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

Joint Policy Advisory Committee on Transportation (JPACT) agenda

Thursday, July 21, 2022 **7:30 AM** **https://zoom.us/j/91720995437 (Webinar ID: 917 2099 5437) or 877-853-5257 (Toll Free)**

1. Call to Order, Declaration of a Quorum & Introductions (7:30 AM)

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2. Public Communications (7:35 AM)

Public comment may be submitted in writing and will also be heard by electronic communication (video conference or telephone). Written comments should be submitted electronically by emailing legislativecoordinator@oregonmetro.gov. Written comments received by 4:00 pm on the Wednesday before the meeting will be provided to the committee prior to the meeting.

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3. Updates from the JPACT Chair (7:40 AM)

4. Consent Agenda (7:45 AM)

4.1 Consideration of the June 16, 2022 JPACT Minutes COM 22-0587

5. Information/Discussion Items (7:50 AM)

5.1	Regional Flexible Funds Allocation (RFFA) - Present public comment report and initial draft funding examples (7:50 AM)		COM 22-0581
	Presenter(s):	Dan Kaempff, Metro	
	Attachments:	JPACT worksheet RFFA Memo RFFA Bond Examples	
5.2	Earthquake Ready Burnside Bridge - Introduction (8:35 AM)		COM 22-0584
	Presenter(s):	Alex Oreschak (he/him), Metro Megan Neil, Multnomah County	
	Attachments:	JPACT worksheet Memo Factsheet	
5.3	Better Bus Program (8:55 AM)		COM 22-0583
	Presenter(s):	Matt Bihn (he/him), Metro David Aulwes, TriMet	
	Attachments:	JPACT Worksheet	

6. Updates from JPACT Members (9:20 AM)

7. Adjourn (9:30 AM)

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បើលោកអ្នកត្រូវការអ្នកបកប្រែភាសានៅពេលអង្គប្រជុំសាធារណៈ: សូមទូរស័ព្ទមកលេខ 503-797-1700 (ម៉ោង 8 ព្រឹកដល់ម៉ោង 5 ល្ងាច ថ្ងៃធ្វើការ) ប្រាំពីរថ្ងៃថ្ងៃធ្វើការ មុនថ្ងៃប្រជុំដើម្បីអាចឲ្យគេសម្រួលតាមសំណើរបស់លោកអ្នក ។

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January 2021

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2022 JPACT Work Program

As of 7/11/2022

Items in italics are tentative

July 21, 2022	**August 18, 2022**
• RFFA - Present public comment report, initial draft proposal for funding allocations (Dan Kaempff, Metro; 45 min) • Better Bus Program (Matt Bihn (he/him), Metro; 20 min) • Earthquake Ready Burnside Bridge - Introduction (Alex Oreschak, Metro; Megan Neil, Multnomah County; 20 min) *July 28th- RTP Council/JPACT Workshop 7:30am-9:30am* • Regional Congestion Pricing Policy (Alex Oreschak, Metro) • ODOT Oregon Highway Plan Amendment (ODOT presenters TBD, Garet Prior)	• RFFA - Present refined draft proposal, discussion of coordinating committee priorities (Dan Kaempff, Metro) • 2023 RTP Vision & Goals • Regional Mobility Policy Update – Draft Policy for 2023 RTP (Kim Ellis (she/her), Metro) • Burnside Bridge- Vote (Alex Oreschak, Metro; Megan Neil, Multnomah County) • RTP - High Capacity Transit Strategy Update for 2023 RTP (Ally Holmqvist, Metro; 20 min) *August 25th- RTP Council/JPACT Workshop 7:30am-9:30am* • Safe and Healthy Urban Arterials (John Mermin & Lake McTighe, Metro)
September 15, 2022	**October 20, 2022**
• RFFA - ACTION on TPAC recommended project list (Dan Kaempff, Metro) • *Regional Mobility Policy Update Discussion - Recommended Policy for 2023 RTP (Kim Ellis, Metro and ODOT staff; 30 min)* • Regional Congestion Pricing Policy and ODOT Highway Plan Amendment(Alex Oreschak, Metro, Garet Prior, ODOT; 45 min) • *Transit Oriented Development* • Burnside Bridge- Vote (Alex Oreschak, Metro; Megan Neil, Multnomah County) *September 22nd- RTP Council/JPACT Workshop 7:30am-9:30am*	• Sunrise Community Vision Project – *Tentative (Clackamas County)* • 2023 RTP – Finance Plan & Equitable funding Research (Lake McTighe &Ted Leybold, Metro) • Regional Mobility Policy Update – Recommended Policy for 2023 RTP (Kim Ellis (she/her), Metro) *October 27th- RTP Council/JPACT Workshop 7:30am-9:30am* • Climate Smart Strategy Update (Kim Ellis, Eliot Rose & Thaya Patton, Metro)

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• High Capacity Transit Strategy Update/Future of Transit in the Region (Ally Holmqvist, Metro)	
November 17, 2022 • RTP - Call for Projects for 2023 RTP (Kim Ellis, Metro) • RTP Financial Plan: Revenue Forecast (Ted Leybold (he/him), Metro; 45 min) • Freight Commodity Study (Tim Collins, Metro)	**December 15, 2022**

Parking Lot:

- *Hwy 26/Westside Transportation Study – briefing (20 min, Matt Bihn & ODOT)*
- *Regional Emergency Transportation Routes Update Phase 2 (John Mermin, Metro and Laura Hanson, RDPO)*
- 82nd Avenue – Elizabeth Mros-O'Hare, Metro and City of Portland
- RTP - High Capacity Transit Strategy Update for 2023 RTP (Ally Holmqvist, Metro) (January 2023)
- 82nd Avenue Project Update – Elizabeth Mros Ohare - City of Portland (Fall 2022)

4.1 Consideration of the June 16, 2022 JPACT Minutes

Consent Agenda

Joint Policy Advisory Committee on Transportation
Thursday, July 21, 2022

600 NE Grand Ave.
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JOINT POLICY ADVISORY COMMITTEE ON TRANSPORTATION (JPACT)

