pricing policies.**[1] References to parking were removed; parking is addressed in the Climate policies and Chapter 8. Language was added to the implementing actions highlighting the need to adhere to Federal and State pricing and tolling laws and regulations. A definition of diversion was added. Attachment 3 provides a comparison of RTP Draft Pricing Policies and Oregon Highway Plan Policy 6 Tolling and Congestion Pricing Policies.

- **Draft regional mobility policies.**[2] Where appropriate, "target" was changed to "threshold." Minor clarifying refinements were made to the policies. The term "performance expectations" was replaced with "needs and solutions."

- **Motor vehicle policies.** Revisions were made to policies and narrative to distinguish between completing the planned system and adding capacity beyond the planned system, and to distinguish between throughways, auxiliary lanes, and arterials, which serve different functions. References to "deficiencies" was replaced with "needs and solutions" in Policy 2 and in the narrative; needs includes gaps as well as deficiencies. Reference to OAR 660-012-0830 was removed from Policy 9.

[1] New pricing policies were developed through a four-step process from May through December 2022. The process included a review of existing relevant RTP policies, a review of findings and recommendations from the Regional Congestion Pricing Study and input from an expert review panel, development of draft pricing policies and actions, and recommendations for updates to other policies and Chapter 8 in the RTP. The consolidated elements resulting from this process can be found at: https://www.oregonmetro.gov/sites/default/files/2023/02/24/Draft-2023-RTP-regional-pricing-policies-memo-Jan2023.pdf

[2] The draft policies were developed from 2019-2022 through a joint effort of Metro and the Oregon Department of Transportation (ODOT). More information about this work, including research that informed the draft travel speed targets for throughways can be found at: https://www.oregonmetro.gov/sites/default/files/2023/02/24/Draft-2023-RTP-Regional-mobility-policy-overview-Jan2023.pdf and https://www.oregonmetro.gov/sites/default/files/2023/03/01/Regional-Mobility-Policy-Update-Reliability-Research-Process_0.pdf and https://www.oregonmetro.gov/public-projects/regional-mobility-policy-update

NEXT STEPS

April-May 2023	Metro continues to prepare staff recommendation to TPAC on the 2023 RTP public review draft, including Chapter 3
June 2	TPAC recommendation to JPACT on release of the 2023 RTP public review draft, including Chapter 3, and project list for public review (by Resolution)
June 13	Metro Council discussion on the 2023 RTP public review draft, including Chapter 3
June 15	JPACT consider action on TPAC recommendation on release of the 2023 RTP public review draft, including Chapter 3, and project list for public review (by Resolution)
June 29	Metro Council consider action on JPACT recommendation on release of the 2023 RTP public review draft, including Chapter 3, and project list for public review (by Resolution)
July 10 to Aug. 25	45-day public comment period on the public review draft RTP with hearing(s)
Sept.-Nov. 2023	Metro staff document public comments received and work with TPAC and MTAC to develop recommendations for consideration by MPAC, JPACT and Metro Council
November 2023	JPACT and Metro Council consider adoption of the 2023 RTP (and updated project and program priorities)

Refer to Attachment 5 for the full 2023 RTP schedule. For more information about the RTP update, visit oregonmetro.gov/rtp.

/Attachments

1. Revised Draft 2023 Regional Transportation Plan Chapter 3 (4/11/23)
2. Draft 2023 Regional Transportation Plan Glossary (includes terms used in Chapter 3) (4/11/23)
3. Comparison of 2023 RTP Draft Pricing Policies and Oregon Highway Plan Policy 6 Tolling and Congestion Pricing Policies; and Comparison of 2023 RTP Update Draft Pricing Policies and OHP Policy 6
4. Comments provided by members of TPAC and MTAC on the 3/1/23 staff recommended draft of Chapter 3
5. 2023 RTP Project Timeline and Schedule of Engagement and Metro Council and Regional Advisory Committees' Discussions and Actions for 2023

Attachment 1

DRAFT

4/11/23

Chapter 3
System Policies to Achieve Our Vision
2023 Regional Transportation Plan

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INTRODUCTION

What's changed?

At the start of each section there is a "What's changed?" box that gives a summary of substantive changes in that section. Additionally, changes made from the March 1, 2023, draft are shown in track changes, excluding spelling and grammatical error corrections.

Purpose

Transportation shapes our communities and our daily lives, giving access to opportunities and to meet daily needs. Chapter 3 includes overarching, network, and system management policies for the regional transportation system.

These polices support implementation of the vision, goals and objectives for the regional transportation system defined in Chapter 2 and help the region meet regional performance targets.

Policies guide the development and implementation of the regional transportation system, informing transportation planning and investment decisions made by the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council as well as state and local partners.

Chapter organization

This chapter is organized into three sections. Regional partners have developed policies in this chapter over many decades. As a result, policy sections do not always follow the same format or include all the same elements.

3.1 Regional transportation system components: This section defines the components of the regional transportation system.

3.2 Overarching system policies: This section defines overarching policies for the regional transportation system. Overarching system policies correlate to regional goals and include policies for implementing the 2040 Growth Concept, advancing transportation equity, improving safety, climate leadership and resilience, using pricing, and supporting multimodal mobility. Overarching policies are those policies that impact every part of the transportation system and are essential to meeting regional goals.

Some policies include actions for regional, state, and local agencies and other stakeholders. These policies, such as transportation equity, pricing, and mobility, were developed through the Regional Transportation Plan (RTP) update and do not exist in a separate plan. Implementing actions for policies that are derived from a separate plan, such as the safety and freight policies, are not included in this chapter. Instead, the separate plan is referenced in the text.

3.3 Regional network visions, concepts and policies: This section provides the vision, network concepts, and policies and policy maps for regional street design and placemaking, the regional – motor vehicle, transit, freight, pedestrian and bicycling networks, and for transportation system management and operations, transportation demand management, and emerging technology.

3.1 REGIONAL TRANSPORTATION SYSTEM COMPONENTS

The policies in this chapter apply to the regional transportation system of the greater Portland region. A facility or service is part of the regional transportation system if it provides access to any activities crucial to the social or economic health of the greater Portland region, including connecting the region to other parts of the state and Pacific Northwest, or provides access to and within 2040 Growth Concept centers, main streets, corridors and industrial and employment areas, as described in Section 3.2.1.

Regional transportation system components

The following facilities and areas make up the regional transportation system. Overarching system policies in Section 3.2 apply to these facilities.

1. Planned and existing throughways, highways and arterials shown on the regional motor vehicle network map, including:
    - All state-owned transportation facilities: interstate, statewide, regional and district highways and their bridges, overcrossings and ramps.
    - All city- or county-owned arterial roadways and their bridges.
2. All streets and transportation facilities, including bicycle and pedestrian facilities, within 2040 centers, corridors, industrial areas, employment areas, main streets and station communities shown on the 2040 Growth Concept map.
3. All high capacity transit and regional transit network facilities and their bridges shown on the regional transit network map.
4. All regional bicycle and pedestrian facilities and their bridges, including regional trails shown on the regional pedestrian and bicycle network maps.
5. All bridges that cross the Willamette, Columbia, Clackamas, Tualatin or Sandy rivers.
6. All freight and passenger intermodal facilities, airports, rail facilities and marine transportation facilities and their bridges shown on the regional freight network map.
7. Any other transportation facility, service or strategy that is determined by JPACT and the Metro Council to be of regional interest because it has a regional need or impact (e.g., transit-oriented development, transportation system management and demand management strategies, local street connectivity and culverts that serve as barriers to fish passage).

The Regional Transportation Plan (RTP) designates these facilities on the network maps in this chapter. Together, these facilities and services constitute an integrated and interconnected system that supports planned land uses and provides travel options to achieve the goals, objectives, and policies of the RTP.

3.2 OVERARCHING SYSTEM POLICIES

This section defines regional transportation system policies related to land use, transportation equity, safety, climate protection and resiliency, mobility, and pricing. These policies apply to the regional transportation system and to the networks in Section 3.3.

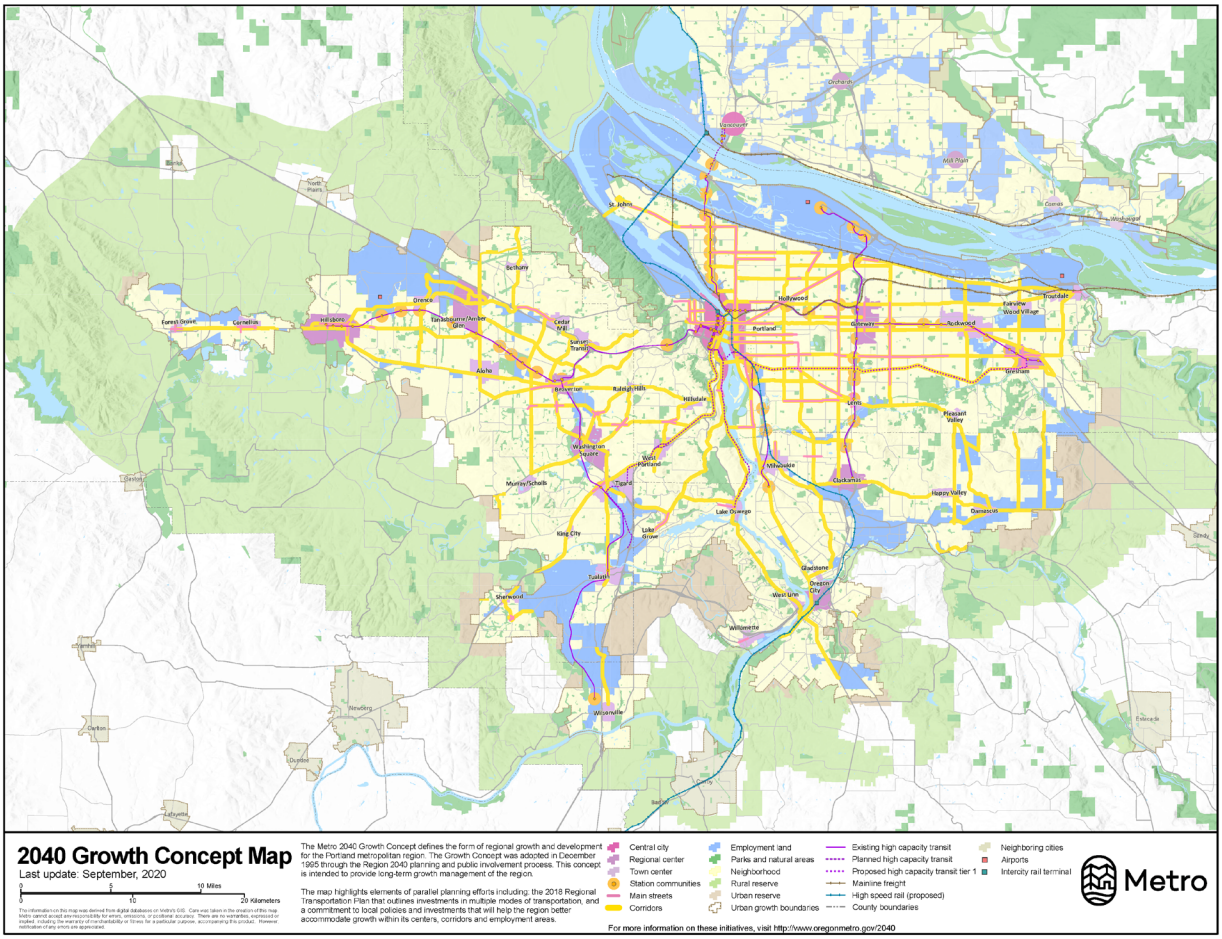
3.2.1 2040 Growth Concept – an integrated land use and transportation vision and strategy

What's changed?

Figure 3.1 updated from March 2023 draft. Provided an explanation of Table 3-2.

In 1995, the greater Portland region adopted the 2040 Growth Concept, the long-range strategy for managing growth that integrates land use and transportation system planning to preserve the region's economic health and livability in an equitable, environmentally sound and fiscally responsible manner.

Figure 3-1 Growth Concept – an integrated land use and transportation vision



Shown in Table 3.1, the 2040 Growth Concept includes land use and transportation building blocks that express the region's aspiration to incorporate population growth within existing urban areas as much as possible and expand the urban growth boundary only when necessary. It concentrates mixed-use and higher density development in urban centers, station communities, corridors and main streets that are well served by transit. It envisions a well-connected street network that supports biking and walking for short trips. Employment lands serve as hubs for regional commerce and include industrial land and freight facilities for truck, marine, air and rail cargo sites that enable goods to be generated and moved in and out of the greater Portland region. Freight access to industrial and employment lands is centered on rail, the freeway system and other road connections.

Implicit in the 2040 Growth Concept is the understanding that compact development is more affordable, sustainable, livable and fiscally responsible than urban sprawl, and will help reduce the region's carbon footprint. Increased pedestrian and bicycle access and new transit and road

capacity are needed to achieve the 2040 Growth Concept vision and support the region's economic vitality.

Transportation and the economy are closely linked and investments that serve certain land uses, or transportation facilities may have a greater economic return than others. Focusing transportation investments and other strategies to support the gateway function of our region's transportation system. This means ensuring reliable and efficient connections between intermodal facilities and destinations within and outside the region to promote the region's function as a gateway for trade and tourism.

3.2.1.1 2040 Growth Concept Land-use Design Types

The 2040 Growth Concept land uses, called 2040 Design Types, are arranged in a hierarchy. Regional Transportation Plan (RTP) investments are typically focused in the primary and secondary land uses, referred to as 2040 Target Areas. These are the areas expected to absorb a large share of the region's future growth. The hierarchy also serves as a framework for prioritizing RTP investments. Table 3-1 lists the 2040 design types based on this hierarchy.

Table 3-1 Growth concept and land use design

2040 Target Areas		
Primary land uses	**Secondary land uses**	**Other urban land uses**
• Portland central city • Regional centers • Industrial areas • Freight and passenger intermodal facilities	• Employment areas • Town centers • Station communities • Corridors • Main streets	• Neighborhoods
		Other land uses outside UGB
		• Urban reserves • Rural reserves • Neighbor cities

Different parts of the region are at different stages of implementing the 2040 Growth Concept. As a result, different areas may have different transportation investment needs and priorities that will require substantial public and private investment over the long-term. Table 3-2 provides an example of the type of investments that might be applicable depending on how far along an area is in implementing the 2040 Growth Concept.

Table 3-2 Priority infrastructure investment strategies

Stage of Development	Developed Areas	Developing Areas	Undeveloped Areas
	Built-out areas, with most new housing and jobs accommodated through infill, redevelopment and brownfields development.	Redeveloping and developing areas, with most new housing and jobs being accommodated through infill, redevelopment and greenfield development.	More recent additions to the urban growth boundary, with most new housing and jobs accommodated through greenfield development.

Infrastructure Investment Strategies	Operations, maintenance and preservation of existing transportation assets.	Operations, maintenance and preservation of existing transportation assets.	Operations, maintenance and preservation of existing transportation assets.
	Managing the existing transportation system to optimize performance for all modes of travel.	Preserving right-of-way for future transportation system.	Preserving right-of-way for future transportation system.
	Leveraging infill, redevelopment and use of brownfields.	Managing the existing transportation system to optimize performance for all modes of travel.	Providing a multimodal urban transportation system.
	Addressing bottlenecks and improving system connectivity to address barriers and safety deficiencies.	Leveraging infill, redevelopment and use of brownfields	Managing new transportation system investments to optimize performance for all modes of travel.
	Providing a multimodal urban transportation system.	Providing a multimodal urban transportation system.	Focusing on bottlenecks and improving system connectivity to address barriers and safety deficiencies.
	Completing local street connections needed to complement the arterial street network.	Focusing on bottlenecks and improving system connectivity to address barriers and safety deficiencies.	Completing local street connections needed to complement the arterial street network.
		Completing local street connections needed to complement the arterial network.	

3.2.2 Transportation Equity Policies

What's changed?

Definitions of some terms were moved to the Draft 2023 RTP Glossary to shorten text. Shortened and simplified by removing repetitive text. Moved some text for clarity. Moved equity policies up in the chapter to directly follow the 2040 Growth Concept, to lead with equity. Consulted with staff in Metro's Diversity, Equity and Inclusion department to review the Equity policies and

develop suggested revisions, as directed by the 2023 RTP work plan. Numbered equity actions to make them easier to reference.

The Regional Transportation Plan (RTP) reflects a regional commitment to plan and invest in the region's transportation system to reduce transportation-related disparities and barriers faced by communities of color and other marginalized communities, regardless of race, language proficiency, income, age, or ability.

~~**Defining terms**~~

~~**Marginalized communities**: Groups who have been denied access and/or suffered past institutional or structural discrimination in the United States, including people of color, people with low English proficiency, people with low income, youth, older adults and people living with disabilities~~

~~**Transportation equity**: The removal of barriers to eliminate transportation-related disparities faced by and improve equitable outcomes for marginalized communities, especially communities of color~~

~~**Racial equity**: The removal of barriers with a specific focus on eliminating disparities faced by and improving equitable outcomes for communities of color – the foundation of Metro's adopted equity strategy with the intent of also effectively identifying solutions and removing barriers for other disadvantaged groups~~

~~**Equity focus areas**: Census tracts where the rate of people of color, people in poverty and people with low English proficiency is greater than the regional average and double the density of one or more of these populations~~

The policies in this section provide direction to Metro, working in partnership with marginalized communities, jurisdictions, and other partners, to prioritize racial and transportation equity in regional transportation planning and decision-making.

Why is a focus on racial equity important?

~~The~~ A goal ~~of a~~ of racial equity ~~focus~~ is to reach a time when ~~we no longer use~~ race is no longer ~~to~~ a predictor of ~~predict~~ life outcomes, and outcomes for all groups are improved. In the transportation context, this means addressing and ~~closing the~~removing disparities ~~gap~~ for marginalized communities, ~~with emphasis on~~especially for people of color, English language learners, and people with low incomes, in areas identified by these communities as priorities for the regional transportation system~~. These priorities~~ , ~~include~~including, but ~~are~~ not limited to, accessibility, mobility, safety, affordability and environmental health.

[NOTE: the next two paragraphs moved from narrative of Policy 1]

Transportation mobility and accessibility plays a significant intersectional role in reducing disparities, but historically, its development and operation has contributed to unequal benefits. Using transportation infrastructure projects as an urban renewal mechanism led to the destruction of thriving communities, particularly ~~communities of color~~Black communities, including in Portland. ~~across the nation. In Portland, the development of the interstate freeway~~

~~system displaced communities of color and lower-income homes, most notably the African American community.~~

~~Since the asphalt and concrete was poured, the l~~Lessons learned from the generational impacts of displacement ~~the interstate system~~ on marginalized communities ~~necessitates~~ teaches us that to achieve ~~the RTP goal of~~ equitable transportation, government must embed~~ding~~ equity considerations in ~~are essential to~~ each step of the planning and implementation process for transportation projects, programs, policies, and strategies.

~~In order for~~ For the greater Portland region to be environmentally sustainable and economically prosperous, ~~the region~~government and communities must proactively address racial disparities and tackle the most pervasive challenges ~~not allowing members of the greater Portland region to thrive~~. Focusing on racial disparities and barriers ~~will~~ helps develop and maintain sustainable economic growth by fostering greater racial inclusion and ~~smaller~~ reducing racial income gaps.[1] This, in turn, will allow communities facing the greatest barriers opportunities to flourish, build generational wealth and, ultimately, succeed. Policies, projects, and strategies that address these disparities will help other marginalized groups, including lower-income White households, older adults, youth and people with disabilities prosper and flourish.

The greater Portland region's economic prosperity and quality of life depend on an equitable transportation system that provides every person and business in the region with access to safe, efficient, reliable, affordable, and healthy travel options and have the fair opportunity to thrive, regardless of their race or ethnicity. Investment in the region's transportation system is one important tool in reducing disparities and barriers experienced by communities of color. But the tool must be intentional and deployed with focus to be successful in reducing racial disparities rather than ~~exacerbating~~worsening disparities.

With a transportation system focused on mobility and access that addresses the transportation disparities and barriers faced by communities of color, the region's transportation system ~~has the ability to~~can open opportunities that can dramatically improve outcomes for all marginalized communities and all people. ~~While on the surface, a focus on racial equity may seem exclusionary, by addressing the most challenging shared barriers faced by those communities, outcomes for other marginalized communities will improve as well~~.[2]

3.2.2.1 Metro's Strategic Plan to Advance Racial Equity, Diversity, and Inclusion (2016)

In 2010, the Metro Council adopted equity as one of the region's six desired outcomes. Adopted by the Metro Council in June 2016, Metro's Strategic Plan to Advance Racial Equity, Diversity, and

1 Treuhaft, S., Blackwell, A.G., & Pastor, M. (2012). America's Tomorrow: Equity is the Superior Growth Model. Retrieved January 2016: www.policylink.org/sites/default/files/SUMMIT_FRAMING_WEB_20120110.PDF

2 To learn more about racial equity as an inclusionary strategy to help other marginalized groups (i.e., low-income households, people with disabilities, older adults), see resources, including Metro's Strategic Plan to Advance Racial Equity, Diversity, and Inclusion or PolicyLink.

Inclusion (Strategic Plan) is a major milestone in the agency's efforts to define, implement and measure equity in the greater Portland region.[3]

The Strategic Plan's purpose is to provide a strategic approach to incorporating equity into policy, decision-making and programs. The Strategic Plan provides clarity and direction to Metro's different lines of business related to integrating and approaching equity in planning, operations, and services.

The key aspect of the Strategic Plan is its focus and emphasis on deliberately tackling inequities based on race and ethnicity. The Strategic Plan is organized around five long-term goals.

The goals are:

A. Metro convenes and supports regional partners to advance racial equity;

B. Metro meaningfully engages communities of color;

C. Metro hires, trains, and promotes a racially diverse workforce;

D. Metro creates safe and welcoming services, programs and destinations; and

E. Metro's resource allocation advances racial equity.

~~Each goal area has specific objectives and implementation actions associated to each goal some of which are internally focused on Metro practices and some of which are externally focused on how Metro considers and serves the needs of communities of color and will require collaborative effort with partners.~~

3.2.2.2 Regional Transportation Plan equity focus areas

~~The Regional Transportation Plan (RTP) focuses~~Metro and regional partners identified Equity Focus Areas using~~on three marginalized communities~~ 2020 Census and 2016-20 American Community Survey data for the following groups:

- People of Color - ~~Persons who identify as non-White.~~People who do not identify as white
- English Language Learners - ~~Persons~~ People who identify as unable "to speak English very well."
- People with Lower Incomes – ~~Persons~~ People with incomes equal to or less than 200% of the Federal Poverty Level

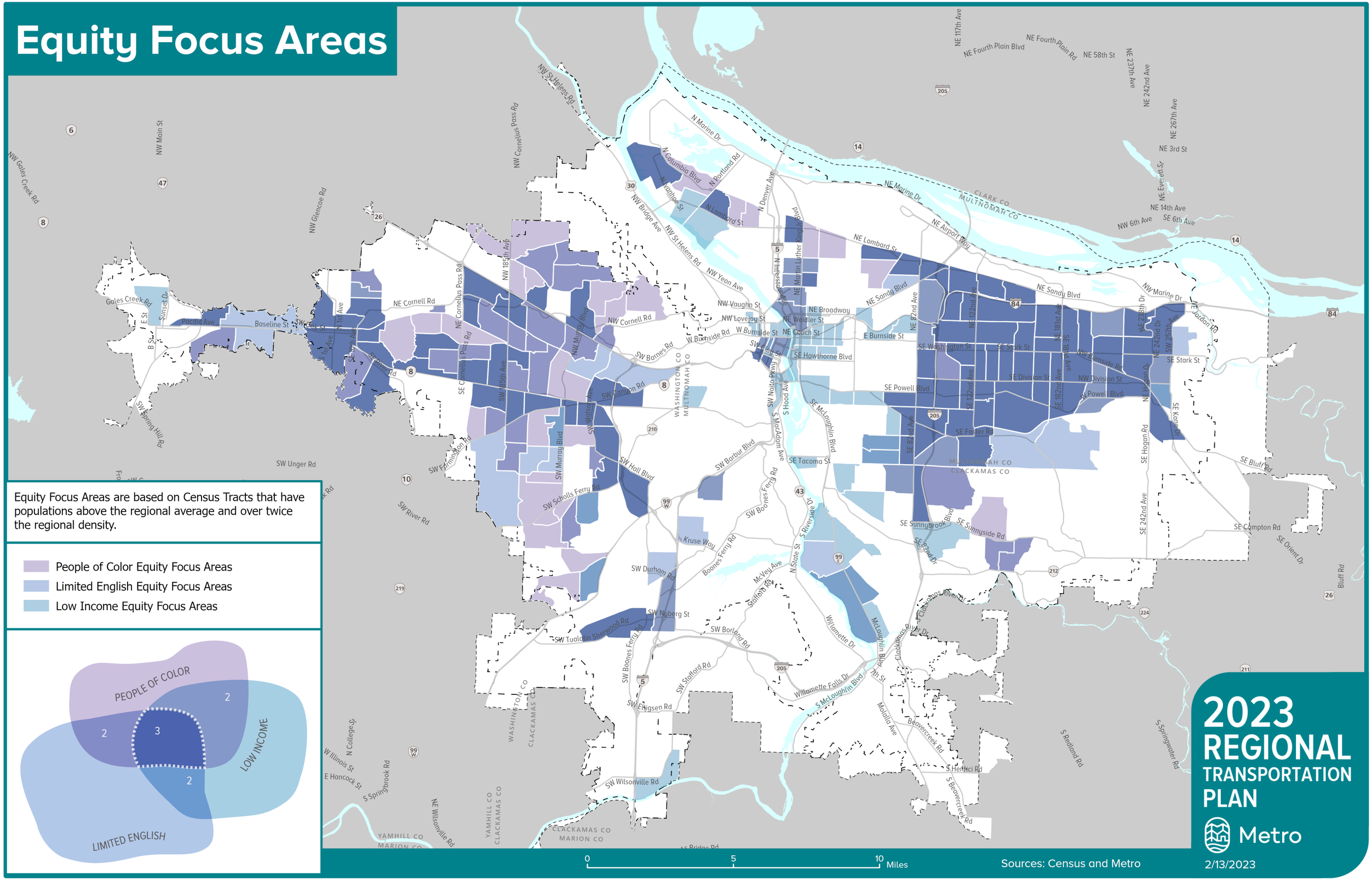
These three ~~communities~~ groups, as identified in Census data, are the emphasis and focus for the ~~Regional Transportation Plan~~RTP, but not with exclusivity to the needs of other marginalized communities, including young people, older adults and people living with disabilities.

[3] https://www.oregonmetro.gov/sites/default/files/2016/11/15/Strategic-plan-advance-racial-equity-diversity-inclusion-exec-summary-17063-20160613.pdf

Figure 3-2 shows Equity Focus Areas, which are areas with double the regional average density of any one of the three groups listed above. The RTP directs certain investments toward these areas where they can benefit as many people ~~in need~~ as possible. More detail on how Metro created this map and on transportation equity in the region can be found in the Needs Assessment in Chapter 4.

Figure 3-2 Regional equity focus areas map

Equity Focus Areas



3.2.2.3 Transportation equity policies

The Transportation Equity policies in this section aim to eliminate transportation-related disparities and barriers[4] identified by marginalized communities as priorities to address through the Regional Transportation Plan (RTP) and regional transportation planning and decision-making processes.

Policy 1	**Embed equity into the planning and implementation of transportation projects, programs, policies, and strategies to achieve equitable outcomes for marginalized communities, particularly communities of color and people with low incomes.**
Policy 2	**Ensure investments in the transportation system support community stability by anticipating and minimizing the effects of displacement and other affordability impacts on marginalized communities, with a focus on communities of color and people with low income.**
Policy 3	**Prioritize transportation investments that eliminate transportation-related disparities and barriers for marginalized communities, with a focus on communities of color and people with low income.**
Policy 4	**Meaningfully engage communities of color and other marginalized communities to participate in the development and implementation of transportation plans, projects and programs.**
Policy 5	**Collect and assess qualitative and quantitative data to understand the transportation-related disparities, barriers, needs and priorities of communities of color and other marginalized communities.**
Policy 6	**Evaluate transportation plans, policies, programs, and investments to understand how they address transportation-related disparities and barriers experienced by communities of color, people with low income and other marginalized communities and the extent disparities are being eliminated.**
Policy 7	**Create living-wage career pathways for people of color and women into the construction industry and support the growth and participation of women and people of color owned firms on capital projects throughout the transportation system.**

The policies provide direction as to how Metro, working in partnership with marginalized communities, jurisdictions and other partners, will prioritize transportation equity in regional transportation planning and decision-making. These policies are consistent with Chapter 660

[4] Transportation-related disparities and barriers identified by historically marginalized communities as priorities to address include safety, access, affordability and community health.

Division 12 of Oregon Administrative Rules (OAR).[5] These rules include additional guidance for equitable transportation planning and decision-making.

Because the ~~Regional~~ Transportation Equity Policies do not have a separate topical plan, specific implementing actions are included for each transportation equity policy.

Transportation Equity Policy 1. Embed equity into the planning and implementation of transportation projects, programs, policies, and strategies to achieve equitable outcomes for marginalized communities, particularly communities of color and people with low incomes.

~~Next two paragraphs moved to introduction. Transportation mobility and accessibility plays a significant intersectional role in reducing disparities, but historically, its development and operation has contributed to unequal benefits. Using transportation infrastructure projects as an urban renewal mechanism led to the destruction of thriving communities, particularly communities of color across the nation. In Portland, the development of the interstate freeway system displaced communities of color and lower-income homes, most notably the African American community.~~

~~Since the asphalt and concrete was poured, the lessons learned from the generational impacts of the interstate system on marginalized communities necessitates that to achieve the RTP goal of equitable transportation, embedding equity considerations are essential to each step of the planning and implementation process for transportation projects, programs, policies and strategies.~~ Equity considerations embedded in transportation projects, programs, policies, and strategies must reflect the transportation priorities identified by ~~these~~ marginalized communities ~~voiced for the transportation~~, ~~which may include, but not limited to~~including accessibility, safety, community health, and affordability. ~~To embed~~Embedding equity into planning and implementation requires a paradigm shift as to how transportation is currently planned, built and operated. This includes bringing in unheard voices from project or policy inception all the way through construction to understand the perspective of potential benefits or impacts.

Additionally, transportation agencies must consider how investments ~~must consider the different ways in which they~~ can advance equity. A transportation investment ~~has the ability to~~can provide greater access to opportunities for ~~support~~ marginalized communities, such as access to ~~reach~~ education~~al facilities~~ or ~~new~~ jobs ~~opportunities~~, but a transportation investment also offers contracting and hiring opportunities. By embedding equity into transportation comprehensively, a full view and consideration of the benefits and impacts of transportation can be understood and weighed.

[5] See OAR 660-012-0130 (Decision-Making with Underserved Populations), OAR 660-012-0125(Underserved Populations) and OAR 660-012-0135 (Equity Analysis).https://secure.sos.state.or.us/oard/displayDivisionRules.action?selectedDivision=3062

Agencies can take a variety of actions ~~can guide agencies in embedding~~to embed equity into transportation processes. Many transportation agencies have organizational level equity policies that can support the implementation and incorporation of these actions. For example, existing policies and structures can support participation mechanisms, such as creation of committees in ways that address power imbalances among groups and stipends for community participation in decision making processes.

To implement Transportation Equity Policy 1, regional partners should take the following actions:

1. Examine the structure of decision-making processes, identify who participates (or doesn't) in decision making and how their input is linked to the outcomes of the decisions.
    a. Change the design of decision-making processes to increase access and opportunity to those who have been previously excluded. This includes prioritizing representation from Black, Indigenous and People of Color communities and equity leaders.
    b. Provide opportunities for direct interaction with decision makers and shift power inequities.
2. Use specific methods, analysis and tools in transportation planning, and decision-making processes to eliminate exclusionary practices. This includes using tools, analysis, and methods to check implicit bias and assess ~~more clearly~~ power dynamics ~~in the effort~~, providing distinct participation mechanisms for those most impacted, considering who benefits and who is most impacted by decisions, and ultimately shifting the way decisions are made.
    a. **Data collection and analysis**: Assessment of current community conditions that may be impacted by the proposed decision with attention to demographics ~~and~~, historical, real estate market, workforce, ~~economic,~~ and environmental conditions.
    b. **Social and economic power analysis**: A social power analysis is a tool that can be used to determine who has the decision-making power or influence, historically and today, to inform this decision, as well as who has the power to change this decision. This analysis is supported by data collection that considers who is positively and negatively affected by the proposed decision.
    c. **Appointed representation**: Appointed representation is a participation mechanism for appointing individuals from specific social groups who have the least influence and are most impacted by the proposed decision.
    d. **Decision mapping**: This tool supports the design of a process to include individuals and groups that lack access and opportunity to participate in decision making. Conceptual mapping of a process is used to determine how and when individuals or a group may be included in decisions and how their input is linked to outcomes. A key aspect of this is identifying decision points to inform how to situate participants to influence decisions rather than serve as a review body.

e. **Reflective questions**: Incorporating specific questions into decision making processes help address implicit bias and shift the way we make decisions. These may include questions such as: Who benefits and who is burdened by this decision? In addition, more extensive and in-depth questions may be tailored to the specific policies and programs.

Transportation Equity Policy 2. Ensure investments in the transportation system support community stability by anticipating and minimizing the effects of displacement and other affordability impacts on marginalized communities, with a focus on communities of color and people with low income.

A trend observed across many western U.S. cities is that with a severe deficit of housing supply, particularly affordable units, the addition of certain transportation projects, such as a new rail line or a high-quality bicycle/pedestrian trail, can increase surrounding property values~~ and~~, contribute to displacement, and disrupt community stability. This has occurred in Portland~~ is not immune to these trends~~, in particular this has been the Black communities experience in North and Northeast Portland. Over time, ~~former~~ ethnic and new immigrant neighborhoods ~~near the region's core with great access~~ with good access to transportation have gentrified, displacing ~~a number of~~ established communities~~ which have an established a history associated with these places~~. ~~The 2040 growth~~Dense centers~~, as~~ are appealing and desirable~~,~~ and ~~are not keeping pace with a mix of~~ do not have enough affordable housing ~~to keep existing residents while~~and are becoming more expensive as transportation investments are ~~being~~ made. This creates a vicious cycle of increased transportation access to those who have the financial means to afford travel options and the benefits not born to the existing community.

[NOTE: Removed text duplicative of actions below.]

The success, sustainability and prosperity of the region relies on how well ~~the regio~~government agencies and partners ~~n manages issue of~~ addresses displacement before ~~as~~ infrastructure investments are made. ~~But too often the silos of transportation and land use prevent coming to agreement on creative solutions which can mitigate and proactively address displacement. The greater Portland region is renowned for breaking down the transportation and land use silo, but d~~Displacement is a pervasive challenge that requires ~~further~~ongoing collaboration ~~across~~between land use, housing and transportation agencies. ~~disciplines and acknowledgement by all transportation professionals that they are part of the solution and not an outside observer. Removed text duplicative of actions below.To ensure investment in the transportation system anticipate, affordability impacts and the effects of displacement, planning and implementation of transportation investments must be coordinated with the surrounding land use, take extra care and consideration of the demographic factors in the surrounding area in evaluating the displacement risk, implement land use strategies prior to the transportation investment, engage the marginalized communities at risk, and imbed funding commitments.~~

To implement Transportation Equity Policy 2, regional partners should take the following actions:

1. Plan capital transportation investments to include a ~~compendium~~variety of strategies to avoid and minimize involuntary displacement, such as increasing rent burden.
2. Demonstrate how intersectional issues of housing affordability and displacement are being addressed proactively in plans and programs prior to capital investment in transportation infrastructure.
    a. ~~In compendium, l~~Look at ~~the~~ land use solutions and survey what is necessary in land use policy to avoid and mitigate involuntary displacement.
    b. Collect data and build analysis tools that can assess and monitor transportation and housing affordability issues and share the information to partners ~~in order~~ to help inform capital investment decisions.
3. Increase the number of units of regulated affordable housing in proximity to frequent transit service and in 2040 growth centers as well as communities with rich access to travel options, jobs, and community places.

Transportation Equity Policy 3. Prioritize transportation investments that eliminate transportation-related disparities and barriers for marginalized communities, with a focus on communities of color and people with low income.

~~To achieve the RTP goal of equitable transportation, efforts to close the gap marginalized communities experience relative to outcomes the transportation system contributes to~~Eliminating transportation disparities is vital to achieving transportation equity. ~~Transportation outcomes identified as priorities by m~~Marginalized communities have identified ~~include~~ affordability, safety, access, and environmental health as transportation priorities. ~~To focus~~Focusing on eliminating disparities ~~is~~requires a ~~paradigm~~ shift in the current practices of transportation agencies, and ~~means approaching~~developing transportation plans, programs, policies, ~~-~~and investments ~~under the lens~~to achieve of fairness rather than equality.

While ~~there is a desire to see the~~Federal law requires that benefits and ~~impacts~~ burdens of transportation are distributed equally ~~across everyone~~, ~~an approach which does~~, transportation agencies should ~~not intentionally~~ focus on ~~equitable outcomes does not help close the~~eliminating disparities caused by systemic racism ~~a pervasive system which erected barriers and separated the level of benefit for certain communities over others. Eliminating the disparities is also a long-term commitment and significant undertaking as no one project can undo system-wide disparities which have been compounded over years. Nonetheless, in focusing on b~~By eliminating ~~the~~ transportation disparities ~~brought on by the transportation system's development and operation~~, not only will marginalized communities ~~see the benefits~~benefit, but ~~the region will see benefits spread across~~ all communities will benefit.

To ~~begin to~~ focus on the disparities, it is imperative for transportation agencies to ask marginalized communities to provide ~~the~~ direction and prioritization of which disparities to tackle first and the best methods to do so.

[NOTE: Removed, repetitive of first paragraph.] ~~Through the development of the RTP, engagement with marginalized communities and a retrospective process of previous engagement efforts elevated the need for the transportation system to provide greater accessibility, be safer for all users, be more affordable for users, and finally not detriment the health and well-being of all communities, but particularly marginalized communities as they have shouldered the brunt of environmental impacts.~~

~~As a starting point and a way to begin focusing on addressing the disparities immediately, an intentional focus is necessary with the prioritization of the allocation of resources to focus on those outcomes that marginalized communities have identified as the priorities for their communities and within their communities in the near- and the long-term.~~ This should also be done with continued engagement through implementation and future prioritization processes to reflect new priorities or other unforeseen issues. *Also see Transportation Equity Policies 4 through 6*.

To implement Transportation Equity Policy 3 regional partners should take the following actions:

1. Seek opportunities to restore Black, Indigenous and people of color (BIPOC) and other marginalized communities harmed by past transportation decisions through collaborative re-investment and removal of harmful infrastructure.
2. Commit to and focus on systematically addressing disparities for marginalized communities, and measure and track progress.
3. Actively question and engage impacted communities to understand how the plan, program, policies, strategies, or action being undertaken contributes to reducing and eliminating disparities.
4. Actively recognize and put aside implicit partialities and biases.
5. More specifically for the outcomes of safety, access, affordability, and public health, prioritize the following:
    a. Among the multiple priorities for the region's transportation system, prioritize and advance the equity elements of the priority. For example, in looking at a transportation investment focused on safety, advance the element that would benefit communities of color over a general safety benefit.
    b. Prioritize building out the active transportation infrastructure network in areas where there are gaps and deficiencies. Focus on completing gaps in communities of color as a means of prioritizing equity. This includes advancing the completion of access to transit in marginalized communities.
    c. Implement the Regional Travel Options Strategy, including the new Safe Routes to School program, with emphasis to support new partnerships with organizations that serve marginalized communities.

d. Prioritize the safety of the transportation system, especially in marginalized communities, but focus on addressing the systemic safety issues on high injury corridors which marginalized communities' traverse. Focus on increasing safety in high-risk locations and on high injury corridors that coincide with higher residential concentrations of marginalized communities.

e. Prioritize and focus on increasing active transportation and transit access to jobs and community places (e.g., libraries, pharmacies, grocery stores, schools, etc.) and services for marginalized communities. Place an emphasis on connecting marginalized communities to middle-wage employment opportunities.

6. Focus on ~~different~~ transit solutions ~~transit~~ that serve marginalized communities.

   a. This may include creative solutions such as community and job connector shuttle services.

   b. Focus increase in service on transit routes that serve a significant portion of marginalized communities.

   c. While not the most productive and efficient from a strict transit management view, consider coverage transit service routes to support marginalized communities as they navigate the shifting housing affordability dynamics.

   d. Support special needs transportation providers.

7. Complement affordable housing and transit-oriented development to support the integration of land use and transportation where marginalized communities ~~have the ability to~~ will benefit.

   a. Ensure the long-term sustainability of programs that make transportation affordable, including the adult low-income fare and student pass programs on transit.

   b. Complement and cross-implement the strategies in the *Coordinated Transportation Plan for Seniors and People with Disabilities* in Appendix G.

8. Document and address existing disparities in exposure to transportation related air pollutants, including PM2.5, Diesel PM, NO2 and air toxics, -and evaluate whether projects reduce or exacerbate disparities.

Transportation Equity Policy 4. Meaningfully engage communities of color and other marginalized communities to participate in the development and implementation of transportation plans, projects and programs.

~~To achieve an equitable transportation system that eliminates disparities and barriers experienced by marginalized communities, m~~Meaningful engagement is critical to understand the perspectives and experiences of marginalized communities and to build plans, projects, and programs to address these perspectives and experiences.

Meaningful and inclusive engagement takes a significant effort and relies on building relationships and trust with members of marginalized communities, ~~which~~and is a significant change from the

conventional practices of public involvement in the transportation sector~~, which places barriers to being involved~~. Engagement and inclusion ~~is part of~~help embedding equity in the transportation planning process by allowing for marginalized communities to be seen, heard and considered, and allow for their needs and priorities to influence the planning and decision-making process.

To implement Transportation Equity Policy 4 regional partners should take the following actions:

1. Reduce the barriers to participation in public processes for these communities.
    a. Transportation professionals should look to reduce the barriers for marginalized communities to participate (e.g. go out into the community, offer language translation and childcare services, provide food and incentives) and reach out to marginalized communities in meaningful ways (e.g. engaging through a community liaison, allowing communities to lead the discussion) and at opportunities to shape and influence transportation plans, policies and program (e.g. not at a perfunctory time).
2. ~~-~~Identify funding and contracting opportunities for community outreach liaisons and community based organizations who are trusted members of marginalized communities to facilitate relationship-building, conversations, and meaningful engagement.
3. ~~-~~Dedicate resources ~~that toward~~to meaningfully engag~~ing~~e marginalized communities in planning and decision-making processes.
4. Bring in voices from marginalized communities to add perspective and help guide how equity can be embedded in the planning and decision-making process. ~~Also see Transportation Equity Policy 4~~.
5. ~~Look to~~Use the Climate Friendly Equitable Communities (CFEC) Program for guidance/rules on inclusive decision making.

Transportation Equity Policy 5. Collect and assess qualitative and quantitative data to understand the transportation-related disparities, barriers, needs and priorities of communities of color and other marginalized communities.

Conventional data sources and analysis practices do not always capture ~~and articulate the nature of~~ disparities experienced by ~~different~~ marginalized communities. While national datasets or statewide statistics ~~are able to~~ provide a picture of disparities, gaps in local data and information ~~impacts the ability~~makes it difficult to assess the performance of transportation plans, programs, and policies on the outcomes and priorities identified marginalized communities.

~~The need to collect~~Collecting ~~more~~ disaggregated data ~~with confidence~~ at a local~~ized~~ scale gives the ability to look in-depth at local~~ized~~ conditions on key transportation outcomes identified as priorities by marginalized communities – affordability, safety, access, and environmental health – and is necessary to understand the current level of disparities and establish ~~an~~ appropriate baselines. Until ~~the data need is fulfilled~~such data can be collected, it is imperative to supplement data collection and assessment with engagement to gather the qualitative information directly

from marginalized communities. [NOTE: repetitive] ~~The information collected helps to better represent and articulate the disparities experienced and needs of marginalized communities to help bring focus.~~

Additionally, in supplementing quantitative data with engagement ~~as part of data collection~~and qualitative data, ~~the process helps to confirm~~ needs, gaps, and deficiencies which may have already been identified can be confirmed. ~~In facilitating greater attention to~~ By supporting data collection and assessment focused on the needs and priorities of marginalized communities, ~~particular~~especially communities of color, transportation professionals ~~have further ability and~~ will have better information to plan, program, and implement strategies or actions which can better address the priorities and needs.

To implement Transportation Equity Policy 5, regional partners should take the following actions:

1. Collect data in a manner that facilitates looking at outcomes with an equity lens.
    a. Collect localized disaggregated data.
    b. Emphasize collecting as much qualitative data as quantitative data.
    c. Collect data that is meaningful to marginalized communities.
2. Appropriately resource data collection and assessment to focus on outcomes with an equity lens.
    a. Acknowledge and recognize data collection and assessment methods will be unfamiliar and new for many project managers and likely to be a necessary but challenging to break convention.
3. Appropriately resource the development of a disparities baseline looking at measures of affordability, safety, access, and environmental health to understand disparities of marginalized communities, in particular people of color.
4. Conduct meaningful engagement with marginalized communities to supplement and ground truth data and technical analysis findings.

Transportation Equity Policy 6. Evaluate transportation plans, policies, programs, and investments to understand how they address transportation-related disparities and barriers experienced by communities of color, people with low income and other marginalized communities and the extent disparities are being eliminated.

To know and to be accountable to whether transportation plans, programs, policies and strategies are making progress towards eliminating disparities, particularly in access, safety, affordability, community health and any other transportation-related priority identified by marginalized communities, evaluation under the lens of what disparities the plans, policies, programs and strategies address is just as crucial as engagement, prioritization and mitigation. The assessment process helps to understand effectiveness, progression, monitoring and accountability in achieving the equitable transportation and other associations RTP goals and objectives. Evaluation also provides transparency towards what to expect as a result.

To implement Transportation Equity Policy 6, regional partners should take the following actions:

1. Resource evaluation methodology development appropriately.
    a. Disaggregate and evaluate data system-wide, as well as by individual project, program or community.
    b. Let the evaluation be led, guided and verified by marginalized communities and their lived experiences.
    c. Ground truth evaluation results through engagement.
    d. Utilize both qualitative and quantitative data in evaluation.
2. Be willing to use non-standard forms of evaluation. Clearly state assumptions and recognize what the method may be testing and the limitations of the evaluation.
3. Set up a long-term feedback loop of evaluation and monitoring; evaluate at each stage and monitor whether projected outcomes are coming to fruition and/or whether plans, policies, programs and strategies may need additional mitigations or a course correction.

Transportation Equity Policy 7. Create living-wage career pathways for people of color and women into the construction industry and support the growth and participation of women and people of color owned firms on capital projects throughout the transportation system.

To Be ADDED: A call-out box that provides background on Construction Career Pathways, and/or link to the Construction Career Pathways webpage.

The construction industry has seen tremendous growth in the last ten years and is one of the fastest-growing industries in recent years, outpacing the rest of the economy. The median wage for construction occupations is higher than the median wage across all sectors in the greater Portland region. It is one of the remaining sectors where workers can make a living-wage income without a higher education degree. At the same time the construction industry is grappling with costly workforce shortages driven by an aging workforce and reality that women and people of color face significant barriers in entering the industry and building their careers.

Construction has been a racially homogenous industry, yet labor market data indicates a shortage in skilled talent. Diversifying the construction workforce will not only help create a stronger supply of needed workers for the industry, but it will also directly address issues of poverty and economic mobility within communities of color and working families in the region.

Transportation infrastructure projects can have a big impact on promoting equitable growth in the region's economy by providing job opportunities for people of color in the construction trades. While federal and state laws have provisions which facilitate greater access for minority, women-owned and disadvantaged businesses (MWDBE) to be part of these contracting and construction

opportunities, the construction industry has a workforce which is not reflective of demographics. Yet it remains a sector that provides access to living-wage careers for marginalized communities, particularly communities of color.

The RTP is a long-range transportation blueprint for the capital investments needed to accommodate existing needs and future population and employment growth. An emphasis on the construction workforce is relevant to building out the transportation system equitably and making progress towards reducing the disparities seen among marginalized communities in terms of living-wage career opportunities and longer-term income stability and affordability. By focusing public investments to advance contracting and workforce equity in the construction trades, transportation infrastructure projects can help mitigate wealth disparity gaps experienced by marginalized communities.

Metro's Construction Career Pathways is a coordinated strategy for growing and diversifying the region's construction workforce. This effort centers on a shared policy framework that provides a roadmap for public agencies to work with labor unions, workforce development organizations and contractors to create opportunities for women and people of color in the construction workforce. As more public agencies in the region join the effort, each agency's individual workforce development efforts are better positioned to succeed in cultivating a labor pool that strengthens their community and reflects the populations they serve.

To implement Transportation Equity Policy 7 regional partners should take the following actions:

1. ~~Formalize~~ Use t inclusive hiring practices and contracting opportunities and formalize reporting of minority, women-owned and disadvantaged businesses construction contracts ~~and workforce diversity utilization~~ on all Metro-funded transportation projects.
2. For transportation investments programmed within the MTIP, particularly as part of the construction phases, request from partners information about minority, women-owned and disadvantaged business contracting and workforce diversity utilization.
3. Through partnership with Metro's Diversity, Equity and Inclusion program, provide information and resources to partners on ways to support and advance equity in contracting and workforce.
4. Develop mechanisms to incentivize partners to pursue recruitment and retention strategies on transportation projects that help grow and diversify the construction workforce.
5. Encourage workforce diversity utilization through apprenticeships with marginalized communities as part of contracts.
6. Partner with workforce development organizations to improve outreach, share information and leverage resources that support and grow a diverse construction workforce and contracting community.

3.2.3 Safety and Security Policies

What's changed?

Since the March 2023 draft: Added language related to disparities in crash-related injuries and level of physical activity impacted by lack of safe places to walk and bicycle under Safety Policy 9 narrative. Added Equity Focus Areas to the High Injury Corridors map.

Eliminating traffic related deaths and life changing injuries (often defined as fatalities, and severe or serious crashes) and increasing the safety and security of the transportation system is a top priority of the Regional Transportation Plan (RTP), as is prioritizing safety for people of color, people with low incomes, people with disabilities, people walking, bicycling, and using motorcycles, youth and older adults.

What do we mean by safety and security?

Transportation safety is protection from death or bodily injury form a motor-vehicle crash while engaged in travel. Individual and public transportation security is protection from intentional criminal or antisocial acts while engaged in trip making.

3.2.3.1 Regional Transportation Safety Strategy (2018)

The Regional Transportation Safety Strategy ("Safety Strategy") identifies data-driven strategies and actions to address the most common types of crashes and contributing factors.[6] Key findings from the analysis of crash data from 206-2020 can are in Chapter 4 of the Regional Transportation (RTP). More detailed findings are in the 2018 Metro State of Safety Report and the Safety Strategy.[7]

The Safety Strategy recommends **six strategies** to support achieving the region's adopted Vision Zero target for 2035, shown in Figure 3-3. Each strategy includes specific actions. The strategies and actions are evidence-based and were identified by the safety work group in response to analysis of crash data in the 2018 Metro State of Safety Report and other sources. Refer to the Regional Transportation Safety Strategy for detailed information on each of the strategies and specific actions.

Figure 3-3 Regional transportation safety strategies

[6] The Regional Transportation Safety Strategy, adopted in December 2018, is a topical plan and appendix of the Regional Transportation Plan.

[7] The Regional Transportation Safety Strategy is a topical plan of the Regional Transportation Plan. The 2018 Metro State of Safety Report is an appendix of the Safety Strategy.

3.2.3.2 Using the Safe System approach

The Safety Strategy employs a Safe System approach with the goal of zero fatal and severe injury traffic deaths. The Safe System approach originated in Sweden and now other countries and many U.S. cities are using the framework. Similar frameworks are Vision Zero (Sweden), Toward Zero Deaths (U.S.), Road to Zero Coalition (National Safety Council), Safe System (New Zealand), and Sustainable Safety (Denmark).

The Safe System approach involves a holistic view of the transportation system and the interactions among travel speeds, vehicles, road users and the road itself. It is an inclusive approach that prioritizes safety for all user groups of the transportation system - drivers, motorcyclists, passengers, pedestrians, bicyclists, and commercial and heavy vehicle drivers.

Consistent with the region's long-term safety vision, it acknowledges that people will make mistakes and may have road crashes—but the system should be designed so that those crashes should not result in death or serious injury. Design emphasizes separation – between people walking and bicycling and motor-vehicles, access management and median separation of traffic – and survivable speeds.

Figure 3-4 Components of the Safe System approach

Source: Metro

Governments using the Safe System approach focus on preventing all fatal and severe injury crashes. It recognizes that the responsibility for crash prevention resides not only with roadway users but with transportation professionals and decision makers. Agencies using the Safe System approach have been more effective in reducing traffic deaths and severe injuries than more traditional approaches that focus on all crashes.[8]

The Safe System approach focuses on the following key guiding principles that shape how stakeholders address transportation safety (Figure 3-5).

[8] Sustainable and Safe: A Vision and Guidance for Zero Road Deaths, World Resources Institute, Global Road Safety Facility (2017)

Figure 3-5 Guiding principles of the Safe System approach

Source: Metro

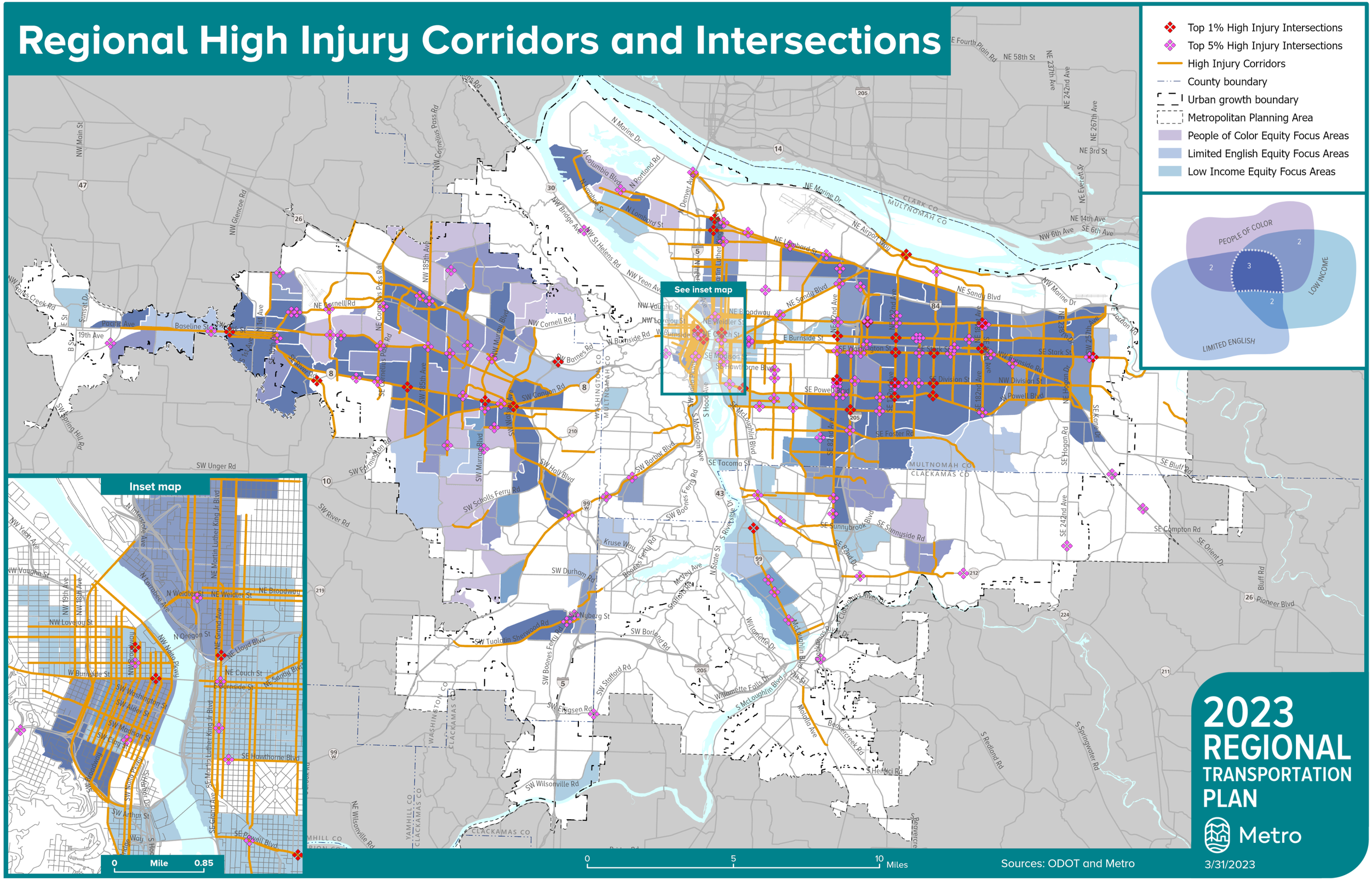
Refer to the Regional Transportation Safety Strategy for detailed information on the Safe System approach.

3.2.3.3 Regional high injury corridors and intersections

Figure 3-6 shows the map of regional high injury corridors overlapping with Equity Focus Areas. Metro and regional partners identify regional high injury corridors and intersections to help prioritize safety near term investments. Metro will update this map every five years. In the interim, transportation agencies and stakeholders may identify other safety investments that warrant priority based on other data and analysis. The needs assessment in Chapter 4 provides more detail on how this map was created, along with other safety data.

Figure 3-6 Regional high injury corridors and intersections

Regional High Injury Corridors and Intersections



3.2.3.4 Safety and security policies

Regional Transportation Safety and Security Policies reflect the policy framework of the Regional Transportation Safety Strategy. Implementation of the policies supports achieving the regional Vision Zero target for 2035 and making travel in the region safer and more secure for all people.

Policy 1	**Focus safety efforts on eliminating traffic deaths and severe injury crashes to achieve Vision Zero.**
Policy 2	**Prioritize safety investments, education and equitable enforcement on high injury and high-risk corridors and intersections, with a focus on reducing speeds and speeding.**
Policy 3	**Prioritize investments that benefit people with higher risk of being involved in a serious crash, including people of color, people with low incomes, people with disabilities, people walking, bicycling, and using motorcycles, people working in the right-of-way, youth and older adults.**
Policy 4	**Increase safety for all modes of travel and for all people through the planning, design, construction, operation, and maintenance of the transportation system, with a focus on reducing vehicle speeds.**
Policy 5	**Make safety a key consideration in all transportation projects and avoid replicating or exacerbating a known safety problem with any project or program.**
Policy 6	**Employ a Safe System approach and use data and analysis tools and performance monitoring to support data-driven decision-making.**
Policy 7	**Utilize safety and engineering best practices to identify low-cost and effective treatments that can be implemented systematically in shorter timeframes than large capital projects.**
Policy 8	**Prioritize investments, education and enforcement that increase individual and public security while traveling by reducing intentional crime, such as harassment, targeting, and terrorist acts, and prioritize efforts that benefit people of color, people with low incomes, people with disabilities, women and people walking, bicycling, and taking transit.**
Policy 9	**Make safety a key consideration when defining system adequacy (or deficiency) for the purposes of planning or traffic impact analysis.**

Safety Policy 1. Focus safety efforts on eliminating traffic deaths and severe injury crashes to achieve Vision Zero.

To reach the goal of eliminating deaths and severe injuries from traffic crashes, this policy directs safety related efforts to focus on fatal and severe injury crashes, as opposed to all crashes. Focusing on serious crashes is a key tenant of the Safe System approach. It entails identifying where serious crashes occur and focusing on those locations, identifying the risk factors involved in serious crashes and addressing and eliminating those risks, focusing enforcement and education on high-risk behaviors that lead to serious crashes and less or no enforcement or education on low-risk behaviors. When communities use enforcement, precautions must be implemented to ensure equitable actions and outcomes.

Safety Policy 2. Prioritize safety investments, education and equitable enforcement on high injury and high-risk corridors and intersections, with a focus on reducing speeds and speeding.

This policy directs safety investments, education and equitable enforcement to be prioritized on the corridors where the most serious crashes have occurred or have a risk of occurring (due to identified risk factors such as lack of roadway separation or excessive speeding). This policy approach, prioritizing corridors where deadly crashes are or could occur, more effectively uses limited resources where the most serious issues are. Additionally, this policy emphasizes the systemic approach to safety to address known safety risk factors corridor wide to prevent serious crashes from occurring in the future.

Safety Policy 3. Prioritize investments that benefit people with higher risk of being involved in a serious crash, including people of color, people with low incomes, people with disabilities, people walking, bicycling, and using motorcycles, people working in the right-of-way, youth, and older adults.

This policy is based on the Safe System approach of prioritizing safety efforts on people with the highest risk of dying in a traffic crash as a key strategy to eliminating serious crashes overall. This policy also helps implement Metro's Strategic Plan for Advancing Equity, Diversity and Inclusion.

Safety Policy 4. Increase safety for all modes of travel and for all people through the planning, design, construction, operation, and maintenance of the transportation system, with a focus on reducing vehicle speeds.

This policy requires that stakeholders integrate transportation safety into every aspect of the transportation system. It is a key element of the Safe System approach which takes a systemic and holistic approach. Safe travel speeds are a core element of achieving Vision Zero. Speed limits in Safe System approach are based on aiding crash avoidance and a human body's limit for physical trauma. An unprotected pedestrian hit at over 20mph has a significant risk of death or life-changing injury. A car in a side-on collision can protect its occupants up to around 30mph; a car in a head-on collision up to around 40mph. Establishing survivable speeds on streets where people using different modes at variable speeds and with different levels of physical protection are essential. Additionally, a diversity of users must be taken into account as the system is developed.

For example, people of color, older adults and children may have different needs that must be addressed at every phase.

Safety Policy 5. Make safety a key consideration in all transportation projects and avoid replicating or exacerbating a known safety problem with any project or program.

While most policies are proactively focused on improving safety, this policy requires that transportation projects and programs clearly evaluate the impacts on all users of the transportation system and do not negatively impact any of those users by either replicating something which has been shown to increase safety problems for roadway users or making a current safety issue worse.

Safety Policy 6. Employ a Safe System approach and use data and analysis tools and performance monitoring to support data-driven decision-making.

Transportation agencies have proven that the Safe System approach reduces serious crashes. The approach is based on data driven strategies and actions. Collecting, maintaining, and analyzing data on a regular basis is critical to focusing investments where they will be most effective. Additionally, monitoring progress and assessing the outcome of investments in safety is crucial to learning from the past and improving in the future.

Safety Policy 7. Utilize safety and engineering best practices to identify low-cost and effective treatments that can be implemented systematically in shorter timeframes than large capital projects.

Many solutions to improve safety are inexpensive. This policy prioritizes addressing safety problems on a corridor level sooner rather than later to prevent serious crashes from occurring in the future. Rather than postponing safety interventions until a larger and more expensive project can be funded this policy directs that low-cost and effective treatments be implemented first.

Safety Policy 8. Prioritize investments, education and equitable enforcement that increase individual and public security while traveling by reducing intentional crime, such as harassment, targeting, and terrorist acts, and prioritize efforts that benefit people of color, people with low incomes, people with disabilities, women and people walking, bicycling, and taking transit.

Individual and personal security while traveling has an important relationship to transportation safety, especially for people of color. Fear of harassment or being targeted can deter people of color from walking, bicycling or using transit and may increase the use of motor-vehicle transportation. Though individual and public security can be challenging to address, a variety of approaches are needed to create a safe and welcoming transportation system, including: collecting data, utilizing crime prevention through environmental design, taking into account a diversity of users when developing and operating the transportation system, educating people to look out for and care for one another, designing security into projects (such as street lighting, visibility, call boxes), equity training for public safety and transportation professionals, and including a wide range of groups in design and decision making.

Safety Policy 9. Make safety a key consideration when defining system adequacy (or deficiency) for the purposes of planning or traffic impact analysis.

This policy specifies that safety data (including disparities in crash-related injuries and level of physical activity impacted by lack of safe places to walk and bicycle), analytical tools and metrics must be part of the evaluation when defining the adequacy of capacity on the transportation system.

3.2.4 Climate ~~Leadership~~ Strategy and Resilience Policies

What's changed?

Three policies were edited to reflect the top three climate smart strategy priorities identified by JPACT and the Metro Council during a joint workshop in November 2022. The TSMO parking management policy was deleted to avoid duplication with Climate Policy 7, which was slightly revised to incorporate some of the TSMO policy. The parking policy language from the TSMO policy was used to replace the Climate Smart parking policy consistent with new Climate-Friendly and Equitable Communities (CFEC) rules. Other changes to this section reflect the work done since the 2018 RTP in the Emergency transportation Routes phase 1 project, including an updated map of regional emergency transportation routes and State Seismic lifeline routes. These policies are focused on climate mitigation.

Since the March 2023 draft: Updated section heading. Added a new policy on emergency transportation routes. Edited policy 9 to reflect that resilience has been added to the RTP Climate Goal. A more thorough treatment of resilience will be needed in the future, as well as revisiting how air quality is addressed in the RTP policies. Policies related to teleworking could also be explored.

Climate change may be the defining challenge of this century. Global climate change poses a growing threat to our communities, our environment and our economy, creating uncertainties for the agricultural, forestry and fishing industries as well as winter recreation. The planet is warming, and we have less and less time to act. Documented effects include warmer temperatures and rising sea levels, shrinking glaciers, shifting rainfall patterns and changes to growing seasons and the distribution of plants and animals.

Warmer temperatures will affect the service life of transportation infrastructure, and the more severe storms that are predicted will increase the frequency of landslides and flooding. Consequent damage to roads and rail infrastructure will compromise system safety, disrupt mobility and hurt the region's economic competitiveness and quality of life. Our ability to respond will have unprecedented impacts on our lives and our survival.

Transportation sources account for ~~34~~ 35 percent of greenhouse gas emissions in Oregon, largely made up of carbon dioxide (CO_2). Since 2006, the state of Oregon has initiated a number of actions

to respond including directing the greater Portland region to develop and implement a strategy for reducing greenhouse gas emissions from cars and small trucks.

3.2.4.1 Climate Smart Strategy (2014)

The Regional Transportation Plan is a key tool for the greater Portland region to implement the adopted Climate Smart Strategy and achieve greenhouse gas emissions reduction targets adopted by the Land Conservation and Development Commission in 2012, 2017, and 2022.

As directed by the Oregon Legislature in 2009, the Metro Council and the Joint Policy Advisory Committee on Transportation (JPACT) developed and adopted a regional strategy to reduce per capita greenhouse gas emissions from cars and small trucks by 2035 to meet state targets. Adopted in December 2014 with broad support from community, business and elected leaders, the Climate Smart Strategy relies on policies and investments that have already been identified as local priorities in communities across the greater Portland region. Adoption of the strategy affirmed the region's shared commitment to provide more transportation choices, keep our air clean, build healthy and equitable communities, and grow our economy – all while reducing greenhouse gas emissions.

The analysis of the adopted strategy demonstrated that with an increase in transportation funding for all modes, particularly transit operations, the region can provide more safe and reliable transportation choices, keep our air clean, build healthy and equitable communities and grow our economy while reducing greenhouse gas emissions from light-duty vehicles as directed by the Legislature. It also showed that a lack of investment in needed transportation infrastructure will result in falling short of our greenhouse gas emissions reduction goal and other desired outcomes. The Land Conservation and Development Commission approved the region's strategy in May 2015.

3.2.4.2 Climate ~~Smart Strategy~~mitigation and resilience policies

The Climate Smart Strategy is built around nine policies to demonstrate climate leadership by reducing greenhouse gas emissions from cars and small trucks while making our transportation system safe, reliable, healthy and affordable. The policies listed below complement other Regional Transportation (RTP) policies related to equity, safety, transit, biking and walking, use of technology and system and demand management strategies.

Policy 1	**Implement adopted local and regional land use plans and strategies to reduce vehicle miles traveled per capita and related greenhouse gas emissions to meet regional targets.**
Policy 2	**Prioritize transportation investments that make transit convenient, frequent, accessible and affordable to significantly increase transit ridership.**
Policy 3	**Prioritize transportation investments that make biking and walking safe, accessible and convenient to ~~significantly increase~~ achieve walking and bicycling system completion and mode share targets.**

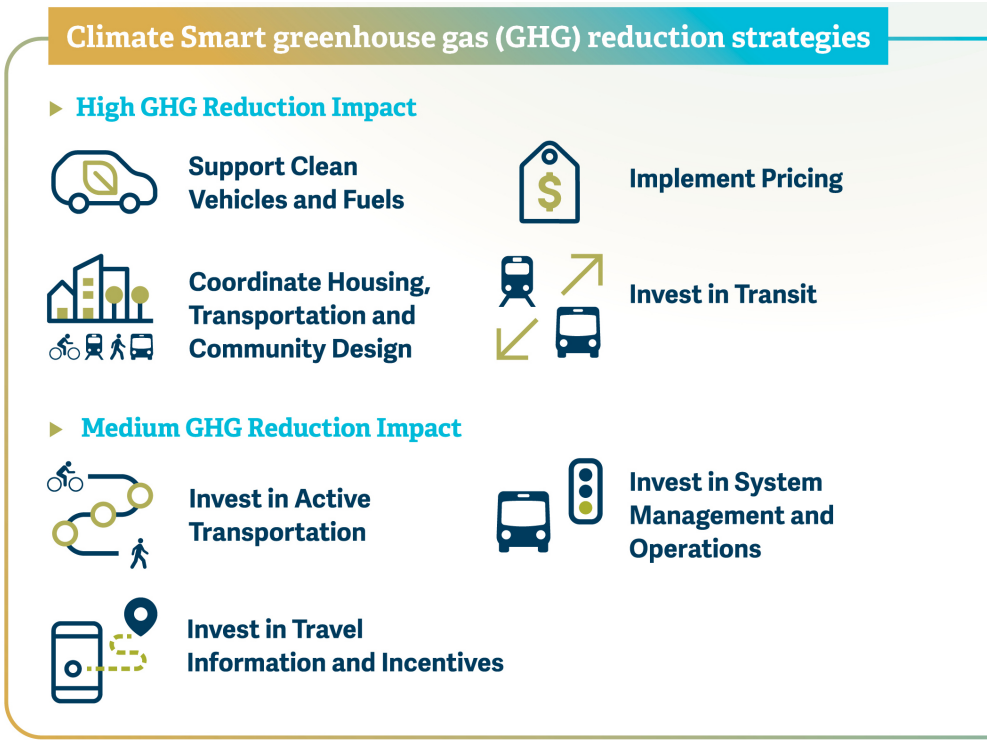
Policy 4	**Make streets and highways safe, efficient, reliable and connected.**
Policy 5	**Prioritize use of technology to actively manage the transportation system and ensure that new and emerging technology affecting the region's transportation system supports shared trips and other Climate Smart Strategy policies and strategies.**
Policy 6	**Provide information and financial incentives to expand the use of travel options and reduce vehicle miles traveled.**
Policy 7	**Manage parking in mixed-use centers and corridors ~~that are served by frequent transit service and good biking and walking connections~~ to reduce the amount of land dedicated to parking, encourage parking turnover, increase shared trips, biking, walking and ~~use of~~ transit use, reduce vehicle miles traveled, increase housing and job production and generate revenue.**
Policy 8	**Support Oregon's transition to cleaner fuels ~~and~~ , more fuel-efficient vehicles and electric vehicles in recognition of the external impacts of carbon and other vehicle emissions.**
New policy	**Designate and maintain regional emergency transportation routes that, in the case of a major regional emergency or natural disaster, would be prioritized for rapid damage assessment and debris-removal.**
Policy 9	**Secure adequate funding for transportation system investments necessary ~~that support the RTP climate action and resilience goals and~~ to ~~implementation of the~~implement the ~~c~~Climate S~~s~~mart S~~s~~trategy and increase the region's preparedness for and resilience to climate change and natural hazard impacts.**

3.2.4.3 Climate Smart Strategy ~~toolbox of potential~~ actions

~~The responsibility of implementation of these policies and the Climate Smart Strategy does not rest solely with Metro. Continued partnerships, collaboration and increased funding from all levels of government will be essential. To that end, t~~The Climate Smart Strategy ~~also identified~~ includes a comprehensive toolbox of more than 200 specific actions that can be taken by the state of Oregon, Metro, cities, counties, transit providers and others to support implementation. These supporting actions are summarized in the *Toolbox of Possible Actions (2015-2020)* adopted as part of the Climate Smart Strategy.[9] The actions support implementation of adopted local and regional plans and, if taken, will reduce greenhouse gas emissions and minimize the region's contribution to climate change in ways that support community and economic development goals. The Climate Smart Strategy's *Toolbox of Possible Actions* was developed with the recognition that existing city and county plans for creating great communities are the foundation for reaching the state target

[9] https://www.oregonmetro.gov/sites/default/files/2015/05/27/CSC_toolbox-actions2014_12_09.pdf

and that some tools and actions may work better in some locations than others. As such, the toolbox does not mandate adoption of any particular policy or action. Instead, it emphasizes the need for many diverse partners to work together to begin implementation of the strategy while retaining the flexibility and discretion to pursue the actions most appropriate to local needs and conditions.



Source: Metro. Graphic depicting Climate Smart seven high and medium impact greenhouse gas reduction strategies.

Local, state, and regional partners are encouraged to review the toolbox and identify actions they have already taken and any new actions they are willing to consider or commit to in the future. Updates to local comprehensive plans and development regulations, transit agency plans, port district plans, and regional growth management and transportation plans present ongoing opportunities to consider implementing the actions recommended in locally tailored ways.

3.2.4.4 Climate Smart Strategy monitoring

The Climate Smart Strategy ~~also contained~~~~contains~~has performance measures and performance monitoring targets for tracking implementation and progress. The purpose of the performance measures and targets is to monitor and assess whether key elements or actions that make up the strategy are being implemented, and whether the strategy is achieving expected outcomes. If an assessment finds the region is deviating significantly from the Climate Smart Strategy performance monitoring targets, then Metro will work with local, regional and state partners to consider the revision or replacement of policies and actions to ensure the region remains on track with meeting adopted targets for reducing greenhouse gas emissions.

~~In 2018,~~ **Appendix J** provides a ~~reports~~progress report on implementation~~. progress since 2014, nd found the RTP makes satisfactory progress towards implementing the Climate Smart Strategy and, if fully funded and implemented, can reasonably be expected to meet the state-mandated targets for reducing per capita greenhouse gas emissions from passenger cars and small trucks (light-duty vehicles) for 2035 and 2040.~~ [NOTE: performance outcomes will be included in Appendix J and Chapter 7]

~~The analysis also found that m~~More investment, actions and resources ~~will be~~are needed to ~~ensure the region achieves~~achieve ~~the~~ mandated greenhouse gas emissions reductions defined in OAR 660-044-0060.~~ Additional funding and prioritization of Climate Smart Strategy investments and policies that substantially reduce greenhouse gas emissions will be needed.~~

3.2.4.5 Transportation preparedness and resilience

~~The topic of p~~Preparedness and resilience have broad implications across all sectors of the economy and communities ~~throughout~~in the region. Natural disasters can happen anytime, affecting multiple jurisdictions simultaneously. The region needs to be prepared to respond quickly, collaboratively, and equitably, and the transportation system needs to be prepared to withstand these events and to provide needed transport for evacuation, fuel, essential supplies and medical transport. Planning for post-disaster recovery is also critical to ensure that communities and the region recover and rebuild important physical structures, infrastructure and services, including transportation – it can make communities and the region stronger, healthier, safer and more equitable.

What are the risks we face?

Climate change, natural disasters, such as earthquakes, urban wildfires and hazardous incidents, and extreme weather events present significant and growing risks to the safety, reliability, effectiveness and sustainability of the region's transportation infrastructure and services. Flooding, extreme heat, wildfires and severe storm events endanger the long-term investments that federal, state, and local governments have made in transportation infrastructure. Changes in climate have intensified the magnitude, duration, and frequency of these events for many regions in the United States, a trend that is projected to continue. There is much work going on locally, regionally, statewide and across the country to address these risks.

Regional collaboration and disaster preparedness

The Regional Disaster Preparedness Organization (RDPO) is a partnership of government agencies, non-governmental organizations, and private-sector stakeholders in the Portland metropolitan area collaborating to increase the region's resilience to disasters. RDPO's efforts span across Clackamas, Columbia, Multnomah, and Washington counties in Oregon and Clark County in Washington.

According to the 2013 Oregon Resilience Plan, Oregon's buildings, and lifelines (transportation, energy, telecommunications, and water/ wastewater systems) would be damaged so severely that it would take three months to a year to restore full service in areas such as the Portland region. More recently, a 2018 report from the Oregon Department of Geology and Mineral Industries (DOGAMI) on the Portland region describes significant casualties, economic losses, and disruption in the event of a large magnitude Cascadia subduction zone (CSZ) earthquake.

While transportation infrastructure is designed to handle a broad range of impacts based on historic climate patterns, more planning and preparation for climate change, earthquakes and other natural disasters and extreme weather events is critical to protecting the integrity of the transportation system and improving resilience for future hazards.

In 2021 the Oregon Transportation Systems project assessed the resilience of Oregon's roadway, airport, and maritime port transportation system to a Cascadia Subduction Zone (CSZ) earthquake, and the ability of those system to support post-disaster response and recovery. A key finding is that very few airports and marine ports have conducted seismic vulnerability analyses of their facilities. More analysis is needed to better understand and enhance the resilience of these facilities in order to more efficiently and effectively support incident response.

Between 2019 and 2021, Metro and RDPO partnered to update the Regional Emergency Transportation Routes (RETR) for the five-county Portland-Vancouver metropolitan region (last updated in 2006). Over 300 miles of new routes were added. Regional Emergency Transportation Routes are travel routes that, in the case of a major regional emergency or natural disaster, would be prioritized for rapid damage assessment and debris-removal. These routes would be used to move people, resources, and materials, such as first responders (e.g., police, fire and emergency medical services), patients, debris, fuel and essential supplies. These routes are also expected to have a key role in post-disaster recovery efforts.

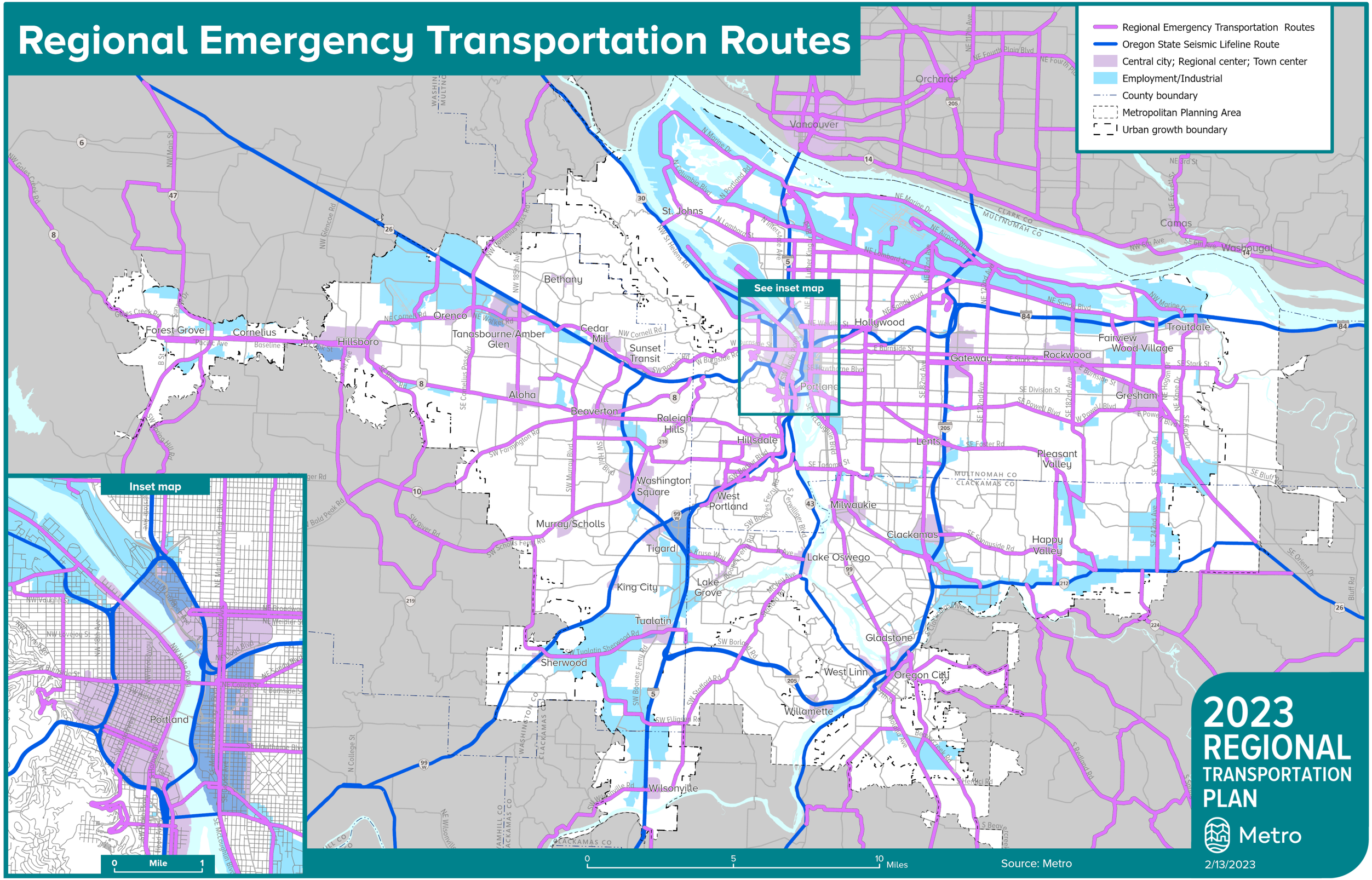
The project developed a regionally accepted network that provides adequate connectivity to critical infrastructure and essential facilities, as well as the region's population centers and vulnerable communities. Over 75% of state and regional critical infrastructure and essential facilities are connected. Partners have established a comprehensive regional GIS database and online RETR viewer for current and future planning and operations. The data and on-line viewer provide valuable resources to support transportation resilience, recovery, and related initiatives in the region. **See Figure 3-7** which shows a map of the RETRs and State Seismic Lifeline (SSL) routes. Regional partners identify these routes to help prioritize them for near term investment.

Figure 3-7 Regional emergency transportation routes (ETR) map

Potential opportunities for future regional collaboration in support of transportation preparedness and resilience include:

- Partner with the RDPO on a second phase of the Regional ETR update to prioritize routes and develop operational guidelines for owners and operators. See Chapter 8 for more information.
- Consider climate and other natural hazard-related risks during transportation planning, project development, design, and management processes.

Regional Emergency Transportation Routes



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- Conduct a vulnerability assessment for the region, documenting climate and other natural hazard-related risks to the region's transportation system and vulnerable populations, and potential investments, strategies, and actions that the region can implement to reduce the vulnerability of the existing transportation system and proactively increase the transportation system's resiliency.
- Optimize operations and maintenance practices that can help lessen impacts on transportation from extreme weather events and natural disasters. Examples include more frequent cleaning of storm drains, improved plans for weather emergencies, closures and rerouting, traveler information systems, debris removal, early warning systems, damage repairs and performance monitoring.
- Integrate green infrastructure into the transportation network when practicable to avoid, minimize and mitigate negative environmental impacts of climate change, natural disasters, and extreme weather events.
- Protection and avoidance of natural areas and high value natural resource sites, especially the urban tree canopy and other green infrastructure, in slowing growth in carbon emissions from paved streets, parking lots and carbon sequestration and addressing the impacts of climate change and extreme weather events, such as urban heat island effects and increased flooding.
- Avoidance of transportation-related development in hazard areas such as steep slopes and floodplains that provide landscape resiliency and which are also likely to increase in hazard potential as the impacts of climate change increase.

3.2.5 Pricing Policies

What's changed?

This is a new policy section. The draft regional pricing policies reflect significant discussion and input from Metro technical and policy advisory committees and the Metro Council from January to Oct. 2022. A memo documenting the Sept.-Oct. 2022 feedback and policies reflected below is available on the project website.

Since the March 2023 draft: Parking is no longer included in this section and is addressed in the Climate policies and Chapter 8. Language highlighting the importance of Federal and State laws in pricing and tolling has been added. Key terms moved to glossary. Pricing background section ("What state and regional pricing work is underway?') has been moved to Chapter 8. Added a definition of diversion.

Transportation pricing is a tool that can help our region reach its goals of better, faster transit, cleaner air, fewer hours sitting in traffic, and more equitable access to jobs and opportunities. To realize these outcomes, pricing programs will need to be carefully designed to ensure the process to develop them is equitable, revenue is reinvested equitably and to support regional goals,

diversion on local streets is mitigated, and pricing strategies are interoperable throughout the region.

What is transportation pricing?

Transportation pricing is the use of a pricing mechanism, such as tolls or parking fees, to reduce traffic congestion and greenhouse gas emissions, encourage a shift to travel via different modes, a different route, or a different time of day, and raise revenue for transportation investments and mitigation for impacts resulting from pricing. The policies in this section apply to vehicle miles traveled fees, cordon pricing, and roadway pricing; parking pricing is addressed through Climate Strategy and Resilience Policies in Section 3.2.4.

While parking pricing has proven to be an effective strategy in the region for many years, cordons, roadway pricing, and other pricing strategies are only beginning to be discussed and implemented as a strategy in the greater Portland region. However, these strategies have been effective in cities around the world. For many leaders and government agencies in the Portland metro region

recognized pricing as a needed, high-impact, tool in the 2018 Regional Transportation Plan (RTP) and other plans.[10]

Table 3-3 outlines which local, regional, and state agencies could potentially implement various types of pricing strategies based on Oregon state law. Other federal, state, or local laws may provide additional guidance or restrictions on the use of pricing and the use of pricing revenues.

Table 3-3 Pricing and Implementing Agency

Type of Pricing	Definition	Implementing Agency
Road Us~~er~~age Charge / Vehicle Miles Traveled Fee	Drivers pay a fee for every mile they travel	State DOT, potentially local roadway authorities
Cordon Pricing	Drivers pay a fee to enter an area, like downtown Portland (and sometimes pay to drive within that area)	City, County
Roadway Pricing and Tolling	Drivers pay a fee or toll to drive on a particular road, bridge, or highway	Local Roads: City, County Highways and Freeways: State DOT
~~Parking Pricing~~	~~Drivers pay to park in certain areas~~	~~City, County, Transit Agency (park-and-rides)~~

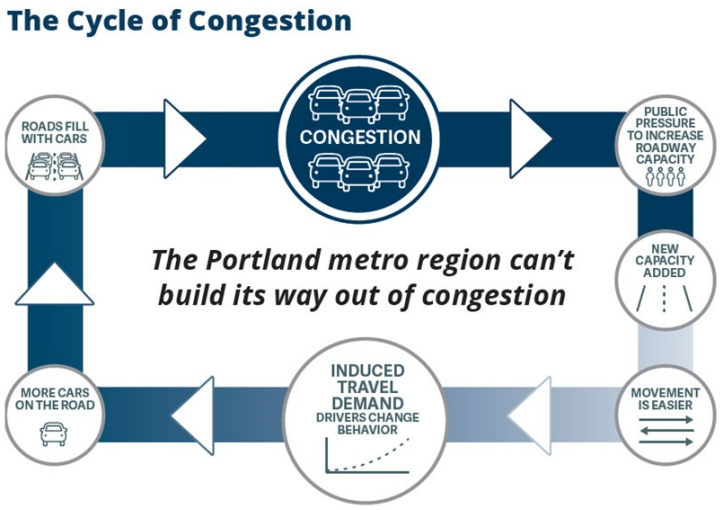
Why is pricing an important strategy for our region?

Congestion is a problem in the Portland metro region as outlined in the ~~RTP Needs Assessment~~Chapter 4 or the RTP. Changing travel patterns and a growing population mean more traffic and less freedom to travel reliably around the region. Congestion can also have significant economic, social, and environmental impacts.

- Growing single occupancy vehicle miles traveled (VMT) leads to congestion.
- Greenhouse gas emissions are on the rise.
- Congestion impacts Metro's Equity Focus Areas most significantly.
- Travel patterns for people and goods are unreliable due to congestion.

[10] 2018 Regional Transportation Plan, TSMO Strategic Plan (2010), Climate Smart Strategy (2014), The Federal Congestion Management Process, 2021 City of Portland Pricing Options for Equitable Mobility Final Report, 2018 Oregon Department of Transportation Value Pricing Feasibility Analysis.

- Our region is growing.



How can pricing help our region?

Transportation investments in the greater Portland ~~metro~~ region have a long history of contributing to racial inequity and neighborhood displacement. Decades ago, public agencies planned and built new highways that cut through Black communities, splitting neighborhoods, and contributing to poor air quality, noise pollution and safety issues. Transit investments have also been made without complementary affordable housing strategies, leading to gentrification and further displacement.

Today, while the region's residents all feel the impacts of congestion, historic inequities in the transportation system amplify impacts on people of color and low-income people:

- Housing costs are increasing faster than incomes, pushing those with lower incomes to seek housing further away from the center of the region and making travel distances longer for people of color and low-income people.
- Communities of color and low-income communities have longer commutes that are made slower and more unreliable when roadways are congested.
- Major roads and freeways often run through communities of color and low-income communities, resulting in disproportionately high rates of air pollution, chronic illnesses, and traffic-related injuries and fatalities.

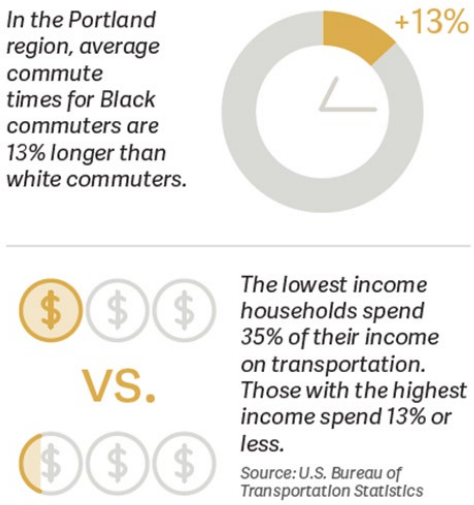
Pricing can be a key tool for jurisdictions as they seek to meet state, regional, and local goals around mobility, climate, safety, ~~and~~ equity, and a thriving economy.

Pricing that is designed and implemented through an equity and climate change lens has the potential to transform transportation in our region in a variety of ways. While pricing programs introduce new costs to users, they also lead to more efficient use of streets and highways and can

help address current and historic inequities borne by people of color and people with low incomes.

Pricing has been shown to encourage use of transit or other modes and reduce overall vehicle miles traveled (VMT). Lower VMT results in decreased congestion, reduced travel times for personal vehicles, freight and buses, lower greenhouse gas emissions, and localized air quality impacts. Pricing is more likely to be successful in areas where transit service elements are already well established and is improved in conjunction with pricing.

Pricing can also have positive impacts on safety. A combination of lower VMT as a result of pricing and reinvestment of pricing revenue in projects that increase safety can, in the long term, lead to decreases in crashes and injuries in and around priced facilities or areas.



Additionally, for many jurisdictions, pricing may be identified as a tool to raise revenue for specific projects and be a key element of a funding plan. This could include, for example, replacement of an aging bridge, or investments in multimodal infrastructure and transit supportive elements or amenities. However, in addition to raising revenue for specific projects, a program can successfully meet state, regional, and local goals by:

- **Reinvesting revenue where it matters most.** If designed thoughtfully, pricing programs that have built equity into the program can introduce progressive fee structures and reinvest revenue in the people and places that have historically been, and continue to be, the most negatively impacted.
- **Reinvesting revenue to support our region's goals.** Revenue collected from pricing programs can be reinvested to enhance transit service elements and access, safety improvements, and walking and bicycling networks. It can also be used to provide incentives and subsidies to increase the number of people biking, walking, and taking transit for more

trips. With properly designed pricing programs, our region can have better, faster transit, cleaner air, fewer hours sitting in traffic, and more equitable access to jobs and opportunities.

Benefits to Freight and Businesses

- Pricing strategies can help freight and businesses succeed by reducing congestion on highways and local roads:
- Pricing can benefit freight, especially truck transportation, as it supports a more reliable system.
- Pricing can encourage people to use other forms of transportation to travel and leave highways open for people and businesses, like freight, who do not have other options.
- Pricing can support lowered cost of doing business – time is money.

3.2.5.1 Best Practices for Revenue Reinvestment

Equitable revenue reinvestment is a critical consideration from the outset of a pricing program. Reinvestment strategies should be guided by the purpose of the program, the expected costs and benefits, and input from community members impacted by the program. Revenue reinvestment should be focused on neighborhoods that do not have or could lose access to the priced facility or area. Increasing access to the priced facility or area, especially for places with limited access today or places that would see reduced access without reinvested revenues, should be a focus. Part of the revenue from pricing may need to be spent on operations, maintenance, and facility investment.

Key considerations related to revenue reinvestment include:

- Reinvestment should be prioritized in areas designated as Metro's Equity Focus Areas most affected by pricing programs.
- Revenues collected through the pricing program should be reinvested in a manner that helps meet state, regional, and local goals related to reductions in greenhouse gas emissions and congestion while improving mobility and safety.
- Revenue should not be reinvested in infrastructure solely for single occupancy vehicles but should be invested to improve the entire multimodal transportation system.
- Revenue should be reinvested in the region.

After paying for the administration and/or operating costs of a pricing program, revenue could be reinvested in several ways (Table 3-4). Implementing agencies will need to consider any state constitutional restrictions to revenue reinvestment, or other limitations based on federal or state funding or program approvals, based on the type of pricing program established. Agencies may use pricing to raise money for other things, like road improvements, seismic operations, and operations and maintenance.

Table 3-4 Potential Options for Revenue Reinvestment

Category	Description	Target Area or Population
Transit		
Infrastructure & speed and reliability improvements	Improved facilities, stops, passenger amenities, transit priority treatments, express services, expanded routes, and similar improvements	Regional Local communities especially equity areas, for example, Metro's Equity Focus Areas
Operation and maintenance	Operation and maintenance of existing and future transit assets and services	Regional
Active Transportation		
Access to priced facility or area	Improved bike, pedestrian, or micromobility access to transit or priced facility or area directly	Regional From/to equity zones, for example, Metro's Equity Focus Areas
Neighborhood access	Improved bike, pedestrian, or micromobility access to transit or neighborhood activity centers such as shopping centers and employment hubs	From equity zones, for example Metro's Equity Focus Areas, to transit or neighborhood activity centers
First/last mile to key employment hubs	Improved bike, pedestrian, or micromobility access to employment hubs from transit	Regional
Diversion mitigation	Prioritize safety enhancements on the high crash network and transit service elements along areas impacted by diversion	Neighborhoods impacted by diversion
Mode Shift and Single Occupancy Vehicle Alternative Programs		
Commuter Credits	Benefit to users of the pricing system who swipe their transit card during peak hours rather than drive	Regional; higher subsidy for transit deprived communities and vulnerable populations

Transit subsidy	Free or discounted transit pass or cash on transit card, i.e., TriMet's Fare Relief Program	Regional; higher subsidy for transit deprived communities and vulnerable populations
Other programs	Electric vehicle (EV) carshare subsidy, bikeshare subsidy, micromobility subsidy, carpool benefit, benefit to drivers of EV vehicles	Regional; higher subsidy for transit deprived communities and vulnerable populations
Priced Facility		
Operations and Maintenance	Operations and maintenance of priced road	-Priced facility
Infrastructure investment	For tolled facilities, designed to be paid for by the pricing revenue	Priced facility

Potential Revenue Opportunities and Limitations

Depending on the pricing model, the use of revenue generated from a pricing program may be subject to legal limits, Federal law and other requirements must be followed. For example, Oregon Constitution Article IX Section 3a limits the use of revenue from taxes on motor vehicle use and fuel. The principle underlying this language is that special taxes paid only by highway users should be used only for highway purposes. Whether a particular pricing model is subject to this constitutional restriction is determined by Oregon courts on a case-by-case basis. Recently, the Oregon Supreme Court concluded that Article IX section 3a's limit on use of tax revenue does not apply to a privilege tax imposed on vehicle dealers for the privilege of engaging in the business of selling taxable motor vehicles at retail. The Court found that the privilege tax was not based on the status of motor vehicle ownership, but rather on the activity of selling motor vehicles. Jurisdictions considering pricing should review all potential legal limits and structure the pricing model with these limits in mind.

[NOTE: the following section will be incorporated into Chapter 8].

~~3.2.5.2 What state and regional pricing work is underway?~~

~~Pricing strategies are being considered in the greater Portland Metropolitan Region, within the City of Portland, and along the Multnomah Falls and the Waterfall Corridor area. They are being used to combat traffic congestion and greenhouse gas emissions. This section provides a high-level overview of statewide legislation and rulemaking related to pricing and describes how the revenue from pricing is intended to support infrastructure in the region.~~

~~State Legislation & Rulemaking~~

~~**House Bill 2017**: House Bill 2017 invested millions of dollars to improve Oregon's transportation network. Part of that funding was allocated to implementing tolling. This directed the Oregon Transportation Commission to implement traffic congestion tolls on I-5, I-205, and in the Portland Metro region.~~

~~**House Bill 3055**: House Bill 3055 created flexibility in allocating $30 million per year of funds to projects listed in House Bill 2017 including I-5, Boone Bridge, and toll program implementation. HB 3055 directed that tolling should be used to manage travel demand and congestion, reduce greenhouse gas emissions, raise revenue, make improvements or fund efforts on the tollway and on adjacent, connected, or parallel highways, and minimize and mitigate impacts to underrepresented and disadvantaged communities. It also required that an equitable tolling strategy be implemented before tolls are assessed, and for a low-income toll report to be provided to the Joint Transportation Committee and Oregon Transportation Committee.~~

~~**Low-Income Toll Report**: House Bill (HB) 2017 provided direction to implement tolling on I-5 and I-205 in the Portland metro area, and ODOT's Toll Program was established to oversee state-operated toll projects and policies throughout the state. The Low-Income Toll Report for the Oregon Toll Program was developed by the Oregon Transportation Department (ODOT) at the direction of the Oregon Legislature. The report presents options for consideration to develop a low-income toll program as part of the Oregon Toll Program, including:~~

- ~~Providing significant toll discounts for households with incomes equal to or below 200% of the federal poverty level~~
- ~~Providing a smaller, more focused toll discount for households with incomes above 200% and up to 400% of the federal poverty level~~
- ~~Using a verification process that leverages existing programs and further explores self-certification to quality for toll discounts~~

~~ODOT, in collaboration with the Oregon Transportation Commission, will identify specific benefits for people experiencing low incomes to ensure benefits are in place before tolling begins. The Equity and Mobility Advisory Committee (EMAC) helped inform the report.~~

~~2023 Oregon Highway Plan Toll Policy Amendment~~

~~In January 2023, the Oregon Transportation Commission adopted an amendment to Goal 6 of the Oregon Highway Plan, which was updated in 2012. The amendment updated state policies related to tolling and congestion pricing policy, including defining terms and types of road pricing and clarifying the need and goals for tolling and congestion pricing. It also updated language related to equity and climate goals and provided guidance on rate setting and the use of revenues. The amendment will guide multiple major toll projects in the Portland metro region, as well as statewide rulemaking and toll rate setting.~~

~~**Climate-Friendly and Equitable Communities**~~

~~Parking reform is part of the Oregon Land Conservation and Development Commission's Climate-Friendly and Equitable Communities (CFEC) rulemaking. The reform decreased required parking mandates for new developments near frequent transit and for certain development types with the intent of reducing costs. This was accomplished by unbundling parking packages in developments, implementing parking maximums, and incentivizing active transportation travel options. This parking mandate reform aimed to decrease congestion by discouraging driving and parking. This rule was published on July 15, 2022, and enacted for new development as of July 2022 and for existing developments in 2023.[11] This reform also required that parking lots include solar power or trees, pedestrian-friendly infrastructure, and 50% of new residential parking spaces equipped with electric vehicle charging.[12]~~

~~Figure 3~~-8 ~~Regional Mobility Pricing Project Map as of November 2022~~

~~Pricing Projects and Committees in the Portland Metro Region~~

~~11 https://www.oregon.gov/lcd/CL/Documents/CFECOverviewImplementation.pdf~~

~~12 https://www.oregon.gov/lcd/LAR/Pages/CFEC.aspx~~

ODOT I-205 Toll Project: ODOT is planning to toll drivers on I-205 near the Abernethy and Tualatin River Bridges. The revenue from these tolls will be used to continue the construction of I-205 Improvement Project past Phase 1A, which aims to decrease congestion, reduce greenhouse gas emissions, increase active transportation, and provide facilities that are resilient to earthquake damage. As part of a 2018 RTP amendment for this project, ODOT agreed to a series of commitments that would address regional concerns related to the I-205 toll project. See Chapter 8 for additional information.

ODOT Regional Mobility Pricing Project: The purpose of the Regional Mobility Pricing Project (RMPP) is to use congestion pricing on I-5 and I-205 to manage traffic congestion on these facilities in the Portland, Oregon metropolitan area in a manner that will generate revenue for transportation system investments (Figure 3)[13]. The fees would vary depending on time of day, income level, and type of car and would help fund critical multimodal projects in the region.

ODOT / WSDOT I-5 Bridge Replacement: The Interstate Bridge Replacement Program plans to toll drivers crossing I-5 as part of the funding to finance a replacement bridge on I-5 between Portland and Vancouver. The new bridge is intended to address congestion, earthquake vulnerability, safety, impaired freight movement, inadequate bike and pedestrian paths, and limited public transportation. Revenue from the tolls would be used to fund construction, maintenance, and operation of the bridge and associated improvements. [14]

ODOT Equity and Mobility Advisory Committee

The Oregon Department of Transportation (ODOT)'s Equity and Mobility Advisory Committee (EMAC) was created to directly advise the Oregon Transportation Commission (OTC) on how tolls on Interstate 205 and I-5 can address impacts and realize benefits for populations that have been historically and are currently underrepresented or underserved by transportation projects. The committee was chartered to addresses the following areas: equitable engagement, transit and multimodal access, affordability and impacts to people experiencing financial hardship, and impacts to neighborhood health and safety. EMAC and the OTC have established Foundational Statements and a set of recommendations to guide equity in the development of the projects.