Meeting Minutes
June 16, 2022
Metro Regional Center, Council Chamber

MEMBERS PRESENT	AFFILIATION
Shirley Craddick (Chair)	Metro Council
Juan Carlos González	Metro Council
Christine Lewis	Metro Council
Temple Lentz	Clark County
Carley Francis	Washington State Department of Transportation
Travis Stovall	Cities of Multnomah County
Anne McEnerny-Ogle	City of Vancouver
Rian Windsheimer	Oregon Department of Transportation
Steve Callaway	Cities of Washington County
Nina DeConcini	Oregon Department of Environmental Quality
Paul Savas	Clackamas County
Jo Ann Hardesty	City of Portland
Kathy Hyzy	Cities of Clackamas County
Curtis Robinhold	Port of Portland
Nafisa Fai	Washington County
Jessica Vega Pederson	Multnomah County

MEMBERS EXCUSED	AFFILIATION
Sam Desue	TriMet

ALTERNATES PRESENT	AFFILIATION
Duncan Hwang	Metro
JC Vannatta	TriMet
Chris Ford	Oregon Department of Transportation
Chris Warner	City of Portland

OTHERS PRESENT: Isabella Garcia, André Lightsey-Walker, Dave Roth, Laurie Lebowsky, Katy McDowell, Mary Baumgardner, Kristine Evertz, Gerik Kransky, Inessa Vitko, Nick Fortey, Mark Ottenad, Chris Smith, Chris Deffebach, Eric Hesse, Tom Markgraf, Mike Bezner, Joseph Cortright, Patrick Brennan, Steven Siegel, Matthew Gremm, Brenda Bartlett, Monica Tellez-Fowler, Cody Field, Jamie Snook, Casey Trummer, Ivo Trummer, Jamie Stasny, Tim Collins, Jack Burkman, Don Odermott, Shilpa Mallem, Mark Dorn, Noel Mickelberry, John Charles, Jennifer John, Briana Calhoun, Will Farley, Derek Bradley, Dwight Brashear, Aaron Deas, Monica Tellez-Fowler, Tara O'Brien, Greg Johnson, John Willis, Allison Boyd, Jean Senechal Biggs, Stephen

Roberts, Katherine Kelly, Mara Krinke, Ryan LeProwse, Jonathan Maus, Glen Bolen, Jaimie Lorenzini, Zach Lindahl.

STAFF: Ramona Perrault, Lisa Hunrichs, Michelle Bellia, Matt Bihn, Roger Alfred, Victor Sin, Ted Leybold, Eliot Rose, Craig Beebe Andy Shaw, Carrie MacLaren, John Mermin Grace Cho, Summer Blackhorse, Jenna Jones, Kim Ellis, Caleb Winter, Jaye Cromwell, Anneliese Koehler, Ken Lobeck, Margi Bradway, Chris Johnson, Connor Ayers.

1. CALL TO ORDER AND DECLARATION OF A QUORUM

JPACT Chair Shirley Craddick (she/her) called the virtual Zoom meeting to order at 7:30 am.

Chair Craddick called the role and declared a quorum.

2. PUBLIC COMMUNICATION ON AGENDA ITEMS

Chris Smith (he/him) with the Just Crossing Alliance gave testimony. Chris expressed concern with the Locally Preferred Alternative for the Interstate Bridge Replacement Project (IBR) that JPACT will be looking at today. He expressed concern with the tall bridge approach that is being looked at because of the grades that will be created as well as the financial burdens that this bridge could create as the monolithic approach to building this bridge makes it very difficult to phase. Chris urged JPACT to pause the IBR process until the following is provided: a new bottom up cost estimate, a credible finance plan, and a phaseable alternative through the National Environmental Policy Act (NEPA) process is included alongside the high bridge.

Joseph Cortright with the Just Crossing Alliance gave testimony on the costs and financial risks of the IBR. Joseph stated that every major ODOT highway project built in the last 20 years has experienced cost overruns on the order of 100%.

3. UPDATES FROM THE CHAIR

Chair Craddick thanked those who attended the JPACT trip and all staff that made the trip possible. She also reminded JPACT members about the joint Metro Council and JPACT workshop that is being held on June 30th.

Metro Staff Margi Bradway (she/her), shared the names and ages of traffic victims during the month of May:

Bianca Ceperich, 16, Gwendolyn E. Brake, 83, Shane Johnson, 43, Tufa Shuka, 41, David Carl Paulsen, 36 and four unidentified persons.

4. CONSENT AGENDA

MOTION: Mayor Anne McEnerny-Ogle (she/her) moved to approve the consent agenda seconded by Commissioner Jo Ann Hardesty (she/her).

ACTION: With all in favor, consent agenda passed.

5. ACTION ITEMS

5.1 Resolution 22-5273, For the Purpose of Endorsing the Modified Locally Preferred Alternative for the Interstate Bridge Replacement Program.

Chair Craddick introduced Metro staff Matt Bihn (he/him), Greg Johnson, IBR, and John Willis, IBR, to present to JPACT.

Key elements of the presentation included:

Greg highlighted that we are at a critical stage of the IBR and they are seeking alignment on what will be carried forward.

Matt summarized the agenda for today's discussion, highlighted the program timeline, the IBR modified locally preferred alternative (LPA) process, the Metro Council modified LPA resolutions sequence, the partner endorsement schedule, and briefly summarized the IBR modified LPA.

Matt paused for questions, seeing none, he summarized Resolution No. 22-5273 and read through Exhibit A to the resolution.

Member discussion included:

Commissioner Paul Savas (he/him) asked if the bridge can be easily widened in order to add capacity as needed in the future.

Greg Johnson responded by explaining that modeling takes them to 2045 and highlighted that regions cannot build themselves out of congestion, rather, smart, adaptable infrastructure must be built.

Commissioner Savas asked what accommodation in design is there for future needs.

Greg explained that auxiliary lanes are key for making lanes more efficient, which frees up capacity as this region grows. He added that safety shoulders is another element that will make the stretch of road more efficient and effective.

Councilor Kathy Hyzy (she/her) asked for more detail on the community benefits agreement and what happens if climate or equity goals are missed.

Greg responded by explaining that community benefits agreements are relatively new for Department of Transportation (DOT) projects and described that these are agreements that can be put in NEPA documents which makes them a standard and enforceable part of what the DOTs are responsible for. Greg described that they are looking to begin the conversation on community benefits and have reached out to local elected officials to have them help lead a community benefits discussion. Greg responded to Councilor Hyzy's second question by explaining that the IBR team has a principle equity officer and a principle climate officer that will maintain key positions throughout the process.

Councilor Hyzy followed up by asking about responsibility for climate and equity goals after the bridge has been built.

Greg responded to Councilor Hyzy's follow-up question by stressing the importance of flexibility and communication for making adjustments as the project moves forward.

Mayor Steve Callaway (he/him), asked if testing is being done to check on the climate impacts of both two and one auxiliary lanes in each direction.

Greg explained that their commitment is to vigorously look at one auxiliary lane in each direction but they recognize that there is a large contingency pushing for additional auxiliary lanes. Greg explained that if a system cannot be designed with one auxiliary lane that meets the goals of the partners then they will look at other options, which may include additional auxiliary lanes.

John Willis explained that the project is being designed so it can accommodate 2045 volumes. He explained that models show that going from zero auxiliary lanes to one shows dramatic improvement in traffic flow, but going from one auxiliary lane to two shows a less dramatic improvement.

Greg highlighted that as the bridge is built wider there are greater impacts to local communities.

Mayor Callaway questioned if the 2045 forecast should be extended as the bridge's construction will be completed inside the 20 year forecast window.

Councilor Juan Carlos Gonzalez asked about the aesthetics of the bridge and what the bridge design might look like.

Greg explained that they are working with two firms that are looking at urban design and aesthetics of the bridge. He explained that in the next phase more design details and bridge

types will be investigated.

John highlighted constraints both above and below the bridge that will prevent certain designs and that aesthetically pleasing designs do not have to be more expensive.

Nina DeConcini reminded members that the Oregon Department of Environmental Quality has significant air and water quality intersects for the BRP and offered herself as a resource if members have any questions about this.

Commissioner Savas expressed appreciation for all the work that has gone into this project but highlighted that his capacity question has not been adequately addressed. Commissioner Savas stressed the importance of meeting market demands through infrastructure.

MOTION: Commissioner Hardesty moved to approve Resolution No. 22-5273. Seconded by Mayor McEnerny-Ogle.

ACTION: Commissioner Savas opposed, with all else in favor the motion to approve Resolution No. 22-5273 passed.

6. INFORMATION/DISCUSSION ITEMS

6.1 Emerging Transportation Trends: Draft results and recommendations

Chair Craddick introduced Eliot Rose (he/him), Metro to present to JPACT.

Key elements of the presentation included:

Eliot discussed the study's purpose, timeline and focus and discussed the final draft work products. Eliot provided an overview on scenario analysis, presented assumptions about current and future teleworking rates, transit service, vehicle miles traveled per capita and change in transit ridership then discussed findings from the scenario analysis. Eliot then provided an overview on their corridor analysis, described the data and presented the findings of the corridor analysis. Eliot concluded by summarizing draft recommendations.

Member discussion included:

Commissioner Savas asked how the trends would be effected if all employment vacancies were filled.

Eliot responded by explaining that this was not explored in this study.

JC Vannatta expressed concern for the bleak picture that this study paints for transit ridership but noted that ridership has been growing since early February. JC also explained that the

Forward Together analysis is coming out soon.

Mayor Travis Stovall expressed support for transit and highlighted the importance of increasing the transit modal share to the region meeting its transportation goals.

Commissioner Hardesty asked how the study will influence the availability of workers and where workers are coming from. She stressed the interconnection of transit and affordable housing.

In the chat, Commissioner Savas asked if there is an analysis on the geographic growth of the commute shed.

Margi responded by explaining that the emerging trends study will be a piece of information that will inform goals and outcomes for the RTP.

Connor Ayres (he/him), Metro Staff, put the following link in the chat:
https://trimet.org/forward/

Mayor Callaway highlighted that arterials are a diversion for when highways are congested and stressed the importance of trying to keep people on highways and freeways instead of commuting on arterials. He asked if getting people on e-bikes gets people off transit or if e-bike and transit ridership increase and decrease together.

Eliot responded by explaining that people need a complete package of options to provide what a car provides so e-bikes and transit complement each other.

Commissioner Fai (she/her) asked TriMet staff if they will be coming to JPACT to do a presentation on the Forward Together project and asked if a “free ride zone” is being looked into to re-encourage people to using transit.

JC Vannatta explained that TriMet can come to JPACT to present on Forward Together findings and explained that TriMet would need to find a revenue source to offset any free-ride program.

6.2 Freight Commodity Study

Chair Craddick introduced Tim Collins (he/him), Metro, to present to JPACT.

Key elements of the presentation included:

Tim explained the reason for this study, the study’s purpose, the early tasks in the scope of the work, summarized the stakeholder advisory committee members, and freight policy framework and questions. Tim moved on to discuss the main tasks in the scope of the work, major milestones for the commodities movement study, and next steps.

Member discussion included:

Councilor Hyzy asked if vehicle miles traveled and mode shift is ever looked at in how freight is transported.

Tim responded by explaining that about 75% of the freight being moved in the region is by truck, so they look at truck vehicle miles travelled.

Commissioner Savas explained that there is a disconnect between businesses and elected officials as elected officials sometimes struggle to hear directly from businesses. Commissioner Savas stressed the importance of hearing from them directly.

Councilor Gonzalez asked how the port project in Coos Bay might interact with freight movement in the Metro area.

Tim explained that a majority of the port activity in the state comes from the Port of Portland and stressed that if freight problems aren't solved here it will have statewide impacts.

Curtis Robinhold responded to Councilor Gonzalez's question by explaining that the idea with the Coos Bay port is to take cargo inland, essentially avoiding road traffic.

In the chat, Rian Windsheimer wondered if the Coos Bay project is taking some of the rail traffic, meaning that more truck traffic will need to travel to and through the region.