PBOT Pricing Options for Equitable

Statewide Toll Rulemaking Advisory Committee (STRAC): ODOT has created the STRAC to ensure that the voice of the customer will be heard in the rulemaking process. The committee will help develop Oregon Administrative Rules that determine how customers interact with and use the system and how toll rates are set up and adjusted. These rules will apply to planned toll projects in the Portland Metro area, as well as any future projects in the state. The rules and rates

13 https://www.oregon.gov/odot/tolling/SiteAssets/Pages/Regional-Mobility-Pricing-Project-Documents/RMPP_NEPA_Proposed_Action_November_2022.pdf

14 https://www.oregon.gov/odot/tolling/Pages/I-5-Tolling.aspx

~~will be approved by the Oregon Transportation Commission. The STRAC will provide input on the following topics, among others:~~

- ~~Customer accounts~~
- ~~Toll transactions and due date~~
- ~~Civil penalties and administrative fees~~
- ~~Dispute provisions~~
- ~~Low-income/middle-income discounts~~
- ~~Vehicle rates and exemptions~~
- ~~General rate structure/schedule~~
- ~~Rate review and adjustment~~

~~Regional Toll Advisory Committee (RTAC):~~ ~~ODOT has created the RTAC to advise the ODOT Director in developing toll projects in the Portland metropolitan area. Committee meetings will provide a forum to provide feedback to ODOT leadership in advance of OTC or ODOT toll-related decisions. The Regional Toll Advisory Committee is asked to focus their deliberations on key project-level decisions. This includes:~~

~~Integration of the I-205 Toll Project with the Regional Mobility Pricing Project as well as the 2023 update to the Regional Transportation Plan and 2022 updates to the Oregon Highway Plan and Oregon Transportation Plan~~

- ~~Centering of equity in process and outcomes~~
- ~~Monitoring of diversion and funding projects that address diversion impacts~~
- ~~Providing local input on criteria for allocation of net toll revenue~~

~~Equity Framework:~~ ~~The Oregon Toll Program has developed the Equity Framework to ensure tolling on I-205 and I-5 will lead to equitable outcomes. Additionally, the framework will ensure the Oregon Toll Program implements an intentional and equitable engagement process that makes historically and currently underrepresented and underserved communities a priority. This I-205 and I-5 Toll Projects' Equity Framework includes:~~

- ~~Goals for the proposed toll projects, and an explanation of why the Oregon Toll Program is prioritizing equity~~
- ~~A definition of equity within the context of the toll projects, including key concepts and definitions related to equity~~
- ~~The overall approach and organizing principles for addressing equity~~
- ~~A set of actions for measuring benefits and burdens to historically excluded and underserved communities and populations~~

~~**PBOT Pricing Options for Equitable Mobility:**~~

~~Portland Bureau of Transportation (PBOT)'s Pricing Options for Equitable Mobility (POEM) task force explored if and how new pricing strategies could be used in the City of Portland to improve mobility, address the climate crisis, and advance equity for people historically underserved by the~~

~~transportation system. In October 2021, Portland City Council accepted the POEM Task Force final recommendation report. This recommendation report includes principles of pricing for equitable mobility, nearer-term pricing strategies, longer-term pricing recommendations, and a suite of complementary strategies to advance alongside pricing. The Pricing Strategies explored through POEM included prices on parking, prices on vehicle-based commercial services (e.g., private for-hire trips and urban delivery), highway tolling, cordons or area pricing, and road usage or per-mile charges.[15]~~

~~Multnomah Falls and the Waterfall Corridor Timed-Use Permits~~

~~While outside of the metropolitan planning area, timed-use permits at Multnomah Falls and the Waterfall Corridor provide a useful example of innovative parking pricing. ODOT, Oregon State Parks, U.S. Forest Service, and Multnomah County required that personal vehicles pay for a timed-use permit to access Multnomah Falls and federal lands adjacent to the Waterfall Corridor. The permits were required from May 24 to September 5, 2022, during peak hours (9am to 6pm) when data has shown crowds are busiest. The parking pricing strategy was used to limit the number of personal vehicles that enter the parking lot for environmental, safety, and emergency response reasons. The fee does not apply to those entering the park through active transportation modes, before or after peak hours, and same-day passes. The fee was used to pay for the online pricing system and does not generate additional revenue for other improvements. The Waterfall Corridor Timed-Use permits apply to visitors that exit I-84 from exit 28 through exit 35, while the Multnomah Falls timed-use permit applies to visitors to Multnomah Falls.[1]~~

~~Federal Pricing Programs~~

~~Section 129 of Title 23 of the U.S. Code and the Value Pricing Program are examples of pricing strategies that have worked. Since pricing is new to the Portland area, these two federal examples show the value of pricing, and how pricing programs can evolve over time.~~

~~Section 129:~~ ~~Section 129 of Title 23 of the U.S. Code provides the ability to toll Federal-aid highways in conjunction with construction, reconstruction, or other capital improvements. Flat rate tolling and variable pricing strategies are authorized for Section 129 facilities. There are some limitations to what facilities may be included.[16] The newly created Congestion Relief Program within the Infrastructure Investment and Jobs Act expands tolling opportunities under a competitive and discretionary program for up to 10 metropolitan areas in the U.S.[17]~~

~~15 https://www.portland.gov/transportation/planning/pricing-options-equitable-mobility-poem~~

~~16 https://www.fhwa.dot.gov/ipd/tolling_and_pricing/tolling_pricing/section_129.aspx~~

~~17 Regional Toll Advisory Committee Meeting #2, 2022 October 24.~~

Section 166: Section 166 of Title 23 of the U.S. Code provides the ability to create high-occupancy vehicle (HOV) lanes on Federal-aid highways. Public authorities which have jurisdiction over an HOV facility have the authority to establish occupancy requirements of vehicles using the facility, but the minimum is no fewer than two. Certain exceptions are allowed such as motorcycles and bicycles, public transit vehicles, and low-emission vehicles.

Value Pricing Pilot Program

Oregon is a participant in the FHWA Value Pricing Pilot Program (VPPP). The VPPP was established in 1991 (as the Congestion Pricing Pilot Program) to encourage implementation and evaluation of value pricing pilot projects to manage congestion on highways through tolling and other pricing mechanisms. The program also sought to test the impact of pricing on driver behavior, traffic volumes, transit ridership, air quality, and availability of funds for transportation programs. While the program no longer actively solicits projects, it can still provide tolling authority to State, regional or local governments to implement congestion pricing applications. Acceptance and approval of VPPP applications is at the discretion of the US DOT. If approved, and once all the federal requirements are met, implementing agencies can use the revenue for any Title 23 project, which is aimed at the Federal-aid highways.[18] See https://ops.fhwa.dot.gov/congestionpricing/value_pricing/

What did Metro learn from the Regional Congestion Pricing Study?

In 2021 Metro completed the Regional Congestion Pricing Study (RCPS). Directed by the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council in the 2018 RTP, the study evaluated a variety of pricing strategies to better understand if the region could benefit from pricing. The study found that pricing can be an effective strategy for reducing drive-alone trips and overall VMT, but its impacts can vary widely by geography and demographics, as well as by what specific strategy is implemented and how it is implemented.

Metro used its travel demand model to conduct in-depth modeling and analysis to help regional policymakers understand the potential performance of different types of pricing tools (VMT fee, cordon, parking, and roadway pricing). Each scenario was analyzed for how well it performed relative to the four regional priorities (safety, equity, congestion, and climate) using performance metrics grounded in the 2018 RTP.

Summary of Key Findings

The RCPS demonstrated that pricing has the potential to help the greater Portland region meet the priorities outlined in the 2018 RTP, including reducing congestion and improving mobility, reducing greenhouse gas emissions, and improving equity and safety outcomes.

All four types of congestion pricing could help address congestion and climate priorities. All eight scenarios that were tested reduced the drive alone rate, vehicle miles traveled, and greenhouse gas emissions, and increased daily transit trips. In fact, the projected improvements were comparable to modeled scenarios with much higher investment in new transportation projects. However, the geographic distribution of benefits, impacts, and costs varied by scenario.

18 Regional Toll Advisory Committee Meeting #2, 2022 October 24.

~~Traffic diversion, travel time savings, and costs to travelers varied by location and by congestion pricing tool. For example, the two roadway pricing scenarios, which evaluated a toll on all the region's freeways, identified significant traffic diversion onto the arterial network, even as volumes and delay on the freeways fell. Without changes, some scenarios would have disproportionate impacts on equity communities and key geographies.~~

~~Geographic distributions of benefits and costs can inform where to focus investments and affordability strategies. In-depth analysis will be necessary to understand benefits (who and where) and costs (who and where) of any future projects. The study also identified tradeoffs for implementing pricing scenarios. Overall regional transportation costs and individual traveler costs varied by scenario. All eight scenarios that were tested increased the overall cost for travel for the region, but some scenarios spread the costs widely while others concentrated them on fewer travelers. Those that spread the costs also had the highest overall cost for travel in the region and the highest revenue potential. Higher overall transportation costs equal higher revenue, which can allow for investment in improvements to address safety and equity concerns.~~

~~**Pricing and Equity**~~

~~Today's transportation system puts more burdens on people of color and people with low incomes. Gas taxes and motor vehicle fees are not tied to a driver's ability to pay. Households with lower incomes spend 22 percent more of their income on transportation than households with higher incomes. People of color and people with low incomes are more likely to use transit and more likely to live further from employment centers. They may also need to commute between more than one job. Increasing congestion negatively impacts transit speed and reliability as buses sit in traffic. This increases commute times for transit users. Federal and state funding prioritizes auto infrastructure over investment in transit, favoring people with higher means and access to a vehicle.~~

~~Today's Transportation Funding is Inequitable~~

~~Pricing can improve or harm equity in the region. A pricing program designed with the goal of improving equity, rather than attempting mitigations later, has the potential to produce positive outcomes. Outcomes are determined by the way funds are collected and where and in whom they are reinvested. The Revenue Considerations and Policy sections below describe methods that can be used to lead to equitable outcomes and strategic reinvestment into pricing programs. The Regional Congestion Pricing Study found that without changes some scenarios harmed equity by increasing costs and decreasing access. A thoughtful and community-focused approach will be necessary as our region continues to explore pricing options.~~

3.2.5.~~4~~ 2 Pricing policies

Pricing policies apply to the planning, implementation, monitoring and evaluation of pricing programs and projects in the region, as defined in Section 3.1.

Policy 1	**Use pricing to ~~I~~improve reliability and efficiency of the transportation network, reduce VMT per capita, and increase transportation options ~~through congestion management, investments in transit, bike, and pedestrian improvements, and transportation demand management programs~~.**
Policy 2	**Center equity and affordability into pricing programs and projects from the outset.**
Policy 3	**Address traffic safety and the safety of users of all travel modes, both on the priced system and in areas affected by diversion.**
Policy 4	**Minimize diversion impacts created by pricing programs and projects prior to implementation and throughout the life of the pricing program or project.**
Policy 5	**Reduce greenhouse gas emissions and vehicle miles travelled per capita while increasing access to low-carbon travel options.**
Policy 6	**Coordinate technologies and pricing programs and projects to make pricing a low-barrier, seamless experience for everyone who uses the transportation system and to reduce administrative burdens.**

Pricing Policy 1. Use pricing to ~~I~~improve reliability and efficiency of the transportation network, reduce VMT per capita, and increase transportation options ~~through congestion management, investments in transit, bike, and pedestrian improvements, and transportation demand management programs~~.

The Metro Regional Congestion Pricing Study found that pricing has the potential to help the greater Portland region improve mobility and manage congestion. Pricing programs should be designed and implemented to maximize benefits related to improved access to jobs and community places, shift to sustainable modes of travel, and overall affordability.

Investments in transit and transit-supportive elements have been shown to improve regional mobility, especially in terms of access to jobs. Future transit investments, and investments into other modal alternatives, should take into consideration the geographic distribution of low-income populations (who may have less automobile access), existing access to jobs via transit, people who commute outside of peak periods, and people who trip-chain (i.e.: making multiple stops during one trip, such as dropping children off at school on the way to work). Policymakers and future project owners and operators should consider how mobility improvements will be received by populations and areas that have been historically marginalized. Mobility improvements can be measured by reduced peak period travel times, reduced daily vehicle miles traveled (VMT), reduced percentage of total daily trips undertaken by drivers without passengers, increased number of total daily transit trips, and total vehicle hours of delay during peak PM periods.

To implement Pricing Policy 1, agencies developing pricing programs or projects should take the following actions:

1. Set rates for pricing at a level that will manage congestion, reduce VMT per capita, and improve reliability on the priced facility and in areas affected by diversion. HB 3055 delegates authority to the Oregon Transportation Commission (OTC) to set pricing rates for state highways in accordance with state legislation.
2. Collaborate with relevant state, regional, and local agencies and communities when setting, evaluating, and adjusting program or project specific goals.
3. Reinvest a portion of revenues from pricing into modal alternatives both on and off the priced facility that encourage mode shift and VMT reduction per capita consistent with Federal and State law. Examples include, but are not limited to, transit improvements, bicycle and pedestrian improvements, and improvements to local circulation.
4. Identify opportunities to partner with other agencies to fund or construct transit, bike, and pedestrian improvements. Work with transit agencies and other jurisdictional partners, including consideration of opportunities identified in the High Capacity Transit Strategy and Regional Transit Strategy, to determine additional revenue needs and pursue funding needed to develop transit-supportive elements, expand access to transit, and to ensure equitable investments, particularly in cases where such improvements cannot be funded directly by pricing revenues due to revenue restrictions.
5. Consider non-infrastructure opportunities to encourage mode shift and reduce VMT per capita, including commuter credits, funding for transit passes, bikeshare and/or micromobility subsidies, partnerships with employer commuter programs, and carpooling / vanpooling. Consider higher benefits, subsidies, discounts or exemptions for people with low-income or other qualifying factors based on equity analysis.

Pricing Policy 2. Center equity and affordability into pricing programs and projects from the outset.

The Metro Regional Congestion Pricing Study found that pricing strategies have the potential to help the greater Portland region improve racial equity and benefit marginalized communities. Our current transportation funding system is inequitable. Regressive funding sources such as fixed tax rates and fees disproportionately impact low-income motorists, and negative health impacts from high automobile reliance disproportionately harm BIPOC and low-income communities.

Pricing programs with an equity framework should aim to increase access to opportunity, provide affordable options, create healthier and safer communities, and reduce income inequality and unemployment. Pricing has the potential to offer a suite of affordability programs, such as rebates, exemptions, or other investments. Reinvestment should be prioritized in areas designated as Metro's Equity Focus Areas most affected by pricing programs.

Policymakers and future project owners and operators should carefully consider how the benefits and costs of pricing impact different geographic and demographic groups. If not conducted thoughtfully, pricing could compound past injustices and harm BIPOC and low-income communities. By focusing engagement at every step in the process on historically impacted residents, agencies can reduce harm and increase benefits. The policy illustrates how equity can be incorporated into pricing programs.

To implement Policy 2, agencies developing pricing programs or projects should take the following actions:

1. Conduct general public engagement in a variety of formats, including formats that accommodate all abilities, all levels of access to technology, and languages other than English. Begin engagement at an early stage and re-engage the public in a meaningful manner at multiple points throughout the process.
2. Engage equity groups, people with low-income, and people of color in a co-creation process, beginning at an early stage, to help shape goals, outcomes, performance metrics, and reinvestment of revenues.
3. Use a consistent methodology across implementing agencies for defining equity groups and equity areas for pricing programs and projects, including but not limited to the methodology used for establishing the Equity Focus Areas. A consistent methodology for documenting benefits and burdens of pricing for equity groups, people with low-income, people of color, and equity areas should also be established across agencies. The methodology should consider a variety of factors, such as implementing agency, costs to the user, travel options, travel time, transit reliability and access, diversion and safety, economic impacts to businesses, noise, access to opportunity, localized impacts to emissions, water and air quality, and visual impacts.
4. Establish feedback mechanisms, a communication plan, and recurring regular engagement over time with the public, and with equity groups that were involved in the co-creation process.
5. Provide a progressive fee structure ~~which includes~~ including elements such as exemptions, credits, or discounts for qualified users. Base eligibility on inclusion in one or more population categories, such as low-income, and minimize barriers to qualification by building on existing programs or partnerships where applicable. Target outreach for enrollment in a discounts, credits, or exemptions in equity areas and communities with higher-than-average shares of people with low income and people of color.
6. Create varied and accessible means of payment and enrollment, including options for people without access to the internet or banking services.
7. Reinvest a portion of revenues from pricing into communities with high proportions of people with low-income and people of color, and/or in Equity Focus Areas, consistent with Federal and State law. Use of these revenues should meet the transportation-related needs identified by the equity communities and people most impacted. Examples include commuter credits and free or discounted transit passes, or improved transit facilities, stops, passenger amenities, and transit priority treatments.
8. Enforcement of pricing and fine structures for non-payment should be designed to reduce the potential for enforcement bias and to minimize burdens on people with low incomes.
9. Create a process to measure how pricing programs achieve the actions items listed above to demonstrate accountability.

Pricing Policy 3. Address traffic safety and the safety of users of all travel modes, both on the priced system and in areas affected by diversion.

The Metro Regional Congestion Pricing Study found that pricing has a strong potential to help the greater Portland region improve safety outcomes and meet the safety priorities outlined in the Regional Transportation Plan. Pricing programs can improve safety by reinvesting revenue into locally supported traffic safety improvements. The study recommends focusing safety improvements on eliminating traffic deaths and serious injuries on city streets, or a Vision Zero approach.

Safety challenges vary greatly across the region. Safety improvements should be assessed at a project scale and built into a pricing programs' definition to ensure that the core of the project addresses these community needs. Detailed project-scale analysis should provide insight into where safety investments are needed and should address any project-related safety concerns. Safety outcomes of a pricing program can be measured by the level of revenue reinvestment in improvements that address fatalities and serious injuries on high injury corridors or roadways.

To implement Pricing Policy 3, agencies developing pricing programs or projects should take the following actions:

1. Collaborate with relevant state, regional, and local agencies and communities when identifying traffic safety impacts and selecting mitigations associated with pricing.
2. Use a data-driven approach to identify potential traffic safety impacts on the priced system and in areas affected by diversion both during and after implementation of pricing programs and projects; monitor with real-time data after implementation.
3. Context-specific monitoring and evaluation programs should be conducted by implementing agencies in coordination with partner agencies and be on-going and transparent. Establish feedback mechanisms, incident resources, and a communication plan in advance for the community and decision makers.
4. Adjust safety strategies in coordination with partner agencies based on monitoring and evaluation findings.
5. Reinvest a portion of revenues on the priced system and in areas affected by diversion to ~~manage~~address safety issues caused by pricing programs and projects ~~and to improve safety~~, consistent with Federal and State law. F~~f~~or example, through investments in transit, bike, and pedestrian improvements, or other investments in known crash reduction factors.
6. Pricing programs and projects should strive to reduce fatalities and serious injuries by aligning with ~~the RTP's~~ local, state and regional safety and security policies ~~identified in Section 3.2.1.4~~.

Pricing Policy 4. Minimize diversion impacts created by pricing programs and projects prior to implementation and throughout the life of the pricing program or project.

Diversion is the movement of automobile trips from one facility to another because of pricing implementation. All trips that change their route in response to pricing are considered diversion, regardless of length or location of the trip, or whether they divert to or from the priced facility.

The Metro Regional Congestion Pricing Study found that pricing programs have the potential to lead to diversion impacts, as drivers shift from the freeway network to the arterials to avoid charges. Spillover/cut through traffic caused by a pricing program can exacerbate traffic safety concerns along other streets. Project designers should carefully consider the wide distribution of

diversion impacts that may result from the program, particularly on regional high injury corridors. ~~Implementing agencies can look to the City of Portland's identified high crash network of streets and intersections for which to prioritize safety improvements.~~ Implementing agencies can also look to high injury local streets and intersections for which to prioritize safety improvements. It is important for pricing programs to mitigate the negative impacts of diversion. Diversion onto nearby streets could be addressed with safety or transit improvements, for example. If pricing programs result in successful mode shift to transit, diversion impacts can be lessened.

To implement Pricing Policy 4, agencies developing pricing programs or projects should take the following actions:

1. Collaborate with relevant state, regional, and local agencies and communities when identifying diversion impacts and selecting mitigations associated with pricing.
2. Use a data-driven approach to define and identify diversion impacts both during and after implementation of pricing programs and projects. Following implementation monitor with real-time data.
3. Evaluate localized impacts of diversion including factors such as VMT per capita, VMT per capita in defined equity areas, noise, economic impacts to businesses, and localized emissions, water quality, air quality, and the completeness of safety infrastructure and non-vehicular modal networks. This should include specific evaluation of diversion impacts in communities with people with low-income and people of color, and/or in Equity Focus Areas.
4. Context-specific monitoring and evaluation programs should be conducted by implementing agencies in coordination with partner agencies and be on-going and transparent. Establish feedback mechanisms and a communication plan in advance for the community and decision makers and ensure reinvestment is still applicable when impacted area changes.
5. Adjust mitigation strategies based on monitoring and evaluation findings. Areas impacted may change as the pricing program is implemented and diversion mitigation strategies are put into place.
6. Reinvest a portion of revenues into areas affected by diversion caused by pricing programs and projects consistent with Federal and State law.

Pricing Policy 5. Reduce greenhouse gas emissions and vehicle miles travelled per capita while increasing access to low-carbon travel options.

The Metro Regional Congestion Pricing Study found that pricing has the potential to help the great Portland region reduce greenhouse gas emissions and achieve Metro's climate goals. All of the scenarios tested in the study showed reductions in greenhouse gas emissions through reducing overall VMT per capita. Pricing policies were found to be effective in encouraging drivers to change their travel behavior such as using more sustainable travel modes like transit, walking, or biking. These changes in behavior are key to reducing greenhouse gas emissions in the region.

Pricing programs should be designed to meet climate goals without adversely impacting safety or equity. Climate improvements can be measured by percent reduction of greenhouse gasses per capita, percent reduction of criteria pollutants and transportation air toxics, percent reduction of

vehicle miles traveled per capita, and shifts in travel behavior. Implementing agencies should consider the geographic and demographic distribution of targeted climate improvements, particularly taking into consideration the health impacts of pollutants and transportation air toxics that disproportionately harm BIPOC and low-income communities.

To implement Pricing Policy 5, agencies developing pricing programs or projects should take the following actions:

1. Identify localized air pollutants and greenhouse gas emission impacts due to pricing and identify strategies for mitigation.
2. Set rates for pricing at a level that will reduce greenhouse gas emissions and improve air quality by managing congestion and reducing overall VMT per capita on the priced system and in areas affected by diversion. HB 3055 delegates authority to the Oregon Transportation Commission (OTC) to set pricing rates for state highways in accordance with state legislation.
3. Reinvest a portion of revenues from pricing into modal alternatives both on and off the priced facility consistent with Federal and State law ~~that can~~ , to reduce overall emissions by encouraging mode shift and VMT per capita reduction, including transit improvements as well as bicycle and pedestrian improvements and improvements to local circulation.
4. Develop and implement pricing so that it addresses and supports the ~~RTP's~~ Climate Smart Strategy and ~~RTP~~ regional climate policies, including through the Congestion Management Process (CMP).

Pricing Policy 6. Coordinate technologies and pricing programs and projects to make pricing a low-barrier, seamless experience for everyone who uses the transportation system and to reduce administrative burdens.

The Metro Regional Congestion Pricing Study details a wide range of technologies available that can be used in pricing programs to create a seamless and low-barrier experience. Programs can use electronic toll collection systems, mobile applications, short-range communication systems embedded in new vehicles, OReGO technologies that wirelessly connect to a vehicle's diagnostic ports, or online portals for self-reporting. The type of technology used will vary depending on the type of pricing program. Metro's study recommends a pilot phase for the region to trial one or more technologies before implementing a region-wide system.

There are several considerations to be taken when using technology in the implementation of a pricing program. First, emerging technologies can be more expensive than existing ones, yet existing technologies run the risk of becoming obsolete sooner. Second, some technologies (such as tolling systems) require a physical footprint that can take up limited physical space and create a visual aesthetic impact that may need design commission approval in some parts of the city. Further, technologies such as mobile apps or online portals that require users to take an action will likely be less accurate and reliable than automatic technologies. These technologies may also unfairly burden low-income travelers that do not have access to a mobile phone, computer, internet, or banking system. Technologies that enhance user experience while limiting barriers to use should be prioritized. Project designers should also consider a program's compatibility with existing pricing technologies used in the region (such as the Hop regional transit fare program or existing parking payment systems).

To implement Policy 6, agencies developing pricing programs or projects should take the following actions:

1. Coordinate technologies and user-friendly designs across pricing programs and projects to reduce burdens on the user and manage the system efficiently, including setting rates, identifying tolling technology and payment systems, and establishing discounts and exemptions.
2. Create varied and accessible means of payment and enrollment, including options for people without access to the internet or banking services.
3. Consider the upfront costs of technology investment balanced with long-term operational and replacement costs compared with expected revenue generation.

[NOTE: the following terms are moved to the glossary]

~~**Key terms will be included in the RTP glossary.**~~

~~**Pricing:** Motorists pay directly for driving on a particular roadway or for driving or parking in a particular area. Pricing includes applying different rates by location, level of congestion, or time of day, amongst other methods. Rates may vary based on vehicle size or type, incomes, or other variables. Pricing within the Portland metropolitan context could include the following methods and pricing strategies. Methods and strategies can be combined in different ways, such as variable cordon pricing or dynamic roadway pricing. Different types of pricing can be implemented in coordination with each other to provide greater systemwide benefits. Pricing can be implemented at the state, regional, or local level.~~

- ~~Types of Pricing~~
  - ~~Cordon / Low Emissions Zone~~
  - ~~Parking~~
  - ~~Road Usage Charge / VMT Fee / Mileage Based User Fee~~
- ~~Roadway Rate Types~~
  - ~~Flat~~
  - ~~Variable~~
  - ~~Dynamic~~

~~**Road Usage Charge / VMT Fee / Mileage Based User Fee:** Motorists are charged for each mile driven. A road usage charge is often discussed as an alternative to federal, state, and local gas taxes which have become less relevant to the user-pays principle as more drivers switch to fuel efficient or electric vehicles. Road usage charges are most often implemented as flat or variable rate fees.~~

~~**Cordon Pricing:** Motorists are charged to enter a congested area, usually a city center or other high activity area well served with non-driving transportation options. Cordon pricing is most often implemented as flat or variable rate fees.~~

~~**Low Emissions Zone Pricing:** Similar to cordon pricing, drivers are charged when they enter a Low Emissions Zone, unless they have a vehicle that meets the requirements of the Low Emissions Zone, for example an electric vehicle that does not emit tailpipe emissions when only using electricity to run.~~

~~**Parking Pricing:** Drivers pay to park in certain areas. Parking pricing may include flat, variable, or dynamic fee structures. Dynamic pricing involves periodically adjusting parking fees to match demand, this can be paired with technology which helps drivers find spaces in underused and less costly areas.~~

~~**Roadway Pricing:** Motorists are charged to drive on a particular roadway. Roadway pricing can be implemented as a flat, variable, or dynamic fee. Roadway prices that vary by time of day can follow a set fee schedule (variable), or the fee rate can be continually adjusted based on traffic conditions (dynamic).~~

~~**Flat Rate Fee (Toll):** A flat rate fee, also known as a toll, charged by a toll facility operator in an amount set by the operator for the privilege of traveling on said toll facility. Tolling is a user fee system for specific infrastructure such a bridges and tunnels. Toll revenues are used for costs associated with the tolled infrastructures. This tool is used to raise funds for construction, operations, maintenance, and administration of specific infrastructure. Flat rate tolling can also serve as a method for congestion management, though it is not responsive to changing conditions or time of day. Additionally, flat rate tolling cannot be used for congestion pricing programs or projects authorized by the Value Pricing Pilot Program, Congestion Relief Program, or Section 166 on interstate highways under Federal law.~~

~~**Variable Rate Fee:** With this type of pricing, a variable fee schedule is set so that the fee is higher during peak travel hours and lower during off-peak or shoulder hours. This encourages motorists to use the facility or drive less during less congested periods and allows traffic to flow more freely during peak times. Peak fee rates may be high enough to usually ensure that traffic flow will not break down, thus offering motorists a reliable and less congested trip in exchange for the higher peak fee. The current price is often displayed on electronic signs prior to the beginning of the priced facility and is often published as a schedule on agency websites and other routing resources.~~

~~**Dynamic Rate Fee:** Fee rates are continually adjusted according to traffic conditions to better achieve a free-flowing level of traffic. Under this system, fee rates increase when the priced facilities get relatively full and decrease when the priced facilities get less full. This system is more complex and less predictable than using a flat or variable rate fee structure, but its flexibility helps to better achieve the optimal traffic flow by reflecting changes in travel demand. MDynamic fee systems may sometimes include a pre-set maximum price. The current price is often displayed on electronic signs prior to the beginning of the priced facility.~~

~~**Low-carbon travel options:** Low-carbon travel options include walking, rolling, biking, transit, and electric vehicles.~~

~~**Transit-supportive elements:** Transit-supportive elements include programs, policies, capital investments and incentives such as Travel Demand Management and physical improvements such as sidewalks, crossings, and complementary land uses.~~

~~**Diversion:** Diversion is the movement of automobile trips from one facility to another because of pricing implementation. All trips that change their route in response to pricing are considered diversion, regardless of length or location of the trip, or whether they divert to or from the priced facility.~~

3.2.6 Mobility Policies

What's changed?

This is a new policy section. It updates and replaces the Interim regional mobility policy (Section 3.5.4 in the 2018 RTP). The new draft mobility policies were developed through an extensive three-year process with significant input from local, regional and state practitioners, Metro technical and policy advisory committees, other stakeholders and the Metro Council. The new policies were accepted by JPACT and the Metro Council in December 2022. Further discussion of the mobility performance targets and thresholds is recommended following completion of the RTP system analysis in April 2022.

Since the March 2023 draft: Updated target to threshold, where appropriate. Made minor refinements to policies. Updated "performance expectations" to "needs and solutions."

Within the greater Portland ~~metropolitan area~~region, the State of Oregon and Metro have a shared goal of providing mobility such that people and businesses can safely, affordably, and efficiently reach the goods, services, places, and opportunities they need to thrive by a variety of seamless and well-connected travel options and services that are welcoming, convenient, comfortable, and reliable.

~~The mobility policy is intended to achieve the following outcomes which are in alignment with ODOT and Metro strategic goals and priorities. They were identified by policymakers and stakeholders as critical to how we plan for, manage, and operate our transportation system.~~

3.2.5.1 Mobility policy outcomes and policies

The mobility policy is intended to achieve the following outcomes ~~which are in alignment with ODOT and Metro strategic goals and priorities. They were~~ identified by policymakers and stakeholders as critical to guide how ~~we~~ transportation agencies plan for, manage, and operate ~~our~~ the transportation system.

Policy outcomes

- **Equity - Black, Indigenous and people of color (BIPOC) community members and people with low incomes, youth, older adults, people living with disabilities and other**

marginalized and underserved communities experience equitable mobility. BIPOC and other marginalized communities have often experienced disproportionately negative impacts from transportation infrastructure as well as disparities in access to safe multimodal travel options. Addressing these disparities is a priority for ODOT and Metro.

The regional transportation system should support access to opportunities for everyone, not just people in motor vehicles. Equity can be enhanced through providing strong multimodal networks with priority provided to improvements benefitting marginalized and underserved communities.

- **Efficiency - Land use and transportation decisions and investments contribute to more efficient use of the transportation system meaning that trips are shorter and can be completed by more travel modes, reducing space and resources dedicated to transportation.** Efficiency in this context means that transportation requires less space and resources. Efficiency can be improved by shortening travel distances between destinations. Shorter travel distances to destinations enhance the viability of using other and more efficient modes of transportation than the automobile and preserves roadway capacity for transit, freight and goods movement by truck and for longer trips. Efficiently using land and planning for key destinations in proximity to the where people live and work, contributes to shorter trip lengths. The transportation efficiency of existing and proposed land use patterns and transportation systems can be measured by looking at "vehicle miles traveled (VMT) per capita" for home-based trips or "VMT per employee" for commute trips to/from work of an area.
- **Access and Options -People and businesses can conveniently and affordably reach the goods, services, places, and opportunities they need to thrive. People and businesses can choose from a variety of seamless and well-connected travel modes and services that easily get them where they need to go.** The viability of trips made by modes other than automobiles can be increased by investing in a connected, multimodal transportation system. Multimodal systems serve all people, not just those who have access to vehicles or the ability to drive them, and provide more route choices, increase safety and efficiency, and increase reliability. Closing gaps in networks, particularly pedestrian and bicycle networks, and closing special and temporal gaps in transit networks, can change travel preferences, reducing VMT/capita. Progress towards well connected, multimodal networks can be measured by mode with "system completeness."

- **Safety - People are able to travel safely and comfortably and feel welcome.** Unsafe transportation facilities can result in injury and loss of life and place a strain on emergency responders. Both unsafe conditions and perceived unsafe conditions can impact travel behavior, causing users to choose different routes or modes. Prioritizing investments that reduce the likelihood of future crashes and that improve safety and comfort for all users will increase mode choices and improve reliability. System completeness by travel mode is useful in identifying needs and investments that could enhance safety and comfort.
- **Reliability - People and businesses can count on the transportation system to travel where they need to go reliably and in a reasonable amount of time**. In a reliable transportation system, all users, including people in automobiles and using transit, can reasonably predict travel time to their destinations. Reliability is impacted by travel conditions, safety, street connectivity, congestion, and availability of travel options. Investments in safety, street connectivity, transit, transportation system management and operations (TSMO), and demand management can yield significant benefits for managing congestion and increasing reliability for all travelers. System completeness can be used as a measure of the availability of reliable travel options, including walking and biking. Average travel speed can be used as a measure to forecast areas of congestion including looking at the number of hours a facility is congested and the percentage of a facility that is congested for multiple hours per day. Average travel speed can also be used to look at total travel time between origin-destination pairs and identify bottlenecks that are most impacting reliability on key travel routes for vehicle modes, including freight and transit.

  For Throughways, the essential function is throughput and mobility for motor vehicle travel, including transit and freight vehicles, to maximize movement of people and goods. Throughways serve interregional and interstate trips and travel times are an important factor in people and businesses being able to make long-distance trips to and through the region and access destinations of regional and statewide significance in a reasonable and reliable amount of time.

  For most Arterials, depending upon the street design classification and freight network classification, the essential functions are transit, bicycle and pedestrian travel and access, while balancing motor vehicle travel and the many other functions of arterials in intensely developed areas. Transit reliability on arterials can be improved with exclusive bus lanes, signal priority and other TSMO strategies. Improving automobile reliability through additional roadway capacity should follow the region's congestion management process and not come at the expense of non-motorized modes and achieving system completeness consistent with modal or design classifications in the Regional Transportation Plan (RTP) or achieving the VMT/capita target for the region or the jurisdiction.

Within the greater Portland ~~metropolitan area~~region, the State of Oregon and Metro have a shared goal of providing mobility such that people and businesses can safely, affordably, and efficiently reach the goods, services, places, and opportunities they need to thrive by a variety of seamless

and well-connected travel options and services that are welcoming, convenient, comfortable, and reliable.

The following policies aim to achieve these outcomes.

Mobility policies

Mobility Policy 1	**Ensure that land use decisions and investments in the transportation system enhance efficiency in how people and goods travel to where they need to go.**
Mobility Policy 2	**Provide people and businesses a variety of seamless and well-connected travel modes and services that increase connectivity, travel~~increase~~ choices and access to low carbon transportation options so that people and businesses can conveniently and affordably reach the goods, services, places and opportunities they need to thrive.**
Mobility Policy 3	**Create a reliable transportation system that people, and businesses can count on to reach destinations in a predictable and reasonable amount of time.**
Mobility Policy 4	**Prioritize the safety and comfort of travelers by all travel modes when planning and implementing mobility solutions.**
Mobility Policy 5	**Prioritize investments that ensure that Black, Indigenous and people of color (BIPOC) community members and people with low incomes, youth, older adults, people living with disabilities and other marginalized and underserved populations have equitable access to safe, reliable, affordable, and convenient travel choices that connect to key destinations.**
Mobility Policy 6	**Use mobility performance ~~measures and~~ targets and thresholds for system planning and evaluating the impacts of plan amendments including: Vehicle Miles Travelled (VMT) per capita for home-based trips ~~and~~, VMT/employee for commute trips to/from work, system completeness for all travel modes, and travel speed reliability on the throughways.**

~~These~~ The Regional Mobility ~~policies~~ Policies apply to:

- the state highway system within the greater Portland ~~metropolitan area~~region for:
    - identifying state highway mobility ~~performance expectations for~~ needs and solutions during system planning and plan implementation; and
    - evaluating the impacts on state highways of amendments to transportation system plans, acknowledged comprehensive plans and land use regulations pursuant to the Transportation Planning Rule (OAR 660-12-0060).
- throughways and arterials designated in the Regional Transportation Plan (RTP), which include state and local jurisdiction facilities, for identifying mobility ~~performance expectations for~~needs and solutions during system planning and plan implementation.

Under this policy, Oregon Highway Plan volume-to-capacity ratio targets still guide operations decisions such as managing access and traffic control systems and can be used to identify intersection improvements that would help reduce delay, improve the corridor average travel speed, and improve safety. Local jurisdiction standards for their facilities still apply for evaluating impacts of amendments to transportation system plans, acknowledged comprehensive plans and land use regulations pursuant to the Transportation Planning Rule (OAR 660-12-0060) and guiding operations decisions.

Three performance ~~measures and~~ targets and thresholds as described in Table 3-5 will be used to assess the adequacy of mobility in the Portland metropolitan area for the regional networks based on the expectations for each facility type, location, and function. These measures will be the initial tools to identify mobility gaps and deficiencies (needs) and consider solutions to address identified mobility needs. The subsequent actions describe how to apply these measures to system planning consistent with OAR 660-012, Sections 3.08.220 and 3.08.510 of the Regional Transportation Functional Plan (RTFP) and OHP Policy 1.G and assessing plan amendment consistent with OAR 660-012-0060.

Table 3-5 ~~Draft m~~ Mobility ~~policy~~performance~~measure~~ targets and thresholds

Measure	Application	Target
VMT/Capita for home-based trips and VMT/Employee for commute trips to/from work	System Planning	OAR 660 Division 44 (~~(~~Metropolitan Greenhouse Gas (GHG) Emissions Reduction rule)) and OAR 660 Division 12 set VMT/capita reduction targets with which the 2023 RTP update and local TSPs will need to comply. The VMT/capita targets are: 20% reduction by 2035, 25% reduction by 2040, 30% reduction by 2045 and 35% reduction by 2050 (from 2005 levels). (a) The 2023 RTP and TSPs that meet this regional target will establish 2045 baseline VMT/capita and VMT/employee. All subsequent applications of this policy shall not increase VMT/capita or VMT/employee above the future baseline.
	Plan Amendments ~~1~~ (b)	The plan amendment will have equal to or lower forecast VMT/capita for home-based trips and equal to or lower forecast VMT/employee for commute trips to/from work than the District target.(c)
System Completeness	System Planning	Complete networks and systems for walking, biking, transit, vehicles, freight, and implement strategies for managing the transportation system and travel demand (See Table 3 for guidance and Table 4 for completeness elements by facility type).[19] (The planned system, Strategic and Financially Constrained, will be defined in local jurisdiction TSPs and may not achieve completeness for all modes to target levels but the local

[19] See pages 10-11 of the Memo "Draft Regional Mobility Policy for the 2023 Regional Transportation Plan (10/28/22)" https://www.oregonmetro.gov/sites/default/files/2022/12/08/Draft-2023-Regional-mobility-policy-2023-RTP-10-28-2022.pdf Tables will be added to Appendix X in the final RTP

		jurisdiction TSP should identify future intent for all facilities given constraints and tradeoffs.)	
	Plan Amendments	100% of planned system Or Reduced gaps and deficiencies (See Table 5[20] for guidance)	
Travel Speed		RTP Motor Vehicle Designation	~~Target~~Thresholds (f)
	System Planning (d)	Throughways – Expressways (e) I-205 I-84 I-5 OR 217 US 26 (west of I-405) I-405 OR 213 from Beavercreek Road to I-205 OR 212-Sunrise Expressway	Average speed not below 35 mph for more than 4 hours per day
		Throughways – Non-Expressways (e) OR 99W west of Sherwood OR 99E Portland to OR 212 OR 99E from south of Oregon City OR 213 south of Beavercreek Rd US 30 OR 47 OR 224 OR 212 US 26 south of OR 212	Average speed not below 20 mph for more than 4 hours per day
	Plan Amendments	Same as system planning	Same as system planning

Table notes:

(a) Meeting these targets sets the region on a trajectory to meet state goals adopted in 2007 to reduce total GHG emissions from all sources to 75% below 1990 levels by 2050.

(b) Plan amendments that meet this target shall be found to not have a significant impact pursuant to the Transportation Planning Rule (OAR 660-12-0060).

(c) Metro will develop maps and/or tables and analyses of how VMT per capita and VMT and per employee and how it is distributed throughout the region. Metro will establish VMT/capita "Districts" that identify TAZ groupings (subareas) with similar land use characteristics and forecast VMT/Capita. A spreadsheet or similar tool will be developed to help assess potential changes to VMT/capita and VMT/employee and potential mitigations to minimize the need for application of the regional travel demand model for all plan amendments.

(d) Addressing motor vehicle congestion through additional throughway capacity should follow the RTP congestion management process, Sections 3.08.220 and 3.08.510 of the Regional Transportation Functional Plan and OHP Policy 1G, and should not come at the expense of achieving system completeness for non-

[20] See page 19 of the Memo "Draft Regional Mobility Policy for the 2023 Regional Transportation Plan (10/28/22)" https://www.oregonmetro.gov/sites/default/files/2022/12/08/Draft-2023-Regional-mobility-policy-2023-RTP-10-28-2022.pdf Tables will be added to Appendix X in the final RTP

motorized modes consistent with regional modal or design classifications or achieving the VMT/capita target for the region or jurisdiction.

(e) Throughways are designated in the Regional Transportation Plan and generally correspond to Expressways designated in the Oregon Highway Plan. Some throughways designated in the RTP are not Expressways in the Oregon Highway Plan but serve an important statewide function.

(f) The ~~target~~thresholds are~~is~~ used to identify areas of poor reliability where due to recurring congestion, average travel speeds drop below specified speed and duration thresholds. It will be used as a ~~target~~threshold to identify needs (deficiencies) ~~and to assess the percentage of the throughway that meets the target~~. It will not be applied as a standard that creates conflict with meeting OAR 660 Division 44 VMT per capita reduction targets. Solutions to address identified needs should follow the RTP congestion management process, Sections 3.08.220 and 3.08.510 of the Regional Transportation Functional Plan and OHP Policy 1G, and should not come at the expense of achieving system completeness for non-motorized modes consistent with regional modal or design classifications or achieving the VMT/capita target for the region or jurisdiction.

How do the measures work together?

VMT/capita will be a controlling measure in both system planning and plan amendments to ensure that the planned transportation system and changes to the system support reduced VMT/capita by providing travel options that are complete and connected and that changes to land use reduce the overall need to drive from a regional perspective and are supportive of travel options.

- For system planning, the final planned system must support OAR 660 Division 44 (Metropolitan Greenhouse Gas (GHG) Emissions Reduction rule) and OAR 660 Division 12 VMT reduction targets.
- For plan amendments, VMT/capita will be used to determine if the proposed plan amendment has a significant impact on regional VMT/capita that needs to be mitigated or not.

System completeness and travel speed reliability on throughways are secondary measures that will be used to identify needs and inform the development of the planned system. The policy requires that TSPs define the planned system for each mode using a variety of guidance documents. Additional RTP and state policies also guide the development of individual modal systems. It is important to note that the Regional Mobility Policy is one of many policies that inform the development of the Regional Transportation Plan and local transportation system plans in the Portland region.

The regional and local "planned" system may not achieve completeness for all modes but should identify future needs and expectations for all facilities given constraints and tradeoffs. Similarly, reliability on throughways will inform state and regional needs of the throughway system~~, and~~ as defined in ~~the target~~ in Table 3-5. ~~articulates the desired level of reliability for the throughway system designated in the RTP and OHP~~. Identifying solutions for locations that do not meet the throughways travel speed reliability ~~target~~ threshold shall follow the RTP congestion

management process[21] and OHP Policy 1G[22], and should not come at the expense of achieving the VMT/capita target.

3.2.5.2 Mobility policy system planning actions

A planned system that can be used to review system completeness is the primary outcome of system planning. VMT/capita and ~~hours of congestion~~ travel speed on throughways are applied to system planning to support the identification of the planned system and transportation needs. The Regional Mobility Policy does not dictate how Metro or local agencies conduct system planning. It is one tool to be used to identify needs and define the planned system. System planning includes updates to long-range transportation plans, including the Regional Transportation Plan and locally adopted transportation system plans. System planning also includes planning for the transportation system in smaller geographies through ODOT facility plans, corridor refinement plans as defined in the Regional Transportation Plan (RTP) and OAR 660-012~~-0190~~, and area plans, including concept plans for designated urban reserve areas. The following actions describe how each of the performance targets shall be used in tandem in system planning, which is supported by the flow chart in Figure 3-9**.**

1. Division 44 GHG Emissions Reduction Rule) and OAR 660 Division 12 (Transportation Planning Rule) set a VMT/capita reduction target for the Portland metropolitan area.[23] The 2023 RTP will identify the strategies needed to achieve this target and result in 2045 baseline VMT/capita for the region. This future baseline shall be used to estimate future VMT/capita for home-based trips and VMT/employee for commute trips to/from work at the TAZ level. The TAZ data shall be aggregated to develop "Districts" [24]with similar land use and VMT characteristics by Metro through the 2023 RTP update and implementation process. The percent change in VMT/capita for the region must meet the reduction target in Division 44 (GHG Emissions Reduction Rule), but the percent change in VMT/capita for each district will vary.

2. For system planning at the sub-regional, local jurisdiction (TSPs), or subarea levels, VMT/capita for home-based trips and VMT/employee for commute trips to/from work shall be measured for the "Districts" covering the plan area to ensure that land use and

[21] ~~2018 RTP Chapter 3 (pages 3-71 and 3-72) regarding~~Section 3.3.4 of the RTP ~~the Congestion Management Process~~ states that "The RTP calls for implementing system and demand management strategies and other strategies prior to building new motor vehicle capacity, consistent with the Federal Congestion Management Process (CMP~~),~~) and Oregon Transportation Plan policies (including Oregon Highway Plan Policy 1G)~~ and Section 3.08.220 of the Regional Transportation Functional Plan (RTFP)~~. Appendix L to the RTP provides more detailed information. Sections 3.08.220 and 3.08.510 of the Regional Transportation Functional Plan (RTFP) further direct how ~~cities and counties~~Transportation System Plans implement the CMP~~ in the local system planning process~~.

[22] Policy 1G (Major Improvements) has the purpose of maintaining highway performance and improving highway safety by improving system efficiency and management before adding capacity.

[23] The Division 44 VMT reduction targets cannot currently be measured using Metro's Regional Travel Demand Model (RTDM); however, baselines for VMT/capita for home-based trips and VMT/employee for commute trips to/from work can be established from the RTDM for the RTP scenario that meet the Division 44 VMT reduction targets as measured via a different tool.

[24] VMT/capita "Districts" will be established that identify TAZ groupings (subareas) with similar forecast VMT/capita, considering use of RTP mobility corridor geographies as a starting point.

transportation plan changes are working in tandem to achieve the region's VMT/capita reduction target, resulting in reduced need to drive, improved viability of using other and more efficient modes of transportation than the automobile, and preserving roadway capacity for transit, freight and movement of goods and services. At the first major TSP update after this policy is implemented, system plans shall demonstrate that the planned transportation system achieves the regional OAR 660 Division 44 (GHG Emissions Reduction Rule) and OAR 660 Division 12 (Transportation Planning Rule) targets and that future system plan updates maintain or reduce aggregate VMT/capita for home-based trips and VMT/employee for commute trips to/from work for the "Districts" in the plan area compared to the 2045 baseline set in the 2023 RTP. Projections of VMT/capita must incorporate the best available science on latent and induced travel of additional roadway capacity consistent with OAR 660-012-0160. If a TSP's financially constrained list does not include any projects requiring review in OAR 660-012-0830, VMT per capita analysis work in OAR 660-012-0160(2)-(4) is not required.

3. System completeness definitions in guidance documents shall be used to identify needs and ensure that the planned transportation system is increasing connectivity and improving safety of the multimodal network. The planned system shall be established in local transportation system plans consistent with the RTP and -Regional Transportation Functional Plan (RTFP) for each facility and will vary based on the modal functional classification and design classification. Table 3[25] provides guidance for defining the planned system and Table 4[26] identifies the elements that must be identified for each facility or service type.

4. Reliability for throughways based on average travel speed ~~targets~~thresholds in Table 3-5 shall be used to assess performance of throughway facilities within the system planning study area for safe, efficient, and reliable speeds. ~~Targets~~ Thresholds ~~will include~~ reflect a ~~target~~ minimum average travel speed that shall be maintained for a specific number of hours per day, recognizing that the ~~target~~ threshold average speed is not likely to be met during a number of peak hours, as described in Table 3-5. The percentage of the throughway system meeting the target may also be considered. These ~~targets~~ thresholds shall inform identification of transportation needs and consideration of system and demand management strategies and other strategies[27] but shall not be used as standards at the expense of non-motorized modes and achieving system completeness for other

[25] See pg 10 of the Memo "Draft Regional Mobility Policy for the 2023 Regional Transportation Plan (10/28/22)" https://www.oregonmetro.gov/sites/default/files/2022/12/08/Draft-2023-Regional-mobility-policy-2023-RTP-10-28-2022.pdf Tables will be added to Appendix X in the final RTP

[26] See pg. 11 of the Memo "Draft Regional Mobility Policy for the 2023 Regional Transportation Plan (10/28/22)" https://www.oregonmetro.gov/sites/default/files/2022/12/08/Draft-2023-Regional-mobility-policy-2023-RTP-10-28-2022.pdf Tables will be added to Appendix X in the final RTP

[27] The RTP system sizing policies, regional congestion management process and OHP Policy 1F will be followed to determine mitigations that support meeting the throughway travel speed~~hours of congestion~~ threshold.

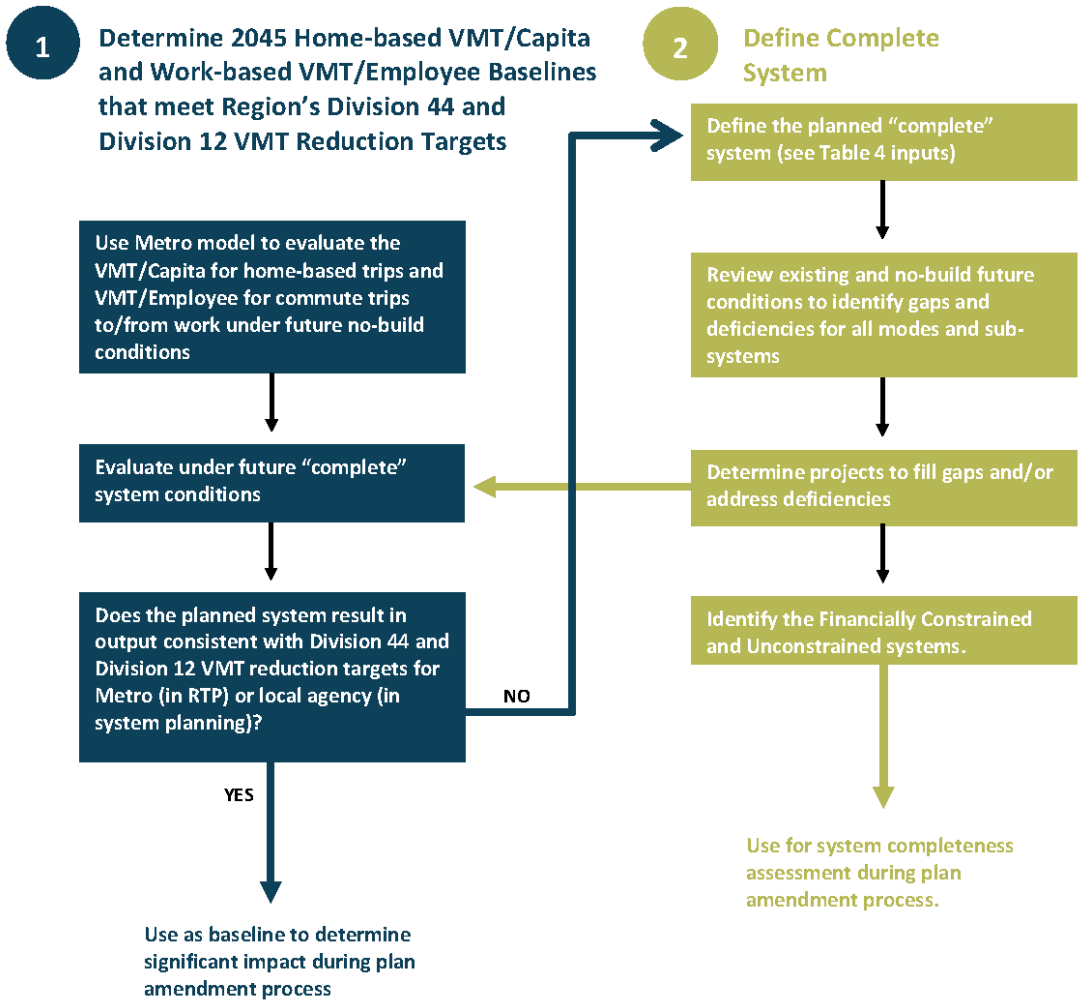
modes consistent with regional modal or design classifications or achieving the VMT/capita target for the region or jurisdiction. Analysis segmentation of facilities within the study area will be determined based on the analysis software or modeling tool utilized.[28] Projections of VMT/capita must incorporate the best available science on latent and induced travel of additional roadway capacity.

5. Interchanges shall be managed to maintain safe, efficient, and reliable operation of the mainline for longer trips of regional or statewide purpose through the interchange area. The main objective is to avoid the formation of traffic queues on off-ramps which back up into the portions of the ramps needed for safe deceleration from mainline speeds or onto the mainline itself. This is a significant traffic safety and operational concern as queues impact mainline operations and crashes affecting reliability. Deceleration space for vehicles exiting throughway mainlines can be improved by managing throughways for longer trips resulting in reducing off-ramp traffic volumes and by increasing capacity at the off-ramp terminal. Throughway off-ramp terminal intersection and deceleration needs shall be evaluated through system plans such as Interchange Area Management Plans, Corridor Plans, and Sub-area Plans.

6. In system plans, when identifying transportation needs and prioritizing investments and strategies, projects that create greater equity and reduce disparities between “Equity Focus Areas" and “Non-Equity Focus Areas” shall be prioritized. This action aims to improve equitable outcomes by burdening underserved populations less than and benefiting underserved populations as much or more as the study area population as a whole. Because the Equity Focus Areas as defined by the RTP are based on a regional average comparison, local governments shall conduct a more specific equity analysis at the local TSP scale consistent with OAR 660-012-0135.

Figure 3-9 System Planning Process Utilizing the Mobility Policy Measures

[28] Supporting documentation will be needed as part of implementation of the policy to define the segmentation methodologies based on analysis options.



3.2.5.3 Mobility policy plan amendment evaluation actions

All three of the mobility policy measures are applied to the evaluation of plan amendments. The following actions describe how each of the ~~performance~~mobility targets and thresholds shall be used in tandem in evaluating plan amendments consistent with the Transportation Planning Rule (OAR 660-012-0060) and is supported by the flowchart in Figure 3-9.

1. Comprehensive plan amendments that do not surpass the trip generation thresholds in the Oregon Highway Plan Policy 1F will be found to have no significant impact and are not required to further evaluate VMT/capita, hours of congestion travel speed on Throughways, or system completeness.

2. In a jurisdiction with a TSP that has demonstrated compliance with achieving the region's Division 44 and Division 12 VMT reduction targets, comprehensive plan amendments that are forecast to maintain or lower VMT/capita for home-based trips and VMT/employee

for commute trips to/from work compared to their 2045 baseline that achieve Division 44 targets, shall be found to have no significant impact consistent with the Transportation Planning Rule (OAR 660-12-0060)

3. Comprehensive plan amendments that have a significant impact because they a) increase VMT/capita for home-based trips or VMT/employee for commute trips to/from work or b) the jurisdiction has not demonstrated compliance with OAR 660 Division 44 and Division 12 VMT reduction targets shall mitigate that impact by adjusting their land use plan, supporting VMT/capita reduction through enhancing non-vehicular modes beyond what's in the financially constrained transportation system plan, and/or committing to ~~travel~~transportation demand management. Enhancing non-vehicular modes means increasing system completeness for non-vehicular modes within the impact area of the plan amendment for those modes. Within the impact area, the system gaps will be identified based on the planned system in the TSP.

4. Large scale, typically legislative plan amendments will be obligated to develop a funding plan that will address the system gaps and bring additional projects that support VMT/capita reduction into the financially constrained transportation system plan and that help the district meet their VMT/capita target or mitigate the safety impacts of additional vehicle trips. In addition to addressing system completeness, a large plan amendment that is found have a significant impact on VMT/capita that cannot be mitigated will be required to review the impact of the plan amendment on meeting the ~~hours of congestion~~ travel speed on Throughways ~~target~~ threshold and mitigate the impact. Addressing the ~~hours of congestion target~~impact of the plan amendment on throughways shall follow the RTP congestion management process, Sections 3.08.220 and 3.08.510 of the Regional Transportation Functional Plan and OHP Policy 1G and shall not come at the expense of achieving the VMT/capita target for the region.

5. Small scale, typically quasi-judicial plan amendments will need to demonstrate their proportionate impact on increased VMT/capita in the district and agree to conditions on the plan amendment or future conditions of development approval consistent with the local jurisdiction development code and project funding mechanisms to support reduced VMT/capita such as land use, transportation~~travel~~ demand management, and/or off-site mitigations to support VMT reduction or mitigate safety impacts of additional trips.

6. System completeness assessment of comprehensive plan amendments shall identify the needs to meet the planned system for each mode, as established in regional and/or local system plans. For each mode, the completeness impact area will be defined based on routing from the comprehensive plan amendment site for the specified distances in Table

5 [29]. Table 5 [30] provides guidance for identifying the needs within each modal completeness impact area. For the comprehensive plan amendment, a proportional share of additional projects in the unconstrained transportation system plan, not included financially constrained transportation system plan, will be established based on additional daily trips for the plan amendment for both multi-modal trips as well as the vehicular trips for which the increased VMT/capita is being mitigated, as described in Figure 3-10.

7. Comprehensive plan amendments that demonstrate either of the following for analysis segments within the vehicular impact area shall be found to require mitigation, and a proportional share of the identified needs will be established for the comprehensive plan amendment based on additional daily trips:

   ~~8.~~a. Degrades the ~~hours of congestion~~travel speed of an existing or planned ~~transportation facility~~throughway such that it would not meet the performance target identified Table 3-5; or

   ~~9.~~b. Degrades the travel speed of an existing or planned ~~transportation facility~~throughway that is otherwise projected to not meet the performance standards identified in Table 3-5.

~~10.~~8. Interchanges within the vehicular impact area shall be assessed for off-ramp queuing to maintain safe, efficient and reliable operation of the mainline for longer trips of regional or statewide purpose through the interchange area under the forecast comprehensive plan amendment.

[29] See pg. 19 of the Memo "Draft Regional Mobility Policy for the 2023 Regional Transportation Plan (10/28/22)" https://www.oregonmetro.gov/sites/default/files/2022/12/08/Draft-2023-Regional-mobility-policy-2023-RTP-10-28-2022.pdf Tables will be added to Appendix X in the final RTP

[30] See pg. 19 of the Memo "Draft Regional Mobility Policy for the 2023 Regional Transportation Plan (10/28/22)" https://www.oregonmetro.gov/sites/default/files/2022/12/08/Draft-2023-Regional-mobility-policy-2023-RTP-10-28-2022.pdf Tables will be added to Appendix X in the final RTP

Figure 3-10 Guidance for Assessing Plan Amendment Impacts

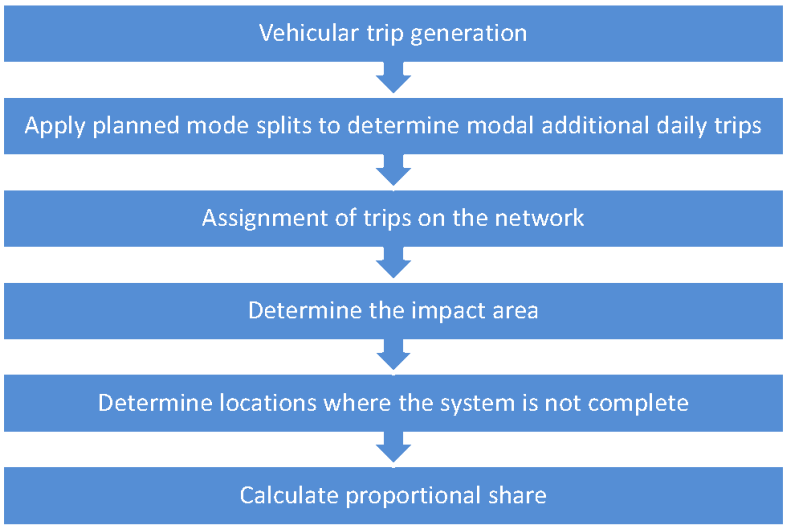
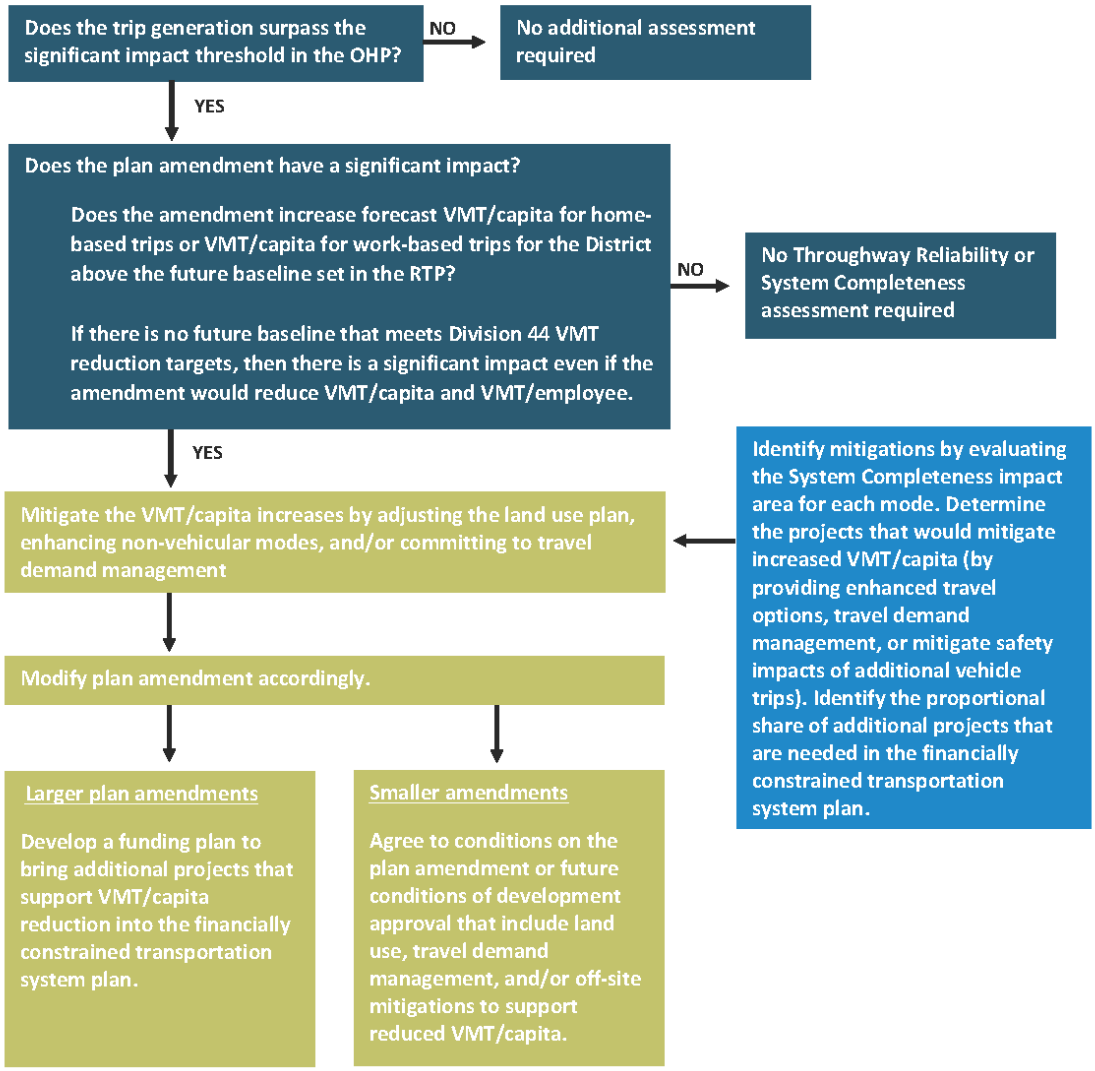


Figure Note: Vehicular trip generation with planned mode splits will be used until or unless mode specific trip generation resources become available.

Figure 3-11 Plan Amendment Process Utilizing the Mobility Policy Measures



WHAT'S CHANGED? Emerging technology policies (what was Section 3.2.4) was moved to later in the Chapter and is now Section 3.3.12)

3.3 REGIONAL NETWORK VISIONS, CONCEPTS AND POLICIES

What's changed?

Section numbers have changed from the 2018 RTP. Changes specific to each policy are described at the start of the policy section.

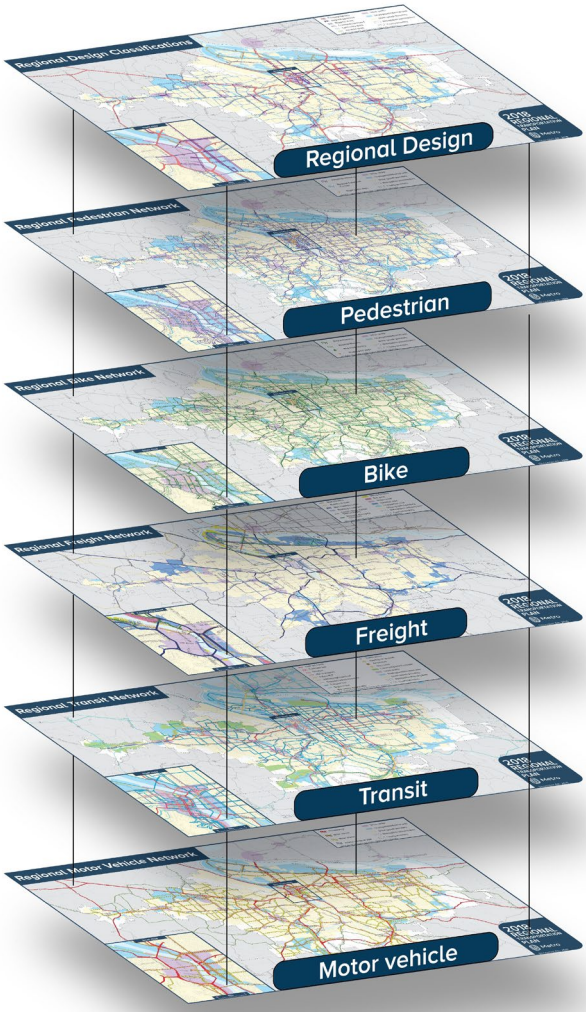
This section describes a network vision, concept and supporting policies for each component of the regional transportation system. The network vision, concepts and policies represent a complete urban transportation system that meets the plan goals and supports local aspirations for growth.

Rendering of a Regional Street showing a four-lane street with a planted median, crosswalks, and buildings. One lane in each direction is a bus only lane. There is a bus and four cars. A painted green bikeway and sidewalk are separated from the roadway by a planted median. People are walking and crossing the street.
Source: Metro Designing Livable Streets and Trails Guide

The network visions, concepts and policies provide define a seamless and well-connected regional system of regional throughways and arterial streets, freight networks, transit networks and services and bicycle and pedestrian facilities. The network policies emphasize safety, access, mobility and reliability for people and goods and recognize the community-building and placemaking role of transportation. The network visions, concepts and supporting policies will guide the development, design, and management of different networks of the regional transportation system. The transportation system components are shown in Figure 3-12.

Click on 2023 RTP Network Maps [LINK TO BE ADDED] for an online zoomable version of each map.

Figure 3-12 Regional transportation system components



3.3.1 Regional mobility corridor concept

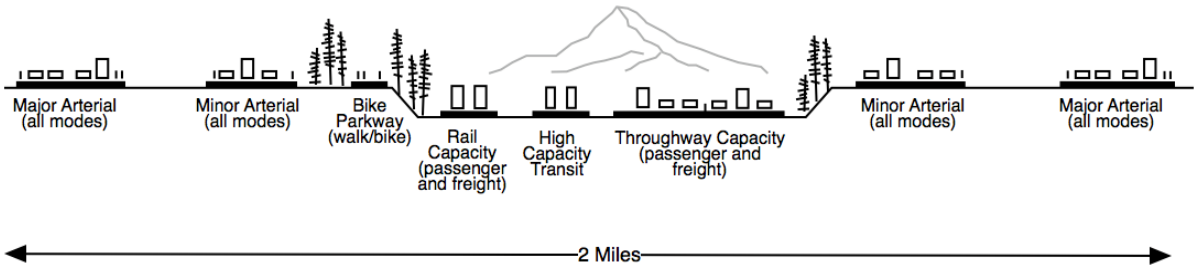
WHAT'S CHANGED? This section was moved up from the position in the 2018 RTP, before the design policies. No other changes are proposed to this section.

The regional mobility corridor concept envisions regional travel corridors defined by a central throughway and high capacity transit well supported by a network of arterial streets, frequent bus routes, freight/passenger rail and bicycle parkways to provide for regional, statewide and interstate travel. The function of this system of integrated transportation corridors is metropolitan mobility – moving people and goods between different parts of the region and connecting the region with the rest of the state and beyond. Mobility corridors also have a significant influence on the development and function of the land uses they serve. Mobility corridors are defined by the major centers of the 2040 Growth Concept. The regional mobility corridor concept calls for the consideration of parallel and interconnected facilities, different travel modes, and land use when identifying needs and solutions to improve mobility within a corridor. The concept of a regional mobility corridor is shown in Figure 3-13.

Since the 1980s, regional mobility corridors have had throughway travel supplemented by high capacity transit service that provides an important passenger alternative. Parallel arterial streets, heavy rail, bus service, bicycle parkways and pedestrian/bicycle connections to transit also provide additional capacity in the regional mobility corridors. The full array of regional mobility corridor facilities should be considered in conjunction with the parallel throughways for system evaluation and monitoring, system and demand management and phasing of physical investments in the individual facilities. Bicycle and pedestrian travel and access to transit are also important as we plan and invest in regional throughways and arterial streets. New throughway and arterial facilities, such as freeway interchanges or widened arterial streets, should be designed and constructed in such a manner as to support bicycling, walking and access to transit.

The Mobility Corridor Strategies provided in the Appendix provides a summary of the 24 corridors, describing facilities, functions, land uses, and documenting transportation needs and strategies for addressing them. Updates to these strategies will be informed by the Regional Mobility Policy update described in Chapter 8.

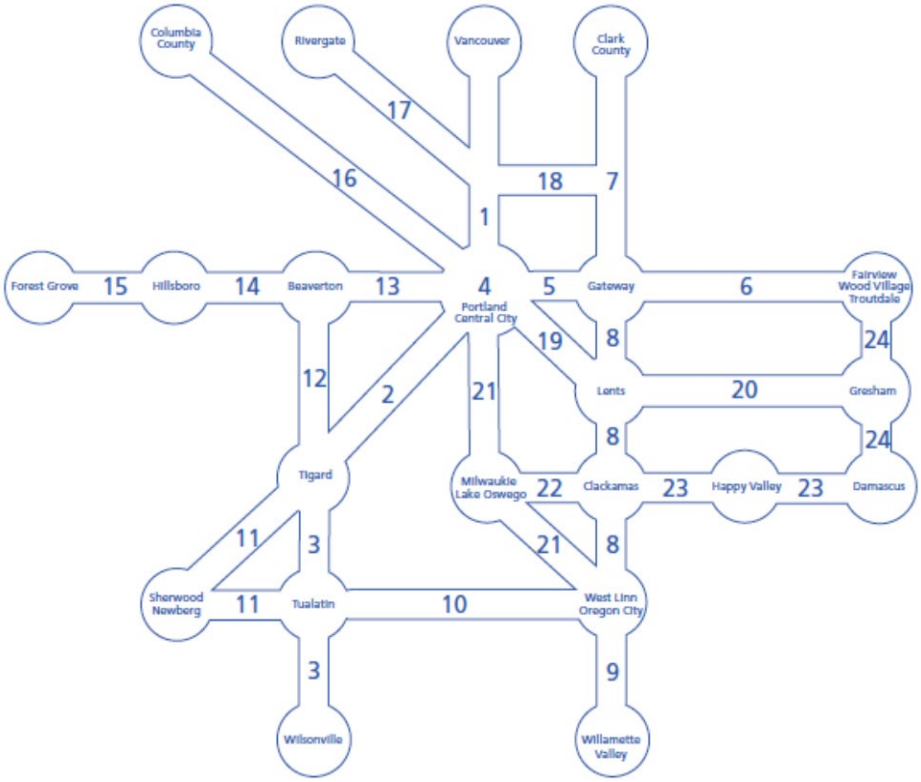
Figure 3-13 Regional mobility corridor concept



Note: Idealized concept for illustrative purposes showing recommended range of system analysis for the evaluation, monitoring, management and phasing of investments to throughways, arterial streets and transit service in the broader corridor. The illustration is modeled after the Banfield corridor that links the Portland central city to the Gateway regional center.

Figure 3-14 shows the general location of mobility corridors in the region.

Figure 3-14 Mobility corridors in the Portland metropolitan region



3.3.2 Regional Design and Placemaking Vision and Policies

What's changed?

Policies in this section are not new. Metro staff have reformatted existing policy language from the 2018 RTP and 2019 Metro Designing Livable Streets and Trails Guide into standard policy format used for all RTP policies. Two existing Motor Vehicle policies were moved into this section.

Since the March 2023 draft: Minor clarifying revisions have been made.

Over the next several decades, the challenges faced by communities in greater Portland and the burdens placed upon the transportation network will multiply in number and complexity. Greenhouse gas emissions from motor vehicles and serious traffic crashes are two of the most pressing transportation issues; addressing them will require a transportation system designed to serve multiple travel modes, especially public transit, walking, and bicycling. Additionally, streets and trails must function not only as corridors for moving people, goods and services, but also as stormwater management facilities, community gathering spots and public spaces to enhance community livability.

The regional transportation system design classifications and policies in this section address federal, state and regional transportation planning mandates and support implementation of the 2040 Growth Concept.

Figure 3-15 Metro's Designing Livable Streets and Trails Guide[31]

[31] Metro's Designing Livable Streets and Trails Guide complements existing national, state and local requirements and guidelines, and its recommendations are allowable under national guidance, including guidelines developed by the American Association of State Highway and Transportation Officials, the Federal Highway Administration and the National Association of City Transportation Officials. The Designing Livable Streets and Trails Guide has been developed based on current design guidance, case studies, best practices for urban environments, research and evaluation of existing designs, and professional review and input. It integrates design guidance for regional streets, regional trails, stormwater management and Greenstreet treatments into one guide to encourage a holistic and comprehensive approach to designing a complete transportation system.

Metro's Designing Livable Streets and Trails Guide provides design guidance depending on the intended functions of the arterial or throughway, the land uses the facility serves and adopted policy. In the design guidance, consideration is given to various arterial designs, designs for freight, trails, pedestrians, bicyclists and transit and the link between street design and stormwater management.[32] Design decisions, especially trade-offs in situations of limited road right-of-way, should use performance-based design and flexibility in design to achieve desired outcomes.

The purpose of the Guide is to support implementation of the 2040 Growth Concept and the Regional Transportation Plan. Along with other local and regional plans and policies, this Guide is a resource for the agencies responsible for designing, constructing, and maintaining the region's transportation system. Metro intends the design guidance to assist in designing new and reconstructed streets and trails but may also be applied to maintenance projects that preserve and extend the service life of existing streets and structures when minor retrofits are needed.

3.3.1 Design and complete streets policies

Policy 1	**Design the transportation system to implement the planned land uses and regional urban form envisioned in the 2040 Growth Concept.**
Policy 2	**Design a well-connected transportation system that serves all modes of travel.**
Policy 3	**Use regional street design classifications to guide development of streets that balance the needs of all users and functions of streets according to planned land use and desired outcomes.**

32 Find regional design guidelines and other resources here: https://www.oregonmetro.gov/tools-partners/guides-and-tools/guidelines-designing-livable-streets-and-trails

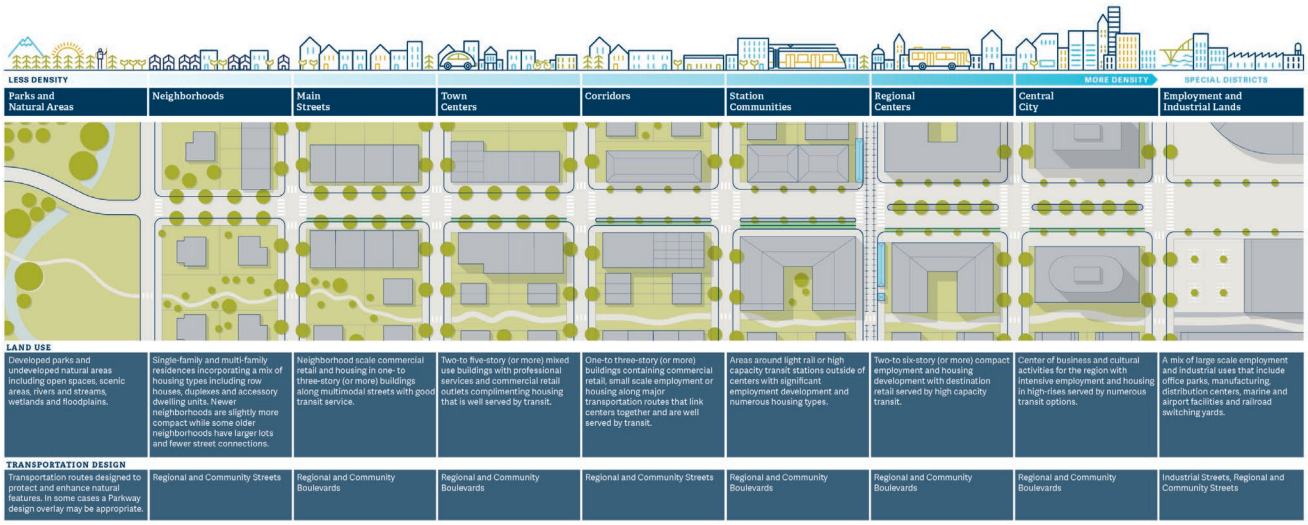
Policy 4	**Use transportation network and street design to help achieve regional goals and desired outcomes, including environmental and human health, climate action and resilience, a safe system, equitable transportation, mobility options, vibrant communities, and a thriving economy.**
Policy 5	**Avoid, minimize, and mitigate environmental impacts of the transportation system using Green Infrastructure design, street trees, wildlife habitat or waterway crossing improvements and other approaches ~~to the extent practicable~~.**
Policy 6	**Use a performance-based approach and decision-making framework to plan and design transportation projects and networks.**

Design Policy 1. Design the transportation system to implement the planned land uses and regional urban form envisioned in the 2040 Growth Concept.

The 2040 Growth Concept directs most new development to mixed-use centers, corridors and main streets. Realization of the Concept relies on a balanced transportation system that adequately serves planned uses while reducing vehicle miles traveled. Regional street design classifications support building and operating streets that are sensitive to the adjacent land use context, the roadway's functional classifications and the different needs and abilities of people traveling.

Figure 3-16 illustrates how the design of transportation facilities should change in response to planned and surrounding land use.

Figure 3-16 Land use and transportation transect

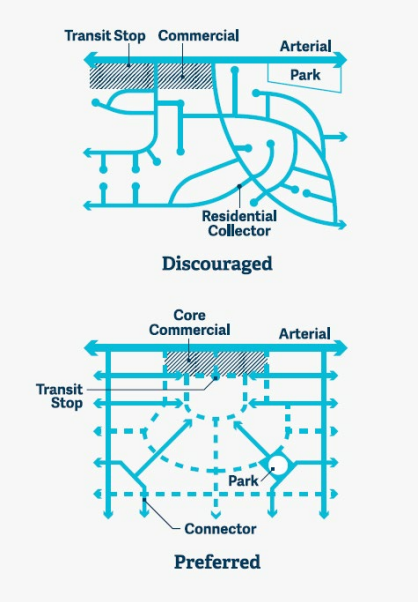


Graphic image of an illustrative road running through different types of land use. To view the full size illustration see the Designing Livable Streets and Trails at https://www.oregonmetro.gov/tools-partners/guides-and-tools/guidelines-designing-livable-streets-and-trails

Design Policy 2. Design a well-connected transportation system that serves all modes of travel.

Consistent with the mobility corridor concept, a well-connected network of complete streets provides multiple and direct routes between destinations. Figure 3-17 illustrates a well-connected street network.

Figure 3-17 Street connectivity

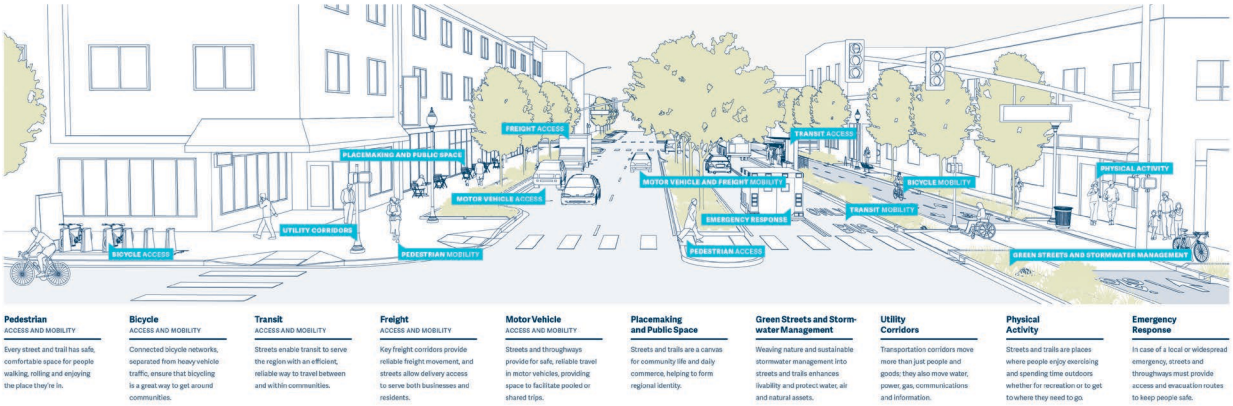


Because walking and biking are easier on a connected street network, a connected street network supports the 20-minute neighborhood concept, where all daily necessities are within a 20-minute walk of bike ride. Even where less-connected street networks have been established by jurisdictions, trails, paths, bridges, and midblock street crossings increase connectivity for people walking and bicycling. Emergency response also benefits from a well-connected street system.

Section 3.3.3.1 of the regional motor vehicle network policies provides regional street spacing standards. Environmental factors may impact street connectivity in some locations. Outside of centers, agencies should design street networks around, rather than through, environmentally sensitive lands and should mitigate impacts when they cannot be avoided. Street networks should allow for the preservation of continuous natural areas and parks.

Complete streets are transportation facilities that agencies plan, design, operate, and maintain to enable safe, convenient, and comfortable travel and access for users of all ages and abilities regardless of their mode of transportation. Complete Streets serve many functions and allow for safe travel by those walking, bicycling, driving automobiles, riding public transportation, or delivering goods. Figure 3-18 illustrates the multiple functions that streets serve.

Figure 3-18 Livable streets and trails functions



Graphic image of an illustrative street with call out boxes describing the different functions of the street. To view the full size illustration see the Designing Livable Streets and Trails at https://www.oregonmetro.gov/tools-partners/guides-and-tools/guidelines-designing-livable-streets-and-trails

Design Policy 3. Use regional street design classifications to guide development of streets that balance the needs of all users and functions of streets according to planned land use and desired outcomes.

Regional street design classifications provide an overall approach to design regional roadways based on its functional classification, the planned land use context, and achieving desired outcomes and community needs.

Table 3-6 summarizes typical design elements, including the planned number of motor vehicle travel lanes and target and design speed, for different travel modes for each of the regional street design classifications and illustrates how street design corresponds to 2040 land use design types and motor vehicle functional classifications.

Table 3-6 Planned regional transportation system and ~~T~~typical design components of regional ~~street~~ design classifications

2040 Land Use Design Type	Design Classification	Street Connections	Prioritized Travel Modes	Motor vehicle Functional Classification	Target and Design Speed	Number of Lanes	Medians and Turn Lanes	Flex Zone Uses	Pedestrian Design	Bikeway Design	Transit Design	Freight Design	Green Streets/ Stormwater Management
Any	Freeways	Limited Grade-separated	Motor vehicle, freight, transit	Throughway	45 to 60 mph	Up to six with auxiliary lanes in some places	Center barrier, no turn lanes	Shoulder for emergency use, bus on shoulder or carpool	Parallel facility; crossings on over- or underpasses; crossings every 200 to 1,200 ft.	Multiuse path; crossings on over- or underpasses	Bus on shoulder, express bus, light rail	Enhanced mobility	Vegetated landscaping and green streets treatments to manage stormwater
Any	Highways	Limited Some grade-separated, signalized	Motor vehicle, freight, transit	Throughway	35 to 50 mph	Up to six with auxiliary lanes in some places	Median, limited turn lanes in some locations	Shoulder for safety, emergency use, bus on shoulder or carpool	Parallel facility or buffered sidewalks; crossings on over- or underpasses; crossings every 200 to 1,200 ft.	Multiuse path or separated bikeway; crossings on over- or underpasses	Bus on shoulder, express bus, light rail	Enhanced mobility	Vegetated landscaping and green streets treatments to manage stormwater
Centers, station communities and some main streets	Regional and community boulevards	Many; access management emphasized	Pedestrian, transit, bicycle; access for all modes	Major arterial (regional boulevard) Minor arterial (community boulevard)	20 to 25 mph	Two to four lanes	Median desired, some turn lanes; minimize additional crossing width at intersections	None, or separated bikeway, enhanced bus, parking, green streets	Buffered sidewalks, enhanced crossings and access to transit; crossings every 200 to 530 ft. (1 to 2 blocks)	Separated bikeway; enhanced crossings	Accessible stations, priority bus treatments as appropriate	Access: loading and unloading	Vegetated landscaping and green streets treatments to manage stormwater
Corridors, neighborhoods, some main streets and employment and industrial areas	Regional and community streets	Some to many; access management as possible	Balanced and modal network priorities	Major arterial (regional street) minor arterial (community street)	20 to 30 mph	Two to four lanes	Median desired; some turn lanes; minimize additional crossing width at intersections	None, or separated bikeway, enhanced bus, parking, green streets	Buffered sidewalks, enhanced crossings and access to transit; crossings every 200 to 530 ft (1 to 2 blocks)	Separated bikeway; enhanced crossings	Accessible stations, priority bus treatments as appropriate	Mobility on freight corridors; access: loading and unloading	Vegetated landscaping and green streets treatments to manage stormwater
Employment and industrial areas	Industrial streets	Some; access management emphasized	Freight, motor vehicle, transit	Major or minor arterial	20 to 40 mph	Two to four lanes	Median in some instances; some turn lanes	None, separated bikeway or multiuse path, enhanced bus, parking, green streets	Sidewalk with buffer or multiuse path; enhanced crossings and access to transit; crossings every 200 to 530 ft. (1 to 2 blocks)	Separated bikeway or multiuse path; enhanced crossings	Accessible stations, priority bus treatments as appropriate	Priority freight treatments, wider lanes and intersections	Vegetated landscaping and green streets treatments to manage stormwater

To view the full size table see the Designing Livable Streets and Trails at https://www.oregonmetro.gov/tools-partners/guides-and-tools/guidelines-designing-livable-streets-and-trails

Regional design classifications apply to local transportation system plans throughout greater Portland. Cities or counties may adopt the classifications into their plans or provide a cross-reference if they use different terms. Regional street design classifications are assigned to all throughways and major and minor arterials in the regional transportation system as shown in Table 3-6 and Figure 3-21.

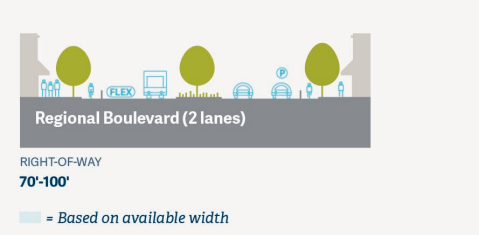
Regional street design concepts promote community livability and reliable travel by balancing all modes of travel and addressing the function and character of adjacent land uses. Linking land use and the physical design of transportation facilities is crucial to achieving state goals to limit reliance on any one mode of travel and to encourage increased walking, bicycling, carpooling, vanpooling and use of transit.

Freeways and highways

Freeways and highways connect major activity centers, including the central city, regional centers, industrial and employment areas, and intermodal facilities such as the Port of Portland. Freeways and highways provide intercity, interregional, and interstate connections. This design classification prioritizes long-distance and higher speed freight, motor vehicle and transit mobility. Freeways are grade separated; highways have a mix of grade-separated and at grade

intersections. Freeways and highways cross all types of land uses, and buildings are typically not oriented to these facilities.

Regional and community boulevards



Regional and community boulevards serve the multimodal travel needs of the region's most intensely developed and developing activity centers, including the central city, regional centers, station communities, town centers and some main streets. Adjacent land uses and buildings should orient directly to the boulevard with ground-floor commercial activity, contributing to a pedestrian and bicycle-friendly environment. Buildings typically have designs, such as a storefront or arcade, which provide transition space from the street and support pedestrian access. Agencies design boulevards to prioritize pedestrian, bicycle, and transit travel.

Regional and community streets

Regional and community streets balance the multimodal travel and access needs of corridors, neighborhoods, and some main streets, along with employment and industrial areas. Regional and community streets can be located within residential neighborhoods as well as more densely developed corridors and employment centers. Development can be set back from the street. Regional and community streets can also serve as main streets with buildings oriented toward them at major intersections and transit stops.

Figure 3-21 shows design classifications for arterials and throughways.

Design Policy 4. Use transportation network and street design to help achieve regional goals and desired outcomes, including environmental and human health, climate action and resilience, a safe system, equitable transportation, mobility options, vibrant communities, and a thriving economy.

Transportation agencies can design facilities to achieve desired outcomes and support the health, safety, and economic and environmental sustainability of communities in the region. Practitioners refer to this approach as performance-based design.

Table 3-7 illustrates how design characteristics of urban arterials ~~that~~ can either promote or hinder desired outcomes.

Table 3-7 Design characteristics of healthy urban arterials[33]

Health Promoting Design	Unhealthy Design
Neighborhood asset for access and commerce	Physical barrier that divides neighborhoods
Supports neighborhood social and cultural connections	Exhibits neglect and physical decay
Safe travel speeds for all users	Traffic speeds too high to be safe for all users
Comfortable for all users to cross	Difficult to cross because of design and traffic
Link within pedestrian and bicycle networks	Barrier within pedestrian and bicycle networks
Designed to mitigate noise	Source of noise
Designed to mitigate air pollution	Near-roadway air pollution
Accessible to users of all abilities	Inaccessible to users with disabilities
Supports green infrastructure systems	Impervious paving materials, lack of shade
Contributes to revitalization without displacement	Location of residential and business gentrification

Design principles to achieve desired outcomes

- **Design with a safe system approach**: Use the safe systems approach in street design, managing speeds for safety, lowering speeds in areas where people are walking, bicycling, and accessing transit and separating users. Separation means creating physical barriers between people moving at different speeds. As speed differentials increase, so should the level of

[33] Understanding and Improving Arterial Roads to Support Public Health and Transportation Goals, American Journal of Public Health, August 2017.

separation. Medians, access management treatments, protected bicycle lanes and other street design elements can minimize crashes.

- **Design for safe speeds**: Design streets to encourage safe speeds for all users – the safe target speed. Evaluating minimum sight distance, horizontal curvature, vertical curves and other design factors is based on the design speed. To achieve a safe target speed, the design speed should align with the target speed. Ultimately, posted speed should also align. Transportation agencies can achieve a desired target speed by street design elements. Wider, more open roadways encourage higher operating speeds. Conversely, a roadside with street-facing buildings, wide, buffered sidewalks, separated bikeways, ~~parked cars~~on-street parking and street trees can ~~provide cues to drivers to encourage~~lead to lower speeds.
- **Design for all users**: Design for people of all ages and abilities, as well as the design vehicle for a specific facility. Before developing a design, practitioners should consider ~~each of type~~each type of user and how they will navigate the street. Agencies should design streets keeping the green transportation hierarchy in mind. The hierarchy prioritizes functions for a typical street in this order: walking, bicycling, transit, freight, carshare/ taxi/commercial transport, and private automobiles. The selection of a design vehicle is an essential part of developing street and intersection designs. The design vehicle is the largest vehicle expected to use the street or intersection regularly. Because the selection of a design vehicle influences street dimensions such as turning radii, which in turn can impact safety and operating speeds, practitioners should choose the smallest possible design vehicle. Occasional larger vehicles can still be accommodated in the design by encroaching on opposing lanes or using multiple point turns. Likewise, agencies can use design features such as speed cushions or truck aprons to accommodate emergency vehicles and large trucks while providing speed management treatments that reduce overall traffic speeds.
- **Design for personal security and equity**: Use design to create streets where people of all races, genders, ages and abilities feel safe from crime and harassment. Because street design has been used to oppress and criminalize Black communities, communities must be engaged in the design process. Streets should be intuitive and easy to use regardless of race, income, age, ability, cultural background, or language.
- **Design to protect the environment**: Use green infrastructure design to avoid, minimize and mitigate the harmful environmental impacts of transportation facilities and achieve a healthier, more resilient landscape.
- **Design for the future**: Factor in rapid technological change and innovation. Agencies should consider allocating street space to the functions that matter most, and not necessarily to the newest technology. Street designs should also be flexible enough to support piloting new innovations.
- **Design with fiscal stewardship in mind**: Use innovative and creative design approaches to reduce costs and conserve resources for construction and life cycle costs, including operation, maintenance, and replacement costs. Include external costs, such as climate change impacts, to capture the full cost of specific design treatments.

Design Policy 5. Avoid, minimize, and mitigate environmental impacts of the transportation system using Green Infrastructure design, street trees, wildlife habitat or waterway crossing improvements and other approaches ~~to the extent practicable~~.

The effect that transportation infrastructure has on the health of the natural environment, particularly urban waterways, and habitat connectivity, is well documented. Transportation infrastructure has the potential to degrade water quality, create barriers to corridors for animal travel and increase air, noise and light pollution. Projects also have the potential to negatively impact cultural and historical resources if not planned and implemented carefully.

Projects should be designed to avoid or minimize impact or if avoidance is not possible, to maximize enhancement, protection, and improvement of natural, community and cultural resources through the application of Green Infrastructure design treatments.[34] The avoid, minimize, or mitigate approach is known as sequencing and involves understanding the affected environment and assessing transportation effects throughout the project development process.

The sequencing for projects follows this order:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action or project.
- Compensating for the impact by replacing or providing substitute resources or environments.

All streets and trails must manage stormwater, treating runoff to reduce pollution and infiltrate water into the ground, limiting how much stormwater and pollutants eventually make their way into vulnerable natural waterways. By incorporating green infrastructure treatments such as vegetated medians, planters, curb extensions and street trees, streets and trails can function as urban green corridors that not only manage stormwater but mitigate the harmful impacts of transportation on air, water, and wildlife habitat and connectivity. This function of streets and trails is imperative to human and environmental health.

One of the distinct advantages of having streets and trails function as green streets over "grey infrastructure" for stormwater management is their superior treatment of pollutants running off from roadways. While grey infrastructure options may have smaller footprints, they are typically

[34] Refer to Appendix F for examples of mitigation strategies for different environmental resource areas. For example, street trees, vegetated swales and other green street treatments can intercept rainwater and convey stormwater in the public right-of-way, following best practices to minimize light pollution, installing appropriate wildlife crossings, screening sensitive habitats from noise and light, enhancing vegetation associated with wetlands and waterways for wildlife, limiting fill within wetlands, constructing bridges or open bottom culverts, creating new wetland areas, and restoring or rehabilitating damaged wetlands and waterways, using pervious materials and preserving, maintain or enhancing tree canopy. Refer to Metro's handbooks Green Streets: Innovative Solutions for Stormwater and Stream Crossings" and "Wildlife Crossings: Providing safe passage for urban wildlife for more information on these designs.

more expensive to maintain and fail if not maintained. In addition, separate grey infrastructure elements are almost always needed to manage runoff quality and quantity.

Street trees and other green streets infrastructure provide a wide array of benefits in addition to stormwater management, offering wildlife habitat, improving air quality, providing shade and reducing the urban heat island affect, beautifying the surroundings, promoting human well-being and calming traffic.

On streets with high levels of walking and bicycling, street trees provide buffers from traffic and air pollution. ~~The green streets function~~Green streets can be further supported by using dark skies approaches to minimize the impact of street lighting on wildlife, human health, and the natural environment. Designing streets and trails for stormwater management can also incorporate and enhance other functions, such as placemaking. Agencies can use green street elements to create a stronger sense of place and make walking and biking more enjoyable.

~~The following list identifies the~~Transportation agencies typically consider the following types of environmental, tribal, cultural and historical data ~~that transportation agencies consider~~ during development of projects:

- High value fish and wildlife habitat areas and biodiversity corridors
- Threatened and endangered species, including vertebrate species and plants
- Vegetation and wildlife
- Fisheries
- Wetlands and waterways
- Flood hazard areas/floodplains
- Historic resources
- Tribal lands and legacies
- Air quality and greenhouse gas emissions

Figure 3-19 Examples of how green infrastructure can help achieve regional goals

RTP Goal	Examples of how Green Infrastructure can help achieve regional goals
Thriving Economy	Green infrastructure can promote economic growth as a valued public amenity, create construction and maintenance jobs, add to property value, support walkable and bikeable communities, businesses, and commercial districts, and lower the costs associated with climate change. Protecting the environment and natural resources today can save money for the future and reduce infrastructure construction and maintenance costs.
Mobility Options	Green streets can promote active travel and access to transit by providing enjoyable routes that are shaded and buffered from traffic. Green infrastructure treatments, such as access management and medians with bioswales, can be designed to support reliability and efficiency by reducing crashes and conflicting movements.
Safe System	Street trees and other green infrastructure can help calm traffic to desired speeds, provide welcoming places that increase security, and improve resiliency and reduce impacts of major storm events.
Climate Action and Resilience	Trees and green infrastructure can support climate adaptation by cooling streets, parking lots and buildings, better managing stormwater and reducing the urban heat island effect. Trees and vegetation can be managed to sequester greenhouse gases to help mitigate climate change. Green infrastructure can enhance and protect the natural environment by supporting clean air and water, filtering stormwater runoff, reducing erosion, protecting, creating, and connecting habitat for birds, fish and other wildlife.
Equitable Transportation	Clean air and water and access to nature can be improved and habitat can be preserved and enhanced when green infrastructure is provided in marginalized communities. Green infrastructure can reduce water, air, noise, and light pollution, encourage active lifestyles and link people to trails, parks and nature that enhance human health and well-being. All stakeholders can be represented, including those that cannot speak for themselves – wildlife and the natural environment. Performance-based planning includes considering environmental effects throughout the planning process.

Design Policy 6. Use a performance-based approach and decision-making framework to plan and design transportation projects and networks.

As the demands on the transportation system increase, so does the need for flexibility in how roadways are designed. Performance-based planning and design expands design parameters to be more flexible. Performance-based planning and design incorporates many performance measures to assess how well a project will achieve desired outcomes. Measures and related goals may be

weighted to ensure that a project supports priority outcomes, for example reducing serious traffic crashes, identified in adopted plans and policies and through community engagement.

A performance-based design decision-making framework helps practitioners and stakeholders track decisions throughout the life of a project, as illustrated in Figure 320. This documentation process provides flexibility to choose the best design for a given context, while providing an effective way to manage risk when designing new or reconstructed roadways. The framework includes documenting the design considerations, and alternatives that were evaluated, based on clearly outlined project goals and meaningful stakeholder engagement.

Performance-based planning and design starts with a well-defined project need, accompanied by goals and related objectives. It then works to align design decisions with the project objectives and desired systemwide outcomes. This approach relies on developing and comparing design alternatives, using performance measures and analysis to assess progress toward achieving project objectives, and applying engineering judgment, informed by a multidisciplinary team, to reach a preferred design. Refer to Chapter 6 of the Designing Livable Streets and Trails Guide for a step-by-step guide and tools to address trade-offs and constraints.

Figure 3-20 The performance-based design decision-making framework

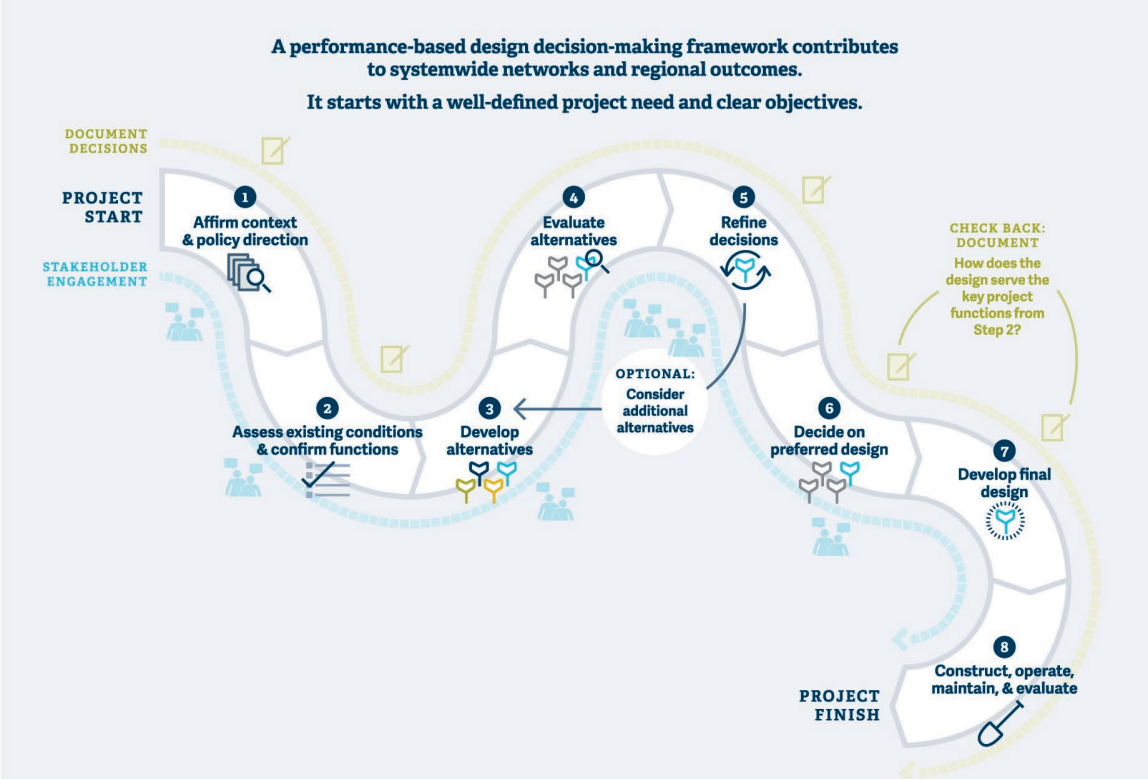


Figure 3-21 Regional design classifications map NOTE: TO BE ADDED

3.3.3 Regional motor vehicle network vision and policies

What's changed?

Three policies in the 2018 RTP were removed because they are addressed by policies in the Safety and Design policy sections.

Since the March 2023 draft: Policies were revised to distinguish between completing the planned system and adding capacity beyond the planned system, and to distinguish between throughways, auxiliary lanes, and arterials, which serve different functions.

Policy 5 was revised to refer only to the planned throughway network; a New Policy on auxiliary lanes was added; Policy 6, which refers to adding capacity beyond the planned system, was revised to refer only to the throughway network and to be consistent with the updated Regional Mobility Policy; Policy 9 was revised to refer only to arterials and reference to OAR 660-012-0830 was removed. The narrative was revised to be consistent with the revisions to the policies.

A definition of capacity was added. References to "deficiencies" was replaced with "needs and solutions" in Policy 2 and in the narrative to be more comprehensive as needs includes gaps as well as deficiencies.

~~Though our~~ While the greater Portland region has changed dramatically over the past century, the shape of the major road network ~~serving our region~~ has not.

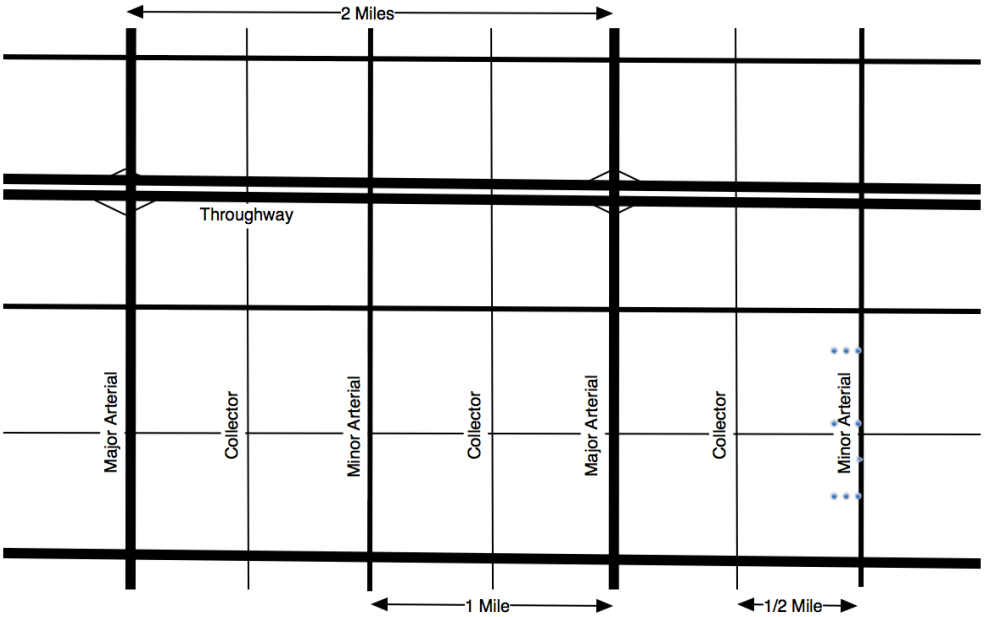
Most ~~of our~~ regional streets were once farm-to-market roads, established along Donation Land Claim boundaries at half-mile or one-mile spacing. The region's throughway system evolved from the mid-1930s, when the first highway was built from Portland to Milwaukie, to the completion of I-205 in the early 1980s. Most of the throughway system was built along the same Donation Land Claim grid that shapes the regional street network, with most throughways following older farm-to-market routes or replacing major streets.

This inherited network design has proven to be an adequate match for accommodating the changing travel demands of our growing region. The Regional Motor Vehicle Network Concept ~~seeks to apply~~applies this proven network design to developing and undeveloped areas in the region, while seeking opportunities to bring existing urban areas closer to this ideal when possible.

3.3.3.1 Regional motor vehicle network concept

The Regional Motor Vehicle Network Concept shown in Figure 3-22 illustrates policies for developing a complete and well-connected motor vehicle network that is safe and reliable, provides adequate capacity and supports all modes of travel.

Figure 3-22 Regional motor vehicle network concept



Note: Conceptual network, illustrating multimodal transportation corridors and showing ideal spacing of arterial streets. Most of the region's travel occurs off the throughway network, on a network of multimodal arterial streets that are further complemented by a well-connected network collector and local streets. The RTP policy places an emphasis on ensuring that arterial networks are fully developed as the region grows, providing both local circulation and preserving throughway capacity for regional and statewide travel.

3.3.3.2 Regional motor vehicle network policies

The planned motor vehicle network is defined by the roadway capacity defined in Table 3-6 and the locations shown in Figure 3-24. Adding motor vehicle capacity beyond the planned system is subject to the regional Congestion Management Process defined in Section 3.3.4.

Capacity

Consistent with OAR 660-012-0830, motor vehicle capacity is defined as: A) A new or extended arterial street, highway, freeway, or bridge carrying general purpose vehicle traffic; (B) New or expanded interchanges; (C) An increase in the number of general purpose travel lanes for any existing arterial or collector street, highway, or freeway; and (D) New or extended auxiliary lanes with a total length of one-half mile or more.

~~Rather than solely relying on levels of congestion to direct how and where to address bottlenecks and other motor vehicle capacity deficiencies, t~~The regional motor vehicle concept and the policies that follow call for adequately maintaining the motor vehicle network, applying the congestion management process and regional mobility policy and data to identify needs and solutions; managing and optimizing throughway capacity to serve regional, statewide and interstate travel; and implementing a well-connected network ~~design~~of local, collector and arterial streets that is tailored to fit local geography, respect existing communities and ~~future~~planned development, and protect the natural environment. Increased network connectivity improves travel reliability ~~through reducing bottlenecks and congestion hotspots~~ and increases ~~ing~~ travel options.

Policy 1	**Preserve and maintain the region's motor vehicle network~~ system~~ in a manner that improves safety, security and resiliency while minimizing life cycle cost and impact on the environment.**
Policy 2	**Use the Congestion Management Process, Regional Mobility Policy, safety and bike and pedestrian network completion data to identify motor vehicle network ~~deficiencies.~~needs and solutions.**
Policy 3	**Actively manage and optimize capacity on the region's throughway network to maintain mobility and accessibility and improve reliability ~~-~~for longer, regional, statewide, and interstate travel.**
Policy 5	**~~Strategically expand~~Complete the region's planned throughway network up to six travel lanes (three lanes in each direction) ~~and auxiliary lanes where appropriate between interchanges to maintain mobility and accessibility and improve reliability for regional, statewide, and interstate travel~~as envisioned in the 2040 Growth Concept.**
Policy 6	**~~If new capacity is being added, evaluate use of pricing and increased transit service in conjunction with new capacity to manage traffic congestion and reduce VMT per capita.~~ Prior to adding new throughway capacity beyond the planned system of motor vehicle through lanes, including adding or extending an auxiliary lane of more than one-half mile, demonstrate that system and demand management strategies, including access management, transit and freight priority, pricing, transit service and multimodal connectivity improvements cannot adequately address identified needs consistent with the Congestion Management Process and Regional Mobility Policy.**
NEW Policy	**Prior to adding or extending an auxiliary lane of more than one-half mile, determine whether the new individual auxiliary lane or series of auxiliary lanes in the same corridor are collectively influencing capacity or alternatively whether each of the auxiliary lanes are truly operating independently and only addressing localized safety issues consistent with the Congestion Management Process and Regional Mobility Policy.**
Policy 4	**Actively manage and optimize arterials according to their planned functions to improve reliability and safety and maintain mobility and accessibility for all modes of travel.**
Policy 7	**Complete a well-connected network of arterial streets ideally spaced at approximately 1-mile apart and planned for up to four travel lanes to maintain transit and freight mobility and accessibility and prioritize safe pedestrian, bicycle**

	and transit access for all ages and abilities using Complete Street design approaches.[35]
Policy 8	**Complete a well-connected network of collector and local streets that provide for local circulation and direct vehicle, bicycle and pedestrian access to adjacent land uses and to transit for all ages and abilities.**
Policy 9	**Prior to adding new arterial street capacity beyond the planned system of motor vehicle through lanes, demonstrate that system and demand management strategies, including access management, transit and freight priority, ~~pricing,~~ transit service, and multimodal connectivity improvements cannot ~~meet regional mobility, safety, climate and equity policies consistent with OAR 660-012-0830~~ adequately address identified needs consistent with the Congestion Management Process and Regional Mobility Policy.**

Motor Vehicle Network connectivity

A well-connected network of complete streets is critical to achieving the 2040 Growth Concept vision. In general, the roadway network should be designed to provide for trips through or across the region on throughways, shorter trips through portions of the region on arterial streets and the shortest trips on collector and local streets.

This approach results in a street hierarchy of:

- throughways (for example, limited-access facilities such as I-84, US 26, I-5, I-205 and I-405)
- arterial streets (for example, Cornell Road in Washington County, 82nd Avenue in the City of Portland and Sunnyside Road in Clackamas County)
- collector streets
- local streets

The traditional street classifications for throughways, arterial streets and other streets are a good starting point for distributing traffic in communities to avoid bottlenecks on overburdened routes or avoid the need to build overly wide streets as a community grows.

Throughways serve ~~only~~ as longer-distance mobility routes, with ~~little or no property~~limited access, and an emphasis on connecting major destinations ~~across the region~~. Arterial streets provide both mobility, moving traffic, goods, and people within the region, and access to property along the street. ~~The degree to which one of these regional street purposes predominates over the other is determined by the functional classification~~.

[35] The number of through lanes may vary based on right-of-way constraints or other factors. Some places in the region may require additional lanes due to a lack of network connectivity. Major and minor arterial streets can either be 2 or 4 lanes with turn lanes as appropriate.

~~The RTP presumes that b~~Building a regional motor vehicle network to accommodate all motor vehicle traffic during peak travel periods is not feasible or practical nor would it be desirable considering ~~potential~~ the environmental, climate, and community impacts.

By developing a well-connected network, the region can spread traffic across the entire network, reducing the need to overburden a few facilities. This will help reduce bottlenecks and congestion hotspots, decreasing the need to widen roads and intersections beyond their typical design. Connectivity also supports transit, biking and walking by making trip distances shorter and more direct and convenient. Improved travel reliability is a key overall outcome of all connectivity-oriented strategies.

Typical spacing and planned capacity for arterial streets

~~As a result, t~~The regional motor vehicle network concept calls for one-~~-~~mile spacing of major arterial streets, with minor arterial streets or collector streets at half-mile spacing, recognizing that existing development, streams and other natural features may ~~limit the provision of these connections~~interfere with this spacing. Major and minor arterial streets can be either 2 or 4 lanes with turn lanes as appropriate. Streets with 4 or more lanes should include medians, where possible, with appropriate median openings for turning movements and turn lanes. Access management strategies should be used on arterial streets and all streets with 4 or more lanes.

Shown in Figure 3-22, the illustrative arterial street network is complemented by a well-connected network of collector streets. This network of arterial and collector streets is multi-modal in design, serving automobiles, motorcycles, trucks, transit, bicycles and pedestrians. The regional arterial street design with a median reflects an accepted design that can support safe travel by all modes, accommodating urban levels of traffic, while also providing for bicycle and pedestrian travel and safe crossings at major intersections.

Traffic speeds, access and level of street connectivity vary depending on the function of the street. The design of transportation facilities should consider the facility's traffic function, all modes of travel, and community development goals. As identified in the Regional Active Transportation Plan and Metro's livable street design guidelines, traffic speeds, traffic volumes and the volume of heavy trucks should be considered in the design of pedestrian and bicycle facilities on streets on the regional network.

Research and experience have shown that there are optimal street designs for various types of roadways. Street design, combined with connectivity help reduce congested hot spots and improve reliability. Local streets and collectors are planned to consist of 2-lanes with turn lanes where needed, major arterials are planned to consist of up to 4-lanes with medians and with turn lanes and access management strategies.~~, throughways are planned to consist of 6-lanes plus auxiliary lanes with grade separated interchanges or intersections.~~

Therefore, before adding additional through lanes beyond the planned system, plans and studies must demonstrate that the additional lanes beyond the planned system do not compromise the

function of the roadway for all modes and that the planned system of through lanes, transit service, bike, pedestrian and other parallel arterial, operational, system and demand management solutions do not adequately address transportation needs first, prior to considering widening arterial beyond the planned system to address ~~capacity concerns~~identified needs.

Throughways

Throughways generally span several jurisdictions and often are of statewide importance linking the greater Portland area with neighboring cities, other parts of the state, other states and Canada. Throughways are planned to consist of six through lanes~~, plus auxiliary lanes,~~ (three lanes in each direction) with grade–separated interchanges or intersections, and serve as the workhorse for regional, statewide and interstate travel. Additional through travel lanes may be ~~required~~needed in some places based on the importance of a facility to regional and state economic performance, excessive demand and limitations or constraints that prevent creation of a well-connected street network due to topography, existing neighborhoods, or natural resource areas.

Analysis of throughway and auxiliary Lanes

An auxiliary lane is intended to separate slower traffic movements from the mainline, helping smooth the flow of traffic and reduce the potential for crashes. The lane is the portion of the roadway adjoining the planned through lanes for speed change, turning, weaving, truck climbing, maneuvering of entering and leaving traffic, and other purposes supplementary to through-traffic. Auxiliary lanes are sometimes appropriate between interchanges to minimize the impact of short trips on the throughway system, including safety issues created by weaving/merging on and off movements between interchanges, particularly in locations with closely spaced interchanges.

By design, auxiliary lanes add additional motor vehicle capacity, providing a new direct connection from one interchange to the next, and are not intended to function as a general purpose travel lane. When a series of auxiliary lanes are added in the same corridor or one or more existing auxiliary lanes are extended through one or more interchanges, the auxiliary lanes begin to function more like a general purpose travel lane. In these cases it must be determined whether the new individual auxiliary lane or series of auxiliary lanes are collectively influencing capacity and measurable increase vehicle miles traveled or alternatively whether each of the auxiliary lanes are truly operating independently and only addressing localized safety issues. In addition, prior to adding new throughway capacity beyond the planned system of motor vehicle through lanes, including adding or extending an auxiliary lane of more than one-half mile in length, demonstrate that system and demand management strategies, including access management, transit and freight priority, pricing, transit service, and multimodal connectivity improvements cannot adequately address identified needs consistent with the Congestion Management Process and Regional Mobility Policy. Chapter 8 ~~explores where such conditions may exist and~~ defines the parameters for future corridor refinement planning work specific to each regional mobility corridor, consistent with the Congestion Management Process and Regional Mobility Policy.

Throughways ~~currently~~ carry between 50,000 to 100,000 vehicles per day, providing ~~for~~ higher-speed travel ~~on~~for longer motor vehicle trips and serving as ~~the~~ primary freight routes, with an emphasis on mobility. Throughways help serve the need to move both freight trucks and autos through the region. Throughways connect major activity centers within the region, including the central city, regional centers, industrial areas and intermodal facilities.

The Throughway functional classification generally corresponds to the Expressways functional classification in the Oregon Highway Plan. There are two types of Throughway designs as described in Table 3-6: Freeways - which are limited-access and completely grade separated interchanges and Highways, which include a mix of separate and at-grade access points. Throughway interchanges that are designated as Freeways in the OHP should be spaced no less than ~~two~~one mile~~s~~ apart in urban areas.[36]

[36] One mile is the minimum interchange spacing distance identified for Freeways in urban areas in Oregon. See https://secure.sos.state.or.us/oard/viewAttachment.action?ruleVrsnRsn=183660 for more information.

Arterial streets

Arterial streets are intended to provide general mobility for travel within the region and provide important connections to the throughway network. Arterial streets connect major commercial, residential, industrial and institutional centers with each other and link these areas to the throughway network. Arterial streets are usually spaced about one mile apart and are designed to accommodate motor vehicle, truck, bicycle, pedestrian and transit travel.

Arterial streets ~~usually~~ carry between 10,000 and 40,000 vehicles per day. ~~T~~Desired travel speeds vary depending on the surrounding and planned land use. Major arterial streets accommodate longer-distance ~~through~~ trips and serve ~~more of~~ a regional traffic function. Minor arterial streets serve shorter trips that are localized within a community. As a result, major arterial streets usually carry more traffic than minor arterial streets. ~~As part of the 2023 RTP update, a policy brief was developed that~~Research has highlighted the important~~tce~~ role of major arterial streets ~~for~~in achieving regional goals for equity, safety, land use/economic development and mobility (especially for transit).[37] ~~It also articulated~~ M~~m~~any funding, design and policy challenges to improving them. ~~The brief can be downloaded here.~~

Streets designated with an arterial functional classification are shown in Figure 3-24 and include Boulevard and Streets described in Table 3-6.

~~Arterial safety~~Safety on arterial streets

Safety is a primary concern on the regional arterial system, ~~on which~~where approximately 60 percent of the region's fatal and severe injury crashes occur. For this reason, much of the focus for achieving the region's Vision Zero target will fall upon improving safety on arterial streets. More attention to designs and operational strategies that have been demonstrated to improve the safety of the arterial system could reduce the number of people killed and injured, using national best practices as a guide. Efforts to substantively improve transportation safety in the region must give arterial roadways high priority, with a focus on the region's high injury corridors, and may include:

- proven designs and strategies such as medians, speed management, access management, improved pedestrian crossings and street lighting, replacing intersections with roundabouts, reducing speeds to levels which are safe for pedestrians and road diets;
- enforcement actions targeting high-risk behaviors, such as speeding, aggressive driving, driving under the influence, red-light running, and failure-to-yield at bike and pedestrian crossings; and
- education initiatives intended to promote safer behavior among all users of the transportation system.

[37] https://www.oregonmetro.gov/sites/default/files/2022/10/24/Safe and healthy urban arterials policy brief.pdf

~~The~~Meeting regional safety targets ~~of the RTP will not be met without~~ ~~will require~~ requires ongoing, ~~a~~ concerted effort~~s~~ to continue to make the region's arterial roadways (also referred to as urban arterials) substantially safer, especially for pedestrians. ~~The development of an objective metric to measure safety on the region's arterials, regardless of jurisdiction, should be developed~~Serious injury crash rates are used to ~~support prioritization of~~prioritize corridor safety efforts.

Collector and local street connectivity

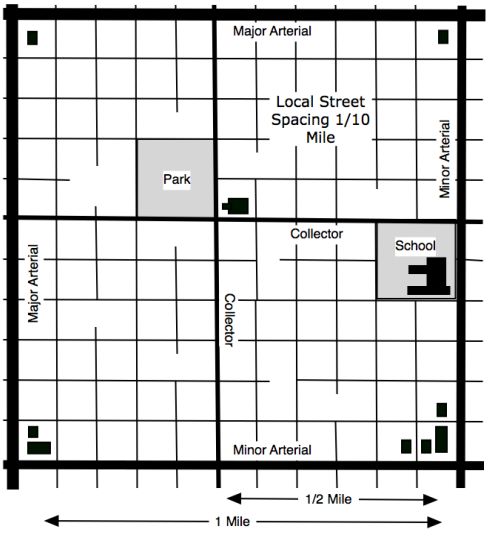
Collector and local streets are general access facilities that provide ~~for~~ community and neighborhood circulation. They are not usually part of the regional transportation system except when located within designated 2040 areas ~~as described in Section 3.4 (~~or when they are part of the Regional Bicycle Network or Regional Pedestrian Network~~), they~~. Collector and local streets play an important ~~supporting~~ role to the design and optimization of the regional transportation system. When local travel is restricted by a lack of connecting routes, local trips are forced onto the arterial and/or throughway networks, in some cases causing congestion on the regional system.

Local jurisdictions are responsible for defining the network of local and collector streets within the one-mile spacing grid of arterial streets. The Regional Transportation Functional Plan (RTFP) which implements the Regional Transportation Plan (RTP) and establishes the requirements for Transportation System Plans ~~The Regional Transportation Functional Plan (RTFP),~~ requires local street spacing of no more than 530 feet in new residential and mixed-use areas, and cul-de-sacs are limited to 200 feet in length to distribute vehicle movements and provide direct bicycle and pedestrian routes.[38] More frequent bike and pedestrian connections are required where collector and local streets cannot be constructed due to existing development or other topographic or environmental constraints.

A goal of the requirements is to encourage local traffic to use local and collector streets to minimize local traffic on regional arterial streets. Local street connectivity also benefits emergency response and access to schools and transit stops. Designs should retain the neighborhood character and livability along these local routes.

Figure 3-23 Collector and local street network concept

[38] Regional Transportation Functional Plan https://www.oregonmetro.gov/regional-transportation-functional-plan



Note: Idealized concept for illustrative purposes showing desired spacing for collectors and local streets in residential and mixed-use areas to serve local circulation, walking/rolling and bicycling. The illustration is modeled after neighborhoods in Southeast Portland.

Shown in Figure 3-23, the collector and local street network concept provides for bicycle and pedestrian travel and provides for direct access from local street networks to community destinations and transit on regional arterial streets.

Collector streets

Collector streets provide both access and circulation. As such, collectors tend to carry fewer motor vehicles at lower travel speeds than arterial streets. Collectors may serve as freight access routes, providing connections from industrial or commercial areas to the arterial network. Collector streets serve neighborhood traffic. Collectors provide local circulation alternatives to arterial streets. Collectors provide both circulation and access within residential and commercial areas, helping to disperse traffic that might otherwise use the arterial network for local travel.

Collectors may also serve as local bike, pedestrian and freight access routes, providing connections to the arterial and transit network. Collectors usually carry between 1,000 and 10,000 vehicles per day, with volumes varying by jurisdiction. Collector streets are ideally spaced at half-mile intervals, or midway between arterial streets. Auto speeds and volumes on collector streets are moderate.

Local streets

Local streets primarily provide direct access to adjacent land uses, and usually between 200-2,000 vehicles per day, with volumes varying by jurisdiction. Vehicle speeds on local streets are relatively low, which makes them good candidates for ~~bicyclists and walkers~~people biking, walking/rolling traveling to and within ~~and between~~ centers, to schools and to transit stops and stations.

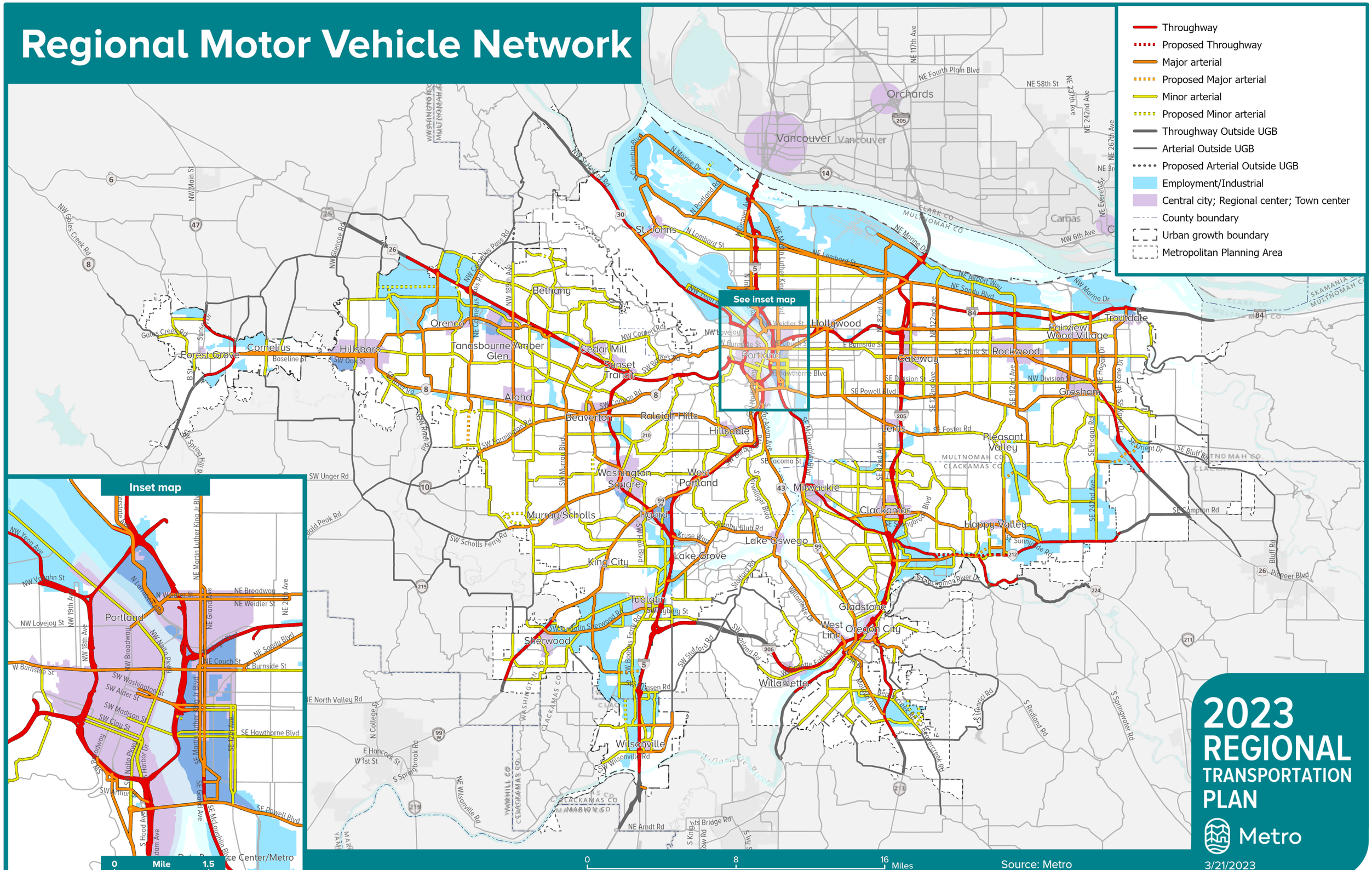
While local streets are not intended to serve through traffic, the local street network serves an important role for supporting bicycle and pedestrian travel. As a result, regional local street connectivity policies require communities to develop a connected network of local streets to increase access to designated centers, to schools and to transit stops and stations on the regional transit network by ~~non-motorized travelers~~people biking and walking/rolling.

3.3.3.3 Regional motor vehicle network classifications and map

The Regional Motor Vehicle Network is shown in **Figure 3-24**. Click on 2023 RTP Regional Network Maps for online zoomable version of map. [NOTE: Link to Be ADDED]

Figure 3-24 Regional motor vehicle network map

Regional Motor Vehicle Network



2023 REGIONAL TRANSPORTATION PLAN

Metro

3.3.4 Congestion management process

What's changed?

Beyond minor, clarifying revisions, no changes have been proposed for this section.

This section outlines the policy~~The RTP calls~~ for implementing system and demand management strategies and other strategies prior to building new motor vehicle capacity, consistent with the Federal Congestion Management Process (CMP~~),~~) and Oregon Transportation Plan (OTP) policies (including Oregon Highway Plan Policy 1G).~~ and~~ Section 3.08.220 of the Regional Transportation Functional Plan (RTFP) implements the Regional Transportation (RTP) and establishes the requirements for Transportation System Plan.[39] In some parts of the greater Portland region~~,~~ the transportation system is generally complete, while in other parts of the region, especially those where new development is planned, significant amounts of infrastructure will be added. In both contexts, management strategies have great value. Where the system is already built out, such strategies may be the only ways to manage congestion and achieve other ~~objectives~~goals. Where growth is occurring, system and demand management strategies can be integrated before and during development to efficiently balance capacity with demand. New technologies are reducing the cost of demand management and new possibilities are emerging with autonomous and connected vehicles.

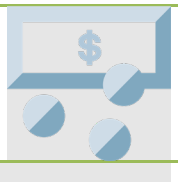
One component of ~~Metro's~~ the Congestion Management Process (CMP) is a toolbox of congestion reduction and mobility strategies, as shown in Table 3-8. This toolbox identifies a suite of strategies to manage congestion and address mobility needs prior to utilizing traditional roadway widening and other capacity projects. Prior to adding single occupant vehicle (SOV) capacity, agencies and jurisdictions should give consideration to the various strategies identified in this section, consistent with FHWA direction and RTP and OTP policies. Usually, multiple strategies are applicable within a corridor, while other strategies are intended to be applied region wide.

The CMP toolbox strategies were assembled to provide a wide range of strategies that could be used to manage congestion region-wide or within congested mobility corridors. They are arranged so that the strategies are considered in order from first to last. Even with the addition of capacity, many of the strategies can be implemented with the project to ensure the long-term management of a capacity project.

The CMP toolbox of strategies is shown in Table 3-8.

Table 3-8 Toolbox of strategies to address congestion in the region

[39] Regional Transportation Functional Plan https://www.oregonmetro.gov/regional-transportation-functional-plan

1		**Community design strategies** • Walkable communities and job centers facilitated by compact land use in combination with walking, biking and transit connections • Mixed-used areas and transit-oriented development • Parking management and pricing
2		**Travel Information and Incentives strategies** • Commuter travel options programs • Household individualized marketing programs • Car-sharing and eco-driving techniques • Safe Routes to School programs • Ridesharing (carpool, vanpool) services
3		**System management and operations strategies** • Real-time variable message signs and speed limits • Signal timing and ramp metering • Transit signal priority, bus-only lanes, bus pull-outs • Incident response detection and clearance • Access management (e.g., turn restrictions, medians)
Emerging		**Congestion pricing strategies** • Peak period pricing • Managed lanes • High occupancy toll (HOT) lanes
4		**Active Transportation strategies** • New biking and walking connections to schools, jobs, downtowns and other community places • Bicycle infrastructure (e.g., bicycle racks, lockers and other bicycle amenities at transit stations and other destinations) • Separated pathways and trails
5		**Transit strategies** • High capacity transit • Expanded transit coverage • Expanded frequency of service • Improvements in right-of-way to increase speed and reliability of buses and MAX • Community and job connector shuttles • Park-and-ride lots in combination with transit service
6		**Street and throughway capacity strategies** • Local and arterial street connectivity to spread out travel • Addition of turn lanes at intersections, driveway restrictions and other geometric designs such as roundabouts • Road widening to add new lane miles of capacity (e.g., adding auxiliary lanes, additional general-purpose lanes); pricing is considered when adding new throughway capacity in the region

The intent of the CMP Toolbox follows FHWA's direction to consider all available solutions before recommending additional roadway capacity in transportation system planning, corridor refinement planning and subarea studies. **Appendix L** describes how this information is used in

the region's process and RTP updates to identify needs and inform consideration and prioritization of multimodal strategies and investments to address congestion in the region.

3.3.5 Regional transit network vision and policies

What's changed?

Policy updates to the 2018 RTP policy were developed by the High Capacity Transit Strategy Work Group with input from Metro technical and policy advisory committees and the Metro Council as part of the Regional High Capacity Strategy update.

Since the March 2023 draft: References to existing conditions, which are covered in Ch. 4, were removed to shorten the text. Moved some definitions to the glossary. Simplified language in policies and throughout. Revised policy narratives for clarity. Removed "prioritize" from Policies 3 and 7 to improve clarity and intent. Removed "optimal spacing" language in Policy 7. Replaced "enhanced transit" with "Better Bus" throughout as appropriate.

With continued regional growth, come challenges including more congestion, higher housing prices, and constrained access to employment and daily needs. ~~. Residents, elected officials, and community organizations view i~~Increased transit service ~~as~~ is a critical part of the overall solution to ~~these~~ regional challenges. But the COVID-19 pandemic disrupted both transit use and service in the region. To achieve the regional vision in the 2040 Growth Concept and Climate Smart Strategy, ~~we need to~~transportation agencies and partners must ~~refocus~~ meet the needs of people using ~~the~~ transit ~~system around how people now travel~~today, while continuing to realize the Regional Transit Vision[40] to increase transit use and make transit more convenient, accessible, affordable, and frequent for everyone, especially those who rely on it.

What do frequent, convenient, accessible and affordable mean?

Make transit more frequent by aligning frequency and type of transit service to meet existing and projected demand in support of local and regional land use and transportation visions.

Frequent transit service is defined as service that operates at a maximum of 15 minutes intervals, but this isn't the only type of service. Regional and local transit service provides basic service and ensures that most the region's population has transit service available to them; service span and frequencies vary based on the level of demand for the service. Because of limited resources, it is important to ensure that service meets demand. Frequency therefore means aligning the frequency and type of service to meet existing and/or projected demand for an area.

Make transit more convenient, and competitive with driving, by improving transit speed and reliability ~~through~~using transit priority treatments and other strategies. Improve transit rider experience ~~by ensuring~~with seamless connections between ~~various~~ transit providers, including transfers, information, and payment. Additionally, ~~cities and counties who own the roads used by~~

[40] Link to Regional Transit Strategy and Vision to be added

~~bus transit could~~road authorities can partner with the transit agencies to implement transit priority treatments.

Make transit more accessible by promoting transit-oriented development of station areas and ensuring safe and direct biking and walking routes and crossings that connect to stops, as well as improve accessibility for seniors and persons with disabilities to ensure transit is accessible for everyone. Accessibility could also include park and ride facilities and drop off/pick up areas. Expand the system to improve access to jobs and essential destinations and daily needs.

~~Accessibility refers to two separate but related aspects of transit. One is to ensure that transit is physically accessible to everyone, regardless of age or ability. All transit users must access transit via biking or walking, even if stops are mere feet away. Complete sidewalks and bike paths improve safety and enhance the experience of using transit and the accessible stations are essential to making transit work for everyone. The first/last mile connection is also an important part of accessibility, as it often represents the best opportunity for people living in less developed areas, rural towns or outlying areas to access our transit system.~~

~~The second component of accessibility is to ensure that schools, particularly high schools and colleges, community places, such as grocery stores and medical services, and jobs are accessible by transit. As the region grows, it's crucial to continue to expand community and regional transit service in order to improve access to these daily needs and encourage employers to locate on existing transit routes.~~

Making transit affordable is the cornerstone of the other components of our vision. Frequency, convenience, and accessibility are meaningless if transit is not affordable. Additionally, affordability ensures that the transit system is equitable for low-income populations, communities of color and those who rely on transit services rather than private automobiles to meet their daily transportation needs.

3.3.5.1 Regional transit network concept

The regional street system has carried public transit for more than a century, beginning with the streetcars of the late 1800s and evolving into a combination of vans, buses, streetcars, and light rail trains today. The Tri-County Metropolitan Transportation District of Oregon (TriMet) is the primary public transportation provider for the greater Portland region. The South Metro Area Regional Transit (SMART) in Wilsonville provides regional transit service connecting Wilsonville to Portland and communities in Washington and Clackamas counties. ~~Clackamas, Multnomah, and Washington Counties have also contracted to provide shuttle service to provide service within regional centers and to regional station areas, town centers, and employment areas.~~ In 2017, the state legislature, through HB 2017, designated Clackamas, Multnomah and Washington Counties as Public Transit Service Providers. The counties receive funding from the Statewide Transportation Improvement Fund to implement transit services to meet goals established by HB 2017, including providing services in areas not well-served by fixed route transit.

Bus service in other surrounding areas, all with connections to the regional network, is also provided by C-TRAN (Clark County, WA), Ride Connection, South Clackamas Transit District (SCTD), Cherriots (Salem, OR), Tillamook County Transportation District (Tillamook, OR), and Yamhill County Transit Area (Yamhill County, OR). Just outside of the greater Portland region,

Sandy Area Metro (SAM) and Canby Area Transit (CAT) provide transit service for Sandy and Canby.

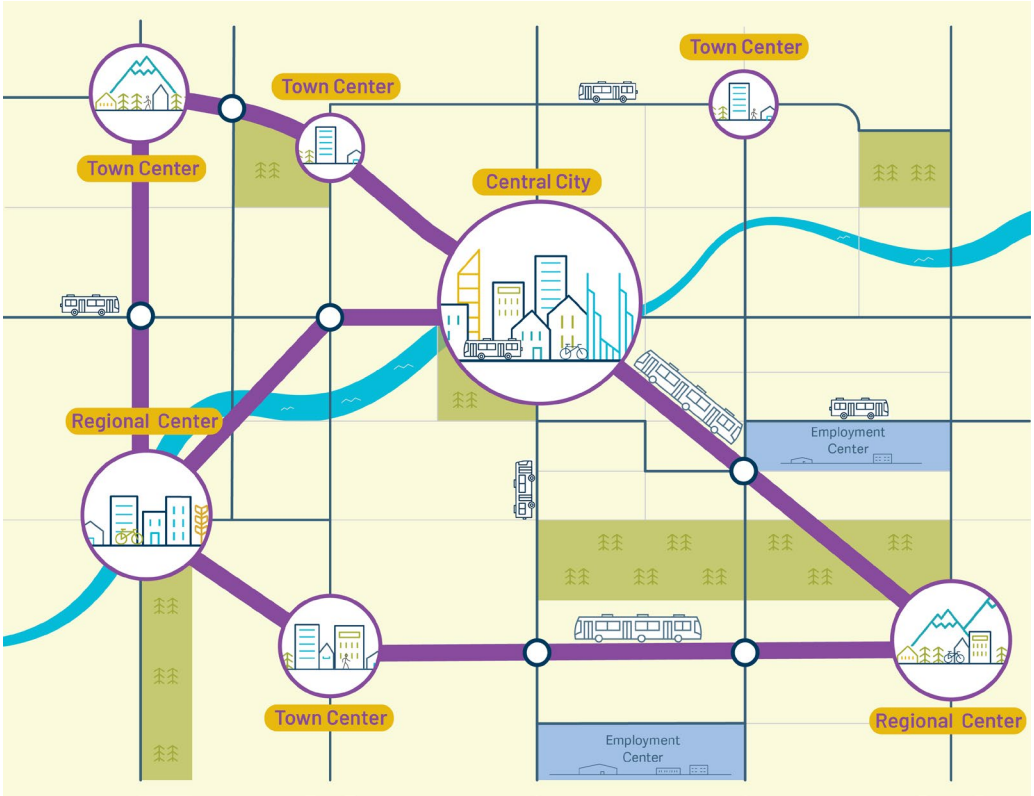
Transit is key to supporting the region's 2040 Growth Concept, which calls for focusing future growth in regional and town centers, station communities and 2040 corridors. A regional transit network, coupled with transit-supportive development patterns and policies that support taking transit, biking, and walking, will be necessary to help the region:

- be less dependent on automobiles
- more equitably serve communities of color and other marginalized communities
- reduce overall transportation and housing costs
- lead healthier lives
- reduce greenhouse gas emissions

As part of the 2040 Growth Concept, transit is critical to connecting centers.

Figure 3-25 shows how the regional transit system concept would connect the 2040 centers.

Figure 3-25 Regional transit network concept



The 2040 Growth Concept set~~s~~ forth a vision for connecting the central city to regional centers like Gresham, Clackamas and Hillsboro with high capacity transit. The High Capacity Transit Strategy expands this vision to include town centers like Milwaukie, Troutdale, and Sherwood along corridors to build onto that vision. The RTP ~~expands this vision~~goes further to include a complete network of regional transit along most arterial streets to better serve existing and growing communities. Existing land use mixes and future transit-oriented development potential should be considered and incorporated into service and station location decisions.

~~In order to~~To leverage transit investments, it is important ~~to~~ for cities and counties to ensure land uses are transit-supportive and support local and regional land use and transportation plans and visions to leverage and protect transit investments.

Adjacent land uses, block size, street connectivity, and parking management affect the success of transit service. Policies and investments that support~~make~~ transit ~~work~~ best can be found in Table 3-9.

Table 3-9 Effects of land use on transit service

Characteristic	~~Works~~Supportive	~~Doesn't Work~~Not Supportive
Density	High	Low
Street layout	Small blocks Grid system	Long, winding streets Cul-de-sacs, dead-end
Mix of uses	Mixed use (e.g., commercial, residential, and office uses)	Single use (e.g., all residential, all industrial)
Pedestrian and bicycle environment	Wide sidewalks Slow moving traffic Street elements (e.g., benches, street trees, pedestrian-scale lighting) Well-marked intersections with signalized crossings Bicycle parking	Narrow or no sidewalks Fast moving traffic Poor lighting No intersection markings and long pedestrian wait times
Site design	Buildings front the street and entrances	Buildings set back from the street and surrounded by surface parking
Parking	Limited Fee-based parking	Abundant Free

Source: TriMet

Transit-supportive development patterns include:

- A compact urban form that places destinations near transit.
- A mix of uses, and a balance of jobs and housing, which creates a place where activity occurs at least 18 hours a day.
- Locating a mix of services near transit, including grocery stores and medical clinics.
- Locating affordable housing options, particularly for older adults, seniors and people with disabilities, near frequent transit.
- Well-designed streets and buildings that encourage pedestrian travel.
- Streets that can accommodate 40-foot buses.

- Safe and efficient multi-modal interactions at transit stops and stations.
- Safe, direct and convenient pedestrian and bicycle access, within communities and to transit stops and stations.
- Street connectivity with good pedestrian and bike connections to extend the effective coverage of bus and rail service.
- Managed on-street and off–street parking.

Areas with low population and/or employment densities, abundant free parking, and with difficult access to transit stops generate fewer riders than areas with transit-supportive development. When fewer riders are generated, it costs more per ride to provide transit service than it does in transit-supportive areas. Ridership productivity is a key criterion in assessing the benefits of service improvements and new transit investments.

3.3.5.2 Regional transit network functional classifications and map

The Regional Transit Network includes future regional and local bus, better bus corridors, high capacity transit and intercity rail, reflecting the region's future transit vision as identified by Portland Streetcar System Concept Plan, TriMet's Service Enhancement Plans, SMART's 2017 Transit Master Plan (update currently underway), as well as local Transportation System Plans. Shown in Figure 3-27, the Regional Transit Network map has been updated to include new connections envisioned in the 2023 High Capacity Transit Strategy update and future transit service. The map also highlights areas planned to be served by community-job connector shuttles, including ~~future~~current and planned routes identified in Clackamas and Washington County's t~~T~~ransit d~~D~~evelopment p~~P~~lans. Click on RTP Regional Network Maps for online zoomable version of map. [NOTE: LINK TO BE ADDED]

Our existing and planned system includes a variety of transit modes, each with a special function in the overall system. Local, regional, and frequent service bus lines are the workhorses of our transit system. The transit providers plan for improving and expanding transit service through service enhancement plans, master plans and through annual service planning.

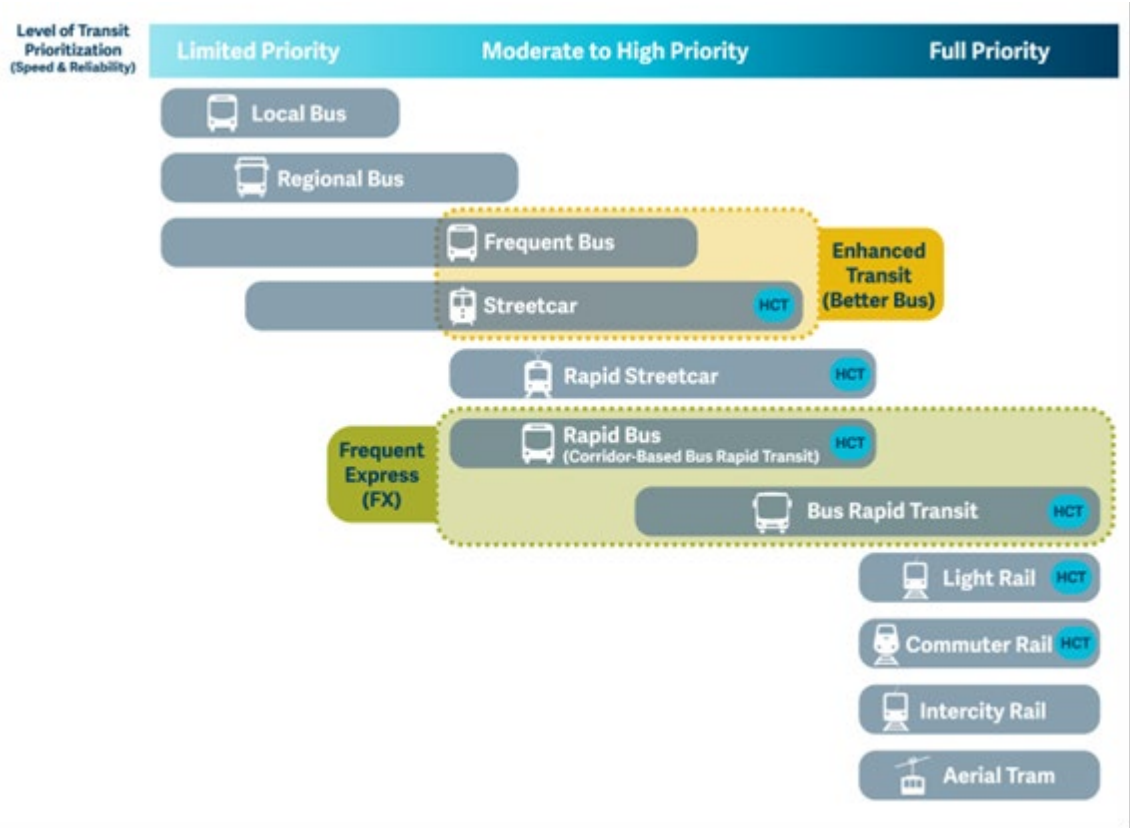
Our bus system operates in mixed traffic and provides service across the region. Alongside our bus system, we have implemented streetcar and corridor-based rapid bus. These services, along with frequent bus service, can and do include a variety of transit priority treatments. These tend to be more frequent and carry more transit riders than the regional and local bus system. The better bus program, new to our region, provides that transit priority to help improve transit speed and reliability above traditional transit service.

The region's high capacity transit system operates with the majority or all of the service in exclusive guideway. The high capacity transit system is the backbone of the broader transportation network, meant to connect to regional centers and carry more transit riders than the local, regional and frequent service transit lines.

The region's high capacity transit system operates with the majority of all of the service in exclusive right-of-way, consisting of six lines over a 75-mile network that serves more than 130

stations in the city of Portland, and the communities of Beaverton, Clackamas, Gresham, Hillsboro, and Milwaukie; and Portland International Airport. **Figure 3-26** shows the broad transit spectrum that exists or is planned for regional transit system.

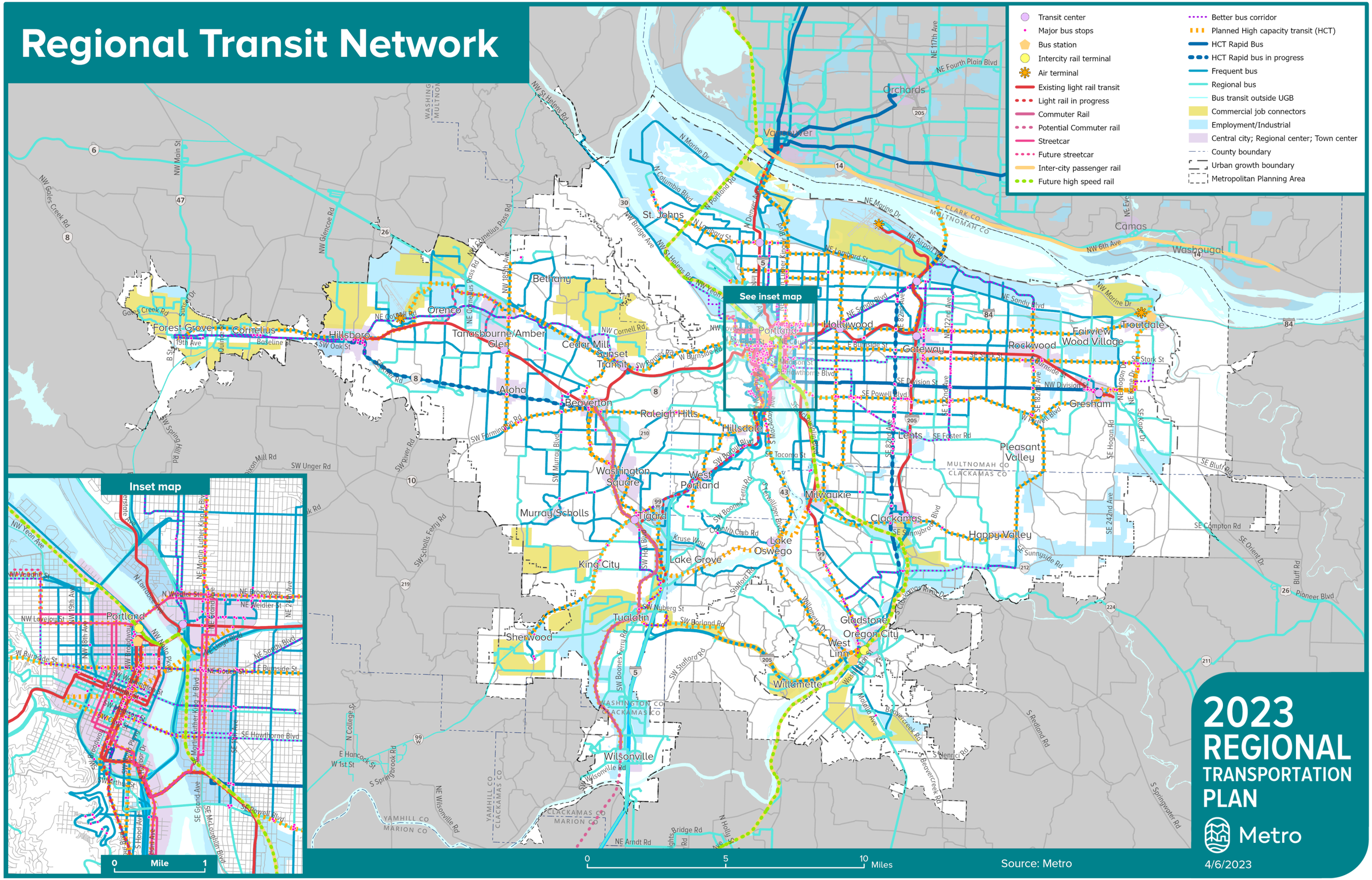
Figure 3-26 Regional transit spectrum



Many variables impact decisions about what type of transit mode and frequencies are most appropriate, including existing and future land uses, transit demand and opportunities and constraints.

Figure 3-27 Regional transit network map

Regional Transit Network



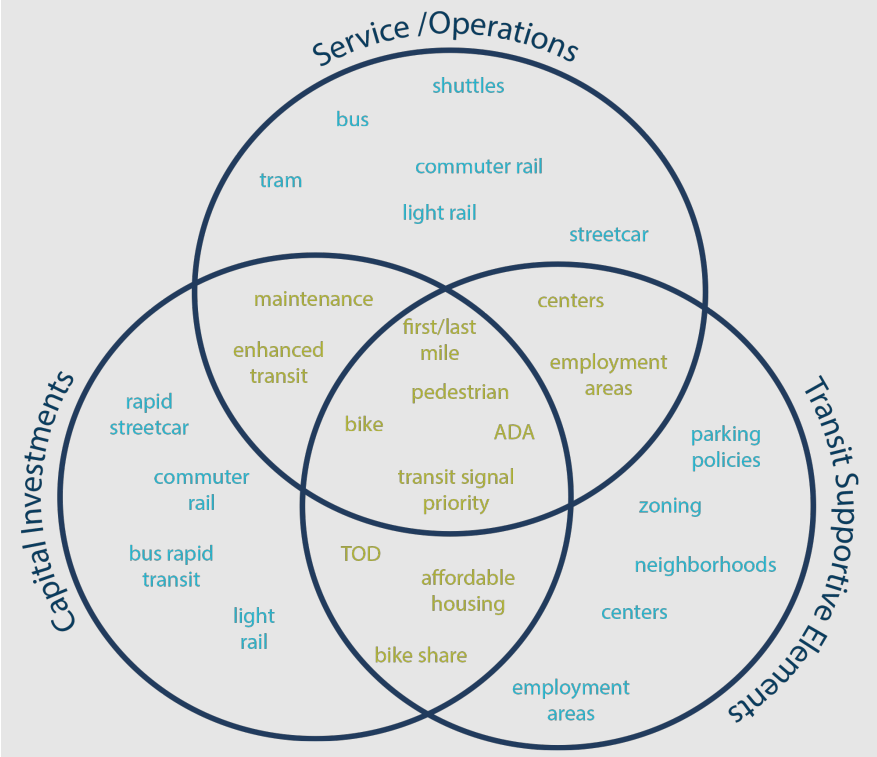
Implementation of the regional transit vision

The Regional Transit Vision will be implemented through improving service, investing in infrastructure, collaborating between transit providers and local jurisdictions and expanding transit supportive elements:

- **Transit service improvements:** local and regional transit service improvements designed to meet current and projected demand in line with local and regional visions and plans.
- **Capital investments in transit:** ~~new~~ enhanced transit strategies that make ~~bus better~~Better Bus such as signal priority and/or~~,~~ dedicated lanes, or high capacity transit options such as bus rapid transit, light rail. commuter rail or high speed rail.
- **Transit supportive elements:** including programs, policies, capital investments and incentives such as Travel Demand Management and physical improvements such as sidewalks, crossings, and complementary land uses.

Figure 3-28 shows the relationships between these different types of investments.

Figure 3-28 Service improvements, capital investments and transit supportive elements



Public agencies and transit providers must collaborate in prioritizing transit investments throughout the region. With the passing of House Bill 2017, the Oregon Legislature identified transit improvements and service expansion as a priority for the state. With this additional

funding, the region will be able to significantly increase and expand transit service. This only highlights the need to collaborate between transit providers.

3.3.5.3 Regional transit network policies

Regional transit priorities are informed by the following policies which aim to provide transit as an attractive, convenient, accessible and affordable travel option for all people in the greater Portland region, optimize existing transit system operations and ensure transit-supportive land uses are implemented to leverage the region's current and future transit investments. Together, these policies ~~support all five RTP~~regional goals.

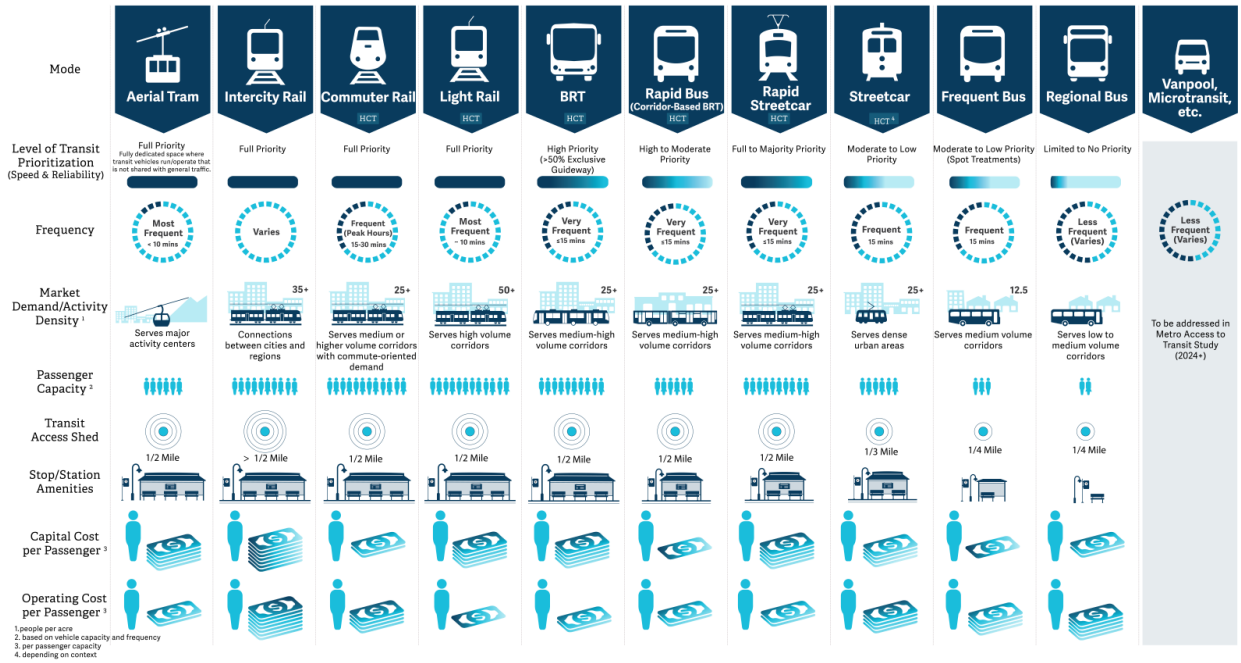
Policy 1	**Provide a high-quality, safe and accessible transit network that makes transit a convenient and comfortable transportation choice for everyone to use.**
Policy 2	**Ensure that the regional transit network equitably prioritizes service to those who rely on transit or lack travel options; makes service, amenities, and access safe and secure; improves quality of life (e.g., air quality); and proactively supports stability of vulnerable communities, particularly communities of color and other marginalized communities.**
Policy 3	**~~Prioritize our investments to c~~Create a transit system that encourages more people to ride transit rather than drive alone, and ~~to~~ supports transitioning to a clean fleet that aspires for net zero ~~GHG~~ greenhouse gas emissions~~, enabling us~~ to meet ~~our~~ state, regional, and local climate goals.**
Policy 4	**~~Preserve and m~~Maintain the region's transit infrastructure in a manner that improves safety, reliability and resiliency while minimizing life-cycle cost and impact on the environment.**
Policy 5	**Complete a well-connected network of local and regional transit on most arterial streets – prioritizing expanding all-day frequent service along ~~mobility~~ corridors and main streets linking town centers to each other and neighborhoods to centers.**
Policy 6	**Complete and strengthen a well-connected high capacity transit network to serve as the backbone of the transportation system. ~~Corridors should generally be spaced at least one half-mile to one mile or more apart and serve mobility corridors with the highest travel demand. High capacity transit p~~Prioritize~~s~~ transit speed and reliability to connect regional centers with the Central City, link regional centers with each other, and link regional centers to major town centers.**
Policy 7	**~~Through the Better Bus concept, prioritize~~Make capital and traffic operational treatments ~~identified in the Enhanced Transit Toolbox~~ in key locations and/or corridors to improve transit speed and reliability for frequent service.**
Policy 8	**~~Evaluate and s~~Support expanded commuter rail and intercity transit service to neighboring communities and other destinations outside the region.**

Policy 9	**~~Make transit more~~Increase access to transit~~ible~~ by improving pedestrian and bicycle access to and bicycle parking at transit stops and stations. Use~~and using~~ new mobility services to improve connections to high-frequency transit when walking, bicycling or local bus service is not an option.**
Policy 10	**Use technology to provide better, more efficient transit service~~ – focusing on~~, including meeting the needs of people for whom conventional transit is not an option.**
Policy 11	**~~Ensure that~~Make transit~~ is~~ affordable, especially for people ~~who depend on transit~~with low incomes.**

Transit Policy 1. Provide a high quality, safe and accessible system that makes transit a convenient and comfortable transportation choice for everyone to use.

The region's economic prosperity and quality of life depend on a transportation system that provides every person and business in the region with access to safe, efficient, reliable, affordable and healthy travel options. But recovering from the pandemic-era ridership slump and meeting the region's transit ridership goals will require broader action, potentially including rethinking how transit serves the region's centers, finding resources to increase service, and redesigning streets to keep buses moving.

Figure 3-29 Tools for building a high-quality transit system



Rapid streetcar has less stops and more street priority for regional mobility between centers. Streetcar extends the reach of the high capacity transit network by facilitating mobility as a circulator within major centers.

A complete and seamless transit system is based on providing frequent and reliable bus and rail transit service during all times of the day, every day of the week. This goes far beyond the responsibility of the transit agencies; it requires actions on behalf of the region and all the

jurisdictions. Preferential treatments, such as transit signal priority, covered bus shelters, curb extensions, special lighting, enhanced sidewalks, protected crosswalks and bikeways, are all fundamental to making the ~~frequent service bus and streetcar elements of the~~ transit network, especially frequent bus and high capacity transit, function at its highest level. In order to provide frequent and reliable service, the region needs to partner together to commit to investing in transit priority treatments and high capacity transit to ensure that transit can take people where they need to go on time.

~~All transit trips begin and end with different modes of access even if stations are mere steps from origins and destinations. Riders access transit via walking, bicycling, bus, rail, carpools, shared mobility (like Uber and Lyft or Biketown) and private automobiles~~. Safe and comfortable access to the stations is critical to the rider's experience and convenience, but also makes transit fully accessible to people of all ages and abilities. ~~Every transit rider is a pedestrian first, whether it is walking to the station, parking their bike and walking to vehicle or walking from the park and ride to the bus or rail. In select locations, park-and-ride facilities may provide vehicular access to the frequent service network, especially for areas that cannot be well-served by local transit due to topography, street configuration, or lack of density.~~

Similarly, ~~T~~typical fixed route transit service may not make sense for everyone throughout the region. ~~P~~people ~~may~~ often rely on demand-response transit as well ~~or infrequent buses that provide slow service and are costly to operate~~. New shared mobility models like microtransit could provide better service at lower cost in these situations and in increasing access to~~. As these options continue to mature, agencies should look for opportunities to supplement demand response and underperforming service with shared mobility. This could provide better service for underserved and transit-dependent residents, and also increase resources available to serve~~ high-demand corridors.

Technology is another tool ~~to actively manage the Portland metropolitan region's transit system~~. ~~This means using i~~Intelligent transportation systems and services ~~to~~ help improve the speed and reliability of transit. It also means taking advantage of the growth in personal technology to efficiently communicate information about transit options and leverage electronic, integrated ticketing systems. As tolling and congestion pricing moves forward in the region, discounts or exemptions should be considered to incentivize multimodal travel behavior and reduce impacts, including exemptions for public transit and reduced pricing for higher occupancy vehicles such as shuttles, vanpools, and carpools (Oregon Highway Plan Policy 6.10).

Transit Policy 2. Ensure that the regional transit network equitably prioritizes service to those who rely on transit or lack travel options; makes service, amenities, and access safe and secure; improves quality of life (e.g., air quality); and proactively supports stability of vulnerable communities, particularly communities of color and other marginalized communities.

~~As greater Portland continues to grow in both population and diversity, embracing this growing diversity means providing service that is equitable.~~ The region's transit and broader transportation system should provide every person and business with equitable access to have

the same opportunity to thrive, regardless of their race or ethnicity. Ridership during the pandemic held steadier on routes that have more people of color and people with low incomes and routes that serve arterials with a mix of jobs, housing, shops and other destinations. Making these trips more convenient and reliable means that people who are more likely rely on transit today will have better travel options. A regional transit system focused on mobility and access that addresses the transportation disparities faced by communities of color has the ability to open opportunities which can dramatically improve outcomes for people of color. By addressing the barriers faced by communities of color, outcomes for other disadvantaged communities will improve as well.

Using equity as a lens to guide decisions more broadly will ensure that the transit system benefits those who rely on it the most. ~~Beyond network and service improvements, a~~An equity lens can also address disparities in:

- **Access:** New development and gentrification can lead to displacement, of which people of color and low-income are disproportionately affected by. As housing and transportation costs increase, households are being forced to move to areas with less transit service. To address this, projects should be prioritized in equity focus areas.
- **Safety and security:** People with low-income and people of color across the country disproportionately suffer from well-documented racial bias in and bear the burden of policing. Racial disparities exist in enforcing transportation laws and rules and issuing penalties for violations. Further, fines are not based on an individual's ability to pay, meaning that the penalty has greater impact for people with low-income and could lead to compounding consequences such as debt. At the same time, people of color are increasingly likely to be concerned for their safety when traveling due to fear of harassment and discrimination. Agencies should continue to pursue alternatives to policing (e.g., TriMet's Safety Response Team) that discourage harassment without enforcement.
- **Technology:** As more transit fare collection systems embrace contactless payment, accessibility challenges can arise for people, especially people with low incomes or who are undocumented, underbanked or unbanked. Agencies should continue to monitor and pursue strategies to reduce barriers to accessing digital fare systems.

Offering ample opportunities for meaningful public engagement and input is critical to hearing diverse perspectives on goals, policies and projects. Continuing to strengthen existing partnerships with local community organizations can provide more individuals with voices that may not have had the platform to be heard. Any transit planning effort should directly incorporate community in the decision-making process.

Further, major infrastructure investments have implications within the communities they are located. Historic data shows that high capacity transit investments such as light rail contribute to both positive and negative outcomes for the communities they serve. Their potential displacement from the economic pressures that the investment brings ultimately undermines its long-term effectiveness. It is critical during planning for a new major transit investment that a strategy be developed that considers both the positive and negative impacts, particularly as it applies to the most at-risk populations who also tend to be the most transit dependent. ~~Their potential~~

~~displacement from the economic pressures that the investment brings ultimately undermines its long-term effectiveness.~~

~~Planning for all new high capacity transit connections through an Equitable Development Framework can potentially lessen the negative impacts of the investment and increase the benefits to transit-dependent communities – limiting residential and business displacements and gentrification. The framework will vary for each project and should be developed at the time the project is being considered through planning, engineering and construction.~~ Key focus areas should include affordable transit-oriented housing opportunities and contracting and job training benefits and opportunities for displaced and marginalized populations.

Transit Policy 3. ~~Prioritize our investments to c~~Create a transit system that that encourages people to ride transit rather than drive alone ~~and to~~ and supports transitioning to a clean fleet that aspires for net zero GHG emissions, enabling us to meet our state, regional, and local climate goals.

Transit is a critical part of meeting regional goals for climate leadership and clean air, and an integral part of implementing the Climate Smart Strategy. Improving and expanding the transit system and use of transit in greater Portland will continue to play a significant role in reducing transportation-related air pollutants, including greenhouse emissions. ~~In order for~~For people to choose transit over driving, transit must be at least as convenient and reliable. A transit trip needs to get people to their destination at the scheduled time, consistently, and it must be easy to use. The route would ideally be a one-seat ride or have seamless connections and fares between trains, buses, shuttles or streetcar, regardless of the provider. It should be just a short walk or bicycle ride away via a safe, comfortable connection that is easy to find and navigate. Information about schedules, transfers and real time arrivals would be readily available and easy to access both on-board and at stops and stations. Most importantly, it needs to be a viable option in regard to travel times. The region should continue to pursue strategies that prioritize transit and make the bus run better (e.g., signal priority and bus lanes), integrate service, information, trip planning, and payment platforms across transit agencies, improve sidewalk, crossing and bicycle facilities, and adopt technology to make transit more predictable and user-friendly (e.g., electronic fare and real-time monitoring systems). By providing both more and better transit connections between where people live and where they need to go, more people who drive today will be more likely to choose to use transit to travel instead.

Ongoing efforts to convert bus fleets to low and zero-emissions vehicles will further reduce emissions in the region. Electric trains and hybrid diesel/electric buses have been part of the regional fleet for many years and battery-electric buses have been added more recently. Both House Bill 2017 and the Low or No Emissions Buses and the federal Bus Facilities Grant Program funded by the 2021 Bipartisan Infrastructure Law have provided an opportunity to further invest in clean vehicles. As transit agencies in the region move toward a fleet without emissions, many are switching to renewable biodiesel fuel to reduce emissions in the interim. ~~TriMet has pledged to stop purchasing diesel buses by 2024 toward being net-zero by 2050. Similarly, SMART's fleet is already composed of 40% alternative fuel vehicles and plans to be net-zero by 2028. C-TRAN has the goal to be net-zero by 2040.~~ Further, renewable electricity from natural resources like sun

and wind can be used to power both transit vehicles and facilities. Cleaner alternative fuels are the future of transit, and the region should continue to support the transition to a clean transit fleet and facilities. As more people are encouraged to ride on an improved and expanded transit network using clean vehicles, greater Portland will see emissions reduced for the transportation system more broadly as well.

Transit Policy 4. ~~Preserve and m~~Maintain the region's transit infrastructure in a manner that improves safety, reliability and resiliency while minimizing life-cycle cost and impact on the environment.

While our transit system is still relatively new, it is starting to need more repairs and/or replacements to buses, streetcars, trains and their infrastructure as they age. It will become increasingly important to invest in upkeep as ~~the~~ elements of the system begin to ~~ages~~reach the end of their useful life to maintain a state of good repair. It is critical to ensure that it is well-maintained and to replace or improve outdated parts of our transit system to preserve its efficiency. ~~In addition, t~~The Federal Transit Administration's State of Good Repair program ~~is~~for rail and bus rapid transit systems that are at least seven years old ~~dedicated maintenance of our transit system~~ includes incorporating industry best practices and recommendations related to reliability and safety ~~and supporting TriMet's implementation of its Service Enhancement Plans~~ to help transit agencies maintain bus and rail systems as part of the federal transportation performance management implementation. ~~These grants are distributed to state and local governments to repair and upgrade rail and bus rapid transit systems that are at least seven years old.~~

~~According to the FTA, the average useful life of a bus, or when it may need to be replaced, is 12 years, or 500,000 miles. In 2002, buses and streetcars close to replacement age in regional fleets were none for TriMet, 2% for Portland Streetcar, 19% for C-TRAN, and 43% for SMART. Another area of investment for TriMet is the MAX system, parts of which are more than 35 years old. While the FTA's assigned life expectancy for rail cars is 25 years, industry experience reports a 30–35-year lifespan in reality. In 2020, about 18% of light rail vehicles were close to replacement age and about 8% of the tracks were also in need of upgrades.~~

~~It's~~ It is also important ~~that~~ to plan for ~~the~~ future capacity needs of ~~our~~the transit system. As our region grows and ridership on our public transportation system is ever increasing, the region is starting to push the limits of what our existing infrastructure can handle. This creates more transit bottlenecks throughout the region, increasing congestion and decreasing the reliability of our transit system. Some lines already have many buses running behind schedule due to heavy traffic, which leads to unpredictable service. Other lines suffer from overcrowding. Popular lines will always have standees, but some trips have such high ridership that at times, riders are unable to board and must wait for another vehicle. ~~In order to~~To make transit more reliable and convenient, these factors must also be addressed.

Transit Policy 5. Complete a well-connected network of local and regional transit on most arterial streets – prioritizing expanding all-day frequent service along ~~mobility~~ corridors and main streets linking town centers to each other and neighborhoods to centers.

Improve local service transit

The local transit network provides basic service and access to local destinations and the frequent and high capacity transit network. ~~Service span and frequencies vary based on the level of demand for the service. The local transit network~~It is designed to provide full transit service coverage to the region, ensuring~~es~~ that the majority of the region's population has transit service available to them – varying in type, frequency, and ~~level~~span based on needs and demand. ~~Beyond bus service, types of local transit services may include para-transit service for people with disabilities, deviated "On-Demand" routes, vanpools, shuttles (e.g., community and job connectors, employer-run or sponsored, community event), and the~~Portland's aerial tram~~.~~

~~Local transit service is appropriate where there is some transit demand, but not enough to support regional or frequent service. Local transit~~It ~~is designed to provide full transit service coverage to the region~~. Transit preferential treatments and passenger facilities are appropriate at higher ridership locations. ~~Sidewalk connectivity, protected crosswalks and bikeways are all fundamental to making the local transit service elements of the transit network function at its highest level.~~

Providing community and job connector shuttles increases the convenience of transit, particularly for areas without frequent service transit or where traditional transit service is not viable. **C**ommunity and job connector shuttles also expand the reach of transit service across the region, which improves access to jobs and community places and can help facilitate first/last mile connections where business and or homes are spread out and regional fixed-route bus service is not cost effective.

One foundational support of the regional transportation system~~ in both urban and rural areas~~ is the availability of demand-response services. These services provide access to transportation that "fills in the gaps" where fixed-route transit, complementary paratransit, or deviated fixed-route "last mile" shuttle services are not the appropriate or most cost-effective tool to meet the need of low-income individuals, seniors or people with disabilities. ~~Because these services operate in the background, as a coordinated addition to the total transportation system, they often go unnoticed. However, t~~They provide a lifeline of service to people who experience barriers to accessing the transportation system. ~~Each year over 500,000 trips are provided on demand-response services throughout the region, and c~~Current service is still not enough to meet the existing demand or projected growth in demand concurrent with the region's growing population.

~~More focus is needed on the local transit needs of suburban and rural areas of the region – identifying transit gaps and exploring innovative strategies like microtransit to improve transit access and reduce service fragmentation. Chapter 8 Moving Forward Together provides more information about the future Connecting First and Last Mile: Transit Mobility Study.~~

Expand regional and local frequent service transit

Providing regional transit along most arterial streets is another key piece of a high-quality network better serving existing and growing communities. ~~In 2040 corridors, main streets and centers, the RTP recommends supporting transit by providing transit-supportive development and well-connected street systems to allow convenient bicycle and pedestrian access.~~

Frequent service transit is defined as wait times of 15 minutes or less from the early morning to late in the evening, seven days a week. Frequency is especially important for making transit more competitive with driving for riders who take short, local trips, because the time riders spend waiting for a bus to take a short trip is a proportionately larger component of the total travel time than it is for longer trips.

Frequent bus service is appropriate when high ridership demand is demonstrated or projected, the streets are pedestrian-friendly, there are high proportions of transit-dependent residents, the lines connect to existing or proposed HCT corridors, and/or it serves multiple centers and major employers. ~~Exhibiting many of the same service characteristics as frequent bus service, streetcar service functions primarily as a connection within and between 2040 centers and along corridors and main streets.~~

~~Preferential treatments, such as transit signal priority, covered bus shelters, curb extensions, special lighting, enhanced sidewalks, protected crosswalks and bikeways, are all fundamental to making the frequent service bus and streetcars elements of the transit network function at its highest level. In select locations, park-and-ride facilities may provide vehicular access to the frequent service network, especially for areas that cannot be well-served by local transit due to topography, street configuration, or lack of density.~~

~~Key considerations for investments in frequent service are ridership, productivity, and lines that provide marginalized communities access to jobs and other community places. Decisions about transit investments should be assessed with an equity lens to ensure transit access for our most vulnerable communities.~~

Transit Policy 6. ~~Through the regional Better Bus concept, prioritize~~Make capital and operational improvements ~~identified in the Enhanced Transit Toolbox~~ in key locations and/or corridors to improve transit speed and reliability for frequent service.

In order to meet the region's environmental, economic, livability and equity goals as we grow over the next several decades, we need to invest more ~~in our transit system~~to improve the efficiency of our system, particularly the more congested corridors in the frequent service bus network, to better support transit riders. More reliable, higher quality transit connections would better connect low-income and transit-dependent riders to jobs, school and services. A more fine-grained network of higher-quality transit service complements high capacity transit investments to help relieve transit congestion and grow ridership throughout the region.

There are many ways to increase transit speed and reliability throughout our system to make the bus better and reduce time spent traveling by transit for people riding. ~~The region should pursue opportunities as they arise to improve the efficiency of our system to support our transit riders~~.

Improving the speed and reliability of our frequent service network could be implemented at the regional scale, along corridors or at "hot spot" locations. Table 3-10 describes the different types of treatments that have the potential to improve reliability that are part of the enhanced transit toolbox. Providing transit priority on the roadway and/or at signals that help buses avoid delay and/or bypass traffic mean trips on these routes stay on schedule and/or are faster. These features, combined with other preferential treatments, such as covered bus shelters, special lighting, enhanced sidewalks and bicycle facilities, and protected crosswalks, are fundamental to making the ~~Better Bus~~frequent bus network function at its highest level. The region should pursue these opportunities as they arise.

Table 3-10 Better Bus treatments to enhance frequent transit service

Regional	Hotspot
Bus on shoulder	Dedicated bus lane
Transit signal priority and signal improvements	Business access and transit (BAT) lane
Headway management	Intersection queue jump/right turn except bus lane
Corridor	Transit-only aperture
Level boarding	Pro-time (peak period only) transit lane
All door boarding	Multi-modal interactions
Bus stop consolidation	Curb extension at stops/stations
Rolling stock modification	Far-side bus stop placement
Transit signal priority and signal improvements	Street design traffic flow modifications

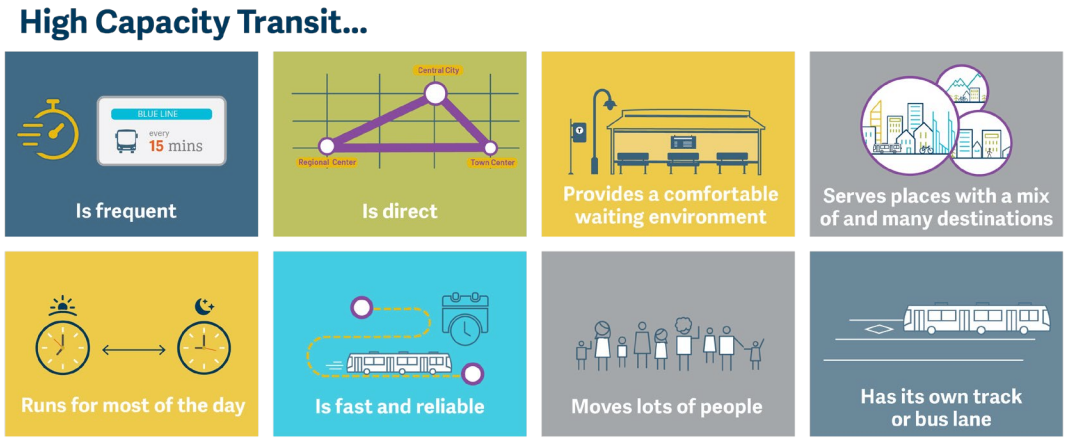
The Better Bus program employs public partnerships to implement treatments that increase capacity and reliability, yet are relatively low-cost to construct, context-sensitive, and able to be deployed quickly throughout the region where needed. Coordinated investments by multiple partners have the potential to provide major improvement over existing frequent service while being less capital-intensive and more quick to implement than large-scale high capacity transit. Investments could serve our many growing mixed-use centers, corridors, and employment areas that demand a higher level of transit service but are not seen as short-term candidates for light-rail or rapid bus (those identified as Developing or Future corridors in the 2023 High Capacity Transit Strategy). This creates a potential path for growing better bus into high capacity transit over time – starting with incremental, smaller-scale improvements that can be leveraged later when implementing a large-scale capital infrastructure investment.

Transit Policy 7. Complete and strengthen a well-connected high capacity transit network to serve as the backbone of the transportation system. ~~Corridors should generally be spaced at least one half-mile to one mile or more apart and serve mobility corridors with the highest travel demand. High capacity transit p~~Prioritize~~s~~ transit speed and reliability to connect regional centers with the Central City, link regional centers with each other, and link regional centers to major town centers.

High Capacity Transit (HCT) investments help the region concentrate development and growth in its centers and corridors. It ~~serves as~~is the backbone of the transportation network, connecting people to the central city, regional centers and major town centers with high-quality service (i.e., fast, frequent, safe and reliable). Linking these activity centers and station communities better

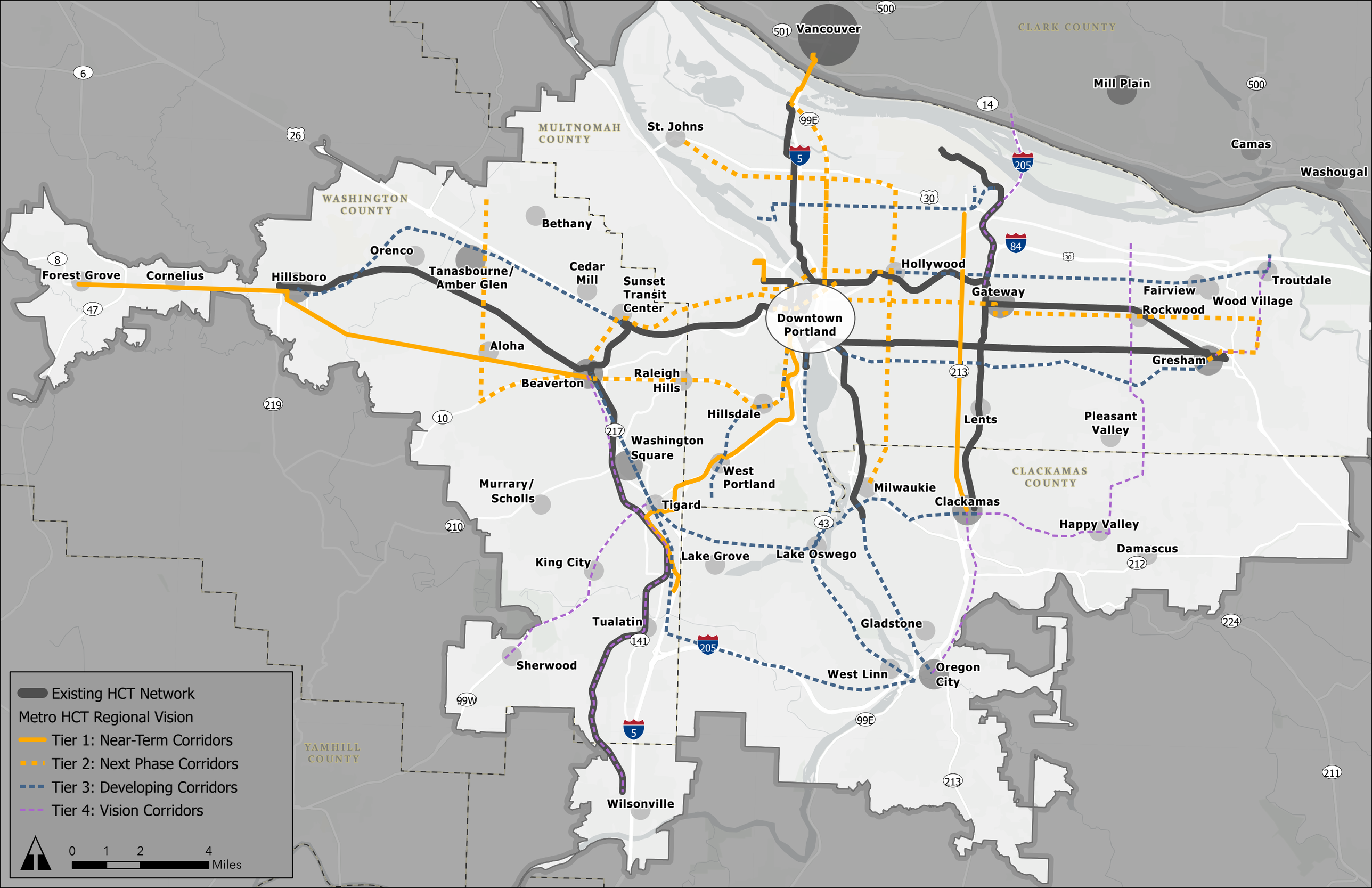
connects people with essential jobs, services, commerce and other major destinations (e.g., colleges, hospitals, affordable housing). High capacity transit serves regional routes where the most people need to travel to get where they need to go, often with relatively long trip lengths, to provide a viable alternative to the automobile in terms of convenience and travel time. Generally, ~~high capacity transit~~these corridors ~~should be about a half-mile to a mile apart to~~ make more broad connections across the region where the bus or other types of transit make connections and provide complementary services to fill in the network.

High capacity transit investments take existing strong transit connections to the next level in accessibility and priority on the roadway and at the signal – while shining a light on the corridor in which it travels to improve safety, access and livability for current and future riders. This type of service carries more transit riders more quickly, efficiently and comfortably than local, regional and frequent service transit lines~~. In the regional transit network concept, high capacity transit serves regional routes where the most people need to travel to get where they need to go, often with relatively long trip lengths, to provide a viable alternative to the automobile in terms of convenience and travel time. High capacity transit has~~through both a level of enhanced amenities and transit priority~~ that work together to move more people, more comfortably than other types of regional or local transit~~. Enhanced amenities refer to features that make high capacity transit more efficient, convenient, and comfortable: vehicles that are larger and allow boarding from all doors, transit centers and stations with near-level boarding, and frequent service (striving for frequencies of 10 minutes or better during the peak hours and 15 minutes during off peak hours). It also refers to transit centers and stations with covered waiting shelters, benches, schedule and real-time bus and train arrival information and special lighting. Other amenities could include ticket machines, restroom facilities, bicycle parking (e.g., bicycle stations or bike & rides), civic art and commercial services. Enhanced priority investments refer to dedicated tracks or lanes in the street that improve speed and/or reliability, getting people to destinations faster and on-time. High capacity transit operates on a fixed guideway or within an exclusive right-of-way on tracks or in the street, to the greatest extent possible. ~~Light rail operates along dedicated tracks, but rapid buses may operate in a mix of dedicated and shared street space. High capacity transit operates on a fixed guideway or within an exclusive right-of-way, to the greatest extent possible. High capacity transit investments take existing strong transit connections to the next level in accessibility and priority on the roadway and at the signal – while shining a light on the corridor in which it travels to improve safety, access and livability for current and future riders.~~



~~To be prioritized for high capacity transit in the near-term, a corridor must have a high "activity density" or people and/or jobs nearby, most of the elements of a transit-supportive environment (described in Table 3.8 above), a high cost-effectiveness of and potential for funding, and demonstrated community and stakeholder support and local agency commitment. Together, these factors indicate where there is the greatest need for and most potential benefit in making higher cost, higher quality transit investments. The High Capacity Transit Strategy prioritizes investments over the span of decades - categorizing corridors by their readiness for investment - where high capacity service supports the cost-effective use of regional resources to build a high capacity transit system. The high capacity transit assessment and readiness criteria, described in more detail in Chapter 7 of the Regional Transit Strategy, provides a framework to inform advancing high capacity transit projects identified in the RTP and Regional Transit Strategy.~~ The region should continue to pursue coordinated partnerships in planning for and investing in these major capital improvements that prioritize transit over other modes, construct features that improve speed, reliability, and access to transit, and address community needs and gaps. Adopted transit-supportive land use and transportation policies and strategies, such as high-density and mixed-use zoning, reduced parking requirements, and affordable housing incentives are critical to ensuring a corridor is ready for high capacity transit investment. To optimize and leverage transit supportive land uses, alignments and station locations should be oriented towards existing and future high density, mixed-use development and connect intermodal passenger facilities. To this end, urban form and connectivity, redevelopment potential, market readiness, public incentives and infrastructure financing should all be considered during the corridor refinement and alternatives analysis phases of project development.

Figure 3-30 High capacity transit map


Vancouver
CLARK COUNTY
Mill Plain
Camas
Washougal
MULTNOMAH COUNTY
St. Johns
WASHINGTON COUNTY
Bethany
Orenco
Forest Grove
Cornelius
Hillsboro
Tanasbourne/ Amber Glen
Cedar Mill
Sunset Transit Center
Hollywood
Gateway
Fairview
Rockwood
Wood Village
Troutdale
Downtown Portland
Aloha
Beaverton
Raleigh Hills
Gresham
Hillsdale
Lents
Pleasant Valley
Washington Square
West Portland
Milwaukie
Clackamas
CLACKAMAS COUNTY
Murrary/ Scholls
Tigard
Happy Valley
Damascus
King City
Lake Grove
Lake Oswego
Tualatin
Gladstone
Sherwood
West Linn
Oregon City
Wilsonville
YAMHILL COUNTY
Existing HCT Network
Metro HCT Regional Vision
Tier 1: Near-Term Corridors
Tier 2: Next Phase Corridors
Tier 3: Developing Corridors
Tier 4: Vision Corridors
0 1 2 4
Miles

Transit Policy 8. ~~Evaluate and s~~Support expanded commuter rail and intercity transit service to neighboring communities and other destinations outside the region.

Intercity passenger rail and bus service to communities outside of the region provides an important connection to the regional transit network. Current travel patterns are showing a rising demand for intercity transit service solutions for improving passenger rail in the future in response to rising demand, while also balancing similarly increasing freight service needs.

The following corridors have a high likelihood to support intercity or commuter rail service in the future: Portland-Newberg, Portland-Astoria, Portland-California and Chicago to Seattle via Salt Lake City and Portland (formerly Amtrak Pioneer). Metro, regional partners and corridor communities should consider right-of-way preservation for these corridors and consider land use planning activities that focus on transit-supportive development around potential future station areas.

Portland-Salem/Keizer-Eugene is the most promising corridor for expanding commuter rail and intercity transit service travel times, reliability, frequency and connectivity with and accessibility of regional and local transit, bicycle and pedestrian networks. There is existing Amtrak passenger rail service on a more highly used freight corridor (Union Pacific Mainline) and there is the potential for an alignment either extending or tying into WES commuter rail service on a lightly used freight corridor (Oregon Electric Line) from to Wilsonville to Salem, currently served by Wilsonville's SMART and Salem's Cherriots today. All were evaluated in the 2010 Oregon Rail study as potential solutions for improving intercity rail service on the corridor, but the alignment tying into WES attracted more riders (by one to four percent). When developing inter-regional rail service, this corridor alignment should take priority for improving passenger rail service between Eugene and Portland in the nearer-term future.

In the longer-term future, providing a fast, frequent, reliable and environmentally responsible high-speed transit connection could serve as a catalyst to transform the Pacific Northwest. The Pacific Northwest Corridor provides an important intercity rail connection between Eugene, Oregon and Vancouver, British Columbia. It is one of eleven corridors shown in Figure 3-31 identified for improved inter-city rail connections and potential high-speed rail investments to better connect communities across the U.S. Ultra-high-speed rail on the corridor should complement and bolster the broader intercity passenger rail system – for instance, Amtrak Cascades could connect smaller cities (including Salem and Eugene nearer-term) to the corridor and the regional hubs connected by it.

~~In 2021, the Governors of Oregon and Washington and the Premier of British Columbia signed a Memorandum of Understanding (MOU) to initiate program to advance activities in support of an ultra-high-speed rail project with speeds up to 250 miles per hour allowing for travel between~~

~~each city in under an hour. The agreement established the goal of laying the groundwork for the creation of a formal, legal entity to continue project development while seeking community engagement and input, gaining critical support from decision makers, and positioning the corridor for future funding opportunities and an efficient environmental process. More information about current efforts to support high speed rail are described in Chapter 8 Moving Forward Together.~~

Figure 3-31 U.S. High speed intercity passenger rail network

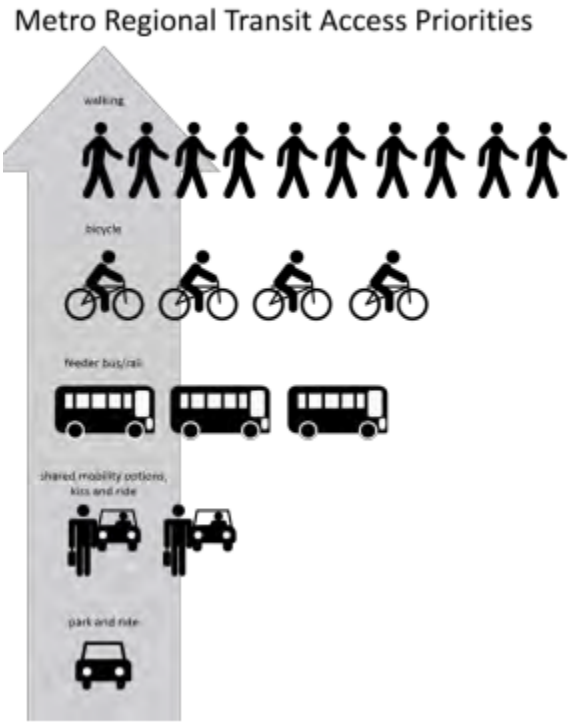
Source: U.S. Department of Transportation (April 2016)

More work is needed to determine what partnerships, infrastructure investments and finance strategies are needed to support improved intercity passenger service to communities outside the region more broadly. Additional collaboration and funding are needed to support the development of this level of service.

Transit Policy 9. ~~Make transit more accessible~~Increase access to transit by improving pedestrian and bicycle ~~access~~connections to and bicycle parking at transit stops and stations. ~~and using~~Use new mobility services to improve connections to high-frequency transit when walking, bicycling or local bus service is not an option.

Improve pedestrian and bicycle access to and bicycle parking at transit stops and stations

Figure 27. Regional Transit Access Priorities



People access transit via walking, bicycling, bus, rail, carpools, shared mobility (like Uber and Lyft or Biketown) and private automobiles. In 2040 corridors, main streets and centers, transit is supported by providing transit-supportive development and well-connected street systems to allow convenient bicycle and pedestrian access. Providing safe and direct walking and biking routes and crossings that connect to transit stops ensures that transit services are fully accessible to people of all ages and abilities and helps the transit network function at its highest level. At some point in their trip, all transit riders are pedestrians first whether it is walking to the station, parking their bike and walking to vehicle or walking from the park and ride to the bus or rail. The environment where people walk to and from transit facilities is a significant part of the overall transit experience. An unattractive or unsafe walking environment discourages people from using transit, while a safer and more appealing pedestrian environment may increase ridership. Likewise, high quality local and regional bicycle infrastructure extends the reach of the transit network, allowing more people to access transit from longer distances. Further, transit, pedestrian and bicycle travel benefit as improvements are made to each of the modes.

Figure 3-27 depicts the region's priorities for providing multi-modal access to the region's transit system. It prioritizes walking and biking to transit and deemphasizes driving to transit. In select locations, park-and-ride facilities may provide vehicular access to the high capacity or even frequent service network for areas that cannot be well-served by local transit due to topography, street configuration, or lack of density.~~Establishing pedestrian and bicycle connections to bus and train stations and stops helps extend the reach of the transit network, making trips made by transit~~

~~feasible and accessible for more people of all ages and abilities, including seniors and people with disabilities.~~

- Improving pedestrian and bicycle access to transit stops and stations is accomplished through filling sidewalk gaps within a mile ~~of stops and stations; filling~~ and bicycle and trail network gaps within three miles ~~of stops and stations,~~; integrating trail connections and shade trees ~~with transit~~, and providing pedestrian and bicycle protected crossings.~~;~~ Additionally, amenities at stops and stations further support people walking and bicycling to transit, including ~~-~~shelters, shade trees~~, transit tracker information~~ and seating ~~at stops and stations~~; bicycle ~~amenities at transit centers such as~~ repair stations~~, and~~ lockers, secured, covered bicycle parking and/or Bike and Rides ~~at stations and stops~~; and co-locat~~inged~~ bike and scooter sharing facilities ~~at transit stations to improve active transportation connections;~~. ~~a~~Allowing bicycles on board transit also helps expand active transportation connections, particularly ~~and exploring~~ the use of apps to let bicycle riders know if a bus or train has bicycle space available.~~;~~

  - ~~locating transit stops and stations on bicycle and pedestrian maps, integrating biking, walking and transit on trip planning tools (e.g., Get There Oregon, TriMet's Trip Planner);~~
  - ~~linking modal systems in regional and local transportation plans; and~~

  Additionally, ~~reducing the amount of parking near stations by~~ managing or pricing ~~existing~~parking spaces and reducing the number of spaces that developments near transit ~~are required to~~ provide a safer, more active transportation-oriented environment near stations. The Climate Friendly and Equitable Communities (CFEC) rules require many cities in the region to reduce or eliminate parking requirements and manage or price parking in areas with high levels of transit service).

Explore new ways to improve connections to high frequency transit

Advances in technology have given rise to new transportation services that make it easier for people to share vehicles and have the potential to work alongside transit to significantly extend the range and convenience of car-free trips in the region. Many of these options, including ride-hailing and bike, e-bike, scooter, and car sharing, are available and widely used in certain parts of the region. These new services can help bridge the gap ~~for~~to first and last-mile high frequency and, particularly, high capacity transit access. ~~There are several actions that Metro and its transportation agency partners can take to i~~Improving~~e~~ connections and interactions between shared mobility and transit can be accomplished by:~~.~~

- Ensuring~~e~~ designated transit streets are designed and managed to prioritize transit and shared travel. Ride-hailing and e-commerce delivery vehicles are using an increasing amount of curb space in some congested areas. Agencies can manage the curbside to prioritize ride-hailing services carrying more than one passenger and avoid conflicts with transit vehicles.
- Dedicating~~e~~ space for shared mobility at transit stations. Accommodating bike share stations or pods of car share vehicles at transit stops makes it easy for transit riders to use these options. Setting aside space for pickups and drop-offs near stations can make it more

convenient for people to access options to transit, as well as improve safety by reducing conflicts between modes. At stations with parking, reserving premium spaces for carpools or shared vehicles can provide an incentive for travelers to share trips instead of driving alone.

- Coordinatinge with shared mobility companies to support shared connections to transit stations. Several communities already fund vanpools or operate shuttles to and from transit stations. Similarly, public agencies can partner with microtransit or carsharing, pooled ride-hailing services or dockless bike/scooter sharing companies to subsidize or promote trips via these modes to transit stations. The City of Portland's Transportation Wallet, which offers credits that people can use to pay for transit and a variety of new mobility services to residents in Parking Districts, affordable housing sites, and new multi-family buildings. These programs allow people access to a suite of options that can complement existing options or connect them to transit when the bus or train only covers part of their journey.

Transit Policy 10. Use technologies to provide better, more convenient and efficient transit service, including focusing on meeting the needs of people for whom conventional transit is not an option.

Transit is a critical option for those in need, the most efficient way to move people along crowded streets, and the backbone of many communities. It is difficult to imagine a positive future for the region without it. Typical fixed route transit service may not make sense for everyone throughout the region. In order to make sure that transit thrives, we need to enhance service on high-ridership lines while piloting new ways to provide transit (like microtransit or using new mobility services to connect to stations) in communities that are challenging to serve with large buses traveling on fixed routes. People commuting to employment centers in more suburban areas rely on slower, often infrequent buses or may not be served by existing bus service Similarly, oOur region is home to many people with disabilities who require specialized vehicles and point-to-point service, as well as people who depend on transit but live in communities where fixed-route service does not make sense. These people often rely on demand-response transit or infrequent buses that provide slow service and are costly to operate. Similarly, people commuting to employment centers in more suburban or exurban areas at the regional edges also often rely on slower, often infrequent buses or may not be served by existing bus service.

New shared mobility models like microtransit could provide better service at lower cost where we need to enhance service on high-ridership lines while piloting new ways to provide transit (like microtransit or using new mobility services to connect to stations) in communities that are challenging to serve with large buses traveling on fixed routes. As these options continue to mature, agencies should look for opportunities to supplement demand response and underperforming service with shared mobility. This could provide better service for underserved and transit-dependent residents, and also increase resources available to serve high-demand corridors. The growth in new mobility technologies also includes new real-time fleet management and route optimization tools as well as trip planning services and ride matching services that can help people identify a transportation service that meets their needs or someone with whom they can share a ride. These technologies can be used to increase the quality and/or productivity of

infrequent or high-cost services, or to help people find a service that meets their needs when conventional transit isn't available to them.

Making it easy to plan, book, and pay for trips, including across agency and even shared mobility platforms, is one way to make transit more convenient for people riding. Smartphone apps are now the most common way for people in the Portland region to access information about their transportation options and are well-suited to provide the type of real-time information that people need to coordinate trips while accounting for potential transit delays. This is especially true for people accessing transit through amidst the changing landscape of new mobility services in the region. TriMet's Open Trip Planner integrates data on transit routes, schedules and real-time arrivals and tracking; bicycling and walking travel times; and shared mobility options to make it easy to plan multimodal trips on an interactive map platform optimized for smartphones.

Other private travel information apps offer similar services; transit agencies can make schedule and route information available in the format that these tools use to allow their services to how up in these apps. There are two important issues to consider when integrating transit and shared mobility data:

- Ensuring that third-party apps use that data in a way that supports transit. ~~No matter how easy-to-use or informative the apps and websites that public agencies develop are, a significant number of people will get data from third-party apps.~~ The companies that develop these apps often monetize transit data by showing advertisements for ride-hailing services that show how much quicker a rider could reach a destination by paying extra for those services. These advertisements can draw people away from taking transit, and agencies should consider whether they want to place conditions on the use of transit data by third parties.

- Maintaining access for the many people who can't or don't access apps or make online payments, which can include ~~low-income people, undocumented people, people with disabilities, or people with limited English proficiency—in other words,~~ many of the same travelers who rely on transit. These travelers often need to overcome both cultural barriers (for example, limited English proficiency and concerns about personal safety when traveling in public) and technological ones (such as a lack of access to smart phones or data plans that allow for easy online access to information from anywhere) in order to access the increasing number of online travel information and ~~shared transportation~~ services.

Transit Policy 11. ~~Ensure that~~ Make transit is affordable, especially for people ~~who depend on transit~~with low incomes.

Ensuring that transit is affordable alleviates the cost of and encourages alternatives to owning automobiles. It is therefore important to ensure that transit is affordable, particularly for the riders that rely on it the most. The cost of transportation burdens many households in the metropolitan region and is usually the second largest share of household costs (after housing).

People of color, with limited English proficiency, with low-income, with disabilities, age 65 or older and 18 or younger are~~ more transit-dependent and~~ those most affected by transportation costs. ~~It is therefore important to ensure that transit is affordable, particularly for the riders that need it the most (i.e., riders who do not have access to cars and low-income households who often have the longest distances to travel). Ensuring that transit is affordable alleviates the cost of owning automobiles.~~

C-TRAN and TriMet offer reduced fares for youth, seniors, people on Medicare, and people with low incomes. Most SMART buses are free – there is a fee for Dial-a-Ride service and for the 1X to Salem which also offers a reduced fare. Broadening these programs to further reduce or even eliminate some fares or offering other financial assistance that could be applied to costs of fees would help alleviate cost-burden for those who rely on transit.

One way to do that is by making transit free for youth – a clear community priority identified during the Get Moving 2020 transportation funding measure process~~ and something C-TRAN has already done for local service~~. Research has shown that people form opinions about transit early on, with early use being a key indicator of ridership in the future. ~~Austin's Capital Metro free fare pilot program for K-12 students both boosted ridership and benefited local communities and was made permanent in 2020. Another way is by allowing more groups to qualify for reduced fare programs. One example being C-TRAN's reduced fare program which also extends to refugees, attendants assisting honored riders and veterans. Revenue impacts of expanding reduced fare or fareless programs should be examined collaboratively, including identifying funding to offset any potential loss of revenue.~~

~~Reduced fare programs~~

Removing barriers to acquiring reduced or free transit fares can make it possible for individuals with limited access to documents, identification, or internet to receive these benefits. Fare capping, an approach utilized by TriMet's Hop Fastpass, allows people to pay for a reduced monthly pass by the ticket rather than all at once up front. Programs like TriMet's Access Transit, which provide fares to non-profit and community-based organizations at lower to no cost to distribute to clients, help to further increase the reach and accessibility of reduced fare programs. The region should build partnerships with non-profit and human service providers to support expanding these types of programs, disseminate more information about reduced fare programs and work through ways in which these programs can be more effective. The City of Portland's BIKETOWN for All program is one example of how~~ access~~ to increase integration of free or reduced fare programs by including students receiving federal aid (FAFSA) and people receiving food assistance (Oregon Trail Card, SNAP). This should also include advocating in the state legislature and to the voters to increase, deepen, and sustain long-term funding for programs which support keeping transit affordable for riders.

3.3.6 Regional freight network vison and policies

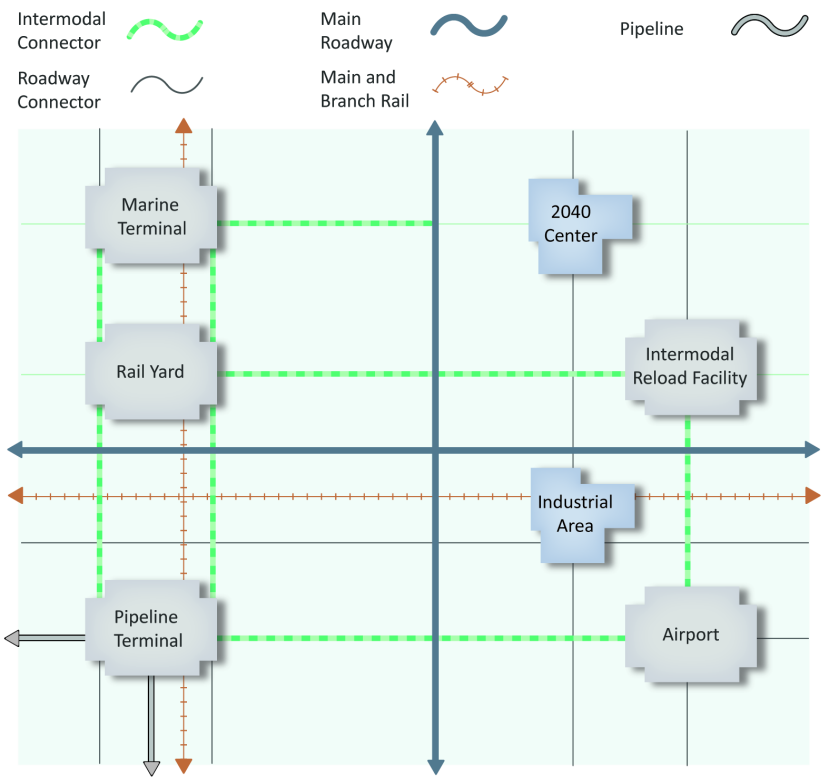
What's changed?

One new policy has been added to address findings from the Regional Freight Delay and Commodities Movement Study. The new policy is focused on addressing the continued growth in e-commerce and delivery trips and the need for industrial land that provides for an increase in distribution centers and fulfillment centers. As part of the Commodities Movement Study, Metro staff will be addressing policy questions around continued growth in e-commerce and delivery trips and address any potential need for a future study that would be included as part of Chapter 8 of the 2023 RTP.

Informing the regional framework for freight policy is the understanding that the Portland – Vancouver region is a globally competitive international gateway and domestic hub for commerce. The multimodal freight transportation network is a foundation for economic activities, and we must strategically maintain, operate and expand it in a timely manner to ensure a vital and healthy economy.

The Regional Freight Strategy addresses the needs for freight through-traffic as well as regional freight movements, and access to employment and industrial areas, and commercial districts. The Regional Freight Network Concept contains policy and strategy provisions to develop and implement a coordinated and integrated freight network that helps the region's businesses attract new jobs and remain competitive in the global economy. The transport and distribution of freight occurs via the regional freight network, a combination of interconnected publicly and privately owned networks and terminal facilities. The concept in Figure 3-32 shows the components of the regional freight system and their relationships.

Figure 3-32 Regional freight network concept



Rivers, mainline rail, pipeline, air and truck routes and arterial streets and throughways connect the region to international and domestic markets and suppliers beyond local boundaries. Inside the region, throughways and arterial streets distribute freight moved by truck to air, marine and pipeline terminal facilities, rail yards, industrial areas and commercial centers. Rail branch lines and heavy vehicle corridors connect industrial areas, marine terminals and pipeline terminals to rail yards and truck terminals. Pipelines transport petroleum products to and from terminal facilities.

3.3.6.2 Regional freight network policies

The Regional Freight Network Policies reflect the policy framework of the Regional Freight Strategy. Specific actions that Metro, in partnership with cities, counties, agencies and other stakeholders can take to implement the policies are identified in Chapter 8 of the Regional Freight Strategy.

Policy 1	**Plan and manage our multimodal freight transportation infrastructure using a systems approach, coordinating regional and local decisions to maintain seamless freight movement and access to industrial areas and intermodal facilities.**
Policy 2	**Manage the region's multimodal freight network to reduce delay, increase reliability and efficiency, improve safety and provide shipping choices.**

Policy 3	**Better integrate freight issues in regional and local planning and communication to inform the public and decision-makers on the importance of freight and goods movement issues.**
Policy 4	**Pursue a sustainable multimodal freight transportation system that supports the health of the economy, communities and the environment through clean, green and smart technologies and practices.**
Policy 5	**Protect critical freight corridors and access to industrial lands by integrating freight mobility and access needs into land use and transportation plans and street design.**
Policy 6	**Invest in the region's multimodal freight transportation system, including road, air, marine and rail facilities, to ensure that the region and its businesses stay economically competitive.**
Policy 7	**Eliminate fatalities and serious injuries caused by freight vehicle crashes with passenger vehicles, bicycles and pedestrians, by improving roadway and freight operational safety.**
Policy 8	**Adapt future freight system investments to emerging technologies and shifts in goods movement, including the emergence of e-commerce and automated delivery systems.**

Freight Policy 1. Plan and manage our multimodal freight transportation infrastructure systems approach, coordinating regional and local decisions to maintain seamless freight movement and access to industrial areas and intermodal facilities.