Commissioner Hardesty expressed concern over the lack of diversity of opinions among advisory committee members and asked how other voices can get involved.

Tim responded by explaining that they did not get the responses they were looking for from some of the organizations Commissioner Hardesty mentioned.

7. UPDATES FROM JPACT MEMBERS

There was none.

8. ADJORN

Chair Craddick adjourned the meeting at 9:30 am.

Respectfully Submitted,

Stellan Roberts

Stellan Roberts
Recording Secretary

ATTACHMENTS TO THE PUBLIC RECORD FOR THE MEETING OF JUNE 16, 2022

ITEM	DOCUMENT TYPE	DATE	DOCUMENT DESCRIPTION	DOCUMENT NO.
2.0	Written Testimony	6/16/2022	Chris Smith Written Testimony	06162022-01
2.0	Written Testimony	6/16/2022	Joe Cortright Written Testimony	06162022-02
3.0	Presentation	6/16/2022	Fatal Crash Slide	06162022-04
5.1	Presentation	6/16/2022	Interstate Bridge Replacement Program Slides	06162022-05
6.1	Presentation	6/16/2022	Emerging Trends Slides	06162022-07
6.2	Presentation	6/16/2022	Freight Commodity Study Slides	06162022-08

5.1 Regional Flexible Funds Allocation (RFFA) - Present public comment report and initial draft funding examples

Information/Discussion Items

Joint Policy Advisory Committee on Transportation
Thursday, July 21, 2022

JPACT Worksheet

Agenda Item Title: Development of 2025-2027 Regional Flexible Funds/Trails Bond Funding Options

Presenters: Dan Kaempff

Contact for this worksheet/presentation: Dan Kaempff daniel.kaempff@oregonmetro.gov

Purpose/Objective
Review options, gather JPACT input for developing regional funding project lists

Outcome
JPACT will provide input to staff and TPAC to be used in developing draft recommendations of projects to be funded through the Regional Flexible Funds Allocation and the Parks and Nature bond funding dedicated to trails projects.

What has changed since JPACT last considered this issue/item?
Staff previously briefed JPACT on this item in May 2022. In that meeting, the project Outcomes Evaluation was presented and the timeline and process for selecting projects was discussed. Since that meeting, the project Risk Assessment and Public Comment reports have been completed. Staff have prepared several different examples of approaches to develop project funding lists. Each example uses the Outcomes Evaluation in a different manner to achieve different policy outcomes. Staff is seeking input from JPACT on what outcomes they want to see reflected through a draft funding recommendation for discussion and action in their August and September meetings.

What packet material do you plan to include?
Staff memo, Funding package examples, slide deck

Memo

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

Date: July 18, 2022

To: JPACT and interested parties

From: Dan Kaempff, Principal Transportation Planner

Subject: UPDATED – Development of Regional Flexible Funds/Trails Bond Funding Options

Introduction

Over the next three months, JPACT will have several discussions to develop an approved list of projects to be funded through the 2025-2027 Regional Flexible Funds Allocation (RFFA). In addition, JPACT will be asked to provide input to a staff-developed list of trails projects to be funded through the 2019 Metro Parks and Nature bond measure.

In your July 21 meeting, staff will present the various sources of information available to inform these decisions and seek JPACT input to be used by TPAC in developing their recommendations.

(NOTE: due to the dates for submission of materials for the JPACT packet, this memo is written prior to TPAC meetings on July 8 and 14. Additional information and input from those meetings will be presented at the July 21 JPACT meeting. A brief recap of the TPAC workshop outcomes is on page 7 of this staff report.)

Updates to Outcomes Evaluation report

Since the initial draft Outcomes Evaluation report was released in May, a number of projects have had adjustments to their requested funding amounts. Most are increases to better reflect inflationary factors and project delivery costs resulting from further budget analysis as part of the project Risk Assessment work. The funding request for the Sandy Boulevard project has been reduced to an estimated $6,500,000 for only the segment between 201st Ave. eastward to Quail Hollow Mobile Park. These new funding requests are reflected in the updated Outcomes Evaluation report and the project funding examples worksheets included with your materials.

Several applicants have provided additional project information to help better understand project details and other aspects not fully brought out in the Outcomes Evaluation. This information has been added to the relevant projects in the updated Outcomes Evaluation report.

There was an error in calculating the technical ratings for the Fanno Creek Trail project. This has been corrected with upwards adjustments to the project's Equity, Safety and Overall ratings. All accompanying materials have also been updated to reflect the corrected ratings.

Funding package examples

Included in your meeting materials are several staff-developed examples of potential funding packages. These examples are not staff recommendations; they are intended to help TPAC and JPACT understand and consider different approaches for how the Outcomes Evaluation project ratings could be used in developing a package of RFFA and Trails Bond projects.

The Outcomes Evaluation ratings are one of several sources of input used in this process. The final packages of funded projects should be developed in a manner that uses and reflects all source of input. Other sources of input and considerations include:

- Project Risk Assessment report
- Public Comment report
- Coordinating Committee prioritization
- Previously awarded RFFA funding for project development or other project segments
- Other additional information provided by applicant
- Allocation objectives for the RFFA process[1]
- Balancing to available funding

The OE report provides a comparison of each project's relative ability to advance regional priorities. It should be used in conjunction with all other sources of information identified above to ensure there is a full consideration of the features, benefits and needs addressed by each of these projects as TPAC develops their recommendation to JPACT for the RFFA funds and provides input to staff for the Trails Bond funding decision.

All the proposed projects have been previously identified for funding through inclusion on either the RTP project list or the Regional Trails System Map. As such, the region has acknowledged that they are necessary to build out the envisioned systems that fulfill our goals and objectives.

How to use these examples

There are seven tabs in the Excel workbook included with your materials, comprising a baseline listing of projects and six examples of different ways the Outcomes could be used to develop funding packages.

In each of the six examples, projects are shown in three groups. Projects shaded in green and above the dashed line illustrate which ones would be fully funded by using that specific example and are referred to as the "100 percent" list. The dashed line represents the point at which there is not sufficient funding available to fully fund the next rated project on the list.