A comprehensive, systems approach is central to planning, managing, and using the region's multimodal freight transportation infrastructure. This approach provides a strong foundation for addressing core throughway network bottlenecks, recognizing and coordinating both regional and local decisions to maintain the flow and access for freight movement that benefits all.

The transport and distribution of freight occurs via a combination of interconnected publicly and privately-owned networks and terminal facilities.

Freight Policy 2. Manage the region's multimodal freight network to reduce delay and increase reliability and efficiency, improve safety and provide shipping choices.

The 2005 Cost of Congestion to the Economy of the Portland Region Study reported that our region has a higher-than-average dependency on traded sector industries, particularly computer/electronic products, wholesale distribution services, metals, forestry/wood/paper products, and publishing; business sectors that serve broader regional, national, and international markets and bring outside dollars into the region's economy.

These industries depend on a well-integrated and well-functioning international and domestic transportation system to stay competitive in a global economy.

As an international gateway and domestic freight hub, the region is particularly influenced by the dynamic trends affecting distribution and logistics. As a result of these global trends, U.S. international and domestic trade volumes are expected to grow at an accelerated rate. The value of trade in Oregon is expected to double by 2040, to $730 billion.[41] The region's forecasted population and job growth – an additional 917,000 residents and 597,000 jobs to be added between 2010 and 2040[42] – along with the associated boost in the consumption of goods and services are significant drivers of projected increases in local freight volume.

This policy is the first step to improved freight and goods movement operations on the existing system and includes preservation, maintenance and operations-focused projects and associated planning and coordinating activities. It focuses on using the system we have more effectively.

It is critical to maximize system operations and create first-rate multimodal freight networks that reduce delay, increase reliability, maintain and improve safety and provide cost-effective choices to shippers. In industrial and employment areas, the policy emphasizes providing critical freight access to the interstate highway system to help the region's businesses and industry in these areas remain competitive. Providing access and new street connections to support industrial area access and commercial delivery activities and upgrading main line and rail yard infrastructure in these areas are also emphasized.

In order to carry out an overall policy of reducing delay and increasing reliability, it will be necessary to expand the types of programs and amounts of funding for freight transportation infrastructure to adequately fund and sustain investment in our multimodal freight transportation network in order to ensure that the region and its businesses stay economically competitive.

Freight Policy 3. Better integrate freight issues in regional and local planning and communication to inform the public and decision-makers on the importance of freight and goods movement issues.

To gain public support for projects and funding of freight initiatives, and to better inform elected officials when making land use and transportation decisions, a program that informs the public is required.

Potential freight impacts should be considered in all modal planning and funding, policy and project development and implementation and monitoring. This also means better informing the region's residents and decision makers about the importance of freight movement on our daily lives and economic well-being. Metro will work with its transportation partners to improve the level of freight information available to decision-makers, the business community and the public.

Freight Policy 4. Pursue a sustainable multimodal freight transportation system that supports the health of the economy, communities and the environment through clean, green and smart technologies and practices.

[41] Federal Highway Administration, Freight Analysis Framework version 3.4, 2013

[42] Metro 2040 growth forecast. Represents forecasted population and jobs within 4-county area (Multnomah, Clackamas, Washington and Clark counties).

This policy deals with traditional nuisance and hot spot issues associated with "smokestack and tailpipe" problems, but it also recognizes the many current contributions and new opportunities for the evolving green freight community to be part of the larger environmental and economic solution set required in these times, including reducing greenhouse gas emissions.

It is important to ensure that the multimodal freight transportation network supports the health of the economy and the environment by pursuing clean, green and smart technologies and practices. Details of the most promising innovations and technologies have been developed as part of the Regional Freight Strategy's Technology for Sustainable Freight Transport, as identified in Chapter 6 of the strategy.

Freight Policy 5. Protect critical freight corridors and access to industrial lands by integrating freight mobility and access needs into land use and transportation plans and street design.

This policy targets land use planning and design issues that can affect the ability of freight, goods movement and industrial uses to live harmoniously with their neighbors. Freight---sensitive land use planning includes everything from long-range aspirations for freight and industrial lands to short-term and smaller scale design and access issues.

It is important to integrate freight mobility and access needs in land use decisions to ensure the efficient use of prime industrial lands, protection of critical freight corridors and access for commercial delivery activities. This includes improving and protecting the throughway interchanges that provide access to major industrial areas, as well as the last-mile arterial connections to both current and emerging industrial areas and terminals.

Freight Policy 6. Invest in the region's multimodal freight transportation system, including road, air, marine and rail facilities, to ensure that the region and its businesses stay economically competitive.

This policy focuses on planning and building capital projects and developing the funding sources, partnerships, and coordination to implement them.

It is important to look beyond the roadway network to address needs of the multi-modal and intermodal system that supports our regional economy. As described in the Regional Freight Strategy, freight rail capacity is adequate to meet today's needs but as rail traffic increases additional investment will be needed in rail mainline, yard and siding capacity.[43] Whenever right-of-way is considered for multiple uses such as freight rail, passenger rail and trails, analysis must include long-term needs for existing freight and freight rail expansion to ensure that necessary future capacity is not compromised.

In addition, navigation channel depth on the Columbia River continues to be the limiting factor on the size, and therefore the number, of ships that call on the Portland-Vancouver Harbor.

[43] Port of Portland, Port of Portland Rail Plan, 2013.

Freight Policy 7. Eliminate fatalities and serious injuries caused by freight vehicle crashes with passenger vehicles, bicycles and pedestrians, by improving roadway and freight operational safety.

This policy and the potential design solutions focuses on addressing the issue of eliminating fatalities and serious injuries due to freight vehicle crashes with passenger vehicles, bicycles and pedestrians.

Freight Policy 8. Adapt future freight system investments to emerging technologies and shifts in goods movement, including the emergence of e-commerce and automated delivery systems.

This policy is focused on addressing the continued growth in e-commerce and delivery trips and the need for industrial land that provides for an increase in distribution centers and fulfillment centers.

3.3.6.3 Regional freight network classifications and map

The Regional Freight Network map, shown in Figure 3-33 applies the regional freight network concept on the ground to identify the transportation networks and facilities that serve the region and the state's freight mobility needs. Click on RTP Regional Network Maps for online zoomable version of map. [NOTE: LINK TO BE ADDED]

The regional freight network has a functional hierarchy like that of the regional motor vehicle network. To show the continuity of the freight system in both Oregon and Washington state, the map shows the freight routes in Clark County, north of the Columbia River and rural freight routes designated by Clackamas and Washington counties that connect to the regional freight network designated within the metropolitan planning area boundary. The Regional Freight Network map also includes six inset maps (brown dotted line boxes) that focus on the key intermodal facilities (marine terminals, rail yards and pipeline facilities) and rail lines to highlight the importance of the rail network and have better visibility for the rail lines.

The different functional elements of the regional freight network are:

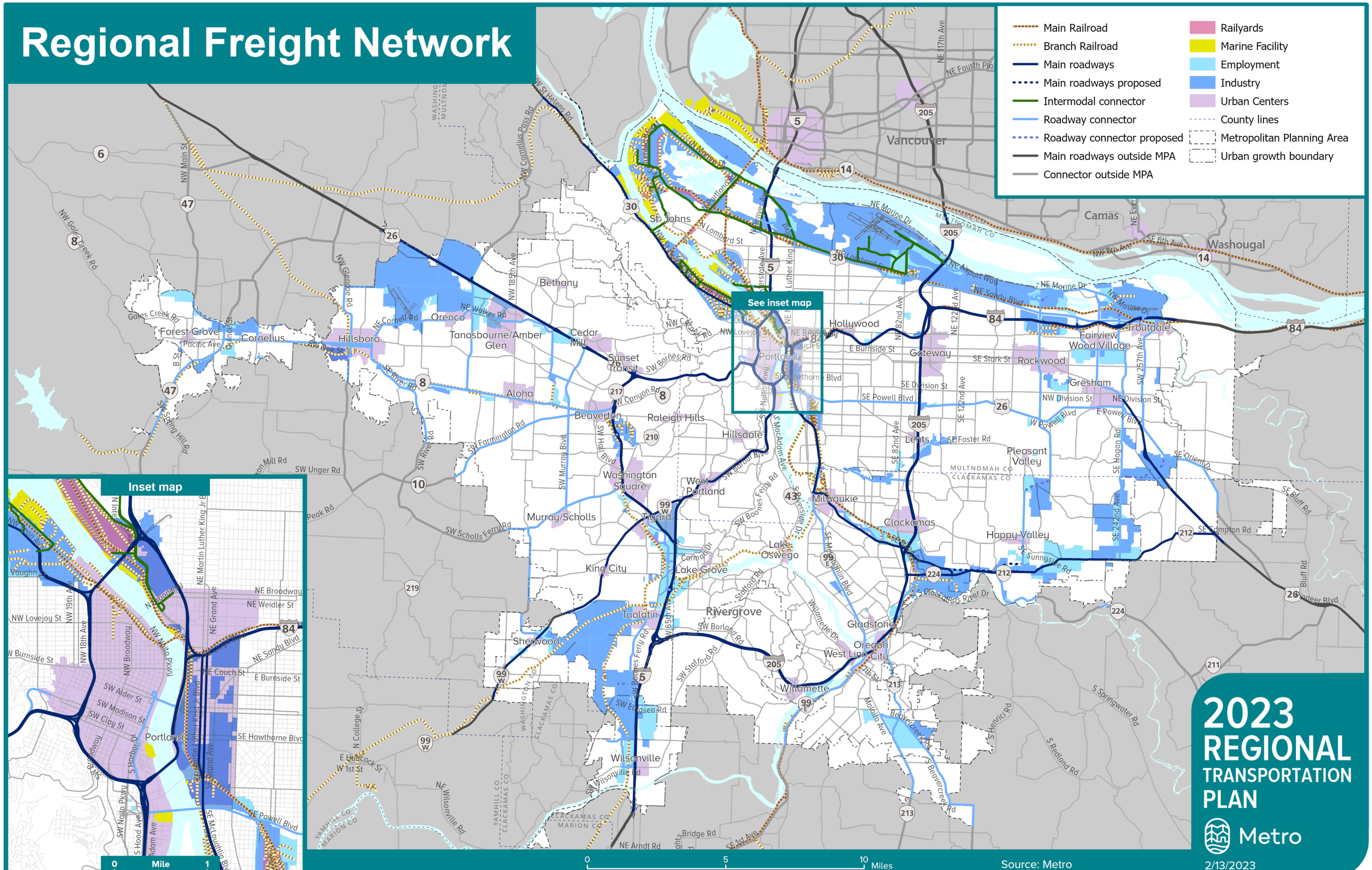
- **Main line rail –** Class I rail lines (e.g., Union Pacific and Burlington Northern/Santa Fe).
- **Branch line rail –** Non-Class 1 rail lines, including short lines (e.g., Portland and Western Railroad).
- **Main roadway routes –** Designated freights routes that are freeways and highways that connect major activity centers in the region to other areas in Oregon or other states throughout the U.S., Mexico and Canada.
- **Regional Intermodal Connectors –** Roads that provide connections between major rail yards, marine terminals, airports, and other freight intermodal facilities, and the freeway and highway system. Marine terminals, truck to rail facilities, rail yards, pipeline terminals, and air freight facilities are the primary types of intermodal terminals and businesses that the tier 1 and NHS intermodal connectors are serving in the Portland region. An example of a NHS intermodal connector is Marine Drive between the marine terminals (Terminal 5 and 6) and I-5, which in 2014 had over 4,100 average daily trucks. Another NHS intermodal connector is Columbia Boulevard between I-5 and OR 213 (82nd Avenue) which had over 3,500 average

daily trucks and is a vital freight connection between the air-freight terminal at Portland International Airport and both I-5 and I-205. These Regional Intermodal Connectors are carrying many more trucks than the typical road connectors on the Regional Freight Network map. They are also of critical importance for carrying commodities that are being exported from and imported into the state and across the country.

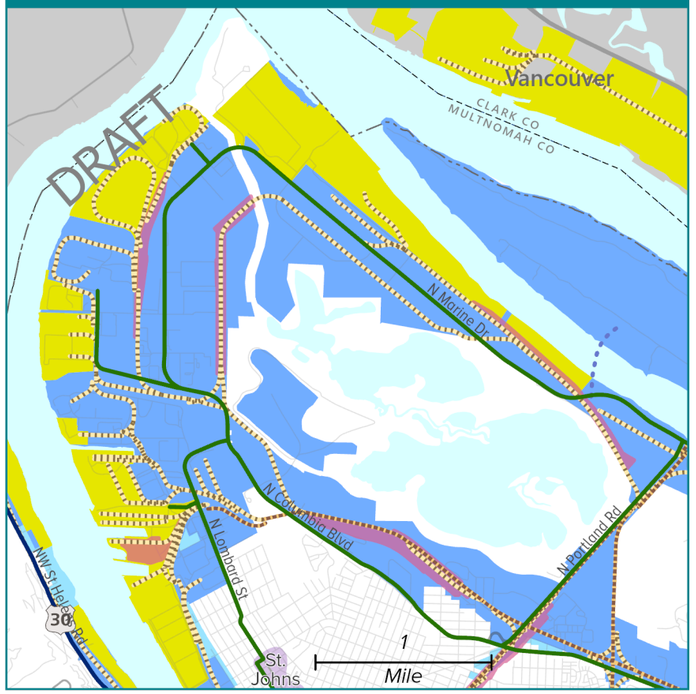
- **Roadway connectors –** Roads that connect other freight facilities, industrial areas, and 2040 centers to a main roadway route.
- **Marine facilities –** A facility where freight is transferred between water-based and land-based modes.
- **Rail yards –** A rail yard, railway yard or railroad yard is a complex series of railroad tracks for storing, sorting, or loading and unloading, railroad cars and locomotives. Railroad yards have many tracks in parallel for keeping rolling stock stored off the mainline, so that they do not obstruct the flow of traffic.

Figure 3-33 Regional freight network map

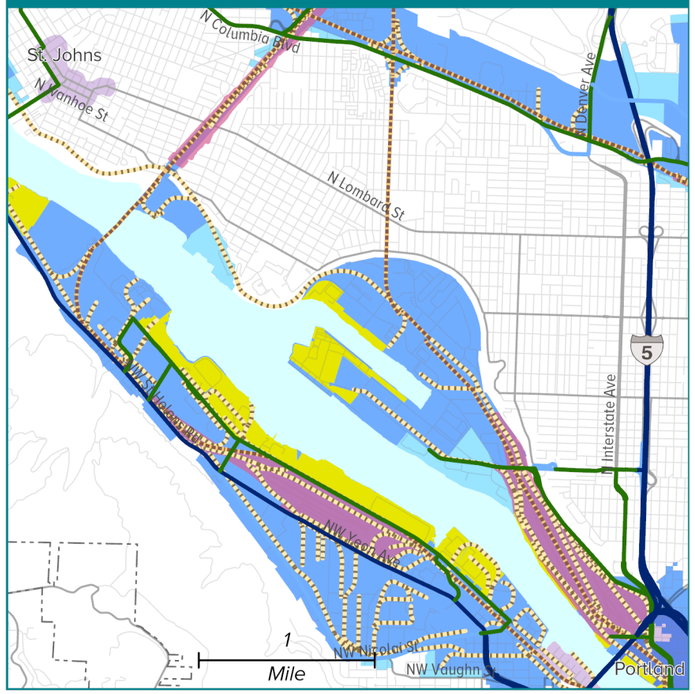
Regional Freight Network



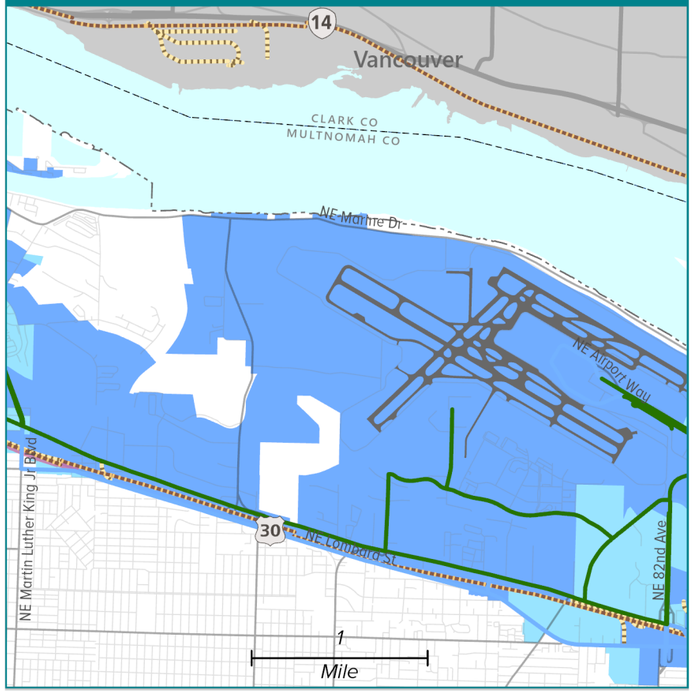
1. North Portland Marine Terminals



2. NW Industrial and Swan Island



3. Portland International Airport



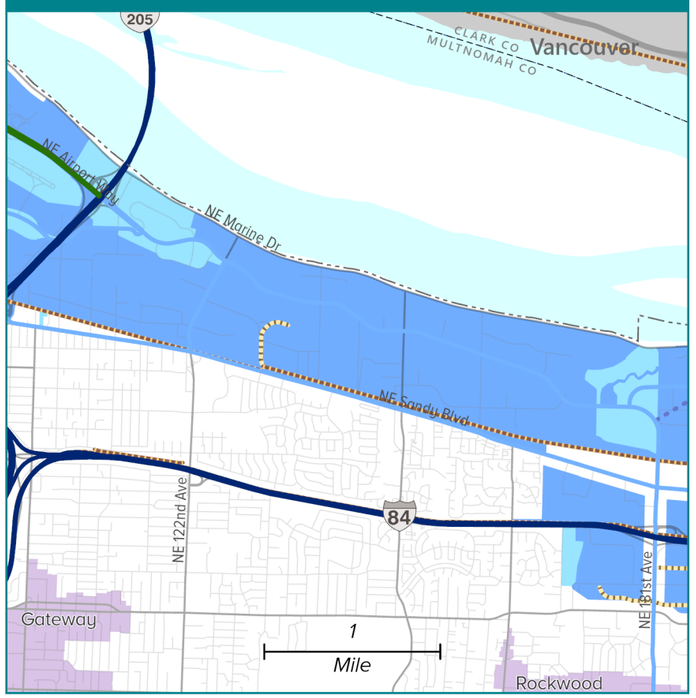
Legend

(dotted lines are proposed projects and do not identify specific alignments)

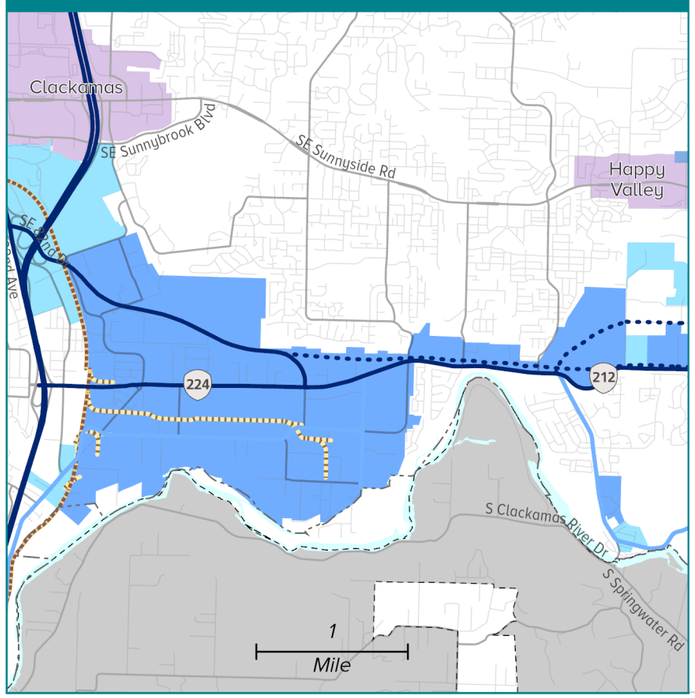
- Main Railroad
- Branch Railroad
- Main roadway routes
- Roadway connectors
- Freight routes outside MPA boundary
- Intermodal connectors
- Marine Facility
- Railyards
- Urban centers
- Industrial area
- Employment area
- County lines
- Urban growth boundary
- Metropolitan planning area

Source: Metro

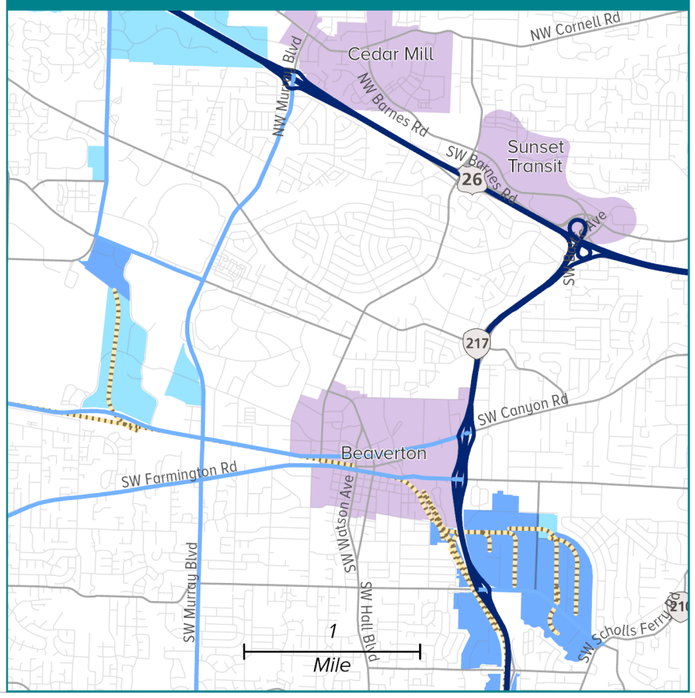
4. Kenton Rail Line/Columbia Corridor



5. Clackamas Industrial Area



6. Beaverton Industrial Area



3.3.7 Regional active transportation network vision

What's changed?

No changes to the policies in this section are proposed. Information on the Regional Active Transportation Plan was moved from the Bicycle Policies section into this section, under 3.3.7.1.

A complete and welcoming active transportation network allows people of all ages, abilities, income levels and backgrounds to access transit, walk and bike easily and safely for many of their daily needs. The Regional Active Transportation Network vision was developed in the Regional Active Transportation Plan and starts with the understanding that integrated, complete and seamless regional pedestrian, bicycle and transit networks are necessary to achieve local and regional transportation goals, aspirations and targets.

Active transportation is human-powered transportation that engages people in healthy physical activity while they travel from place to place. People walking, bicycling, the use of strollers, wheelchairs /mobility devices, skateboarding, and rollerblading are active transportation.

Active transportation supports public transportation because most trips on public transportation include walking or bicycling. Many people in the region incorporate walking, transit and riding a bicycle into daily travel. The regional active transportation network concept focuses on the integration of bicycle, pedestrian and transit travel and connecting local pedestrian and bicycle networks into a coordinated and complete regional network.

The regional active transportation network is composed of pedestrian-bicycle districts and regional bikeways and walkways that connect to and serve high capacity and frequent transit. Pedestrian-bicycle districts are urban centers and station communities. The following ten guiding principles were developed in the Regional Active Transportation Plan to guide development of the regional active transportation network.

1. Bicycling, walking, and transit routes are integrated and connections to regional centers and regional destinations are seamless.
2. Routes are direct, form a complete network, are intuitive and easy-to-use and are accessible at all times.
3. Routes are safe and comfortable for people of all ages and abilities and welcoming to people of all income levels and backgrounds.
4. Routes are attractive and travel is enjoyable.
5. Routes are integrated with nature and designed in a habitat and environmentally sensitive manner.
6. Facility designs are context sensitive and seek to improve safety and balance the needs of all transportation modes.

7. Increases corridor capacity and relieves strain on other transportation systems.
8. Ensures access to regional destinations for people with low incomes, people of color, people living with disabilities, people with low-English-proficiency, youth and older adults.
9. Measurable data and analyses inform the development of the network and active transportation policies, including metrics for air quality and safety.
10. Implements regional and local land use and transportation goals and plans to achieve regional active transportation modal targets.

Developing the regional active transportation network according to the guiding principles will provide a well-connected network of complete streets and off-street paths integrated with transit and prioritizing safe, convenient and comfortable pedestrian and bicycle access for all ages and abilities. This will help make walking and bicycling the most convenient and enjoyable transportation choices for short trips and provide access to regional destinations, jobs, regional and town centers, schools, parks and essential daily services. It will also increase walking and bicycling access for underserved populations and ensures that the regional active transportation network equitably serves all people.[44]

3.3.7.1 Regional Active Transportation Plan (2014)

The Regional Active Transportation Plan (ATP) and the Designing Livable Streets and Trails Guide provides recommended design guidance for trails/multi-use paths, and low volume and high-volume streets. The appropriateness of each design is based on adjacent motor vehicle speeds and volumes. ~~It~~ While it may be difficult for transportation agencies to provide a comfortable facility on some arterial streets ~~at present to provide a comfortable facility. The RTP expects that~~ these routes ~~will~~ should be improved over time~~eventually improve for bicycling~~, through better designs and lower auto speeds accompanying a more compact urban form. In the short-term ~~the RTP recognizes the need to continue to build ridership through~~ providing low-volume routes for bicycle travel ~~in the region~~will help increase the number of people riding bicycles.

Arterial streets typically provide direct routes that connect to ~~2040 Target Areas~~centers and daily destinations. Cyclists tend to travel on arterial streets when they want to minimize travel time or access destinations along them. Oregon State statutes and administrative rules establish that bicycle facilities are required on all collector and higher classification arterial streets when those roads are constructed or reconstructed.

Low-volume streets often provide access to ~~2040 Target Areas~~centers and daily destinations as well as residential neighborhoods, complementing bicycle facilities located on arterial streets. Though these routes are often less direct than arterials, attributes such as slower speeds and less noise, exhaust and interaction with vehicles, including trucks and buses, can make them more comfortable and appealing to many cyclists. Recent research suggests that providing facilities on

[44] Underserved populations include low income, low-English proficiency, minority, solder adults (over 65) and youth (under 18).

low-volume streets may be a particularly effective strategy for encouraging new bicyclists, which helps increase bicycle mode share in the region.

Regional trails typically provide an environment removed from vehicle traffic and function as an important part of the larger park and open space system in a community and in the region. Trails often take advantage of opportunities for users to experience natural features such as creeks, rivers, forests, open spaces and wildlife habitats, as well as historic and cultural features, with viewpoints and interpretive opportunities. In the highest use areas, regional trails should be designed to provide separation between bicyclists and pedestrians.

Off-street facilities also complement on-street bikeways, providing access to 2040 Target Areas while providing a travel environment with fewer intersecting streets than on-street bikeways, thereby allowing for faster travel times. This makes off-street facilities especially attractive for serving long distance bicycle trips. Similar to low-volume streets, off-street facilities provide an environment more removed from vehicle traffic, which is appealing to families and new or less confident cyclists.

3.3.8 Regional bicycle network concept and policies

What's changed?

No changes to the policies in this section are proposed.

Residents in the region have long recognized bicycling as an important form of transportation. The RTP elevates the importance of supporting bicycle travel because of the mobility, economic, environmental, health, and land use benefits it provides.

Sidewalks, trails, bicycle facilities and transit cannot achieve their full potential if they are treated as stand-alone facilities – they must be planned and developed as part of a complete network.

Section 3.08.140 of the Regional Transportation Functional Plan (RTFP), the implementing plan of the Regional Transportation Plan (RTP), requires that local jurisdictions include a bicycle plan to achieve the following:

- an inventory of existing facilities that identifies gaps and deficiencies in the bicycle system;
- an evaluation of needs for bicycle access to transit and essential destinations, including direct, comfortable and safe bicycle routes and secure bicycle parking;
- a list of improvements to the bicycle system;
- provision for bikeways along arterials, collectors and local streets, and bicycle parking in centers, at major transit stops, park-and-ride lots and institutional uses; and
- provision for safe crossing of streets and controlled bicycle crossing on major arterials.

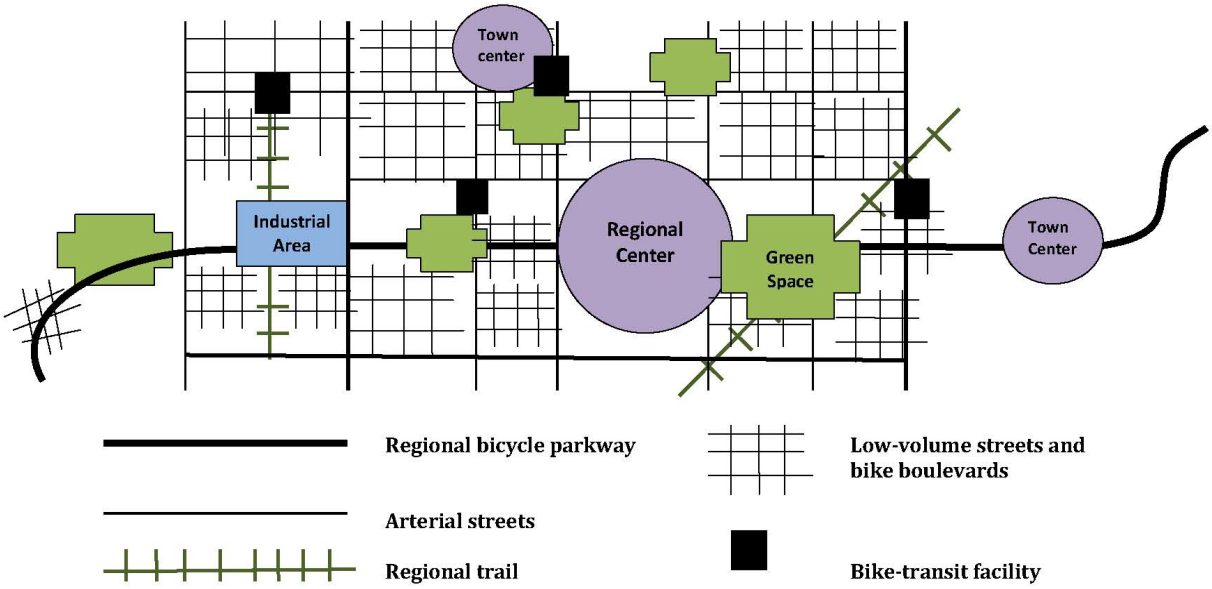
3.3.8.1 Regional bicycle network concept

The regional bicycle network concept includes:

- A bicycle parkway in each of the region's Mobility Corridors within the MPA boundary to provide transportation options in these corridors.
- A network of bicycle parkways spaced approximately every two miles, that connect to and/or through every town and regional center, many regional destinations and to most employment and industrial land areas and regional parks and natural areas (all areas are connected by regional bikeways, the next functional class of bicycle routes).
- A network of regional bikeways that connect to the bicycle parkways, providing an interconnected regional network. Local bikeways connect to bicycle parkways and regional bikeways.
- Regional bicycle districts. Regional and town centers and station communities were identified as bicycle districts, as well as pedestrian districts.

Figure 3-34 shows the components of the regional bicycle network concept and their relationship to adjacent land uses. A region-wide bicycle network would be made up of on-street and off-street routes with connections to transit and other destinations.

Figure 3-34 Regional bicycle network concept



3.3.8.2 Regional bicycle network policies

This section describes the policy framework of the Regional Bicycle Network Concept. Specific actions that Metro, in partnership with cities, counties, agencies and other stakeholders can take to implement the policies are identified in the Regional Active Transportation Plan.

Policy 1	**Make bicycling the most convenient, safe and enjoyable transportation choice for short trips of less than three miles**
Policy 2	**Complete an interconnected regional network of bicycle routes and districts that is integrated with transit and nature and prioritizes seamless, safe, convenient and comfortable access to urban centers and community places, including schools and jobs, for all ages and abilities.**
Policy 3	**Complete a green ribbon of bicycle parkways as part of the region's integrated mobility strategy.**
Policy 4	**Improve bike access to transit and community places for people of all ages and abilities.**
Policy 5	**Ensure that the regional bicycle network equitably serves all people.**

Bicycle Policy 1. Make bicycling the most convenient, safe and enjoyable transportation choice for short trips of less than three miles.

The average length of a bicycle trip in the region is about three miles.[45] Nearly 45 percent of all trips made by car in the region are less than three miles, and 15 percent are less than one mile.[46] With complete networks, education, encouragement and other programs, many short trips made by car could be replaced with bicycle or pedestrian trips, increasing road capacity and reducing the need to expand the road system. Technologies such as bike-sharing provide a new toolkit to make bicycling even easier for short trips.

In 2011, the Federal Transit Administration (FTA) established a formal policy on the eligibility of pedestrian and bicycle improvements for FTA funding and defined the catchment area for pedestrians and bicyclists in relation to public transportation stops and stations. The policy recognized that bicycle and pedestrian access to transit is critical and defined a three mile catchment area for bicycle improvements and a half mile catchment area for pedestrian improvements. [47]

Bicycle travel holds huge potential for providing transportation options that can replace trips made by auto, especially for short trips. Bicycle trips made in the region for all purposes grew by

[45] 2011 Oregon Household Activity Survey.

[46] 2011 Oregon Household Activity Survey. Vehicle trips by length for trips wholly within Clackamas, Multnomah, Washington and Clark Counties.

[47] Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements Under Federal Transit Law

190 percent since 1995.[48] When bicycling is safe, comfortable, convenient and enjoyable, people have the option of making some of those short trips by bicycle.

Actions to implement this policy can be found in Chapter 12 of the 2014 Regional Active Transportation Plan.

Bicycle Policy 2. Complete an interconnected regional network of bicycle routes and districts that is integrated with transit and nature and prioritizes seamless, safe, convenient and comfortable access to urban centers and community places, including schools and jobs for all ages and abilities.

A well-connected bicycle network does not have gaps and is comfortable and safe for people of all ages and abilities. Regional bicycle routes connect to and through urban centers increasing access to transit, businesses, schools, and other destinations. Regional trails and transit function better when they are integrated with on-street bicycle routes. Wherever possible, routes should connect to and through nature and include trees and other green elements. Designing the network for universal access will make the regional bicycle network accessible and comfortable for all ages and abilities. The Regional Transportation Functional (RTFP) plan requires local Transportation System Plans include an interconnected network of bicycle routes.

Bicycle Policy 3. Complete a green ribbon of bicycle parkways as part of the region's mobility strategy.

Regional bicycle parkways form the backbone of the regional bicycle system, connecting to 2040 activity centers, downtowns, institutions and greenspaces within the urban area while providing an opportunity for bicyclists to travel efficiently with minimal delays. In effect, the bicycle parkway concept mainstreams bicycle travel as an important part of the region's integrated mobility strategy. This concept emerged from work by the Metro Blue Ribbon Committee for Trails as part of the broader Connecting Green Initiative in 2007-09 and further developed in the Regional Active Transportation Plan adopted in 2014.

Key experiential aspects that bike parkways embody:

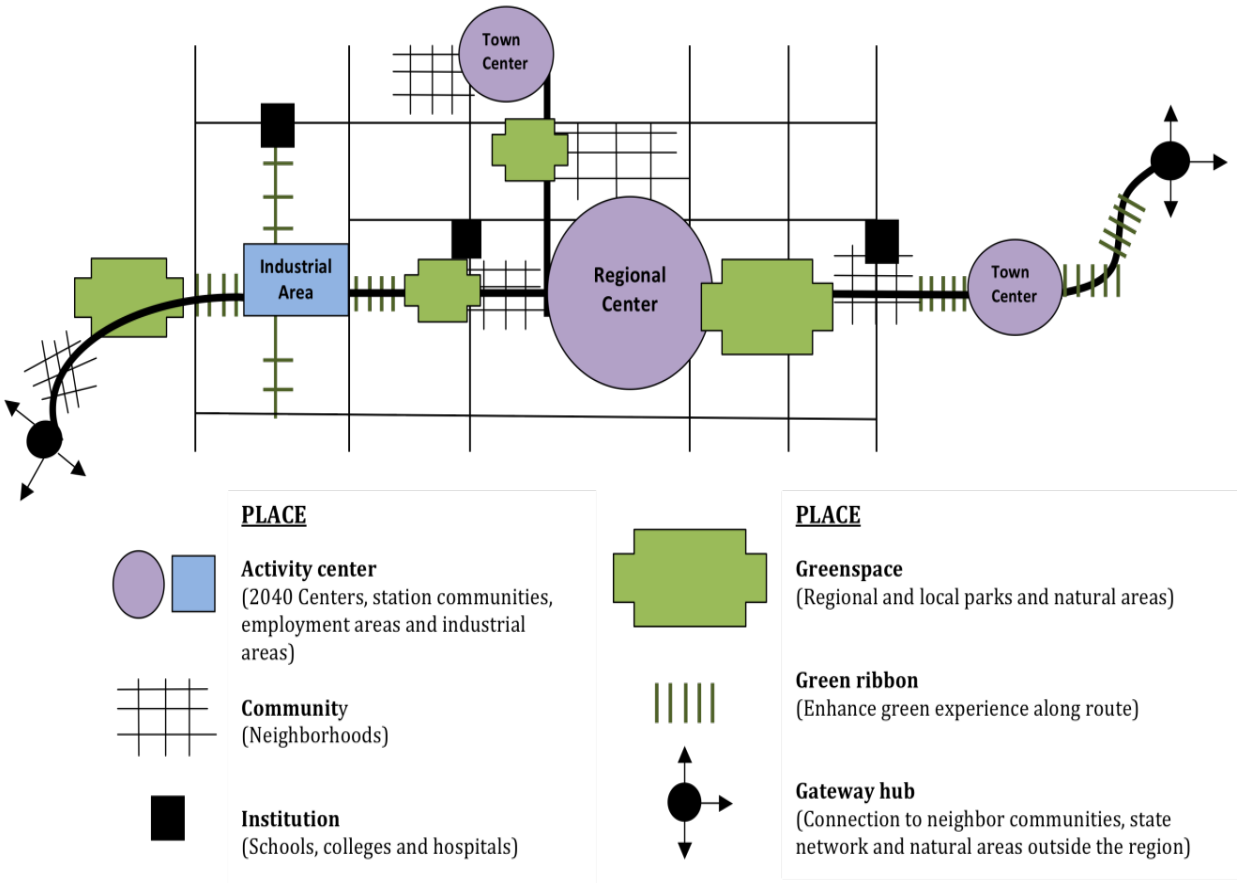
- A green environment with natural features such as trees or plantings (some will already be green, while others will be made greener as part of bike parkway development)
- Comfort and safety provided by protection from motorized traffic
- Large volumes of cyclists traveling efficiently with minimal delays

The bicycle parkway also connects the region to neighboring communities, other statewide trails and natural destinations such as Mt Hood, the Columbia River Gorge, and the Pacific Ocean.

Figure 3-35 illustrates this policy concept in the context of the regional bicycle parkway concept.

[48] 2011 Oregon Household Activity Survey.

Figure 3-35 Bicycle parkway concept



A bicycle parkway serves as a green ribbon connecting 2040 activity centers, downtowns, institutions and greenspaces within the urban area.

The experience of the cyclist will be optimized to such a high level that people will clearly know when they are riding on a bicycle parkway. The specific design of a bike parkway will vary depending on the land use context within which it passes through. The facility could be designed as an off-street trail along a stream or rail corridor, a cycle track / protected / physically separated bicycle lane along a main street or town center, or a bicycle boulevard through a residential neighborhood. Priority treatments will be given to cyclists (e.g., signal timing) using the bike parkway when they intersect other transportation facilities, and connections to/from other types of bicycle routes will be intuitive. The Regional Active Transportation Plan provides design guidance on the development of bicycle parkways.

Bicycle Policy 4. Improve bike access to transit and to community places for people of all ages and abilities.

Public transit and bicycling are complementary travel modes. Effectively linking bicycling with transit increases the reach of both modes. It allows longer trips to be made without driving and reduces the need to provide auto park-and-ride lots at transit stations.

Transit provides a fast and comfortable travel environment between regional destinations that overcomes barriers to bicycling (hills, distance, and streets without bikeways); while bicycling provides access from the front door to a transit station, is faster than walking and can sometimes eliminate the need to transfer between transit vehicles.

A key component of the bike-transit connection is bicycle parking at transit stations and stops. Bike-transit facilities provide connections between modes by creating a "bicycle park and ride." Both TriMet and SMART currently provide bicycle parking and storage at many transit stations and stops. TriMet, with input from regional stakeholders, has developed Bicycle Parking Guidelines. The guidelines consider station context and regional travel patterns and are focused on three major factors for parking: location, amount and design. The guidelines will help TriMet, and local jurisdictions determine the appropriate location, size and design of large-scale bike-parking facilities, including Bike-Transit Facilities. The Regional Transportation Functional Plan (RTFP)requires that local transportation system plans evaluate the needs for bicycle access to transit, including secure bicycle parking.

Bicycle Policy 5. Ensure that the regional bicycle network equitably serves all people.

All people in the region, regardless of race, income level, age or ability should enjoy access to complete and safe walking, bicycling and transit networks and the access they provide to essential destinations, including schools and jobs. Currently the regional active transportation network is incomplete in many areas of the region, including areas with low-income, minority and low-English proficiency populations. Transportation is the second highest household expense for the average American; providing transportation options in areas with low-income populations helps address transportation inequities. Future planning, design and construction of the networks must include consideration of the benefits and burdens of transportation investments to underserved and environmental justice populations. In addition to infrastructure, technologies such as bike sharing increase opportunities for all residents to bicycle. In Portland, the "Biketown for All"" program provides discounted memberships, free helmets and bike safety education to low-income people.

3.3.8.3 Regional bicycle network functional classifications and map

This section describes the regional bicycle network functional classifications shown on Figure 3-36, the Regional Bicycle Network. Click on 2023 for online zoomable version of map.

The regional bicycle network is composed of on street and off-street bikeways that serve the central city, regional centers, town centers, and other 2040 Target Areas, providing a continuous network that spans jurisdictional boundaries. Figure 3-36 is a functional classification map

illustrating how regional bicycle routes and districts work together to form a comprehensive network that would allow people to bike to transit, schools, employment centers, parks, natural areas and shopping.

The regional bicycle network has a functional hierarchy like that of the regional motor vehicle network. Figure 3-36 provides a vision for a future bicycle network; for a map of current bicycle facilities in the region, refer to Chapter 4.

The different functional elements of the regional bicycle network are:

- **Regional Bicycle Parkways** are spaced approximately every two miles in a spiderweb-grid pattern, and connect to and through every urban center, many regional destinations and to most employment and industrial land areas, regional parks and natural areas. Each Mobility Corridor within the urban area has an identified bicycle parkway. Bicycle parkways were identified as routes that currently serve or will serve higher volumes of bicyclists and provide important connections to destinations.
- **Regional Bikeways** provide for travel to and within the Central City, Regional Centers, and Town Centers. Regional bikeways can be any type of facility, including off-street trails/multi-use paths, separated in-street bikeways (such as buffered bicycle lanes) and bicycle boulevards. On-street Regional Bikeways located on arterial and collector streets are designed to provide separation from traffic.
- **Local Bikeways** are not identified as regional routes. However, they are very important to a fully functioning network. They are typically shorter routes with less bicycle demand and use than regional routes. They provide for door-to-door bicycle travel.
- **Bicycle Districts (and Pedestrian Districts)** include the Portland Central City, Regional and Town Centers and Station Communities. A bicycle district is an area with a concentration of transit, commercial, cultural, educational, institutional and/or recreational destinations where bicycle travel is intended to be attractive, comfortable and safe. Bicycle districts are also areas with current or planned high levels of bicycle activity. All bicycle routes within bicycle districts are considered regional and are eligible for federal funding. Bicycle facilities in bicycle districts should strive to be developed consistent with the design guidance described in Chapter 9.

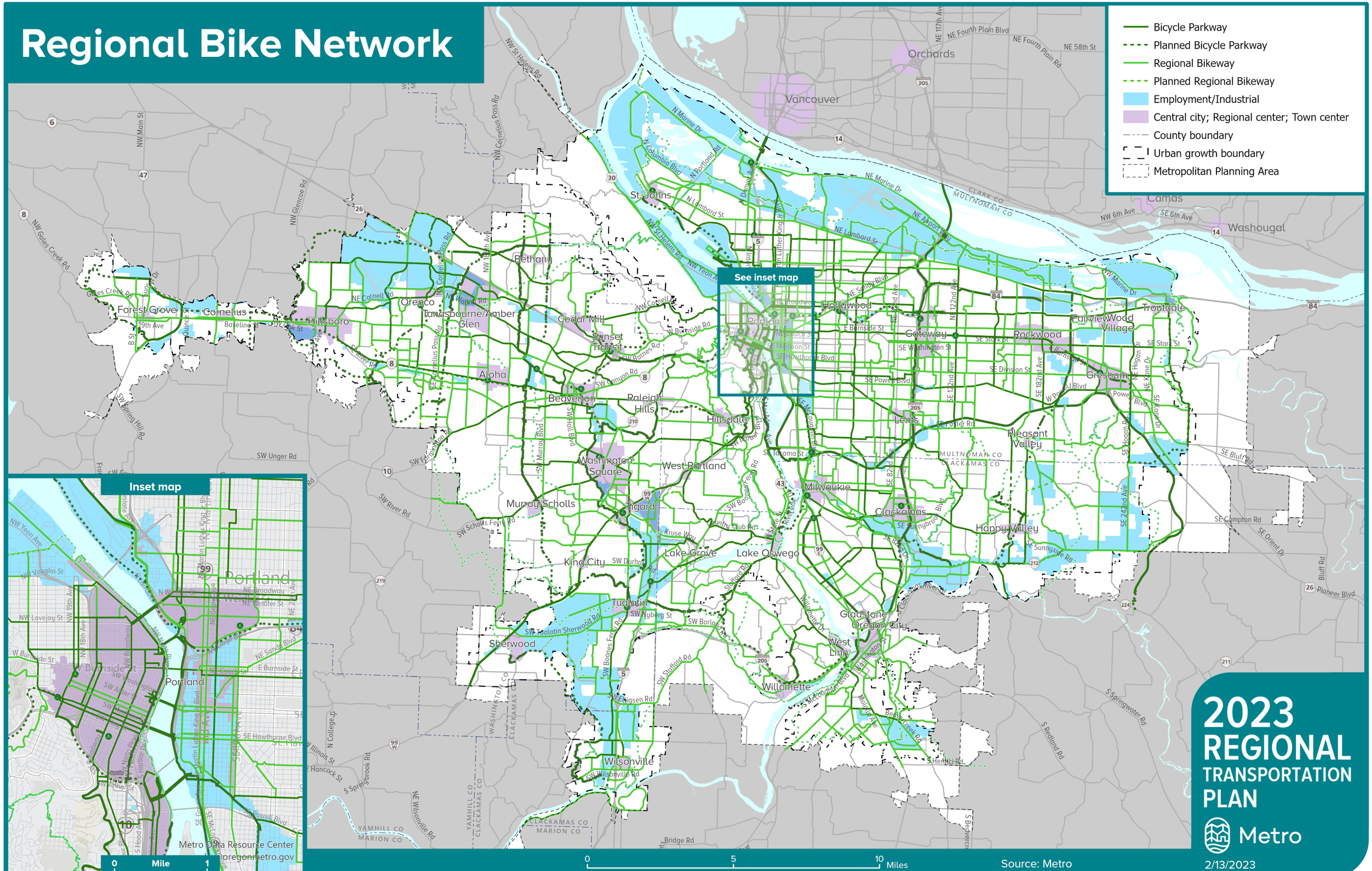
Which areas are designated as bicycle districts should be considered further in future Regional Transportation Plan and ATP updates. For example, areas around bus stops with high ridership should be evaluated as potential bicycle districts (light rail station areas are currently identified as bicycle districts); some Main Streets on the regional network may be considered for expansion as bicycle districts, as well as other areas

- **Bike-Transit Facilities** are often referred to as Bike & Rides and are generally located at transit centers and stations and provide secure, protected large-scale bike parking facilities. Some facilities may include additional features such as showers, lockers, trip planning and bicycle repair. These facilities have been built at transit centers and MAX stations throughout the region– including in Wilsonville, Hillsboro, Beaverton, Portland and Clackamas County.

Bicycle Parkways and Regional Bikeways typically follow arterial streets but may also be located on collector and low-volume streets. On-street bikeways should be designed using a flexible "toolbox" of bikeway designs, including bike lanes, cycle tracks /protected/physically separated bicycle lanes, shoulder bikeways, shared roadway/wide outside lanes and bicycle priority treatments (e.g., bicycle boulevards).

Figure 3-36 Regional bicycle network map

Regional Bike Network



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3.3.9 Regional pedestrian network concept and policies

What's changed?

No changes to the policies in this section are proposed.

Walking contributes to a healthy lifestyle and supports vibrant local economies. Every trip begins or ends with at least a short walk. Transit in particular is integrated with walking. However, while everyone walks, walking is not a safe or convenient option for everyone in the region. Traffic crashes involving people walking often end in a death or severe injury and pedestrian deaths are rising.

Many streets are not ADA-compliant, sidewalk gaps remain on busy arterial roadways and along bus routes, safe places to cross the street can be few and far between, and lack of street lighting and other gaps make it dangerous and difficult to walk, especially for older adults, children and people with disabilities. In marginalized communities, lack of safe walking routes can be worse.

In the Regional Pedestrian Network Vision, walking is safe and convenient. Section 3.08.130 of the Regional Transportation Functional Plan (RTFP) requires that local jurisdictions include a pedestrian plan to achieve the following:

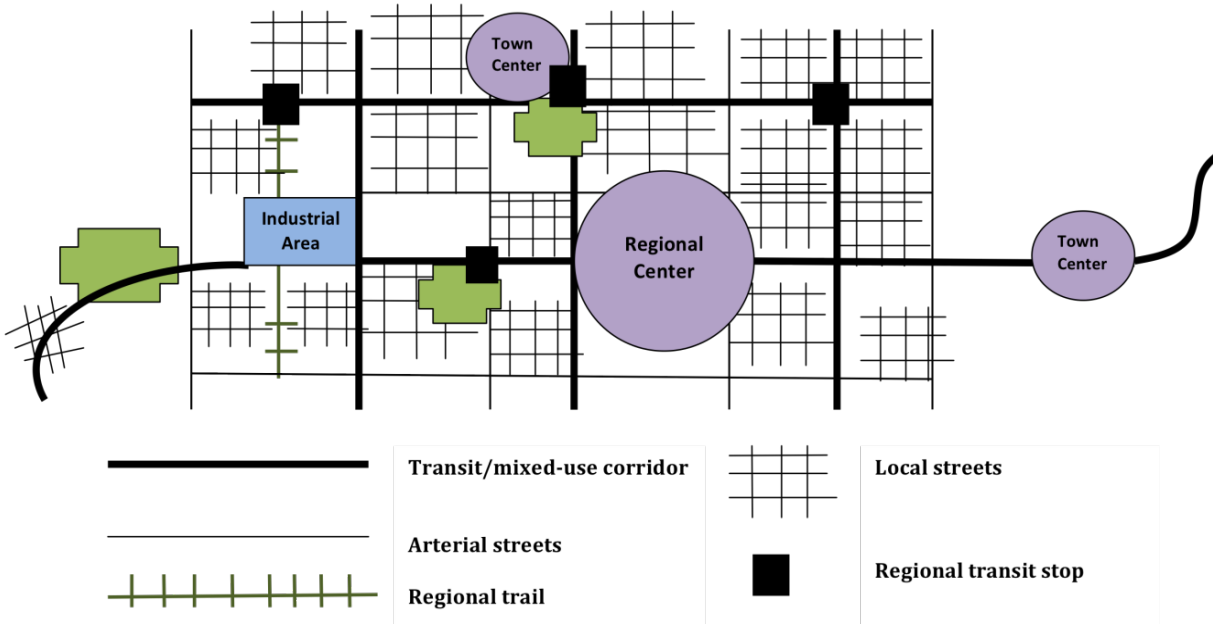
- Sidewalks along all arterials, collectors and most local streets.
- Direct and safe pedestrian routes to transit and other essential destinations.
- Provision of safe crossings of streets and controlled pedestrian crossings on major arterials.
- Safe, direct and logical pedestrian crossings at all transit stops where practicable.
- Crossings over barriers such as throughways, active rail-lines and rivers provided at regular intervals following regional connectivity standards.
- Regional multi-use trails and walking paths are completed.

3.3.9.1 Regional pedestrian network concept

The Regional Pedestrian Network Concept describes a well-connected grid of streets and multi-use paths connecting to and intersecting through regional and town centers, employment areas, station communities, parks and natural areas and connecting to transit and essential destinations.

Figure 3-37 shows the components of the regional pedestrian network and their relationship to adjacent land uses.

Figure 3-37 Regional pedestrian network concept



The 2040 Growth Concept sets forth a vision for making walking safe, convenient and enjoyable to support walking as a legitimate travel choice for all people in the region. The Regional Transportation Plan supports this vision with a region-wide network of on-street and off-street pedestrian facilities integrated with transit and regional destinations.

3.3.9.2 Regional pedestrian network policies

Regional pedestrian policies help achieve the Regional Pedestrian Network Vision. Specific actions that Metro, in partnership with cities, counties, agencies and other stakeholders, can take to implement the policies are identified in the Regional Active Transportation Plan.

Policy 1	**Make walking the most convenient, safe and enjoyable transportation choice for short trips of less than one mile.**
Policy 2	**Complete a well-connected network of pedestrian routes and safe street crossings that is integrated with transit and nature that prioritize seamless, safe, convenient and comfortable access to urban centers and community places, including schools and jobs, for all ages and abilities.**
Policy 3	**Create walkable downtowns, centers, main streets and station communities that prioritize safe, convenient and comfortable pedestrian access for all ages and abilities.**
Policy 4	**Improve pedestrian access to transit and community places for people of all ages and abilities.**

Pedestrian Policy 1. Make walking the most convenient, safe and enjoyable transportation choice for short trips of less than one mile.

In addition to being the most basic form of transportation, walking is an important form of exercise and is the most popular recreational activity in Oregon.[49] The average length of a walking trip in the region is about half a mile. Today 15 percent of trips made in an auto are less than one mile. [50] Many of these trips could be made by walking if it were convenient, safe and enjoyable. Fully implementing regional and local plans will help make this possible.

In 2011, the Federal Transit Administration (FTA) established a formal policy on the eligibility of pedestrian and bicycle improvements for FTA funding and defined the catchment area for pedestrians and bicyclists in relation to public transportation stops and stations. The policy recognized that bicycle and pedestrian access to transit is critical and defined a three-mile catchment area for bicycle improvements and a half mile catchment area for pedestrian improvements. [51]

Ensuring all gaps and deficiencies on the regional pedestrian network have projects identified in the Regional Transportation Plan and including wayfinding, street markings, lighting and other elements that enhance connections and make the pedestrian network consistent, integrated, and easy to navigate are key elements to implementing this policy. The Regional Transportation

[49] Oregon's 2017 Statewide Outdoor Recreation Survey shows that 83 percent of Oregonians walk on local streets and sidewalks for recreation, making this the most popular recreational activity in the state.
[50] 2011 Oregon Household Activity Survey.
[51] Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements Under Federal Transit Law

Functional Plan (RTFP) includes specific requirements in the Pedestrian and Transit System Design sections.

Actions to implement this policy can be found in Chapter 12 of the 2014 Regional Active Transportation Plan.

Pedestrian Policy 2. Complete a well-connected network of pedestrian routes, including safe street crossings, integrated with transit and nature that prioritize seamless, safe, convenient and comfortable access to urban centers and community places, including schools and jobs, for all ages and abilities.

A well-connected high-quality pedestrian environment facilitates walking trips by providing safe and convenient access to essential destinations. The Regional Pedestrian Network provides the plan for well-connected pedestrian routes and safe street crossings to provide access to transit and essential daily needs. The Regional Transportation Functional Plan (RTFP) requires that local Transportation System Plans include an interconnected network of pedestrian routes.

Section 3.08.130 of the Regional Transportation Functional Plan (RTFP) includes the requirements to provide a well-connected pedestrian system, and Oregon State statutes and administrative rules establish that pedestrian facilities are required on all collector and higher classification streets when those roads are built or reconstructed. Exceptions are provided where cost is excessively disproportionate to need or where there is an absence of need due to sparse population or other factors.

Priority should be given to filling gaps and providing safe crossings of the busiest streets with transit and other essential destinations. Deficient facilities in areas of high walking demand are considered gaps.

Pedestrian Policy 3. Create walkable downtowns, centers, main streets and station communities that prioritize safe, convenient and comfortable pedestrian access for all ages and abilities.

All centers and station areas are Regional Pedestrian Districts. The central city, regional and town centers, main streets and light rail station communities are areas where high levels of pedestrian activity are prioritized. In these areas, sidewalks, plazas and other public spaces are integrated with civic, commercial and residential development. They are often characterized by compact mixed-use development served by transit. These areas are defined as pedestrian districts in the RTP.

Walkable areas should be designed to reflect an urban development and design pattern where walking is safe, convenient and enjoyable. These areas are characterized by buildings oriented to the street and boulevard-type street design features, such as wide sidewalks with buffering from adjacent motor vehicle traffic, marked street crossings at all intersections with special crossing amenities at some locations, special lighting, benches, bus shelters, awnings and street trees. All streets within these areas are important pedestrian connections. Sections 3.08.120 (B) (2) and 3.08.130 (B) list requirements for pedestrian districts and new development near transit.

Pedestrian Policy 4. Improve pedestrian access to transit and community places for people of all ages and abilities.

Public transportation use is fully realized only with safe and convenient pedestrian and bicycle connections, especially safe crossings and facilities that connect stations or bus stops to surrounding areas or that provide safe and attractive waiting areas. Improving walkway connections between office and commercial districts and surrounding neighborhoods provides opportunities for residents to walk to work, shopping or to run personal errands. Buildings need to be oriented to the street and be well connected to sidewalks. Safe routes across parking lots need to be provided. This reduces the need to bring an automobile to work and enhances public transportation and carpooling as commute options. The Regional Transportation Functional Plan (RTFP) requires that local Transportation System Plans include an evaluation of needs for pedestrian access to transit for all mobility levels, including direct, comfortable and safe pedestrian routes.

Pedestrian access along transit-mixed use corridors is improved with features such as wide sidewalks, reasonably spaced marked crossings and buffering from adjacent motor vehicle traffic.

Pedestrian Policy 5. Ensure that the regional pedestrian network equitably serves all people.

All people in the region, regardless of race, income level, age or ability should enjoy access to the region's walking and transit networks and the access they provide to essential destinations, including schools and jobs. Currently the regional pedestrian network is incomplete in many areas of the region, including areas where people with low-incomes, people of color and people with language isolation live. Transportation is the second highest household expense for the average American; providing transportation options in areas with low-income populations helps address transportation inequities.

Section 3.08.120[C] of the Regional Transportation Functional Plan (RTFP) specifies that the needs of youth, seniors, people with disabilities and environmental justice populations including people of color and people with low incomes must be considered when planning transit.

Regional and local planning, design and construction of the networks must include consideration of the benefits and burdens of transportation investments to underserved and environmental justice populations and continue to collect data and monitor performance in accordance with section 3.08.010 of the Regional Transportation Functional Plan.

Investment programs should set priorities for sidewalk improvements to and along major transit routes and communities where physically or economically disadvantaged populations live.

3.10.3 Regional pedestrian network classifications and map

This section describes the regional pedestrian network functional classifications shown on Figure 3-38, the Regional Pedestrian Network. The regional pedestrian network mirrors the regional transit network reflecting the important relationship of a complete walking network and transit. Frequent transit routes and regional arterials comprise regional pedestrian streets. Regional trails are also part of the regional pedestrian network. Centers and station areas are regional pedestrian districts and include all streets of all functional classifications and paths within their boundaries.

The regional pedestrian network has a functional hierarchy like that of the regional motor vehicle network. Figure 3-38 provides a vision for a future pedestrian network; for a map of existing pedestrian facilities in the region, refer to Chapter 4.

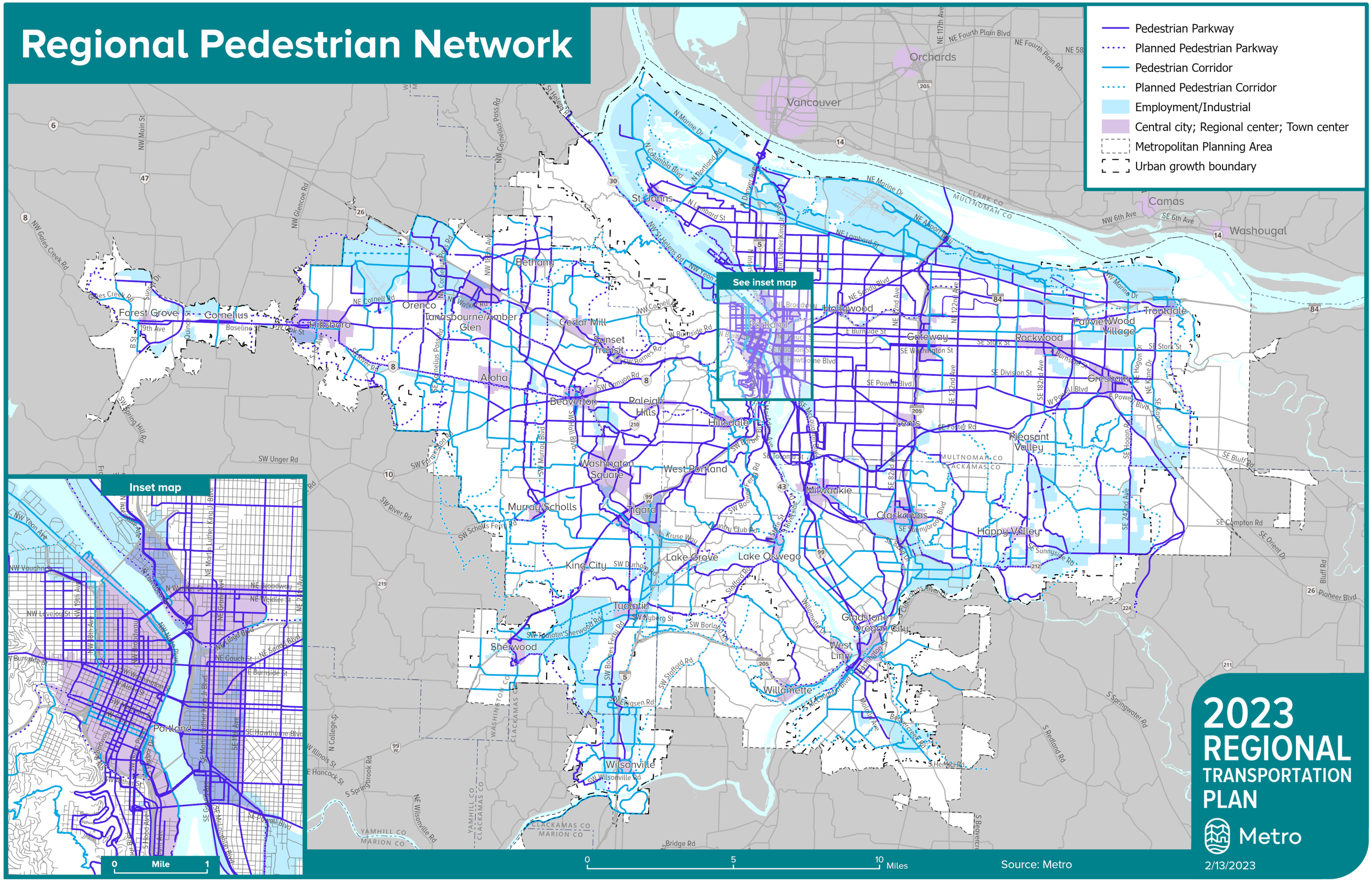
The different functional elements of the regional pedestrian network are:

- **Pedestrian Parkways** are generally major urban streets that provide frequent and almost frequent transit service (existing and planned). They can also be regional trails.
- **Regional Pedestrian Corridors** are any major or minor arterial on the regional urban arterial network that is not a Pedestrian Parkway. Regional trails that are not Pedestrian Parkways are classified as Regional Pedestrian Corridors.
- **Local Pedestrian Connectors** are all streets and trails not included on the Regional Pedestrian Network.
- **Pedestrian Districts** are the Central City, Regional and Town Centers and Station Communities shown on the Regional Pedestrian Network Map. A pedestrian district is an area with a concentration of transit, commercial, cultural, institutional and/or recreational destinations where pedestrian travel is attractive, comfortable and safe. Pedestrian Districts are areas where high levels of walking exist or are planned. All streets and trails within the Pedestrian District are part of the regional system.

Figure 3-38 applies the regional pedestrian network concept on the ground, illustrating how different regional pedestrian facilities work together to form a comprehensive network that allows people to walk to transit, schools, employment centers, parks, natural areas and shopping. Click on RTP Regional Network Maps for online zoomable version of map. [LINK TO BE ADDED]

Figure 3-38 Regional pedestrian network map

Regional Pedestrian Network



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3.3.10 Transportation System Management and Operations Vision and Policies

What's changed?

Changes are recommended to the RTP TSMO policies to align with the 2021 TSMO Strategy, adopted by JPACT and the Metro Council in 2022. Changes also are made to only include the references to transportation demand management (TDM) and parking policies as they relate to TSMO. Pricing, TDM and parking related policies have been moved to other policy sections in Chapter 3 of the RTP and are noted in those sections. The Oregon Transportation Planning rule, as amended through the Climate Friendly Communities (CFEC) rulemaking in 2022, was also reviewed and referenced.

Since the March 2023 draft: Added missing narrative for Policy 4. Made minor clarifying revisions.

The region's Transportation System Management and Operations (TSMO) vision, concept and policies ~~reflect that the transportation system represents a~~ address the management of the significant public investment in capital infrastructure ~~that must be well-managed~~. ~~C~~Taking a "manage first" approach addressed concerns about the social, environmental, and financial costs of large~~r-scale~~ capital projects, such as building new lanes~~, lend support for first managing the current system~~. ~~M~~System management can restore reliable travel and provide flexibility for travelers to use a variety of travel options. OAR 660.012, ~~the~~ Oregon's Transportation Planning Rule (TPR), stipulates that coordinated land use and transportation plans should increase transportation choices and make more efficient use of the existing transportation system through transportation system management and demand management.

~~The 2021 TSMO Strategy incorporated the policies and regionally desired outcomes of the 2018 RTP.~~ The 2021 TSMO Strategy updated the region's ten-year strategy, continuing an innovative, holistic, multimodal, and cost-effective approach to managing the ~~region's~~ transportation system. ~~An effective~~ The TSMO Strategy prioritizes optimization of the existing transportation system by improving business practices and collaboration, encouraging behavior changes through transportation demand management and using technology to understand and manage how the system operates.

3.3.10.1 Transportation system management and operations vision

Regional stakeholders share a vision for TSMO: Collaborate to provide reliable, agile, and connected travel choices so that all users are free from harm, and to eliminate the disparities experienced by Black, Indigenous, people of color and people with low incomes.

This vision reflects broad participation in planning for operations. TSMO participation is multidisciplinary, and requires collaboration across several disciplines, including planners,

engineers, emergency responders, demand management specialists, operators, and maintenance professionals. The region leads by aligning efforts with six TSMO Strategy goals:

1. Provide a transportation system that is reliable for all users.
2. Connect all people to the goods, services, and destinations they need through a variety of travel choices.
3. Collaborate as effective stewards for the transportation system.
4. Eliminate the disparities in the transportation system experienced by Black, Indigenous, people of color and people with low incomes.
5. Create a transportation system where all users are free from harm.
6. Manage the system to be agile in the face of growth, disruptions and changing technology.

3.3.10.2 Transportation system management and operations concept

The concept for TSMO was further refined by stakeholders to establish objectives, performance measures and actions. The 21 actions in Table 3-11 show the range of regional work that connects TSMO work to achieving outcomes aligned with the RTP.

Table 3-11 Examples of TSMO and investments in four strategic areas

Concepts, Capabilities, and Infrastructure • Inventory and manage regional signal and Intelligent Transportation System Communications Infrastructure • Manage transportation assets to secure the network • Continue freight technology and Intelligent Transportation Systems deployment • Facilitate ground truthing of emerging technologies • Establish a Regional Transit Operators TSMO Group • Unify and standardize fare subsidies for transit and Mobility on Demand • Develop an Intelligent Transportation System travel time information data collection and distribution plan for Regional Disaster Preparedness Organization regional emergency routes • Create continuous improvement process for existing and new signal systems and related performance • Deploy regional traveler information systems • Implement integrated corridor management and mainstream into corridor planning • Create a TSMO safety toolbox • Build and use a TSMO Toolbox to connect gaps in bicycle and pedestrian infrastructure •
Planning • Develop a Mobility on Demand strategy and policy • Pilot Origin-Destination data to prioritize TSMO investments • Participate in regional public outreach to assist in guiding, listening and learning through TSMO focused conversations • Update the regional ITS Architecture

Listening & Accountability

- Track and prioritize TSMO investments for and with Black, Indigenous, people of color and people with low incomes
- Create a community listening program
- Improve TSMO data availability to aid in traveler decisions and behavior

Data Needs

- Establish TSMO performance measures baseline.
- Explore new TSMO data sources

3.3.10.3 Transportation system management and operations (TSMO) policies

Policy 1	**Manage the transportation system for the effective and efficient use of publicly funded transportation assets while supporting mobility, multi-modal reliability, racial equity, safety, and reductions in carbon emissions.**
Policy 2	**Take actions from the regional TSMO Strategy by supporting a program that conducts planning for operations, develops new operational concepts, assesses future needs for capabilities, identifies gaps in data and establishes a process for listening and accountability.**
Policy 3	**Optimize operations for reliability and mobility by coordinating and advancing operator capabilities with shared tools and interoperable technologies.**
Policy 4	**Provide real-time traveler information data across devices and at physical locations that is comprehensive in serving the needs of people, businesses and freight movement.**
Policy 5	**Improve incident detection and clearance times on the region's transit and motor vehicle networks to reduce the impact of crashes on the transportation system.**

TSMO Policy 1. Manage the transportation system for the effective and efficient use of publicly funded transportation assets while supporting mobility, multi-modal reliability, racial equity, safety, and reductions in carbon emissions.

Consistent with ~~RTP~~ reigonal policy dating back to the 1990s, transportation agencies use system management to make the best use of existing infrastructure to delay or avoid large, higher-cost and potentially disruptive construction projects. This policy is applied using regional values and desired outcomes for mobility, reliability, racial equity, safety, and reduction in greenhouse gas emissions.

Transportation agencies collaborate to identify and scale up practices and technologies to a regional scale that are effective at reducing vehicle miles traveled and crashes while increasing reliability, connectivity, traveler information and investments that support racial equity. These

technologies also record data from the transportation system that supports effective operations, planning and investments. Performance measures and targets for system management support the ~~RTP~~ Congestion Management Process (CMP), Climate Smart ~~Communities~~ Strategy and the 2021 TSMO Strategy.

Each step of implementing the strategy will use the TSMO Equity Tree (a branching diagram), working up through a series of equity-focused questions. The last step is to evaluate the plan or action ~~be accountable~~for accountability. Each evaluation ~~will ask~~asks "Did the outcomes help or hurt communities of color?" and suggests next steps depending on the answer.

TSMO Policy 2. Take actions from the regional TSMO Strategy by supporting a program that conducts planning for operations, develops new operational concepts, assesses future needs for capabilities, identifies gaps in data and establishes a process for listening and accountability.

In 2010, the region completed a planning process to adopt the first ten-year strategy for implementing TSMO. This formalized a regional TSMO Program to convene stakeholders and support priorities with resources and partnerships. Metro convenes TransPort, the subcommittee of Transportation Policy Alternatives Committee (TPAC). TransPort ~~plays a major role to advance~~advances the TSMO Strategy through monthly meetings for cooperative planning and deployment of technologies and related procedures. Broad TransPort participation is encouraged. This regional forum supports operators of greater Portland's roads, highways, transit, shared-use mobility services, transportation demand management, congestion pricing, parking management, freight, active transportation facilities and digital infrastructure. Metro and TransPort form additional work groups as needed.

Figure 3-39 shows where some of these actions and investments are envisioned to be applied in the region to improve mobility, safety, efficiency, and reliability of the system.

TSMO Policy 3. Optimize operations for reliability and mobility by coordinating and advancing operator capabilities with shared tools and interoperable technologies.

Transportation operators meet to share perspective on their "capability maturity" with regard to their agency performance in operations and an overall performance of regional partners working together. By reaching agreement on standards and procedures, transportation operators share and advance capabilities. The end goal is to reach optimization across multiple categories such as actively managing the transportation system, responding to incidents, participating in planning, measuring performance, building a workforce with a culture of technical understanding and leadership, and engaging in broad collaboration. In many cases, optimization requires formal agreements, such as data sharing, that stem from regional policies. In other cases, the conversations prepare for emerging technologies as well as retiring outmoded technology.

TSMO Policy 4. Provide real-time traveler information data across devices and at physical locations that is comprehensive in serving the needs of people, businesses and freight movement.

TSMO responds to the barriers that can be overcome with traveler information, aiding people to find and use the most sustainable affordable and safest option. The 2021 TSMO Strategy includes actions to ensure investments and the creation of traveler information is done with community involvement supportive of racial equity.

TSMO Policy 5. Improve incident detection and clearance times on the region's transit and motor vehicle networks to reduce the impact of crashes on the transportation system.

TSMO Strategy is aligned with the region's Safety Strategy to eliminate severe crashes (crashes with major injuries or fatalities) by 2035. Crashes on the transportation network cause non-recurring congestion, and fatal crashes result in longer clearance and recovery times with sustained impacts. The 2021 TSMO Strategy aims to reduce harm, and reduce the non-recurring congestion created by incidents, by improving the safety of the system overall. [52]

[52] "Ridesharing" in this context means traditional not-for-profit carpooling or vanpooling, not Transportation Network Companies such as Uber or Lyft.

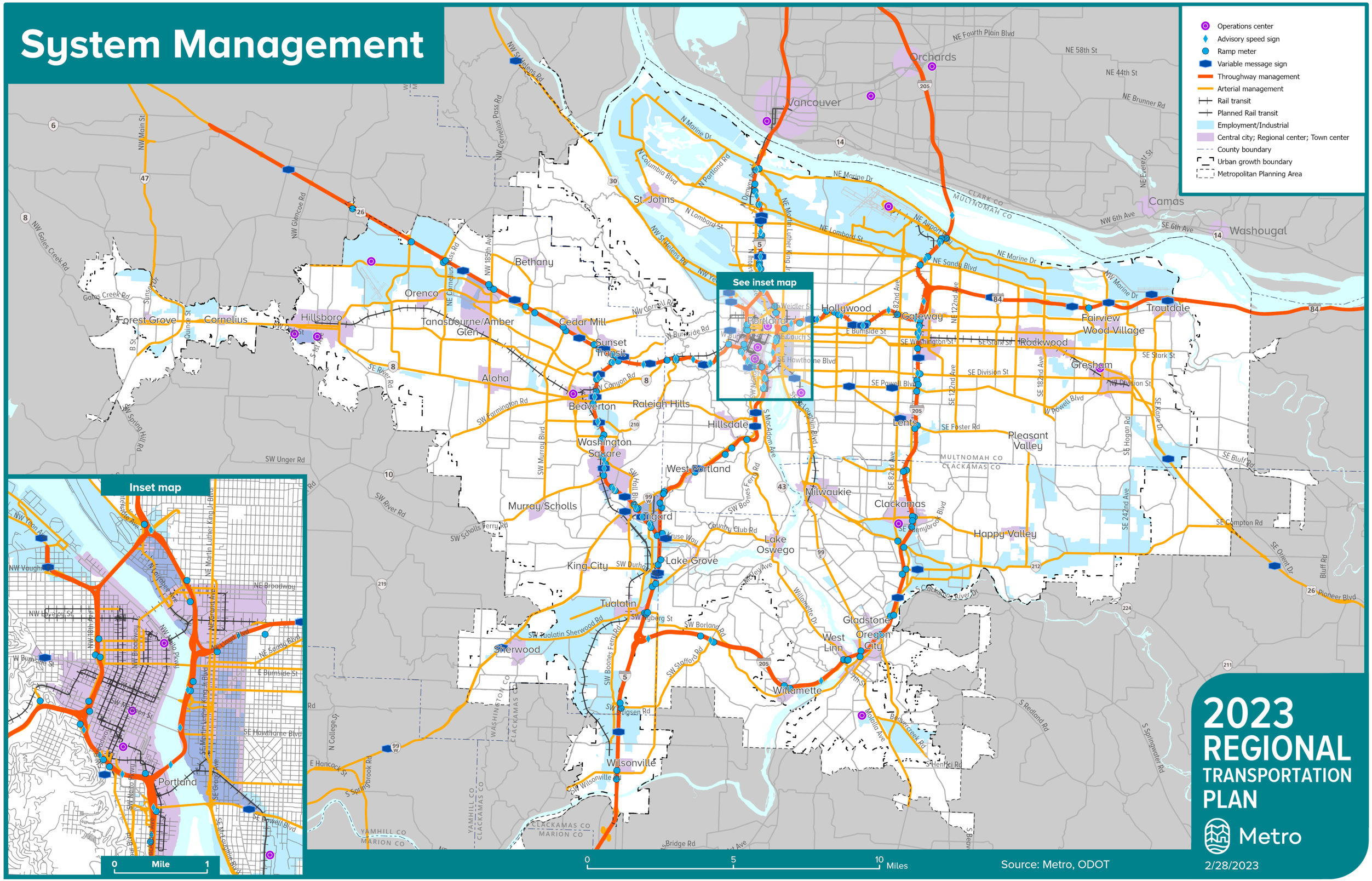
3.11.4 Transportation system management and operations map

The map for regional TSMO reflects Policy 1~~, manage the transportation system~~. Actively managing the transportation system requires Intelligent Transportation Systems (ITS) equipment, such as variable message signs, along throughways and arterials ~~that can~~to alert travelers with information or advise safe speeds. A variety of sensors help automate this process, but operators also utilize cameras to solve problems remotely or deploy responders to an incident. A digital infrastructure transmits data to and from transit and road operators who use central, shared software to improve multimodal movement and safety at intersections with traffic signals. In partnership with Portland State University, regional partners share data that can then be accessed by academic researchers, planners, consultants and the public. In partnership with Oregon DOT and the private sector, the region's operators also use crowdsourced data. Crowdsourced data helps evaluate reliability and also can inform current travel conditions and report crashes. Not all of this can fit into one map.

Another map will be created in a parallel effort with the 2023 RTP update. TSMO stakeholders will define system completeness as part of the Regional Mobility Policy. Stakeholders will map key corridors, referring to existing conditions and gaps that need to be addressed. This map will be used in Transportation System Plan updates and amendments.

Figure 3-39 Transportation system management and operations map

System Management



2023 REGIONAL TRANSPORTATION PLAN

Metro

2/28/2023

3.3.11 Transportation Demand Management Concept and Policies

What's changed?

Metro staff propose adding a new TDM policy section, separated out from the TSMO policy section, to provide clearer direction for how TDM helps achieve regional policy and which entities are responsible for delivering TDM programming. Several TDM-related policies from the TSMO policy section have been moved into this section with refinements.

This proposed new policy reflects the expanded role of Transportation Demand Management (TDM) in achieving multiple other regional policy outcomes. TDM is referenced as a means of achieving goals in transportation equity, regional mobility, managing roadway capacity, reducing greenhouse gas emissions, improving safety and implementing pricing strategies. This policy section brings clarity to how TDM programs should be delivered to help meet these goals, broadly defining the various approaches and partnerships required to implement a comprehensive TDM effort throughout the region.

Since the March 2023 draft: Revised policies to replace "ensure" and made minor clarifying revisions.

The Regional Travel Options (RTO) program is led by Metro and supports TDM work in the region primarily through awarding grants to partners leading outreach and engagement programs. This methodology has led to successful program implementation in the places and instances where it has been used. But there remain significant gaps in where TDM is used in the region and limits on expanding TDM efforts.

The RTO Strategy has established a goal of expanding the number of partners and programs to support the region's goals, but clearer policy direction is needed to better define how TDM is to be implemented in the region and move TDM efforts beyond their current levels.

3.3.11.1 Transportation demand management concept

Transportation Demand Management (TDM) is a series of activities aimed at ensuring people are aware of, understand and have access to the full variety of travel options available within the region. Though the region has already done much and continues to work to improve and expand travel options through capital investments in non-auto modes, the potential exists to increase the public's use of these non-SOV modes through TDM investments.

TDM complements and enhances other RTP policy areas by helping ensure our transportation system is used in a balanced way to maximize our investments. TDM provides information, encouragement, and incentives to help people make more of their trips safely and comfortably without driving alone. TDM programs are developed and staffed by professionals trained in understanding the travel needs of various groups, such as commuters or school children, and creating methods of helping them make those trips without the need for an SOV trip.

A typical TDM program involves working with a defined group of people that have similar travel needs or live in a specific place. Trained staff discuss the transportation needs and interests of the group and provide information and incentives to encourage people to try a new travel mode. This work can take many forms, from participation in GetThereOregon.org, a statewide website provided by ODOT and dedicated to facilitating travel options use, to a localized outreach effort specific to a single housing development.

Active involvement in delivering TDM programming is needed at the state, regional and local levels. Certain programs are most effective when developed and led by local governments, school districts, Transportation Management Associations (TMA), employers or community organizations. Others are better suited to be conducted on a state or regional scale.

TDM is particularly effective when paired with other policies or capital investments. Building new or improved active transportation infrastructure provides an opportunity for TDM efforts to help people be aware of and use the new travel options available to them. Complementary TDM activities should be planned and budgeted for in capital system improvement projects to ensure people are aware of the new travel options available to them, and to help them create new travel patterns and habits.

As the region considers roadway pricing and parking management as strategies for reducing auto trips, TDM is an important component in ensuring that people's mobility is maintained when these strategies are implemented. Making people aware of the existent options to paying a toll or fee can reduce the public's financial burden and help improve reliability and efficiency of the transportation network.

A significant portion of the region's current TDM activities are coordinated through the Regional Travel Options (RTO) program. This program, led by Metro on behalf of the entire region, currently coordinates partner activities and provides grant funds for TDM activities throughout the region. Through the RTO Strategy, the region's TDM vision, goals, objectives, and needs are defined. Roles for regional partners are defined, as is the grant funding methodology and criteria.

3.3.11.2 Transportation demand management policies

Policy 1	**Develop and refine regional and local TDM policies and implementation ~~and action~~ plans to help reach climate, mobility and modal targets.**
Policy 2	**~~Ensure~~ Provide adequate TDM resources and programming ~~are deployed~~ to meet the public's specific mobility needs for employment, education and essential services.**
Policy 3	**Provide and deliver TDM programming at a variety of scales: state, regional and local.**

Policy 4	**~~Focus TDM efforts on improving~~ Improve access to travel choices and eliminating barriers for marginalized communities, with a focus on communities of color and people with low incomes.**

TDM Policy 1. Develop and refine regional and local TDM policies and implementation ~~and action~~ plans to help reach climate, mobility and modal targets.

TDM is a component of numerous federal, state and regional plans, including:

- Climate Friendly and Equitable Communities Rules
- ODOT Transportation Options Plan
- DEQ Employee Commute Options Rule
- Metro Climate Smart Strategies
- Metro Regional Travel Options Strategy
- Metro Transportation System Management & Operations Strategy
- Congestion Management Process

These plans identify implementation of TDM programs as a part of the actions required for objectives to be met. Sufficient policy development and planning must be in place so that the roles and responsibilities of various entities are established and understood. Current local planning is insufficient in defining how TDM is to be implemented at a local level. And regional TDM planning is focused primarily on delivering grant funding through the RTO program.

Planning for TDM programs should be expanded and coordinated at the state, regional and local levels to ensure programs exist and are effective at helping people drive less. For some TDM programs, implementation at a regional scale is the most cost effective and efficient means of delivery. Other TDM programming functions best at a local, county or school district scale. A comprehensive regional TDM effort involves multiple levels of effort coordinated between government and non-government partners.

TDM Policy 2. Ensure adequate TDM resources and programming are deployed to meet the public's specific mobility needs for employment, education and essential services.

TDM programs are most effective when they are tailored to the specific travel needs of a group or community. The region has moved from a broad-based, one-size-fits all approach to TDM messaging and outreach, to implementing specific approaches for different travel needs. For example, helping commuters find other ways to get to work often involves working with employers to establish programs of information and incentives at worksites. But for Safe Routes to School programs, an entirely different approach is needed in working with parents and children to help them see the fun and benefits of being able to safely walk, bike or roll to school. The region should provide adequate funding, coordination and resources to effectively implement TDM.

Often, TDM efforts are compromised by a lack of first/last mile connections to transit, or by a lack of 24-hour transit service and vanpools. Many commuters live outside the region and have no option other than driving to work. Improvements to the regional transit system, as outlined in the transit policy section, are needed to improve TDM program effectiveness.

Regional funding for a portion of the region's TDM actions is provided through the RTO program. In its current form, the RTO program funds grants to partners conducting TDM activities. A portion of grant funds are reserved for partners with defined TDM plans and programs to ensure on-going funding is available. Other grant funds are aimed at pilot or one-time TDM projects, or to develop partner capacity to plan for and deliver TDM programs on an on-going basis.

ODOT also provides funding to the RTO program to promote and expand use of the GetThereOregon.org website.

Current funding levels are not sufficient to support an expanded TDM effort throughout the region. Additional state, regional and local funding will be needed to support these efforts.

TDM Policy 3. Provide and deliver TDM programming at a variety of scales: state, regional and local.

A thorough regional TDM effort entails a variety of programs, at different scales and targeted towards a spectrum of travel needs. Delivery of these programs is most effective when it is led by the appropriate organization or government, depending on the program and its purpose.

Creation of TDM policy and ordinances through local TSPs is a successful approach to defining how TDM programs can be tailored to fit local needs and infrastructure and be coordinated with regional-scale efforts.

Providing a robust variety of successful TDM programs around the region comes from harnessing the efforts and expertise of cities, counties, regional and state agencies, as well as non-governmental organizations (NGO).

Government partners have oversight authority and responsibilities for managing parking and roadway pricing. Their role in these initiatives put them in a position to also lead complementary TDM efforts to help the public understand the travel alternatives available and ensure pricing strategies are implemented to their fullest potential.

Non-governmental organizations (NGOs) have insights and relationships with communities that, when combined with the capabilities and responsibilities of governments, can lead to more effective and impactful TDM programming.

TDM Policy 4. ~~Focus TDM efforts on improving~~Improve access to travel choices and eliminating barriers for marginalized communities, with a focus on communities of color and people with low incomes.

The negative impacts of auto-centric transportation investments in the region have fallen particularly hard on BIPOC community members. TDM investments made through a racial equity

focus begin to correct these impacts and improve multiple regional priorities by addressing known burdens on BIPOC community members in accessing travel options, which includes cost, personal safety from harassment/bias, and physical access to travel options. TDM efforts should focus on working with partners to learn together how to adapt and develop programming that is inclusive of and meets the needs of BIPOC community members.

Implementing meaningful TDM programming in many areas of the region is constrained by the lack of sidewalks, safe bicycling infrastructure or low levels of transit service. These same areas are often those with high percentages of BIPOC and low-income residents. Continued focus and prioritization of improvements in these areas is a key part of ensuring that TDM programs can benefit everyone in the region.

3.3.12 Emerging Technology Policies

What's changed?

No changes are proposed to this policy. The policy section was moved out of Section 3.2 as the policy area fits in with the TSMO and TDM policy sections.

Over the past several decades, new developments in technology have begun to reshape the way that people travel. Over three-quarters of adults now own a smartphone, often including apps that provide instant access to information on travel choices. Some new services combine smartphones with social networking, online payment, and global positioning systems to connect people with vehicles and rides. Most auto manufacturers now offer hybrid or electric vehicles, and the cost of these vehicles has been falling, giving more people access to clean transportation options. Other automakers have been working to develop vehicles that drive themselves, which could dramatically transform our relationship with cars.

The Regional Transportation Plan (RTP) uses the blanket term **emerging technology** to encompass all new developments and establishes a set of terms to describe and categorize them, including:

- Advances in vehicle technology, such as automated vehicles (AVs) that operate independently of any input from a human driver, connected vehicles (CVs) that communicate with each other or with traffic signals and other infrastructure, and electric vehicles (EVs) that use electric motors instead of or in addition to gasoline-powered motors.
- New mobility services that use smartphones and other new technologies to connect people with vehicles and rides. These services include ride hailing companies that connect passengers with drivers who provide rides in their personal vehicles; car, scooter, or bike share that allow people to rent a nearby vehicle for short trips; and microtransit services that operate vans or small buses, often tailoring schedules and routes to customers' travel needs. Traveler information and payment services that help people plan trips and compare different ways of getting around, get detailed information on their mode of choice, track and share their trips, and pay for trips.

3.3.12.1 Emerging technology principles

Unlike other aspects of the transportation system, which are largely built and operated by the public sector, many emerging technology services are currently developed and operated by private companies. Transportation agencies can work with private companies in a variety of different ways – including contracting directly with companies and creating regulations that govern how companies operate – to bring emerging technology services to their communities in a way that benefits people. This work often happens more in the realm of partnerships and pilot projects than in the realm of policy and regulation. The principles summarized in Table 3-12, guide Metro and its partners in identifying companies that share common goals when developing partnerships and pilot projects.

Table 3-12 RTP goals and corresponding emerging technology principles

RTP goal	Emerging technology principle
Economy	Emerging technology should create more efficient ways to meet the transportation needs of local businesses and workers. Emerging technology companies and users should contribute their fair share of the cost of operating, maintaining and building the transportation system.
Climate	Emerging technology should improve transit service or provide shared travel options and support transit, bicycling and walking.
Mobility	Emerging technology should promote shared trips, decrease vehicle miles traveled and minimize conflicts between modes.
Safety	Emerging technology should reduce the risk of crashes for everyone and protect users from data breaches and cyberattacks.
Equity	New mobility services should be accessible, affordable and available for all and meet the transportation needs of communities of color and marginalized communities. Companies and public agencies should collaborate and share data to help make the transportation system better for everyone.

3.3.12.2 Emerging technology policies

Policy 1	**Make emerging technology accessible, available and affordable to all, and use technology to create more equitable communities.**
Policy 2	**Use emerging technology to improve transit service, provide shared travel options throughout the region and support transit, bicycling and walking.**
Policy 3	**Use the best available data to empower travelers to make travel choices and to plan and manage the transportation system.**
Policy 4	**Advance the public interest by anticipating, learning from and adapting to new developments in technology.**

Emerging Technology Policy 1. Make emerging technology accessible, available and affordable to all, and use technology to create more equitable communities.

Metro and its partners are responsible for ensuring that the transportation system serves all people, particularly those in the greatest need. New mobility services have the potential to bring more flexible transportation options to marginalized communities, but not everyone can access these services. Communities of color face the threat of discrimination from drivers or companies, some older adults and people who speak limited English are not able to use apps, many low-income people cannot afford costly data plans or lack access to bank accounts and people in wheelchairs often struggle to find accessible shared vehicles. Removing these barriers can help to bring better transportation choices to communities of color, night shift workers, people with disabilities, people living in areas that lack frequent transit service and others.

Emerging Technology Policy 2. Use emerging technology to improve transit service, provide shared travel options throughout the region and support transit, bicycling and walking.

Emerging technology has already given people in our region new ways to get around, whether by taking car, scooter, or bike share, hailing a ride, or simply making it easier for people to learn about and pay for public transportation. However, new mobility services are often concentrated in communities where it is already easy to take transit, walk or bike, which can create more congestion and pollution by attracting people away from more efficient modes and clogging streets with vehicles looking for passengers. To make the most of emerging technology's potential to reduce congestion and pollution, the region's transportation agencies need to prioritize and invest in the modes that move people most efficiently; improve convenience and safety for transit riders, pedestrians, and bicyclists; and direct new mobility services to provide options in places that currently lack them in addition to adding options to communities that are already rich in travel choices.

Emerging Technology Policy 3. Use the best data available to empower people to make travel choices and to plan and manage the transportation system.

In today's transportation system, data is almost as important as infrastructure. Smartphones enable people to instantly book a transit trip or find a new route when they run into traffic, and new mobility companies use real-time data to balance supply and demand. Metro and its agency

partners work to ensure that high-quality information is available for all transportation options in the region, and that this information is presented in a way that allows travelers to seamlessly plan and book trips. Transportation agencies also work to collect data on how travel patterns are changing to plan the transportation system. This requires collecting data from companies that operate emerging technologies in a way that helps agencies understand trip making without risking users' privacy, it also requires agencies to improve data on transit, bicycling and walking as well as on new mobility options and create systems that allow us to share this data among public agencies.

Emerging Technology Policy 4. Advance the public interest by anticipating, learning from and adapting to new developments in technology.

Our current planning process is designed around infrastructure projects designed to last for 50 years and an unchanging set of transportation services. It can take decades to plan and build a project, and once it is built there is little room for change. This time-intensive, risk-averse approach continues to make sense for major infrastructure projects, but to effectively plan for emerging technology agencies need to test new services and approaches and learn from their experience. Agencies in the region have used approaches like pilot testing and phased implementation of regulations so that they can test new approaches to working with technology in a small-scale, low-risk manner before applying what they learn to larger-scale efforts.

Attachment 2

2023 RTP Glossary of Terms

GLOSSARY OF TERMS

Accessibility – The ability ~~or ease~~ to reach desired goods, services, activities and destinations with relative ease, within a reasonable time, at a reasonable cost and with reasonable choices. Many factors affect accessibility (or physical access), including mobility, the quality, cost and affordability of transportation options, intersection design, land use patterns, connectivity of the transportation system and the degree of integration between modes. The accessibility of a particular location can be evaluated based on distances and travel options, and how well that location serves various modes. Locations that can be accessed by many people using a variety of modes of transportation generally have a high degree of accessibility. *See also Transit accessibility.*

Access Management – Enables access to land uses while maintaining roadway safety and mobility through controlling access location, design, spacing and operation.

Action – Discrete steps to make progress toward a desired outcome(s).

Active Living – Lifestyles characterized by incorporating physical activity into daily routines through activities such as walking or biking for transportation, exercise or pleasure. To achieve health benefits, the goal is to accumulate at least 30 minutes of activity each day.

Active transportation – Non-motorized forms of transportation including walking and biking, people using wheelchairs or mobility devices and skateboarding. Transit is considered part of active transportation because most transit trips start with a walking or bicycle trip.

Active transportation network – Combined network of streets, trails and districts identified on the *Regional Pedestrian and Bicycle Network Functional Classification Maps* and identified as pedestrian and bicycle parkways, regional bikeways, regional pedestrian corridors and regional pedestrian and bicycle districts, which include station communities. The active transportation network also includes frequent bus routes, all of which are designated as pedestrian parkways, and high ridership bus stops.

Active Transportation Plan – Adopted in 2018, the Regional Active Transportation Plan identifies a vision, policies and actions to complete a seamless green network of on- and off-street pathways and districts connecting the region and integrating walking, biking and public transit.

Adaptation – This term refers to adjustment in natural or human systems in anticipation of or response to a changing environment in a way that effectively uses beneficial opportunities or reduces negative effects.

Air toxics – Also known as toxic air pollutants or hazardous air pollutants, are those pollutants that cause or may cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental and ecological effects.

Air quality – Air quality refers to the degree to which the air is suitable or clean enough for humans or the environment. Good air quality means the air is free of harmful substances.

All Roads Transportation Safety (ARTS) – Formerly known as the Jurisdictionally Blind Safety Program, is an Oregon Department of Transportation Program that is designed to address safety needs on all public roads in Oregon. The program's goals are to:

- Increase awareness of safety on all roads;
- Promote best practices for infrastructure safety;
- Complement behavioral safety efforts;
- Focus limited resources to reduce fatal and serious injury crashes in the state of Oregon.

The program is data driven to achieve the greatest benefits in crash reduction and is blind to jurisdiction.

Amendment – A revision to a long-range statewide or metropolitan transportation plan, TIP, or STIP that involves a major change to a project included in a metropolitan transportation plan, TIP, or STIP, including the addition or deletion of a project or a major change in project cost, project/project phase initiation dates, or a major change in design concept or design scope (e.g., changing project termini or the number of through traffic lanes or changing the number of stations in the case of fixed guideway transit projects). Changes to projects that are included only for illustrative purposes do not require an amendment. An amendment is a revision that requires public review and comment and a redemonstration of fiscal constraint. If an amendment involves "non-exempt" projects in nonattainment and maintenance areas, a conformity determination is required.

Arterial – A classification of street. Arterial streets interconnect and support the throughway system. Arterials are intended to provide general mobility for travel within the region. Correctly sized arterials at appropriate intervals allow through trips to remain on the arterial system thereby discouraging use of local streets for cut–through travel. Arterial streets link major commercial, residential, industrial and institutional areas. Major arterials serve longer distance through trips and serve more of a regional traffic function. Minor arterials serve shorter, more localized travel within a community. As a result, major arterials usually carry more traffic than minor arterials. Arterial streets are usually spaced about one mile apart and are designed to accommodate bicycle, pedestrian, truck and transit travel.

Arterial traffic calming – Designed to manage traffic at higher speeds and volumes, but still minimize speeding and unsafe speeds. Treatments can include raised medians, raised intersections, gateway treatments, textured intersections, refuge islands, road diets, and roundabouts.

Asset management – A strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on both engineering and economic analysis based upon quality information, to identify a structured sequence of maintenance, preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a desired state of good repair over the lifecycle of the assets at minimum practicable cost.

Attainment area – Any geographic area in which levels of a given criteria air pollutant (e.g., ozone, carbon monoxide, PM_{10}, $PM_{2.5}$, and nitrogen dioxide) meet the health-based National Ambient Air Quality Standards (NAAQS) for that pollutant. An area may be an attainment area for one pollutant and a nonattainment area for others. A "maintenance area" (see definition in this section) is not considered an attainment area for transportation planning purposes. The greater Portland region received attainment status in 2017.

Autonomous vehicle (AV) – Also known as a driverless car, self-driving car, robotic car, AVs use sensors and advanced control systems to operate independently of any input from a human driver. Transportation experts have developed a five-level system to distinguish between different levels of automation;[i] in this plan we focus on Level 4 or 5 AVs, which can operate independently under most or all conditions.

Auxiliary lane – An auxiliary lane provides a direct connection from one interchange ramp to the next, and are not intended to be a general purpose travel lane. The lane separates slower traffic movements from the mainline, helping smooth the flow of traffic and reduce the potential for crashes., and is the portion of the roadway adjoining the planned through lanes for speed change, turning, weaving, truck climbing, maneuvering of entering and leaving traffic, and other purposes supplementary to through-traffic. By design, auxiliary lanes add additional motor vehicle capacity and even more capacity is added if auxilliary lanes extend through an interchange. An auxiliary lane is intended to separate slower traffic movements from the mainline, helping smooth the flow of traffic and reduce the potential for crashes.

Barrier – A condition or obstacle that prevents an individual or a group from accessing the transportation system or transportation planning process. Examples include a physical gap or impediment, lack of information, language, education and/or limited resources.

Best practices – For purposes of this document, the term "best practices" is used as a general term of preferred practices accepted and supported by experience of the applicable professional discipline. It is not prescriptive to a particular set of standards or a particular discipline.

Bicycle – A vehicle having two tandem wheels, a minimum of 14 inches in diameter, propelled solely by human power, upon which a person or persons may ride. A three–wheeled adult tricycle is considered a bicycle. In Oregon, a bicycle is legally defined as a vehicle. Bicyclists have the same right to the roadways and must obey the same traffic laws as the operators of other vehicles.

Bicycle boulevards – Sometimes called a bicycle priority street, a bicycle boulevard is a low-traffic street where all types of vehicles are allowed, but the street is modified as needed to enhance bicycle safety and convenience by providing direct routes that allow free-flow travel for bicyclists at intersections where possible. Traffic controls are used at major intersections to help bicyclists cross streets. Typically these modifications also calm traffic and improve pedestrian safety.

Bicycle comfort index (BCI) – A method to analyze the auto volumes, auto speeds and number of auto lanes on existing bikeways and within defined 'cycle zones' and assign a comfort rating to the bikeway. Generally off-street paths receive the highest rating because they are completely

separated from auto traffic. Results help identify existing bikeways on the regional bicycle network that could be upgraded to increase bicyclists comfort. Metro's BCI analysis was used in the existing conditions step of developing the ~~ATP~~Regional Active Transportation Plan. Additional data would be useful to refine the tool.

Bicycle district – An area with a concentration of transit, commercial, cultural, institutional and/or recreational destinations where bicycle travel is attractive, comfortable and safe. Bicycle districts are areas where high levels of bicycle use exist or a planned. Within a bicycle district, some routes may be designated as bicycle parkways or regional bikeways, however all routes within the bicycle district are considered regional. A new concept for the *Regional Transportation Plan* and added to the regional bicycle network through the Regional Active Transportation Plan~~ATP~~. The Central City, Regional and Town Centers and Station Communities are identified as bicycle districts.

Bicycle facilities – A general term denoting improvements and provisions made to accommodate or encourage bicycling, including parking facilities, all bikeways and shared roadways not specifically designated for bicycle use.

Bicycle parkway – A bicycle route designed to serve as a bicycle highway providing for direct and efficient travel for large volumes of cyclists with minimal delays in different urban and suburban environments and to destinations outside the region. These bikeways connect 2040 activity centers, downtowns, institutions and greenspaces within the urban area. The specific design of a bike parkway will vary depending on the land use context within which it passes through. These bikeways could be designed as an off-street trail along a stream or rail corridor, a cycletrack along a main street or town center, or a bicycle boulevard through a residential neighborhood.

Bicycle routes – Link bicycle facilities together into a clear, easy to follow route using wayfinding such as signs and pavement markings, connecting major destinations such as town centers, neighborhoods and regional destinations.

Bike lane – A portion of a roadway that has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists.

Bike share – Systems like Biketown in Portland make fleets of bicycles available for short-term rental within a defined service area. Some bike share systems now offer electric bikes. Conventional bike share systems like Biketown in Portland are operated through exclusive agreements between a private company and a public agency, and in most cases users must pick up and leave bikes at designated stations, through Biketown and other modern systems also offer users the option of locking a bike anywhere within the service area. Fully dockless systems operated by companies such as Ofo, Lime bike and Spin allow users to pick up and leave bikes (or electric scooters, which many companies now offer) within a defined service area and require less coordination between the public and private sector.

Bike-transit facilities – Infrastructure that provide connections between the two modes, by creating a "bicycle park-and-ride," a large-scale bike parking facility at a transit station.

Bikeable – A place where people live within biking distance to most places they want to visit, whether it is school, work, a grocery store, a park, church, etc. and where it is easy and comfortable to bike.

Bikeway – Any road, street, path or right-of-way that is specifically designated in some manner as being open to bicycle travel, either for the exclusive use of bicycles or shared use with other vehicles or pedestrians, including separated bike paths, striped bike lanes or wide outside lanes that accommodate bicycles and motor vehicles.

Bipartisan Infrastructure Law – The Infrastructure Investment and Jobs Act (IIJA) (Public Law 117-58, also known as the "Bipartisan Infrastructure Law") is the Federal transportation bill signed into law November 15, 2021 by President Biden. The Bipartisan Infrastructure Law is the largest long-term investment in infrastructure and economy in the history of the United States.

Capacity – A transportation facility's ability to accommodate a moving stream of people or vehicles in a given place during a given time period. Increased capacity can come from building more streets or throughways, adding more transit service, timing traffic signals, adding turn lanes at intersections or many other sources. Consistent with OAR 660-012-0830, motor vehicle capacity is defined as: A) A new or extended arterial street, highway, freeway, or bridge carrying general purpose vehicle traffic; (B) New or expanded interchanges; (C) An increase in the number of general purpose travel lanes for any existing arterial or collector street, highway, or freeway; and (D) New or extended auxiliary lanes with a total length of one-half mile or more. See definition of ~~A~~auxiliary lane ~~means the portion of the roadway adjoining the traveled way for speed change, turning, weaving, truck climbing, maneuvering of entering and leaving traffic, and other purposes supplementary to through-traffic movement~~.

Capacity expansion – Constructed or operational improvements to the regional motor vehicle network that increase the vehicular capacity of the system, typically adding a general-purpose through lane or auxi~~al~~~~l~~iary lane. Section 3.3.4 of Chapter 3 of the RTP calls for analyzing and implementing system and demand management strategies and/or a combination of other strategies (e.g. pedestrian, bicycle, transit strategies) prior to building new motor vehicle capacity, consistent with the Federal Congestion Management Process (CMP) and the Oregon Transportation Plan policies (including Oregon Highway Plan Policy 1G). Sections 3.08.220 and 3.08.510 of the Regional Transportation Functional Plan (RTFP) further direct how cities and counties implement the CMP in the local transportation system planning process.

Capital project – A capital project is a project to construct either new facilities or make significant, long-term renewal improvements to existing facilities.

Car share – Services allow people to rent a nearby vehicle for short trips and pay only for the time that they use. Different car share service types include:

- Stationary car share (ZipCar, in some cases ReachNow), under which cars are kept at fixed stations and users pick up cars from and return them to the same station.

- Free-floating car share (Car2Go, ReachNow), which allows people to pick up and drop off cars anywhere within a defined service area.
- Peer-to-peer car share (Getaround, Turo), which enables people to rent cars from their neighbors on a short-term basis.

Central city (2040 Design Type) – Downtown Portland and adjacent areas (like Lloyd District) within the city of Portland.

Climate change – Any significant change in the measures of climate lasting for an extended period of time. Climate change includes major variations in temperature, precipitation or wind patterns, among other environmental conditions, that occur over several decades or longer. Changes in climate may manifest as a rise in sea level, as well as increase the frequency and magnitude of extreme weather events now and in the future.

Collector street – A class of street. Collector streets provide both access and circulation between residential, commercial, industrial and agricultural community areas and the arterial system. As such, collectors tend to carry fewer motor vehicles than arterial streets, with reduced travel speeds. Collector streets are usually spaced at half–mile intervals, midway between arterial streets. Collectors may serve as bike, pedestrian and freight access routes providing local connections to the arterial street network and transit system.

Community places – ~~Key local d~~Destinations and gathering places such as ~~as schools, libraries, grocery stores, pharmacies, hospitals and other medical facilities, general stores, and other places which provide key services and/ or daily needs.~~ hospitals and other medical services, civic places, such as post offices, churches, social services, libraries, schools and colleges, financial institutions, such as banks and credit unions, grocery stores, and retail services, such as hardware stores, pharmacies and laundry services

Commute – Regular travel between home and a fixed location (e.g., work, school).

Commuter rail – Short–haul rail passenger service operated within and between metropolitan areas and neighboring communities. This transit service operates in a separate right–of–way on standard railroad tracks, usually shared with freight use. The service is typically focused on peak commute periods but can be offered other times of the day and on weekends when demand exists and where rail capacity is available. The stations are typically located one or more miles apart, depending on the overall route length. Stations offer infrastructure for passengers, bus and LRT transfer opportunities and parking as supported by adjacent land uses. See also Inter–city rail.

Complete streets – A transportation policy and design approach where streets are designed, operated and maintained to enable safe, convenient and comfortable travel and access for users of all ages and abilities, regardless of their mode of transportation.

Complete streets project checklist – With the realization that street design affects so much more than traffic flow, leading Complete Streets programs have been successful in part because they endeavored to break down silos between city departments. In addition to regular meetings

between departments, some cities have instituted a Project Checklist that is circulated for a sign-off from each interested department when street designs are in process. The best known example comes from the City of Seattle. Some Metropolitan Planning Organizations also use project checklists to ensure funding for street improvements adhere to Complete Street goals. Examples include the Bay Area's Metropolitan Transportation Commission, and the Mid-Ohio Regional Planning Commission.

Congestion – A condition characterized by unstable traffic flows that prevents movement on a transportation facility at optimal legal speeds. Recurrent congestion is caused by constant excess volume compared with capacity. Nonrecurring congestion is caused by incidents such as bad weather, special events and/or traffic accidents.

Congestion management – The application of strategies to improve transportation system performance and reliability by reducing the adverse impacts of congestion on the movement of people and goods. *See Appendix L for more information.*

Congestion management process – A systematic and regionally-accepted approach for managing congestion that provides accurate, up-to-date information on transportation system performance and assesses alternative strategies for congestion management that meet state, regional and local needs. This systematic approach is required in transportation management areas (TMAs) to provide for effective management and operation, based on a cooperatively developed and implemented metropolitan-wide strategy, of new and existing transportation facilities eligible for funding under title 23 U.S.C., and title 49 U.S.C., through the use of travel demand reduction and operational management strategies. *See Appendix L for more information.*

Congestion Mitigation and Air Quality Improvement (CMAQ) Program – A federal source of funding for projects and activities that reduce congestion and improve air quality, both in regions not yet attaining federal air quality standards and those engaged in efforts to preserve their attainment status.

Connected vehicles (CVs) – Vehicles that communicate with each other, wireless devices or with infrastructure like traffic signals and incident management systems. It seems increasingly likely that vehicles in the near future will be automated and may include some connected elements, we typically use "automated vehicles" to refer to vehicles that include a mix of automated and connected elements, and only use "connected vehicles" to distinguish connected from automated vehicles.

Connected vehicle (CV) infrastructure – This refers to the communications, wireless devices and other infrastructure, such as traffic signals and roadside sensors, that offer the ability of vehcles to send and receive message to other vehicles, wireless devices and comunication devices to communicate information in order to help them navigate the transportation system safely and efficiently.

Connectivity – The degree to which the local and regional street, pedestrian, bicycle, transit and freight systems in a given area are interconnected.

Consideration – One or more parties takes into account the opinions, action, and relevant information from other parties in making a decision or determining a course of action.

Constrained budget – The budget of federal, state and local funds the greater Portland region can reasonably expect through 2040 under current funding trends presuming some increased funding compared to current levels.

Constrained list – Projects that can be built by 2040 within the constrained budget.

Consultation – One or more parties confer with other identified parties in accordance with an established process and, prior to taking action(s), considers the views of the other parties and periodically informs them about action(s) taken. This definition does not apply to the "consultation" performed by the States and the Metropolitan Planning Organizations (MPOs) in comparing the long-range statewide transportation plan and the metropolitan transportation plan, respectively, to State and tribal conservation plans or maps or inventories of natural or historic resources (see section 450.216(j) and sections 450.324(g)(1) and (g)(2)).

Context sensitive design – A model for transportation project development that requires proposed transportation projects to be planned not only for its physical aspects as a facility serving specific transportation objectives, but also for its effects on the aesthetic, social, economic and environmental values, needs, constraints and opportunities in a larger community setting.

Cooperation – The parties involved in carrying out the transportation planning and programming processes work together to achieve a common goal or objective.

Coordinated public transit-human services transportation plan – A locally developed, coordinated transportation plan that identifies the transportation needs of individuals with disabilities, older adults, and people with low incomes, provides strategies for meeting those local needs, and prioritizes transportation services for funding and implementation. Trimet leads developmentof this plan for the reigon.

Coordination – The cooperative development of plans, programs, and schedules among agencies and entities with legal standing and adjustment of such plans, programs, and schedules to achieve general consistency, as appropriate.

Corridor – A broad geographical band that follows a general directional flow connecting major sources of trips that may contain a number of streets, highways, freight, active transportation and transit route alignments.

Corridors (2040 design type) – A type of land use that is typically located along regional transit routes and arterial streets, providing a place for somewhat higher densities than is found in 2040 centers. These land uses should feature a high–quality pedestrian environment and convenient access to transit. Typical new developments would include row houses, duplexes and one to three–story office and retail buildings, and average about 25 persons per acre. While some corridors may be continuous, narrow bands of higher–intensity development along arterial streets, others may be more nodal, that is a series of smaller centers at major intersections or other locations along the arterial that have high quality pedestrian environments, good connection to adjacent neighborhoods and transit service.

Countermeasure – An activity, initiative or design element to prevent, neutralize, or correct a specific safety problem.

Cordon pricing - Motorists are charged to enter a congested area, usually a city center or other high activity area well served with non-driving transportation options. Cordon pricing is most often implemented as flat or variable rate fees.

Crash – A violent collision, typically of one vehicle with another (vehicles include bicyclists, motorcyclists, freight trucks, school buses, transit buses, etc.), a pedestrian, or with a stationary objects such as a pole or guard rail.

Criteria pollutants – Carbon monoxide, lead, ground-level ozone, nitrogen oxides, particulate matter, and sulfur dioxides. Criteria pollutants are the only air pollutants with national air quality standards that define allowable concentrations of these substances in ambient air.

Cycletrack – Bicycle lanes that are physically separated from motor vehicle and pedestrian travel. A cycle track is an exclusive bike facility that has elements of a separated path and on-road bike lane. A cycle track, while still within the roadway, is physically separated from motor traffic and is distinct from the sidewalk. Cycle tracks may be one-way or two-way, and may be at road level, at sidewalk level, or at an intermediate level. They all share in common some separation from motor traffic with bollards, car parking, barriers or boulevards.

Cyclist – Person riding a bicycle.

Data-driven safety analysis – Uses data to promote the integration of safety performance into all roadway investment decisions. Broader implementing of quantitative safety analysis so that it becomes an integral part of safety management and project development decision making in order to lead to better targeted roadway investments that result in fewer fatal and serious injury crashes. Decisions are compelled by data, rather than by intuition or by personal experience.

Deficiency – A performance, design or operational constraint that limits, but does not prohibit the ability to travel by a given mode. Examples include locations where throughway capacity is less than six through lanes ~~and arterial street capacity less than 4 lanes~~ or that do not meet the travel speed thresholds defined in Table 3~~.6~~-5 (~~Interim Regional Mobility Policy~~Mobility performance targets and thresholds), or that have poor or substandard design features; at–grade rail crossings; height restrictions; bike and pedestrian connections that contain obstacles (e.g., missing curb

ramps, distances greater than 330 feet between pedestrian crossings, absence of pedestrian refuges, sidewalks occluded by utility infrastructure, high traffic volumes and complex traffic environments); transit overcrowding, inadequate frequency, or schedule unreliability; and high crash locations). A deficiency is a transportation need. See also gap.

Delay – The additional travel time required by all travelers, as measured by the time needed to reach destinations at posted speed limits (free–flow speed) versus traveling at a slower congested speed. Delay can be expressed in several different ways, including total delay in vehicle–hours, total delay per vehicle miles traveled (VMT) and share of delay by time period, day of week or speed range.

Design type – The conceptual areas depicted on the Metro 2040 Growth Concept Map and described in the Regional Framework Plan, including Central City, Regional Center, Town Center, Station Community, Corridor, Main Street, Inner Neighborhood, Outer Neighborhood, Regionally Significant Industrial Area, Industrial Area and Employment Area.

Diversion - Diversion is the movement of automobile trips from one facility to another because of pricing implementation. All trips that change their route in response to pricing are considered diversion, regardless of length or location of the trip, or whether they divert to or from the priced facility.

Dynamic rate fee - Fee rates are continually adjusted according to traffic conditions to better achieve a free-flowing level of traffic. Under this system, fee rates increase when the priced facilities get relatively full and decrease when the priced facilities get less full. This system is more complex and less predictable than using a flat or variable rate fee structure, but its flexibility helps to better achieve the optimal traffic flow by reflecting changes in travel demand. MDynamic fee systems may sometimes include a pre-set maximum price. The current price is often displayed on electronic signs prior to the beginning of the priced facility.

Electric vehicles (EVs) – Vehicles that use electric motors for propulsion instead of or in addition to gasoline motors.

Emergency – Any human-made or natural event or circumstance causing orthreatening loss of life, injury to person or property, and includes, but is not limited to, fire, explosion, flood, severe weather, drought earthquake, volcanicactivity, spills or releases of oil or hazardous material, contamination, utility or transportation disruptions, and disease.

Emergency medical services (EMS) – The treatment and transport of people in crisis health situations that may be life threatening. Emergency medical support is applied in a wide variety of situations, including traffic crashes.

Emergency transportation routes – Priority routes used during and after a major regional emergency or disaster to move people and response resources, including including the transport of first responders (e.g., police, fire and emergency medical services), fuel, essential supplies and patients.

Emerging technologies – A blanket term that we use throughout this plan to refer to new developments in transportation technology. We use it to refer both to technologies like automated vehicles or smart phones and services that operate using these technologies, like car and bike share.

Employer-based commute programs – Work-based travel demand management programs that can include transportation coordinators, employer-subsidized transit pass programs, ride-matching, carpool and vanpool programs, telecommuting, compressed or flexible work weeks and bicycle parking and showers for bicycle commuters.

Employment areas – Areas of mixed employment that include various types of manufacturing, distribution and warehousing uses, and may include commercial and retail development. Retail uses should primarily serve the needs of the people working or living in the immediate employment area. Exceptions to this general policy can be made only for certain areas indicated in a functional plan.

Employment lands – Areas of mixed employment that include various types of manufacturing, distribution and warehousing uses, and may include commercial and retail development.

Enhanced transit concept (Better bus) – Enhanced transit is a set of street design, signal, and other improvements that improve transit capacity, reliability and travel time along major Frequent Service bus lines. Enhanced Transit actions can include changes to the design and operation of streets and signals, typically owned and operated by the City. It can also include changes to transit vehicle fleet, station equipment and operation systems typically owned and operated by TriMet.

Enhanced transit projects come in a variety of shapes and sizes; for example, the improvements might address bottlenecks, or a portion of a transit line experiencing delay, or in some cases, improvements to a full transit line. Treatments can be applied systematically across a transit network to improve multiple lines or through a corridor approach to improve one or more transit lines. Enhanced Transit is intended to be flexible and context-sensitive during design and implementation. Enhanced Transit encompasses a range investments comprised of capital and operational treatments of moderate cost. It can be deployed relatively quickly in comparison to larger transit capital projects, such as building light rail.

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. (EPA definition)

Environmental justice populations – People living in poverty, people with low-income as determined annually by the U.S. Department of Health and Human Services Low-Income Index, people of color, elderly, children, people with disabilities, and other populations protected by Title VI and related nondiscrimination statutes.

Environmental mitigation activities – Strategies, policies, programs, and actions that, over time, will serve to avoid, minimize, rectify, reduce or eliminate impacts to environmental resources

associated with the implementation of a long-range statewide transportation plan or metropolitan transportation plan.

Equitable Development – An approach to creating healthy, vibrant, communities of opportunity by creating ~~smart~~coordinated, intentional strategies to ensure that everyone (residents of all incomes, races and ethnicities) can participate in, and benefit from, decisions that shape their neighborhoods and region. This approach involves investments, policies, and protections to prevent displacement of vulnerable residents, businesses, and community organizations.

Equity – Just and fair inclusion into a society in which all can participate, prosper, and reach their full potential. In transportation, a normative measure of fairness among transportation system users. *See also Racial ~~E~~equity ~~and~~ , Social ~~E~~equity, and Trasnportation equity*.

Equity focus areas – Census tracts with higher than regional average concentrations and double the density of one or more of the following: people of color, English language learners, and/or people with lower income. Most of these areas also include higher than regional average concentrations of other historically marginalized communities, including young people, older adults and people living with disabilities.

Excessive delay – The extra amount of time spent in congested conditions defined by speed thresholds that are lower than a normal delay threshold. For the purposes of MAP-21 target-setting, the speed threshold is 20 miles per hour (mph) or 60 percent of the posted speed limit, whichever is greater.

Extreme events – This term refers to risks posed by climate change and extreme weather events. The definition does not apply to other uses of the term nor include consideration of risks to the transportation system from other natural hazards, accidents, or other human induced disruptions.

Extreme weather events – Significant anomalies in temperature, precipitation and winds and can manifest as heavy precipitation and flooding, heatwaves, drought, wildfires and windstorms (including tornadoes). Consequences of extreme weather events can include safety concerns, damage, destruction and/or economic loss. Climate change can also cause or influence extreme weather events.

Facility – The fixed physical assets (structures) enabling a transportation mode to operate (including travel, as well as the loading and unloading of goods and passengers). This includes streets, throughways, bridges, sidewalks, bikeways, transit stations, bus stops, ports, air and marine terminals and rail lines and yards.

Federal Highway Administration (FHWA) – The U.S. Department of Transportation agency responsible for administering the federal highway aid program to individual states, and helping to plan, develop and coordinate construction of federally-funded highway projects. FHWA also governs the safety of hazardous cargo on the nation's highwaysThe FHWA implements transportation legislation approved at the congressional level that appropriates all federal funds to states,MPOs and local governments.

Federal Transit Administration (FTA) – U.S. Department of Transportation agency that provides financial and planning assistance to help plan, build and operate rail, bus and paratransit systems. The agency also assists in the development of local and regional traffic reduction programs.

Financial plan – Documentation required to be included with a metropolitan transportation plan and TIP (and optional for the long-range statewide transportation plan and STIP) that demonstrates the consistency between reasonably available and projected sources of Federal, State, local, and private revenues and the costs of implementing proposed transportation system improvements.

Financially constrained or fiscal constraint – This means that the metropolitan transportation plan, TIP, and STIP includes sufficient financial information for demonstrating that projects in the metropolitan transportation plan, TIP, and STIP can be implemented using committed, available, or reasonably available revenue sources, with reasonable assurance that the federally supported transportation system is being adequately operated and maintained.

Fiscal (or financial) constraint – A federal requirement that long-range transportation plans and four-year ~~multistage investments programs (aka~~**Metropolitan** Transportation Improvement Programs ~~–~~ (MTIP) include only projects that have a reasonable expectation of being funded, based upon anticipated revenues (for the long-range transportation plan) or secured revenues (for the four-year TIP). In other words, long-range transportation plans or TIP cannot be a wish lists of projects; they must reflect realistic assumptions about revenues that will likely be available or secured.

Fixing America's Surface Transportation Act (FAST Act) – A funding and authorization bill to govern United States federal surface transportation spending, signed by President Obama on December 4, 2015. The FAST Act established funding levels and federal policy for our nation's highways and public transit systems for fiscal years 2016-2020. The $305 billion, five-year bill maintained~~s~~ the core highway and transit funding programs established by its predecessor MAP-21, and establishes the National Highway Freight Program, a formula program focused on goods movement.

Flat rate fee (toll) - A flat rate fee, also known as a toll, charged by a toll facility operator in an amount set by the operator for the privilege of traveling on said toll facility. Tolling is a user fee system for specific infrastructure such a bridges and tunnels. Toll revenues are used for costs associated with the tolled infrastructures. This tool is used to raise funds for construction, operations, maintenance, and administration of specific infrastructure. Flat rate tolling can also serve as a method for congestion management, though it is not responsive to changing conditions or time of day. Additionally, flat rate tolling cannot be used for congestion pricing programs or projects authorized by the Value Pricing Pilot Program, Congestion Relief Program, or Section 166 on interstate highways under Federal law.

Forecast – Projection of population, employment or travel demand for a given future year.

Freeway – A design for a Throughway in which all access points are grade separated. Directional travel lanes usually separated by a physical barrier, and access and egress points are limited to on–and off–ramp locations or a very limited number of at–grade intersections.

Freight intermodal facility – An intercity facility where freight is transferred between two or more freight modes (e.g., truck to rail, rail to ship, truck to air).

Freight mobility – The efficient movement of goods from point of origin to destination.

~~**Freight intermodal facility** – An intercity facility where freight is transferred between two or more freight modes (e.g., truck to rail, rail to ship, truck to air).~~

Freight modes – Freight modes are the means by which freight achieves mobility. These modes fall into five basic types: road (by truck), rail, pipeline, marine (by ship or barge) and air.

Freight rail – A freight train that is a group of freight cars hauled by one or more locomotives on a railway, transporting cargo all or some of the way between the shipper and the intended destination.

Frequent bus – Frequent bus service offers local and regional bus service with stops approximately every 750 to 1000 feet, providing corridor service rather than nodal service along selected arterial streets. This service typically runs at least every 15 minutes throughout the day and on weekends though frequencies may increase based on demand, and it can include transit preferential treatments, such as reserved bus lanes and transit signal priority, and enhanced passenger infrastructure along the corridor and at major bus stops, such as covered bus shelters, curb extensions, special lighting and median stations.

Full Funding Grant Agreement (FFGA) – An instrument that defines the scope of a project, the Federal financial contribution, and other terms and conditions for funding New Starts projects

Functional classification – The class or group of roads to which the road belongs. There are three main functional classes as defined by the United States Federal Highway Administration: arterial, collector, and local. Throughways and freeways fall under arterial in the federal classification system.

Gap – A missing link or barrier in the "typical" urban transportation system for any mode that functionally prohibits travel where a connection might be expected to occur in accordance with the system concepts and networks in Chapter 3 of the RTP. A gap generally means a connection does not exist at all, but could also be the result of a physical barrier such as a throughway, natural feature, weight limitations on a bridge or existing development. Gaps are a transportation need. *See also deficiency.*

Goal – A broad statement that describes a desired outcome or end statetoward which actions are focused to make progress toward a long-term vision.

Greenhouse gas emissions – The six gases identified in the Kyoto Protocol and by the Oregon Greenhouse Gas Mandatory Reporting Advisory Committee as contributing to global climate

change: carbon dioxide (CO2), nitrous oxide (N2), methane (CH4), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). Greenhouse gases absorb solar radiation and act like a heat-trapping blanket in the atmosphere, causing climate change. More information is available at epa.gov/climatechange.

Green infrastructure – A network of multi-functional green spaces and environmental features, both natural and engineered, that use or replicate natural systems to better manage stormwater, protect streams and enhance wildlife corridors—trees, soils, water and habitats. Examples include: permeable paving, vegetated swales, rain gardens, green streets, green roofs, green walls, urban forestry, street trees, parks, green corridors such as trails, and other low impact development practices.

Green streets – An innovative stormwater management approach that captures rain where it falls by using vegetation, soil and engineered systems to slow, filter and clean stormwater runoff from impervious surfaces.

Greenways – Greenways generally follow rivers and streams and may or may not provide for public access. In some cases, greenways may be a swath of protected habitat along a stream with no public access. In other cases, greenways may allow for an enviro9nmentally compatible trail, viewpoint or canoe launch site. The greenways that are identified in Metro's regional trails plan do not presently offer public access. Usage of the term "greenway" can be ambiguous because it is sometimes used interchangeably with the word "trail." For example, "Fanno Creek Trail", "Fanno Creek Greenway", and "Fanno Creek Greenway Trail" are used with equal frequency for the same trail. Trail and greenway professional prefer to make the technical distinction that the "trail" refers to the tread or the actual walking service, while the "greenway" refers to the surrounding park or natural corridor. The term is also ambiguous because the City of Portland recently began referring to its bicycle boulevards as "neighborhood greenways." Neighborhood greenways differ from traditional greenways in that they general do not follow an open space corridor aside from local streets.

Health impact assessment – A combination of procedures, methods, and tools by which a policy, program or project may be evaluated as to its potential effects on the health of a population, and the distribution of these effects within the population.

High capacity transit – High capacity transit is public transit that can have exclusive right of way, non-exclusive right of way, or a combination of both. Vehicles make fewer stops, travel at higher speeds, have more frequent service and carry more people than local service transit such as typical bus lines. It includes:

- Light rail uses high capacity trains (68 seats with room and design for several passengers to stand) and focuses on regional mobility with stops typically one-half to 1 mile apart, connecting concentrated housing or local bus hubs and employment areas. The service has its own right of way. Cars can be doubled, and service frequency increased, during peak hours.
- Commuter rail uses high capacity heavy rail trains (74 seats in a single car, 154 in doubled cars), typically sharing right of way with freight or other train service (though out of roadway).

The service focuses on connecting major housing or local bus hubs and employment areas with few stops and higher speeds. The service may have limited or no non-peak service.

- Bus rapid transit uses coach-style or high capacity busses (40-60 seats with room and design for several passengers to stand). The service may be in the roadway with turnouts and signal priority for stops, have an exclusive right of way, or be some combination of the two. The service focuses on regional mobility, with higher speeds, fewer stops, higher frequency and more substantial stations than local bus, connecting concentrated housing or local bus hubs and employment areas. Service frequency can be increased during peak hours.
- Using the same technology as local streetcar, rapid streetcar focuses on regional mobility, offering fewer stops through less populated areas to connect housing areas to jobs or other destinations. Cars can be doubled, and service frequency increased, during peak hours. The service operates in mixed traffic, in exclusive right of way or a combination of the two.

High crash location – Highway or road segments identified by the frequency and severity of motor vehicle crashes. Identification of high crash locations is part of the safety problem identification process.

High injury corridors and intersections (RTP) – Roadways where the highest concentrations of fatal and severe injury crashes involving people in cars, biking and walking occur on the regional transportation system Corridors and intersections were analyzed to determine aggregate crash scores based on the frequency and severity of crashes, using the following methodology:

- Fatal and Injury A (serious) crashes for all modes are assigned to the network;
- "Injury B", "Injury C", and "PDO (property damage only)" crashes involving bikes and pedestrians are also assigned to the network;
- Fatal and Injury A crashes are given a weight of 10;
- Roadways are analyzed in mile segments; if a segment has only one Fatal or Injury A crash it must also have at least one B/C (minor injury) crash, for the same mode, to be included in the analysis.; and
- Roadway segments are assigned an N-score (or “crash score”) by calculating the weighted sum by mode and normalizing it by the roadway length.

To reach 60 percent of Fatal and Severe Injury crashes, roadway segments had to have an N-score of 39 or higher; high injury Bicycle Corridors had to have an N-score of 6 or more, and high injury Pedestrian Corridors had to have an N-score of 15 or more. Intersections with the highest weighted crash scores were also identified; 5 percent of intersections had an N-score (or “crash score”) higher than 80 and are also shown on the map, and 1 percent of intersections (the top 1 percent) had to have an N-score higher than 128.

High risk roadways – Characteristics if high risk roads are identified by looking at crash history on an aggregate basis to identify particular severe crash types (e.g. pedestrian) and then use the

roadway characteristics associated with particular crash types (e.g. arterial roadways with four-or more lanes, posted speed over 35 mph, unlit streets) to understand which roadways may have a higher risk of the same type of severe crash.

High–occupancy vehicle (HOV) – A vehicle carrying more than two passengers with the exception of motorcycles.

High-occupancy vehicle lane – The technical term for a carpool lane. *See also high-occupancy vehicle.*

Highway – A design for a Throughway in which access points are a mix of separate and at–grade.

~~**Historically m**~~**arginalized communities** – Communities of people that have been historically excluded from critical aspects of social participation including, voting, education, housing and more. Historical marginalization is often a result of systematic exclusion based on devaluation of any individual existing outside of the dominant culture. For purposes of the RTP, this includes people of color, people with limited English proficiency, people with lower-incomes, youth, older adults and people living with a disability.

Incident management – The detection and verification of incidents (crashes, stalled vehicles, etc. blocking traffic) and the implementation of appropriate actions to clear the highway.

Individualized marketing – Travel demand management programs focused on individual households. IM programs involve individualized outreach to households that identify household travel needs and ways to meet those needs with less vehicle travel.

Induced demand – The process whereby improvements in the transportation system intended to alleviate congestion and delay result in additional demand for the transportation segment, offsetting some of the improvement's potential benefits. For instance, when a congested roadway is expanded from 2 to 3 lanes, some drivers will recognize the increased capacity and take this roadway though they had not done so previously. *See also capacity.*

Industrial areas – Areas set aside for industrial activities. Supporting commercial and related uses may be allowed, provided they are intended to serve the primary industrial users. Residential development and retail users whose market area is larger than the industrial area are not considered supporting uses.

Intelligent transportation systems (ITS) – Electronics, photonics, communications, or information processing used singly or in combination to improve the efficiency or safety of the transportation system. ITS can include both vehicle-to-vehicle communication (which allows cars to communicate with one another to avoid crashes and vehicle-to-infrastructure communication (which allows cars to communicate with the roadway) to identify congestion, crashes or unsafe driving conditions, manage traffic flow, or provide alternate routes to travelers.

Intermodal connector – A road that provides connections between major rail yards, marine terminals, airports, and other freight intermodal facilities; and the freeway and highway system (the National Highway System).

Intermodal facilities – A transportation element that allows passenger and/or freight connections between modes of transportation. Examples include airports, rail stations, marine terminals, and rail–yards that facilitate the transfer of containers or trailers. See also passenger intermodal facility and freight intermodal facility definitions.

~~**Level-of-service (motor vehicle network)** – A traditional measure of congestion, calculated by by dividing the number of motor vehicles passing through a section of roadway during a specific increment of time by the motor vehicle capacity of the section. For example, a LOS of 1.00 indicates the roadway facility is operating at its capacity.~~

~~Traditionally, motor vehicle LOS has been used in transportation system planning, project development and design as well as in operational analyses and traffic analysis conducted during the development review process. As a system plan, the RTP uses the interim regional policy to diagnose the extent of motor vehicle congestion on throughways and arterials during different times of the day and to determine adequacy in meeting the region's needs. LOS is also used to determine consistency of the RTP with the Oregon Highway Plan for state-owned facilities. *See also volume-to-capacity ratio and regional mobility policy.*~~

Local bikeways – Trails, streets and connections not identified as regional bicycle routes, but are important to a fully functioning network. Local bikeways are the local collectors of bicycle travel. They are typically shorter routes with less bicycle demand and use. They provide for door-to-door bicycle travel.

Local jurisdiction – For the purpose of this plan, this term refers to a city or county within the Metro boundary.

Local pedestrian connectors – All streets and trails not included on the regional network. Local connectors experience lower volumes of pedestrian activity and are typically on residential and low-volume/speed roadways or smaller trails. Connectors, however, are an important element of the regional pedestrian network because they allow for door-to-door pedestrian travel.

Local streets or roads – Local streets primarily provide direct access to adjacent land. While Local streets are not intended to serve through traffic, the aggregate effect of local street design impacts the effectiveness of the arterial and collector system when local travel is restricted by a lack of connecting routes, and local trips are forced onto the arterial street network. In the urban area, local roadway system designs often discourage "through traffic movement." Regional regulations require local street connections spaced no more than 530 feet in new residential and mixed used areas, and cul–de–sacs are limited to 200 feet in length. These connectivity requirements ensure that a lack of adequate local street connections does not result in the arterial system becoming congested. While the focus for local streets has been on motor vehicle traffic, they are developed as multi–modal facilities that accommodate bicycles, pedestrians and sometimes transit.

Low-carbon travel options - Low-carbon travel options include walking, rolling, biking, transit, and electric vehicles.

Low emissions zone pricing - Similar to cordon pricing, drivers are charged when they enter a Low Emissions Zone, unless they have a vehicle that meets the requirements of the Low Emissions Zone, for example an electric vehicle that does not emit tailpipe emissions when only using electricity to run.

Lower income focus area – Census tracts with higher than regional average concentrations and double the density of people with lower income. Lower income is defined as households with incomes below 200 percent of the federal poverty level, adjusted for household size (i.e., with incomes up to twice the level of poverty), as defined by the U.S. Census ~~Bureau for 2016. The 2016 federal poverty level for a two person household was $16,020~~.

Main line rail – Class I rail lines (e.g., Union Pacific and Burlington Northern/Santa Fe).

Main roadway routes – Designated freights routes that are freeways and highways that connect major activity centers in the region to other areas in Oregon or other states throughout the U.S., Mexico and Canada.

Major transit stop – Existing and planned light rail stations and transit transfer stations, except for temporary facilities and other existing and planned transit stops which:

(A) Have or are planned for an above average frequency of scheduled, fixed-route service when compared to region wide service. In urban areas of 1,000,000 or more population major transit stops are generally located along routes that have or are planned for 20 minute service during the peak hour; and

(B) Are located in a transit oriented development or within 1/4 mile of an area planned and zoned for:

(i) Medium or high density residential development; or

(ii) Intensive commercial or institutional uses within 1/4 mile of subsection (i); or

(iii) Uses likely to generate a relatively high level of transit ridership.

Marginalized communities - Groups who have been denied access and/or suffered past institutional or structural discrimination in the United States, including people of color, people with low English proficiency, people with low income, youth, older adults and people living with disabilities.

Marine facilities – A facility where freight is transferred between water–based and land–based modes.

Meaningful involvement – This term means that the public should have opportunities to participate in decisions that could affect their environment and their health, their contributions should be taken into account by regulatory agencies, and decision-makers should seek and facilitate the engagement of those potentially affected by their decisions. (from EPA)

Measure – An expression based on a metric that is used to establish targets and to assess progress toward achieving the established targets.

Metric – A quantifiable indicator of performance or condition.

Metropolitan Greenspaces Master Plan (1992) – Details the vision, goals and organizational framework of a regional system of natural areas, trails and greenways for wildlife and people in the region, and set the foundation for subsequent bond measures and trail plans.

Metropolitan Planning Area Boundary (MPA) – The geographic area determined by agreement between the Metropolitan Planning Organization (MPO) and the Governor, in which the metropolitan transportation planning process is carried out by the MPO.

Metropolitan Planning Organization (MPO) – A federally-required policy body responsible for the transportation planning, project selection and scheduling the use of federal transportation funds in its region. Governed by policy board, MPOs are required in urbanized areas with populations more than 50,000 and are designated by the governor of the state. Oregon currently has eight MPOs covering the metropolitan areas of Portland, Salem-Keizer, Corvallis area, Eugene-Springfield, Rogue Valley (Medford-Ashland,) Bend area, Albany area, and Middle Rogue. JPACT and the Metro Council constitute the MPO for the Portland region. The MPO conducts federally mandated transportation planning work, including: a long-range Regional Transportation Plan (RTP), the Metropolitan Transportation Improvement Program (MTIP) for capital improvements identified for a four-year construction period, a Unified Planning Work Program (UPWP), a congestion management process (CMP), federal performance-based planning and target-setting and conformity to the state implementation plan for air quality for transportation related emissions.

Metropolitan Transportation Improvement Program (MTIP) – The MTIP includes all federally funded transportation projects in the Portland metropolitan planning area, including projects planned by TriMet, the Oregon Department of Transportation and local agencies receiving federal funds allocated by Metro. The MTIP is incorporated in the Statewide Transportation Improvement

Program (STIP), which identifies the state's four-year transportation capital improvements. See also transportation improvement program.

Metropolitan transportation plan – The official multimodal transportation plan addressing no less than a 20-year planning horizon that the MPO develops, adopts, and updates through the metropolitan transportation planning process. The Regional Transportation Plan is metropolitan transportation plan for the Portland region.**Microtransit** – Services such as Via, Chariot and Leap can differ from conventional transit service in several different ways:

- Dynamic routing: Some microtransit services operate on flexible routes to pick up and drop off riders nearer to their origins and destinations. Services may deviate from a fixed route to make pickups and dropoffs, crowdsource routes from data provided by riders or make stops anywhere within a defined service area.
- On-demand scheduling: Instead of operating on a fixed schedule, microtransit services may allow riders to request a ride when they need it.
- Smaller vehicles: Microtransit services often use vans or small buses instead of 40-passenger buses.
- Private operation: Many microtransit services are privately operated or operated through partnerships between public agencies and private companies.

We distinguish between microtransit that is coordinated with public transit, for example services that connect people to high-frequency transit or operate in areas that are hard to serve with conventional transit, and luxury microtransit that serve existing transit routes and offer more space or amenities than a public bus at a higher cost.

Mileage Based User Fee – See Road Usage Charge

Mitigation – Planning actions taken to avoid an impact altogether, minimize the degree or magnitude of the impact, reduce the impact over time, rectify the impact, or compensate for the impact. Mitigation includes:

(a) Avoiding the impact altogether by not taking a certain action or parts of an action.

(b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.

(c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.

(d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.

(e) Compensating for the impact by replacing or providing substitute resources or environments.

Mixed use – Comprehensive plan or implementing regulations that permit a mixture of commercial and residential development.

Mixed-use development – Areas of a mix of at least two of the following land uses and includes multiple tenants or ownerships: residential, retail and office. This definition excludes large, single-use land uses such as colleges, hospitals, and business campuses.

Mobility – People and businesses can safely, affordably, and efficiently reach the goods, services, places and opportunities they need to thrive by a variety of seamless and well-connected travel options and services that are welcoming, convenient, comfortable, and reliable.~~The ability to move people and goods to destinations efficiently and reliably.~~

Mobility corridor – Mobility corridors represent subareas of the region and include all regional transportation facilities within the subarea as well as the land uses served by the regional transportation system. This includes freeways and highways and parallel networks of arterial streets, regional bicycle parkways, high capacity transit, and frequent bus routes. The function of this network of integrated transportation corridors is metropolitan mobility – moving people and goods between different parts of the region and, in some corridors, connecting the region with the rest of the state and beyond. This framework emphasizes the integration of land use and transportation in determining regional system needs, functions, desired outcomes, performance measures, and investment strategies.

Modal targets – Performance targets for increased walking, biking, transit, shared ride and other non-drive alone trips as a percentage of all trips made in a defined area. The targets apply to trips to, from and within each 2040 Design Type. The targets reflect desired mode shares for each area for the year 2040 needed to comply with Oregon Transportation Planning Rule objectives to reduce reliance on single-occupant vehicles and per capita vehicle miles traveled.

Regional 2040 modal targets

2040 Design Type	Non-drive alone modal target
Portland central city	60-70%
Regional centers Town centers Main streets Station communities Corridors Passenger intermodal facilities	45-55%
Industrial areas Freight intermodal facilities Employment areas Neighborhoods	40-45%

Note: The targets apply to trips to, from and within each 2040 design type

Mode – A type of transportation distinguished by means used (e.g., such as walking, bike, bus, single– or high–occupancy vehicle, bus, train, truck, air, marine).

Mode choice – The ability to choose one or more modes of transportation.

Mode share – The proportion of total person trips using various modes of transportation.

Motorcycle – A motor vehicle with motive power having a seat or saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground. The NHTSA defines "motorcycle" to include mopeds, two or three-wheeled motorcycles, off-road motorcycles, scooters, mini bikes and pocket bikes.

Moving Ahead for Progress in the 21st Century Act (MAP-21) (P.L. 112-141) – Reauthorization of Federal highway funding, signed into law by President Obama on July 6, 2012. Subsequent adoption of the FAST Act does not replace MAP-21 in all areas regulation of transportation safety planning and funding, so both must be referenced.

Multimodal – Transportation facilities or programs designed to serve many or all methods of travel, including all forms of motor vehicles, public transportation, bicycles and walking.

Multimodal level of service – Multimodal level of service (MMLOS) is an analytical tool that measures and rates users' experiences of the transportation system according to their mode. It evaluates not only drivers' experiences, but incorporates the experiences of all other users, such as cyclists and pedestrians.

Must – When used in the context of actions and policies must means there is a legal obligation or requirement to take the action or enact the policy. Must is often used interchangeably with shall. *Also see should.*

National Highway System (NHS) – Title 23 of the U.S. Code section 103 states that the purpose of the NHS is to provide an interconnected system of principal routes that serve major population centers, international border crossings, ports, airports, public transportation facilities, intermodal transportation facilities, major travel destinations, meet national defense requirements, and serve interstate and inter–regional travel. Facilities included in the NHS are of regional significance.

National Performance Management Research Data Set (NPMRDS) – A data set derived from vehicle/passenger probe data (sourced from Global Positioning Station (GPS), navigation units, cell phones) that includes average travel times representative of all traffic on each mainline highway segment of the National Highway System (NHS), and additional travel times representative of freight trucks for those segments that are on the Interstate System. The data set includes records that contain average travel times for every 15 minutes of every day (24 hours) of the year recorded and calculated for every travel time segment where probe data are available. The NPMRDS does not include any imputed travel time data.

Needs – see Transportaton needs.

Network – Connected routes forming a cohesive system.

New mobility services – Transportation services like ride-hailing, microtransit and car and bike share, which operate using smart phones and other emerging technologies. Many of these services are privately operated by new mobility companies.

Non-motorized – Generally referring to bicycle, walking and other modes of transportation not involving a motor vehicle.

Non-SOV travel – Any travel mode other than driving alone in a motorized vehicle (i.e., single occupancy vehicle or SOV travel), including travel avoided by telecommuting.

Objective (in a plan) – A specific, measureable desired outcome and means for achieving a goal(s) to guide action within the plan period.

Off–peak hours – The hours outside of the highest motor vehicle traffic period, generally between 9 a.m. and 3 p.m. and between 6 p.m. and 7 a.m.

Older adults (vulnerable) – The Moving Ahead for Progress in the 21st Century (MAP-21) Act created a new Special Rule for older drivers and pedestrians under 23 USC 148(g)(2), which was continued under the Fixing America's Surface Transportation (FAST) Act. If the rate per capita of traffic fatalities and serious injuries for drivers and pedestrians over the age of 65 in a State increases over the most recent 2-year period, this Special Rule requires a State to include strategies to address the increases in those rates in their State Strategic Highway Safety Plan (SHSP). FHWA issued the Section 148: Older Drivers and Pedestrians Special Rule Final Guidance in May 2016.[1] TriMet's *Coordinated Transportation Plan for Seniors and Persons With Disabilities* (~~2016~~2020) identifies several principles and actions related to addressing safety and security concerns getting to and at transit stops and on transit. *See Appendix G.*

Operational and management strategies – Actions and strategies aimed at improving the performance of existing and planned transportation facilities to relieve congestion and maximize the safety and mobility of people and goods.

Oregon Transportation Commission (OTC) – The Oregon Transportation Commission is a five–member governor–appointed government agency that manages the state highways and other transportation in the state of Oregon, in conjunction with the Oregon Department of Transportation.

Oregon Transportation Plan (OTP) – The official statewide intermodal transportation plan that is developed through the statewide transportation planning process by ODOT and approved by the Oregon Transportation Commission.

Parking management – Strategies that encourage more efficient use of existing parking facilities, improve the quality of service provided to parking facility users, and improve parking facility design. Examples include developing an inventory of parking supply and usage, reduced parking requirements, shared and unbundled parking, parking-cash-out, priced parking, bicycle parking

[1] U.S. Department of Transportation, Federal Highway Administration Older Drivers and Pedestrians Special Rule. https://safety.fhwa.dot.gov/hsip/older/

and providing information on parking space availability. More information can be found at vtpi.org/park_man.pdf

Parking pricing - Drivers pay to park in certain areas. Parking pricing may include flat, variable, or dynamic fee structures. Dynamic pricing involves periodically adjusting parking fees to match demand, this can be paired with technology which helps drivers find spaces in underused and less costly areas.

Passenger car equivalent – Passenger Car Equivalent (PCE) is a metric used in Transportation Engineering, to assess traffic–flow rate on a highway. A PCE is essentially the impact that a mode of transport has on traffic variables compared to a single car.

Passenger intermodal facilities – Facilities that accommodate or serve as transfer points to interconnect various transportation modes for the movement of people. Examples include Portland International Airport, Union Station, Oregon City Amtrak station and inter–city bus stations.

Passenger rail – Inter–city passenger rail is part of the state transportation system and extends from the Willamette Valley north to British Columbia. Amtrak already provides service south to California, east to the rest of the continental United States and north to Canada. It is a transit system that operates, in whole or part, on a fixed guide–way. These systems should be integrated with other transit services within the metropolitan region with connections at passenger intermodal facilities.

Passenger train – A railroad train for only passengers, rather than goods. Amtrak is the company that controls the railroads that carry passengers in the U.S.

Passenger vehicles – Motor vehicles with at least four wheels, used for the transport of passengers, and comprising no more than eight seats in addition to the driver's seat. Light commercial vehicles are motor vehicles with at least four wheels, used for the carriage of goods.

Peak period or hours – The period of the day during which the maximum amount of travel occurs. It may be specified as the morning (A.M.) or afternoon or evening (P.M.) peak. Peak periods in the Portland metropolitan region are currently generally defined as from 7–9 AM and 4–6 PM.

Pedestrian – A person traveling on foot, in a wheelchair or in another health–related mobility device.

Pedestrian comfort index (PCI)- Uses data such as auto volumes, auto speeds, number of auto lanes, sidewalk existence and width, number of pedestrian crossings on existing roadways and assigns a comfort rating for pedestrians. Results help identify roadways on the regional pedestrian network that could be upgraded to increase bicyclists comfort. Metro has collected and analyzed initial data for the regional pedestrian network but has not created a PCI. Additional data and analysis is needed.

Pedestrian connection – A continuous, unobstructed, reasonably direct route between two points that is intended and suitable for pedestrian use. Pedestrian connections include but are not limited to sidewalks, walkways, accessways, stairways and pedestrian bridges. On developed parcels, pedestrian connections are generally hard surfaced. In parks and natural areas, pedestrian connections may be soft-surfaced pathways. On undeveloped parcels and parcels intended for redevelopment, pedestrian connections may also include rights-of-way or easements for future pedestrian improvements.

Pedestrian corridor – The second highest functional class of the regional pedestrian network. On-street regional pedestrian corridors are any major or minor arterial on the regional urban arterial network that is not a pedestrian parkway. Regional trails that are not pedestrian parkways are regional pedestrian corridors. These routes are also expected to see a high level of pedestrian activity, though not as high as the parkways.

Pedestrian district – A comprehensive plan designation or set of land use regulations designed to provide safe and convenient pedestrian circulation, with a mix of uses, density, and design that support high levels of pedestrian activity and transit use. The pedestrian district can be a concentrated area of pedestrian activity or a corridor. Pedestrian districts can be designated within the following 2040 Design Types: Central City, Regional and Town Centers, Corridors and Main Streets. Though focused on providing a safe and convenient walking environment, pedestrian districts also integrate efficient use of several modes within one area, e.g., auto, transit, and bike.

Pedestrian facility – A facility provided for the benefit of pedestrian travel, including walkways, protected street crossings, crosswalks, plazas, signs, signals, pedestrian scale street lighting and benches.

Pedestrian parkway – A new functional class for pedestrian routes in the Regional Transportation Plan and the highest functional class. They are high quality and high priority routes for pedestrian activity. Pedestrian parkways are major urban streets that provide frequent and almost frequent transit service (existing and planned) or regional trails. Adequate width and separation between pedestrians and bicyclists should be provided on shared use path parkways.

Pedestrian-scale – An urban development pattern where walking is a safe, convenient and interesting travel mode. The following are examples of pedestrian scale facilities: continuous, smooth and wide walking surfaces, easily visible from streets and buildings and safe for walking; minimal points where high speed automobile traffic and pedestrians mix; frequent crossings; and storefronts, trees, bollards, on-street parking, awnings, outdoor seating, signs, doorways and lighting designed to serve those on foot; all well-integrated into the transit system and having uses that cater to pedestrians.

People of color focus area – Census tracts with higher than regional average concentrations and double the density of one or more of the following: people of color and/or English language learners.

Per capita – Used to describe the rate of something per person.

Performance-based planning and programming – Refers to the application of performance management within the planning and programming processes of MPOs and transportation agencies to achieve desired performance outcomes for the multimodal transportation system. Attempts to ensure that transportation investment decisions are made – both in long-term planning and short-term programming of projects – based on their ability to meet established goals.

Performance management – A strategic approach that uses data and information to support decisions that help to achieve identified performance outcomes.

Performance measurement – A process of assessing progress toward achieving goals using data.

Performance measure – A metric used to assess and monitor progress toward meeting an objective using quantitative or qualitative data and provide feedback in the plan's decision-making process.

Some measures can be used to predict the future as part of an evaluation process using forecasted data, while other measures can be used to monitor changes based on actual empirical or observed data. In both cases, they can be applied at a system-level, corridor-level and/or project level, and provide the planning process with a basis for evaluating alternatives and making decisions on future transportation investments. As used in the RTP, performance measures are used to evaluate transportation system performance and potential impacts of the plan's investments within the planning period. They are also used to monitor performance of the plan in between updates to evaluate the need for refinements to policies, investment strategies or other elements of the plan..

Person trip – A trip made by a person from one location to another, whether as a driver, bicyclist, passenger or pedestrian.

Per vehicle miles traveled (VMT) – Used to describe rate of something per the number of motor vehicle miles traveled, such as the crash rate per motorized vehicle miles. Except where otherwise noted, crash rates are per 100-million motorized vehicle miles travelled in this document.

Physically separated bicycle lanes – These types of facilities provide a physical buffer between a person riding a bicycle and auto traffic and can be referred to as cycle tracks, trails, paths and buffered bicycle lanes. Buffers can be provided by parked cars, landscaped strips, raised pavement, bollards and planters.

Planning area boundary – A boundary used by Metro for planning purposes – also called the metropolitan planning area boundary. Included within the boundary are all areas within the Metro jurisdictional boundary, the 2010 Census urbanized area, designated urban reserves and the urban growth boundary.

Planning factors – A set of broad objectives defined in Federal legislation to be considered in both the metropolitan and statewide planning process. The factors are:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- Increase the safety of the transportation system for motorized and non-motorized users.
- Increase the security of the transportation system for motorized and non-motorized users.
- Increase the accessibility and mobility of people and for freight.
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- Enhance the integration and connectivity of the transportation system, across and between modes, people and freight.
- Promote efficient system management and operation.
- Emphasize the preservation of the existing transportation system.
- Improve the resiliency and reliabilityof the transportation system and reduce or mitigate stormwaterimpacts of surface transportation.
- Enhance travel and tourism.

Policy – A policy is a statement of intent and describes a direction and a course of action adopted and pursued by a government to achieve desired outcome(s).

Posted Speed – The speeds indicated on signs along the roadway. When speeds differ from statutory speeds there must be a posted sign indicating the different speed.

Practicable – This term means available and capable of being done after taking into consideration cost, existing technology and logistics, in light of overall project purposes.

Preparedness – This term refers to actions taken to plan, organize, equip, train, and exercise to build, apply, and sustain the capabilities necessary to prevent, protect against, ameliorate the effects of, respond to, and recover from climate change related damages to life, health, property, livelihoods, ecosystems, and national security.

Pricing - Motorists pay directly for driving on a particular roadway or for driving or parking in a particular area. Pricing includes applying different rates by location, level of congestion, or time of day, amongst other methods. Rates may vary based on vehicle size or type, incomes, or other variables. Pricing within the Portland metropolitan context could include the following methods and pricing strategies. Methods and strategies can be combined in different ways, such as variable cordon pricing or dynamic roadway pricing. Different types of pricing can be implemented in coordination with each other to provide greater systemwide benefits. Pricing can be implemented at the state, regional, or local level. Types of Pricing: Cordon / Low Emissions Zone; Parking; Road Usage Charge / VMT Fee / Mileage Based User Fee. Roadway Rate Types: Flat; Variable; Dynamic

Principal arterial – Limited-access roads that serve longer-distance motor vehicle and freight trips and provide interstate, intrastate and cross-regional travel. See definition of Throughway.

Project development – A phase in the transportation planning process during which a proposed project undergoes a more detailed analysis of the project's social, economic and environmental impacts and various project alternatives to determine the precise location, alignment, and preliminary design of improvements based on site-specific engineering and environmental studies. After a project has successfully passed through this phase, it may move forward to right–of–way acquisition and construction phases. Project development activities include: Environmental Assessment (EA)/Environmental Impact Statement (EIS) work, Design Options Analysis (DOA), management plans, and transit Alternatives Analysis (AA).

Protected bike lanes – Separated bike lane, cycle track, a bike lane that is physically separated from auto traffic, typically they are created using planters, curbs, parked cars, or posts and are essential for creating a complete network of bike-friendly routes. For bicyclists, safety increases significantly when there is physical separation from motorists through infrastructure. Fully protected bikeways can reduce bicycle injury risk up to 90 percent.[2] Another report found that on-street bike lanes that use barriers to physically separate bicyclists from motor vehicles are 89 percent safer than streets with parked cars and without bicycling infrastructure. When physical separation is not possible, infrastructure such as striped bike lanes, bicycle boulevards, and bike boxes help reduce the risk of conflict with motor vehicles.[3]

Public health – The health of the population as a whole, especially as monitored, regulated, and promoted by the state.

Racial equity – When race can no longer be used to predict life outcomes and outcomes for all groups are improved. The removal of barriers with a specific focus on eliminating disparities faced by and improving equitable outcomes for communities of color – the foundation of Metro's strategy with the intent of also effectively identifying solutions and removing barriers for other disadvantaged groups.

Rail branch lines – Non–Class I rail lines, including short line or branch lines.

Ramp meter or metering – A traffic signal used to regulate the flow of vehicles entering the freeway. Ramp meters smooth the merging process resulting in increased freeway speeds and reduced crashes. Ramp meters can be automatically adjusted based on traffic conditions.

Refinement plan – Amendment to a transportation system plan which determines at a systems level the function, mode or general location of a transportation facility, service or improvement, deferred during system planning because detailed information needed to make the determination could not be reasonably obtained at that time.

Regional bike-transit facility – The hub where the spokes of the regional bikeway network connect to the regional transit network. Stations and transit centers identified as regional bike-transit facilities have high-capacity bike parking and are suitable locations for bike-sharing and

[2] "Route Infrastructure and the Risk of Injuries to Bicyclists: a Case-Crossover Study," Teschke, et al. American Journal of Public Health, Vol. 102, No. 12, December 2012.
[3] A Right to the Road, p.48, GHSA, 2017.

other activities that support bicycling. Criteria for identifying locations are found in the TriMet Bicycle Parking Guidelines.

Regional bikeway – Designated routes that provide access to and within the central city, regional centers and town centers. These bikeways are typically located on arterial streets but may also be located on collectors or other low-volume streets. These bikeways should be designed using a flexible "toolbox" of bikeway designs, including bike lanes, cycle tracks (physically separated bicycle lanes) shoulder bikeways, shared roadway/wide outside lanes and bicycle priority treatments (e.g. bicycle boulevards).

Regional centers (2040 design type) – Compact, specifically–defined areas where higher density growth and a mix of intensive residential and commercial land uses exists or is planned. Regional centers are to be supported by an efficient, transit–oriented, multi–modal transportation system. Examples include traditional centers, such as downtown Gresham, and new centers such as Gateway and Clackamas Town Center.

Regional Conservation Strategy (RCS) for the Greater Portland Vancouver Metropolitan Area, Intertwine and Metro - Identifies high quality land and riparian areas in the region. The strategy was developed by The Intertwine Alliance, Metro and a broad coalition of conservation organizations to pull together 20 years of conservation planning and create an integrated blueprint for regional conservation. The plan will help government, nonprofit and private organizations work together to care for and restore thousands of acres of natural area land and create habitat for wildlife.

Regional destinations – Include the following types of places: employment sites with 300 or more employees (includes regional sports and attraction sites such as Oregon Zoo, Oregon Museum of Science and Industry, Providence Park, Moda Center); high ridership bus stop locations; regional shopping centers; major hospitals and medical centers; colleges, universities and public high schools; regional parks; major government centers; social services; airports; and libraries.

Regional Flexible Funds Allocation (RFFA) – Regional flexible funds come from three federal grant programs: the Surface Transportation Block Grant Program, the Congestion Mitigation/Air Quality Program and the Transportation Alternatives Program. The regional flexible fund allocation process identifies which projects in the *Regional Transportation Plan* will receive funding. Regional flexible funds are allocated every two years and are included in the Metropolitan Transportation Improvement Program. Unlike funding that flows only to highways or only to transit by a rigid formula, this is money that can be invested in a range of transportation projects or programs as long as federal funding eligibility requirements are met.

Regional freight network – Applies the regional freight concept on the ground to identify the transportation networks and freight facilities that serve the region and state's freight mobility needs.

Regional intelligent transportation system (ITS) architecture – A regional framework for ensuring institutional agreement and technical integration for the implementation of ITS projects or groups of projects.

Regional mobility policy – The Regional Mobility Policy is a policy in Metro's Regional Transportation Plan (RTP) as well as ODOT's Oregon Highway Plan (OHP). It applies to system planning and plan amendment processes only within the Portland metropolitan area. The regional mobility policy is one of many policies that helps the region choose where to focus resources for the transportation system to support implementation of city and county comprehensive plans. The goal of the updated policy is to better align the policy and measures with shared regional values, goals, and desired outcomes identified in RTP and 2040 Growth Concept, as well as with local and state goals. Specifically, the updated policy is intended to support mobility outcomes related to equity, efficiency, access and options, safety, and reliability. Six policies and three measures are included in the policy that have direct relationships to these desired mobility outcomes. ~~The minimum motor vehicle performance desired for transportation facilities designated on the Regional Motor Vehicle Network in Chapter 3. Table 3.6 reflects volume-to-capacity targets adopted in the RTP for facilities designated on the Regional Motor Vehicle Network as well as volume-to-capacity targets adopted in the Oregon Highway Plan for state-owned facilities in the urban growth boundary. In effect, the policy is used to evaluate current and future performance of the motor vehicle network, using the ratio of traffic volume (or forecasted demand) to planned capacity of a given roadway, referred to as the volume-to-capacity ratio (v/c ratio) or level-of-service (LOS. As a system plan, the RTP uses the interim regional policy to diagnose the extent of motor vehicle congestion on throughways and arterials during different times of the day and to determine adequacy in meeting the region's needs. LOS is also used to determine consistency of the RTP with the Oregon Highway Plan for state-owned facilities. JPACT and the Metro Council adopted the policy in 2000, agreeing that building a regional arterial and throughway network to accommodate all motor vehicle traffic during peak travel periods is not practical nor would it be desirable considering potential financial, social equity, environmental and community impacts. The RTP mobility policy can be found in Chapter 2 and Chapter 3 of the RTP.~~

Regional trails – Regional Trails are defined by Metro as linear facilities for non-motorized users that are at least 75% off-street and are regionally significant. Bicycle/pedestrian sidewalks on bridges are also included in this definition. The term "non-motorized" is used instead of "multi-use" or "multi-modal" because some Regional Trails are pedestrian-only. Trails must meet two levels of criteria to be considered "regionally significant." The criteria are adopted by the Metro Council in the *Regional Trails and Greenways Plan*. Regional trails are physically separated from motor vehicle traffic by open space or a barrier. Bicyclists, pedestrians, joggers, skaters and other non-motorized travelers use these facilities.

While all trails serve a transportation function, not all regional trails identified on Metro's *Regional Trails and Greenways Map* are included in the RTP. The RTP includes regional trails that support both utilitarian and recreational functions. These trails are generally located near or in residential areas or near mixed-use centers and provide access to daily needs. Trails in the RTP

are defined as transportation facilities and are part of the regional transportation system. Regional trails in the RTP are eligible to receive federal transportation funds. Trails that use federal transportation funds need to be ADA accessible according to the AASHTO trail design guidelines. There are some pedestrian only trails or trails near sensitive habitat on the RTP network that would most likely not be paved. Regional bicycle connections are planned parallel to pedestrian only regional trails. Colloquially, terms like "bike path" and "multi-use path" are often used interchangeably with "regional trail," except when referring to pedestrian-only regional trails.

Regional Trails and Greenways Map – A map developed and maintained by Metro. The map was first developed as part of the *Metropolitan Greenspaces Master Plan*. The map includes the existing and proposed trails and greenways in the regional system. Many of the regional trails are included in the Regional Transportation Plan.

Regional transit network – The regional transit system includes light rail, commuter rail, bus rapid transit, enhanced transit, frequent bus, regional bus, and streetcar modes as well as major transit stops.

Regional Transportation Functional Plan (RTFP) – A regional functional plan regulating transportation in the Metro region, as mandated by Metro's Regional Framework Plan. The plan directs local plan implementation of the Regional Transportation Plan.

Regional Transportation Plan (RTP) – A long-range metropolitan transportation plan that is developed and adopted for the greater Portland metropolitan planning area (MPA) covering a planning horizon of at least 20 years. Usually RTPs are updated every five years through the federally-mandated metropolitan transportation planning process. The plan identifies and analyzes transportation needs of the metropolitan region and creates a framework for implementing policies and project priorities. Required by state and federal law, it includes programs to better maintain, operate and expand transportation options to address existing and future transportation needs. The RTP also serves as the regional transportation system plan under the Oregon Transportation Planning Rule.

Regional transportation system – The regional transportation system is identified on the regional transportation system maps in the Regional Transportation Plan. The system is limited to facilities of regional significance generally including regional arterials and throughways, high capacity transit and regional transit systems, regional multi–use trails with a transportation function, bicycle and pedestrian facilities that are located on or connect directly to other elements of the regional transportation system, air and marine terminals, as well as regional pipeline and rail systems.

Regional Travel Options (RTO) Program – Metro program guided by a five-year strategic plan aimed at reducing the demand for roadway travel, particularly single occupant vehicle travel. More specifically, Metro's RTO program includes:

- a coordinated education and outreach effort to efficiently use public dollars to reach key audiences
- an employer outreach program to save employers and employees money
- a regional Safe Routes to School effort that supports local education programs in schools to teach kids how to walk and bicycle to school safely
- a regional rideshare program that makes carpooling safer and easier and helps people with limited transit access have options to get around
- a grant program that funds partner efforts, such as The Street Trust's Bike Commute Challenge, TriMet's and TMA's work with employers, Ride Connection's RideWise travel training program for seniors and people with disabilities, and Portland Sunday Parkways, to name a few
- funding for bicycle racks, wayfinding signage and other tools that help people to walk and bicycle
- funding for pilot projects to test new ways to reach the public through technology or innovative engagement methods.

See also transportation demand management.

Regionally significant industrial area (RSIA) – 2040 land use designation; RSIAs are shown on Metro's 2040 map. Industrial activities and freight movement are prioritized in these areas.

Regionally significant project – A transportation project (other than projects that may be grouped in the TIP and/or STIP or exempt projects as defined in EPA's transportation conformity regulations (40 CFR part 93, subpart A)) that is on a facility that serves regional transportation needs (such as access to and from the area outside the region; major activity centers in the region; major planned developments such as new retail malls, sports complexes, or employment centers; or transportation terminals) and would normally be included in the modeling of the metropolitan area's transportation network. Chapter 3 of the RTP defines the regional transportation system.

Reliability – This term refers to consistency or dependability in travel times, as measured from day to day and/or across different times of day. Variability in travel times means travelers must plan extra time for a trip.

Reload facility – An intermediary facility where freight is reloaded from one land–based mode to another.

Resilience or resiliency – This term means the ability to anticipate, prepare for and adapt to changing conditions and withstand, respond to and recover rapidly from disruptions.

Revision – A change to a long-range statewide or metropolitan transportation plan, TIP, or STIP that occurs between scheduled periodic updates. A major revision is an "amendment" while a minor revision is an "administrative modification."

Ride-hailing services – Also known as transportation network companies, or TNCs like Uber and Lyft, which use apps to connect passengers with drivers who provide rides in their personal vehicles.

Rideshare – A transportation demand management strategy where two or more people share a trip in a vehicle to a common destination or along a common corridor. Private passenger vehicles are used for carpools, and some vanpools receive public/private support to help commuters. Carpooling and vanpooling provide travel choices for areas underserved by transit or at times when transit service is not available.

Right-of-way (ROW) – Land that is publicly-owned, or in which the public has a legal interest, usually in a strip, within which the entire road facility (including travel lanes, medians, sidewalks, shoulders, planting areas, bikeways and utility easements) resides. The right-of-way is usually acquired for or devoted to multi-modal transportation purposes including bicycle, pedestrian, public transportation and vehicular travel.

Road diet – Road diets are one way to reconfigure limited roadway space in a way that allows for the inclusion of wider sidewalks and separated bicycle facilities such as buffered bicycle lanes, which can provide space for all users to operate safely an in their own "zones." Road diets can have multiple safety and operational benefits for autos, as well as pedestrians and cyclists. On existing roadways, separated in-roadway facilities may be implemented by narrowing existing travel lanes, removing travel lanes, removing on-street parking or widening the roadway shoulder. If constraints, such as narrow existing right-of-way, prohibit providing optimally desired bicycle facility widths, then interim facility improvements can be used.

Road Usage Charge / VMT Fee / Mileage Based User Fee - Motorists are charged for each mile driven. A road usage charge is often discussed as an alternative to federal, state, and local gas taxes which have become less relevant to the user-pays principle as more drivers switch to fuel efficient or electric vehicles. Road usage charges are most often implemented as flat or variable rate fees.

Road users – A motorist, passenger, public transportation operator or user, truck driver, bicyclist, motorcyclist, or pedestrian, including a person with disabilities. (23 USC section 148)

Roadway connectors – Roads that connect other freight facilities, industrial areas, and 2040 centers to a main roadway route.

Roadway pricing - Motorists are charged to drive on a particular roadway. Roadway pricing can be implemented as a flat, variable, or dynamic fee. Roadway prices that vary by time of day can follow a set fee schedule (variable), or the fee rate can be continually adjusted based on traffic conditions (dynamic).

Rural reserves (2040 Design Type) – Large areas outside the urban growth boundary that will remain undeveloped through 2060. These areas are reserved to provide long-term protection for agriculture, forestry or important natural landscape features that limit urban development or help define appropriate natural boundaries for development, including plant, fish and wildlife habitat, steep slopes and floodplains.

Safe Routes to School – A comprehensive engineering/education program focused on youth school travel that aims to create safe, convenient, and fun opportunities for children to walk and roll (bike, scooter, etc.) to and from schools. City or school district based programs incorporate evaluation, education, encouragement, engineering, enforcement, and equity with the goal of increasing walking and rolling to school. Safe Routes to School is a national program that works to nationally, regionally and locally to create safe, healthy, and livable urban, suburban and rural communities. The program works with parents, school districts, local governments, government, police and community partners to make it easy and safe for kids to walk and bike to school. Results are achieved through investments in small capital projects, educations and outreach such as walking school buses.

Safe System Approach – A data-driven, strategic approach to roadway safety that aims to eliminate fatal and severe injury crashes. The approach is based on a foundational understanding of the underlying causes of traffic fatalities and severe injuries (using data) and is based on the principle that errors are inevitable but serious crashes should not be. Transportation safety policies that use a Safe System approach include Vision Zero, Towards Zero Deaths, Road to Zero and Sustainable Safety.

Safe System Approach Speed Setting – Speed limits are set according to the likely crash types, the resulting impact forces, and the human body's ability to withstand these forces. It allows for human errors (that is, accepting humans will make mistakes) and acknowledges that humans are physically vulnerable (that is, physical tolerance to impact is limited). Therefore, in this approach, speed limits are set to minimize death and severe injury as a consequence of a crash.

Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users (SAFETEA-LU) – Signed into federal law in 2005, SAFETEA-LU authorized the federal surface transportation programs for highways, highway safety, and transit through 2009. SAFETEA-LU refined and reauthorized TEA-21. SAFETEA-LU was subsequently replaced by MAP-21 and the FAST Act.

Safety – Protection from death or bodily injury from a motor-vehicle crash through design, regulation, management, technology and operation of the transportation system.

Safety benefit projects – Projects with design features to increase safety for one or more roadway user. These projects may not necessarily address an identified safety issue at an identified high injury or high risk location, but they do include design treatments known to increase safety and reduce serious crashes. Examples include adding sidewalks, bikeways, medians, center turn lanes and intersection or crossing treatments.

Safety data – Includes, but is not limited to, crash, roadway, and traffic data on all public roads. For railway- highway grade crossings, safety data also includes the characteristics of highway and train traffic, licensing, and vehicle data.

Safety project – Has the primary purpose of reducing fatal and severe injury crashes or reducing crashes by addressing a documented safety problem at a documented high injury or high risk location with one or more proven safety countermeasures.

Scenario planning – An analytical approach and planning process that provides a comprehensive framework for evaluating how various combinations of strategies, policies, plans and/or programs may affect the future of a community, region or state. The approach involves identifying various packages or strategies or scenarios against a baseline projection.

Security (public and personal) – Protection from intentional criminal or antisocial acts while engaged in trip making through design, regulation, management, technology and operation of the transportation system.

Serious Crash – Refers to the total number of Fatal and Severe Injury (Injury A) crashes combined.

Severity – A measurement of the degree of seriousness concerning both vehicle impact (damage) and bodily injuries sustained by victims in a traffic crash.

Shared mobility – Describes services that allow people to share a vehicle, such as ride-hailing trips, car and bike share and microtransit, as well as traditional shared modes like transit, car- or vanpools and taxis. Some of these services are privately operated by shared mobility companies.

Shared trips – Trips taken by multiple passengers traveling in a single vehicle, including carpools, transit trips and some ride-hailing or car share trips.

Short trip – Generally defined as a one-way trip less than three miles.

Should – When used in the context of a policy or action, should means an expected course of action or policy that is to be followed unless inappropriate for a particular circumstance. *Also see must.*

Sidewalk – A walkway separated from the roadway with a curb, constructed of a durable, hard and smooth surface, designed for preferential or exclusive use by pedestrians.

Single–occupanct vehicle (SOV) – A private motorized passenger vehicle carrrying one occupant (the driver only). Also referred to as a drive alone vehicle.

Smart cities – The way in which public agencies are using technology to collect better data, provide better service, do business more efficiently and make better decisions.

Social equity – The idea that all members of a societal organization or community should have access to the benefits associated with civil society – the pursuit of an equitable society requires the recognition that there are a number of attributes that give members of a society more or less

privilege and that in order to provide equitable situations the impacts of these privileges (or lack thereof) must be addressed. For transportation, equity refers to fair treatment or equal access to transportation services and options. In the context of safety, transportation equity relates to improving the travel choices, the safety of travel and not unfairly impacting one group or mode of transportation. More specifically it means improved safety for all transportation options and lessening the risks or hazards associated with different choices of transportation.

Stakeholders – Individuals and organizations with an interest in or who are affected by a transportation plan, program or project, including federal, state, regional and local officials and jurisdictions, institutions, community groups, transit operators, freight companies, shippers, non–governmental organizations, advocacy groups, residents of the geographic area and people who have traditionally been underrepresented.

State Highways – In Oregon, is a network of roads that are owned and maintained by the Highway Division of the Oregon Department of Transportation (ODOT), including Oregon's portion of the Interstate Highway System.

State Transportation Improvement Program (STIP) – The four-year funding and scheduling document for major street, highway and transit projects in Oregon. The STIP is produced by ODOT, consistent with the Oregon Transportation Plan (the statewide transportation plan) and other statewide plans as well as metropolitan transportation plans and MTIPsThe STIP covers the entire state and is overseen by the Oregon Transportation Commission (OTC). It must include all the metropolitan region's TIPs without change as well as a list of specific projects proposed by ODOT in the non-metropolitan areas. Updated every three years, the STIP determines when and if transportation projects will be funded by the state with state or federal funds.

State Transportation Plan – The official statewide intermodal transportation plan that is developed through the statewide transportation planning process. See also Oregon Transportation Plan.

Station communities (2040 Design Type) – Areas generally within a 1/4- to 1/2-mile radius of a light rail station or other high capacity transit stops that are planned as multi-modal, mixed-use communities with substantial pedestrian and transit-supportive design characteristics and improvements.

Strategic plan – Defines the desired direction and outcomes to guide decisions for allocating resources to pursue the strategy.

Strategic project list – Additional policy-driven transportation needs and priority projects that could be achieved with additional resources.

Strategy – Involves setting goals, determining actions to achieve the goals, and mobilizing resources to execute the actions. A strategy describes how the ends (goals) will be achieved by the means (resources).

Street – A generally gravel or concrete– or asphalt–surfaced facility. The term collectively refers to arterial, collector and local streets that are located in 2040 mixed–use corridors, industrial areas, employment areas and neighborhoods. While the focus for streets has been on motor vehicle traffic, they are designed as multi–modal facilities that accommodate bicycles, pedestrians and transit, with an emphasis on vehicle mobility and special pedestrian infrastructure on transit streets.

Surface Transportation Block Grant (STBG) – A federal source of funding for projects and activities that is the most flexible in its use. Projects and activities which states and localities can use STBG include: projects that preserve and improve the conditions and performance on any federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure and transit capital projects, including intercity bus terminals.

Sustainability – Using, developing and protecting resources in a manner that enables people to meet current needs and provides that future generations can meet future needs, from the joint perspective of environmental, economic and community objectives. This definition of sustainability is from the 2006 Oregon Transportation Plan and ORS 184.421(4). The 2001 Oregon Sustainability Act and 2007 Oregon Business Plan maintain that these principles of sustainability can stimulate innovation, advance global competitiveness and improve quality of life in communities throughout the state.

Sustainable – A method of using a resource such that the resource is not depleted or permanently damaged.

System efficiency – Strategies that optimize the use of the existing transportation system, including traffic management, employer-based commute programs, individualized marketing and carsharing.

System management – A set of strategies for increasing travel flow on existing facilities through improvements such as ramp metering, traffic signal synchronization and access management.

Target – A specific level of performance that is desired to be achieved within a specified time period.

Threshold - Thresholds determine the upper and lower limits of performance for a specific time period.

Throughways – Controlled access (on-ramps and off-ramps) freeways and major highways. These routes generally correspond to Expressways designated in the Oregon Highway Plan.

Toward Zero Deaths – The United States' highway safety vision. The National Strategy on Highway Safety provides a platform of consistency for state agencies, private industry, national organizations and others to develop safety plans that prioritize traffic safety culture and promote the national Toward Zero Deaths vision. As a strategic policy it is similar to Vision Zero.

Traffic – Movement of motorized vehicles, non–motorized vehicles and pedestrians on transportation facilities. Often traffic levels are expressed as the number of units moving over or through a particular location during a specific time period.

Traffic calming – A transportation system management technique that aims to prevent inappropriate through-traffic and reduce motor vehicle travel speeds on a particular roadway. Traditionally, traffic calming strategies provide speed bumps, curb extensions, planted median strips or rounds and narrowed travel lanes.

Traffic incident management – Planned and coordinated processes followed by state and local agencies to detect, respond to, and remove traffic incidents quickly and safely in order to keep highways flowing efficiently.

Traffic management – Strategies that improve transportation system operations and efficiency, including ramp metering, active traffic management, traffic signal coordination and real-time traveler information regarding traffic conditions, incidents, delays, travel times, alternate routes, weather conditions, construction, or special events.

Traffic signal progression – A process by which a number of traffic signals are synchronized to create the efficient progression of vehicles.

Transti accessibility – Accessibility refers to two separate but related aspects of transit. One is to ensure that transit is physically accessible to everyone, regardless of age or ability. All transit users must access transit via biking or walking, even if stops are mere feet away. Complete sidewalks and bike paths improve safety and enhance the experience of using transit and the accessible stations are essential to making transit work for everyone. The first/last mile connection is also an important part of accessibility, as it often represents the best opportunity for people living in less developed areas, rural towns or outlying areas to access our transit system. The second is to ensure that schools, particularly high schools and colleges, community places, such as grocery stores and medical services, and jobs are accessible by transit. As the region grows, it's crucial to continue to expand community and regional transit service in order to improve access to these daily needs and encourage employers to locate on existing transit routes.

Transit Asset Management Plan (TAMP) – A plan that includes an inventory of capital assets, a condition assessment of inventoried assets, a decision support tool, and a prioritization of investments.

Transit Asset Management System – A strategic and systematic process of operating, maintaining, and improving public transportation capital assets effectively, throughout the life cycles of those assets.

Transit oriented development (TOD)/Metro Transit Oriented Development Program – A mixed-use community or neighborhood designed to encourage transit use, bicycle and pedestrian activity, containing a rich mix of residential, retail, and workplaces in settings designed for bicycle and pedestrian convenience and transit accessibility. Metro began a regional Transit Oriented Development program in 1998 as part of a strategy to leverage the region's significant investment

in high capacity transit. As part of Metro's TOD Program, the agency strategically invests to stimulate private development of higher-density, affordable and mixed-use projects near transit to help more people live, work and shop in neighborhoods served by high-quality transit. In addition, the program invests in "urban living infrastructure" like grocery stores and other amenities, provides technical assistance to communities and developers, and acquires and owns properties in transit-served areas and solicits proposals from qualified developers to create transit-oriented communities in these places. To date, the TOD program investments totaling $16 million have leveraged more than $697 million in private development activity across 45 completed TOD projects.

Transit-supportive elements - Transit-supportive elements include programs, policies, capital investments and incentives such as Travel Demand Management and physical improvements such as sidewalks, crossings, and complementary land uses.

Transportation Alternatives Program – The Transportation Alternatives Program (TAP) was authorized under Section 1122 of Moving Ahead for Progress in the 21st Century Act (MAP-21) and is codified at 23 U.S.C. sections 213(b), and 101(a)(29). Section 1122 provides for the reservation of funds apportioned to a State under section 104(b) of title 23 to carry out the TAP. The national total reserved for the TAP is equal to 2% of the total amount authorized from the Highway Account of the Highway Trust Fund for Federal-aid highways each fiscal year. The TAP provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, community improvement activities, and environmental mitigation; recreational trail program projects; safe routes to school projects; and projects for planning, designing, or constructing boulevards and other roadways largely in the right-of-way of former Interstate System routes or other divided highways.

Transportation demand – The quantity of transportation services desired by users of the transportation system.

Transportation demand management (TDM) – The application of a set of strategies and programs designed to reduce demand for roadway travel, particularly single occupant vehicle trips, through various means (e.g. education, outreach, marketing, incentives, technology). The strategies aim to affect when, where and how much people travel in order to make more efficient use of transportation infrastructure and services. Strategies include offering other modes of travel such as walking, bicycling, ride–sharing and vanpool programs, car sharing, alternative work hours, education such as individualized marketing, policies, regulations and other combinations of incentives and disincentives that are intended to reduce drive alone vehicle trips on the transportation network. Metro's TDM program is called the Regional Travel Options (RTO) program. *See also Regional Travel Options Program.*

Transportation disadvantaged/persons potentially underserved by the transportation system – Individuals who have difficulty in obtaining important transportation services because of their age, income, physical or mental disability.

Transportation equity – The removal of barriers to eliminate transportation-related disparities faced by and improve equitable outcomes for historically marginalized communities, especially communities of color.

Transportation improvement program (TIP) – A prioritized listing/program of multimodal transportation projects covering a period of 4 years that is developed and formally adopted by an MPO as part of the metropolitan transportation planning process. The TIP must be consistent with the metropolitan transportation plan, and is required for projects to be eligible for funding under title 23 U.S.C. and title 49 U.S.C. chapter 53. In the Portland metropolitan region, the TIP is referred to as the Metropolitan Transportation Improvement Program (MTIP). In practice, the MTIP is a short-term, four year program of transportation projects that will be funded with federal funds expected to flow to the region and locally and state-funded regionally significant projects.

Transportation management associations (TMA) – Non-profit coalitions of local businesses and/or public agencies, and residences such as condo Home Owner Associations all dedicated to reducing traffic congestion and pollution while improving commuting options for employees, residents and visitors.

Transportation management area (TMA) – An urbanized area with a population over 200,000, as defined by the U.S. Census Bureau and designated by the Secretary of Transportation, or any additional area where TMA designation is requested by the Governor and the MPO and designated by the Secretary of Transportation. These areas must comply with special transportation planning requirements regarding congestion management process, project selection, processes for develoment of tan RTP and MTIP and certification identified in 23 CFR 450.300-340.

Transportation needs – Estimates of the movement of people and goods based on current population and employment and future growth consistent with acknowledged comprehensive plans. Needs are typically defined based on an assessment of existing transportation system gaps and deficiencies and projections of future travel demand, from a continuation of current trends as modified by policy objectives expressed in Statewide Planning Goal 12, the Transportation Planning Rule, federal planning factors and the RTP (Chapter 2 and Chapter 3).

Deficiencies are defined as the difference between the current transportation system and adopted standards based on performance measures and targets identified in Chapter 2. Deficiencies are capacity or design constraints that limit but do not prohibit the ability to travel by a given mode. Gaps are defined as missing links in the transportation system for any mode. Gaps either prohibit travel by a particular mode or make it functionally unsafe. Together, gaps and deficiencies are defined as needs.

- **Local transportation needs** means needs for movement of people and goods within communities and portions of counties and the need to provide access to local destinations.

- **Regional transportation needs** means needs for movement of people and goods between and through communities and accessibility to regional destinations within a metropolitan area, county or associated group of counties.
- **State transportation needs** means needs for movement of people and goods between and through regions of the state and between the state and other states.

See also gap and deficiency.

Transportation performance management (TPM) – Strategic approach that uses system information to make investment and policy decisions to achieve national performance goals.

Transportation planning – A continuing, comprehensive, and cooperative (3-C) process to encourage and promote the development of a multimodal transportation system to ensure safe and efficient movement of people and goods while balancing environmental and community needs.

Transportation planning rule (TPR) – Oregon's statewide planning goals established state policies in 19 different areas. The TPR implements the Land Conservation and Development Commission's Planning Goal 12 (Transportation) which requires ODOT, MPOs, Counties and Cities, per OAR 660-012-0015 (2) and (3), to prepare a Transportation System Plan (TSP) to identify transportation facilities and services to meet state, regional and local needs, as well as the needs of the transportation disadvantaged and the needs for movement of goods and services to support planned industrial and commercial development, per OAR 660-012-0030(1).

Transportation system – Various transportation modes or facilities (aviation, bicycle and pedestrian, throughway, street, pipeline, transit, rail, water transport) serving as a single unit or system.

Transportation system management (TSM) – A set of strategies for increasing travel flow on existing facilities through improvements such as ramp metering, traffic signal synchronization, incident response and access management.

Transportation system plan (TSP) – The transportation element of the comprehensive plan for one or more transportation facilities that is planned, developed, operated and maintained in a coordinated manner to supply continuity of movement between modes, and between geographic and jurisdictional areas. A TSP describes a transportation system and outlines projects, programs, and policies to meet transportation needs now and in the future based on community (and regional) aspirations. A TSP typically serves as the transportation component of the local comprehensive plan. The TSP supports the development patterns and land uses contained in adopted community and regional plans. The TSP includes a comprehensive analysis and identification of transportation needs associated with adopted land use plans. The TSP complies with Oregon's Transportation Planning Rule, as described in statewide Planning Goal 12. The RTP is a regional TSP.

Local TSPs must be consistent with the applicable Regional Transportation Plan. Jurisdictions within a metropolitan area must adopt TSPs that reflect regional goals, objectives, and investment

strategies specific to the area and demonstrate how local transportation system planning helps meet regional performance targets. A jurisdiction within a Metropolitan Planning Organization area must make findings that the proposed Regional Transportation Plan amendment or update is consistent with the local TSP and comprehensive plan or adopt amendments that make the Regional Transportation Plan and the TSP consistent with one another. (OAR 660-012-0016) TSP updates must occur within one year of the adoption of a new or updated Regional Transportation Plan. (OAR 660-012-0055).

Travel options/choices – The ability range of travel mode choices available, including motor vehicle, walking, bicycling, riding transit and carpooling. Telecommuting is sometimes considered a travel option because it replaces a commute trip with a trip not taken.

Travel time – The measure of time that it takes to reach another place in the region from a given point for a given mode of transportation. Stable travel times are a sign of an efficient transportation system that reliably moves people and goods through the region.

Travel time reliability – This term refers to consistency or dependability in travel times, as measured from day to day and/or across different times of day. Variability in travel times means travelers must plan extra time for a trip.

Trip – A one–way movement of a person or vehicle between two points. A person who leaves home on one vehicle, transfers to a second vehicle to arrive at a destination, leaves the destination on a third vehicle and has to transfer to yet another vehicle to complete the journey home has made four unlinked passenger trips.

TripCheck – An Oregon Department of Transportation website that displays real-time data regarding road conditions, weather conditions, camera images, delays due to congestion and construction, and other advisories. Additionally, TripCheck provides travelers with information about travel services such as food, lodging, attractions, public transportation options, scenic byways, weather forecasts, etc. This information is also available through the 511 travel information phone line.

Truck terminal – A facility that serves as a primary gateway for commodities entering or leaving the metropolitan area by road.

Underserved communities – Populations that have historically experienced a lack of consideration in the planning and decision making process. It describes historically marginalized communities in addition to those that are defined in the federal definition of Environmental Justice. These populations are seniors, persons with disabilities, youth, communities of color, low-income communities, and any other population of people whose needs may not have been full met in the planning process.

Unified Planning Work Program (UPWP) – This refers to annual statement of work identifying the planning priorities and activities to be carried out within a metropolitan planning area. At a minimum, a UPWP includes a description of the planning work and resulting products, who will

perform the work, time frames for completing the work, the cost of the work, and the source(s) of funds.

United States Department of Transportation (USDOT) – The federal cabinet-level agency with responsibility for highways, mass transit, aviation and ports; it is headed by the Secretary of Transportation. The DOT includes the Federal Highway Administration and the Federal Transit Administration, among others.

Universal access – Universal access is the goal of enabling all citizens to reach every destination served by their public street and pathway system. Universal access is not limited to access by persons using automobiles. Travel by bicycle, walking, or wheelchair to every destination is accommodated in order to achieve transportation equity, maximize independence, and improve community livability. Wherever possible, facilities are designed to allow safe travel by youth, seniors, and people with disabilities who may have diminished perceptual or ambulatory abilities. By using design to maximize the percentage of the population who can travel independently, it becomes much more affordable for society to provide paratransit services to the remainder with special needs.

Update – For federal purposes, this means making current a long-range statewide transportation plan, metropolitan transportation plan, TIP, or STIP through a comprehensive review. Updates require public review and comment, a 20-year horizon for metropolitan transportation plans and long-range statewide transportation plans, a 4-year program period for TIPs and STIPs, demonstration of fiscal constraint (except for long-range statewide transportation plans), and a conformity determination (for metropolitan transportation plans and TIPs in nonattainment and maintenance areas). For state purposes, this means TSP amendments that change the planning horizon and apply broadly to a city or county and typically entails changes that need to be considered in the context of the entire TSP, or a substantial geographic area.

Urban growth boundary – The politically defined boundary around an urban area beyond which no urban improvements may occur. In Oregon, UGBs are defined so as to accommodate projected population and employment growth within a 20–year planning horizon. A formal process has been established for periodically reviewing and updating the UGB so that it meets forecasted population and employment growth.

Urbanized area (UZA) – A geographic area with a population of 50,000 or more, as designated by the Bureau of the Census.

Urban reserve – An area outside of the urban growth boundary designated for future growth by the Metro Council pursuant to OAR 660 Division 27.

Variable rate fee - With this type of pricing, a variable fee schedule is set so that the fee is higher during peak travel hours and lower during off-peak or shoulder hours. This encourages motorists to use the facility or drive less during less congested periods and allows traffic to flow more freely during peak times. Peak fee rates may be high enough to usually ensure that traffic flow will not break down, thus offering motorists a reliable and less congested trip in exchange for the higher peak fee. The current price is often displayed on electronic signs prior to the beginning of the

priced facility and is often published as a schedule on agency websites and other routing resources.

Value pricing – A demand management strategy that involves the application of market pricing (through variable tolls, variable priced lanes, area-wide charges or cordon charges) to the use of roadways at different times of day. Also called congestion pricing or peak period pricing. Also *see pricing*

Vehicle – Any device in, upon or by which any person or property is or may be transported or drawn upon a public highway and includes vehicles that are propelled or powered by any means.

Vehicle miles traveled (VMT) – A common measure of roadway use by multiplying miles traveled per vehicle by the total number of vehicles for a specified time period. For purposes of this definition, "vehicles" include automobiles, light trucks and other passenger vehicles used for the movement of people. The definition does not include buses, heavy trucks and other vehicles that involve commercial movement of goods.

VMT Fee – See Road Usage Charge

Vision – In this document, an aspirational statement of what the region (and plan) is trying to achieve over the long-term through policy and investment decisions.

Vision Zero – A system and approach to public policy developed by the Swedish government which stresses safe interaction between road, vehicle and users. Highlighted elements include a moral imperative to preserve life, and that the system conditions and vehicle be adapted to match the capabilities of the people that use them. Vision Zero employs the Safe System approach.

Visualization techniques – Methods used by States and MPOs in the development of transportation plans and programs with the public, elected and appointed officials, and other stakeholders in a clear and easily accessible format such as GIS- or web-based surveys, inventories, maps, pictures, and/or displays identifying features such as roadway rights of way, transit, intermodal, and non-motorized transportation facilities, historic and cultural resources, natural resources, and environmentally sensitive areas, to promote improved understanding of existing or proposed transportation plans and programs.

Volume–to–capacity (v/c) ratio – A traditional measure of congestion, calculated by by dividing the number of motor vehicles passing through a section of roadway during a specific increment of time by the motor vehicle capacity of the section. For example, a V/C ratio of 1.00 indicates the roadway facility is operating at its capacity.

Also referred to as level-of-service, this ratio has been used in transportation system planning, project development and design as well as in operational analyses and traffic analysis conducted during the development review process. As a system plan, the RTP uses the volume-to-capacity ratio targets to diagnose the extent of motor vehicle congestion on throughways and arterials during different times of the day and to determine adequacy in meeting the region's needs. The

v/c ratio targets are also used to determine consistency of the RTP with the Oregon Highway Plan for state-owned facilities. *See also level-of-service and regional mobility policy.*

Vulnerable users – In this document, refers to groups of people that are more vulnerable to being killed or severely injured in traffic crashes. Vulnerable users are people that are more vulnerable to being killed or seriously injured in crashes. Vulnerable users are pedestrians, bicyclists, motorcycle operators, children, older adults, road construction workers, people with disabilities, people of color and people with low income.

Walkable neighborhood – A place where people live within walking distance to most places they want to visit, whether it is school, work, a grocery store, a park, church, etc.

Walk score – An online tool that produces a number between 0 and 100 that measures the walkability of any address. Similar tools for transit and bicycling - Transit Score and Bike Score.

Walkway – A hard-surfaced transportation facility designed and suitable for use by pedestrians, including persons using wheelchairs. Walkways include sidewalks, hard-surfaced portions of accessways, regional trails, paths and paved shoulders.

Wayfinding – Signs, maps, street markings, and other graphic or audible methods used to convey location and directions to travelers. Wayfinding helps people traveling to orient themselves and reach destinations easily.

Attachment 3
Comparison of Revenue and Rate Setting Policies:
2023 RTP Update Draft Pricing Policies and OHP Policy 6

RTP Policy 1, Action 1. Set rates for pricing at a level that will manage congestion, reduce VMT per capita, and improve reliability on the priced facility and in areas affected by diversion. HB 3055 delegates authority to the Oregon Transportation Commission (OTC) to set pricing rates for state highways in accordance with state legislation.	**OHP Policy 6.3, Action 6.3.D.** Utilize congestion pricing to reduce demand on interstates and freeways during identified high-demand periods (e.g. during peak hours) utilizing scheduled rate variable pricing. **OHP Policy 6.4, Action 6.4.A.** Evaluate implementation of road pricing as a strategy to limit or reduce future vehicular travel demand from planned land use development. **OHP Policy 6.5, Action 6.5.B.** Pursue congestion pricing strategies to manage demand so that the recurring congestion performance objectives are met during all hours of the day. **OHP Policy 6.5, Action 6.5.C.** Upon completing toll bond obligations, consider congestion pricing strategies for ongoing reliability and demand management purposes. **OHP Policy 6.9, Action 6.9.B.** Set rates, as appropriate, sufficient to: … Manage congestion to desired travel times, speeds, or reliability thresholds established for the project **OHP Policy 6.10, Action 6.10.H.** Analyze and consider reducing toll rates when funding needs are achieved for the infrastructure improvement but ensure that toll remains to help achieve statewide goals of congestion reduction, and support long-term administration, maintenance and operations. **OHP Policy 6.12.** Follow a hierarchy of revenue allocation for road pricing projects. Manage congestion through multimodal investments in biking, walking, public transportation and roadway infrastructure within the traffic and multimodal corridors
RTP Policy 1, Action 3. Reinvest a portion of revenues from pricing into modal alternatives both on and off the priced facility that encourage mode shift and VMT reduction per capita consistent with Federal and State law. Examples include, but are not limited to, transit improvements, bicycle and pedestrian	**OHP Policy 6.5, Action 6.5.A.** Evaluate available modal options prior to implementing roadway pricing to determine availability and accessibility of biking, walking and public transportation. During pricing project planning, develop investments, projects, and programs to support enhanced multimodal access through partnerships and investments beyond those that may be made from road pricing revenue. **OHP Policy 6.5, Action 6.5.D.** While developing the tolling project and/or road pricing application, collaborate with transit agencies, local jurisdictions, and other modal groups on the following:

improvements, and improvements to local circulation.	• Increase (or support) public transportation services, transportation option service providers, or biking and walking options to manage demand and increase mode shift within the project or project area • Understand and evaluate how the benefits of a better managed, less congested interstate or freeway may provide opportunities for new, expanded, or enhanced public and active transportation options • Pursue investments that produce reliable, emissions-reducing, and a competitive range of transportation options (bike, walk, bus, carpool, vanpool, etc.) to advance climate, safety, and mobility goals, and prioritize benefits to historically excluded and underserved communities. **OHP Policy 6.12, Action 6.12.A.** When considering a project that is solely Congestion Pricing without any specific freeway infrastructure project on the priced segment, transit and multimodal transportation options should be a focus for revenue expenditure consistent with the State's constitution and the policies of this section. This can be done through direct congestion pricing revenue allocation, when compliant with the Oregon Constitution, or through partnerships to support availability and enhancements to transit and other transportation services complementary to congestion pricing. **OHP Policy 6.12, Action 6.12.B.** Pair and supplement road pricing multimodal revenue with other funding sources to provide transit-supportive infrastructure, such as bus-on-shoulder, dedicated transit lanes, transit signal priority, and park-and-rides. Investments in carpools, vanpools, shuttles, and encouragement of other shifts to higher occupancy vehicles should also be considered as they may better match the needs of longer-trip users of the interstate and freeway system.
RTP Policy 2, Action 7. Reinvest a portion of revenues from pricing into communities with high proportions of people with low-income and people of color, and/or in Equity Focus Areas, consistent with Federal and State law. Use of these revenues should meet the transportation-related needs identified by the equity	**OHP Policy 6.1, Action 6.1.B.** Road pricing options must not conflict with, and should support, other statewide goals around sustainability and climate, health and equity, with an emphasis on addressing the needs of historically or currently underrepresented and underserved communities. **OHP Policy 6.6.** Equity must be considered and addressed in the design, implementation and management of road pricing. Equity efforts must focus on both "process equity" and "outcome equity," which are defined as follows: • Process equity means that the planning process, from design to post-implementation monitoring and evaluation, actively and successfully encourages the meaningful participation of individuals and groups from historically excluded and underserved communities.

communities and people most impacted. Examples include commuter credits and free or discounted transit passes, or improved transit facilities, stops, passenger amenities, and transit priority treatments.	• Outcome equity means that the toll or roadway pricing project will acknowledge existing inequities and will strive to prevent historically excluded and underserved communities from bearing the burden of negative effects that directly or indirectly result from the priced projects, and will further seek to improve overall transportation affordability, accessible opportunity, and community health. **OHP Policy 6.7.** Structure rates so as not to impose unfair burdens on people experiencing low-income and to advance equity. **OHP Policy 6.7, Action 6.7.B.** To the greatest degree possible, investments that are necessary to advance equity must be delivered at the same time as tolling begins, or beforehand. **OHP Policy 6.10, Action 6.10.B.** Provide discounts or account supplements for people who are experiencing low income and who are struggling to meet basic needs (e.g. food, shelter, clothing, etc.). **OHP Policy 6.10, Action 6.10.C.** Evaluate and implement a low or no cost rate system for low-income users.
RTP Policy 3, Action 5. Reinvest a portion of revenues on the priced system and in areas affected by diversion to address safety issues caused by pricing programs and projects consistent with Federal and State law. For example, through investments in transit, bike, and pedestrian improvements, or other investments in known crash reduction factors.	**OHP Policy 6.8, Action 6.8.B.** "Traffic Diversion" is part of the "project" and shall be considered as vehicles that move from a priced to a non-priced facility within: The "corridor," defined as the immediate area of impact adjacent to the priced facility, generally within 1 mile or as defined through the project-specific analysis as being impacted by the project. Additionally the corridor is limited to facilities that generally move traffic in the same directions. OR A broader geographic area because of lack of adjacent/parallel facilities, such as around bridges and/or major geographic barriers (rivers, mountains, ravines, etc.). Improvements to address such diversion may be considered and may be included as part of the project for safety, multimodal, or vehicular impacts when:

	Safety is negatively impacted by likely increases in fatalities or serious injury crashes as determined through predictive analysis3. AND/OR The multimodal system is negatively impacted by increased traffic volumes that worsen the Level of Traffic Stress for people biking or walking, increase risks for fatalities or serious injuries, decrease access or result in significant transit delays or make transit trips less reliable. AND/OR There is projected to be a substantial increase in traffic volumes on the local network (a volume/capacity ratio of 0.05 or greater4 between the no build and build scenario, and where the volume/capacity ratio is greater than 0.7 in the build scenario). **OHP Policy 6.11, Action 6.11.A.** Address impacts to neighborhood health, safety, and congestion within the corridor consistent with Policy 6.8, acknowledging that diversion, the choice of some drivers to choose routes off the priced system, may have impacts to adjacent communities. Coordinate with these communities and transit providers to address direct impacts when feasible.
RTP Policy 4, Action 6. Reinvest a portion of revenues into areas affected by diversion caused by pricing programs and projects consistent with Federal and State law.	**OHP Policy 6.8, Action 6.8.B.** "Traffic Diversion" is part of the "project" and shall be considered as vehicles that move from a priced to a non-priced facility within: The "corridor," defined as the immediate area of impact adjacent to the priced facility, generally within 1 mile or as defined through the project-specific analysis as being impacted by the project. Additionally the corridor is limited to facilities that generally move traffic in the same directions. OR A broader geographic area because of lack of adjacent/parallel facilities, such as around bridges and/or major geographic barriers (rivers, mountains, ravines, etc.). Improvements to address such diversion may be considered and may be included as part of the project for safety, multimodal, or vehicular impacts when:

	Safety is negatively impacted by likely increases in fatalities or serious injury crashes as determined through predictive analysis3. AND/OR The multimodal system is negatively impacted by increased traffic volumes that worsen the Level of Traffic Stress for people biking or walking, increase risks for fatalities or serious injuries, decrease access or result in significant transit delays or make transit trips less reliable. AND/OR There is projected to be a substantial increase in traffic volumes on the local network (a volume/capacity ratio of 0.05 or greater4 between the no build and build scenario, and where the volume/capacity ratio is greater than 0.7 in the build scenario). **OHP Policy 6.11, Action 6.11.A.** Address impacts to neighborhood health, safety, and congestion within the corridor consistent with Policy 6.8, acknowledging that diversion, the choice of some drivers to choose routes off the priced system, may have impacts to adjacent communities. Coordinate with these communities and transit providers to address direct impacts when feasible.
RTP Policy 5, Action 2. Set rates for pricing at a level that will reduce greenhouse gas emissions and improve air quality by managing congestion and reducing overall VMT per capita on the priced system and in areas affected by diversion. HB 3055 delegates authority to the Oregon Transportation Commission (OTC) to set pricing rates for state highways in accordance with state legislation.	**OHP Policy 6.1, Action 6.1.B.** Road pricing options must not conflict with, and should support, other statewide goals around sustainability and climate, health and equity, with an emphasis on addressing the needs of historically or currently underrepresented and underserved communities.

RTP Policy 5, Action 3. Reinvest a portion of revenues from pricing into modal alternatives both on and off the priced facility consistent with Federal and State law, to reduce overall emissions by encouraging mode shift and VMT per capita reduction, including transit improvements as well as bicycle and pedestrian improvements and improvements to local circulation.	**OHP Policy 6.8, Action 6.8.C.** "Mode Shift" shall be considered as the intentional movement of any person previously driving on the priced roadway to biking, walking, or public transportation systems. Such shift is desired and should be encouraged. Capital improvements can be considered, and may be included as part of the project to better accommodate and support increased demand on these multimodal systems, under the following conditions: • Increases in ridership or needs impacting transit capacity within the "public transportation corridor," which is generally defined as major routes that accommodate movement of people to similar origins and destinations as the priced facility. • Gaps exist in the biking and walking system that prevent network connectivity on potential high-use routes generally moving traffic in the same directions within 1 mile of the priced facility, except where corridor options are more limited due to geographical barriers.

Attachment 3
Comparison of 2023 RTP Update Draft Pricing Policies and OHP Policy 6

RTP Pricing Policy 1: Use pricing to improve reliability and efficiency of the transportation network, reduce VMT per capita, and increase transportation options.	**OHP Policy 6.3:** Use congestion pricing to reduce traffic congestion Reduce delays, stops-and-starts, and increase reliability of travel times through congestion pricing to improve overall mobility on Oregon's interstates and freeways. The intent of congestion pricing is to change some users' behavior so that they choose a different mode of transportation, time of day, route or not to make the trip. **OHP Policy 6.3, Action 6.3.C:** Pair pricing with other actions to address roadway congestion holistically, including the use of ITS technology, access control and management, increasing multimodal options and implementing other demand management tools. **OHP Policy 6.4, Action 6.4.A:** Evaluate implementation of road pricing as a strategy to limit or reduce future vehicular travel demand from planned land use development. **OHP Policy 6.5:** Design and operate congestion pricing projects to support shifting travel to off-peak hours and to biking, walking, and public transportation. **OHP Policy 6.5, Action 6.5.A:** Evaluate available modal options prior to implementing roadway pricing to determine availability and accessibility of biking, walking and public transportation. During pricing project planning, develop investments, projects, and programs to support enhanced multimodal access through partnerships and investments beyond those that may be made from road pricing revenue. **OHP Policy 6.5, Action 6.5.D:** While developing the tolling project and/or road pricing application, collaborate with transit agencies, local jurisdictions, and other modal groups on the following: • Increase (or support) public transportation services, transportation option service providers, or biking and walking options to manage demand and increase mode shift within the project or project area • Understand and evaluate how the benefits of a better managed, less congested interstate or freeway may provide opportunities for new, expanded, or enhanced public and active transportation options • Pursue investments that produce reliable, emissions-reducing, and a competitive range of transportation options (bike, walk, bus, carpool, vanpool, etc.) to advance climate, safety, and mobility goals, and prioritize benefits to historically excluded and underserved communities. **OHP Policy 6.8, Action 6.8.A:** Consider "capital investment" portion of a tolling or combined pricing project to be the direct costs of building the infrastructure such as a lane, road, or bridge and operational expenses.

	Capital investments for congestion pricing may also include multimodal investments consistent with Oregon's Constitutional restrictions and consistent with this policy. **OHP Policy 6.8, Action 6.8.C** "Mode Shift" shall be considered as the intentional movement of any person previously driving on the priced roadway to biking, walking, or public transportation systems. Such shift is desired and should be encouraged. Capital improvements can be considered, and may be included as part of the project to better accommodate and support increased demand on these multimodal systems, under the following conditions: • Increases in ridership or needs impacting transit capacity within the "public transportation corridor," which is generally defined as major routes that accommodate movement of people to similar origins and destinations as the priced facility. • Gaps exist in the biking and walking system that prevent network connectivity on potential high-use routes generally moving traffic in the same directions within 1 mile of the priced facility, except where corridor options are more limited due to geographical barriers. **OHP Policy 6.10, Action 6.10.D:** Incentivize high-occupancy vehicles, such as shuttles, vanpools, and carpools. **OHP Policy 6.12, Action 6.12.A:** When considering a project that is solely Congestion Pricing without any specific freeway infrastructure project on the priced segment, transit and multimodal transportation options should be a focus for revenue expenditure consistent with the State's constitution and the policies of this section. This can be done through direct congestion pricing revenue allocation, when compliant with the Oregon Constitution, or through partnerships to support availability and enhancements to transit and other transportation services complementary to congestion pricing. **OHP Policy 6.12, Action 6.12.B:** Pair and supplement road pricing multimodal revenue with other funding sources to provide transit-supportive infrastructure, such as bus-on-shoulder, dedicated transit lanes, transit signal priority, and park-and-rides. Investments in carpools, vanpools, shuttles, and encouragement of other shifts to higher occupancy vehicles should also be considered as they may better match the needs of longer-trip users of the interstate and freeway system.
RTP Pricing Policy 2: Center equity and affordability into pricing programs and projects from the outset.	**OHP Policy 6.1, Action 6.1.B:** Road pricing options must not conflict with, and should support, other statewide goals around sustainability and climate, health and equity, with an emphasis on addressing the needs of historically or currently underrepresented and underserved communities.