Projects falling just beyond the 100 percent cut line are shaded in orange are included in the "150 percent" list to illustrate the next group of projects that would be considered for funding through that example if additional funds were available. Projects shaded in gray are those that are beyond the 150 percent.

For each example, a sub-regional distribution of the 100 percent list is included. This illustrates how many projects and the corresponding dollar amounts would be funded in each of the four parts of the region through that example.

<u>It is important to emphasize that the inclusion of a project in any of these groups (100 percent, 150 percent, beyond 150 percent) does in no way indicate whether it will actually be included in a staff recommendation brought to JPACT for discussion in August. These are examples of different ways the Outcomes Evaluation ratings can be used and are intended to help inform JPACT's discussion.</u>

The following are brief descriptions of each example:

> **Baseline** – This is not a funding package example. It is provided for illustrative purposes to show the projects along with the various sources of information that will be available to aid

[1] Adopted by Metro Council Res. 21-5194 – 2025-2027 RFFA Program Direction

decision-making. Projects are organized by the requested funding source and listed in alphabetical order by project name.

1. **Overall** – This example illustrates the package of projects created by sorting the projects by their Overall outcomes ratings. It does not move any of the "Either" projects into one funding source, but shows them in each project group for comparison purposes.

2. **Overall, with projects moved** – This example is similar to the previous one, but it moves the following projects into the funding sources as shown below.

Placed in RFFA	Placed in Trails Bond
N Portland Greenway (Columbia Blvd to Cathedral Park)	Marine Drive Trail
Council Creek Trail	
Tigard – Lake Oswego Trail	

   Moving the three projects to the RFFA list – for this example as well as the following three – was done based on factors specific to these projects which lends them to be better suited to that funding source. This version is done for illustrative purposes only and should not be considered as a final decision at this stage of the discussion.

3. **Construction emphasis** – This example focuses on completing projects. It first funds projects requesting funding up to and including the construction phase, then funds lower cost project development funding requests up to the existing funding amount.

4. **Project development emphasis** – This example focuses on ensuring there is a pipeline of sufficiently planned and developed projects in order to prepare for upcoming funding opportunities. It funds projects in a manner similar to the Construction emphasis example but prioritizes projects seeking planning or project development funding.

5. **Specific outcomes emphasis –** This example illustrates how the outcomes ratings in specific criteria areas can be used to develop project packages. The example shown uses the combined averages of the Equity and Safety outcomes.

6. **Other considerations –** This is not a funding package example. It illustrates how additional project information will be illustrated and used in conjunction with the Outcomes ratings to compare overall project benefits.

Information used in developing funding recommendations

The selection of projects for both the Regional Flexible Funds and the Trails Bond funding sources should take multiple sources of project information as well as regional policy direction into consideration. The Outcomes Evaluation ratings provide a key source of information and form a starting point for further development of these project lists, but they should be used in conjunction with additional information in shaping recommendations that best align with regional policy objectives.

Risk assessment – Following practice established for the 2022-2024 RFFA, Metro is working with Kittelson and Associates to conduct a risk assessment of the project proposals. This evaluation measures the thoroughness of projects' scoping, timeline and

budget, and identifies any associated risks to the project being completed as indicated in the proposal. The risk assessment is intended to help ensure that the regional funding awarded to a project can be obligated and proceed as described in the applications. The initial risk assessment findings have been shared with applicants. They have been provided the opportunity to amend their proposal and funding amount requested following the initial risk assessment report to address any findings. The final risk assessment report will be available and presented at the July 14 TPAC workshop and included in a supplemental mailing for this meeting.

Public comment – A 30-day public comment period concluded on June 21. This provided the opportunity for members of the public, community organizations and local jurisdictions to provide insights and information beyond that included in the project application materials and to demonstrate support for specific projects. Metro received over 1,550 responses via a multi-lingual online survey tool, with more responses coming in via letter or email. The draft public comment report will be available for the July 14 TPAC workshop and included in a supplemental mailing for this meeting. Subsequent meeting materials will include information to illustrate the relative response rate for each of the projects.

Coordinating committee prioritization – Gathering input from local jurisdictions via their county coordinating committees is the final source of information used in helping shape the funding decision. Coordinating committees may indicate which of the projects submitted from their represented jurisdictions are their priorities to be considered for funding. The deadline for coordinating committees to submit communication to Metro on their priorities is July 22.

Previous RFFA funding award – Many of the project proposals in the 2025-2027 allocation cycle are continuations of previously RFFA funded project development phases or are other segments of a trail or street that were previously constructed using RFFA dollars. This is indicated in each of the funding examples.

Other considerations – To fully understand the breadth of each project's attributes that may not be illustrated through the Outcomes Evaluation, each applicant has been given the opportunity to provide additional information for inclusion in the Outcomes Evaluation report. The report included with the materials for this meeting has been updated with additional information supplied by applicants who chose to provide it.

Staff have compiled the applicant-submitted two-page project summaries into a single document, available at oregonmetro.gov/rffa. These summaries provide location maps, design details and other helpful information.

RFFA objectives – Included in the 2025-2027 RFFA Program Direction are ten objectives that define how the RFFA process should be conducted and what outcomes should be achieved through the overall allocation process.

1. Select projects from throughout the region; however, consistent with federal rules, there is no sub-allocation formula or commitment to a particular distribution of funds to any sub-area of the region.
2. Honor previous funding commitments made by JPACT and the Metro Council.
3. Address air quality requirements by ensuring State Implementation Plan for air quality requirements are met and that an adequate pool of CMAQ-eligible projects is available for funding.

4. Achieve multiple transportation policy objectives.
5. Allow use of funding for project development and local match of large-scale projects (greater than $10 million) that compete well in addressing policy objectives when there is a strong potential to leverage other sources of discretionary funding.
6. Encourage the application of projects that efficiently and cost-effectively make use of federal funds.
7. Recognize the difference in transportation infrastructure investment needs relative to an areas stage of development (developed, developing, undeveloped) consistent with RTP Table 2.2.
8. Identify project delivery performance issues that may impact ability to complete a project on time and on budget.
9. Ensure agencies have qualifications for leading federal aid transportation projects.
10. Identify opportunities for leveraging, coordinating, and collaboration.

The JPACT-approved project list should be consistent with all the RFFA objectives. Two of these objectives in particular influence how a final selection of projects is determined. One objective (#1.) directs that projects should be selected for funding from throughout the region without a predetermined suballocation or formula. Another objective (#7.) is to recognize the importance of investing in projects at various stages of planning, development and construction.

Balancing to available funding – Regardless of which project rating and ranking methodology is used to determine the order in which projects are to be funded, there will likely be a point where the remaining unallocated funds are insufficient to fund the next project down the list. In instances where the difference between remaining funds and the next project's funding request is small, it may be possible to make adjustments to cover the gap. In instances where the next project's funding request is significant, JPACT may choose to skip over a project in favor of funding one or more lower cost projects further down the list in order to fully allocate the entire available funding amount.

JPACT's role in project selection

Due to the different origins of these two funding sources and Metro bylaws governing the process for how they are to be allocated, JPACT's role varies for each source.

For the federal Regional Flexible Funds, JPACT's role is defined through the MPO bylaws. The decision for awarding these funds rests jointly with JPACT and Metro Council. TPAC develops a funding recommendation for JPACT's consideration. JPACT in turn, takes action on an approved project list based on TPAC's recommendations. Metro Council then either takes action to adopt the JPACT-approved list or sends it back to JPACT for revisions to reflect Council's intended outcomes.

As the Bond funds for trails projects were raised via a voter approved ballot measure referred by Metro Council, they are the sole decision making body for these funds. Metro Parks and Nature staff will develop a funding recommendation to be presented to Council for their action. Recognizing the value of TPAC's and JPACT's input, staff will use it along with additional inputs specific to this funding source when developing their recommendation.

Next steps in developing funding recommendations

This presentation is intended to introduce various ways to develop funding packages and to ensure that JPACT is familiar with the available sources of information to help with that process. TPAC's July 8 and July 14 discussions are intended to provide input to Metro staff as they prepare a staff recommendation for your discussion and consideration. Staff will provide additional information from those TPAC meetings to help inform JPACT's July and August's discussions in preparation for taking action on a recommended funding list in September.

Metro Council is scheduled to take action on the Bond-funded projects in September and the RFFA-funded projects in October. Table 1 below indicates the full process and schedule.

Table 1
RFFA Step 2 and Bond project selection schedule

July	8 – TPAC 14 – TPAC workshop 21 – JPACT	Present final risk assessment report, public comment report, discuss initial draft staff proposals Coordinating committees identify priority projects (due July 22)	
August	5 – TPAC 18 – JPACT	**RFFA** Refined draft staff recommendation, w/CCC priorities. Draft Council legislation	**Bond** Metro staff finalize funding proposal, incorporating input from JPACT. Metro COO recommends Bond Trails Grant project list to Council
September	2 – TPAC **ACTION** 15 – JPACT **ACTION** TBD – Council **ACTION** (on Bond-funded projects)	Recommendation to JPACT Approved project list to Council	Council approves and adopts Bond Trails Grants project list
October	13 – Council **ACTION** (on RFFA-funded projects)	Final adoption of 25-27 RFFA funding allocations	

UPDATE from July 14 TPAC workshop

TPAC met in a special workshop on July 14 to discuss the funding package examples provided in your meeting materials, and to provide additional input to staff for developing draft funding recommendations.

In that discussion, TPAC indicated that they wished to further discuss draft recommendations based on examples 2 (the Outcomes evaluation ratings) and 5 (emphasis on the Safety and Equity outcomes) and provided additional input to help further refine those examples with the use of the additional information such as sub-regional coordinating committee priorities and public comments.

Staff will prepare updated examples based on input received from TPAC and JPACT, as well as coordinating committee priorities for discussion in meetings in August and September.

Questions for JPACT discussion

- Are these descriptions of the information sources and process of developing a recommendation clear or raise any concerns?
- Do these materials reflect the input you've provided to date?
- What input do you have on outcomes you wish to see reflected in a final funding decision?
- What input do you wish to share with TPAC as they develop their recommendations?

Baseline

Legend: BEST | BETTER | GOOD

Project	Applicant	Fund Source	Phase	Requested amount	Funded amount	Equity	Safety	Climate	Con. Rel.	Trails	Overall	Risk Rating	Previous RFFA?	Public Comment	CCC Priority	Additional Information	Subregion
Trails Bond projects																	
Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000		44%	71%	33%	N/A	71%	55%						
Clackamas River Trail	Happy Valley	Bond	Const	$ 666,175		33%	42%	11%	N/A	29%	29%						
Cornfoot Rd	PBOT	Either	Const	$ 5,225,500		56%	46%	44%	N/A	59%	51%						
Council Ck Trail	Washington Co	Either	Const	$ 5,511,000		67%	92%	67%	N/A	82%	77%						
Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000		56%	63%	33%	N/A	53%	51%						
Gresh-Fairview Trail	Gresham	Bond	Const	$ 4,167,723		67%	79%	56%	N/A	65%	67%						
Marine Dr Trail	PPR	Either	Const	$ 2,261,645		56%	71%	56%	N/A	59%	60%						
NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,647,950		78%	83%	44%	N/A	71%	69%						
NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 3,483,699		56%	58%	44%	N/A	56%	54%						
Sandy River Greenway	Troutdale	Bond	Const	$ 1,945,800		22%	67%	44%	N/A	47%	45%						
Scott Creek Trail	Happy Valley	Bond	Plan/PD	$ 89,562		78%	79%	44%	N/A	47%	62%						
Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000		67%	71%	56%	N/A	82%	69%						
Trolley Trail	NCPRD	Bond	Const	$ 651,750		67%	71%	56%	N/A	88%	70%						
Westside Trail Bridge	THPRD	Bond	Plan/PD	$ 1,907,500		89%	71%	33%	N/A	76%	67%						
Westside Trail: Seg 1	King City	Bond	Plan/PD	$ 210,000		44%	50%	22%	N/A	56%	43%						
				100% Total	**$ -**												
				150% Total	**$ -**												
				Available	**$ 20,000,000**												
				Difference	**$ 20,000,000**												

Sub-regional distribution (100%)		
Clack	**$ -**	**0**
Mult	**$ -**	**0**
Portland	**$ -**	**0**
Wash	**$ -**	**0**
Total	**$ -**	**0**

This is a baseline example of all the data to be used in creating a funding recommendation. More information will be filled in column M-Q as it becomes available. Column R is filled in to calculate the subregional distribution of funds. Projects are sorted alphabetically by project name.