	OHP Policy 6.6: Center equity in road pricing Equity must be considered and addressed in the design, implementation and management of road pricing. Equity efforts must focus on both "process equity" and "outcome equity," which are defined as follows: • *Process equity* means that the planning process, from design to post-implementation monitoring and evaluation, actively and successfully encourages the meaningful participation of individuals and groups from historically excluded and underserved communities. • *Outcome equity* means that the toll or roadway pricing project will acknowledge existing inequities and will strive to prevent historically excluded and underserved communities from bearing the burden of negative effects that directly or indirectly result from the priced projects, and will further seek to improve overall transportation affordability, accessible opportunity, and community health. **OHP Policy 6.6, Action 6.6.A:** Engrain equity into decision-making processes and ensure equity outcomes are achieved when developing, implementing, and managing road pricing programs, by: • Ensure full **participation** of impacted populations and communities throughout the project and applications by identifying specific populations, groups, or geographic areas that will be used to discern equity. The Agency must be accountable and transparent. • Explore how road pricing application will impact overall household budgets, populations and communities and maintain **affordability**, in balance with other objectives. • Projects will identify ways to support multi-modal access through partnerships and expand **opportunities** for historically excluded and underserved communities. • Projects will consider the project impacts to outcomes such as community health, including air quality, noise, traffic safety, economic impacts and other potential effects in tribal areas and on historically or currently excluded and underserved communities. **OHP Policy 6.7:** Structure rates so as not to impose unfair burdens on people experiencing low-income and to advance equity **OHP Policy 6.7, Action 6.7.B:** To the greatest degree possible, investments that are necessary to advance equity must be delivered at the same time as tolling begins, or beforehand. **OHP Policy 6.7, Action 6.7.D:** Road pricing should not contribute to furthering financial indebtedness for people experiencing low income. This should be considered in the establishment of rates, discounts,

	exemptions, payments, enrollment, penalties or free travel options available to avoid further burdening people experiencing low incomes who are struggling to meet basic needs (food, shelter, clothing, healthcare, etc.). **OHP Policy 6.10, Action 6.10.B:** Provide discounts or account supplements for people who are experiencing low income and who are struggling to meet basic needs (e.g. food, shelter, clothing, etc.). **OHP Policy 6.10, Action 6.10.C:** Evaluate and implement a low or no cost rate system for low-income users.
RTP Pricing Policy 3: Address traffic safety and the safety of users of all modes, both on the priced system and in areas affected by diversion.	**OHP Policy 6.8, Action 6.8.B:** Improvements to address such diversion may be considered and may be included as part of the project for safety, multimodal, or vehicular impacts when: Safety is negatively impacted by likely increases in fatalities or serious injury crashes as determined through predictive analysis3. AND/OR The multimodal system is negatively impacted by increased traffic volumes that worsen the Level of Traffic Stress for people biking or walking, increase risks for fatalities or serious injuries, decrease access or result in significant transit delays or make transit trips less reliable. AND/OR There is projected to be a substantial increase in traffic volumes on the local network (a volume/capacity ratio of 0.05 or greater4 between the no build and build scenario, and where the volume/capacity ratio is greater than 0.7 in the build scenario).
RTP Pricing Policy 4: Minimize diversion impacts created by pricing programs and projects prior to implementation and	**OHP Policy 6.8:** Define a road pricing "project" as including, consistent with this policy, all of the following: any planned capital investment, traffic diversion, and mode shift that result from changes in travel behavior from the roadway price imposed. **OHP Policy 6.8, Action 6.8.B:** "Traffic Diversion"[1] is part of the "project" and shall be considered as vehicles that move from a priced to a non-priced facility within:

[1] When evaluating diversion, consider different users of the facility, the purpose of the priced facility and also the facilities that may see diverted trips. Understanding the facility primary purpose along with the diverted trip purposes and lengths may be valuable in helping to determine potential actions for diverted trips.

throughout the life of the pricing program or project.	The "corridor," defined as the immediate area of impact adjacent to the priced facility, generally within 1 mile or as defined through the project-specific analysis as being impacted by the project. Additionally the corridor is limited to facilities that generally move traffic in the same directions. OR A broader geographic area because of lack of adjacent/parallel facilities, such as around bridges and/or major geographic barriers (rivers, mountains, ravines, etc.). Improvements to address such diversion may be considered and may be included as part of the project for safety, multimodal, or vehicular impacts when: Safety is negatively impacted by likely increases in fatalities or serious injury crashes as determined through predictive analysis3. AND/OR The multimodal system is negatively impacted by increased traffic volumes that worsen the Level of Traffic Stress for people biking or walking, increase risks for fatalities or serious injuries, decrease access or result in significant transit delays or make transit trips less reliable. AND/OR There is projected to be a substantial increase in traffic volumes on the local network (a volume/capacity ratio of 0.05 or greater4 between the no build and build scenario, and where the volume/capacity ratio is greater than 0.7 in the build scenario). **OHP Policy 6.11, Action 6.11.A:** Address impacts to neighborhood health, safety, and congestion within the corridor consistent with Policy 6.8, acknowledging that diversion, the choice of some drivers to choose routes off the priced system, may have impacts to adjacent communities. Coordinate with these communities and transit providers to address direct impacts when feasible.

	OHP Policy 6.16, Action 6.16.A: Establish a monitoring and reporting program, which should include: vehicle speed, volume, driver pattern changes within the corridor (e.g. diversion or rerouting), levels of congestion, modal shifts, transit time and reliability, air quality, GHG emissions, and equity goals identified on a project-level basis. Data should capture the benefits and impacts to multimodal transportation, which includes: freight, light rail, transit, passenger vehicles (single and high occupancy), bike, walk, and telecommute. It is acknowledged that varying levels of data exist for these modes and thus information may vary by level of detail or frequency.
RTP Pricing Policy 5: Reduce greenhouse gas emissions and vehicle miles travelled per capita while increasing access to low-carbon travel options.	**OHP Policy 6.1, Action 6.1.B:** Road pricing options must not conflict with, and should support, other statewide goals around sustainability and climate, health and equity, with an emphasis on addressing the needs of historically or currently underrepresented and underserved communities. **OHP Policy 6.4:** Connect to our climate goals and targets Evaluate how potential applications of congestion pricing and tolling will help support state climate change goals and targets. **OHP Policy 6.4, Action 6.4.A:** Evaluate implementation of road pricing as a strategy to limit or reduce future vehicular travel demand from planned land use development. **OHP Policy 6.4, Action 6.4.B:** Reinforce congestion pricing project goals by underscoring the role of multimodal travel in meeting climate related goals through coordination with transit agencies and public information campaigns.
RTP Pricing Policy 6: Coordinate technologies and pricing programs and projects to make pricing a low-barrier, seamless experience for everyone who uses the transportation system and to reduce administrative burdens.	**OHP Policy 6.3, Action 6.3.C:** Pair pricing with other actions to address roadway congestion holistically, including the use of ITS technology, access control and management, increasing multimodal options and implementing other demand management tools. **OHP Policy 6.15:** Ensure interoperability of toll rate collection systems **OHP Policy 6.15, Action 6.15.A:** Deploy technology that facilitates interoperability with tolling systems of neighboring states whenever possible **OHP Policy 6.15, Action 6.15.B:** For any proposed tolling or congestion pricing project on an interstate or freeway, ODOT shall develop tolling systems that rely on all-electronic collection mechanisms and enable at least one manner of toll collection that does not require a transponder.

	OHP Policy 6.15, Action 6.15.C: For any proposed tolling or road pricing project on an interstate or freeway, ODOT will develop and utilize tolling technologies and systems that are based on common standards and an operating sub-system accessible by the marketplace where components performing the same function can be readily substituted or provided by multiple providers to the extent possible while compatible with tolling systems in Washington and California whenever possible. **OHP Policy 6.15, Action 6.15.D:** Provide a “cash preferred” option for paying road pricing fees in order to reduce barriers to use of the transponders.

Attachment 4: Comments provided by members of TPAC and MTAC on the 3/1/23 Draft of Chapter 3

1. Verde, Indi Namkoong, Transportation Justice Coordinator, (received 3/24/23)
2. Clackamas County staff, (received 3/26/23)
3. Washington County staff, Chris Deffebach (received 3/24/23)
4. TriMet (3/23/23)
5. Portland Bureau of Transportation staff, (received 3/27/23)
6. Multnomah County, Allison Boyd, (received 3/7/23)
7. Multnomah County staff, Allison Boyd, (received 3/23/23)
8. ODOT staff, (received 3/24/23)
9. ODOT, Chris Ford, Policy and Development Manager, (received 4/6/23)

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Dear Project Manager Ellis and Metro Staff,

Thank you for the opportunity to comment on the draft policies proposed for Chapter 3 of the 2023 RTP. My name is Indi Namkoong, and I am commenting as a TPAC community representative and in my capacity as the Transportation Justice Coordinator for Verde. Verde's mission is to serve communities by building environmental wealth through social enterprise, outreach, and advocacy. We were born in 2005 in NE Portland's Cully neighborhood, a neighborhood with more than its share of poverty, and less than its share of environmental assets. Cully is both where we do our place-based work and a symbol of the environmental justice communities we advocate for statewide; when it comes to transportation, this context leads us to pursue solutions that challenge the status quo to expand affordable and accessible options for clean and equitable transportation in our communities.

We believe that many of the draft policies proposed for Chapter 3 could lead to the expansion of those options in our region and to meaningful challenges to the barriers we've faced in the past; for this reason, with the exception of a couple of small recommendations for improvement, the bulk of my comments serve to highlight the policies we'd urge you to preserve in future drafts. Thank you all for your excellent work on this draft; I look forward to staying engaged as these continue to develop!

Pricing policies

> We are heartened to see your framework for pricing strategies; Verde believes pricing strategies hold enormous potential to reduce congestion and VMT while expanding clean, safe, and abundant transportation options for all of our communities. When well-designed, these policies can encourage the most beneficial effects of pricing in our transportation system while protecting affordability and access for people traveling by all modes of transportation. The specificity of these pricing policies is a particular strength; after all, who would actually be served by pricing policies that fall outside the specifications included in this draft? Under this framework, commuters would benefit from more efficient trips and/or more viable options for how to get to their destination, communities living in the highway footprint would experience a lower burden of air pollution, all of our communities would benefit from the emissions reduction, and with a well-tuned and equitable pricing policy, we wouldn't be asking people to pay out money they were unable to part with. This isn't necessarily true of any pricing policy; these are design features it makes sense to hold up as prerequisites for a program's inclusion in the RTP. If we want to have something as broad as pricing as a tool in our regional toolbox, we'd do well to be specific about what we do and don't actually want to see implemented.
>
> More specificity with regard to diversion mitigation would be a valuable addition to Pricing Policy 4; equity and existing vulnerabilities within neighborhoods should be taken

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into consideration here and named in the policy. One can imagine a strategy that would minimize projected diversion impacts from a project, but would also concentrate the remaining impacts in neighborhoods with minimal infrastructure for bike/ped and many residents who cannot afford to travel by car. The core of this policy is sound, but we'd like to see this language updated to discourage inequitable outcomes like this.

Mobility policies

We appreciate that these policies recognize that mobility justice is not at odds with our region's economic interests. We also see these priorities as interdependent. Our economy and our quality of life will both be better served by a transportation system that allows all people, regardless of income, race, age, or ability, to easily, safely, and reliably travel where they need to go when they need to do it. Many people in the communities Verde serves get around without a car by necessity, and many more would drive less if it was safer and more practical to walk, bike, or take transit; however, a legacy of car-centric planning has produced decades of unsafe streets, few sidewalks or bike lanes, and scarce transit connections in neighborhoods like Cully in Northeast Portland. We're hopeful for what this new framework for mobility in our region could do for communities like ours, and we urge you to keep these policies robust as they advance to an official draft.

Motor vehicle network policies

Verde strongly approves of the changes to Motor Vehicle Network Policies 5, 6, and 9. Historically, "business as usual" in expanding throughway capacity for motor vehicles has brought more air pollution, more traffic violence, and more exposure to climate & environmental hazards like heat islands for low-income communities and communities of color in our region. Our statewide climate goals will not be served by more of the same, and environmental justice communities would continue to pay with their lives and their health. The proposed changes to these policies are not a reckless overhaul of the motor vehicle system most people and businesses still, to varying degrees, rely on. They're common sense directives to find and use the best tool available for the job at hand. Given what we know about induced demand, the climate and public health impacts of increased VMT, and the devastation freeway expansions have historically delivered to low-income communities and communities of color, particularly Black communities, a decision to increase throughway capacity can't be made casually. These changes would support weighing out these factors and potential strategies to chart a path forward for projects that balance the needs of the transportation system and the needs of the communities who have to live with it.

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Transit network policies

For similar reasons, we're also supportive of the updates to the Transit Network Policies. Verde is currently working with Metro to facilitate community engagement activities related to high-capacity transit, so we've recently had the opportunity to speak to community members in Cully and nearby neighborhoods directly about their transit priorities. Reliability, frequency, and safety are top concerns and interconnected for many people; if a trip requires a person to wait by themselves for 30 minutes in a poorly lit area, or if two buses drive past a student traveling home from school because they filled up earlier on the route, taking transit becomes a less safe or practical option for them.

For this reason, we find Transportation Network Policy 2 particularly valuable; the problems our community members are sharing with us are the result of past policy decisions that have deprioritized infrastructure investments and transit improvements in communities like Cully, and to build a transit system that truly serves everyone, the RTP needs to prioritize projects that actively correct and compensate for the imbalances that already exist.

If you have questions or would like to follow up, please don't hesitate to reach out; I'd be happy to discuss any of these comments further. Thanks for your consideration and your work!

Warmly,

Indi Namkoong
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Clackamas County Staff Comments – Chapter 3

March 26, 2023

RTP Policies

Regional Transportation Equity Policies

- Change appear reasonable. Were reviewed by Metro Diversity, Equity and Inclusion department

Climate Smart Strategy Policies

- Ties directly to reduction in VMT
- New language is included which emphasizes "significantly increasing" the mode. We need to understand how that will be measured? Does this give greater weight to projects where more people already live and unintentionally penalize projects in the suburban areas?

- Policy 7 is long, and is a run-on sentence that includes too many concepts

  Current Proposed Language: Manage parking in mixed-use centers and corridors that are served by frequent transit service and good biking and walking connections to reduce the amount of land dedicated to parking, encourage parking turnover, increase shared trips, biking, walking and use of transit, reduce vehicle miles traveled and generate revenue.

  Recommended changed language Policy 7 : <u>Manage parking and provide good biking and walking connections to reduce the amount of land needed for parking.</u>

- Why is the Policy Map – Regional Emergency Transportation Routes?

Regional Mobility Policy

- Won't there be a Policy Map that has the existing VMT per Capita/VMT per Employee?

Regional Pricing Policies

- Be Clear that these are Roadway/Cordon and/or VMT Pricing policies, but not Parking pricing policies

Regional Motor Vehicle Network Policies

- Policy 6 – if there is a specific definition of "new capacity" it should be cited. Current language is too broad. Also, the "area" that is being measures for VMT reduction should be stated. Perhaps it should be changes to read –
  - When new capacity is being considered to address XYZ (congestion), evaluate the use of pricing and increased transit service to identify if those tools will address the needed reduction of traffic congestion and reduction in regional VMT per capita.

- Policy 9 – Difficult to understand what Policy 6 and Policy 9 are needed (repetitive?). What is the specific intent of these policies?
    - (Proposed Language)Prior to adding new capacity, demonstrate that system and demand management strategies, including access management, transit and freight priority, pricing, and transit service and multimodal connectivity improvements. cannot meet regional mobility, safety, climate, and equity policies consistent with OAR 660-012-0830

Regional Freight Network Policies

- Better describe what "Adapt future freight system investments to emerging technologies and shifts in goods movement, including the emergence of e-commerce and automated delivery systems" means. Should it be "Focus…"? OR "Future freight system internments should address emerging technologies…." While there was a presentation on the Freight movement study, I do pot believe this language was discussed at that time.

Regional Transit Network Policies

- Some of these policies address multiple issues and it isn't clear why. For example Policy 3 should be reworded to be clear that is about achieving the climate goals

  Prioritize transit investments that enable the region to meet state, regional, and local climate goals such as encouraging people to ride transit rather than drive alone and transitioning to a clean fleet that aspires for net zero GHG emissions,

- Why has "comfortable" been brought into Policy 1? What does this mean? Comfortable seats?
- Remove specificity of distance from Policy 5. See example below -

  High Capacity Transit: Complete and strengthen a well-connected high capacity transit network to serve as the backbone of the transportation system. Prioritize transit speed and reliability to connect regional centers with the Central City, link regional centers with each other, and link regional centers to major town centers.

- Policy 7 – do we need to call out "Better Bus Program" Could it just say "Prioritize capital and traffic operational treatments identified in the Enhanced Transit Toolbox in key locations or corridors to improve transit speed and reliability for frequent service."?

The Chapter 3 document that was provided was not in "cross out" format, so it was very difficult to discern all of the places where there was specific proposed updates. To complete the review, I needed to be looking both at the 2018 RTP document and the proposed Chapter 3.

1. Appreciate the edited down version of Purpose.
2. Chapter Organization. Less is more. Much of the information should be in appendices instead of trying to include it all in the RTP document.

- Interesting inclusion of (1) policies related to implementing the 2040 growth concept, (2) pricing and (3) support multimodal mobility

3. Why the inclusion of "all streets" in the definition of Regional transportation System Components #2 (in 2040 centers). Privately owned? Local?
4. Moving the 2040 Growth concept into chapter.
   - Map needs to be updated
   - Will it have its own Policies and Actions? Explain the Table 3-2 Priority Infrastructure Investment Strategies. How is this table used?

5. Transportation Equity Policies
   - Appreciate the reduction of words in introduction.
   - Appreciate the clarity in 3.2.2.2 related to communities included in the Equity Focus Areas
   - The Actions have been revised from what was in the 2018 RTP
     - Too much detail. Would be sufficient with to have the numbered items without the sub (a) , (b) … items, especially under #2
     - The use of the word "ensure" is unrealistic. For example, Policy #2 could be changed to say – "Invest in the transportation system to support community…"
   - Why have the Actions under Policy 2 been changes to read "Plan" instead of "focus"? What does it mean to plan capital transportation investments to include a compendium of strategies…?
   - Who and how are "regional partners" supposed to demonstrate how intersectional issues are being addressed in plans? How is this being done in the RTP?
   - What is a "compendium"?
   - Who is making sure all of these action are being done?
   - Why is the statement "Also see Transportation Equity Policy 4 added to the fourth action of Policy 4? Is this circular?
   - Action 5 should point to the Transportation Planning Rules for the rules on inclusive decision making. CFEC was just an acronym for a process that updates the TPR

6, Safety and Security
   - Why is the new map overlaid onto the 2040 centers instead of the Equity areas?
   - I love that there are just Safety policies and no Additional Actions. Can we do that for the other topics ☺ ?

7. Climate Leadership Policies
   - Policy 1 – Aren't all of these policies to meet regional targets? Remove "to meet regional targets" from the end of the policy. Perhaps the policy should be revised to read
     - **Policy 1: Implement adopted local and regional land use plans and strategies <u>as a tool</u> to reduce vehicle miles traveled per capita.**
   - It is not clear why we need to continually add "prioritize" in to the policies. At some time we should pull together all of the policies that include the word prioritize to fully understand what the RTP prioritizes. Honestly, I don't think one JPACT session on the Climate is sufficient to be adding the word prioritize to these items.
   - Per earlier comment Policy 7 needs to be reworded
   - Will there be an update to Appendix J to report on Implementation progress?
   - There needs to be additional Policies developed that support the work of the Emergency Transportation Routes and other resiliency work.

8. Pricing Policies

- Is there a way to reduce the amount of detail in the background section and just refer to an appendix?
- Too much detail related to CFEC. Perhaps mention that there were changes to the Transportation Planning Rule that direction local governments to make changes to their minimum parking standards OR adopt other policies and programs to address the reduction of parking mandates.
- Highly recommend doing more summary and less words. Perhaps stick to "What did Metro Learn and Key Findings." Maybe some of the stuff on Equity.
- Focus the Policies on Roadway, Cordon and VMT pricing, NOT parking pricing. Add a sentence that while pricing of Parking is a tool, the Regional Pricing Policies are directed at VMT, Cordon and Roadway pricing
- Add an "action" under Regional Pricing Policy #4 that addresses the need to develop a program that looks at the system comprehensively before implementation of pricing on a portion of the network to understand the implications of diversion and minimized disruption during implementation.
- Why is there the "key terms" section? Hopefully this will all be in a glossary in the end of the document.

Mobility policies

- Has the word "Regional" been inadvertently dropped? The title of the Section should read "Regional Mobility Policies"
- This paragraph which is above the policies is a duplication of what was said at the beginning
    - Within the Portland metropolitan area, the State of Oregon and Metro have a shared goal of providing mobility such that people and businesses can safely, affordably, and efficiently reach the goods, services, places, and opportunities they need to thrive by a variety of seamless and well-connected travel options and services that are welcoming, convenient, comfortable, and reliable. The following policies aim to achieve these outcomes.
    - It should be edited to read: "The following policies aim to achieve the above described outcomes."
- Should the word "Draft" be deleted form Table 3-5?
- We need to have a FULL TPAC meeting to discuss how these were used as a part of the RTP analysis and if there are any resulting changes.
- When do we get to see the VMT district map?

Regional Mobility Corridor Concept

- Can we change the name of this to "Regional Mobility Corridors"?
- Were there really "Updates to these strategies will be informed by the Regional Mobility Policy update described in Chapter 8"? (Bottom of Page 3-71)

Regional Design and Placemaking Vision and Policies

- I love that there are policies and no specific actions ☺

Regional Motor vehicle network policies

- Per previous statement. Policy 6 and 9 seem repetitive. Please describe why each are needed.
- See language on the middle of Page 3-89 that still refers to "beyond the planned system" but that was taken out of the Policy language.

Regional Transit Network Policies (3.3.5.3)

- A cross out version of the section is needed to provide more detailed comments
- Is this our only opportunity to comment on this Section?

Regional Freight network vision and policies

- Reword policy 8 per previous suggestions
- It seems that Hwy 213 into Oregon City should also be designated as a "main roadway" route because it access key employment land and area to the south (Molalla etc) as well as 99E south to Canby. Hwy 213 and Hwy 99E are freight truck routes on the Clackamas County Freight map

Active Transportation, Bikeway, Pedestrian –

- No changes – No comments

Transportation System Management and Operations vision and policies

- Missing the TSMO policy 2 detail on page -150/151

Transportation Demand Management

- Pulled out of TSMO section. Makes sense

Emerging Technologies

- Moved from previous location. No changes

Interesting deletion of section 3.12 – Moving from Vision to Action.

- Was this purposeful?

Attachment 4: TPAC/MTAC comments on March Draft of 2023 RTP Ch. 3

To: Kim Ellis

From: Chris Deffebach

Subject: 2023 Regional Transportation Plan Policies

Date: March 24, 2023

This memo summarizes comments from Washington County Land Use and Transportation staff on the 2023 Regional Transportation Plan policies proposed in the March 8 TPAC Workshop packet and dated March 1.. Thank you for the extended time to provide comments. One of the comments Washington County Coordinating Committee made during RTP scoping process was to allow for more time to review and understand the RTP policies. The policies are significant and deserve time for review.

Our staff comments are organized by general comments that apply to all policies and then by each of the eight policy areas. The track changes version of the policies in the March 3 TPAC packet is useful to see what is new/changed. Though our comments focus on what has changed, some of our comments are on the existing 2018 policies where it seemed relevant.

GENERAL OVERALL COMMENTS:

Separate policies from actions. Some of the policies include statements for how the policy should be implemented. This memo highlights some of these under each policy. Moving the 'how' to the actions section will shorten the policies and make them more targeted.

Delete terms like prioritize or ensure in the policies. Just state the policy and develop priorities for allocating funds through the MTIP /RFFA or other processes. The terms are used so frequently that they lose effectiveness. Plus, we can never 'ensure' no matter how hard we try.

Drop the directive terms to what regional partners or jurisdictions should do. These terms, such as ":To implement ___ regional partners should take the following actions:" don't belong here and sometimes it is Metro that should take the actions. Save these directives for the Regional Transportation Functional Plan. The language from the 2018 RTP (actions to implement…) was fine.

Move background text to appendix, when possible. The introduction in the March 8 TPAC packet indicates that some sections, freight and safety, have separate documents to reference for action items. Much of the text in the policy chapter could be moved to an appendix too.

Thriving economy. This RTP goal lacks policies and actions to support it. There are opportunities to refer to supporting a thriving economy in some existing policies. The notes before identify a few, but more direction on achieving this goal is needed.

Policy action sections. These lack consistency. Over time, would be good to sync up.

OVERARCHING SYSTEM POLICES

This section moved from Chapter 2 to Chapter 3 policies. No big deal – it was fine in Chapter 2 because it serves as the guide for more than transportation.

TRANSPORTATION EQUITY POLICIES

Policy 1. Drop the wording that describes how to achieve this policy starting with …by assessing the benefits and impacts of… and move it to the actions section.

In all – consider adding reference to persons with disabilities. Text starting on page 3-9 references OAR 660-012-0130 which also includes persons with disabilities.

Text following all policies and actions is long. Consider moving some of this to an appendix and/or how much of it needs to be included. Second and third paragraphs under transportation equity policy 1 say what must be done (Equity considerations must reflect… and Transportation investments must consider…) This language sounds like additional policy. This could be rewritten as actions (reflect equity considerations in …or..consider the different ways transportation …) and fold them into actions in the section on actions. In addition, this text reads like a scope of work, it says so specifically what must be done. This seems like more than needed and more than in other sections.

The text listing the actions for policy 1 are very detailed and somewhat repetitive with the paragraphs above.

Policy 2. Define Community stability to be clear it doesn't conflict policies that support using transportation investment to catalyze development or implement other policies (eg middle housing).

Policy 3. This policy and all of the actions include too many priorities to be helpful in knowing which is the real priority (all?). In 7a instead of Ensure, say Support long term sustainability.. (we can't ensure anything).

Policy 4 – Nice job shortening this policy, and others, by dropping the 'how to do it' language.

SAFETY AND SECURITY POLICIES

3.2.3.3 – thank you for including the flexibility that allow transportation agencies and stakeholders to identify other safety investments based on other data and analysis.

Policy 1-9 – some of these sound like actions (saying how to implement policy 1). If the reference to system adequacy and deficiency in policy 9 is the only reference to seismic and emergency routes, it should be highlighted to be clear.

CLIMATE LEADERSHIP POLICIES

Policies 2, 3 and 5 are all priorities. Lots of priorities. Some of the policies could be actions (provide information and financial incentives is the action to expand the use of travel options.

This section discusses emergency transportation routes (not seismic) but does not have a policy to support development of emergency transportation routes. Add a policy saying to develop and maintain emergency transportation routes.

Policy 7 covers parking management. Since parking pricing in the congestion pricing section has caused some head-scratching, suggest adding pricing as one of the climate tools in this policy and dropping it from the congestion pricing section. The language already refers to managing parking as a way to generate revenue.

Policy 9 is an outlier as it is the only policy that calls for securing adequate funding for implementation. This should be a policy for all of the RTP – or say why we only are seeking funding for climate policies.

The Climate Smart actions are in a separate document – but it seems like they could be folded in here and use the appendix as a reference document.

PRICING POLICIES

Reference to the Thriving Economy goal can be included in the introductory section How can pricing help our region? By adding it to the list.. " Pricing can be a key tool to meet state, regional and local goals around mobility, climate, safety, equity and a thriving economy."

Also in the introduction that starts with Pricing can have positive impacts on safety.. point out that pricing can also contribute to safety risks if vehicle traffic increases on local roads as a result of diversion. (eg point out both sides of the story).

The added call out for benefits to freight and business is good.

3.2.5.1 Best practices for revenue reinvestment. Revenue reinvestments are described as key considerations and as potential options yet the text under key considerations is written as 'should' which is prescriptive. Recommend dropping the should and just list the considerations. This isn't the place to dictate how it should be spent, but considerations are ok.

3.2.5.2 – this section is all good, but long. Consider moving it to an appendix.

Policies 1-6 are so much better now! Could shorten Policy 1 by stopping after options. The rest (through congestion management, investments… transitions into an action item for how to accomplish it)

The descriptive texts after the policy and before the actions includes several 'should be' which sound like policies – they are already covered in the policy language, don't add anything and the directives (how) can be in the actions. The focus should be on the policies and actions. The additional "shoulds" add confusion because they read like policies or actions.

There is a lot of redundancy in the actions in the policies. Thinking of how to consolidate… consider an approach like used later under the mobility policy.

Policy 4 descriptive text– drop the reference to looking to the City of Portland high crash network for which to prioritize safety improvements. This is too geographically specific given the geographic breadth of potential diversion and safety consideration.

Policy 6 language is missing (p 3-52) which you probably saw.

Key terms – consider dropping parking pricing and referring only in the climate policy. The action items and revenue directives don't apply at a local scale and are not regionally significant.

MOBILITY POLICIES

In general, drop the 'ensure' and 'prioritize' language in the mobility policies eg Use ~~Ensure~~ land use and transportation decisions to. We will have more comments on the mobility performance measures and targets when available after April 2022.

The actions are organized under system planning and under plan amendment

System Planning Actions apply to TSPs, ODOT facility plans, corridor refinement plans and concept plans for urban reserve areas. Under implementing action 1, its not clear what happens if the VMT/capita or VMT/employee target is not met in a new urban area. Does that mean that Metro can not approve the UGB expansion?

Add tables 3 and 4 of the guidance document – or have available to understand implications of action 3. (rather than look for another document -these sound important)

Plan Amendment Actions. Not clear how effective more bike lanes/sidewalks will be in reducing VMT/employee or /capita in new urban areas where TriMet does not provide transit service. The county can pursue first/last mile options – which need to be recognized as an acceptable approach.

Additional comments:

- Reducing vehicle miles traveled per capita, means reducing the amount people move. By definition, this is a policy intended to reduce mobility. I suggest calling this the "efficiency policy" rather than the mobility policy and rewording as appropriate.

- The "how the measures work together" section starting on page 3-60 is likely premature. Until we have VMT numbers per district and start working with real applications we're not going to know what issues will come up. It is likely that adjustments to the defined structure, including the chart on page 3-68, will be necessary as the new measures are applied in practice.

- The references to the TPR should not reference section -0060 as other sections may also be applicable (notably section -0325).

- Table 3-5 on page 3-59 indicates that for plan amendments "The plan amendment will have equal to or lower forecast VMT/capita for home-based trips and equal to or lower forecast VMT/employee for commute trips to/from work than the District." Suggest adding the word "**target**" at the end of the sentence. A particular land use change might result in greater VMT, but still be within a district wide VMT target. This would also mean the evaluation consider and establish VMT targets by district rather than just report the model results.

REGIONAL NETWORK VISIONS, CONCEPTS AND POLICIES

Regional mobility corridor concept – no changes proposed. Recommend the mobility corridors be amended to include a N-S route such as 185th and Roy Rogers Road or River Road/Tile Flat, Clark Hill – the roads that connect Hillsboro to Tigard and/or Sherwood. These areas have developed, as has the travel demand. These are as much a corridor as Corridor 24 (C to C). by not listing them a corridor, the area misses out in eligibility for improvements highlighted in other policies (eg pricing). We have seen

increased use of these roads due to congestion on 217, US 26 (diversion), as well as more commuters traveling to jobs from Yamhill County and beyond. Columbia County is a corridor into Portland – it should also connect Columbia County to Hillsboro to pick up our new state highway – Cornelius Pass Road.

Design and Placemaking Policies. Important to continue to allow local design flexibility in achieving these policies. Changes or reductions in design features are sometimes necessary to avoid large right of way costs that would make the project unaffordable (i.e. constrained ROW due to existing buildings or natural features).

A few notes:

- can't read figure 3-28 or table 3-6 enlarge to full page size
- street trees, while beneficial, create additional maintenance costs if located in public right of way which should be noted.

Regional motor vehicle network vision and policies. Really important to provide adequate spacing for major and minor arterials (or as Washington County says arterials and collectors). A policy on limiting neighborhood and local street (or collectors in Metro's terms) access to arterials should be highlighted. Access management is an important tool to improve safety and mobility. The distance between access points also preserves the arterial function (speed and volume). Consider adding a sentence to Policy 7 that says: "Limit access to arterial streets to other arterial or collector level streets to maintain safety and mobility."

Policy 6 is too broad. Capacity is defined to focus on through lanes and eliminate turn lanes of certain lengths. Also need a definition for what it means to evaluate pricing before capacity is added. This could be as simple as as a check list of pricing considerations. The viable pricing options to consider when completing a 5 lane arterial is different than adding throughway capacity. Something simple such as does it pass threshold for when pricing would be reasonable is needed. Who and when decides if this has been completed, when the 5 lane arterial is in adopted plans.

Policy 9. For this to be workable, need some checklist approach to make it easier and consistent to determine if system and demand management strategies have been met. Explain why we need this in both the TPR and the RTP. As a land use action, we will need to make findings for both and want to avoid conflicting interpretations of the same language. These comments are especially important with the removal of the language of 'beyond the planned system of motor vehicle through lanes'. Because it takes years to construct a road, and other plans are built upon the adopted TSP improvements and because it takes years between TSP updates, we need the certainty of being able to refer to adopted plans for these projects.

A clear definition of 'adding new capacity' would be helpful – there have been mixed messages on whether improving an existing two-lane road to a three-lane road (with a center turn lane) is considered to be adding capacity. If analysis has already been done showing the need to adopt a future improvement into the TSP, the goalposts shouldn't be then moved to require additional analysis to implement an already adopted project. It would be reasonable to require a new level of analysis for *new* TSP amendments for capacity adding projects. This definition could be a footnote or box.

Congestion management process. The congestion management process is related to the steps to evaluate before adding capacity in the new urban mobility standards and in policy 6 and 9 of the motor vehicle policies. Explore if this section can be folded into the mobility or motor vehicle policies as an implementation tool along with appendix L of the 2018 RTP. Its worth clarifying the relationship between following the FHWA process and actions listed in the mobility and motor vehicle policies. Pricing is referenced in the congestion management toolbox and in the appendix L guidance but not described as to what it means to 'consider' pricing as a tool. This comment relates to the comment above in the motor vehicle policy that some guidance as to what expectations are for it.

Regional transit network vision and policies. This section is too long. Some proposals to shorten it:

- The definitions, from 2018 RTP, can be shortened with some editing. I'm not going to include edits here - you have good editors at Metro. Start with defining frequent transit –(15 min or better,) convenient transit (rider experiences, service coordination) Accessible transit (safe bike and walk routes) and affordable transit (low income fare program). List first/last mile service as a separate category where standard bus routes are not cost-effective including Park and Ride, shuttles, micro transit. (or fold into accessibility) If this is the main definitions page, add Better Bus and HCT definitions too.
- Under 3.3.5.1, replace last sentence to align with role of counties per STIF: In 2017, the state legislature, through HB 2017, designated Clackamas, Multnomah and Washington Counties as Public Transit Service Providers (PTSB) and receive funding from the Statewide Transportation Improvement Fund to implement transit services to meet goals established by HB 2017 and further outlined in OAR. The PTSBs provide a variety of services in areas not well served by fixed route transit.
- 3.3.5.2. last paragraph change the tense to… the map shows current and planned routes identified in Clackamas and Washington County's transit development plans.

Policy 1. Make this policy more pointed by adding at the end,… **particularly for communities of color and other marginalized communities.**

Policy 2: Drop this policy. the edit proposed in policy 1 should cover it. " equitably prioritizes service" "proactively supports stability of vulnerable communities" are undefined terms.. (and as previously stated, drop the 'ensure' and too many prioritize.

Policy 3 ; Delete the "Prioritize our investments to" and say "**Create a transit system that increases ridership and reduces greenhouse gas emissions in support of our regional, state and local climate goals.**

Policy 4: This is about operations and maintenance. So revise to lead with "Operate and maintain the region's transit infrastructure to improve safety, reliability and resiliency while minimizing life-cycle cost.

Policy 5 – drop the reference to prioritizing transit in mobility corridors. We have many areas with frequent service (eg 185th) that are not designated as mobility corridors. This point can be covered with something like **Complete a well-connected transit network with frequent service on arterials linking centers and corridors.**

Policy 6 This is too long. Drop the third sentence completely; it should already be covered in a definitions section for HCT. The first sentence should refer to transit system, not backbone of transportation system. The corridor spacing of 1/2 mile is too close for HCT. If you want policy statement on HCT corridor spacing, that should be separate. Suggest revising to "**Develop a well-connected high capacity transit network along high demand travel corridors to serve as the backbone of the transit system."**

Policy 7. Drop reference to Better Bus concept unless it is defined in a definitions section. And drop the prioritize. Suggest: **Improve transit speed and reliability on key locations and/or corridors with capital and traffic operational improvements identified in the Enhanced Transit Toolbox** (only keep the last part in if enhanced transit toolbox is described)

Policy 8. To Evaluate something isn't really policy. Suggest – **improve service coordination and expand commuter rail and intercity transit service to neighboring communities and other destinations outside the region.**

Policy 9. Shorten this by focusing on the policy of improving accessibility. Suggest: **Increase access to transit with improved pedestrian and bicycle facilities and first/last mile connector, new mobility services and park and ride.**

Policy 10. Not sure what the purpose of this one is. If it is about on-demand services, Suggest: **Improve transit service convenience and efficiency for mobility impaired riders**

Policy 11. Can't ensure. Suggest: Make transit affordable, especially for low income riders.

Transit policy actions: pages 3-107 – 3-120. These aren't written as actions in the same way as other policies – the text describes the policies There is really too much here – is it all needed?

Reference to the need for a first last mile study, top of page 3-112 – describe why Metro should care about the rural area. If include this, put it in context of Policy 9 and the need for service coordination. Rural areas do not have a lot of people living there . In Washington county these needs are met with on-demand ride services– are you thinking of small cities outside of the Metro area when you say rural? Finally, this doesn't seem like the chapter to identify needs.

The long section on Better Bus and other descriptions in this chapter could be covered with a definitions section. And the reference to ½ mile for HCT corridors seems too close to be cost-effective. At least qualify that ½ mile for densely developed corridors where ridership demand is high and HCT investments can be cost-effective.

The text under policy 8 should reference improvements to WES since there is a reference to commuter rail.

Regional Freight network vision and policies. No comments. Appreciate timely reference to ecommerce. After more experience, the RTP may have a policy in terms of promoting or discouraging when all the costs and impacts are better understood.

Regional bike and pedestrian network concept and policies. No comments, except eliminate use of the word 'ensure'

Transportation System Management and Operations Vision and Policies and Transportation demand management concept and policies. Support breaking apart TSMO and TDM. This allows TSMO to focus on integrating tools and technologies and TDM to focus on more marketing/incentives for use of travel options. No comments (except drop the Ensure and policy 4, TDM, just say improve access to travel choices (drop the focus TDM efforts on)

Emerging technology policies – no comments; moving to this section makes sense.

Attachment 4: TPAC/MTAC comments on March Draft of 2023 RTP Ch. 3

TriMet comments on RTP policies:
3/23/2023

General comments:
Ensure or Prioritize or "Should" language is overused.
Policies don't need to dictate HOW to implement policies, actions should cover those.

Regional Transportation Equity Policies (p.2 of attachment)

- No mention of inclusive community engagement in this
- Policy 7 – One place where including some of the old language about how to implement could be useful. Blending of old and new: "living-wage career pathways for people of color and women into the construction industry" is an improvement in intention and specificity. Pair that with the clarity of action that governments and agencies can take "through inclusive hiring practices and contracting opportunities" and it would be a better statement.

Regional Safety and Security Policies

- Would a reference to resiliency, emergency services and/or climate mitigation be included somewhere in this list? Has been brought up that needs inclusion.

Climate Smart Strategy Policies

- Policy 8 – any way to include mention of transit fleets specifically for supporting zero emission vehicles?
- Policy 6 – suggest adding "to reduce VMT" to the end or add "non-SOV travel options"
- Policy 7 – is there a clearer way to frame level of biking and walking network quality besides "good"?
- Seems like there should be some reference to telework as a strategy to reduce emissions, especially after last TPAC/MTAC workshop?

Draft Regional Pricing Policies

- Policy 1 – leaves unsaid which jurisdictions/agencies need to invest in congestion management, Perhaps consider something like "use congestion management charges to invest in…"?
- Is there a comparison of how these policies differ from the revised OHP amendment? I think that will be important to better understand how these will be applied.

Regional Design and Placemaking Policies

- Seems like there isn't anything about character, identity or place in these policies? Really just transportation design?
- Policy 2 – consider adding something like "…with priority on safe and sustainable mobility for people and movement of goods."

Regional Motor Vehicle Network Policies

- Policy 6 – since the policy is only to evaluate I'm not too concerned about the potential financial impacts of adding transit service as an alternative to building new capacity, but if there is a way to edit in some kind of statement about additional transit (not just service, also capacity) or other demand management tied to road pricing not being on the hook to deliver unless feasible to meet operating cost per rider and ridership targets

Regional Transit Network Policies

- Policy 2: "*Ensure that the regional transit network equitably prioritizes service to those who rely on transit or lack travel options…"*.
    - Use of ensure and prioritize is problematic here. This prioritization could be in conflict with the other policies of reducing region-wide VMT or building ridership.
- Policy 5 – Delete "complete and…" Start with strengthen. No one knows what a "complete" HCT system looks like. As long as there is any growth (or desire for more sustainable higher-capacity transit in any given area), there may always be another project, especially when we include BRT. Also, would prefer to remove second sentence – level of detail not necessary in a policy: Corridors should generally be spaced at least one half-mile to one mile or more apart and serve mobility corridors with the highest travel demand.
- Policy 6 – instead of complete "continue to build out". Transit network is always evolving and won't be "completed"
- Policy 7 – instead of "prioritize" say "partner with roadway owners and local jurisdictions to make capital and traffic operational treatments in key locations or corridors" Referencing Better Bus program or ETC Toolbox seems too prescriptive and confusing since these programs have two different names.
- Policy 8 – If corridor spacing language remains above, would like to add: "unless it parallels other high capacity transit or rail corridors" to this policy.
- Policy 11 – Revise to: Make transit affordable, especially for low-income riders.

- New comment: Is there a need for a specific policy to identify the need to increase funding for transit to allow the service levels and transit vision called for in the RTP? This is sort of implied in Climate Smart Policy 9 *("Secure adequate funding for transportation investments that support the RTP climate goal implementation of the climate smart strategy")*, but I think it should be reiterated in the Regional Transit Network Policies with a specific callout for new funding for transit operations if the vision is to be achieved. – Perhaps more appropriate for the report or chapter language.

Regional Bicycle Network Policies

- Policy 1 – Seems to contradict Policy 1 under Ped. Maybe this should read "…trips between one and three miles."

Transportation System Management and Operations Policies

- Policy 1 – small typo near start of statement "…in for…"

Transportation Demand Management Policies

- Policy 2 – remove Ensure, start with "Adequately fund" also, is "essential services" defined anywhere?

Attachment 4: TPAC/MTAC comments on March Draft of 2023 RTP Ch. 3

PBOT Staff Comments on Draft RTP Policies in Chapter 3

Transit Policy Comments

Both here and in the Climate Smart policies, there is a fair amount of new "prioritize" language. In each case the intent is understandable and laudable; however, we have heard others raise concerns that this could lead to confusion about what should be invested in first or most heavily ("If everything is prioritized, then nothing is"). We interpret the draft policy language to be pointing out these investment priorities as articulation of desired outcomes within the Performance Management framework that Chapter 3 lays out, with the intention of encouraging investment that optimizes across these goals rather than intending to rank one over the other. This seems consistent with JPACT and Metro Council direction on the Vision, Goals and Objectives. If Metro staff shares our perspective on the intent of this proposed approach, we are hopeful that this description might help others be more comfortable with the language as proposed. If something else is intended, and that this language is intended to have a different outcome from that RTP policy direction, it would be valuable to better understand that intention.

At the same time, it doesn't mean that there are no potential tradeoffs among these goals. Indeed, that is the delicate balancing needed to successfully optimize across those outcomes, which will require equitable and effective public engagement being combined with analysis and professional judgement to understand these intricacies.

As an example, while we are supportive of the goal of ensuring affordability in Policy 11, it is important to note that additional revenue may be necessary to ensure sufficient operating budget so that there are not tradeoffs between expanded fare subsidies and service levels necessary to make transit "frequent, convenient and accessible." Similarly, for those concerned about fare increases, consideration would be necessary to ensure sufficient revenues are available to subsidize fares without requiring additional fare increases. Additionally, articulating the associated goals of the policy might be helpful, akin to the language around ridership in Climate Smart Policy 2, for example.

On Transit Policy 6, the spacing proposed seems appropriate for the region's initial focus for the HCT network; namely, light rail. However, we would suggest that it may not be fully appropriate as we consider other tiers with the service typology depicted in Figure 3-26 (including those within the HCT part of the spectrum), both in terms of the spacing between higher and lower level tiers as well as between elements of the same tier (for example, between arterial BRT lines, if the arterial network spacing is itself narrower than that due to intensity of development, topographical or other considerations. We would recommend that this be an area that the HCT Strategy TAC take up as they refine their work in the coming weeks, with the goal of having intentional policy for each of the key elements of the framework. An arterial BRT network seems a sufficiently new and distinct entry to the space that it could potentially use its own set of policies on network design.

Finally, in terms of our ongoing evolution in the space, we'd just flag that there is a mix of use of Enhanced Transit and Better Bus language in the draft chapter (including in Figure 3-26). We see language around the Enhanced Transit toolkit being used in the Better Bus program in Policy 7, which seems a reasonable way to relate each of the terms to each other and their role and would encourage consistent use through to minimize potential confusion.

Pricing Policy Comments

Our central concern is that, as written, the draft policy applies singular sets of principles and policies and related actions across all of the pricing types addressed, including parking. The draft language appears to be strongly informed by the numerous discussions at the JPACT table around the current ODOT tolling projects and related MPO actions. However, the entities and facilities involved, the kind and geography of impacts to be mitigated, and the appropriate kinds of reinvestment priorities can and do vary across the pricing typology.

In order to have more implementable policies, we suggest that we tease out some more nuances of each tool's current or future use and the relevant policy considerations and reinvestment priorities to apply, perhaps using a crosswalk type approach.

A primary example of the need for this additional nuance regards parking. While it is clearly a tool that can advance a number of the same goals as the other types of pricing. It is also not a new tool, like the other are. It is an existing tool and cities have existing policies and investment priorities which need to be acknowledged. Parking is also a localized tool which doesn't have multijurisdictional impacts in the same way, neither does it lead to some of the potential impacts like diversion in the same way.

The policies themselves are not necessarily problematic on their face, but the accompanying proposed actions are where their application to things like parking pricing feels potentially inappropriately constraining for what is a localized strategy with localized impact.

A key question that could lower our and others' concerns about this regards how we are supposed to interpret the proposed actions and the "should" language those actions often use. Are these best practices or policy?

Here is a salient example of how the actions seem very geared toward ODOT running tolling/congestion pricing, not a parking management program:

To implement Pricing Policy 1, agencies developing pricing programs or projects should take the following actions:

1. *Set rates for pricing at a level that will manage congestion, reduce VMT per capita, and improve reliability on the priced facility and in areas affected by diversion.*
2. *Collaborate with relevant state, regional, and local agencies and communities when setting, evaluating, and adjusting program or project specific goals.*
3. *Reinvest a portion of revenues from pricing into modal alternatives both on and off the priced facility that encourage mode shift and VMT reduction per capita. Examples include, but are not limited to, transit improvements, bicycle and pedestrian improvements, and improvements to local circulation.*
4. *Identify opportunities to partner with other agencies to fund or construct transit, bike, and pedestrian improvements. Work with transit agencies and other jurisdictional partners, including consideration of opportunities identified in the High Capacity Transit Strategy and Regional Transit Strategy, to determine additional revenue needs and pursue funding needed to develop transit-supportive elements, expand access to transit, and to ensure equitable investments,*

particularly in cases where such improvements cannot be funded directly by pricing revenues due to revenue restrictions.

5. *Consider non-infrastructure opportunities to encourage mode shift and reduce VMT per capita, including commuter credits, funding for transit passes, bikeshare and/or micromobility subsidies, partnerships with employer commuter programs, and carpooling / vanpooling. Consider higher benefits, subsidies, discounts or exemptions for people with low-income or other qualifying factors based on equity analysis.*

In terms of a potential crosswalk of the factors noted above and the typology of pricing covered in the RTP, here is a starting proposal that builds on some of the draft work already in the chapter (specifically Tables 3.3 and 3.4), but would continue to tease out the nuance within various elements of the typology:

	RUC/VMT Fee	**Cordon Pricing**	**Roadway/Pricing and Tolling**	**Parking Pricing**
Implementing Agencies	State/Local	Local	State/Local	Local
Geography of Impacts	Regional/Local (depending on scale of application); Regional would be interjurisdictional	Regional/Local (depending on scale of application); Regional would be interjurisdictional	Regional for Freeways/Local for Arterials	Local
Types of Impacts	Diversion/Safety/Transit	Diversion/Safety/Transit	Diversion/Safety/Transit	Local Circulation
Types of Reinvestment	Diversion/Safety/Transit	Diversion/Safety/Transit	Diversion/Safety/Transit	Local Improvements
Current/Future Tool Use	Future	Future	Future	Current

Attachment 4: TPAC/MTAC comments on March Draft of 2023 RTP Ch. 3

From: Allison Boyd <allison.boyd@multco.us>
Sent: Tuesday, March 7, 2023 12:18 PM
To: Kim Ellis <Kim.Ellis@oregonmetro.gov>; John Mermin <John.Mermin@oregonmetro.gov>
Subject: [External sender]Resilience policy suggestion

CAUTION: This email originated from an **External source**. Do not open links or attachments unless you know the content is safe.

Hi Kim and John,
I wanted to see if I could get the ball rolling on adding in a policy on resilience to the RTP as was noted as missing in the Climate section.

Suggested new policy (policy 10 under climate?):
Identify, coordinate, and fund transportation system improvements necessary to increase the region's preparedness for and resilience to climate change and natural hazard impacts.

Edit Climate Policy 9 to reflect updated climate goal that includes resilience:
Secure adequate funding for transportation investments that support the RTP climate action and resilience goal and implementation of the climate smart strategy.

Also, I suggest updating the policy section heading to be Climate Smart Strategy and Resilience Policies. Ideally, we'd like to see the resilience topic separated from the Climate Smart Strategy policies for clarity. However, at this point in the process and with more work to come on the RETR project I'm assuming it would be preferable to add something under Climate and wait until the next RTP update cycle to do a more thorough look at resilience and possibly climate adaptation as well. If you do want to separate them, let me know if you need help with some language.

I'll bring this up at tomorrow's workshop but just wanted to send you some language to consider as a starting place.
Thanks,
Allison

--
Allison Boyd, AICP
Senior Planner
Multnomah County Transportation Division
1620 SE 190th Avenue, Portland, OR 97233
desk: 503-988-7195; mobile: 971-300-9099
Pronouns: she / her / hers

Transportation Division

Multnomah County

Transportation Planning and Development

TO	Kim Ellis, Metro Lake McTighe, Metro
CC	Jessica Berry, Transportation Deputy Director Sarah Paulus, Transportation Policy Analyst Andrea Hamberg, Environmental Health Services Director Max Nonnamaker, Built Environment & Transportation Program Specialist
FROM	Allison Boyd, Senior Planner
DATE	March 23, 2023
RE:	2023 RTP Draft Chapter 3 for TPAC and MTAC Review

Thank you for the recent TPAC meeting and workshop opportunities to discuss the Chapter 3 policy draft and time to submit additional comments. We appreciate your willingness to add policy language to reflect resilience as we suggested earlier.

In our further review of the policies and narrative, we noticed there was not a lot of actionable detail related to health and air quality. We discussed this with our Public Health colleagues and they have suggested specific health and air quality metrics that could be incorporated into the actions for Equity Policy 3 on pages 3-13 through 3-15 of the March draft. Please see their suggestions below.

Air quality metrics:

- Incorporate greater air quality metrics, such as $PM_{2.5}$, Diesel PM, and NO_2, as indicators of transportation-related disparities to help guide investment prioritization. These metrics can be measured over time to evaluate investment efficacy.
- We recommend using the World Health Organization's most recent Air Quality Guidelines and the Oregon Air Toxics Benchmarks to track how often local air quality goes above guidelines/benchmarks at a subregional level to assess more granular differences in outcomes and project impacts

Health metrics:

- In addition to air quality metrics, we would like to see traffic crash injuries and physical activity be integrated as transportation-related disparities used to prioritize investments.
- Physical activity related to active transportation can be measured and modeled in gross metabolic equivalents (METs) and/or average minutes of physical activity per capita.

Using these physical activity metrics at the neighborhood or Census tract level can help identify active transportation disparities and plans which enhance active transportation can then model the physical activity benefits to compare across the region as a health equity metric.

Comment on Attachment 1

Regional Safety and Security Policies

ODOT Comment: Perhaps revise to 'achieving context appropriate vehicle speeds'. That would work well with the Blueprint for Urban Design and the Livable Streets Handbook. Policy 2 covers the goals of lowering speeds on high crash corridors.

ODOT Text Edits: shown in green and purple.

Policy 4 Increase safety for all modes of travel and for all people through the planning, design, construction, operation and maintenance of the transportation system, with a focus on ~~reducing vehicle speeds~~ achieving context appropriate vehicle speeds.

Policy 7 Utilize safety and engineering best practices to identify low-cost and effective treatment that can be implemented systematically ~~in shorter timeframes than large capital projects~~.

Climate Smart Strategy Policies

ODOT Text Edits: shown in green and purple.

Policy 3 Prioritize transportation investments that make biking and walking safe, accessible and convenient to significantly increase walking and bicycling mode shares.

Policy 7 ~~Make efficient use of vehicle parking spaces through parking management and reducing the amount of land dedicated to parking.~~ Manage parking in mixed-use centers and corridors that are served by frequent transit service and good biking and walking connections to reduce the amount of land dedicated to parking, encourage parking turnover, increase shared trips, biking, walking and use of transit, reduce vehicle miles traveled, increase housing and job ~~productions, and~~production, and generate revenue.

Policy 8 Support Oregon's transition to cleaner fuels, ~~and~~ more fuel-efficient vehicles, and electric vehicles in recognition of the external impacts of carbon and other vehicle emissions.

Draft Regional Mobility Policies

ODOT Comment: A colon here emphasizes the three metrics.

Policy 6 Use mobility performance measures and targets for system planning and evaluating the impacts of plan amendments including: Vehicle Miles Travelled (VMT) per capita for home-based trips and VMT/employee for commute trips to/from work, system completeness for all modes, and travel speed reliability on the throughways.

Commented [BA1]: Perhaps revise to 'achieving context appropriate vehicle speeds'. That would work well with the Blueprint for Urban Design and the Livable Streets Handbook. Policy 2 covers the goals of lowering speeds on high crash corridors

Commented [BGA2]: A colon here emphasizes the three metrics

Draft Regional Pricing Policies

ODOT Comment: This clarifies the policy's intent without qualifying it with how. The how can be determined through the policies and actions listed in the chapter.

ODOT Text Edits: shown in green and turquoise.

Policy 1 Improve reliability and efficiency of the transportation network, reduce VMT per capita, and increase transportation options~~through congestion management, investments in transit, bike, and pedestrian improvements, and transportation demand management programs.~~

Commented [PG3]: This clarifies the policy's intent without qualifying it with how. The how can be determined through the policies and actions listed in the chapter.

Regional Design and Placemaking Policies

ODOT Comment: Practicable is essentially the same as 'possible' which could elevate this policy above others.

Policy 5 Avoid, minimize and mitigate environmental impacts of the transportation system using Green Infrastructure design, street trees, wildlife habitat or waterway crossing improvements and other approaches to the extent ~~practicable~~practical.

Commented [BA4]: Practicable is essentially the same as 'possible' which could elevate this policy above others

Regional Motor Vehicle Network Policies

ODOT Comment: Instead of "appropriate" reference the mobility policy.

Policy 5 Strategically expand the region's throughway network up to six travel lanes, ~~plus~~ and auxiliary lanes ~~where appropropriate~~ between interchanges where a deficiency is shown in accordance with the Regional Mobility Policy, to maintain mobility and accessibility and improve reliability for regional, statewide and interstate travel.

Commented [BA5]: Instead of "appropriate" reference the mobility policy

ODOT Comment: ODOT will be providing expanded commentary on this policy soon. Remove reference to section 0830 as it applies only to cities and counties. Alternatively, clarify that Metro is not requiring a section 830 analysis for projects to be added to the RTP Financial Constrained project list, rather than local agencies must meet the section 830 requirements in order to have affected projects considered. For example, change "consistent with OAR…" to "and if a local agency that is has met OAR 660-012-0830 requirements." "Deficiencies" needs to be retained. This strikeout runs contrary to the Mobility Policy work around defining deficiencies. Removing it from here disconnects motor vehicle network planning from that effort

Policy ~~12~~ 9 Prior to adding new ~~throughway~~ capacity beyond the planned system of motor vehicle through lanes, ~~beyond the planned system of motor vehicle through lanes,~~ demonstrate that system and demand management strategies, including access management, transit and freight priority, ~~and congestion~~ pricing, and transit service and multimodal connectivity improvements cannot meet regional mobility, safety, climate, and equity policies ~~consistent with OAR 660-012-0830 to adequately address throughway deficiencies and bottlenecks~~.

ODOT Comment: Section 3.1 - some policies have assigned "actions" but not all – is there a reason for the inconsistency?

Transportation Equity Policies

ODOT Comment: There could be unintentional outcomes related to "removal of harmful infrastructure". This could apply to many items such as I-5 through SW and N,NE Portland, the planned SW corridor work, and other developments resulting from some past urban renewal project.

To implement Transportation Equity Policy 3 regional partners should take the following actions:

1. Seek opportunities to restore Black, Indigenous and people of color (BIPOC) and other marginalized communities harmed by past transportation decisions through collaborative re-investment and removal of harmful infrastructure.

ODOT Text Edits: shown in blue, purple and yellow.

To implement Transportation Equity Policy 3 regional partners should take the following actions:

2. Focus on ~~different~~ transit solutions transit that serve marginalized communities.

Transportation Equity Policy 4. Meaningfully engage communities of color and other marginalized

To implement Transportation Equity Policy 4 regional partners should take the following actions:

1. Look to the Climate Friendly Equitable Communities (CFEC) Program for guidance/rules on inclusive decision making.

To implement Transportation Equity Policy 5 regional partners should take the following actions.:

1. Collect data in a manner that facilitates looking at outcomes with an equity lens.
    a. To the extent practical, and respecting personal privacy, ~~C~~collect

Commented [BGA6]: Retain "beyond the planned system…"

Commented [FC7]: This edit runs contrary to Attachment 1 to Metro's January 25, 2023, letter to DLCD that noted that the planned system are not subject to the new CFEC rules

This edit also clashes with system completeness policy (see Mobility policy section), the role of the RTFP, and past land use approvals based TSP projects

Commented [FC8]: ODOT will be providing expanded commentary on this policy soon.

Commented [BGA9]: Remove reference to section 0830 as it applies only to cities and counties

Commented [FC10]: Alternatively, clarify that Metro is not requiring a section 830 analysis for projects to be added to the RTP Financial Constrained project list, rather than local agencies must meet the section 830 requirements in order to have affected projects considered. For example, change "consistent with OAR…" to "and if a local agency that is has met OAR 660-012-0830 requirements."

Commented [FC11]: "Deficiencies" needs to be retained. This strikeout runs contrary to the Mobility Policy work around defining deficiencies. Removing it from here disconnects motor vehicle network planning from that effort

Commented [BGA12]: There could be unintentional outcomes related to "removal of harmful infrastructure". This could apply to many items such as I-5 through SW and N,NE Portland, the planned SW corridor work, and other developments resulting from some past urban renewal project.

localized disaggregated data.

b. ~~Emphasize~~ To the extent practical, collect~~ing~~ as much qualitative data as quantitative data.

c. Collect data that is meaningful to marginalized communities.

3.1.1.1 Safety and security policies

ODOT Text Edits: shown in purple.

Safety Policy 4. Increase safety for all modes of travel and for all people through the planning, design, construction, operation, and maintenance of the transportation system, with a focus on achieving context appropriate vehicle speeds~~reducing vehicle speeds~~.

Safety Policy 7. Utilize safety and engineering best practices to identify low-cost and effective treatments that can be implemented systematically ~~in shorter timeframes than large capital projects~~.

3.1.2 Climate Leadership Policies

Commented [BGA13]: The box below says that additional work is needed for resilience – will this be in Chapter 8? If yes, consider adaptation as well.

ODOT Comment: The explanatory text box introducing section 3.1.2 says that additional work is needed for resilience – will this be in Chapter 8? If yes, consider adaptation as well.

ODOT Text Edits: shown in yellow.

The planet is warming, and we have less and less time to act. Documented effects include warmer temperatures and rising sea levels, shrinking glaciers, shifting rainfall patterns and changes to growing seasons and the distribution of plants and animals.

The Land Conservation and Development Commission ~~approved~~ acknowledged the region's strategy in May 2015.

3.1.3 Pricing Policies

ODOT Text Edits: shown in turquoise.

Table 3-3 Pricing and Implementing Agency

Type of Pricing	Definition	Implementing Agency
Road ~~User~~ Usage Charge / Vehicle Miles Traveled Fee	Drivers pay a fee for every mile they travel	State DOT, potentially local roadway authorities

Commented [PG14]: Updated to be consistent with how this is referenced later.

3.1.3.1 Best Practices for Revenue Reinvestment

ODOT Comment: As Metro staff noted at the March 8, 2023, TPAC Workshop and consistent with the description of considerations under Section 3.2.5.1 Best Practices for Revenue Reinvestment, RTP actions are not directives. We request the text be updated to say agencies "…should consider the following actions" rather than "should take the following actions." This change alone will reduce or eliminate conflicts with federal and state requirements.

ODOT Text Edits: shown in turquoise.

Commented [VV15]: As Metro staff noted at the March 8, 2023, TPAC Workshop and consistent with the description of considerations under Section 3.2.5.1 Best Practices for Revenue Reinvestment, RTP actions are not directives. We request the text be updated to say agencies "…should consider the following actions" rather than "should take the following actions." This change alone will reduce or eliminate conflicts with federal and state requirements.

Table 3-4 Potential Options for Revenue Reinvestment

Category	Description	Target Area or Population
Priced Facility		
Operations and Maintenance	Operations and maintenance of priced road	Regional
Infrastructure investment	For tolled facilities, designed to be paid for by the pricing revenue	Regional

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Potential Revenue Opportunities and Limitations

Depending on the pricing model, the use of revenue generated from a pricing program may be subject to legal limits. For example, Oregon Constitution Article IX Section 3a limits the use of revenue from taxes on motor vehicle use and fuel. The principle underlying this language is that special taxes paid only by highway users should be used only for highway purposes. Whether a particular pricing model is subject to this constitutional restriction is determined by Oregon courts on a case-by-case basis. Recently, the Oregon Supreme Court concluded that Article IX section 3a's limit on use of tax revenue does not apply to a privilege tax imposed on vehicle dealers for the privilege of engaging in the business of selling taxable motor vehicles at retail. The Court found that the privilege tax was not based on the status of motor vehicle ownership, but rather on the activity of selling motor vehicles. Jurisdictions considering pricing should review all potential legal limits and structure the pricing model with these limits in mind.

Commented [PG16]: David Ungemah (national toll consultant): In addition to the limitations under the Oregon Constitution, there are also revenue use limitations under Title 23 of the US Code for the use of tolling. In most cases, the use of revenue on Federal aid highways (including interstate highways) are constrained to Title 23 acceptable expenditures. For mitigations necessary under environmental clearance, Title 49 may also provide acceptable expenditures. It should be noted that some of the revenue reinvestment categories as identified in Figure 2 of the memo are untested for tolling/pricing, and will need concurrence from the US DOT.

ODOT Comment: David Ungemah (national toll consultant): In addition to the limitations under the Oregon Constitution, there are also revenue use limitations under Title 23 of the US Code for the use of tolling. In most cases, the use of revenue on Federal aid highways (including interstate highways) are constrained to Title 23 acceptable expenditures. For mitigations necessary under environmental clearance, Title 49 may also provide acceptable expenditures. It should be noted that some of the revenue reinvestment categories as identified in Figure 2 of the memo are untested for tolling/pricing, and will need concurrence from the US DOT.

3.1.3.2 What state and regional pricing work is underway?

ODOT Comment: As discussed with Metro staff, please add language on STRAC where you see fit.

ODOT Text Edits: Shown in red

Pricing Projects and Committees in the Portland Metro Region

Statewide Toll Rulemaking Advisory Committee (STRAC): ODOT has created the STRAC to ensure that the voice of the customer will be heard in the rulemaking process. The committee will help develop Oregon Administrative Rules that determine how customers interact with and use the system and how toll rates are set up and adjusted. These rules will apply to planned toll projects in the Portland Metro area, as well as any future projects in the state. The rules and rates will be approved by the Oregon Transportation Commission. The STRAC will provide input on the following topics, among others:

- Customer accounts
- Toll transactions and due date
- Civil penalties and administrative fees
- Dispute provisions
- Low-income/middle-income discounts
- Vehicle rates and exemptions
- General rate structure/schedule
- Rate review and adjustment

Regional Toll Advisory Committee (RTAC): ODOT has created the RTAC to advise the ODOT Director in developing toll projects in the Portland metropolitan area. Committee meetings will provide a forum to provide feedback to ODOT leadership in advance of OTC or ODOT toll-related decisions. The Regional Toll Advisory Committee is asked to focus their deliberations on key project-level decisions. This includes:

Integration of the I-205 Toll Project with the Regional Mobility Pricing Project as well as the 2023 update to the Regional Transportation Plan and 2022 updates to the Oregon Highway Plan and Oregon Transportation Plan

- Centering of equity in process and outcomes
- Monitoring of diversion and funding projects that address diversion impacts
- Providing local input on criteria for allocation of net toll revenue

Equity Framework: The Oregon Toll Program has developed the Equity Framework to ensure tolling on I-205 and I-5 will lead to equitable outcomes. Additionally, the framework will ensure the Oregon Toll Program implements an intentional and equitable engagement process that makes historically and currently underrepresented and underserved communities a priority. This I-205 and I-5 Toll Projects' Equity Framework includes:

- Goals for the proposed toll projects, and an explanation of why the Oregon Toll Program is prioritizing equity
- A definition of equity within the context of the toll projects, including key concepts and definitions related to equity
- The overall approach and organizing principles for addressing equity
- A set of actions for measuring benefits and burdens to historically excluded and underserved communities and populations

Commented [VV17]: As discussed with Metro staff, please add language on STRAC where you see fit.

Federal Pricing Programs

ODOT Text Edits: shown in turquoise.

Section 129: Section 129 of Title 23 of the U.S. Code provides the ability to toll Federal-aid highways in conjunction with construction, reconstruction, or other capital improvements. Flat rate tolling and variable pricing strategies are authorized for Section 129 facilities. There are some limitations to what facilities may be included.[19] The newly created Congestion Relief Program within the Infrastructure Investment and Jobs Act expands tolling opportunities under a competitive and discretionary program for up to 10 metropolitan areas in the U.S. ~~A new provision within the Infrastructure Investment and Jobs Act is expanding tolling eligibility requirements~~.[20]

Commented [PG18]: Edit from David Ungemah (national toll consultant).

Value Pricing Pilot Program

Oregon is a participant in the FHWA Value Pricing Pilot Program (VPPP). The VPPP was established in 1991 (as the Congestion Pricing Pilot Program) to encourage implementation and evaluation of value pricing pilot projects to manage congestion on highways through tolling and other pricing mechanisms. The program also sought to test the impact of pricing on driver behavior, traffic volumes, transit ridership, air quality, and availability of funds for transportation programs. While the program no longer actively solicits projects, it can still provide tolling authority to State, regional or local governments to implement congestion pricing applications.
Acceptance and approval of VPPP applications is at the discretion of the US DOT. If approved, and once all the federal requirements are met under Section 129, ~~Once all the federal requirements are met,~~ implementing agencies can use the revenue for any Title 23 project, which is aimed at the Federal-aid highways.[21]

Commented [PG19]: Edit from David Ungemah (national toll consultant).

3.2.5.4 Pricing policies

ODOT comment: The implementation actions related to the policies are guided by Metro's Regional Congestion Pricing Study, endorsed by JPACT. However, some clarifications are needed to ensure consistency with state legislation. In particular, HB 3055 establishes the Oregon Transportation Commission (OTC) as the body to review and approve tolls and lists considerations for the OTC to take into account when setting rules for the process to establish tolls. HB 3055 also spells out allowable uses of the Toll Program Fund and the purpose of assessing variable rate tolls.

Edits to Policy 1 clarifies the policy's intent without qualifying it with how. The how can be determined through the policies and actions listed in the chapter.

As Metro staff noted at the March 8, 2023, TPAC Workshop and consistent with the description of considerations under Section 3.2.5.1 Best Practices for Revenue Reinvestment, RTP actions are not directives. We request the text be updated to say agencies "…should consider the following actions" rather than "should take the following actions." This change alone will reduce or eliminate conflicts with federal and state requirements.

The draft language of Pricing Policy 1/Action 1 is not in line with specific direction in HB 3055 to the OTC. HB 3055 allows for other road authorities to set tolls, however. We request this action say that State highway pricing rates will be set by the OTC in accordance with state legislation, but other road authorities should consider the actions listed.

We are concerned that several toll revenue actions conflict with limitations in federal regulations (such as Section 129 of Title 23), the Oregon Constitution (Article IX Section 3a), and state legislation (HB 3055). These actions may mislead public expectations on options for reinvesting toll revenues. We request Metro staff update the language in the following actions to say "Consider reinvesting" rather than "reinvest": Pricing Policy 1/Action 3, Policy 2/Action 7, Policy 3/Action 5, Policy 4/Action 6, and Policy 5/Action 3.

Policy 2 - Which includes" could mean that you would have to do all 3 or 1 of the 3.

ODOT Text Edits: shown in turquoise, red, purple and blue.

Policy 1	**Improve reliability and efficiency of the transportation network, reduce VMT per capita, and increase transportation options. ~~through congestion management, investments in transit, bike, and pedestrian improvements, and transportation demand management programs.~~**

Pricing Policy 1. Mobility: Improve reliability and efficiency of the transportation network, reduce VMT per capita, and increase transportation options through congestion management~~, investments in transit, bike, and pedestrian improvements, and transportation demand management programs.~~.

Commented [VV20]: The implementation actions related to the policies are guided by Metro's Regional Congestion Pricing Study, endorsed by JPACT. However, some clarifications are needed to ensure consistency with state legislation. In particular, HB 3055 establishes the Oregon Transportation Commission (OTC) as the body to review and approve tolls and lists considerations for the OTC to take into account when setting rules for the process to establish tolls. HB 3055 also spells out allowable uses of the Toll Program Fund and the purpose of assessing variable rate tolls.

Commented [PG21]: This clarifies the policy's intent without qualifying it with how. The how can be determined through the policies and actions listed in the chapter.

To implement Pricing Policy 1, agencies developing pricing programs or projects should ~~take~~ consider the following actions:

1. Consider ~~achieving goals~~outcomes such as managing congestion, reducing VMT per capita, or improving reliability, consistent with ~~the OTP and OHP~~other state, local and regional policy. ~~Set rates for pricing at a level that will manage congestion, reduce VMT per capita, and improve reliability on the priced facility and in areas affected by diversion~~.
2. Collaborate with relevant state, regional, and local agencies and communities when setting, evaluating, and adjusting program or project specific goals.
3. Consider reinvesting ~~Reinvest~~ a portion of revenues from pricing into modal alternatives both on and off the priced facility that encourage mode shift and VMT reduction per capita. Examples include, but are not limited to, transit improvements, bicycle and pedestrian improvements, and improvements to local circulation.

To implement Policy 2, agencies developing pricing programs or projects should ~~take~~ consider the following actions:

5. Provide a progressive fee structure ~~which includes~~that would include a combination of exemptions, credits, or discounts for qualified users. Base eligibility on inclusion in one or more population categories, such as low- income, and minimize barriers to qualification by building on existing programs or partnerships where applicable. Target outreach for enrollment in a discounts, credits, or exemptions in equity areas and communities with higher-than-average shares of people with low income and people of color.
7. Consider reinvesting ~~Reinvest~~ a portion of revenues from pricing into communities with high proportions of people with low-income and people of color, and/or in Equity Focus Areas. Use of these revenues should meet the transportation-related needs identified by the equity communities and people most impacted. Examples include commuter credits and free or discounted transit passes, or improved transit facilities, stops, passenger amenities, and transit priority treatments.

To implement Pricing Policy 3, agencies developing pricing programs or projects should ~~take~~ consider the following actions:

5. Consider reinvesting ~~Reinvest~~ a portion of revenues on the priced system and in areas affected by diversion to manage safety issues caused by pricing programs and projects and to improve safety, for example, through investments in transit, bike, and pedestrian improvements, or other investments in known crash reduction factors.

To implement Pricing Policy 4, agencies developing pricing programs or projects should ~~take~~ consider the following actions:

5. Consider reinvesting ~~Reinvest~~ a portion of revenues into areas affected by diversion caused by pricing programs and projects.

To implement Pricing Policy 5, agencies developing pricing programs or projects should ~~take~~ consider the following actions:

3. Consider reinvesting ~~Reinvest~~ a portion of revenues from pricing into modal alternatives both on and off the priced facility that can reduce overall emissions by encouraging mode

Commented [VV22]: As Metro staff noted at the March 8, 2023, TPAC Workshop and consistent with the description of considerations under Section 3.2.5.1 Best Practices for Revenue Reinvestment, RTP actions are not directives. We request the text be updated to say agencies "…should consider the following actions" rather than "should take the following actions." This change alone will reduce or eliminate conflicts with federal and state requirements.

Commented [VV23]: The draft language of Pricing Policy 1/Action 1 is not in line with specific direction in HB 3055 to the OTC. HB 3055 allows for other road authorities to set tolls, however. We request this action say that State highway pricing rates will be set by the OTC in accordance with state legislation, but other road authorities should consider the actions listed.

Commented [VV24]: We are concerned that several toll revenue actions conflict with limitations in federal regulations (such as Section 129 of Title 23), the Oregon Constitution (Article IX Section 3a), and state legislation (HB 3055). These actions may mislead public expectations on options for reinvesting toll revenues. We request Metro staff update the language in the following actions to say "Consider reinvesting" rather than "reinvest": Pricing Policy 1/Action 3, Policy 2/Action 7, Policy 3/Action 5, Policy 4/Action 6, and Policy 5/Action 3.

Commented [PG25]: "Which includes" could mean that you would have to do all 3 or 1 of the 3.

shift and VMT per capita reduction, including transit improvements as well as bicycle and pedestrian improvements and improvements to local circulation.

To implement Policy 6, agencies developing pricing programs or projects should ~~take~~ consider the following actions:

Key terms will be included in the RTP glossary.

ODOT comment: Pricing in low emissions zones is duplicative with cordon pricing. There's no substantive difference between the two (as the LEZ boundary is a cordon boundary, regardless of whether pricing is used or not).

Dynamic rate fee definition - Strike the sentence: "Motorists are usually guaranteed that they will not be charged more than a pre-set maximum price under any circumstances." Although that is true for a few legacy dynamically priced managed lanes, it's no longer true for a good many managed lanes. Current best practice is that if you want to set a price ceiling, then you're better off using schedule based pricing (which, by definition, has ceilings built in).

ODOT Text Edits: shown in turquoise.

Pricing: Motorists pay directly for driving on a particular roadway or for driving or parking in a particular area. Pricing includes applying different rates by location, level of congestion, or time of day, amongst other methods~~Pricing includes pricing different locations using different rate types, such as variable or dynamic pricing (higher prices under congested conditions and lower prices at less congested times and conditions), amongst other methods~~. Rates may vary based on vehicle size or type, incomes, or other variables. Pricing within the Portland metropolitan context could include the following methods and pricing strategies. Methods and strategies can be combined in different ways, such as variable cordon pricing or dynamic roadway pricing. Different types of pricing can be implemented in coordination with each other to provide greater systemwide benefits. Pricing can be implemented at the state, regional, or local level.

- Types of Pricing
  - Cordon
  - ~~Low Emissions Zone~~
  - Parking
  - Road Usage Charge / VMT Fee / Mileage Based User Fee
- Roadway Rate Types
  - Flat
  - Variable
  - Dynamic

Commented [PG26]: Edit from David Ungemah (national toll consultant).

Commented [PG27]: David Ungemah (national toll consultant): Pricing in low emissions zones is duplicative with cordon pricing. There's no substantive difference between the two (as the LEZ boundary is a cordon boundary, regardless of whether pricing is used or not).

Flat Rate Fee (Toll): A flat rate fee, also known as a toll, charged by a toll facility operator in an amount set by the operator for the privilege of traveling on said toll facility. Tolling is a user fee system for specific infrastructure such a bridges and tunnels. Toll revenues are used for costs associated with the tolled infrastructures. This tool is used to raise funds for construction, operations, maintenance, and administration of specific infrastructure. Flat rate tolling can also serve as a method for congestion management, though it is not responsive to changing conditions or time of day. Additionally, flat rate tolling cannot be used for congestion pricing programs or projects authorized by the Value Pricing Pilot Program, Congestion Relief Program, or Section 166 on interstate highways under Federal law.

Variable Rate Fee: With this type of pricing, a variable fee schedule is set so that the fee is higher during peak travel hours and lower during off-peak or shoulder hours. This encourages motorists to use the facility or drive less during less congested periods and allows traffic to flow more freely during peak times. Peak fee rates may be high enough to usually ensure that traffic flow will not break down, thus offering motorists a reliable and less congested trip in exchange for the higher peak fee. The current price is always displayed on electronic signs prior to the beginning of the priced facility and is often published as a schedule on agency websites and other routing resources. The power of schedule pricing is you know, before your trip begins, how much it will cost you. That helps with both mode choice and routing, as you commit to the route (and paying the fee) well in advance of arriving at the facility.~~The current price is often displayed on electronic signs prior to the beginning of the priced facility.~~

Dynamic Rate Fee: Fee rates are continually adjusted according to traffic conditions to better achieve a free-flowing level of traffic. Under this system, fee rates increase when the priced facilities get relatively full and decrease when the priced facilities get less full. This system is more complex and less predictable than using a flat or variable rate fee structure, but its flexibility helps to better achieve the optimal traffic flow by reflecting changes in travel demand. ~~Motorists are usually guaranteed that they will not be charged more than a pre-set maximum price under any circumstances.~~ The current price is ~~often~~ always displayed on electronic signs prior to the beginning of the priced facility.

Commented [PG28]: David Ungemah (national toll consultant): Strike the sentence: "Motorists are usually guaranteed that they will not be charged more than a pre-set maximum price under any circumstances." Although that is true for a few legacy dynamically priced managed lanes, it's no longer true for a good many managed lanes. Current best practice is that if you want to set a price ceiling, then you're better off using schedule based pricing (which, by definition, has ceilings built in).

3.1.4 Mobility Policies

ODOT Comment: This line doesn't match the policies and the metrics. It's clear that the speed reliability target is for identifying a "need". It is not the performance goal or expectation.

ODOT Text edits: shown in purple.

These policies apply to:

- the state highway system within the Portland metropolitan area for
  - identifying state highway mobility performance expectations for planning and plan implementation; and

- evaluating the impacts on state highways of amendments to transportation system plans, acknowledged comprehensive plans and land use regulations pursuant to the Transportation Planning Rule (OAR 660-12-0060).

- throughways and arterials designated in the Regional Transportation Plan, which include state and local jurisdiction facilities, for identifying mobility ~~performance expectations~~needs for system planning and plan implementation.

Commented [BA29]: This line doesn't match the policies and the metrics. It's clear that the speed reliability target is for identifying a "need". It is not the performance goal or expectation.

3.2.5.2 Mobility policy plan amendment evaluation actions

4. Large, typically legislative plan amendments will be obligated to develop a funding plan that will address the system gaps and bring additional projects that support …

5. 5. Small scale, typically quasi-judicial plan amendments will need to demonstrate their proportionate impact on increased VMT/capita in the district …

Commented [BA30]: We should define Large and Small in some fashion. Perhaps "large" amendments are legislative while "small" are quasi-judicial. Or language such as, Plan amendments affecting many for larage. and Plan amendments affecting one or a few... for small

Regional Design Policies

ODOT Text edits: shown in purple and green.

Design Policy 5. Avoid, minimize and mitigate environmental impacts of the transportation system using Green Infrastructure design, street trees, wildlife habitat or waterway crossing improvements and other approaches to the extent ~~practicable~~practical.

The following list identifies the types of environmental, tribal, cultural and historical data that transportation agencies consider during development of projects:

Regional motor vehicle Network Policies

ODOT Text edits: shown in purple.

Motor Vehicle Policy 5 Strategically expand the region's throughway network up to six travel lanes and auxiliary lanes ~~where appropriate~~ between interchanges, where a deficiency is shown in accordance with the Regional Mobility Policy, to maintain mobility and accessibility and improve reliability for regional, statewide, and interstate travel.

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3.1.5 Regional transit network vision and policies

ODOT Comment: Add ODOT to list of roadway owners

ODOT Text edits: shown in yellow.

What do frequent, convenient, accessible and affordable mean?

Make transit more convenient and competitive with driving by improving transit speed and reliability through priority treatments and other strategies. Improve transit rider experience by ensuring seamless connections between various transit providers, including transfers, information, and payment. Additionally, cities, ~~and~~ counties, and ODOT who own the roads used by bus transit could partner with the transit agencies to implement transit priority treatments.

Commented [BA31]: Add ODOT to list of roadway owners

ODOT Comment: Suggest changing table terms – consider changing Characteristic from "Works" to "Ideal" and "Doesn't Work" to "Less Ideal or Not Ideal."

Table 3-9 Effects of land use on transit service

Commented [BGA32]: Suggest changing table terms – consider changing Characteristic from "Works" to "Ideal" and "Doesn't Work" to "Less Ideal or Not Ideal."

Characteristic	Works	Doesn't Work
Density	High	Low
Street layout	Small blocks Grid system	Long, winding streets Cul-de-sacs, dead-end
Mix of uses	Mixed use (e.g., commercial, residential, and office uses)	Single use (e.g., all residential, all industrial)
Pedestrian and bicycle environment	Wide sidewalks Slow moving traffic Street elements (e.g., benches, street trees, pedestrian-scale lighting) Well-marked intersections with signalized crossings Bicycle parking	Narrow or no sidewalks Fast moving traffic Poor lighting No intersection markings and long pedestrian wait times
Site design	Buildings front the street and entrances	Buildings set back from the street and surrounded by surface parking
Parking	Limited Fee-based parking	Abundant Free

Source: TriMet

Transit-supportive development patterns contributing to ridership productivity include:

3.1.5.1 Regional transit network policies

ODOT Comment: Consider addition of Vanpools and carpooling to this section

Transit Policy 2. Ensure that the regional transit network equitably prioritizes service to those who rely on transit or lack travel options; makes service, amenities, and access safe and secure; improves quality of life (e.g., air quality); and proactively supports stability of vulnerable communities, particularly communities of color and other marginalized communities.

Commented [BGA33]: Consider addition of Vanpools and carpooling to this section

ODOT Comment: The vision is good. Consider language to acknowledge on the ground challenges, such as rail, stormwater, right of way, and other roadway constraints when implementing transit or high capacity transit along arterials.

Transit Policy 5. Complete a well-connected network of local and regional transit on most arterial streets – prioritizing expanding all-day frequent service along mobility corridors and main streets linking town centers to each other and neighborhoods to centers.

Commented [BGA34]: The vision is good. Consider language to acknowledge on the ground challenges, such as rail, stormwater, right of way, and other roadway constraints when implementing transit or high capacity transit along arterials.

ODOT Comment: vanpool for commute is also defined as transit by the FTA and FHWA. Reporting passenger miles results in increases in 5307 allocations, and they can be subsidized with federal funds to reduce the cost to the end user.

ODOT text edits: shown in blue and purple.

Improve local service transit

The local transit network provides basic service and access to local destinations and the frequent and high capacity transit network. Service span and frequencies vary based on the level of demand for the service. The local transit network ensures that the majority of the region's population has transit service available to them – varying in type and level based on needs and demand. Beyond bus service, types of local transit services include para-transit service for people with disabilities, deviated "On-Demand" routes, vanpools, shuttles (e.g., community and job connectors, employer-run or sponsored, community event), and the tram.

Commented [ML35]: vanpool for commute is also defined as transit by the FTA and FHWA. Reporting passenger miles results in increases in 5307 allocations, and they can be subsidized with federal funds to reduce the cost to the end user.

Improving pedestrian and bicycle access to transit is accomplished through:

- filling sidewalk gaps within a mile of stops and stations;
- filling bicycle and trail network gaps within three miles of stops and stations;
- integrating trail connections with transit;
- providing shelters, transit tracker information and seating at stops and stations;
- providing bicycle amenities at transit centers such as repair stations and lockers;
- providing pedestrian and bicycle protected crossings at stations and stops where appropriate,

including secured, covered bicycle parking or Bike and Rides at stations and stops;

- providing shade trees along pedestrian routes and at transit stops

3.1.6 Regional freight network vison and policies

ODOT Comment: Details on this policy are limited. suggest addition to Chapter 8 for a planning effort to investigate and develop actionable steps

Freight Policy 8. Adapt future freight system investments to emerging technologies and shifts in goods movement, including the emergence of e-commerce and automated delivery systems.

This policy is focused on addressing the continued growth in e-commerce and delivery trips and the need for industrial land that provides for an increase in distribution centers and fulfillment centers.

Commented [BA36]: Details on this policy are limited. suggest addition to Chapter 8 for a planning effort to investigate and develop actionable steps

3.1.7 Regional pedestrian network concept and policies

ODOT Comment: this format defies convention. Policy plans do not typically refer to the implementation plans that serve them. Suggest removing the reference to the RTPF while retaining the plan elements. This issue is repeated multiple times within this section.

Example given: In the Regional Pedestrian Network Vision, walking is safe and convenient. Section 3.08.130 of the Regional Transportation Functional Plan requires that local jurisdictions include a pedestrian plan to achieve the following:

Commented [BGA37]: this format defies convention. Policy plans do not typically refer to the implementation plans that serve them. Suggest removing the reference to the RTPF while retaining the plan elements. lThis issue is repeated multiple times within this section.

3.1.7.1 Transportation demand management policies

ODOT Comment: recommend a policy focused on commute trip solutions. This would support expansion of DEQs ECO Rule and regional goals to reduce SOV trips. Does not rely just on transit, includes transit, carpool, vanpool, biking and work from home. Addresses equity with promotion of a variety of solutions that address temporal (such as swing and graveyard shift workers) and locational (such as business parks and manufacturing centers) issues.

Commented [ML38]: recommend a policy focused on commute trip solutions. This would support expansion of DEQs ECO Rule and regional goals to reduce SOV trips. Does not rely just on transit, includes transit, carpool, vanpool, biking and work from home. Addresses equity with promotion of a variety of solutions that address temporal (such as swing and graveyard shift workers) and locational (such as business parks and manufacturing centers) issues.

Oregon
Tina Kotek, Governor

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600 NE Grand Ave
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Dear Chair Kloster and TPAC members,

The draft Chapter 3 of the 2023 Regional Transportation Plan (RTP) update circulated for the March 8 TPAC work session captured the many shared goals around the Portland region. ODOT is broadly supportive of the direction within its 160 pages. However, changes are needed to ensure that the RTP is consistent with state legislation, plans and federal regulations.

This letter spells out the critical adjustments required for three specific sections, Motor Vehicle Network, Pricing and Mobility Polices, and highlights the reasons for regional policymakers. ODOT requests that Metro staff make these changes and asks for JPACT and TPAC support in doing so, to best ensure an RTP that is consistent with past promises and higher level requirements, sets appropriate expectations, and can be implemented as written.

Motor Vehicle Network Policy
ODOT, DLCD and Metro staff worked through how the Climate Friendly Equitable Communities (CFEC) program applies to the RTP, yet the language in draft Policy 9 (formerly 12) does not clearly align with that agreement. The following changes are needed:

1) Policy 9 references OAR 660-012-0830, which was agreed only to apply to projects in local Transportation System Plans (TSPs) and is not required for projects to be added to the RTP Financial Constrained project list.
   - See Attachment 1 to Metro's January 25, 2023, letter to DLCD (attached to this letter) that explains the planned system is not subject to the new CFEC rules: "Metro considers projects in an adopted RTP or TSP exempt from additional review as described by this section [0830]."

2) The first sentence includes strikeouts for the words "beyond the planned system". This change is not acceptable for the following reasons:
   - As noted above, the motor vehicle network already adopted in the RTP and TSPs is assumed to be part of the regional transportation system, further review or analysis is not required. Retaining "beyond the planned system" ensures consistency with CFEC and will help prevent agency and public confusion on how OAR 600-012-0830 applies.
   - Removal of this clause could complicate currently adopted plans – including years of local agency work and even federal NEPA review. The Transportation Planning Rule included consideration of motor vehicle needs and projects were adopted into plans and approved accordingly under the assumption that the projects in those transportation system plans (TSPs) are likely in the foreseeable future, including inclusion in the RTP when appropriate.

3) The word “deficiencies” has been struck. This change is not acceptable for the following reasons:
   - The intention of the proposed mobility policy update is to have an improved, regionally-supported method for identifying motor vehicle network deficiencies, with the intention that planning and investments focus on those needs. Removing “deficiencies” from draft Policy 9 conflicts directly with that effort, as well as with Mobility Policy 6.
   - The Mobility policy section of the RTP specifically references system completeness, including in system performance measures, and with language such as, “The regional and local ‘planned’ system may not achieve completeness for all modes but should identify future needs and expectations for all facilities.” Removing “deficiencies” from draft Policy 9 de-links transportation projects from regional mobility needs.

For the reasons above, ODOT requests that Metro staff restore “beyond the planned system” and “deficiencies” to draft Motor Vehicle Policy 9.

Proposed Pricing Policies and Actions

The Pricing Policies clearly benefit from cooperative work between Metro and ODOT. We are sincerely appreciative of the collaborative efforts of Metro staff, which have resulted in policies generally consistent with the Oregon Highway Plan.

The implementation actions related to the policies are guided by Metro’s Regional Congestion Pricing Study, endorsed by JPACT. However, some clarifications are needed to ensure consistency with state legislation. In particular, HB 3055 establishes the Oregon Transportation Commission (OTC) as the body to review and approve tolls and lists considerations for the OTC to take into account when setting rules for the process to establish tolls. HB 3055 also spells out allowable uses of the Toll Program Fund and the purpose of assessing variable rate tolls. We request the following changes to ensure the RTP meets state legislation and federal guidelines:

1) **Implementation.** As Metro staff noted at the March 8, 2023, TPAC Workshop and consistent with the description of considerations under Section 3.2.5.1 Best Practices for Revenue Reinvestment, RTP actions are not directives. We request the text be updated to say agencies “…should consider the following actions” rather than “should take the following actions.” This change alone will reduce or eliminate conflicts with federal and state requirements.
2) **Toll Authority**. The draft language of Pricing Policy 1/Action 1 is not in line with specific direction in HB 3055 to the OTC. HB 3055 allows for other road authorities to set tolls, however. We request this action say that State highway pricing rates will be set by the OTC in accordance with state legislation, but other road authorities should consider the actions listed.
3) **Toll Revenue.** We are concerned that several toll revenue actions conflict with limitations in federal regulations (such as Section 129 of Title 23), the Oregon Constitution (Article IX Section 3a), and state legislation (HB 3055). These actions may mislead public expectations on options for reinvesting toll revenues. We request Metro staff update the language in the following actions to say “Consider reinvesting” rather than “reinvest”: Pricing Policy 1/Action 3, Policy 2/Action 7, Policy 3/Action 5, Policy 4/Action 6, and Policy 5/Action 3.

Proposed Mobility Policy

The path to crafting the new Regional Mobility Policy continues to be a positive example of agency cooperation, where Metro and ODOT co-funded and lead a study. As stated clearly at JPACT, ODOT supports learning more before moving forward on the proposed new performance measures.

While we all await the modelling results, we emphasize the need for clarity around how the performance measures are to be used. Of particular concern is the interpretation of the Travel Speed Reliability Measure, which is intended to set a threshold of need not an expected level of performance. When those speed reach a threshold of 35 MPH for 4 hours a day then an undeniable need exists that must be addressed.

However, in the policy language, it is characterized more around performance than need, and is inconsistent with what Metro and ODOT have agreed. Specifically, under "These policies apply to:" it says,

> *"throughways and arterials designated in the Regional Transportation Plan, which include state and local jurisdiction facilities, for identifying* ***mobility performance expectations*** *for planning and plan implementation. "*

The words in bold above could be mistakenly read to imply that the speed reliability target is an operational goal, rather than a threshold denoting an unreliable system. ODOT considers this to be the definition of an undeniable need, meaning that when the system is operating or projected to operate at this level, the planning process needs to evaluate and consider improvements to the facility. We request that RTP include clarifying language or an adjustment to the proposed wording, such as "mobility performance thresholds" or "mobility performance deficiencies".

Metro staff should reach out to us with any questions about these requests, which were included in our detailed comments submitted on March 24. We hope documenting them will save valuable time at regional meetings and clarify the need for the changes. ODOT staff are available to meet and discuss these concerns.

We thank TPAC members for their support. Sincerely,

Chris Ford
Policy & Development Manager
ODOT Region 1

Applicability of Statewide Transportation Planning Rules to Transportation System Planning in the Portland region

Applicability of Statewide Transportation Planning Rules to Transportation System Planning in the Portland region

This summary was collaboratively prepared by Metro, the Department of Land Conservation and Development (DLCD) and the Oregon Department of Transportation (ODOT) to provide clarity on the applicability of the Statewide Transportation Planning Rules to transportation system planning in the Portland region.

Transportation Planning Rule Section	Applicability	
	Metro and/or Regional Transportation Plan (RTP)	Cities and counties and/or local TSPs in Portland region
0012: Effective Dates and Transition – Subsection (4)(d) requires Metro to amend the UGMFP to "require local government adoption of Region 2040 centers and land use regulations" as described in the UGMFP. Cities and counties in the region must comply with those requirements by December 31, 2025. At that time, Metro will need to verify that boundaries have been adopted and land use regulations have been amended consistent with the Metro Urban Growth Management Functional Plan.	Yes	Yes, for the non-adopted centers
0100: TSPs in Metropolitan Areas –This rule applies to all cities and counties in the state, but not to Metro. Subsection (9) expressly refers to Metro's RTP and directs Metro to comply with separate requirements in 0140, and sub (10) directs cities and counties inside Metro to also meet the separate requirements in 0140.	No	Yes
0105: TSP Updates –This rules describes how cities update their TSPs. Counties are addressed in the next section regarding urban planning areas. This section applies to "cities" and not to Metro, which is governed by 0140.	No	Yes
0110: Planning Areas – This rule says cities do the TSPs for all urbanizable areas inside UGBs, including unincorporated areas, and describes different requirements for county planning in those areas. It does not apply to Metro.	No	Yes
0115 through 0135: Content of TSPs, Engagement and Equity Analysis – These rules apply to cities and counties and include requirements regarding the content of TSPs, public engagement and equity. Subsections are: 0115 – funding projections, 0120-engagement, 0125-underserved populations, 0130-decision-making with underserved populations, and 0135-equity analysis.	No	Yes
0140: Planning in the Portland Metro Area – This rule creates specific requirements for cities and counties within the Metro area and Metro. It directs those cities and counties to "develop and adopt local transportation system plans as provided in -0100" and directs Metro to "develop and adopt a regional transportation plan as provided in this rule." As required under sub (3) of this rule, Metro will adopt its regional transportation system plan in coordination with the regional transportation plan that is required by federal law, through a single coordinated process involving both the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council.	Yes	Yes

Applicability of Statewide Transportation Planning Rules to Transportation System Planning in the Portland region

Transportation Planning Rule Section	Applicability	
	Metro and/or Regional Transportation Plan (RTP)	Cities and counties and/or local TSPs in Portland region
0145 and 0150: Transportation Options Planning – These rules apply to "cities and counties" and not to Metro, same analysis as above. 0145 – transportation options planning 0150 – transportation system planning inventories	No	Yes
0155: Prioritization Framework – This rule sets the context for prioritizing projects in transportation system plans; and how cities, counties, Metro, and state agencies make decisions about investments in the transportation system. This rule expressly applies to "cities, counties, Metro, and state agencies."	Yes	Yes
0160: Reducing VMT – This rule requires Metro, cities and counties to use vehicle miles traveled to link local transportation systems planning with the metropolitan greenhouse gas reduction targets. The rule applies when adopting a TSP and requires the city or county to adopt a TSP that is projected to reduce vehicle miles traveled. Under subsection (2), this rule applies when a city or county makes a major update to a TSP as provided in -0105, or when Metro makes an update to the RTP as provided in -0140.	Yes	Yes
0170 through 0190: These rules all apply to "cities and counties" and not to Metro. 0170 – unconstrained project list 0180 – constrained project list 0190 – refinement plans *Note: Rules 0170 and 0180 align with existing Federal MPO requirements for a financially constrained Regional Transportation Plan that is developed according to the region's Congestion Management Process (CMP). The RTP includes an unconstrained project list (called the Strategic list) and a constrained project list (called the Constrained list) that is updated with each RTP update. The RTP also identifies refinement plans to address needs identified in the RTP that are not fully addressed.*	No	Yes
0210: Transportation Modeling – This rule applies to "cities and counties" and not to Metro. This rule addresses plan amendments.	No	Yes
0215: Transportation Performance Standards – This rule applies to performance standards that cities and counties use to review plan and land use regulation amendments under OAR 660-012-0060, and subsection 6 applies to performance standards that Metro uses to review functional plan amendments under -0060.	Yes	Yes
0325: Transportation Review in Climate Friendly Areas – This rule applies to changes in land use regulations in Region 2040 centers.	No	Yes

Applicability of Statewide Transportation Planning Rules to Transportation System Planning in the Portland region

Transportation Planning Rule Section	Applicability	
	Metro and/or Regional Transportation Plan (RTP)	Cities and counties and/or local TSPs in Portland region
0330: Land Use Requirements – This rule applies to cities and counties. Local regulations must be brought up to date with this rule at the time of a major TSP update. Some of this rule is based on existing requirements in the Transportation Planning Rule. Some of these requirements may have analogues in the Metro functional plans.	No	Yes
0340: Land Use Assumptions for Transportation Planning – This rule requires "a city, county or Metro" to develop and adopt future land use assumptions when preparing a TSP or zoning a CFA or Regional Center under Title 6 of the Metro Urban Growth Management Functional Plan.	Yes	Yes
0350: Urban Growth Boundary Expansions – This rule requires local jurisdictions to ensure they are being consistent with coordinated transportation planning requirements when proposing to expand an urban growth boundary.	No	No
0400-450: Parking Management – These rules apply directly to cities and counties in metropolitan areas. Local governments may apply the state rules directly or update their local codes to remove or reduce parking mandates in specified areas. *Note: While the rules allow for Metro functional plans to provide further direction to local governments on parking management, Metro does not plan to require different parking management from what is identified in these rules.*	No	Yes
0500-0820: Modal System Planning, Inventories and Projects – These rules either expressly apply to "cities" or "cities and counties" but not to Metro. Metro is specifically governed by -0140. *Note: The multimodal system inventory work ODOT conducts is anticipated to be statewide, including the Portland area. The inventory data identified in the rules go beyond what is currently required of cities and counties in the Portland area and the bicycle and pedestrian data that cities and counties currently provide to Metro for the Regional Land Information System (RLIS). While the rules allow for Metro functional plans to provide further direction on what local governments must include in the their inventories, Metro does not plan to require collection of additional inventory data beyond what is identified in these rules.*	No	Yes

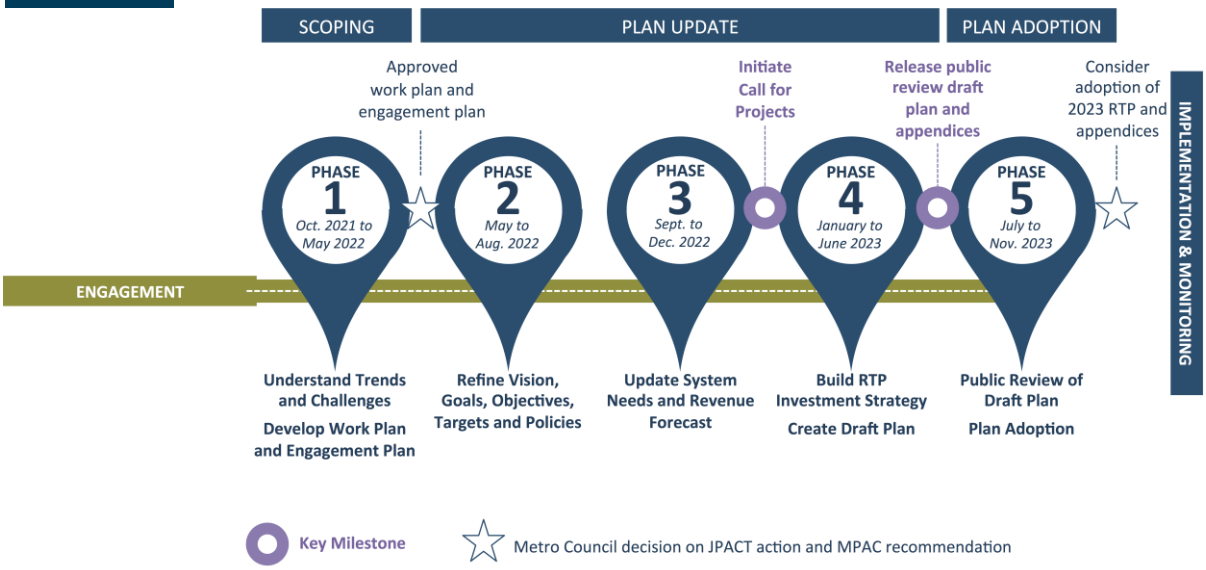
Applicability of Statewide Transportation Planning Rules to Transportation System Planning in the Portland region

Transportation Planning Rule Section	Applicability	
	Metro and/or Regional Transportation Plan (RTP)	**Cities and counties and/or local TSPs in Portland region**
0830: Enhanced Review of Select Roadway Projects – This rule provides for local review of certain street and highway projects meeting a certain threshold. The rule provides for local review at the time of a major TSP update. *Note: This rule aligns with existing Federal MPO requirements for a financially constrained Regional Transportation Plan that is developed consistent with the region's Congestion Management Process (CMP). The CMP policies in the RTP and existing Metro Regional Transportation Functional Plan call for transportation agencies to document consideration of alternative solutions to adding capacity to address identified needs. Metro considers projects in an adopted RTP or TSP exempt from additional review as described by this section.*	No	Yes
0900: TPR Reporting – This rule applies to Metro. Metro is required to submit minor annual reports and major reports as part of RTP updates. Cities and counties within Metro are not required to submit individual reports; however, cities and counties within Metro must coordinate with Metro and provide information to Metro. *Note: Metro submits reports on behalf of the region as part of updates to the Regional Transportation Plan and other reporting processes. Cities and counties must coordinate with and provide information to Metro to support Metro's reporting.*	Yes	Yes

2023 REGIONAL TRANSPORTATION PLAN UPDATE

Project Timeline and Schedule of Engagement and Metro Council and Regional Advisory Committees' Discussions and Actions for 2023

Dates are subject to change. *Activities in gray text have been completed.*



Note: Under Federal law, the current Regional Transportation Plan expires on Dec. 6, 2023.

- **Call for Projects**
  - Prepare for Call for Projects: 8/4/22 to 1/6/2023
    - 8/4/22 to 1/6/2023: Metro works with jurisdictional partners to develop revenue forecast
    - 10/4/22 to 2/17/2023: County coordinating committees and agencies conduct meetings to develop draft project lists for submission; Agencies engage governing bodies on process and draft lists
  - Conduct Call for Projects: 1/6 to 2/17
    - 1/6: RTP Hub open to project partners
    - Metro continues to work with jurisdictional partners to develop draft revenue forecast
    - 2/3 TPAC: Update on the schedule, engagement and the Call for Projects
    - 2/16 JPACT: Update on the Call for Projects and next steps
    - 2/17: RTP Hub information, public engagement form and congestion management process form(s), if applicable, due
    - 2/17: Draft Project Lists from Agencies and County Coordinating Committee Lists due
    - 2/17: Submission letters from County Coordinating Committees documenting coordination and agreement on draft lists due
  - Submission of endorsement letters and any proposed refinements to the draft lists
    - 1/6 to 2/17: Governing bodies review draft project list and submit letter of endorsement with draft project list by 2/17; if additional time is needed endorsement letters may be submitted until May 24
    - 4/1 to 5/24: Governing bodies may identify project list refinements and communicate them to Metro by 5/24 with endorsement letter

- **Draft Policy Chapter (Ch. 3)**
  - Prepare draft - 12/22 to 2/24

- Discussions: March and April
  - 3/3 TPAC: draft Ch.3 – Introduce draft Ch. 3 and key policy topics (draft mobility policy, draft pricing policy, possibly others) for more discussion; invite minor "edits" to be included in public review draft RTP by March 24.
  - 3/8 TPAC workshop: draft Ch.3 – Discuss key policy topics; additional discussions may be added
  - 3/15 MTAC: draft Ch.3 – Discuss key policy topics; additional discussions may be added
  - 4/19 TPAC/MTAC workshop – discuss updated draft Ch. 3

- **High-level Assessment of Draft Project List**
  - Prepare for assessment: 1/6 to 2/28
    - 1/6 to 2/28: Develop and test work flow and set up data and tools for assessment
  - Conduct assessment of draft project list across climate, equity, mobility, safety and economy policy outcomes: 3/10 to 3/17
  - Conduct high-level environmental assessment of project list: 3/21 to 3/24
  - 3/16 CORE: RTP Call for Projects status update
  - Consult with Tribes and federal, state, regional and local resource agencies on results of environmental assessment and potential mitigation strategies, in coordination with 2024-2027 MTIP consultations: April
    - Consultation with Natural Resources Agencies and Tribes: 4/20
    - Consultation with Federal and State agencies: 4/27
  - Report results of assessment to policymakers, regional advisory committees, county coordinating committees and the public: April-May
    - ~4/3 to 4/30: Online public survey on draft project list
    - 4/1 to 4/26: Report on draft project list through briefings to county coordinating committees, and other interested parties
    - 4/7 TPAC: Report on draft project list and preview analysis approach
    - 4/13 RTP Community Leaders Forum: Report on draft project list and assessment results and receive input on project priorities
    - 4/15 Culturally specific community forums: Report on draft project list and assessment results and receive input on project priorities
    - 4/18 Metro Council: Report on draft project list across climate, mobility, equity, safety and economy policy outcomes
    - 4/19 TPAC/MTAC workshop: Report on draft project list across climate, mobility, equity, safety and economy policy outcomes
    - 4/20 JPACT: Report on draft project list across climate, mobility, equity, safety and economy policy outcomes
    - 4/26 MPAC: Report on draft project list across climate, mobility, equity, safety and economy policy outcomes

- **RTP System Analysis**
  - Conduct system analysis: 2/22 to 4/19
  - Report results of system analysis: May
    - 5/5 TPAC: Report on project list input, consultation meeting(s) and draft system analysis: climate, equity, mobility, safety and economy policy outcomes
    - 5/10 TPAC workshop: Report on project list input and draft system analysis: overall system performance; discuss mobility measures and targets
    - 5/11 JPACT/Metro Council workshop: RTP project priorities

        - 5/16 Metro Council: Report on project list input, consultation meeting(s) and draft system analysis: climate, equity, mobility, safety and economy policy outcomes
        - 5/17 MTAC: Report on project list input, consultation meeting(s) and draft system analysis: climate, equity, mobility, safety and economy policy outcomes
        - 5/18 JPACT: Report on project list input, consultation meeting(s) and draft system analysis: climate, equity, mobility, safety and economy policy outcomes
        - 5/18 CORE: Report on project list input, consultation meeting(s) and draft system analysis: climate, equity, mobility, safety and economy policy outcomes
        - 5/24 MPAC: Report on project list input, consultation meeting(s) and draft system analysis: climate, equity, mobility, safety and economy policy outcomes
        - 5/25 Business Leaders Forum: Report on draft project list across climate, mobility, equity, safety and economy policy outcomes and findings from Regional Freight Delay and Commodity Movement Study

- **RTP Public Comment Period**
    - Prepare public review draft RTP and project list: Jan. to June
    - Discussions: July to August (and throughout adoption process)
    - 6/2 TPAC: Recommendation to JPACT on release of the draft plan and project list for public review (by Resolution)
    - 6/13 Metro Council: Discussion
    - 6/15 JPACT: Consider action on TPAC recommendation (by Resolution)
    - 6/29 Metro Council: Consider action on JPACT recommendation (by Resolution)
    - 7/10 to 8/25 Public Comment Period: Briefings to Council, Metro technical and policy committees, county coordinating committees, online public comment survey and public hearing

- **Draft Implementation Chapter (Ch. 8)**
    - Prepare draft: March to May
    - Discussions: July and August
        - 7/7 TPAC: Seek feedback on draft Ch.8
        - 7/11 Metro Council: Seek feedback on draft Ch.8
        - 7/19 MTAC: Seek feedback on draft Ch.8
        - 7/20 JPACT: Seek feedback on draft Ch.8
        - 7/26 MPAC: Seek feedback on draft Ch.8
        - 8/4 TPAC: Continue discussion on draft Ch.8, if needed

- **RTP Adoption process**
    - Prepare draft legislation: July
    - Conduct adoption process: 8/4 to 11/30
        - 8/4 TPAC: review draft Ordinance and outline of adoption package
        - 9/13 TPAC Workshop: Draft Public Comment Report and Recommended Changes
        - 9/20 MTAC: Draft Public Comment Report and Recommended Changes
        - 10/6 TPAC: Draft Public Comment Report and Recommended Changes
        - 10/18 MTAC: Recommendation to MPAC
        - 10/19 JPACT: Introduce final 2023 RTP action (Ordinance)
        - 10/25 MPAC: Recommendation to the Metro Council
        - 11/3 TPAC: Recommendation to JPACT
        - 11/16 JPACT: Consider final action (by Ordinance)
        - 11/30 Metro Council: Consider final action (by Ordinance)

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Updates to the Regional High Capacity Transit Strategy and the Climate Smart Strategy are occurring concurrent with the 2023 Regional Transportation Plan update and are anticipated to be considered by for recommendation by MPAC and adoption by JPACT and the Metro Council as part of the final adoption package for the 2023 Regional Transportation Plan. A schedule of Metro Council and regional advisory committees' discussions in support of these updates follows.

- **Update HCT Strategy**
  - January/early Feb.: High Capacity Transit Strategy business group interviews
  - 1/13 to 2/13: Transit priorities online public survey and other engagement activities
  - 1/17 to 2/1: High Capacity Transit Strategy tabling events with TriMet
  - 1/11 TPAC Workshop: High Capacity Transit Strategy Update: Corridor Investment Readiness Tiers
  - 1/18 MTAC: High Capacity Transit Strategy Update: Corridor Investment Readiness Tiers
  - 1/19 JPACT: High Capacity Transit Strategy Update: Corridor Investment Readiness Tiers
  - 1/25 MPAC: High Capacity Transit Strategy Update: Corridor Investment Readiness Tiers
  - 1/26 Metro Council: High Capacity Transit Strategy Update: Corridor Investment Readiness Tiers
  - 2/1: High Capacity Transit Strategy online Story Map
  - 5/10 TPAC Workshop: High Capacity Transit Strategy Update: Draft Report
  - 5/17 MTAC: High Capacity Transit Strategy Update: Draft Report
  - 5/18 JPACT: High Capacity Transit Strategy Update: Draft Report
  - 5/24 MPAC: High Capacity Transit Strategy Update: Draft Report
  - 5/30 Metro Council: High Capacity Transit Strategy Update: Draft Report

- **Update Climate Smart Strategy**[1]
  - 2/15 TPAC/MTAC Workshop: Climate Smart Strategy discussion
  - 2/16 JPACT: Climate Smart Workshop Recap and discussion of updating strategy
  - 3/8 TPAC Workshop: Climate Smart Strategy discussion
  - 5/2 TPAC: Climate Smart Strategy discussion
  - 6/21 TPAC/MTAC Workshop: Climate Smart Strategy discussion

[1] Schedule of discussions to be further refined.

Oregon
Tina Kotek, Governor

Department of Transportation
Transportation Region 1
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Transportation Policy Alternatives Committee
600 NE Grand Ave
Portland OR, 97232

Dear Chair Kloster and TPAC members,

The draft Chapter 3 of the 2023 Regional Transportation Plan (RTP) update circulated for the March 8 TPAC work session captured the many shared goals around the Portland region. ODOT is broadly supportive of the direction within its 160 pages. However, changes are needed to ensure that the RTP is consistent with state legislation, plans and federal regulations.

This letter spells out the critical adjustments required for three specific sections, Motor Vehicle Network, Pricing and Mobility Polices, and highlights the reasons for regional policymakers. ODOT requests that Metro staff make these changes and asks for JPACT and TPAC support in doing so, to best ensure an RTP that is consistent with past promises and higher level requirements, sets appropriate expectations, and can be implemented as written.

Motor Vehicle Network Policy
ODOT, DLCD and Metro staff worked through how the Climate Friendly Equitable Communities (CFEC) program applies to the RTP, yet the language in draft Policy 9 (formerly 12) does not clearly align with that agreement. The following changes are needed:

1) Policy 9 references OAR 660-012-0830, which was agreed only to apply to projects in local Transportation System Plans (TSPs) and is not required for projects to be added to the RTP Financial Constrained project list.
   - See Attachment 1 to Metro's January 25, 2023, letter to DLCD (attached to this letter) that explains the planned system is not subject to the new CFEC rules: "Metro considers projects in an adopted RTP or TSP exempt from additional review as described by this section [0830]."

2) The first sentence includes strikeouts for the words "beyond the planned system". This change is not acceptable for the following reasons:
   - As noted above, the motor vehicle network already adopted in the RTP and TSPs is assumed to be part of the regional transportation system, further review or analysis is not required. Retaining "beyond the planned system" ensures consistency with CFEC and will help prevent agency and public confusion on how OAR 600-012-0830 applies.
   - Removal of this clause could complicate currently adopted plans – including years of local agency work and even federal NEPA review. The Transportation Planning Rule included consideration of motor vehicle needs and projects were adopted into plans and approved accordingly under the assumption that the projects in those transportation system plans (TSPs) are likely in the foreseeable future, including inclusion in the RTP when appropriate.

3) The word “deficiencies” has been struck. This change is not acceptable for the following reasons:
   - The intention of the proposed mobility policy update is to have an improved, regionally-supported method for identifying motor vehicle network deficiencies, with the intention that planning and investments focus on those needs. Removing “deficiencies” from draft Policy 9 conflicts directly with that effort, as well as with Mobility Policy 6.
   - The Mobility policy section of the RTP specifically references system completeness, including in system performance measures, and with language such as, “The regional and local ‘planned’ system may not achieve completeness for all modes but should identify future needs and expectations for all facilities.” Removing “deficiencies” from draft Policy 9 de-links transportation projects from regional mobility needs.

For the reasons above, ODOT requests that Metro staff restore “beyond the planned system” and “deficiencies” to draft Motor Vehicle Policy 9.

Proposed Pricing Policies and Actions

The Pricing Policies clearly benefit from cooperative work between Metro and ODOT. We are sincerely appreciative of the collaborative efforts of Metro staff, which have resulted in policies generally consistent with the Oregon Highway Plan.

The implementation actions related to the policies are guided by Metro’s Regional Congestion Pricing Study, endorsed by JPACT. However, some clarifications are needed to ensure consistency with state legislation. In particular, HB 3055 establishes the Oregon Transportation Commission (OTC) as the body to review and approve tolls and lists considerations for the OTC to take into account when setting rules for the process to establish tolls. HB 3055 also spells out allowable uses of the Toll Program Fund and the purpose of assessing variable rate tolls. We request the following changes to ensure the RTP meets state legislation and federal guidelines:

1) **Implementation.** As Metro staff noted at the March 8, 2023, TPAC Workshop and consistent with the description of considerations under Section 3.2.5.1 Best Practices for Revenue Reinvestment, RTP actions are not directives. We request the text be updated to say agencies “…should consider the following actions” rather than “should take the following actions.” This change alone will reduce or eliminate conflicts with federal and state requirements.
2) **Toll Authority**. The draft language of Pricing Policy 1/Action 1 is not in line with specific direction in HB 3055 to the OTC. HB 3055 allows for other road authorities to set tolls, however. We request this action say that State highway pricing rates will be set by the OTC in accordance with state legislation, but other road authorities should consider the actions listed.
3) **Toll Revenue.** We are concerned that several toll revenue actions conflict with limitations in federal regulations (such as Section 129 of Title 23), the Oregon Constitution (Article IX Section 3a), and state legislation (HB 3055). These actions may mislead public expectations on options for reinvesting toll revenues. We request Metro staff update the language in the following actions to say “Consider reinvesting” rather than “reinvest”: Pricing Policy 1/Action 3, Policy 2/Action 7, Policy 3/Action 5, Policy 4/Action 6, and Policy 5/Action 3.

Proposed Mobility Policy

The path to crafting the new Regional Mobility Policy continues to be a positive example of agency cooperation, where Metro and ODOT co-funded and lead a study. As stated clearly at JPACT, ODOT supports learning more before moving forward on the proposed new performance measures.

While we all await the modelling results, we emphasize the need for clarity around how the performance measures are to be used. Of particular concern is the interpretation of the Travel Speed Reliability Measure, which is intended to set a threshold of need not an expected level of performance. When those speed reach a threshold of 35 MPH for 4 hours a day then an undeniable need exists that must be addressed.

However, in the policy language, it is characterized more around performance than need, and is inconsistent with what Metro and ODOT have agreed. Specifically, under "These policies apply to:" it says,

> *"throughways and arterials designated in the Regional Transportation Plan, which include state and local jurisdiction facilities, for identifying* ***mobility performance expectations*** *for planning and plan implementation. "*

The words in bold above could be mistakenly read to imply that the speed reliability target is an operational goal, rather than a threshold denoting an unreliable system. ODOT considers this to be the definition of an undeniable need, meaning that when the system is operating or projected to operate at this level, the planning process needs to evaluate and consider improvements to the facility. We request that RTP include clarifying language or an adjustment to the proposed wording, such as "mobility performance thresholds" or "mobility performance deficiencies".

Metro staff should reach out to us with any questions about these requests, which were included in our detailed comments submitted on March 24. We hope documenting them will save valuable time at regional meetings and clarify the need for the changes. ODOT staff are available to meet and discuss these concerns.

We thank TPAC members for their support. Sincerely,

Chris Ford
Policy & Development Manager
ODOT Region 1

Applicability of Statewide Transportation Planning Rules to Transportation System Planning in the Portland region

Applicability of Statewide Transportation Planning Rules to Transportation System Planning in the Portland region

This summary was collaboratively prepared by Metro, the Department of Land Conservation and Development (DLCD) and the Oregon Department of Transportation (ODOT) to provide clarity on the applicability of the Statewide Transportation Planning Rules to transportation system planning in the Portland region.

Transportation Planning Rule Section	Applicability	
	Metro and/or Regional Transportation Plan (RTP)	Cities and counties and/or local TSPs in Portland region
0012: Effective Dates and Transition – Subsection (4)(d) requires Metro to amend the UGMFP to "require local government adoption of Region 2040 centers and land use regulations" as described in the UGMFP. Cities and counties in the region must comply with those requirements by December 31, 2025. At that time, Metro will need to verify that boundaries have been adopted and land use regulations have been amended consistent with the Metro Urban Growth Management Functional Plan.	Yes	Yes, for the non-adopted centers
0100: TSPs in Metropolitan Areas –This rule applies to all cities and counties in the state, but not to Metro. Subsection (9) expressly refers to Metro's RTP and directs Metro to comply with separate requirements in 0140, and sub (10) directs cities and counties inside Metro to also meet the separate requirements in 0140.	No	Yes
0105: TSP Updates –This rules describes how cities update their TSPs. Counties are addressed in the next section regarding urban planning areas. This section applies to "cities" and not to Metro, which is governed by 0140.	No	Yes
0110: Planning Areas – This rule says cities do the TSPs for all urbanizable areas inside UGBs, including unincorporated areas, and describes different requirements for county planning in those areas. It does not apply to Metro.	No	Yes
0115 through 0135: Content of TSPs, Engagement and Equity Analysis – These rules apply to cities and counties and include requirements regarding the content of TSPs, public engagement and equity. Subsections are: 0115 – funding projections, 0120-engagement, 0125-underserved populations, 0130-decision-making with underserved populations, and 0135-equity analysis.	No	Yes
0140: Planning in the Portland Metro Area – This rule creates specific requirements for cities and counties within the Metro area and Metro. It directs those cities and counties to "develop and adopt local transportation system plans as provided in -0100" and directs Metro to "develop and adopt a regional transportation plan as provided in this rule." As required under sub (3) of this rule, Metro will adopt its regional transportation system plan in coordination with the regional transportation plan that is required by federal law, through a single coordinated process involving both the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council.	Yes	Yes

Applicability of Statewide Transportation Planning Rules to Transportation System Planning in the Portland region

Transportation Planning Rule Section	Applicability	
	Metro and/or Regional Transportation Plan (RTP)	Cities and counties and/or local TSPs in Portland region
0145 and 0150: Transportation Options Planning – These rules apply to "cities and counties" and not to Metro, same analysis as above. 0145 – transportation options planning 0150 – transportation system planning inventories	No	Yes
0155: Prioritization Framework – This rule sets the context for prioritizing projects in transportation system plans; and how cities, counties, Metro, and state agencies make decisions about investments in the transportation system. This rule expressly applies to "cities, counties, Metro, and state agencies."	Yes	Yes
0160: Reducing VMT – This rule requires Metro, cities and counties to use vehicle miles traveled to link local transportation systems planning with the metropolitan greenhouse gas reduction targets. The rule applies when adopting a TSP and requires the city or county to adopt a TSP that is projected to reduce vehicle miles traveled. Under subsection (2), this rule applies when a city or county makes a major update to a TSP as provided in -0105, or when Metro makes an update to the RTP as provided in -0140.	Yes	Yes
0170 through 0190: These rules all apply to "cities and counties" and not to Metro. 0170 – unconstrained project list 0180 – constrained project list 0190 – refinement plans *Note: Rules 0170 and 0180 align with existing Federal MPO requirements for a financially constrained Regional Transportation Plan that is developed according to the region's Congestion Management Process (CMP). The RTP includes an unconstrained project list (called the Strategic list) and a constrained project list (called the Constrained list) that is updated with each RTP update. The RTP also identifies refinement plans to address needs identified in the RTP that are not fully addressed.*	No	Yes
0210: Transportation Modeling – This rule applies to "cities and counties" and not to Metro. This rule addresses plan amendments.	No	Yes
0215: Transportation Performance Standards – This rule applies to performance standards that cities and counties use to review plan and land use regulation amendments under OAR 660-012-0060, and subsection 6 applies to performance standards that Metro uses to review functional plan amendments under -0060.	Yes	Yes
0325: Transportation Review in Climate Friendly Areas – This rule applies to changes in land use regulations in Region 2040 centers.	No	Yes

Applicability of Statewide Transportation Planning Rules to Transportation System Planning in the Portland region

Transportation Planning Rule Section	Applicability	
	Metro and/or Regional Transportation Plan (RTP)	Cities and counties and/or local TSPs in Portland region
0330: Land Use Requirements – This rule applies to cities and counties. Local regulations must be brought up to date with this rule at the time of a major TSP update. Some of this rule is based on existing requirements in the Transportation Planning Rule. Some of these requirements may have analogues in the Metro functional plans.	No	Yes
0340: Land Use Assumptions for Transportation Planning – This rule requires "a city, county or Metro" to develop and adopt future land use assumptions when preparing a TSP or zoning a CFA or Regional Center under Title 6 of the Metro Urban Growth Management Functional Plan.	Yes	Yes
0350: Urban Growth Boundary Expansions – This rule requires local jurisdictions to ensure they are being consistent with coordinated transportation planning requirements when proposing to expand an urban growth boundary.	No	No
0400-450: Parking Management – These rules apply directly to cities and counties in metropolitan areas. Local governments may apply the state rules directly or update their local codes to remove or reduce parking mandates in specified areas. *Note: While the rules allow for Metro functional plans to provide further direction to local governments on parking management, Metro does not plan to require different parking management from what is identified in these rules.*	No	Yes
0500-0820: Modal System Planning, Inventories and Projects – These rules either expressly apply to "cities" or "cities and counties" but not to Metro. Metro is specifically governed by -0140. *Note: The multimodal system inventory work ODOT conducts is anticipated to be statewide, including the Portland area. The inventory data identified in the rules go beyond what is currently required of cities and counties in the Portland area and the bicycle and pedestrian data that cities and counties currently provide to Metro for the Regional Land Information System (RLIS). While the rules allow for Metro functional plans to provide further direction on what local governments must include in the their inventories, Metro does not plan to require collection of additional inventory data beyond what is identified in these rules.*	No	Yes

Applicability of Statewide Transportation Planning Rules to Transportation System Planning in the Portland region

Transportation Planning Rule Section	Applicability	
	Metro and/or Regional Transportation Plan (RTP)	**Cities and counties and/or local TSPs in Portland region**
0830: Enhanced Review of Select Roadway Projects – This rule provides for local review of certain street and highway projects meeting a certain threshold. The rule provides for local review at the time of a major TSP update. *Note: This rule aligns with existing Federal MPO requirements for a financially constrained Regional Transportation Plan that is developed consistent with the region's Congestion Management Process (CMP). The CMP policies in the RTP and existing Metro Regional Transportation Functional Plan call for transportation agencies to document consideration of alternative solutions to adding capacity to address identified needs. Metro considers projects in an adopted RTP or TSP exempt from additional review as described by this section.*	No	Yes
0900: TPR Reporting – This rule applies to Metro. Metro is required to submit minor annual reports and major reports as part of RTP updates. Cities and counties within Metro are not required to submit individual reports; however, cities and counties within Metro must coordinate with Metro and provide information to Metro. *Note: Metro submits reports on behalf of the region as part of updates to the Regional Transportation Plan and other reporting processes. Cities and counties must coordinate with and provide information to Metro to support Metro's reporting.*	Yes	Yes

Memo

Metro
600 NE Grand Ave.
Portland, OR 97232-2736

Date: April 19, 2023
To: Metro Transportation Policy Advisory Committee (TPAC)
From: Eliot Rose, Senior Transportation Planner
Subject: Draft 2023 RTP project list summaries, high-level assessment results, and system analysis results

Purpose

This memorandum presents information summarizing the 2023 RTP project list, as well as draft results from the high-level assessment of how projects advance regional goals and from the system analysis of the RTP, for discussion by RTP technical and policy advisory committees and by Metro Council. This is part of the extensive suite of information that is used to evaluate the impacts of the RTP and finalized the plan. Metro staff will be presenting additional information on the project list and its impacts on regional goals to these committees in May. Feedback from technical committees will help inform how the results presented below are interpreted and presented, and Metro Council and policy committees may make explore refinements to the RTP project list based on these results.

Introduction

A major update to the Regional Transportation Plan (RTP) is underway. The plan is a tool that guides investments in all forms of travel – motor vehicle, transit, bicycle and walking – and the movement of goods and freight throughout greater Portland. The RTP is a key tool for implementing the 2040 Growth Plan and Climate Smart Strategy and connecting people to their jobs, families, school and other important destinations in the region.

Now that the RTP Call for Projects is complete, Metro staff are able to begin analyzing the investments and the impacts of the RTP. This information will inform changes and refinements that help to better meet the region's goals before the public review draft of the plan is released. Over the next several months, Metro staff will be sharing three different types of information that can help to understand the plan's investments and impacts:

- RTP **project list summaries**, which include aggregate information such as the distribution of projects across different types of investments and different cost categories. These summaries provide information on the spending profile of the RTP as well as context to help understand the two other types of information discussed below.
- The **high-level assessment**, which takes a simple, yes-or-no approach to reviewing whether individual RTP projects have certain features that support RTP goals, and on the share of the RTP budget devoted to different types of projects.
- The **system analysis**, which is a quantitative evaluation of how the RTP performs with respect to specific performance measures and targets that reflect RTP goals and policies.

These three elements are best considered side by side. Together they can be used to compare the RTP's budget to its impacts and to identify opportunities for the RTP to deliver greater benefit to the region. Metro staff will be presenting all three types of information in April and

May with Metro technical and policy committees. During April, staff will be focusing on descriptive information and the high-level assessment, both because most of the results from those analyses are ready before results of the more complex system-level evaluation, and because to allow stakeholders extra time to understand and interpret the high-level assessment, which is a new aspect of the RTP evaluation.

Project list summaries

Methods

Chapter 6 of the RTP describes the investments that are included in the plan. The plan typically summarizes the project list using the following characteristics in order to help stakeholders understand the RTP's investment profile and priorities:

By investment scenario: The RTP contains several different investment scenarios that represent when projects are intended to be built (short- vs. long-term) and whether or not funding is expected to be available to cover the project given other priorities (constrained vs. strategic). This information can help to understand the timing and likelihood of different projects, as well as the extent to which the region is prioritizing different projects – often decision-makers see near-term projects as higher priorities than long-term ones, and constrained projects as higher priorities than strategic ones.

By investment category: Lead agencies assign an investment category to all RTP projects that represents how the majority of project funds will be spent. These investment categories describe characteristics such as the type of investment (capital vs. maintenance and/or operations), the primary mode of investment (particularly for transit and active transportation projects, since these are critical to achieving many different RTP goals), and for roadway projects, the type of facility involved (throughways vs. roads and bridges). For the 2023 RTP update, Metro staff have added a dedicated Megaprojects investment category for multimodal projects with a value over $2 billion. These categories are important for understanding the RTP's investment priorities and also for demonstrating financial constraint (i.e., that the region can be reasonably expected to have the funding to play for planned investments) since many of the revenue streams accounted for in the RTP are restricted to certain types of projects.

By cost category: The projects in the RTP range in cost from roughly $1.5 million to $6 billion dollars. Some investment categories consist of hundreds of smaller projects and some consist of a few large projects. Looking at projects by cost can help to understand how and the RTP is investing in different priorities, and can also help stakeholders strategically identify opportunities to improve the project list.

More information on how these characteristics are described is available in the descriptions of the results below. There are two important limitations that stakeholders should be aware of when reviewing these results:

- **The results rely on information submitted by lead agencies**. Metro staff provided guidance accompanying the RTP Call for Projects on how lead agencies should enter the information described above, but do not have the capacity to verify that this information was correctly entered for each RTP project.

- **The summary assigns projects to a single investment category, selected by lead agencies to reflect how the majority of each project's budget is spent**. Lead agencies do not break out project spending by investment category. For example, if a project to create new high-capacity transit service also invests in walking and bicycling facilities connecting to stations, the entire project budget would be associated with transit capital, and the portion spent on active transportation facilities would not show up as a walking + biking investment in the results below.
- **The results inflate the value of projects that are built later in the RTP time frame**. Consistent with federal guidance, the RTP uses year-of-expenditure dollars (YOE$) when describing project costs throughout the plan. This helps to anticipate the impact of future inflation on project budgets, but it can make it challenging to compare costs between projects that are built during different time periods. For example, a project that costs $2 million in 2030 dollars would cost $3.6 million in 2045 dollars assuming four percent average inflation per year. Wherever possible, results present cost information both in YOE$ and as percentages of the overall RTP budget for the given investment scenario, which helps control somewhat for this issue since the RTP includes both short- and long-term scenarios.

Results

This section summarizes the RTP project list. In addition, Appendix A includes materials that Metro staff developed to graphically summarize projects for the public, which may also help technical and policy committee members understand these results. Appendix B contains selected results by subregion.

Table 1 shows how RTP projects and spending are distributed among different investment categories under four different budget scenarios. The investment categories used in this memorandum include:

- *Road and bridge* projects, including "complete street" reconstructions, arterial street connectivity and widening, and highway overcrossings that provide mobility and access for all modes of travel.
- *Throughway* projects that add or reconfigure lanes on throughways, and which may also include improvements to nearby surface streets, active transportation facilities, and transit facilities.
- *Freight access* projects that improve access and mobility for national and international rail, air and marine freight to reach destinations within the region's industrial areas and to the regional throughway system.
- *Transit capital* projects include high-capacity transit extensions and regional, corridor or site-specific projects to improve speed and reliability of bus and streetcar service.
- *Walking and biking* projects fill important gaps in sidewalks, bikeways and trails to make biking and walking safe, convenient and accessible for all ages and abilities.
- *Information and technology* projects use information and technology to manage travel demand and/or the transportation system and to help people learn about travel options.
- *Megaprojects* include multimodal projects that cost over $2 billion. The Interstate 5 Bridge Replacement is currently the only project in this category.

- *Other* projects include regional programmatic investments like the Regional Travel Options program.
- *Transit service and operations* projects fund the continued operation of the existing transit network.
- *Transit maintenance* projects fund the maintenance of the existing transit network.
- *Road, bridge, and throughway maintenance* projects maintain the existing roadway network, sometimes including existing on-street active transportation facilities.

The following budget scenarios are used in this memorandum:

- The *short-term constrained* scenario includes projects that the region can reasonably expect to build between 2023 and 2030 with the funds that are likely to be available during that time period. The highest priority projects in the region typically end up in this scenario.
- The *long-term constrained* scenario includes projects that the region can reasonably expect to build between 2030 and 2045 with the funds that are likely to be available during that time period. This scenario covers twice as many years as the short-term constrained scenario, and its budget is also roughly double the size.
- The *total constrained* or *constrained* scenario includes both the short- and long-term constrained scenarios, and therefore all investments that the region can reasonably expect to fund between 2023 and 2035.
- The *strategic scenario* includes additional strategic priority investments that could be built with additional transportation resources if they became available in the region. These projects are not anticipated to be completed unless new, as of yet identified funding becomes available. Since the financial forecast for the next several years is generally much clearer than for later years, Strategic projects are assumed to be implemented between 2030 and 2045.

Table 1: RTP spending by investment category and budget scenario

	Total constrained		**Short-term constrained**		**Long-term constrained**		**Strategic**	
Investment category	**YOE$m**	**%**	**YOE$m**	**%**	**YOE$m**	**%**	**YOE$m**	**%**
Walking + Biking	$3,073	4.2%	$955	4.9%	$2,118	3.9%	$3,177	14.3%
Freight Access	$381	0.5%	$74	0.4%	$307	0.6%	$155	0.7%
Roads + Bridges	$7,885	10.8%	$3,523	18.2%	$4,362	8.1%	$4,264	19.2%
Throughways	$4,729	6.4%	$2,600	13.4%	$2,129	3.9%	$2,322	10.4%
Transit Capital	$2,658	3.6%	$1,021	5.3%	$1,637	3.0%	$11,828	53.2%
Info + Technology	$573	0.8%	$165	0.8%	$408	0.8%	$132	0.6%
Megaprojects	$6,000	8.2%	$0	0.0%	$6,000	11.1%	$0	0.0%
Other	$71	0.1%	$21	0.1%	$50	0.1%	$0	0.0%
Transit Maintenance	$4,958	6.8%	$1,260	6.5%	$3,698	6.9%	$0	0.0%
Transit Service + Operations	$27,593	37.6%	$5,836	30.1%	$21,757	40.3%	$368	1.7%
Throughway + Road + Bridge Maintenance	$15,413	21.0%	$3,951	20.4%	$11,461	21.3%	$0	0.0%
Total	*$73,334*	*100.0%*	*$19,405*	*100.0%*	*$53,929*	*100.0%*	*$22,247*	*100.0%*

The majority of RTP spending goes toward maintaining and operating the existing transportation system. Collectively, **maintaining the region's roads and transit infrastructure and operating the transit system accounts for 65% of all constrained spending**.[1] This limits the share of funding that goes toward the capital projects and programmatic investments that the region uses to better meet goals. It also speaks to the importance of carefully selecting capital projects for inclusion in the RTP, because today's investments will need maintaining and operating for decades to come.

Among the RTP's constrained capital budget, the **largest shares of spending go toward roads and bridges, megaprojects, and throughways**. Significant but smaller shares of capital spending also go toward walking and biking and transit capital projects. In contrast, transit capital accounts by far for the largest share of spending under the strategic scenario, and walking and biking accounts for a much larger share of spending under this scenario relative to other categories. This suggests that **the amount and type of funding available may be preventing the region from funding transit and active transportation projects that are otherwise high priorities**.

Table 2 shows the number and average cost of constrained capital RTP projects by investment category. This table helps to illustrate how the composition of these categories differs.

Table 2: Number and average cost of constrained RTP projects by investment category (capital projects and programmatic investments only)

Investment category	Less than $3m	$3m to $10m	$10m to $25m	$25m to $100m	$100m to $1b	$1b and up	Total	Average cost per project (YOE$m)
Walking + Biking	34	153	97	18	0	0	302	$10
Freight Access	1	4	2	7	0	0	14	$27
Roads + Bridges	12	105	84	68	8	0	277	$28
Throughways	0	1	3	10	9	0	23	$206
Transit Capital	11	8	6	13	5	0	43	$62
Info + Technology	10	22	10	5	0	0	47	$12
Megaprojects	0	0	0	0	0	1	1	$6,000
Other	0	1	2	1	0	0	4	$18
Total	*68*	*294*	*204*	*122*	*22*	*1*	*711*	*$36*

Some investment categories – including walking and biking, freight access, roads and bridges, and information and technology – consist of many different projects, the majority of which cost less than $25 million. Other categories, like throughways, transit capital projects, and megaprojects, tend to consist of fewer, costlier projects. In categories that consist of fewer,

[1] The region's policy of maintaining the system in a good state of repair means that all spending on operations and maintenance must be part of the constrained project list. New and unanticipated funding sources tend to focus on programmatic investments and capital projects, so those are the focus of the Strategic scenario, and that scenario does not include any spending on maintaining or operating the existing system.

larger projects, making changes to a single project or two can have a significant impact on the RTP's progress toward regional goals. This relationship between individual projects and regional goals is the subject of the high-level assessment, which is discussed in the next section.

High-level assessment

Background

The goal of the high-level assessment is to provide decision-makers, agency partners, and community members with information on how the investments included in the draft RTP project list support the RTP vision, goals, and policies. The assessment shows how individual projects, as well as the collective set of RTP projects, advance each of the five RTP goals.

During this update, as well as during the past several RTP cycles, an increasing number of stakeholders have been asking for information to help better understand how the different investments in the RTP relate to the overarching policy goals. These calls have coincided with a growing urgency surrounding issues like rising transportation fatalities, high housing costs and their impact on equity, and the impacts of climate change in the region. The high-level assessment provides information that can help stakeholders understand the extent to which the RTP is prioritizing investments that address these issues.

Metro staff presented a draft proposal outlining the high-level assessment process and measures to TPAC in November during discussion of the RTP Call for Projects. In December, staff shared changes to the high-level assessment measures and methodologies that reflected TPAC's feedback, which included significant changes to several of the inital draft measures. Appendix A contains a memorandum summarizing these changes.

The initial high-level assessment proposal was also informed by the 2018 RTP update, which tested a rigorous and quantitative approach to analyzing projects. This exercise revealed the limitations inherent in evaluating and comparing the diverse projects in the RTP. After devoting considerable effort to the analysis, Metro and partner agencies felt like the results couldn't reliably be compared between projects. Partners recommended that future RTP updates use a simple, transparent set of criteria to explore and communicate how projects relate to goals. The approach and results presented in this memorandum carry out that recommendation.

The high-level assessment aims to provide information and spur conversation about how to best align the projects in the RTP with its goals. The assessment is not intended to serve as a screen for determining which projects do and don't make it into the RTP. It is intended to help identify opportunities to improve the project list and to prioritize beneficial projects. During the 2018 RTP update, a similar assessment was conducted with respect to safety. Based on the results, JPACT and Metro Council requested that lead agencies update the descriptions of several projects to better reflect their impacts on safety and recommended moving some projects between the near- and long-term constrained project lists.

Methodology and measures

The high-level assessment includes ten measures – two for each of the five RTP goal areas (Equity, Climate, Safety, Mobility, and Economy). Each measure asks a simple yes-or-no question that can be answered using maps and analyses from the RTP and the information that lead agencies submit through the RTP call for projects. Metro staff applied the assessment to each of the capital projects and programmatic investments in the RTP to create the draft results presented in the next section.

Table 3 summarizes each measure, including the data source and the methodology used to assess RTP projects. Appendix C contains a more detailed description of the high-level assessment methodology.

Table 3: High-level assessment measures, data sources, and assessment methods

Brief name	Measure	Data source(s)	Assessment method
Equity			
In equity focus areas	Is the project located in an Equity Focus Area?	Equity Focus Area map, project location	Projects that overlap[2] an Equity Focus Area receive credit.
Equity projects	Does the project invest primarily in transit or active transportation, or close a gap in the transit or active transportation networks?	Prior regional community engagement on equity, RTP network gap maps, investment category, project location	Projects receive credit if they invest primarily in active transportation or transit. Roadway and freight projects that include bicycle and pedestrian design elements receive credit if they overlap a gap in active transportation networks.
Climate			
Climate action	Does the project have a high or medium greenhouse gas reduction potential?	Climate Smart Strategy, investment category	Projects in investment categories that align with high-impact Climate Smart strategies receive two points. Projects in investment categories that align with medium-impact strategies receive one point.
Resilience	Is the project located on a Regional Emergency Transportation Route or Statewide Seismic Lifeline Route?	Regional Emergency Transportation Route map, Seismic Lifeline maps, project location	Projects that overlap the routes identified in either one of these maps receive credit.
Safety			
Safety projects	Is the project identified as safety project?	Agency identified consistent with RTP definition[3]	Projects receive credit if the lead agency identifies a project as meeting the definition of a safety project.

[2] For the purposes of the assessment projects get credit whether they fully or partially overlap the geography in question. Metro staff use 40-foot buffers whenever determining whether two different features overlap each other.

[3]

Brief name	Measure	Data source(s)	Assessment method
High injury network	Is the project on a high injury corridor or high injury intersection?	High Injury Corridors map, project location	Projects that overlap a high-injury corridor or intersection receive credit.
Mobility			
Fill gaps	Does the project complete a gap in the RTP pedestrian, bicycle transit or motor vehicle networks?	RTP network gap maps, project location, investment category	Projects receive credit if they invest primarily in a given mode and also overlap a gap in that modal network. Roadway and freight projects that include bicycle and pedestrian design elements receive credit if they overlap a gap in active transportation networks.
Design elements	Does project include ADA-pedestrian-, bicycle- or transit-supportive design or TSMO elements?	Agency-identified project design elements	Projects receive credit if they include certain design elements identified through the call for projects (see appendix A).
Economy			
Planned job centers	Is the project located in an area that is prioritized for future job growth?	2040 Growth Concept map, Title 4 Map, Title 6 Map, Metro UGB Expansion History map, project location	Projects receive credit if they overlap with one of the following land use types: • 2040 centers and station communities • Industrial / employment areas • UGB expansion areas
Current job centers	Is the project located in an area with higher-than-average job activity?	Economic Value Atlas, project location	Projects receive credit if they fully or partially overlap with an area with higher-than-average job activity. (GIS)

The measures listed above were selected to:

- **Reflect RTP policy**. Wherever possible, the measures above draw on adopted RTP policies and policy maps.
- **Apply to a wide range of project types and sizes** – including relatively inexpensive bicycle and pedestrian projects, major transit and throughway projects, and regional programs like Metro's Regional Travel Options and Transportation System Management and Operations program or programmatic countywide investments.
- **Be simple and transparent**. The assessment asks yes-or-no questions that are easy to answer based on established RTP policies and practices. The goal is to report on how key aspects of the RTP are being implemented – not to account for all the nuances of what makes a "good" transportation project.
- **Highlight projects that meet multiple RTP goals**. Prior RTP work and feedback from agency and community members have repeatedly highlighted that many projects in the RTP serve multiple goals. For example, providing high-frequency transit in key locations supports climate, mobility, and equity goals.
- **Be implementable given the time, resources and information available through the RTP process**. There are more than 1,000 projects in the draft RTP project list. The high-level assessment is automated and based on existing maps and data and the information provided by nominating agencies through the Call for Projects.

Limitations

The high-level assessment is a new component of the 2023 RTP update that is designed to provide simple and transparent information on how different projects in the RTP reflect regional policies. It is designed to provoke further ideas and questions about how to better align the RTP project list with goals – not to provide a definitive rating or screening of RTP projects. Metro staff recommend keeping the following limitations in mind when reviewing the results below.

The high-level assessment does not offer an "apples-to-apples" comparison between different goal areas. This is because the RTP policies that guide the design of the assessment define "good" investments more broadly for some goals that others. For example, the planned job centers used in the Economy measures cover the majority of jobs and people in the region; only a fraction of jobs and people are located along the high-injury network used in the Safety measures. The region focuses transportation investments on places where jobs and people are concentrated, so all things being equal more projects will meet the Economy measure than the Safety measure. Similarly, one of the Mobility measures gives credit to projects that spend *any* resources on a relevant design element to qualify, whereas under one of the Climate measures projects only get credit if they devote *the majority of* resources to high- or medium-impact greenhouse gas reduction strategies, so the former measure is more inclusive than the latter. **The results of the assessment can make it appear as if the RTP invests more money in meeting one goal than in others when in fact that goal simply uses more expansive measures**.

The high-level assessment is biased in favor of larger projects.[4] All other things being equal, a project that covers a large area and/or invests in a variety of modes (i.e., a multimodal corridor improvement project covering several miles of a major arterial and the surrounding streets) is more likely to overlap with an Equity Focus Area or one of the other geographies used in the assessment – and therefore to receive credit for the associated measure – than a targeted project that covers a small area (i.e., a project that redesigns a specific intersection for pedestrians). This runs counter to an expectation expressed by some stakeholders that a project's benefit to the region should be proportional to its cost, so that projects that consume a greater share of the region's transportation funds deliver greater benefits in return. **The high-level assessment treats all projects equally; it does not attempt to hold more costly projects to a higher standard even though the assessment is biased in their favor**.

The high-level assessment relies on the limited and imperfect information that is provided by lead agencies through the RTP call for projects. Some projects are missing the geographic data needed to apply the many map-based measures used in the assessment. Lead agencies were not always consistent in entering the information used to analyze some measures.[5] Metro staff do not have the capacity to review each RTP project to determine

[4] This bias does not extend to large programmatic investments because they are exempt from certain measures; see next bullet.

[5] This was particularly an issue with the measure that captures whether projects meet the RTP definition of a safety project. Though the project hub guidance directed lead agencies to the definition of safety projects for

whether lead agencies entered information correctly, and even if they did, it is not possible for such a simplified assessment to capture all the nuances of what makes a "good" RTP project. **The results serve as a useful starting point for understanding the benefits of individual RTP projects, but the high-level assessment is not intended to be an authoritative statement on the benefits of any individual RTP project.**

There are no targets associated with the high-level assessment. Due to the issues above, as well as the fact that the high-level assessment is a new element of the RTP, there are no established targets for how much spending on any of the measures used in the high-level assessment is "enough."

Draft results

This section presents aggregate information on the amount and percentage of the RTP budget that is devoted to projects that support the five goals captured in the high-level assessment. In addition, Appendix A includes materials that Metro staff developed to graphically summarize projects for the public, which may also help technical and policy committee members understand these results. Appendix B contains selected results by county. Some of the results below refer to budget scenarios defined previously in this memo; refer to the Results subsection of the Project list summaries for more information on these scenarios.

Table 4 shows how much RTP spending is devoted to projects that receive credit for the different measures defined in Table 3 above.

reference, Metro staff reviewed several instances where lead agencies did not follow this guidance and described their project as a safety project when it clearly did not meet the RTP definition.

Table 4: Amount and percentage of RTP spending on different project types captured in the high-level assessment, by budget scenario

	Near-term constrained		Long-term constrained		Total constrained		Total strategic	
Project type	**YOE$b**	**%**	**YOE$b**	**%**	**YOE$b**	**%**	**YOE$b**	**%**
Equity								
In equity focus areas	$5.5	69%	$12.5	78%	$18.1	75%	$17.9	82%
Equity projects	$2.9	37%	$5.7	35%	$8.6	36%	$17.3	79%
Both	$2.2	27%	$4.0	25%	$6.2	26%	$14.7	67%
Climate								
Climate action	$2.6	32%	$4.2	26%	$6.7	28%	$15.1	69%
Resilience	$5.7	72%	$11.5	71%	$17.2	71%	$11.1	51%
Both	$1.5	18%	$2.0	13%	$3.5	15%	$6.5	30%
Safety								
Safety projects	$5.3	66%	$11.8	73%	$17.0	71%	$4.8	22%
High injury network	$3.2	40%	$9.6	60%	$12.8	53%	$8.5	39%
Both	$1.9	24%	$8.5	53%	$10.4	43%	$1.9	9%
Mobility								
Fill gaps	$2.4	30%	$4.5	28%	$6.9	29%	$10.1	46%
Design elements	$7.6	95%	$14.4	90%	$22.0	91%	$20.5	94%
Both	$2.4	30%	$4.5	28%	$6.9	29%	$9.8	45%
Economy								
Planned job centers	$7.1	89%	$14.0	87%	$21.1	88%	$20.0	92%
Current job centers	$6.7	83%	$12.6	78%	$19.3	80%	$19.0	87%
Both	$6.4	80%	$12.1	76%	$18.5	77%	$18.5	85%
Total	*$8.0*		*$16.1*		*$24.1*		*$21.9*	

These results can be used to explore several different questions related to the RTP's alignment with regional goals.

How urgently is the region investing in different priorities? To answer this question, we can compare the amount invested in different project types between the near-term constrained and the long-term constrained scenarios:

- The RTP invests a **significantly lower share of near-term resources on projects in equity focus areas** (69% of the near-term budget vs. 78% of the long-term budget) **and on projects on high injury corridors or intersections** (40% vs. 60%). Moving these types of projects from the long-term to the near-term list would help prioritize projects that support equity and safety.
- Relative to long-term investments, the **RTP invests a significantly higher share of near-term resources on projects that implement Climate Smart strategies** (32% vs. 26%). This could reflect an effort to prioritize climate investments.

Would more funding help the RTP better meet its goals? To answer this, we can compare the amount invested in different project types between the constrained and strategic scenarios. **The strategic scenario invests a far larger share in equity, reducing GHG emissions, and in closing gaps in multimodal networks than the constrained scenario does**. This may

mean that there are opportunities to better meet equity, climate and mobility goals by moving certain projects from the strategic list to the constrained list – or it may mean that the amount and type of transportation funding that is currently available limits progress toward regional goals.

Are there opportunities to improve projects? Ideally, projects that meet needs would be located in the places that have the greatest needs. Equity, safety, and mobility each contain two complimentary measures – one focused on the project type and one focused on the project's location with respect to areas of need. Ideally, projects that receive credit for one measure in these areas would also receive credit for the other:

- Equity: 75% of constrained projects are in Equity Focus Areas, 36% of projects focus on investments that underserved people prioritize, and 26% of projects do both. This means that only one third of investments in equity focus areas are focused on equity investments. Prioritizing more equity-focused projects within EFAs could help the RTP better meet equity goals.
- Safety: We see similar patterns for safety as for equity, though they are less pronounced. Including more safety-related elements in projects that are on the high injury network could help to better meet safety outcomes.
- Mobility: 29% of constrained projects complete gaps in the multimodal network, 91% include multimodal design elements, and 29% do both. Almost all projects that complete gaps in the multimodal network also include multimodal design elements, which suggests that the region is making targeted investments in meeting its mobility goals.

Table 5 shows how spending across the different investment categories used in the previous section aligns with the measures used in the high-level assessment. This helps to illustrate how different types of investments align with different regional goals.

Table 5: Percentage of project spending that meets high-level assessment measures, by investment category

Project type	Walking + Biking	Freight Access	Roads + Bridges	Throughways	Transit Capital	Info + Technology	Megaprojects
Equity							
In equity focus areas	66%	27%	67%	71%	77%	17%	100%
Equity projects	100%	21%	42%	0%	100%	0%	0%
Both	66%	0%	31%	0%	77%	0%	0%
Climate							
Climate action	100%	0%	0%	9%	100%	100%	0%
Resilience	33%	68%	47%	100%	73%	20%	100%
Both	33%	0%	0%	9%	73%	20%	0%
Safety							
Safety projects	90%	47%	63%	57%	42%	15%	100%
High injury network	27%	41%	27%	42%	70%	16%	100%
Both	26%	22%	22%	21%	42%	5%	100%
Mobility							
Fill gaps	64%	21%	44%	0%	73%	0%	0%
Design elements	100%	48%	89%	76%	100%	97%	100%
Both	64%	21%	43%	0%	73%	0%	0%
Economy							
Planned job centers	76%	87%	83%	100%	77%	23%	100%
Current job centers	64%	83%	62%	100%	76%	21%	100%
Both	54%	82%	56%	100%	76%	21%	100%

Transit and active transportation projects are particularly likely to meet equity, climate, safety, and mobility goals, which should come as no surprise since the region's climate, safety, equity and mobility policies all focus heavily on supporting multimodal travel. Freight and throughway projects are well-aligned with economic goals. Throughway projects often touch on key geographies like equity focus areas, emergency routes, and the high-injury network, but they are less likely to include the features that are necessary to meet other equity, climate, and safety criteria. The one megaproject in the region, the Interstate 5 Bridge Replacement, performs well with respect to many criteria, as would be expected of an expansive multimodal project.

Draft system analysis results

System completeness

System completeness, which measures the percentage of the planned transportation network that is expected to be complete under different RTP budget scenarios, is a critical performance measure for the RTP that touches on each of the five goal areas. Different RTP policies prioritize the completion of different modal networks or of transportation facilities in key locations within the region. Table 6 shows results for the many different ways that system completeness is evaluated in the RTP. The text below discusses how RTP policies priorities system completeness in different ways and offers findings for each goal area in light of this policy direction.

Table 6: Draft 2023 RTP system completeness results, by goal area, modal network, and subarea

Network	Baseline (2020)	Percent of miles completed Near-term constrained (2030)	Long-term constrained (2045)	Strategic
General / mobility and climate				
Regional:				
Pedestrian network	57%	62%	69%	75%
Bicycle network	55%	70%	70%	70%
Trail network	43%	48%	58%	64%
Motor vehicle network	98%	99%	99%	99%
Near transit:				
Pedestrian network	63%	68%	74%	78%
Bicycle network	60%	74%	74%	74%
Equity				
In equity focus areas:				
Pedestrian network	70%	76%	81%	85%
Pedestrian network near transit	73%	78%	83%	86%
Bicycle network	61%	77%	78%	78%
Bicycle network near transit	64%	80%	80%	80%
Outside of equity focus areas:				
Pedestrian network	45%	49%	58%	65%
Pedestrian network near transit	53%	56%	64%	70%
Bicycle network	49%	63%	63%	63%
Bicycle network near transit	55%	68%	68%	68%
Safety				
Along arterials:				
Pedestrian network	56%	61%	70%	76%
Bicycle network	66%	83%	83%	83%
Economy[6]				
Within 2040 regional, city and town centers:				
Pedestrian network	78%	79%	82%	85%
Bicycle network	66%	76%	76%	76%
Within 2040 station communities:				
Pedestrian network	63%	67%	70%	73%
Bicycle network	57%	73%	73%	73%
Within 2040 mixed-use zoning areas:				
Pedestrian network	81%	85%	89%	90%
Bicycle network	66%	84%	84%	84%
Within 2040 employment and industrial areas:				
Pedestrian network	39%	44%	52%	59%
Bicycle network	55%	69%	69%	69%

General and mobility / climate

The RTP strives to provide multimodal transportation choices and encourage low-carbon transportation across the region. The draft mobility policies call for the region to "Provide

[6] The subarea results reported in this section are mutually exclusive. There are station communities both within and outside of regional, city, and town centers; the "station community" results shown here only apply to the latter. Similarly, results for 2040 mixed-use areas exclude mixed-use areas located within regional, city and town centers and station communities.

people and businesses a variety of seamless and well-connected travel modes and services that increase connectivity, increase choices and access to low carbon transportation options" (Policy 2), while the climate policies direct the region to "significantly increase transit ridership" and "significantly increase walking and bicycling mode shares." Implementing these policies means completing all modal networks, and particularly prioritizing completion of the transit and active transportation networks, both since those networks are less complete than the motor vehicle network and since those modes are critical to meeting climate targets. As of 2020, **the motor vehicle network was far more complete** (98%) **than those other networks**, which are between 43% and 57% complete. **The RTP reduces this disparity but does not eliminate it**, increasing completion of transit and active transportation networks by at least 15% between 2020 and 2045 while motor vehicle network completion only increases by one percent.

Table 6 also tracks the completion of bicycle and pedestrian facilities near transit. Most transit riders walk to stations, so completing these facilities (which is the focus of draft RTP Transit policy 6) helps to increase transit ridership overall. **The draft RTP does not necessarily appear to be prioritizing completion of walk and bike connections to transit stations**. Active transportation networks near transit are 5% to 6% more complete than active transportation networks elsewhere in the region in 2020, but the RTP does slightly less to complete these networks near transit between 2020 and 2045 than it does to complete bicycle and pedestrian networks overall.

The regional numbers shown in Table 6 are also generally relevant to other RTP goals discussed below because they often serve as baselines against which to evaluate whether the RTP is prioritizing the investments called for under these goals.

Equity

Draft RTP equity policy 3 prioritizes "transportation investments that eliminate transportation-related disparities and barriers for historically marginalized communities, with a focus on communities of color and people with low income." The RTP maps Equity Focus Areas (which are areas with high concentrations of people of color, people with low incomes, and people who speak limited English) in order to identify investments that have the potential to reduce race- and income-related disparities. People living in equity focus areas have expressed a desire for safer walking and bicycling connections and better access to transit, so the RTP tracks the completeness of the bicycle and pedestrian system, both in general and near transit, in equity focus areas.

As of 2020, bicycle and pedestrian networks were roughly ten to 20 percent more complete in equity focus areas than in other communities, both in general and near transit. However, **the RTP does not appear to prioritize the completion of active transportation networks in equity focus areas**. In most cases, the RTP makes slightly more progress completing these networks outside of EFAs than within EFAs.

Safety

Draft safety and security policy 2 is, "Prioritize safety investments, education and equitable enforcement on high injury and high risk corridors and intersections." Most of these high injury corridors and intersections are located along arterial streets. Many arterials have a mix

of transit routes and active transportation facilities alongside vehicle lanes with relatively high traffic speeds, a combination that can pose special risks for vulnerable travelers. 77 percent of serious pedestrian crashes occur on arterials. Table 6 tracks the completion of pedestrian and bicycle facilities along arterials to evaluate how the region is addressing arterial safety issues.

As of 2020, the pedestrian network along arterials was roughly as complete as in the rest of the region, and is projected to advance toward completeness at the same rate as the region's pedestrian network between now and 2045. However, the region makes much more short-term progress between now and 2030 in completing the regional pedestrian network in general than it does in completing the pedestrian network along arterials. The bicycle network along arterials was 11% more complete than the regional bike network in 2020, and that figure is expected to increase slightly to 12% in 2030 and 13% in 2045**. Overall, the region appears to be placing a slight priority on completing the bicycle and pedestrian network along arterials, but it may be necessary to further prioritize completing sidewalks and crossing along arterials in order to make them safe for people walking**.

Economy

In order to support the region's economic development, the RTP must make transportation investments that support the planned development of the areas that are expected to contain most of the region's jobs. These areas are designated in the 2040 Growth Concept, and draft regional design policy 1 is, "Design the transportation system to implement the planned land uses and regional urban form envisioned in the 2040 Growth Concept" – including land uses that create space for jobs. This includes completing the bicycle and pedestrian networks in employment areas so that workers can easily run errands, get food, and make short trips to and from transit.

Table 6 reports on the completion of the bicycle and transit network in several different areas designated by the 2040 Growth Concept:[7]

- The *regional, city and town* centers that serve as the region's business, cultural and civic hubs. The bicycle and pedestrian networks in these areas are largely complete, though significant gaps remain. The RTP makes more modest progress completing the networks in these areas than in the region as a whole.
- *Station communities* centered on high-capacity-transit stations that feature a variety of shops and services. The active transportation networks in these areas are slightly more complete than in the rest of the region. Under the RTP, the bicycle network in these areas grows at the same pace as in the rest of the region, but not the pedestrian network.
- *Mixed-use areas* that are planned for a mix of housing, jobs and services. The bicycle and pedestrian networks in these areas are largely complete and the RTP makes modest progress completing them.
- *Employment and industrial areas* that are critical to our region's economy. Pedestrian and bicycle network completion is relatively low in these areas, where the need for freight access and ample floor space for manufacturing or warehousing can pose

[7] See https://www.oregonmetro.gov/2040-growth-concept for a map and other information.

challenges to creating convenient and safe walking and biking environments. Under the RTP, the active transportation networks in these communities develops at a similar pace as in the region as a whole.

Safety performance measures

The RTP includes ambitious targets to reduce fatal and serious injury crashes by 16 percent by 2020, by 50 percent by 2025, and to zero by 2035. The system analysis takes a different approach to evaluating progress toward these targets than in other goal areas. Metro's travel model, which is the primary tool used to forecast the RTP's impacts on regional goals, is not capable of forecasting crashes. Instead, the system analysis compares the trends represented in recent safety data with the targets listed above to assess the region's progress toward its safety goals. This enables Metro staff to present safety results in advance of results for other performance measures, which will be available in May when modeling is complete. The information presented here is drawn from what Metro staff presented previously as part of the RTP needs assessment in November 2022.[8]

The RTP reports several different federally-required safety measures that reflect different components of the region's Vision Zero goals. Table 4.1 summarizes regional progress towards its targets.

Table 4.7: Federal Safety Performance Measures for Traffic Fatalities and Serious Injuries, 2016-2020 (Oregon Department of Transportation crash data analyzed by Metro)

	5-year rolling averages		
Performance Measure	**2011-2015 Baseline**	**2016-2020 Target**	**2016-2020 Actual**
Number of fatalities	62	52	93
Fatalities per 100 million vehicle miles traveled	0.6	0.5	0.9
Number of serious injuries	458	384	512
Serious injuries per 100 million vehicle miles traveled	4.5	3.6	4.8
Number of non-motorized fatalities and serious injuries	113	95	129

The region is not on track to meet its targets. In fact, across all the measures summarized in Table 4.1, **the region's streets have gotten less safe since Metro established this goal and began collecting baseline data**.

The information in the needs assessment offers several different insights as to what is driving the growth in serious crashes and which people and communities are impacted the most by safety issues:

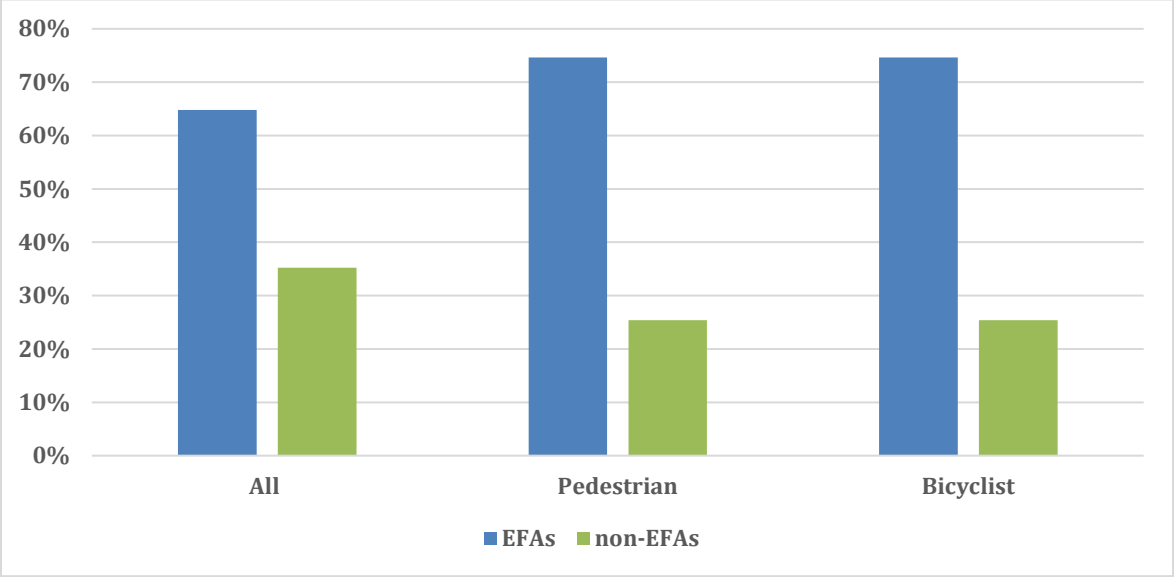
- Fatal and serious injury crashes are increasing for people using all modes – except for people bicycling.
- Fatal crashes are increasing at a more rapid rate than serious injury crashes.

[8] Refer to https://www.oregonmetro.gov/sites/default/files/2023/01/12/2023-RTP-Needs-Assessment-memo-nov-2022.pdf for the full assessment of safety needs.

- Over the past five years, traffic fatalities have been increasing in Multnomah County, but not in Washington or Clackamas Counties.
- Speed, alcohol, and/or drugs continue to be the most common contributing factors in severe and fatal crashes in the region.
- Pedestrians who are involved in a crash are much more likely to die – 26 times more likely – than non-pedestrians.

Safety and equity issues are deeply intertwined. Safety and personal security when traveling are priorities for people living in equity focus areas, and people of color – especially Black, American Indian and Alaska Native people – experience higher serious crash rates than White people. As Figure 1 shows, three quarters of serious pedestrian and bicycle crashes and 65% of all serious crashes occur in Equity Focus Areas (EFAs).

Figure 1: Percent of average annual traffic fatalities and severe injuries in Equity Focus Areas, by mode, 2016-2021 (ODOT crash data, analyzed by Metro staff)



Though bicycle and pedestrian infrastructure is more complete in EFAs than in other communities, a higher percent of crashes are still occurring in EFAs. One explanation for this is that roads designed for high traffic speeds can make people who walk and bike unsafe even when sidewalks and bike facilities are available.

Summary of findings

This memorandum has presented findings from three different aspects of the RTP evaluation. This section summarizes the high-level findings from the different types of information discussed here.

The project list summaries, which tabulate RTP projects and spending by investment category, investment scenario and cost, reveal that:

- Maintaining the region's roads and transit infrastructure and operating the transit system accounts for 65% of all constrained spending.

- The largest shares of capital spending go toward roads and bridges, megaprojects, and throughways.
- The strategic scenario includes much higher levels of investment in transit capital projects and active transportation facilities than the constrained scenario, which suggests that demand for these projects exceeds the funding currently available.

The high-level assessment applies simple criteria to each project to assess its consistency with RTP policies across all five goal areas and summarizes the RTP project list through this lens. The draft results suggest that:

- The RTP prioritizes climate mitigation in the near-term investment scenario.
- The RTP invests less in projects in equity focus areas and projects on high injury corridors and intersections in the short term than over the long term. Fast-tracking projects that support equity and safety could help the RTP better meet its goals.
- The strategic scenario invests a far larger share in equity, reducing GHG emissions, and in closing gaps in multimodal networks than the constrained scenario does. This could indicate that there are opportunities to improve the RTP's performance by funding some of these strategic investments in equity, climate and mobility – or that available funding limits progress toward goals.
- There may be opportunities to improve the RTP's performance by better targeting investments that benefit safety and equity toward the areas with the greatest need for these projects.

The draft system analysis results presented here cover system completeness and safety performance measures. Findings include:

- The motor vehicle network is significantly more complete than other modal networks. The RTP reduces this disparity, bringing active transportation networks 15% closer to completion while only completing an additional one percent of the motor vehicle network, but does not eliminate it.
- In many parts of the region that the RTP prioritizes for investment – including 2040 centers and mixed-use areas, equity focus areas, and near transit stations – active transportation networks are currently more complete than they are in the region as a whole.
- The RTP completes the bike and pedestrian network along arterials slightly more quickly than in the rest of the region. More pedestrian investments on arterials may help to address the fact that 77 percent of pedestrian fatalities occur on arterials.
- The RTP does not appear to prioritize pedestrian and bicycle investments in equity focus areas, near transit, nor in most areas prioritized for employment growth. The active transportation network in these places is projected to grow at the same rate as or more slowly than in the rest of the region.
- The region is not on track to meet its Vision Zero safety targets. In fact, the region's streets have gotten less safe since Metro established this goal and began collecting baseline data.
- Though bicycle and pedestrian infrastructure is more complete in equity focus areas (EFAs) than in other communities, a higher percent of crashes are still occurring in EFAs.

Next steps

Metro staff will present information from the RTP evaluation to RTP technical and policy committees, Metro Council, RTP stakeholders, and the public throughout April and May for feedback. The project list summaries and high-level assessment will be the focus of the April discussions. The May presentations will focus on the results of the system analysis and will also include summaries of the project list and high-level assessment in order to encourage stakeholders to consider the evaluation holistically. In June, staff will seek JPACT and Metro Council support to release the Draft 2023 RTP for public review and comment. JPACT and Metro Council may recommend potential changes to the RTP based on evaluation results and input from committees, stakeholders and the public before releasing a draft of the plan for public review.

Appendix A: Graphic project list and high-level assessment summaries

The following pages contain graphics that Metro developed to communicate the project list summaries and high-level assessment to stakeholders and the public. These materials provide the same results discussed above in a different format.

DRAFT CONSTRAINED PROJECT LIST

RTP spending by investment category

Capital projects make up 35% of the total constrained project list. Operations and maintenance comprise the remaining 65%. For more information about the projects and the 2023 Regional Transportation Plan visit: **oregonmetro.gov/rtp**.

DRAFT

REGIONWIDE

$25.3B

CAPITAL PROJECT SPENDING
[YEAR OF EXPENDITURE $]

- 12% Walking + Biking
- 11% Transit Capital
- 31% Roads + Bridges
- 19% Throughways
- 24% I-5 IBR Program
- 2% Freight Access
- 2% Info + Technology

$48.0B

OPERATIONS + MAINTENANCE SPENDING
[YEAR OF EXPENDITURE $]

- 58% Transit Service + Operations
- 10% Transit Maintenance
- 32% Throughway+Road+Bridge Maintenance

$73.3B
total RTP project spending
[YEAR OF EXPENDITURE $]

SHARE OF CAPITAL SPENDING BY PROJECT LOCATION

PORTLAND

CAPITAL PROJECT SPENDING [YEAR OF EXPENDITURE $] $15.4B

- 6% Walking + Biking
- 14% Transit Capital
- 20% Roads + Bridges
- 39% I-5 IBR Program
- 17% Throughways
- 2% Freight Access
- 3% Info + Technology

CLACKAMAS COUNTY

CAPITAL PROJECT SPENDING [YEAR OF EXPENDITURE $] $7.2B

- 12% Walking + Biking
- 13% Transit Capital
- 33% Roads + Bridges
- 37% Throughways
- 1% Freight Access
- 5% Info + Technology

MULTNOMAH COUNTY (NON-PDX)

CAPITAL PROJECT SPENDING [YEAR OF EXPENDITURE $] $3.0B

- 12% Walking + Biking
- 21% Transit Capital
- 51% Roads + Bridges
- 1% Throughways
- 3% Freight Access
- 12% Info + Technology

WASHINGTON COUNTY

CAPITAL PROJECT SPENDING [YEAR OF EXPENDITURE $] $9.4B

- 11% Walking + Biking
- 22% Transit Capital
- 50% Roads + Bridges
- 13% Throughways
- 4% Info + Technology

NOTES:

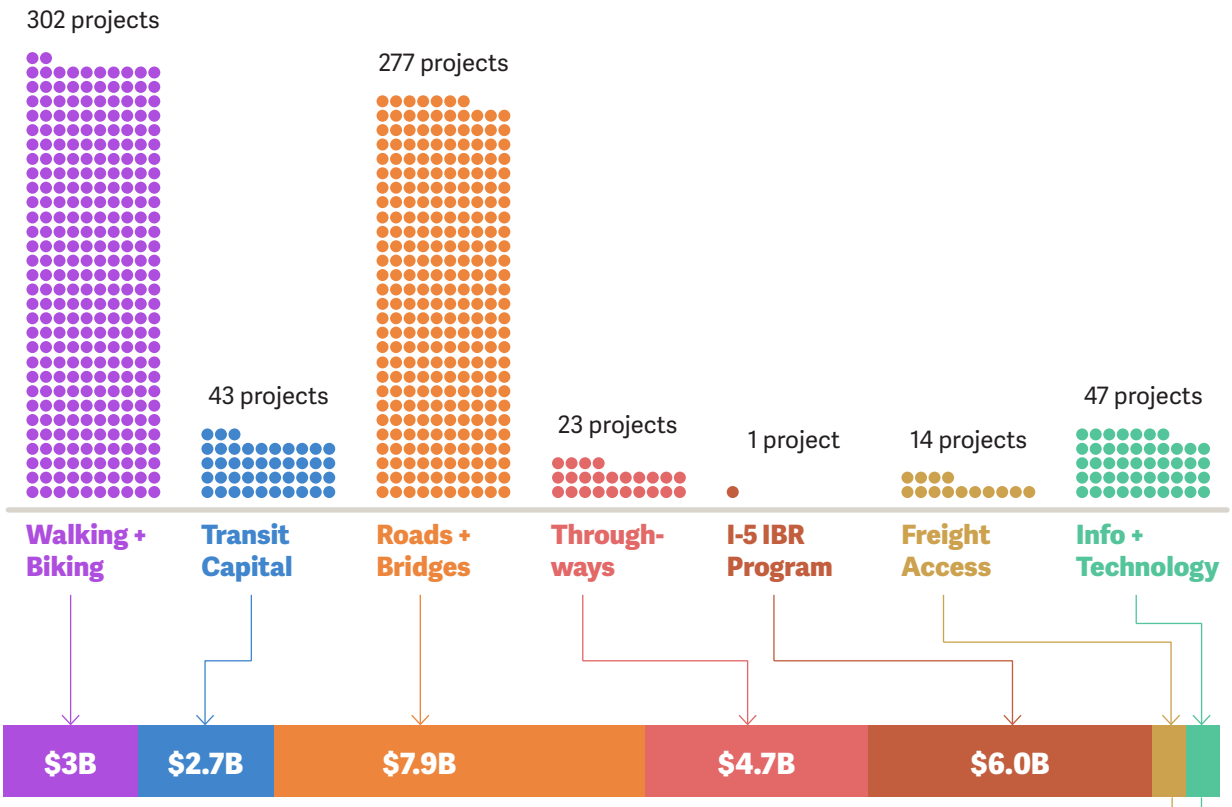
1. Year of Expenditure $ represent current year costs inflated to a projected cost for the year of expenditure.
2. Percentages may not add up due to rounding.
3. Road and bridge projects include street reconstructions, new street connections and widening, and throughway overcrossings with designs that support walking and biking to provide mobility and access for all modes of travel.
4. Freight access projects improve access and mobility for national and international rail, air and marine freight to reach destinations within the region's industrial areas and to the regional throughway system.
5. City/county totals do not sum to regional totals because many RTP projects cross county lines. Where this is the case, the entire project cost is included in the totals for each county in which it is located.
6. The I-5 Interstate Bridge Replacement (IBR) Program is reported separately due to the overall cost and mix of investments that would be constructed as part of the project. The project would replace I-5/ Columbia River bridges, add auxiliary lanes and improve interchanges on I-5, extend light rail transit from Expo Center to Vancouver, WA., add walking and biking facilities and implement variable rate tolling.

DRAFT CONSTRAINED PROJECT LIST

Number and cost of capital projects by investment category

Road and transit operations and maintenance costs are not presented here. For more information about the projects and the 2023 Regional Transportation Plan visit: **oregonmetro.gov/rtp**.

DRAFT



Total project costs by investment area
[in year-of-expenditure $]

DRAFT CONSTRAINED PROJECT LIST

Cost range of capital projects by investment category

Road and transit operations and maintenance costs are not presented here. For more information about the projects and the 2023 Regional Transportation Plan visit: **oregonmetro.gov/rtp**.

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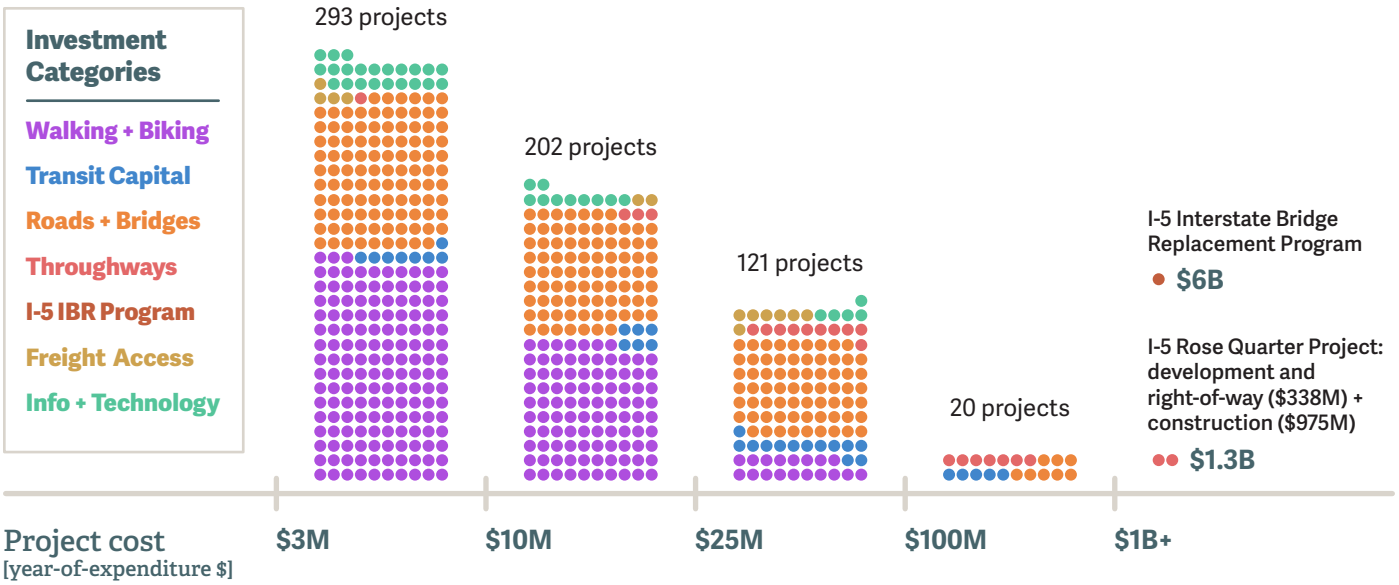


DRAFT CONSTRAINED PROJECT LIST

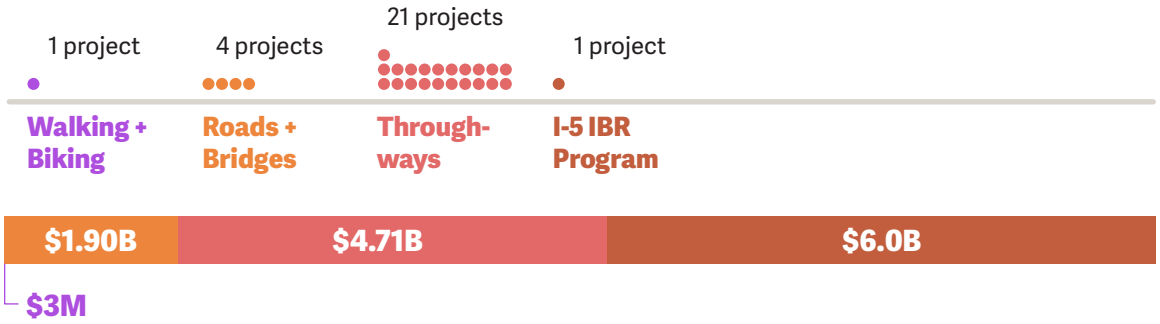
Nominating agencies: number and cost of capital projects by investment category

Road and transit operations and maintenance costs are not presented here. County project summaries include the projects nominated by the cities within the county and the County itself. Project costs are in year-of-expenditure dollars. Bars are not to scale. For more information about the projects and the 2023 Regional Transportation Plan visit: oregonmetro.gov/rtp.

DRAFT

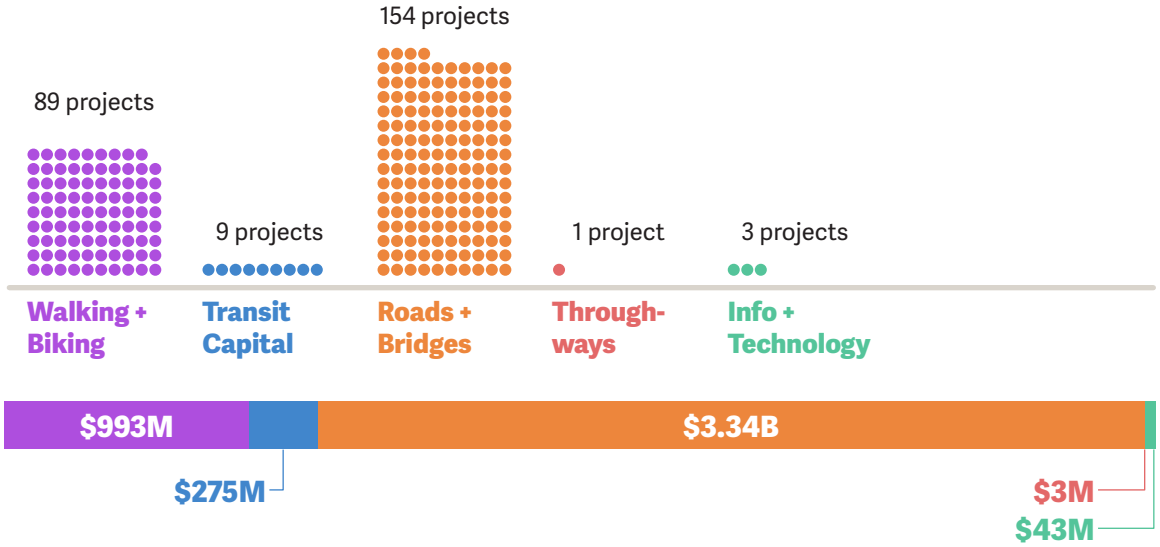
ODOT

$12.61B
total RTP project spending [YOE $]



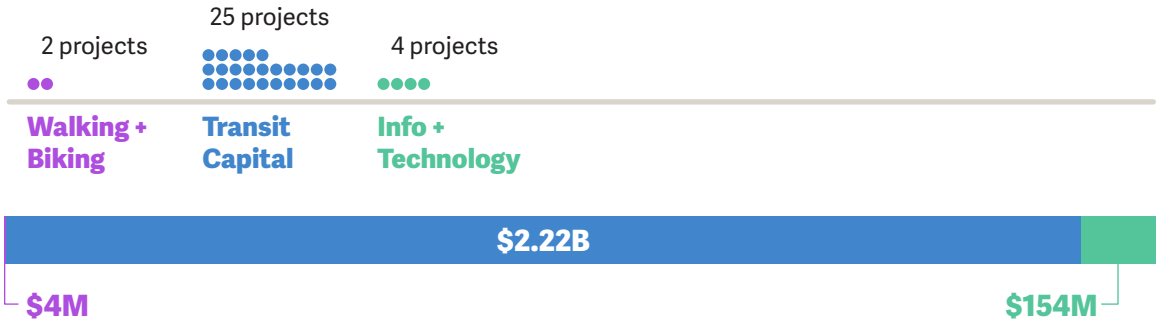
WASHINGTON COUNTY

$4.66B
total RTP project spending [YOE $]



TRIMET

$2.38B
total RTP project spending [YOE $]



DRAFT CONSTRAINED PROJECT LIST

Nominating agencies: number and cost of capital projects by investment category

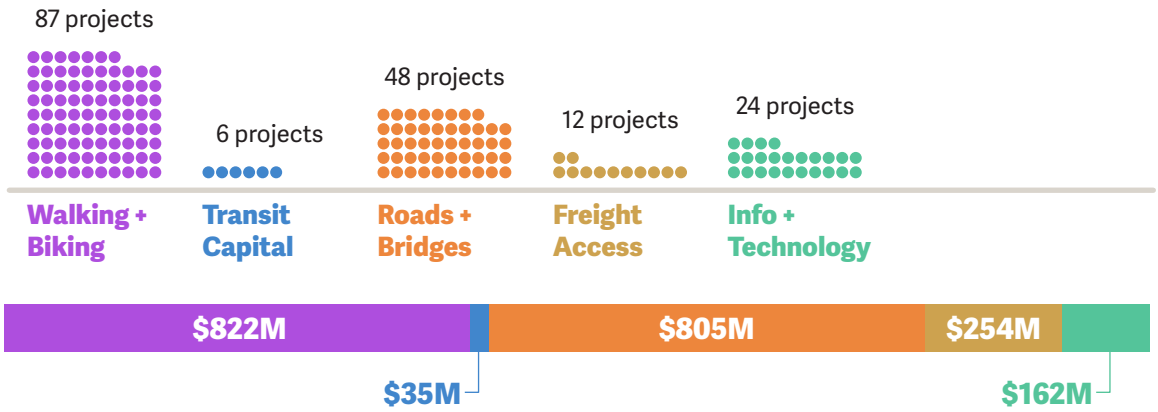
Road and transit operations and maintenance costs are not presented here. County project summaries include the projects nominated by the cities within the county and the County itself. Project costs are in year-of-expenditure dollars. Bars are not to scale. For more information about the projects and the 2023 Regional Transportation Plan visit: oregonmetro.gov/rtp.

DRAFT

CITY OF PORTLAND

$2.08B

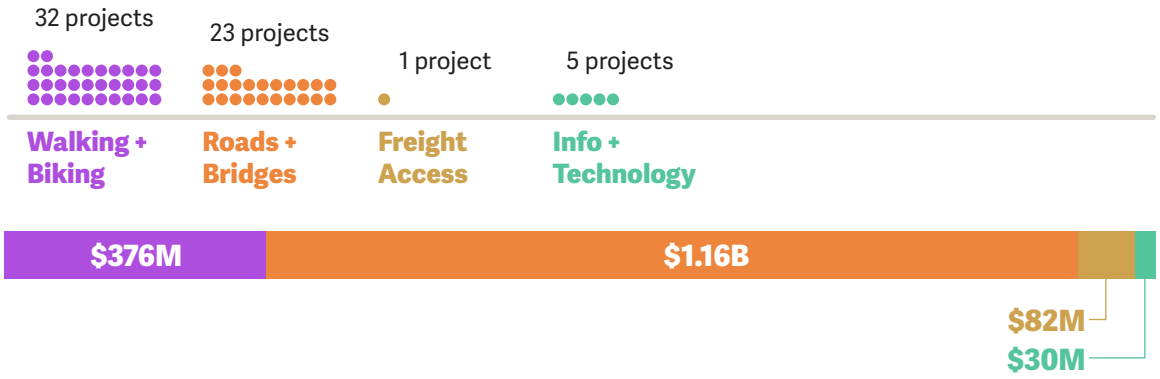
total RTP project spending [YOE $]



MULTNOMAH COUNTY (NON-PDX)

$1.65B

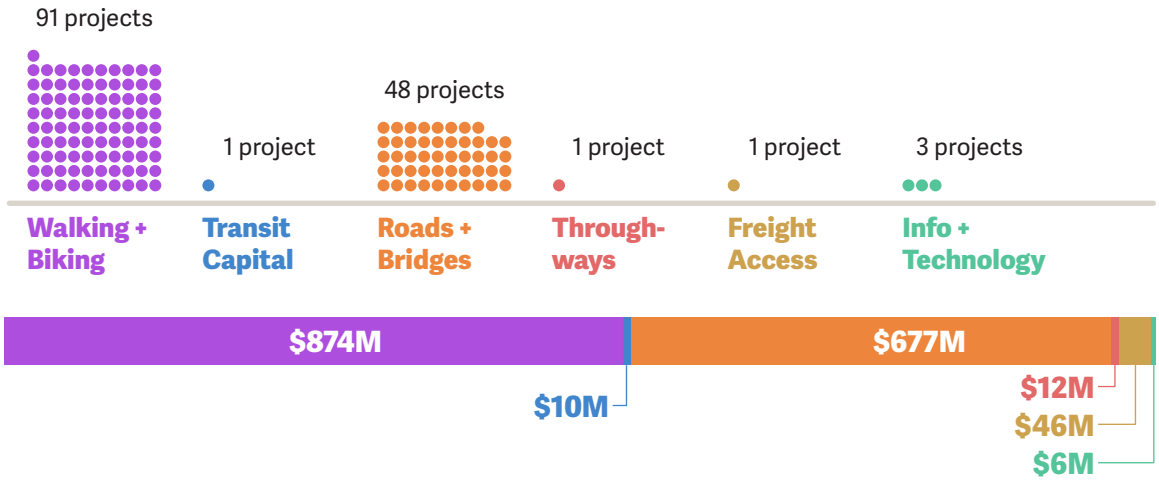
total RTP project spending [YOE $]



CLACKAMAS COUNTY

$1.62B

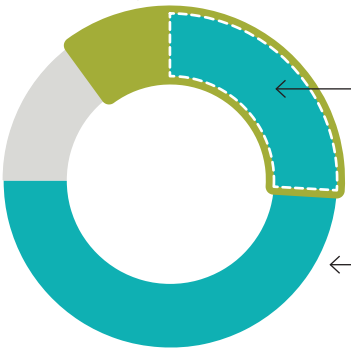
total RTP project spending [YOE $]



How does the RTP invest in EQUITY?

DRAFT

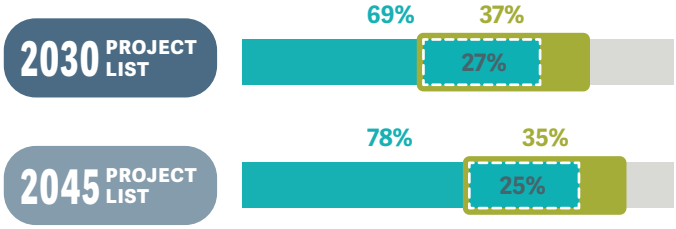
85%
of the RTP capital spending* invests in **EQUITY**



36% of the RTP capital spending* invests in a project category that underserved people have identified as a priority **(bike, pedestrian or transit projects)**.

26% of the RTP capital spending * invests in **bike, pedestrian or transit projects** that are in an **Equity Focus Area**.

75% of the RTP capital spending* invests in an **Equity Focus Area**.



79% of the RTP capital spending* invests in **EQUITY**

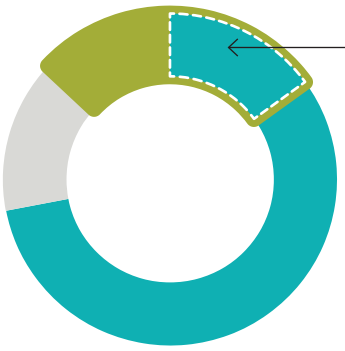
88% of the RTP capital spending* invests in **EQUITY**

*Only capital projects and programmatic investments in the constrained project list are included in this information. These projects and programs account for roughly one-third of the RTP constrained budget. The constrained project list includes all of the projects and programs that fit within a constrained budget of federal, state and local funds the greater Portland region can reasonably expect through 2045. The remaining budget is devoted to increased transit service and shuttles, and projects that operate and maintain the region's streets, highways and transit systems. These projects are critical to keeping the transportation system in a state of good repair in support of all RTP goals.

How does the RTP invest in CLIMATE+RESILIENCE?

DRAFT

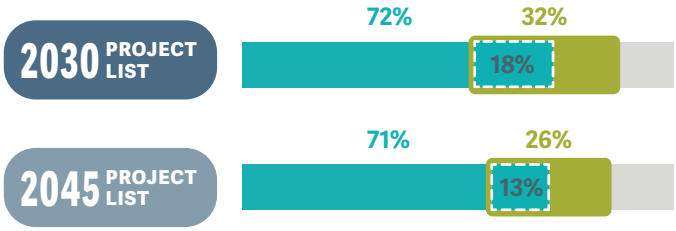
85%
of the RTP capital spending* invests in **CLIMATE+ RESLIENCE**



28% of the RTP capital spending* invests in projects that are **high- or moderate-impact climate pollution reduction strategies**.

15% of the RTP capital spending* invests in projects that implement **high- or moderate-impact climate pollution reduction strategies** and are located on **emergency/seismic routes**.

71% of the RTP capital spending* invests in projects that are located on **Regional Emergency Transportation Routes or Statewide Seismic Lifeline Routes**.



85% of the RTP capital spending* invests in **CLIMATE+ RESLIENCE**

84% of the RTP capital spending* invests in **CLIMATE+ RESLIENCE**

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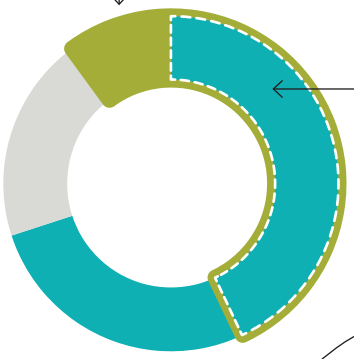
How does the RTP invest in **SAFETY?**

DRAFT

80%
of the RTP capital spending* invests in **SAFETY**

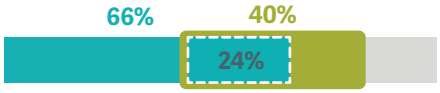


53% of the RTP capital spending* invests in projects located on **high injury corridors or intersections**.

43% of the RTP capital spending* invests in projects on **high injury corridors or intersections** that help **reduce serious traffic crashes or address other safety issues**.

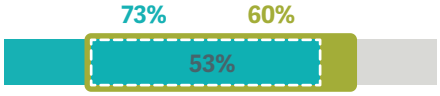
71% of the RTP capital spending* invests in projects that help **reduce serious traffic crashes or address other safety issues**.

2030 PROJECT LIST



82% of the RTP capital spending* invests in **SAFETY**

2045 PROJECT LIST



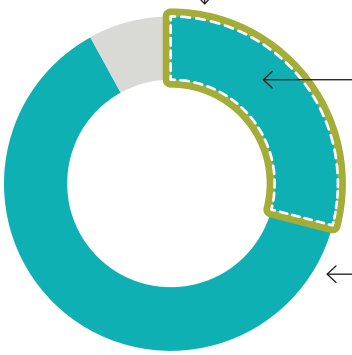
80% of the RTP capital spending* invests in **SAFETY**

*Only capital projects and programmatic investments in the constrained project list are included in this information. These projects and programs account for roughly one-third of the RTP constrained budget. The constrained project list includes all of the projects and programs that fit within a constrained budget of federal, state and local funds the greater Portland region can reasonably expect through 2045. The remaining budget is devoted to increased transit service and shuttles, and projects that operate and maintain the region's streets, highways and transit systems. These projects are critical to keeping the transportation system in a state of good repair in support of all RTP goals.

How does the RTP invest in MOBILITY?

DRAFT

92%
of the RTP capital spending* invests in **MOBILITY**

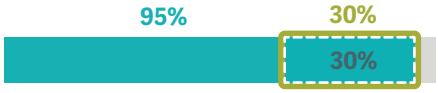


29% of the RTP capital spending* invests in projects that **complete gaps in transportation networks**.

29% of the RTP capital spending* invests in projects that **complete gaps in transportation networks** and include **priority elements**.

91% of the RTP capital spending* invests in projects that include **priority elements** (ADA-, pedestrian-, bicycle-, or transit-supportive design).

2030 PROJECT LIST



95% of the RTP capital spending* invests in **MOBILTY**

2045 PROJECT LIST

90% of the RTP capital spending* invests in **MOBILITY**

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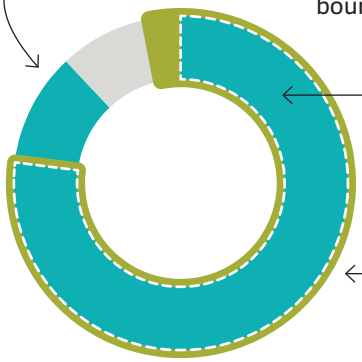
How does the RTP invest in the ECONOMY?

DRAFT

91%
of the RTP capital spending* invests in the **ECONOMY**

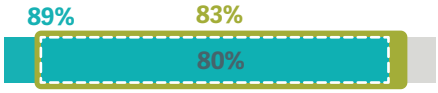


88% of the RTP capital spending* invests in projects that are located in an **economic development priority area** (2040 center, station community, industrial area, employment area or urban growth boundary expansion area).

77% of the RTP capital spending* invests in projects located in **economic development priority areas** with **above-average job activity**.

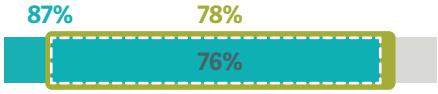
80% of the RTP capital spending* invests in projects that are located in areas with **above-average job activity**.

2030 PROJECT LIST



92% of the RTP capital spending* invests in the **ECONOMY**

2045 PROJECT LIST



90% of the RTP capital spending* invests in the **ECONOMY**

*Only capital projects and programmatic investments in the constrained project list are included in this information. These projects and programs account for roughly one-third of the RTP constrained budget. The constrained project list includes all of the projects and programs that fit within a constrained budget of federal, state and local funds the greater Portland region can reasonably expect through 2045. The remaining budget is devoted to increased transit service and shuttles, and projects that operate and maintain the region's streets, highways and transit systems. These projects are critical to keeping the transportation system in a state of good repair in support of all RTP goals.

How are the region's goals prioritized over time?

Projects on the 2030 and 2045 project lists can be built with funds the region currently expects to have available. Projects on the 2045 strategic list do not yet have identified funding.

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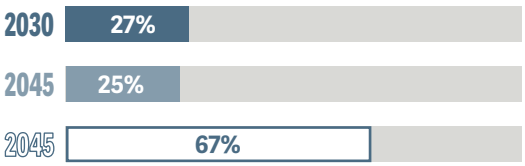
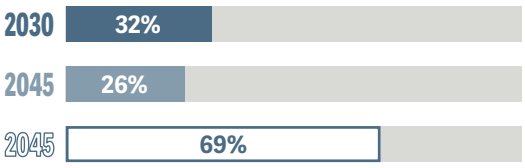
2030 PROJECT LIST | 2045 PROJECT LIST | 2045 STRATEGIC LIST

EQUITY

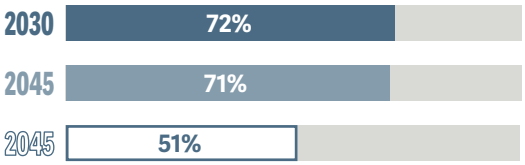


Percent of capital spending* that invests in **bike, pedestrian or transit projects** that are in an **Equity Focus Area**

CLIMATE+RESILIENCE

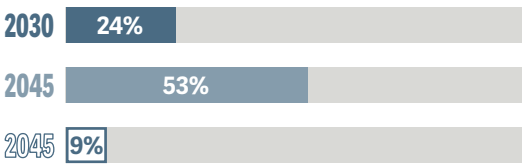


Percent of capital spending* that invests in projects that **are high- or moderate impact climate pollution reduction strategies**



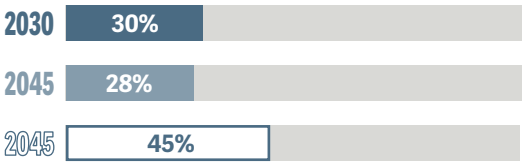
Percent of capital spending* that invests in projects that are located on **emergency/seismic routes**

SAFETY



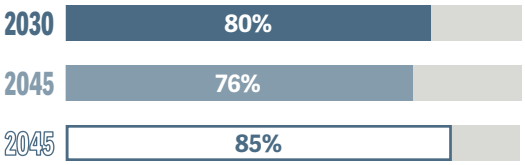
Percent of capital spending* that invests in projects on **high injury corridors or intersections** that **help reduce serious traffic crashes or address other safety issues**

MOBILITY



Percent of capital spending* that invests in projects that complete gaps in **transportation networks** and include **priority elements** (ADA-, pedestrian-, bicycle-, or transit-supportive design)

ECONOMY



Percent of capital spending* that invests in projects located in **economic development priority areas** (2040 center, station community, industrial area, employment area or urban growth boundary expansion area) with **above-average job activity**

*Only capital projects and programmatic investments in the constrained project list are included in this information.

4/3/2023

Appendix B: Subregional results

The tables below provide information about how RTP investments and high-level assessment results vary across the region. It is important to consider differences in subregional context when interpreting these results. Subregions with more people and jobs, or that are closer to the center of the region's transportation network, typically receive greater investment because the RTP often prioritizes those transportation projects that serve the most people and that benefit the entire region's transportation system.

RTP spending by project location

Table 5 below shows the same information on RTP spending as Table 1 above, broken out according to the subregion in which projects are located, with regional results for comparison. Subregions include the City of Portland, the portions of Clackamas and Washington Counties that fall within the metropolitan planning area (MPA) boundary, and the portion of Multnomah County that falls within the MPA boundary and outside of the City of Portland. The results shown in this table account for all projects located within each subregion – including projects nominated by the cities, counties, and special districts within that surbregion; ODOT and TriMet projects located within the subregion; and in the City of Portland's case, investments on Willamette River bridges that are within Portland but are owned and operated by Multnomah County.

Table 8: RTP spending by investment category, budget scenario, and subregion

	Region		City of Portland		Clackamas County		Multnomah County outside of Portland		Washington County	
	YOE$m	**%**	**YOE$m**	**%**	**YOE$m**	**%**	**YOE$m**	**%**	**YOE$m**	**%**
Near-term constrained projects (2023-2030)										
Walking + Biking	$955	4.9%	$301	1.9%	$219	1.5%	$186	1.6%	$272	2.0%
Freight Access	$74	0.4%	$74	0.5%	$0	0.0%	$0	0.0%	$0	0.0%
Roads + Bridges	$3,523	18.2%	$1,662	10.7%	$1,161	8.2%	$419	3.6%	$1,343	9.8%
Throughway + Road + Bridge Maintenance	$3,951	20.4%	$3,951	25.4%	$3,889	27.4%	$3,889	33.2%	$3,889	28.5%
Throughways	$2,600	13.4%	$1,781	11.5%	$1,287	9.1%	$0	0.0%	$450	3.3%
Transit Capital	$1,021	5.3%	$694	4.5%	$498	3.5%	$205	1.7%	$551	4.0%
Transit Maintenance	$1,260	6.5%	$1,260	8.1%	$1,260	8.9%	$1,256	10.7%	$1,256	9.2%
Transit Service and Operations	$5,836	30.1%	$5,664	36.4%	$5,733	40.4%	$5,622	48.0%	$5,732	42.0%
Info + Technology	$165	0.8%	$142	0.9%	$120	0.8%	$114	1.0%	$131	1.0%
Megaprojects	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
Other	$21	0.1%	$21	0.1%	$21	0.1%	$21	0.2%	$21	0.2%
Total	*$19,405*	*100.0%*	*$15,550*	*100.0%*	*$14,188*	*100.0%*	*$11,712*	*100.0%*	*$13,646*	*100.0%*
Long-term constrained projects (2031-2045)										
Walking + Biking	$2,118	3.9%	$648	1.4%	$659	1.6%	$151	0.4%	$725	1.7%
Freight Access	$307	0.6%	$180	0.4%	$46	0.1%	$82	0.2%	$0	0.0%
Roads + Bridges	$4,362	8.1%	$1,389	2.9%	$1,213	3.0%	$1,081	2.8%	$3,325	7.7%
Throughway + Road + Bridge Maintenance	$11,461	21.3%	$11,461	24.2%	$11,210	28.0%	$11,210	29.4%	$11,210	26.1%
Throughways	$2,129	3.9%	$798	1.7%	$1,359	3.4%	$41	0.1%	$786	1.8%
Transit Capital	$1,637	3.0%	$1,378	2.9%	$435	1.1%	$425	1.1%	$1,550	3.6%
Transit Maintenance	$3,698	6.9%	$3,698	7.8%	$3,698	9.2%	$3,698	9.7%	$3,698	8.6%
Transit Service and Operations	$21,757	40.3%	$21,498	45.3%	$21,171	52.9%	$21,079	55.4%	$21,333	49.7%
Info + Technology	$408	0.8%	$355	0.7%	$217	0.5%	$247	0.6%	$243	0.6%
Megaprojects	$6,000	11.1%	$6,000	12.6%	$0	0.0%	$0	0.0%	$0	0.0%
Other	$50	0.1%	$50	0.1%	$50	0.1%	$50	0.1%	$50	0.1%
Total	*$53,929*	*100.0%*	*$47,454*	*100.0%*	*$40,058*	*100.0%*	*$38,064*	*100.0%*	*$42,921*	*100.0%*
All constrained projects (2023-2045)										

	Region		City of Portland		Clackamas County		Multnomah County outside of Portland		Washington County	
	YOE$m	**%**	**YOE$m**	**%**	**YOE$m**	**%**	**YOE$m**	**%**	**YOE$m**	**%**
Walking + Biking	$3,073	4.2%	$949	1.5%	$878	1.6%	$337	0.7%	$997	1.8%
Freight Access	$381	0.5%	$254	0.4%	$46	0.1%	$82	0.2%	$0	0.0%
Roads + Bridges	$7,885	10.8%	$3,051	4.8%	$2,374	4.4%	$1,500	3.0%	$4,669	8.3%
Throughway + Road + Bridge Maintenance	$15,413	21.0%	$15,413	24.5%	$15,099	27.8%	$15,099	30.3%	$15,099	26.7%
Throughways	$4,729	6.4%	$2,579	4.1%	$2,646	4.9%	$41	0.1%	$1,236	2.2%
Transit Capital	$2,658	3.6%	$2,072	3.3%	$933	1.7%	$630	1.3%	$2,101	3.7%
Transit Maintenance	$4,958	6.8%	$4,958	7.9%	$4,958	9.1%	$4,954	10.0%	$4,954	8.8%
Transit Service and Operations	$27,593	37.6%	$27,162	43.1%	$26,904	49.6%	$26,701	53.6%	$27,065	47.8%
Info + Technology	$573	0.8%	$497	0.8%	$337	0.6%	$361	0.7%	$375	0.7%
Megaprojects	$6,000	8.2%	$6,000	9.5%	$0	0.0%	$0	0.0%	$0	0.0%
Other	$71	0.1%	$71	0.1%	$71	0.1%	$71	0.1%	$71	0.1%
Total	*$73,334*	*100.0%*	*$63,005*	*100.0%*	*$54,247*	*100.0%*	*$49,776*	*100.0%*	*$56,567*	*100.0%*
Strategic projects										
Walking + Biking	$3,177	14.3%	$1,149	8.5%	$727	25.0%	$341	22.8%	$1,603	14.5%
Freight Access	$155	0.7%	$113	0.8%	$0	0.0%	$42	2.8%	$0	0.0%
Roads + Bridges	$4,264	19.2%	$687	5.1%	$508	17.5%	$536	35.8%	$2,579	23.3%
Throughway + Road + Bridge Maintenance	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
Throughways	$2,322	10.4%	$40	0.3%	$1,028	35.3%	$0	0.0%	$1,343	12.1%
Transit Capital	$11,828	53.2%	$11,052	82.1%	$199	6.9%	$163	10.9%	$5,065	45.8%
Transit Maintenance	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
Transit Service and Operations	$368	1.7%	$350	2.6%	$368	12.7%	$350	23.4%	$350	3.2%
Info + Technology	$132	0.6%	$66	0.5%	$79	2.7%	$66	4.4%	$120	1.1%
Megaprojects	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
Other	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
Total	*$22,247*	*100.0%*	*$13,456*	*100.0%*	*$2,909*	*100.0%*	*$1,498*	*100.0%*	*$11,059*	*100.0%*

Table 6 shows the same information as Table 5 above, but only for capital projects. This provides more focus on how the capital spending that most influences the RTP's progress toward regional goals is allocated.