RFFA projects																	
148th Ave	PBOT	RFFA	Const	$ 7,100,335		89%	63%	67%	54%	N/A	68%						
162nd Ave	Gresham	RFFA	Const	$ 7,316,080		100%	83%	67%	79%	N/A	82%						
57th Ave-Cully Blvd	PBOT	RFFA	Const	$ 7,643,201		67%	63%	67%	71%	N/A	67%						
7th Ave	PBOT	RFFA	Const	$ 10,692,227		56%	71%	67%	79%	N/A	68%						
Allen Blvd	Beaverton	RFFA	Plan/PD	$ 723,670		67%	50%	67%	79%	N/A	66%						
Beaverton Creek Trail	THPRD	RFFA	Const	*$ 1,774,575*		78%	71%	56%	79%	N/A	71%						
Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000		44%	71%	33%	67%	N/A	54%						
Cornfoot Rd	PBOT	Either	Const	$ 6,698,345		56%	46%	44%	83%	N/A	57%						
Council Ck Trail	Washington Co	Either	Const	$ 5,511,000		67%	92%	67%	79%	N/A	76%						
Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000		56%	63%	33%	54%	N/A	51%						
Fanno Ck Trail	Tigard	RFFA	Plan/PD	$ 1,606,705		89%	58%	56%	54%	N/A	64%						
I-205 MUP	Clackamas Co	RFFA	Plan/PD	$ 1,094,858		78%	71%	56%	71%	N/A	69%						
Lakeview Blvd	Lake Oswego	RFFA	Plan/PD	$ 450,036		67%	13%	56%	13%	N/A	37%						
Marine Dr Trail	PPR	Either	Const	$ 2,899,104		56%	71%	56%	79%	N/A	65%						
MLK Blvd	PBOT	RFFA	Const	$ 5,532,955		78%	63%	78%	88%	N/A	76%						
NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,745,541		78%	83%	44%	79%	N/A	71%						
NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 4,465,605		56%	58%	44%	54%	N/A	53%						
Sandy Blvd	Multnomah Co	RFFA	Const	$ 6,500,000		44%	63%	67%	79%	N/A	63%						
Taylors Fy Rd	PBOT	RFFA	Const	$ 10,124,236		56%	58%	56%	67%	N/A	59%						
Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000		67%	71%	56%	79%	N/A	68%						
Troutdale Rd	Multnomah Co	RFFA	Plan/PD	$ 1,720,000		56%	58%	44%	50%	N/A	52%						
Willamette Falls Dr	West Linn	RFFA	Const	$ 3,497,580		33%	63%	56%	54%	N/A	51%						
				100% Total	**$ -**												
				150% Total	**$ -**												
				Available	**$ 47,300,000**												
				Difference	**$ 47,300,000**												

Sub-regional distribution (100%)		
Clack	**$ -**	**0**
Mult	**$ -**	**0**
Portland	**$ -**	**0**
Wash	**$ -**	**0**
Total	**$ -**	**0**

Example 1. Overall

Legend: BEST | BETTER | GOOD

	Project	Applicant	Fund Source	Phase	Requested amount	Funded amount	Equity	Safety	Climate	Con. Rel.	Trails	Overall	Risk Rating	Previous RFFA?	Public Comment	CCC Priority	Additional Information	Subregion
	Trails Bond projects																	
100%	Council Ck Trail	Washington Co	Either	Const	$ 5,511,000	$ 2,550,000	67%	92%	67%	N/A	82%	**77%**		Y				Wash
100%	Trolley Trail	NCPRD	Bond	Const	$ 651,750	$ 651,750	67%	71%	56%	N/A	88%	**70%**		Y				Clack
100%	NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,647,950	$ 2,647,950	78%	83%	44%	N/A	71%	**69%**		Y				Port
100%	Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000	$ 245,000	67%	71%	56%	N/A	82%	**69%**						Wash
100%	Westside Trail Bridge	THPRD	Bond	Plan/PD	$ 1,907,500	$ 1,907,500	89%	71%	33%	N/A	76%	**67%**						Wash
100%	Gresh-Fairview Trail	Gresham	Bond	Const	$ 4,232,979	$ 4,232,979	67%	79%	56%	N/A	65%	**67%**						Mult
100%	Scott Creek Trail	Happy Valley	Bond	Plan/PD	$ 89,562	$ 89,562	78%	79%	44%	N/A	47%	**62%**						Clack
100%	Marine Dr Trail	PPR	Either	Const	$ 2,261,645	$ 2,261,645	56%	71%	56%	N/A	59%	**60%**		Y				Port
100%	Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000	$ 4,500,000	44%	71%	33%	N/A	71%	**55%**						Wash
150%	NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 3,483,699		56%	58%	44%	N/A	56%	**54%**						
150%	Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000		56%	63%	33%	N/A	53%	**51%**						
150%	Sandy River Greenway	Troutdale	Bond	Const	$ 1,945,800		22%	67%	44%	N/A	47%	**45%**						
150%	Westside Trail: Seg 1	King City	Bond	Plan/PD	$ 210,000		44%	50%	22%	N/A	56%	**43%**		Y				
150%	Clackamas River Trail	Happy Valley	Bond	Const	$ 666,175		33%	42%	11%	N/A	29%	**29%**						
	Cornfoot Rd	PBOT	Either	Const	$ 5,225,500		56%	46%	44%	N/A	59%	**51%**						

100% Total $ 19,086,386
Available $ 20,000,000
Difference $ 913,614

Sub-regional distribution (100%)		
Clack	$ 741,312	2
Mult	$ 4,232,979	1
Portland	$ 4,909,595	2
Wash	$ 9,202,500	4
Total	$ 19,086,386	9