Table 9: RTP capital spending by investment category, budget scenario, and subregion

	Region		City of Portland		Clackamas County		Multnomah County outside of Portland		Washington County	
	YOE$m	%	YOE$m	%	YOE$m	%	YOE$m	%	YOE$m	%
Near-term constrained projects (2023-2030)										
Walking + Biking	$955	11.4%	$301	6.4%	$219	6.6%	$186	19.7%	$272	9.8%
Freight Access	$74	0.9%	$74	1.6%	$0	0.0%	$0	0.0%	$0	0.0%
Roads + Bridges	$3,523	42.2%	$1,662	35.6%	$1,161	35.1%	$419	44.4%	$1,343	48.5%
Throughways	$2,600	31.1%	$1,781	38.1%	$1,287	38.9%	$0	0.0%	$450	16.3%
Transit Capital	$1,021	12.2%	$694	14.8%	$498	15.1%	$205	21.7%	$551	19.9%
Info + Technology	$165	2.0%	$142	3.0%	$120	3.6%	$114	12.1%	$131	4.7%
Megaprojects	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
Other	$21	0.3%	$21	0.4%	$21	0.6%	$21	2.2%	$21	0.8%
Total	*$8,358*	*100.0%*	*$4,675*	*100.0%*	*$3,306*	*100.0%*	*$945*	*100.0%*	*$2,769*	*100.0%*
Long-term constrained projects (2031-2045)										
Walking + Biking	$2,118	12.4%	$648	6.0%	$659	16.6%	$151	7.3%	$725	10.9%
Freight Access	$307	1.8%	$180	1.7%	$46	1.1%	$82	3.9%	$0	0.0%
Roads + Bridges	$4,362	25.6%	$1,389	12.9%	$1,213	30.5%	$1,081	52.0%	$3,325	49.8%
Throughways	$2,129	12.5%	$798	7.4%	$1,359	34.2%	$41	2.0%	$786	11.8%
Transit Capital	$1,637	9.6%	$1,378	12.8%	$435	10.9%	$425	20.5%	$1,550	23.2%
Info + Technology	$408	2.4%	$355	3.3%	$217	5.5%	$247	11.9%	$243	3.6%
Megaprojects	$6,000	35.3%	$6,000	55.6%	$0	0.0%	$0	0.0%	$0	0.0%
Other	$50	0.3%	$50	0.5%	$50	1.3%	$50	2.4%	$50	0.7%
Total	*$17,012*	*100.0%*	*$10,797*	*100.0%*	*$3,979*	*100.0%*	*$2,077*	*100.0%*	*$6,680*	*100.0%*
All constrained projects (2023-2045)										
Walking + Biking	$3,073	12.1%	$949	6.1%	$878	12.1%	$337	11.2%	$997	10.6%
Freight Access	$381	1.5%	$254	1.6%	$46	0.6%	$82	2.7%	$0	0.0%
Roads + Bridges	$7,885	31.1%	$3,051	19.7%	$2,374	32.6%	$1,500	49.6%	$4,669	49.4%
Throughways	$4,729	18.6%	$2,579	16.7%	$2,646	36.3%	$41	1.4%	$1,236	13.1%

	Region		City of Portland		Clackamas County		Multnomah County outside of Portland		Washington County	
	YOE$m	**%**	**YOE$m**	**%**	**YOE$m**	**%**	**YOE$m**	**%**	**YOE$m**	**%**
Transit Capital	$2,658	10.5%	$2,072	13.4%	$933	12.8%	$630	20.8%	$2,101	22.2%
Info + Technology	$573	2.3%	$497	3.2%	$337	4.6%	$361	12.0%	$375	4.0%
Megaprojects	$6,000	23.6%	$6,000	38.8%	$0	0.0%	$0	0.0%	$0	0.0%
Other	$71	0.3%	$71	0.5%	$71	1.0%	$71	2.4%	$71	0.8%
Total	*$25,370*	*100.0%*	*$15,472*	*100.0%*	*$7,285*	*100.0%*	*$3,022*	*100.0%*	*$9,449*	*100.0%*
Strategic projects										
Walking + Biking	$3,177	14.5%	$1,149	8.8%	$727	28.6%	$341	29.7%	$1,603	15.0%
Freight Access	$155	0.7%	$113	0.9%	$0	0.0%	$42	3.6%	$0	0.0%
Roads + Bridges	$4,264	19.5%	$687	5.2%	$508	20.0%	$536	46.7%	$2,579	24.1%
Throughways	$2,322	10.6%	$40	0.3%	$1,028	40.5%	$0	0.0%	$1,343	12.5%
Transit Capital	$11,828	54.1%	$11,052	84.3%	$199	7.8%	$163	14.2%	$5,065	47.3%
Info + Technology	$132	0.6%	$66	0.5%	$79	3.1%	$66	5.8%	$120	1.1%
Megaprojects	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
Other	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%	$0	0.0%
Total	*$21,878*	*100.0%*	*$13,106*	*100.0%*	*$2,541*	*100.0%*	*$1,148*	*100.0%*	*$10,709*	*100.0%*

RTP investments by nominating agency

Table 7 breaks out the capital investments in the constrained RTP budget scenario by nominating agency. Whereas the tables above categorize spending according to where projects are located in the region, Table 7 categorizes spending according to the agencies that nominate RTP projects, using the six agencies that nominate the majority of RTP projects: the City of Portland, the three Metro-area counties, TriMet, and ODOT. County-level results include projects that were nominated by the county and by cities or special districts within the county. This helps to understand how the different agencies that contribute projects to the RTP are prioritizing different types of investments.

Table 10: Total constrained capital projects and spending by investment category and nominating agency

Investment category	# projects	Spending ($YOEm)	Spending (%)
Clackamas County	*145*	*$1,626*	
Freight Access	1	$46	3%
Info + Technology	3	$6	0%
Roads + Bridges	48	$677	42%
Throughways	1	$12	1%
Transit Capital	1	$10	1%
Walking + Biking	91	$874	54%
Multnomah County outside of Portland	*61*	*$1,652*	
Freight Access	1	$82	5%
Info + Technology	5	$30	2%
Roads + Bridges	23	$1,164	70%
Walking + Biking	32	$376	23%
ODOT	*27*	*$12,613*	
Megaprojects	1	$6,000	48%
Roads + Bridges	4	$1,896	15%
Throughways	21	$4,714	37%
Walking + Biking	1	$3	0%
City of Portland	*177*	*$2,078*	
Freight Access	12	$254	12%
Info + Technology	24	$162	8%
Roads + Bridges	48	$805	39%
Transit Capital	6	$35	2%
Walking + Biking	87	$822	40%
TriMet	*31*	*$2,376*	
Info + Technology	4	$154	6%
Transit Capital	25	$2,218	93%
Walking + Biking	2	$4	0%
Washington County	*256*	*$4,658*	
Info + Technology	3	$43	1%
Roads + Bridges	154	$3,343	72%
Throughways	1	$3	0%
Transit Capital	9	$275	6%
Walking + Biking	89	$993	21%

High-level assessment results by project location

Table 8 shows how much RTP spending is devoted to projects that receive credit for the different measures used in the high-level assessment by project location. Refer to the beginning of this appendix for information on how these project locations are defined.

Table 11: Amount and percentage of RTP spending on different project types captured in the high-level assessment, by budget scenario and project location

	Region		City of Portland		Clackamas County		Multnomah County outside of Portland		Washington County	
Project type	**YOE$m**	**%**	**YOE$m**	**%**	**YOE$m**	**%**	**YOE$m**	**%**	**YOE$m**	**%**
Near-term constrained projects (2023-2030)										
In equity focus areas	$5,516	69%	$3,877	90%	$1,152	39%	$212	37%	$1,604	67%
Equity projects	$2,917	37%	$1,143	27%	$891	30%	$424	74%	$1,426	59%
Both equity criteria	$2,153	27%	$907	21%	$514	18%	$194	34%	$950	40%
Climate action	$2,567	32%	$1,537	36%	$1,265	43%	$505	88%	$1,354	56%
Emergency routes	$5,719	72%	$3,665	85%	$2,267	77%	$137	24%	$927	39%
Both climate criteria	$1,458	18%	$1,011	23%	$763	26%	$88	15%	$741	31%
Safety projects	$5,279	66%	$2,860	66%	$1,596	54%	$210	37%	$655	27%
High injury network	$3,168	40%	$2,321	54%	$808	28%	$170	30%	$1,030	43%
Both safety criteria	$1,920	24%	$1,504	35%	$56	2%	$106	18%	$254	11%
Fill gaps	$2,401	30%	$849	20%	$654	22%	$206	36%	$1,122	47%
Priority elements	$7,562	95%	$4,184	97%	$2,872	98%	$565	98%	$2,169	90%
Both mobility criteria	$2,371	30%	$849	20%	$654	22%	$206	36%	$1,092	46%
Planned job centers	$7,123	89%	$3,967	92%	$2,538	86%	$199	35%	$1,752	73%
Current job centers	$6,654	83%	$3,790	88%	$2,418	82%	$190	33%	$1,605	67%
Both economy criteria	$6,394	80%	$3,786	88%	$2,354	80%	$153	27%	$1,435	60%
Total	$7,988		$4,305		$2,936		$575		$2,399	
Long-term constrained projects (2031-2045)										
In equity focus areas	$12,535	78%	$8,690	88%	$1,032	34%	$351	31%	$1,032	73%
Equity projects	$5,674	35%	$2,135	22%	$1,244	41%	$787	69%	$1,244	65%
Both equity criteria	$3,998	25%	$1,537	16%	$326	11%	$214	19%	$326	49%

Project type	Region		City of Portland		Clackamas County		Multnomah County outside of Portland		Washington County	
	YOE$m	%	YOE$m	%	YOE$m	%	YOE$m	%	YOE$m	%
Climate action	$4,163	26%	$2,381	24%	$1,311	43%	$823	72%	$1,311	44%
Emergency routes	$11,451	71%	$8,671	88%	$1,795	59%	$311	27%	$1,795	42%
Both climate criteria	$2,048	13%	$1,358	14%	$252	8%	$97	8%	$252	22%
Safety projects	$11,765	73%	$7,881	80%	$1,372	45%	$363	32%	$1,372	55%
High injury network	$9,585	60%	$8,085	82%	$603	20%	$175	15%	$603	43%
Both safety criteria	$8,524	53%	$7,276	74%	$152	5%	$101	9%	$152	32%
Fill gaps	$4,531	28%	$1,493	15%	$671	22%	$319	28%	$671	51%
Priority elements	$14,444	90%	$9,396	95%	$2,306	76%	$1,145	100%	$2,306	93%
Both mobility criteria	$4,493	28%	$1,493	15%	$671	22%	$319	28%	$671	51%
Planned job centers	$13,970	87%	$8,999	91%	$2,171	71%	$429	37%	$2,171	72%
Current job centers	$12,599	78%	$8,780	89%	$1,878	62%	$313	27%	$1,878	59%
Both economy criteria	$12,147	76%	$8,709	88%	$1,749	57%	$278	24%	$1,749	55%
Total	$16,080		$9,865		$3,047		$1,145		$5,748	
All constrained projects (2023-2045)										
In equity focus areas	$18,051	75%	$12,567	89%	$2,183	36%	$563	33%	$5,822	71%
Equity projects	$8,591	36%	$3,278	23%	$2,135	36%	$1,211	70%	$5,148	63%
Both equity criteria	$6,151	26%	$2,443	17%	$840	14%	$407	24%	$3,772	46%
Climate action	$6,731	28%	$3,917	28%	$2,576	43%	$1,328	77%	$3,873	48%
Emergency routes	$17,170	71%	$12,336	87%	$4,062	68%	$448	26%	$3,354	41%
Both climate criteria	$3,506	15%	$2,368	17%	$1,014	17%	$185	11%	$1,980	24%
Safety projects	$17,044	71%	$10,740	76%	$2,968	50%	$573	33%	$3,814	47%
High injury network	$12,752	53%	$10,406	73%	$1,411	24%	$345	20%	$3,482	43%
Both safety criteria	$10,444	43%	$8,780	62%	$208	3%	$207	12%	$2,105	26%
Fill gaps	$6,931	29%	$2,343	17%	$1,325	22%	$526	31%	$4,067	50%
Priority elements	$22,007	91%	$13,579	96%	$5,178	87%	$1,710	99%	$7,491	92%
Both mobility criteria	$6,864	29%	$2,343	17%	$1,325	22%	$526	31%	$4,000	49%
Planned job centers	$21,093	88%	$12,966	92%	$4,709	79%	$629	37%	$5,901	72%
Current job centers	$19,252	80%	$12,570	89%	$4,296	72%	$503	29%	$4,986	61%
Both economy criteria	$18,541	77%	$12,495	88%	$4,102	69%	$431	25%	$4,600	56%
Total	$24,068		$14,170		$5,983		$1,720		$8,147	

Project type	Region YOE$m	Region %	City of Portland YOE$m	City of Portland %	Clackamas County YOE$m	Clackamas County %	Multnomah County outside of Portland YOE$m	Multnomah County outside of Portland %	Washington County YOE$m	Washington County %
Strategic projects										
In equity focus areas	$17,924	82%	$12,090	92%	$1,518	60%	$755	66%	$8,388	78%
Equity projects	$17,274	79%	$12,550	96%	$1,278	50%	$824	72%	$7,954	74%
Both equity criteria	$14,742	67%	$11,941	91%	$473	19%	$516	45%	$6,542	61%
Climate action	$15,137	69%	$12,267	94%	$1,005	40%	$570	50%	$6,787	63%
Emergency routes	$11,096	51%	$6,234	48%	$1,476	58%	$615	54%	$7,583	71%
Both climate criteria	$6,476	30%	$5,480	42%	$306	12%	$189	16%	$5,180	48%
Safety projects	$4,810	22%	$1,443	11%	$938	37%	$532	46%	$2,539	24%
High injury network	$8,482	39%	$5,868	45%	$288	11%	$416	36%	$6,666	62%
Both safety criteria	$1,910	9%	$711	5%	$77	3%	$133	12%	$1,010	9%
Fill gaps	$10,060	46%	$6,016	46%	$891	35%	$584	51%	$7,307	68%
Priority elements	$20,474	94%	$12,525	96%	$2,482	98%	$1,113	97%	$9,980	93%
Both mobility criteria	$9,807	45%	$6,016	46%	$870	34%	$584	51%	$7,075	66%
Planned job centers	$20,027	92%	$12,617	96%	$2,064	81%	$774	67%	$9,406	88%
Current job centers	$19,015	87%	$12,448	95%	$1,801	71%	$374	33%	$9,159	86%
Both economy criteria	$18,490	85%	$12,393	95%	$1,743	69%	$344	30%	$8,777	82%
Total	$45,940		$13,106		$2,541		$1,148		$10,703	

High-level assessment results by nominating agency

Table 10 shows the number of projects that meet each high-level assessment measure by nominating agency (see above for how nominating agencies are defined), as well as the total spending and maximum/minimum project cost for each nominating agency.

Table 12: Number of projects that meet different high-level assessment measures by nominating agency

Measure	Clackamas County	Multnomah County	ODOT	Portland	TriMet	Washington County
Equity						
In equity focus areas	62	49	18	122	16	183
Equity projects	111	45	2	107	27	176
Both	52	35	1	81	16	134
Climate						
Climate action	95	37	3	117	31	101
Resilience	43	31	24	102	14	51
Both	21	16	2	61	14	26
Safety						
Safety projects	105	42	11	137	1	148
High injury network	29	26	10	90	13	66
Both	22	17	3	74	1	50
Mobility						
Fill gaps	85	35	1	77	15	130
Design elements	139	59	21	154	31	227
Both	85	35	1	77	15	127
Economy						
Planned job centers	111	44	24	156	16	193
Current job centers	86	35	23	132	15	138
Both	67	29	23	123	15	118
Total number of projects	*145*	*61*	*25*	*177*	*31*	*256*
Total spending	$1,625,618,393	$1,651,555,600	$11,382,000,000	$2,077,765,000	$2,375,700,000	$4,658,000,000
Max project cost	$64,800,000	$767,200,000	$6,000,000,000	$150,000,000	$855,000,000	$111,600,000
Min project cost	$1,500,000	$2,000,000	$3,000,000	$2,000,000	$2,000,000	$1,600,000

Appendix C: High-level assessment methodology

General methodology

Note: This document uses *italics* to denote fields and attributes that are included in the RTP Project Hub.

Filtering projects before applying the assessment

The high-level assessment only applies to capital projects, ongoing programmatic investments, and expanded high-capacity transit and better bus service – not to projects that maintain or operate the existing system, nor to projects that are only in the planning or engineering phase. Projects in the following *RTP Investment Categories* are filtered out and excluded from the analysis.

- *Roadway Maintenance and Preservation*
- *Bridge Maintenance and Preservation*
- *Transit Operating Capital*
- *Transit Maintenance*
- *Roadway Operations*
- *Bridge Operations*
- *Transit Service and Operations*

Assessing projects that lack geographic information

Some projects in the RTP do not include geographic information, either because they are regional/county-wide programmatic investments that do not have a particular geography (particularly in categories where investments tend to be more programmatic, such as *Regional activities, Transit-oriented Development and Transportation Demand Management*) or because projects leads submitted inadequate information. Any project for which the *Project Start/End Location* field is empty or incomplete is exempted from any of the GIS-based analysis described below and receives a "not applicable" value for the associated measures.

Methodology by measure

RTP Goal	Measure	Data source(s)	Assessment method
Equity	Is the project located in an Equity Focus Area?	Equity Focus Area map, *project location*	Projects that fully or partially overlap[9] an Equity Focus Area receive credit.
Equity	Is the project in an investment category that underserved people identified as a priority through regional community engagement (transit, bike and pedestrian) or does the project complete a gap in the RTP bicycle, pedestrian or transit network?	Prior regional community engagement on equity, RTP network gap maps, *investment category, project location*	Projects receive credit if they meet either of the following criteria: • Their *RTP Investment Category* is *Pedestrian*, *Bicycle*, or *Pedestrian/Bicycle* • Their *RTP Investment Category* is *High Capacity, Better Bus, Transit Capital – Other,* or *Transit-oriented development* • Their *RTP Investment Category* is *Roadways* OR *Freight* AND they fully or partially overlap a gap in the bicycle or pedestrian networks AND they include bicycle / pedestrian design elements.[10]
Climate	Does the project have a high or medium greenhouse gas reduction potential?	Climate Smart Strategy, *investment category*	This is the only non-binary measure. It's possible to get 0-2 points. Projects in the following *RTP Investment Categories* receive 2 points: • *Pricing Programs* • *High Capacity* • *Better Bus* • *Transit Capital – Other* • *Transit-oriented development* Projects in the following *RTP Investment Categories* receive 1 point: • *Pedestrian* • *Bicycle* • *Pedestrian/Bicycle* • *Transportation Demand Management* • *Transportation System Management (Technology)*
Climate	Is the project located on a Regional Emergency Transportation Route or Statewide Seismic Lifeline Route?	Regional Emergency Transportation Route map, Seismic Lifeline maps, *project location*	Projects that fully or partially overlap with the routes identified in either one of these maps receive credit.

[9] Metro Research staff use 40-foot buffers whenever determining whether two different features overlap each other for the purposes of the High-level assessment.
[10] Relevant design elements include: *Pedestrian: Sidewalk infill (ped), Bicycle: On-street bikeway or bike lane (bike), Bicycle: Buffered bikeways (bike), Bicycle: Protected bikeways/cycletracks (bike),* and *Trail: New trail/multi-use path or extension (bike/ped)*

RTP Goal	Measure	Data source(s)	Assessment method
Safety	Is the project identified as a safety project or does it address other identified safety issues?[11]	Agency identified consistent with RTP definition	Projects receive credit if the lead agency identifies a project as meeting the definition of a safety project. (*Is this a safety project or program? = Yes*)
Safety	Is the project on a high injury corridor or high injury intersection?	High Injury Corridors map, *project location*	Projects that fully or partially overlap a high-injury corridor or intersection receive credit.
Mobility	Does the project complete a gap in the RTP pedestrian, bicycle transit or motor vehicle networks?	RTP network gap maps, *project location*, *investment category*	Projects receive credit if they meet any of the following criteria: • Their *RTP Investment Category* is *Pedestrian* or *Pedestrian/Bicycle* AND the project fully or partially overlaps a gap in the pedestrian network. • Their *RTP Investment Category* is *RTP Investment Category* is *Bicycle* or *Pedestrian/Bicycle* AND the project fully or partially overlaps a gap in the bicycle network. • Their *RTP Investment Category* is *High Capacity, Better Bus, Transit Capital – Other* AND the project fully or partially overlaps a gap in the transit network. • Their *RTP Investment Category* is *Roadway* AND the project fully or partially overlaps a gap in the motor vehicle network. • Their *RTP Investment Category* is *Roadways* OR *Freight* AND they fully or partially overlap a gap in the bicycle or pedestrian networks AND they include bicycle / pedestrian design elements.[12]
Mobility	Does project include ADA-pedestrian-, bicycle- or transit-supportive design or TSMO elements?	Agency-identified project design elements	Projects receive credit if they include certain design design elements identified through the call for projects (i.e., selected options in the *Project features and design elements* field are checked; see appendix A)

[11] "Safety projects" are defined in the RTP as projects that include proven safety countermeasures, and this definition was used in the RTP project hub. However, Metro staff ended up expanding the definition of safety projects used in the high-level assessment because nominating agencies provided inconsistent information to the hub and identified some projects that did not meet the RTP definition of safety projects. Metro staff did not have capacity to individually review and verify that all projects responded correctly to this and other questions included in the project hub.

[12] Relevant design elements include: *Pedestrian: Sidewalk infill (ped), Bicycle: On-street bikeway or bike lane (bike), Bicycle: Buffered bikeways (bike), Bicycle: Protected bikeways/cycletracks (bike),* and *Trail: New trail/multi-use path or extension (bike/ped)*

RTP Goal	Measure	Data source(s)	Assessment method
Economy	Is the project located in a 2040 center, station community, industrial area, employment area or urban growth boundary expansion area?	2040 Growth Concept map, Title 4 Map, Title 6 Map, Metro UGB Expansion History map, *project location*	Projects receive credit if they fully or partially overlap with one of the relevant land use types: • 2040 centers and station communities are on the 2040 Growth Concept map • Industrial / employment areas are on the 2040 Growth Concept map or Title 4 Map UGB expansion areas are on the Metro UGB Expansion History map or were included in a recently-approved UGB land swap.
Economy	Is the project located in an area with higher-than-average job activity?	Economic Value Atlas, *project location*	Projects receive credit if they fully or partially overlap with an area with higher-than-average job activity. (GIS)

Draft 2024-2027 STIP Update

TPAC

April 19, 2023

Oregon Department of Transportation

Presentation Content

- STIP overview
- Funding categories and amounts
- Public review process
- Region 1 draft list
  - Selection criteria
  - Overview
  - Specific projects by category

Oregon Department of Transportation

What is the STIP?

Capital Program Funds
Federal and State Funds
Construction projects for the highway system
Public and active transportation projects

What is NOT in the STIP

State-Funded Multimodal Grant Programs	Maintaining and Operating the System	Revenue/ Administrative Functions

Three Phases of ‘24-’27 STIP Development

Funding Allocation

2020

Project Selection

2021-2022

Public Review/ Approval

2023

Investments in the ‘24-’27 STIP

- More than $3 billion in total state and federal resources
- Significant infusions from both HB 2017 and federal infrastructure bill
- Major investment of federal and state funding in bridges
- Significant increase in funding for public and active transportation
- Increased funding for safety
- Greater investments in local government programs
- Investment in ADA curb ramps

2024 – 2027 STIP Program Funding Categories

FIX-IT

Projects that preserve or fix the state highway system– bridges, pavement, culverts, etc.

SAFETY

Projects focused on reducing fatal and serious injury crashes on Oregon's roads

ENHANCE HIGHWAY

Highway projects that expand or enhance the state highway system

PUBLIC AND ACTIVE TRANSPORTATION

Bicycle, pedestrian, public transportation and transportation options projects & programs

LOCAL GOVERNMENT PROGRAMS

Funding to cities, counties, and others for priority projects

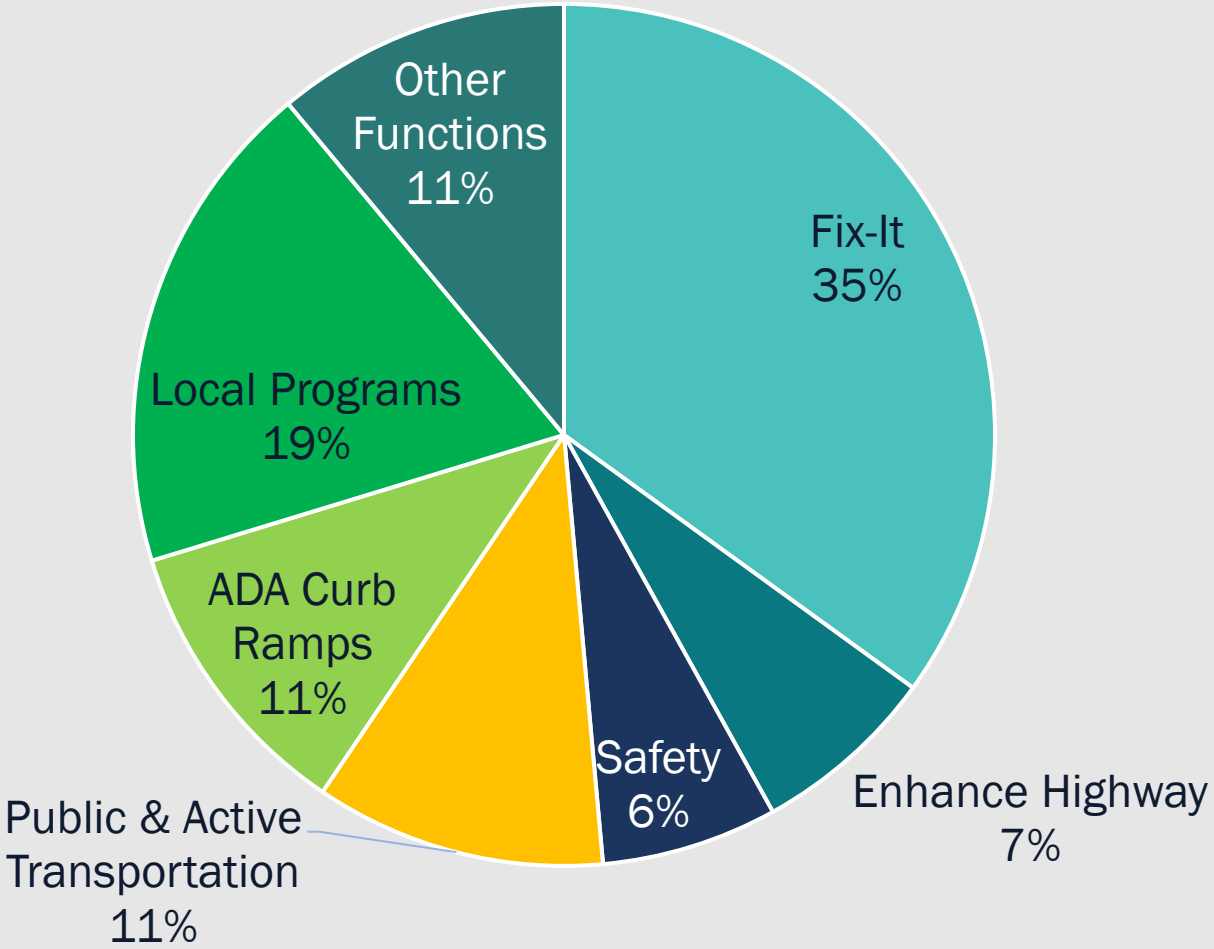
ADA CURB RAMPS

Construction of curb ramps to make sidewalks accessible for people experiencing a disability

OTHER FUNCTIONS

Workforce development, planning, data collection and other programs using federal money

Draft 2024-2027 STIP Funding by Category



Oregon Department of Transportation

Public engagement process

- Summer 2021: R1 shares draft 150% list
- Summer 2022: R1 shares draft 100% list
- Spring 2023: Public comment opportunities statewide on draft STIP
- Summer 2023: OTC adopts 24-27 STIP

Public review – March & April ‘23

- OTC commenced public comment for draft 24-27 STIP on March 9
- Program-level public comment process focused on gathering input on potential impacts of projects
  - Website, Online open house, Public comment webinar
- Region 1 staff are visiting regional committees to gather comments
- Three in person events in R1

STIP Open Houses

- Monday, April 3, 4:30-6:00pm
  - Clack Co Development Services Bldg
  - in coordination with the ACT meeting
- Saturday, April 8, 11am – 1pm
  - Beaverton Library
  - in conjunction with Farmers Market
- Tuesday, April 25, 4:30 – 6:30 pm
  - at the Hood River Ty Taylor Fire Station

STIP WEBSITES

Online open house:

- https://odotopenhouse.org/or-draft-stip

Info on past, current and future STIPs

- https://www.oregon.gov/odot/STIP/Pages/About.aspx
- https://www.oregon.gov/ODOT/Regions/Pages/Region-1-STIP.aspx

Oregon Department of Transportation

Key Questions for Public Input

- What impact could a proposed project have on the community, for good or for bad?
- How can we mitigate potential negative impacts of a proposed project and ensure the project meets community needs?

Region 1 Draft 100% List

As of February 2023

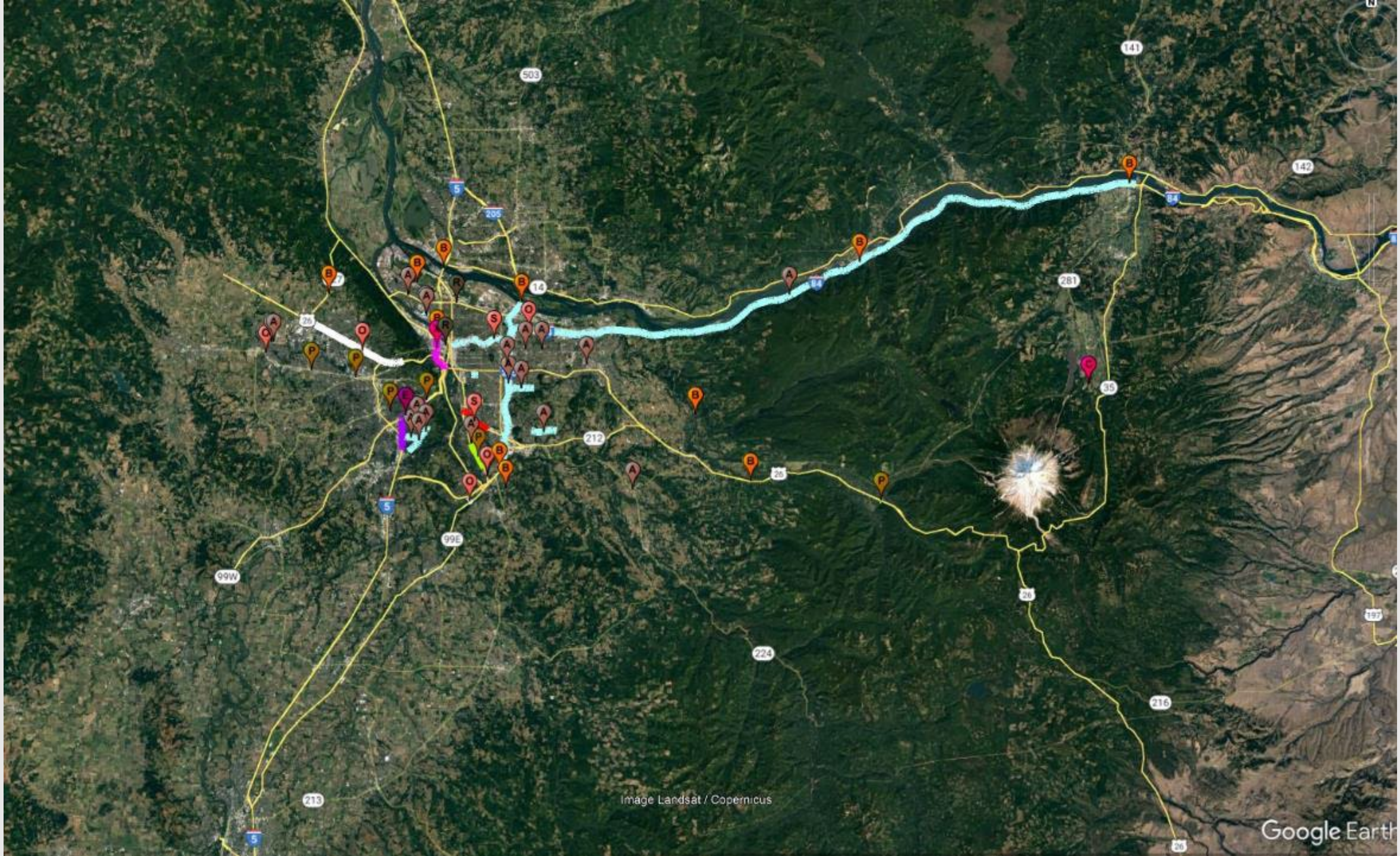
Category	Amount
ADA	$164.4 m
Bridge	$311.3 m
ARTS	$41.7 m
Ped Bike	$27.5 m
Preservation	$22.1 m
Operations	$25.8 m
Enhance	$15.9 m
Various other	$21.5 m
Total	**$630 million**

Project Selection Factors

- Engineering and data analysis (particularly for Fix-It and Safety projects)
- Impacts on multimodal accessibility, greenhouse gas emissions and equity
- Stakeholder input
- Some program funds are allocated statewide (Bridge) others are regionally selected (Operations)
- The draft list and funding amounts will continue to evolve

Themes of R1 STIP funding

- 75% of funds going to ADA and Bridges
- Of the remaining $154M
  - ~30 projects and buckets focused on safety = $97M
- Investments in urban arterials make up almost half of non-ADA/Bridge
  - 10 projects on ODOT facilities = $37M
  - Plus 82nd Ave = $13.4M
  - 8 local ARTS projects = $22M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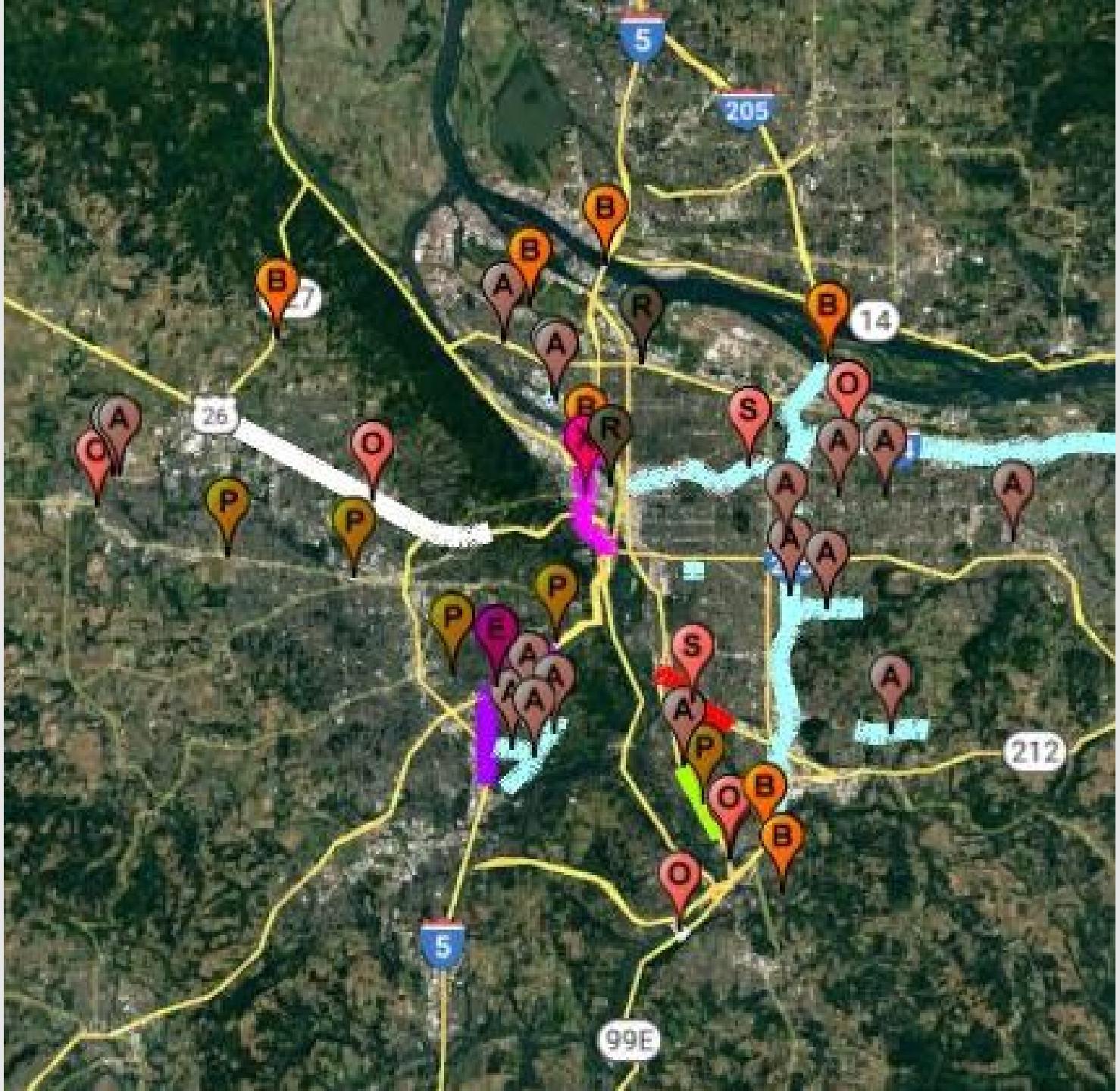
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99E

new Construction Reserve approach

- Cost escalation pressures have made it more challenging to accurately estimate construction costs
- To help address, some funding categories are using a pooled reserve for construction funds
- ODOT will be able to better distribute construction funds after prelim engineering, closer to bid

Bridge [ODOT]

Project	24-27 STIP $M
I-5: Northbound Interstate Bridge	$ 9.1
I-205: Glenn Jackson Bridge	$ 5.1
I-84: Moffett Creek westbound bridge [planning only]	$ 2.1
OR120: Columbia Slough Bridge	$ 17+
US26: Cedar Creek Bridge	$ 29.4
I-205: Clackamas River southbound bridge	$ 7.8
OR99E: Clackamas River (McLoughlin) Bridge ^	$ 13.1
I-405: Fremont Bridge (Willamette River) West Ramps ^	$ 103.7
I-84 (Westbound): Union Pacific Railroad bridge ^	$ 50.0

^ 24-27 STIP adds to funds from prior STIP cycle

Local Bridge

Project	24-27 STIP $M
S Holly Lane: Abernethy Creek Bridge	$ 8.4
Cornelius Pass Road: Rock Creek Bridge	$ 4.5
SE Lusted Road: Sandy River Bridge [design only]	$ 2.3

ARTS

Project	24-27 STIP $M
OR224 at OR211 and SE Burnett Rd [design only] – *Hotspot*	$ 6.9
I-205: Columbia River - SE 82nd Drive	$ 3.2
US30B: (N Lombard St) at Peninsula Crossing Trail	$ 3.6
I-84: I-5 - Hood River	$ 2.1
*92nd Ave, E Burnside St and N Basin Ave **	*$ 3.3*
*Gresham Pedestrian Improvements **	*$ 2.6*
*NE Cornell Rd at 17th Ave and 21st Ave – Hotspot **	*$ 2.1*
*SE Cesar Chavez Blvd: Lafayette Ct - Shiller St – Hotspot **	*$ 2.0*
*SE Sunnyside Rd: 132nd Ave - 172nd Ave **	*$ 1.8*
*Lake Oswego Signals Visibility Upgrades **	*$ 1.6*
*SE Foster Rd: 101st Ave - 136th Ave **	*$ 1.6*
*N Basin Ave: N Leverman St - N Emerson St **	*$ 0.6*

** Cost does not include local agency contribution of 10%*

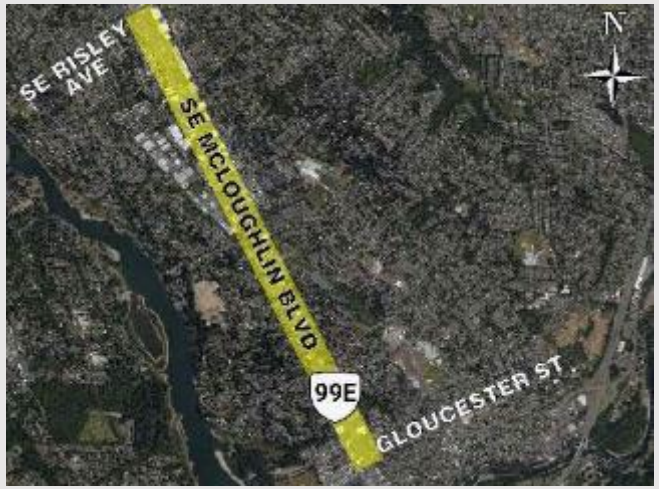
Pedestrian Bike Strategic

Project	24-27 STIP $M
OR99E: (SE Mcloughlin Blvd) SE Risley Ave - W Gloucester St *	$ 9.7
OR8: Tualatin Valley Hwy at SW 142nd & 214th Ave	$ 7.1
OR99W: (Barbur Blvd) SW 26th Way - SW 26th Ave	$ 4.2
OR141: Hall Blvd at SW Hemlock St	$ 2.9
US26: E Salmon River Rd - E Lolo Pass Rd	$ 2.1

* Includes ARTS funds

OR 99E: SE McLoughlin Blvd Pedestrian Safety

Clackamas County



In 2 locations, improve traveler safety for people walking and biking by installing crosswalks with a rectangular rapid flashing beacon (RRFB), stop bars and signs.

Install curb ramps to meet Americans with Disabilities Act (ADA) requirements.

US26: E Salmon River Rd - E Lolo Pass Rd

Clackamas County

Constructs a new 800-foot segment of a shared use-path along the south side of U.S. 26 in Welches.

This was identified as a high priority in the Mt. Hood Multimodal Transportation Plan and is in the Clackamas County's Transportation System Plan.

OR 8: Tualatin Valley Hwy at SW 142nd Ave & SW 214th Ave

Washington County

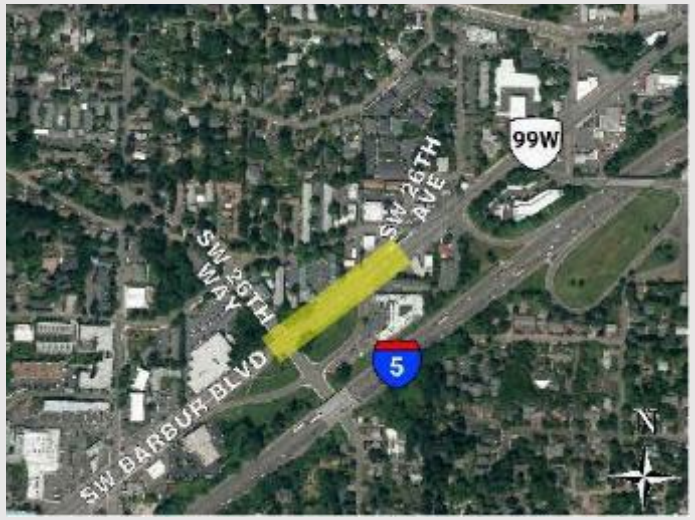
Install crosswalks, flashing beacons, and lighting on Tualatin Valley Hwy (OR 8) in two locations, at SW 142nd Ave. and SW 214th Ave.

This project will also install a buffered bike lane between SW 139th Ave and Murray Blvd.

OR 99W: (Barbur Blvd) SW 26th Way - SW 26th Ave

Multnomah County

Improve safety and access for pedestrians and other road users by installing a new crosswalk with a Rectangular Rapid Flashing Beacon (RRFB), filling in sidewalk gaps, upgrading curb ramps and re-stripe existing bike lanes.



OR 141: Hall Blvd at SW Hemlock St

Washington County

Increase pedestrian safety and connectivity on SW Hall Boulevard at SW Hemlock Street in Tigard/Metzger by building an enhanced pedestrian crossing at the intersection, along with new sidewalk, lighting and sidewalk curb ramps.

Operations

Project	24-27 STIP $M
Portland Metro and Surrounding Areas Operations Upgrades	$ 1.9
Portland Metro and surrounding areas signal upgrades	$ 1.3
US26 Active Traffic Management [design only]	$ 3.2
OR8: SE10th Ave at SE Walnut St	$ 3.7
OR99E: McLoughlin Blvd at W Arlington St and River Rd	$ 4.1
OR99E Canemah Rockfall Phase 2	$ 4.0

OR99E: McLoughlin Blvd at W Arlington St and River Rd

Clackamas County

Design and install all new signal equipment and phasing to improve safety for all modes of travel at this 2018 10% Safety Priority Index System site.

OR 8: SE 10th Ave at SE Walnut St

Washington County

Replace traffic signal, poles and signal software, and replace curb ramps to be ADA-compliant at the intersection of SE 10th Avenue (OR 8) and SE Walnut Street in downtown Hillsboro.

Other categories

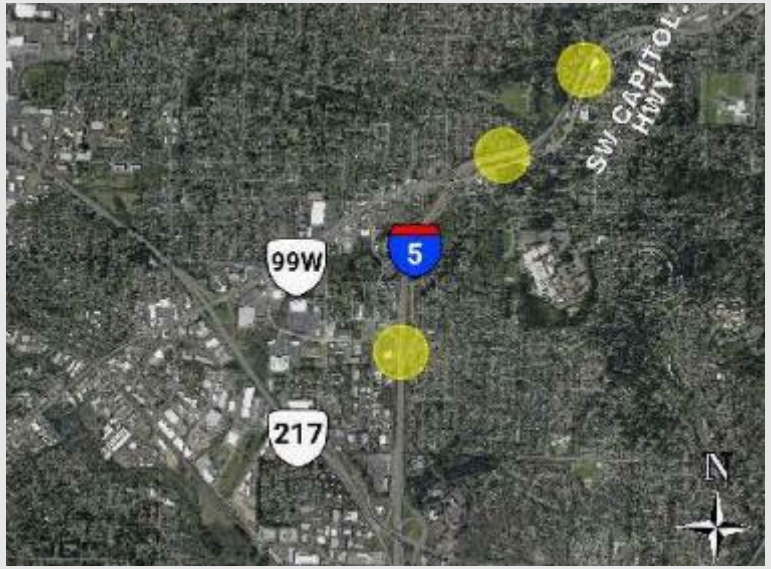
Category	Project	24-27 STIP $M
ADA	curb ramps	$ 164.4
Culverts	Evans Creek Culvert	$ 1.8
Electric Vehicle	I-405: I-5 to N Kerby | US 26: US101 to Nyssa	$ 9.8
Enhance	I-5: Capitol Highway - OR217 (ITS)	$ 15.9
Interst Maint.	I-84: NE MLK Jr Blvd - I-205 [design only]	$ 1.9
Preservation	OR224: SE 17th - Rusk Rd	$ 20.6
Rail Safety	US30B: NE Lombard - NE 11th [design only]	$ 1.9
Rail Safety	NW Naito Parkway Rail Crossing	$ 2.4
Safety	HB2017 safety priority funds	$ 3.7
Various	OR99W: I-5 – McDonald	$ 6.7
Various	82nd Ave Improvements	$ 13.4

I-5: Capitol Hwy - OR 217

Multnomah County

Install new ODOT RealTime Signs at key locations along I-5 Northbound in Tigard and Southwest Portland.

Includes Variable Advisory Speed Signs (VAS) and Variable Message Signs (VMS) across new sign bridges.



Materials following this page were distributed at the meeting.

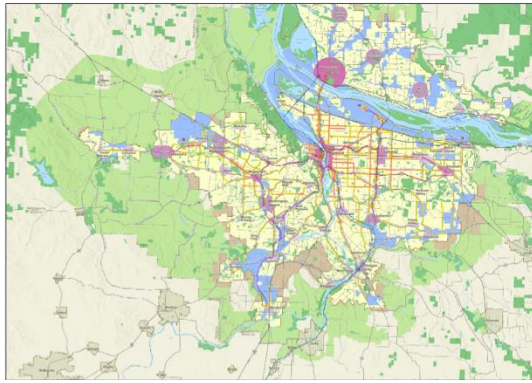
2023 Regional Transportation Plan

Revised Draft Chapter 3 – System Policies

TPAC/MTAC Workshop

April 19, 2023

Metro



Today's purpose

Share revised working draft policy chapter developed by staff

Continue discussion of the staff recommended draft policies

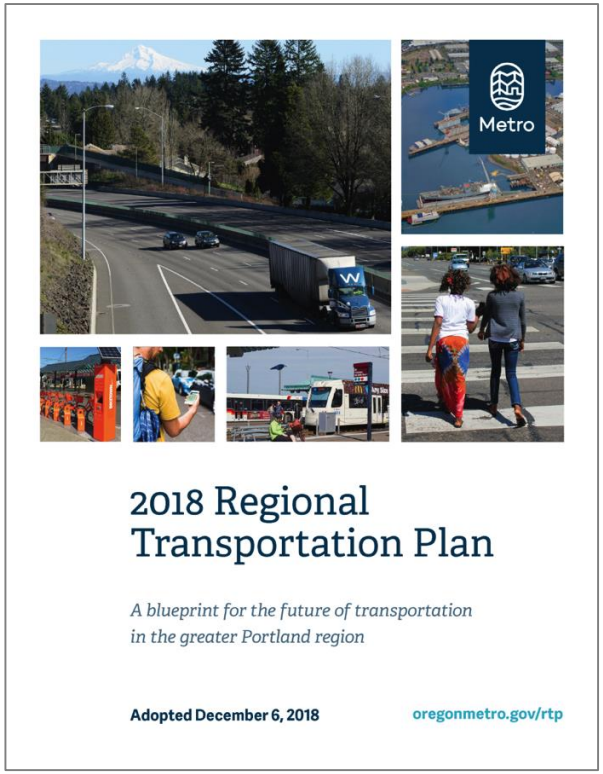
Prepare TPAC members for June 2 recommendation to JPACT on release of the draft 2023 RTP for public review, including Chapter 3

Additional comments may be submitted by May 3

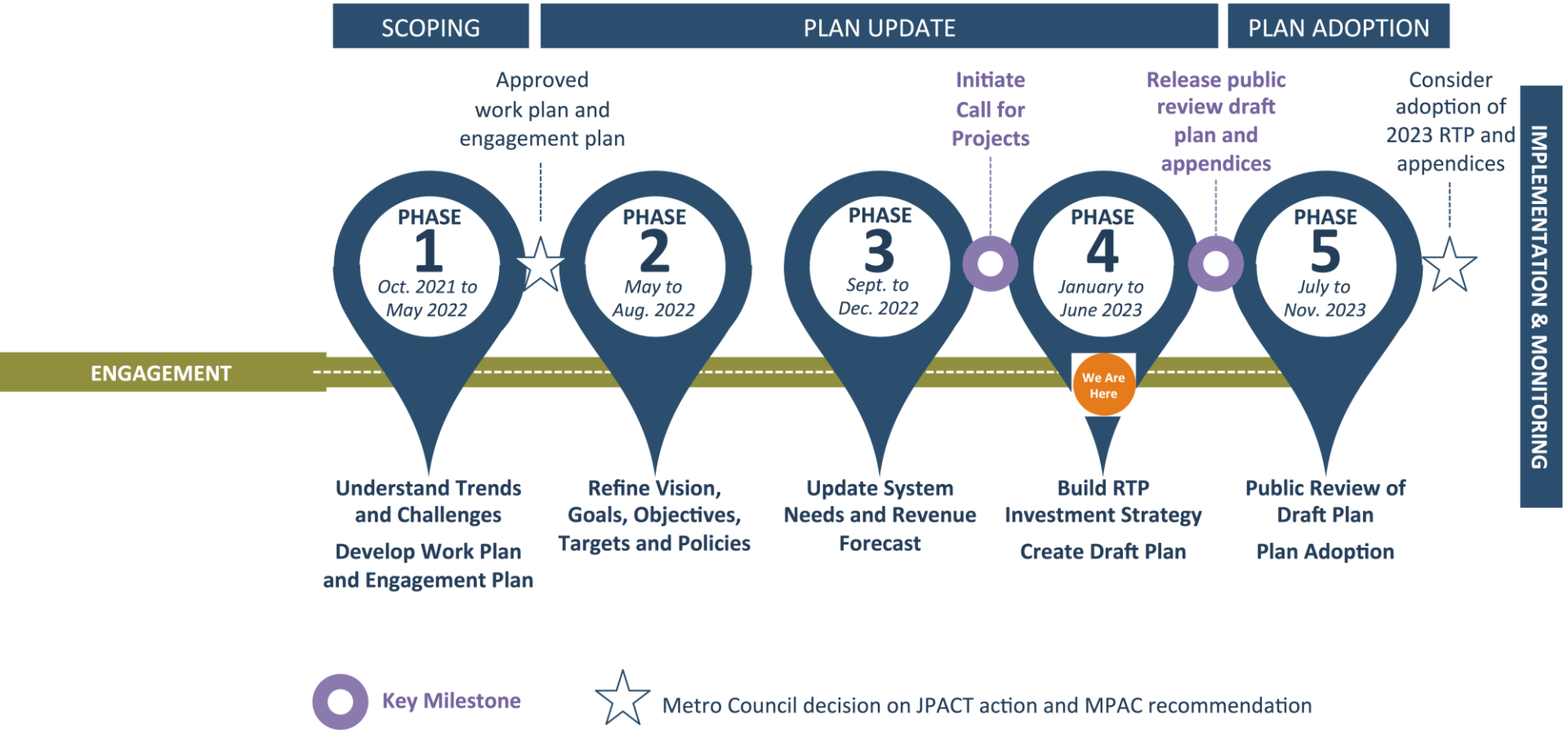
What is the Regional Transportation Plan (RTP)?

20+ year transportation plan

- Sets the vision and goals for moving people and goods safely, reliably and affordably for decades to come
- Uses projections of future population and job growth to identify travel needs and solutions through 2045
- Includes policies and projects
- Coordinates local, regional, and state investments on regional system
- Establishes priorities for federal and state funding



Timeline for the 2023 RTP update



Draft RTP document under development

Executive Summary

Chapter 1: Toward A Connected Region

Chapter 2: Our Shared Vision and Goals for Transportation

Chapter 3: Transportation System Policies to Achieve Our Vision

Chapter 4: Snapshot of Our Growing and Changing Region

Chapter 5: Our Transportation Funding Outlook

Chapter 6: Regional Programs and Projects to Achieve Our Vision

Chapter 7: Measuring Outcomes

Chapter 8: Moving Forward Together (Implementation)

Glossary of terms

Appendices and supporting documents

RTP outcomes-based framework

Guides planning and decision-making in the region

Vision Statement
Establishes the overarching vision of the plan

Goals
Expand on the Vision Statement to describe outcomes of emphasis

Objectives
Define focused, measurable outcomes of the Goals

Policies and Strategies
Detail an approach to meet desired outcomes (Goals and Objectives)

Performance Measures
Track progress in achieving the Objectives

Coordinated planning and decision-making

Federal and state law define roles and responsibilities and expectations for coordinated planning

Policies guide planning and investment decisions for the parts of the system they address

Plans identify needs and solutions

2023 RTP Policy Framework

Draft vision and goals for 2023 RTP

Vision--->

Everyone in the greater Portland region will have **safe, reliable, affordable, efficient, and climate-friendly** travel options that allow people to **choose to drive less** and support **equitable, resilient, healthy and economically vibrant communities and region**.

Developed in 2022 by JPACT and Metro Council with input from MPAC and CORE

Today's purpose

Share revised working draft policy chapter developed by staff

Continue discussion of the staff recommended draft policies

Prepare TPAC members for June 2 recommendation to JPACT on release of the draft 2023 RTP for public review, including Chapter 3

Additional comments may be submitted by May 3

Revisions to draft Chapter 3

- Comments submitted by members of TPAC and MTAC representing: Verde, ODOT, TriMet, PBOT, Clackamas, Multnomah and Washington counties *(pages 266-312 of the packet)*
- Many helpful, minor comments
- Metro staff identified two policy areas that would benefit from further discussion at the workshop: pricing policies *(pages 80-87 of the packet)* and motor vehicle policies *(pages 121-132 of the packet)*
- Revisions are shown in track changes in revised draft Chapter 3 (4/11/23)

Draft Chapter 3 System Policies

Pricing Policy revisions

- References to parking were removed and are now included in the climate policies
- Changes highlight the need to adhere to Federal and State pricing and tolling laws and regulations
- Diversion defined
- Attachment 3 provides a comparison of draft RTP pricing policies and Oregon Highway Plan Policy 6 on tolling and congestion pricing policies *(pages 253-265 of the packet)*

Draft Chapter 3 System Policies

Motor Vehicle Policy revisions

- Revisions were made to policies and narrative to:
  - define what is meant by the planned motor vehicle system
  - distinguish between completing the planned system and adding capacity beyond the planned system
  - distinguish between throughways, auxiliary lanes, and arterials, and the different functions each serves
- References to “deficiencies” were replaced with “needs and solutions” in Policy 2 and in the narrative; needs includes gaps as well as deficiencies
- References to pricing and OAR 660-012-0830 were removed from Policy 9

Comparison of draft 2023 RTP and draft 2023 OTP Policies

Draft 2023 RTP policy 6 (4/11/23):

Prior to adding new throughway capacity beyond the planned system of motor vehicle through lanes, including adding or extending an auxiliary lane of more than one-half mile, demonstrate that system and demand management strategies, including access management, transit and freight priority, pricing, transit service and multimodal connectivity improvements cannot adequately address identified needs consistent with the Congestion Management Process and Regional Mobility Policy.

Draft 2023 RTP policy 9 (4/11/23):

Prior to adding new arterial street capacity beyond the planned system of motor vehicle through lanes, demonstrate that system and demand management strategies, including access management, transit and freight priority, transit service, and multimodal connectivity improvements cannot adequately address identified needs consistent with the Congestion Management Process and Regional Mobility Policy.

Draft 2023 Oregon Transportation Plan policy:

Prior to strategically adding new motor vehicle capacity, demonstrate that the capacity needs cannot be reasonably addressed by one or a combination of the following:

- Multimodal investments (e.g., increased transit service, multimodal network completion, and connectivity improvements),
- Transportation options programs (e.g., education and outreach, transportation options information, trip planning, or rideshare support),
- Transportation system management improvements (e.g., ramp metering, signal coordination, or roadway lane reconfiguration).
- Context-appropriate pricing strategies (e.g., roadway tolling, charging for parking, or incentives)

Draft Chapter 3 System Policies

Mobility Policy revisions

- Where appropriate, “target” was changed to “threshold”
- Minor clarifying refinements were made to the policies
- “Performance expectations” was replaced with “needs and solutions”

Next steps for Chapter 3

April-May 2023	Metro continues to prepare staff recommendation to TPAC on the draft 2023 RTP, including Chapter 3
May 3	Additional comments may be submitted to Metro staff
June 2	TPAC recommendation to JPACT on release of the draft 2023 RTP for public review, including Chapter 3

Refer to the memo for more details and to the packet materials for the 2023 RTP Schedule

Questions and discussion

- Additional comments on the policies overall?
- Comments on the proposed revisions?
- Additional comments on any individual policies?

Learn more about the Regional Transportation Plan at:

Metro

Kim Ellis, AICP
RTP Project Manager
kim.ellis@oregonmetro.gov

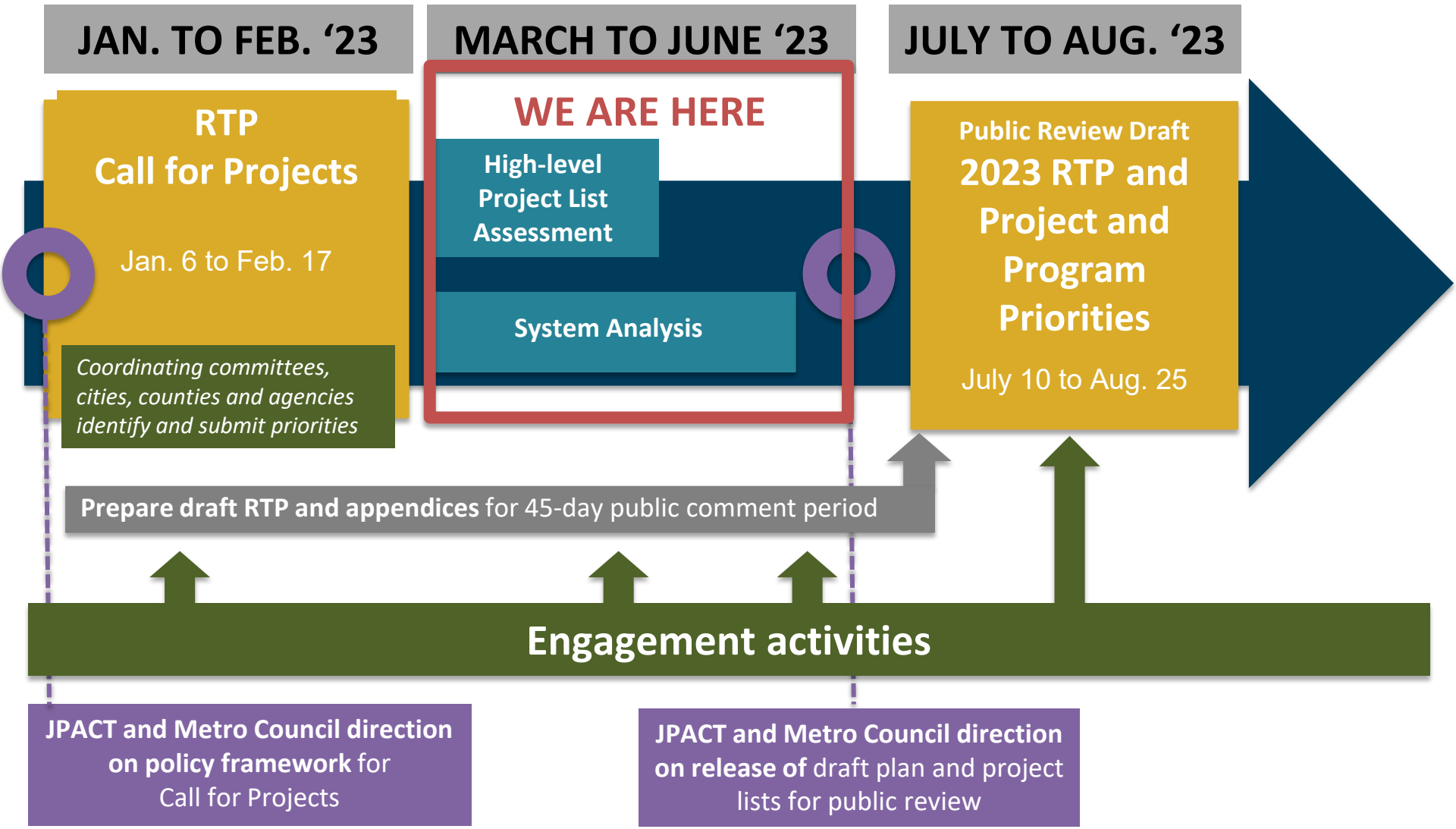
oregonmetro.gov/rtp

2023 draft RTP project summaries and high-level assessment results

TPAC-MTAC workshop

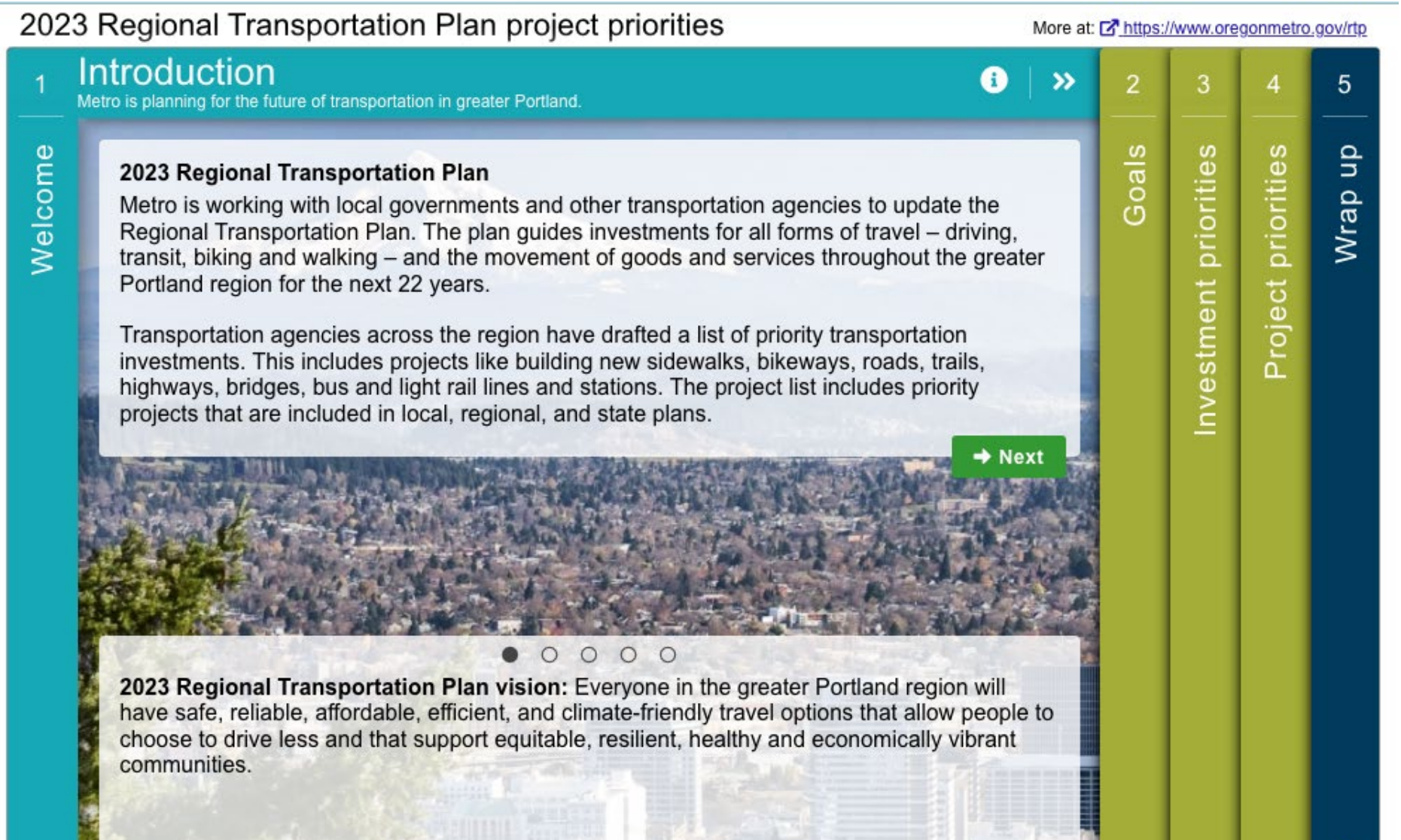
April 19, 2023

Where we are


JAN. TO FEB. '23
MARCH TO JUNE '23
JULY TO AUG. '23
RTP
Call for Projects
Jan. 6 to Feb. 17
Coordinating committees, cities, counties and agencies identify and submit priorities
WE ARE HERE
High-level Project List Assessment
System Analysis
Public Review Draft
2023 RTP and Project and Program Priorities
July 10 to Aug. 25
Prepare draft RTP and appendices for 45-day public comment period
Engagement activities
JPACT and Metro Council direction on policy framework for Call for Projects
JPACT and Metro Council direction on release of draft plan and project lists for public review

Public survey launched!

Comment through May 1: https://metroquestsurvey.com/ly48e

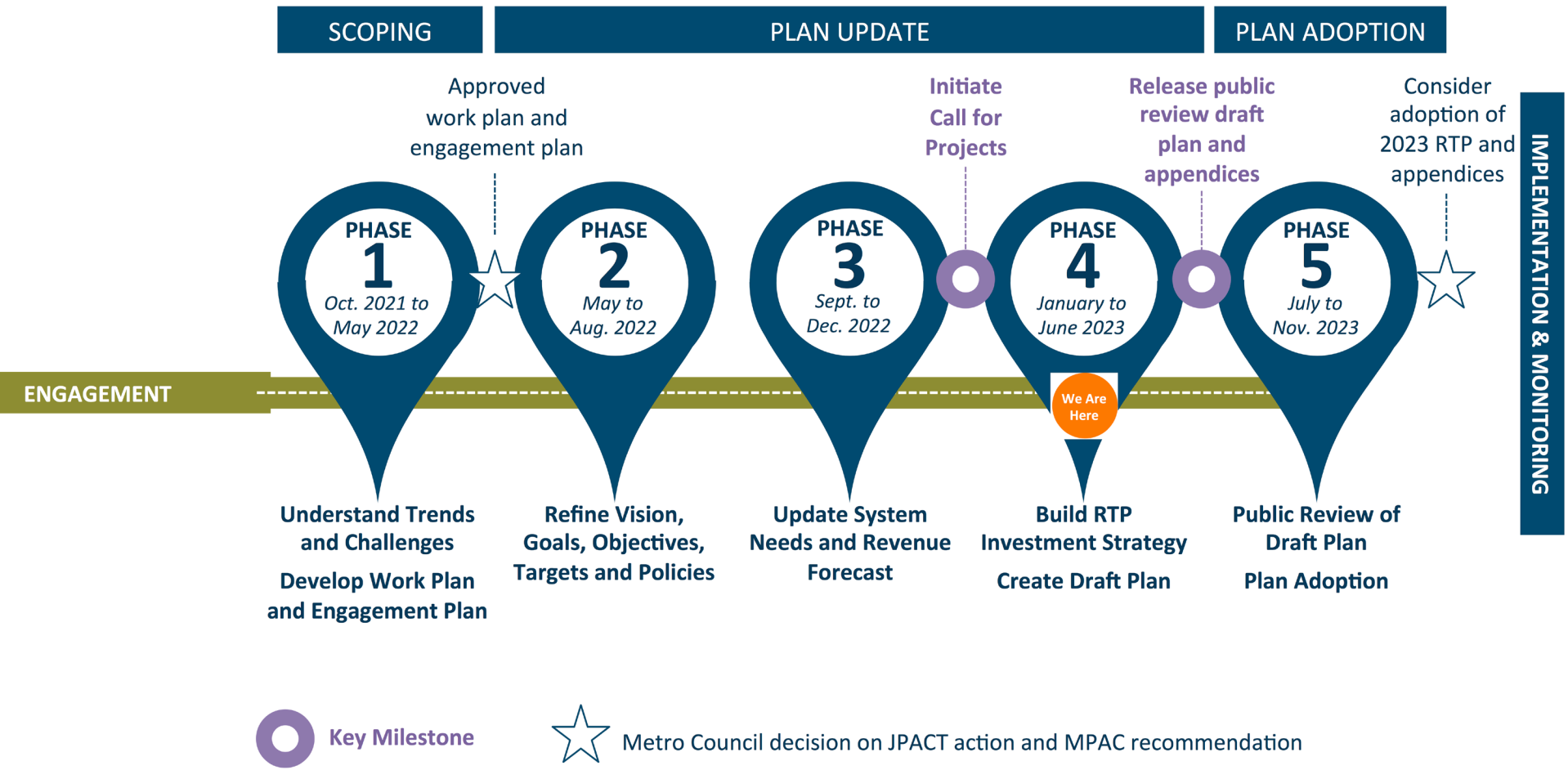


Recent and upcoming engagement

- Community leaders' forum (April 12)
- Cultural and language specific forums (April 15)
- Community-based organization engagement (April)
- Online public survey (closes May 1)
- Consultation with Tribes/Resource Agencies and State/Federal Agencies (April 20 and 27)
- Business leaders' forum (May 25)

Summary report and key themes to be prepared for Metro Council and JPACT consideration.

Timeline for the 2023 RTP update



Key Milestone

Metro Council decision on JPACT action and MPAC recommendation

We're sharing 3 types of information:

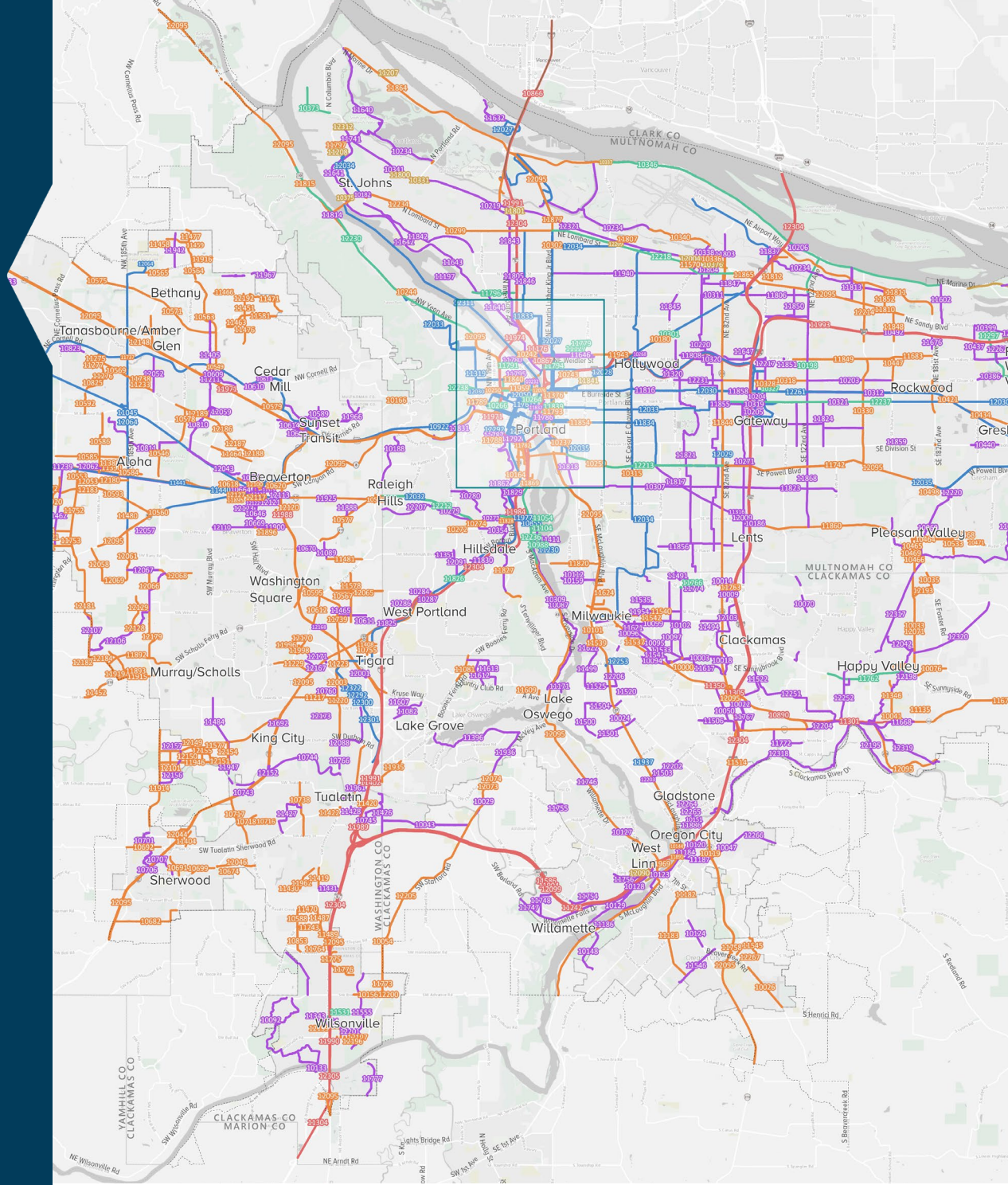
- **Project list summaries** that describe how investments are distributed among different cost and investment categories and areas of the region.
- A **high-level assessment** that describes whether each project is aligned with RTP goals, based on simple measures that reflect RTP maps and policies.
- A **system analysis** that quantifies how the RTP overall performs with respect to specific measures and targets.

All three types of information are critical to understanding the impacts of the RTP. We will be presenting this information in April and May.

Key terms

- **Constrained** projects can be paid for with the funds that we expect to be available.
- **Strategic** investments are things we would like to build with additional money if it becomes available.
- **Near-term** means 2023-2030.
- **Long-term** means 2031-2045.
- We use **investment categories** to organize RTP projects by **primary** purpose / mode / facility type.
- Many of these analyses distinguish between **capital** investments and investments in **operations and maintenance**.
- The RTP describes cost in **year-of-expenditure dollars** (YOE$, or sometimes YOE$m/YOE$b)

Project list summary



Project list summary: limitations

- The summary relies on **limited and imperfect information** provided by lead agencies through the call for projects.
- The summary **categorizes projects** according to how lead agencies plan to invest **most of the project budget**. Lead agencies do not break out project spending by investment category.
- The summary **inflates the cost of long-term** projects.

Constrained spending by category

$25.3B

CAPITAL PROJECT SPENDING
[YEAR OF EXPENDITURE $]

12% Walking + Biking
11% Transit Capital
31% Roads + Bridges
19% Throughways
24% I-5 IBR Program
2% Freight Access
2% Info + Technology

$48.0B

OPERATIONS + MAINTENANCE SPENDING
[YEAR OF EXPENDITURE $]

58% Transit Service + Operations
10% Transit Maintenance
32% Throughway+Road+Bridge Maintenance

Constrained spending by category

$25.3B

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[YEAR OF EXPENDITURE $]

12% Walking + Biking
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$48.0B

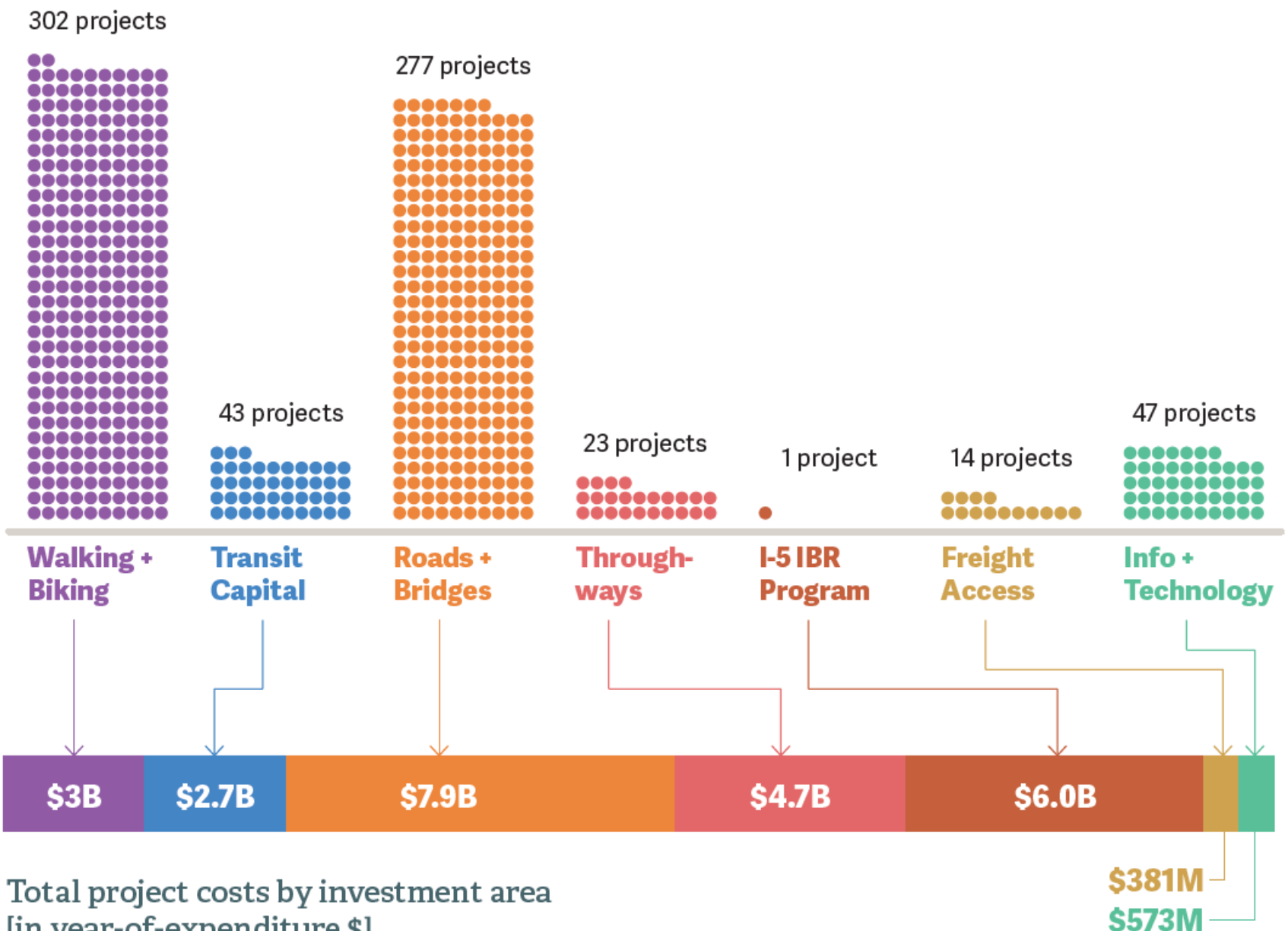
OPERATIONS + MAINTENANCE SPENDING
[YEAR OF EXPENDITURE $]

58% Transit Service + Operations
10% Transit Maintenance
32% Throughway+Road+Bridge Maintenance

35% of RTP spending goes toward capital projects that shape the region's future progress toward goals.

65% goes toward operating and maintaining the system we have.

Constrained projects by category / cost



Total project costs by investment area
[in year-of-expenditure $]

High-level assessment: goals

The goal of the high-level assessment is to provide stakeholders with information that compliments the system evaluation on how the investments included in the draft RTP project list support the RTP vision, goals, and policies.

- It is **not** an effort to screen RTP projects.
- The results are **not** meant to stand alone.
- It **is** intended to provoke conversations and questions about how RTP spending can be best aligned with goals.

High-level assessment measures

Brief name	Measure
Equity	
In equity focus areas	Is the project located in an Equity Focus Area?
Equity projects	Does the project invest primarily in transit or active transportation, or close a gap in the transit or active transportation networks?
Climate	
Climate action	Does the project have a high or medium greenhouse gas reduction potential?
Resilience	Is the project located on a Regional Emergency Transportation Route or Statewide Seismic Lifeline Route?
Safety	
Safety projects	Is the project identified as safety project?
High injury network	Is the project on a high injury corridor or high injury intersection?
Mobility	
Fill gaps	Does the project complete a gap in the RTP pedestrian, bicycle transit or motor vehicle networks?
Design elements	Does project include ADA- pedestrian-, bicycle- or transit-supportive design or TSMO elements?
Economy	
Planned job centers	Is the project located in an area that is prioritized for future job growth?
Current job centers	Is the project located in an area with higher-than-average job activity?

We chose these measures to…

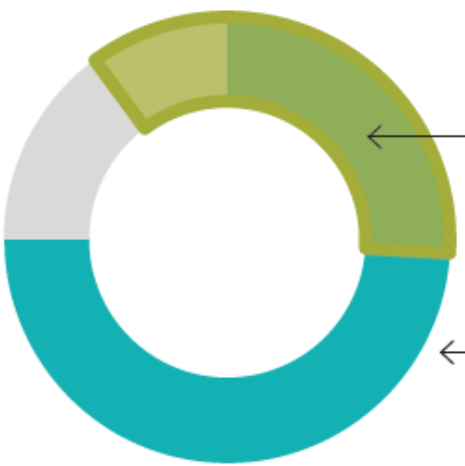
- Reflect **RTP policy**.
- Produce results that are **clear** and **easy to communicate and interpret**.
- Provide **simple and clear** advance information to decision-makers, partners and stakeholders.
- Support partners in highlighting **projects that meet multiple RTP goals**.
- Apply to the **diverse set of RTP projects**.
- Be achievable within the **RTP timeline and process**.

High-level assessment: limitations

- The assessment captures whether certain aspects of a project align with RTP policy – it is **not comprehensive** and **does not identify negative impacts**.
- The assessment **does not support an "apples-to-apples" comparison** between different goal areas.
- The assessment is **biased in favor of larger and more long-term projects**.
- The assessment relies on **limited and imperfect information** provided through the call for projects.
- There are **no targets** for how much the RTP spends on different measures.
- This is a **new element** of the RTP.

How to interpret results

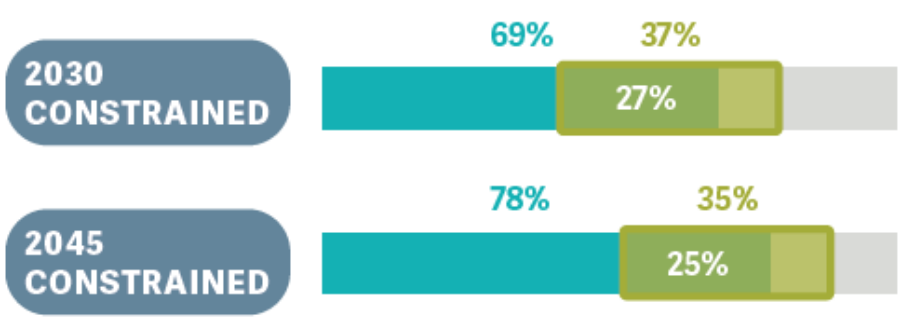
Share of RTP constrained capital spending that goes toward meeting **either measure**. *Is this in line with the impacts that we want to see?*



Share of RTP constrained capital spending that goes toward measure #1. *Is this in line with the impacts we want to see?*

Share of RTP constrained capital spending that goes toward both measures. *Are we coordinating safety, equity, and mobility investments?*

Share of RTP constrained capital spending that goes toward measure #2. *Is this in line with the impacts we want to see?*

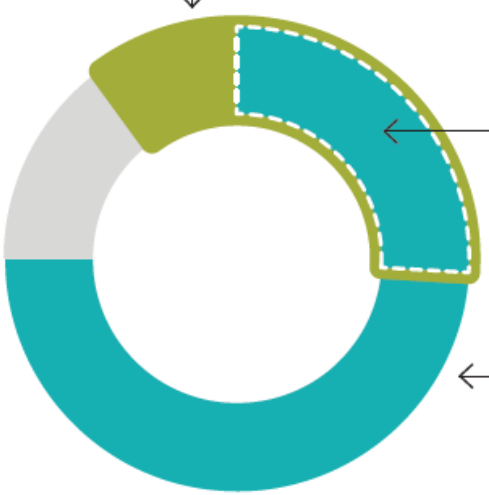


This shows the information above broken out between **near- and long-term** spending. *Is the RTP prioritizing projects that address our most pressing goals?*

Note: This summary only includes capital projects and programmatic investments in the constrained project list.

HLA results: equity

85%
of the RTP capital spending* invests in **EQUITY**

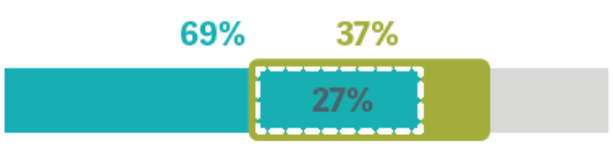


36% of the RTP capital spending* invests in a project category that underserved people have identified as a priority **(bike, pedestrian or transit projects)**.

26% of the RTP capital spending * invests in **bike, pedestrian or transit projects** that are in an **Equity Focus Area.**

75% of the RTP capital spending* invests in an **Equity Focus Area.**

2030 PROJECT LIST



79% of the RTP capital spending* invests in **EQUITY**

2045 PROJECT LIST

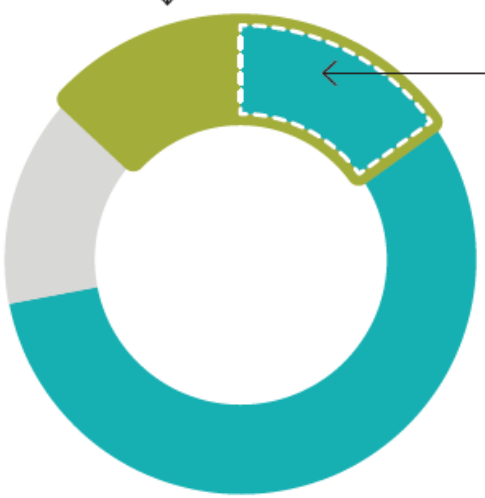
88% of the RTP capital spending* invests in **EQUITY**

Note: This summary only includes capital projects and programmatic investments in the constrained project list.

HLA results: climate

85%

of the RTP capital spending* invests in **CLIMATE+ RESLIENCE**



28% of the RTP capital spending* invests in projects that are **high- or moderate-impact climate pollution reduction strategies.**

15% of the RTP capital spending* invests in projects that implement **high- or moderate-impact climate pollution reduction strategies** and are located on **emergency/seismic routes.**

71% of the RTP capital spending* invests in projects that are located on **Regional Emergency Transportation Routes or Statewide Seismic Lifeline Routes.**

85% of the RTP capital spending* invests in **CLIMATE+ RESLIENCE**

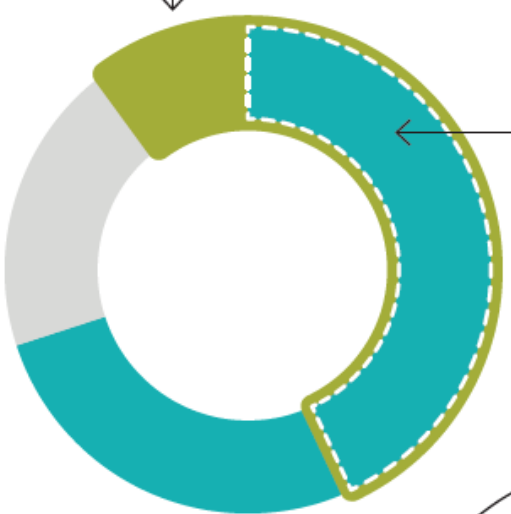
84% of the RTP capital spending* invests in **CLIMATE+ RESLIENCE**

Note: This summary only includes capital projects and programmatic investments in the constrained project list.

HLA results: safety

80%

of the RTP capital spending* invests in **SAFETY**

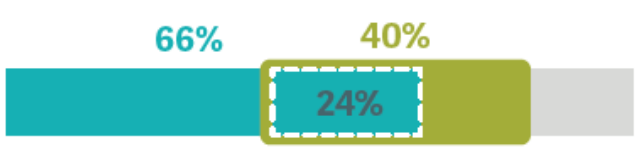


53% of the RTP capital spending* invests in projects located on **high injury corridors or intersections.**

43% of the RTP capital spending* invests in projects on **high injury corridors or intersections** that help **reduce serious traffic crashes or address other safety issues.**

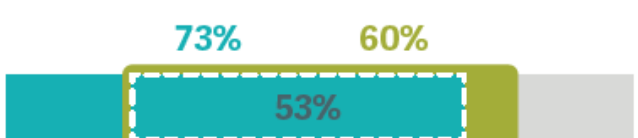
71% of the RTP capital spending* invests in projects that help **reduce serious traffic crashes or address other safety issues.**

2030 PROJECT LIST



82% of the RTP capital spending* invests in **SAFETY**

2045 PROJECT LIST



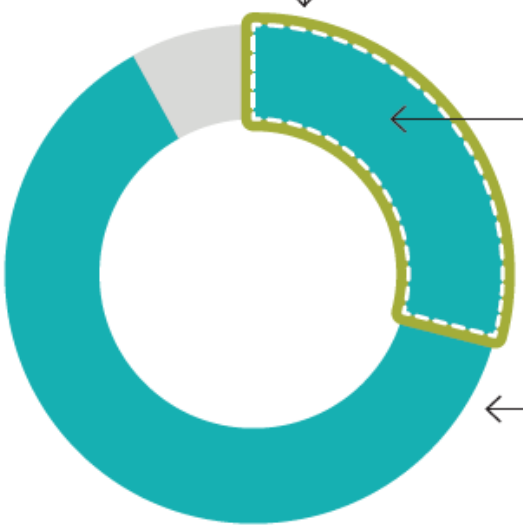
80% of the RTP capital spending* invests in **SAFETY**

Note: This summary only includes capital projects and programmatic investments in the constrained project list.

HLA results: mobility

92%

of the RTP capital spending* invests in **MOBILITY**

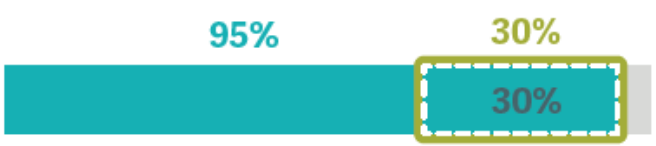


29% of the RTP capital spending* invests in projects that **complete gaps in transportation networks.**

29% of the RTP capital spending* invests in projects that **complete gaps in transportation networks** and include **priority elements.**

91% of the RTP capital spending* invests in projects that include **priority elements** (ADA-, pedestrian-, bicycle-, or transit-supportive design).

2030 PROJECT LIST



95% of the RTP capital spending* invests in **MOBILTY**

2045 PROJECT LIST

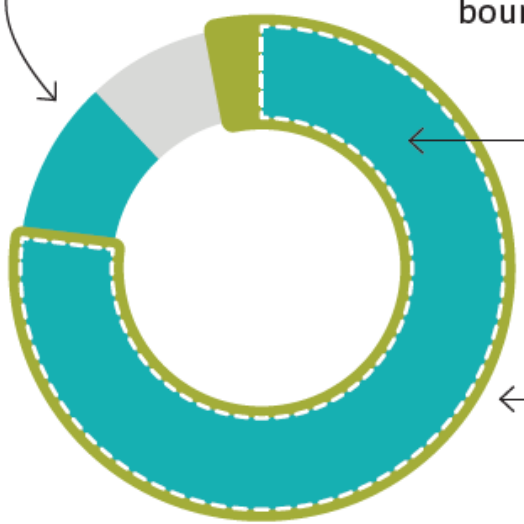
90% of the RTP capital spending* invests in **MOBILITY**

Note: This summary only includes capital projects and programmatic investments in the constrained project list.

HLA results: economy

91%

of the RTP capital spending* invests in the **ECONOMY**



88% of the RTP capital spending* invests in projects that are located in an **economic development priority area** (2040 center, station community, industrial area, employment area or urban growth boundary expansion area).

77% of the RTP capital spending* invests in projects located in **economic development priority areas** with **above-average job activity**.

80% of the RTP capital spending* invests in projects that are located in areas with **above-average job activity**.

2030 PROJECT LIST

92% of the RTP capital spending* invests in the **ECONOMY**

2045 PROJECT LIST

90% of the RTP capital spending* invests in the **ECONOMY**

Note: This summary only includes capital projects and programmatic investments in the constrained project list.

Strategic vs. constrained scenarios

	Near-term constrained	Long-term constrained	Total constrained	Strategic
Equity				
In equity focus areas	69%	78%	75%	82%
Equity projects	37%	35%	36%	79%
Both	**27%**	**25%**	**26%**	**67%**
Climate				
Climate action	32%	26%	28%	69%
Resilience	72%	71%	71%	51%
Both	**18%**	**13%**	**15%**	**30%**
Safety				
Safety projects	66%	73%	71%	22%
High injury network	40%	60%	53%	39%
Both	**24%**	**53%**	**43%**	**9%**
Mobility				
Fill gaps	**30%**	**28%**	**29%**	**46%**
Design elements	95%	90%	91%	94%
Both	30%	28%	29%	45%
Economy				
Planned job centers	89%	87%	88%	92%
Current job centers	83%	78%	80%	87%
Both	80%	76%	77%	85%

HLA results by investment category

Project type	Walk + Bike	Freight access	Roads + Bridges	Through-ways	Transit capital	Info + tech	Mega-projects
Equity							
In equity focus areas							
Equity projects							
Both							
Climate							
Climate action							
Resilience							
Both							
Safety							
Safety projects							
High injury network							
Both							
Mobility							
Fill gaps							
Design elements							
Both							
Economy							
Planned job centers							
Current job centers							
Both							

High-level assessment: draft findings

- The RTP invests a higher share of long-term resources in equity focus areas on projects on the high injury network. **This could represent opportunities to prioritize equity and safety in near-term investments.**
- The RTP invests a higher share of near-term resources in implementing climate strategies. **This could reflect a priority on advancing climate action**.
- There could be an **opportunity to better align investments in safety and equity** with areas of the region that have safety and equity needs.
- The strategic list has a much higher share of equity, climate, and gap-filling projects than the constrained list. **Funding constraints may be preventing the RTP from investing in these projects**.

System completeness

Network	Baseline (2020)	Near-term constrained (2030)	Long-term constrained (2045)
Pedestrian	57%	62%	69%
Bicycle	55%	70%	70%
Trail	43%	48%	58%
Transit	48%	50%	50%
Motor vehicle	98%	99%	99%

The motor vehicle network is significantly more complete than other networks. The RTP reduces this disparity but does not eliminate it.

System completeness in priority areas

Network	2020 network is more complete than average in these areas	RTP prioritizes completing the network in these areas	2045 network is more complete than average in these areas
Mobility and climate			
Ped network near transit	✓		✓
Bike network near transit	✓		✓
Equity			
Ped network in EFAs	✓		✓
Bike network in EFAs	✓	✓	✓
Ped network near transit in EFAs	✓		✓
Bike network near transit in EFAs	✓	✓	✓
Safety			
Ped network along arterials		✓	✓
Bike network along arterials	✓	✓	✓

✓ = significantly (>2%) more complete than comparison networks
✓ = slightly (<2%) more complete than comparison networks

System completeness in priority areas

Network	2020 network is more complete than average in these areas	RTP prioritizes completing the network in these areas	2045 network is more complete than average in these areas
Economy			
Ped network in centers	✓		✓
Bike network in centers	✓		✓
Ped network in station communities	✓		
Bike network in station communities	✓	✓	✓
Ped network in mixed-use areas	✓		✓
Bike network in mixed-use areas	✓	✓	✓
Ped network in employment/industrial areas		✓	
Bike network in employment/industrial areas	✓		

✓ = significantly (>2%) more complete than comparison networks

✓ = slightly (<2%) more complete than comparison networks

Safety: key findings

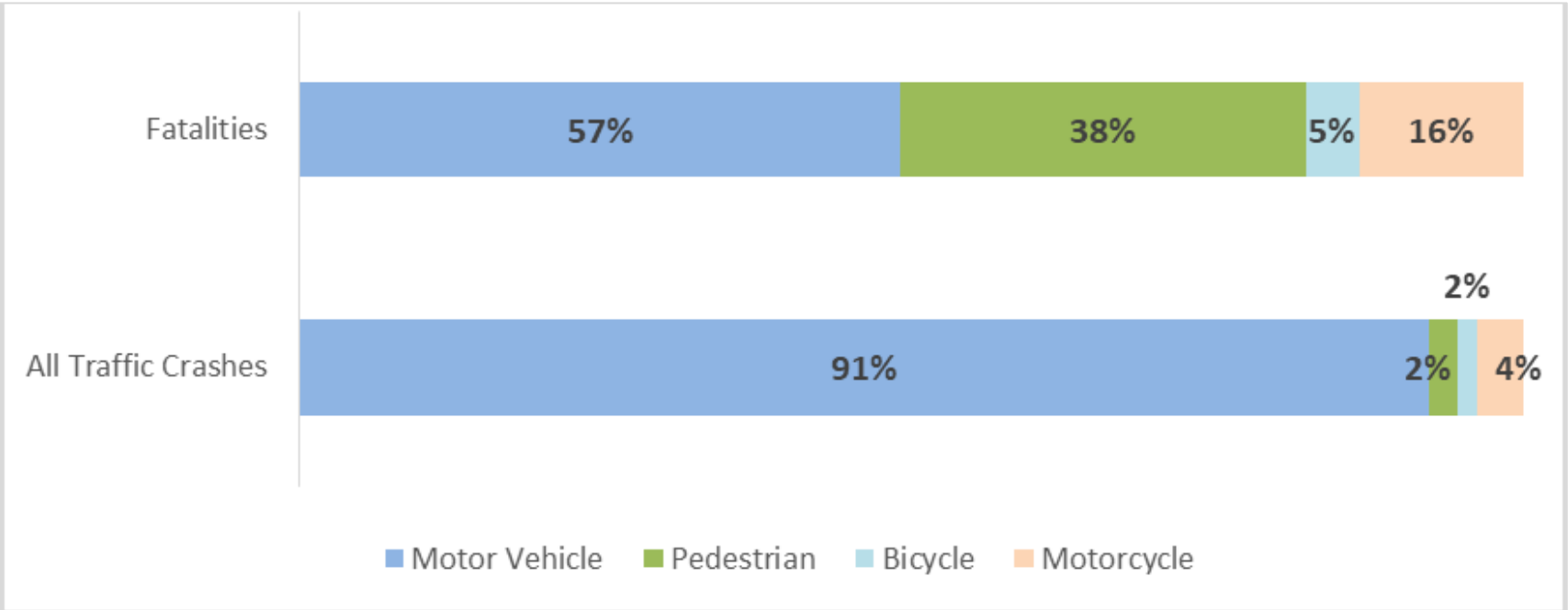
- An average of **563 people die or are seriously injured** each year while traveling in the region.
- The region is **not on track to meet its Vision Zero targets**.
- **Pedestrians** experience a disproportionately high number of traffic deaths.
- Traffic fatalities are decreasing among **bicyclists**.
- Despite progress building out the transportation network in equity focus areas, **a majority of serious crashes and bike/ped crashes occur in these areas**.

Safety performance measures

Performance Measure	5-year rolling averages 2011-2015 Baseline	2016-2020 Target	2016-2020 Actual
Number of fatalities	62	52	93
Fatalities per 100 million vehicle miles traveled	0.6	0.5	0.9
Number of serious injuries	458	384	512
Serious injuries per 100 million vehicle miles traveled	4.5	3.6	4.8
Number of non-motorized fatalities and serious injuries	113	95	129

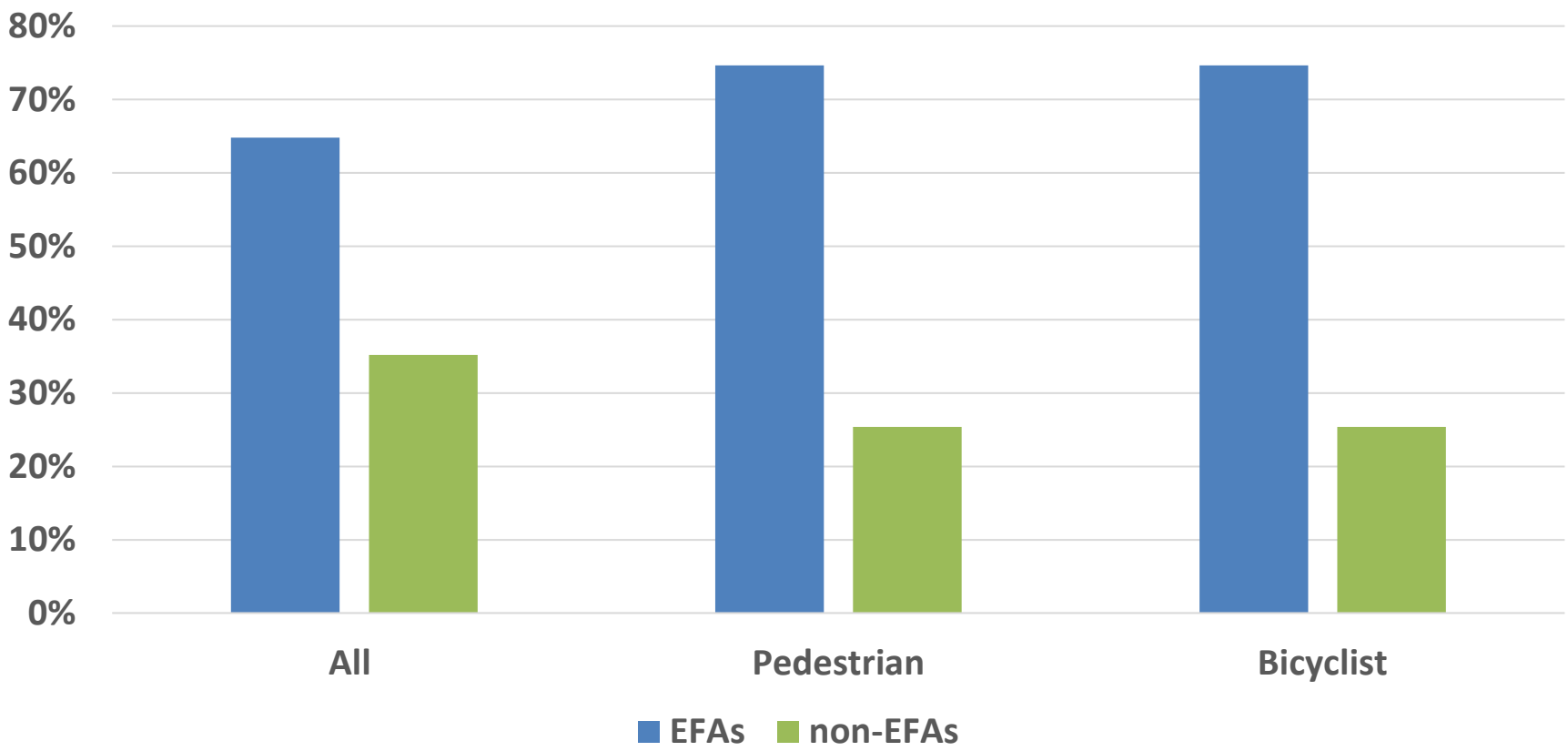
Across all Federal safety performance measures in the RTP, the region is currently not meeting targets, and has gotten less safe since Metro collected baseline data.

Crashes and fatalities by mode



- Pedestrians who are involved in a crash are 26 times more likely to die than non-pedestrians.
- Pedestrian crashes make up 2% of all crashes and 38% of all fatal crashes.
- 49% of pedestrian crashes occur on arterials, which account for only five percent of roadway miles.

Crashes in equity focus areas



EFAs experience nearly twice as many serious injuries and deaths and three times as many crashes involving pedestrians and bicyclists as other communities.

Next steps

March to May	Metro evaluates how projects advance RTP goals (equity, climate, safety, mobility and economy) and seeks public input on draft project list Metro reports findings to Metro Council, and technical and policy committees, including county coordinating committees
May 11	JPACT/Metro Council workshop to provide feedback on project priorities and discuss opportunities to make more near-term progress on RTP goals Metro staff prepare draft RTP and draft HCT Strategy for public review
May 24	**Letters of endorsement from governing bodies and project list refinements due**
June 2	TPAC recommendation to JPACT on releasing draft RTP (and projects) for public review
June 15/29	JPACT/Metro Council consider public input, technical findings and releasing the draft RTP (and projects) for public review
Summer	45-day public comment period on draft RTP (and projects) and HCT Strategy
Nov. 3	TPAC recommendation to JPACT on adoption of RTP (and projects)
Nov. 16/30	JPACT/Metro Council consider public input and final RTP for adoption

Discussion questions

- What questions or ideas do you have about how to make more near-term progress on RTP goals based on the information shared today?
- What questions or ideas do you have about how to interpret and communicate this information?

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