	RFFA projects																	
100%	162nd Ave	Gresham	RFFA	Const	$ 7,575,882	$ 7,575,882	100%	83%	67%	79%	N/A	**82%**						Mult
100%	MLK Blvd	PBOT	RFFA	Const	$ 5,532,955	$ 5,532,955	78%	63%	78%	88%	N/A	**76%**		Y				Port
100%	Council Ck Trail	Washington Co	Either	Const	$ 5,511,000	$ 2,961,000	67%	92%	67%	79%	N/A	**76%**		Y				Wash
100%	NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,745,541	$ 2,745,541	78%	83%	44%	79%	N/A	**71%**		Y				Port
100%	Beaverton Creek Trail	THPRD	RFFA	Const	$ 2,055,647	$ 2,055,647	78%	71%	56%	79%	N/A	**71%**		Y				Wash
100%	I-205 MUP	Clackamas Co	RFFA	Plan/PD	$ 1,094,858	$ 1,094,858	78%	71%	56%	71%	N/A	**69%**						Clack
100%	Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000	$ 245,000	67%	71%	56%	79%	N/A	**68%**						Wash
100%	7th Ave	PBOT	RFFA	Const	$ 10,692,227	$ 10,692,227	56%	71%	67%	79%	N/A	**68%**						Port
100%	148th Ave	PBOT	RFFA	Const	$ 7,100,335	$ 7,100,335	89%	63%	67%	54%	N/A	**68%**						Port
150%	57th Ave-Cully Blvd	PBOT	RFFA	Const	$ 7,643,201		67%	63%	67%	71%	N/A	**67%**						
150%	Allen Blvd	Beaverton	RFFA	Plan/PD	$ 723,670		67%	50%	67%	79%	N/A	**66%**						
150%	Marine Dr Trail	PPR	Either	Const	$ 2,899,104		56%	71%	56%	79%	N/A	**65%**						
150%	Fanno Ck Trail	Tigard	RFFA	Plan/PD	$ 1,606,705		89%	58%	56%	54%	N/A	**64%**		Y				
	Sandy Blvd	Multnomah Co	RFFA	Const	$ 6,500,000		44%	63%	67%	79%	N/A	**63%**		Y				
	Taylors Fy Rd	PBOT	RFFA	Const	$ 10,124,236		56%	58%	56%	67%	N/A	**59%**						
	Cornfoot Rd	PBOT	Either	Const	$ 6,698,345		56%	46%	44%	83%	N/A	**57%**						
	Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000		44%	71%	33%	67%	N/A	**54%**						
	NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 4,465,605		56%	58%	44%	54%	N/A	**53%**						
	Troutdale Rd	Multnomah Co	RFFA	Plan/PD	$ 1,720,000		56%	58%	44%	50%	N/A	**52%**						
	Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000		56%	63%	33%	54%	N/A	**51%**						
	Willamette Falls Dr	West Linn	RFFA	Const	$ 3,497,580		33%	63%	56%	54%	N/A	**51%**		Y				
	Lakeview Blvd	Lake Oswego	RFFA	Plan/PD	$ 450,036		67%	13%	56%	13%	N/A	**37%**						

100% Total $ 40,003,445
Available $ 47,300,000
Difference $ 7,296,555

Sub-regional distribution (100%)		
Clack	$ 1,094,858	1
Mult	$ 7,575,882	1
Portland	$ 26,071,058	4
Wash	$ 5,261,647	3
Total	$ 40,003,445	9

Example 2. Overall with projects moved

Legend: BEST | BETTER | GOOD

	Project	Applicant	Fund Source	Phase	Requested amount	Funded amount	Equity	Safety	Climate	Con. Rel.	Trails	Overall	Risk Rating	Previous RFFA?	Public Comment	CCC Priority	Additional Information	Subregion
	Trails Bond projects																	
	Council Ck Trail	Washington Co	Either	Const	$ 5,511,000		67%	92%	67%	N/A	82%	77%		Y				
	Trolley Trail	NCPRD	Bond	Const	$ 651,750	$ 651,750	67%	71%	56%	N/A	88%	70%		Y				Clack
	NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,647,950		78%	83%	44%	N/A	71%	69%		Y				
	Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000		67%	71%	56%	N/A	82%	69%						
100%	Westside Trail Bridge	THPRD	Bond	Plan/PD	$ 1,907,500	$ 1,907,500	89%	71%	33%	N/A	76%	67%						Wash
	Gresh-Fairview Trail	Gresham	Bond	Const	$ 4,232,979	$ 4,232,979	67%	79%	56%	N/A	65%	67%						Mult
	Scott Creek Trail	Happy Valley	Bond	Plan/PD	$ 89,562	$ 89,562	78%	79%	44%	N/A	47%	62%						Clack
	Marine Dr Trail	PPR	Either	Const	$ 2,261,645	$ 2,261,645	56%	71%	56%	N/A	59%	60%		Y				Port
	Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000	$ 4,500,000	44%	71%	33%	N/A	71%	55%						Wash
	NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 3,483,699	$ 3,483,699	56%	58%	44%	N/A	56%	54%						Port
	Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000	$ 200,000	56%	63%	33%	N/A	53%	51%						Wash
	Sandy River Greenway	Troutdale	Bond	Const	$ 1,945,800	$ 1,945,800	22%	67%	44%	N/A	47%	45%						Mult
	Westside Trail: Seg 1	King City	Bond	Plan/PD	$ 210,000	$ 210,000	44%	50%	22%	N/A	56%	43%		Y				Wash
	Clackamas River Trail	Happy Valley	Bond	Const	$ 666,175	$ 666,175	33%	42%	11%	N/A	29%	29%						Clack
	Cornfoot Rd	PBOT	Either	Const	$ 5,225,500		56%	46%	44%	N/A	59%	51%						

100% Total	$ 20,149,110
Available	$ 20,000,000
Difference	$ (149,110)

Sub-regional distribution (100%)		
Clack	$ 741,312	3
Mult	$ 4,232,979	2
Portland	$ 5,745,344	2
Wash	$ 6,407,500	4
Total	$ 17,127,135	11

	Project	Applicant	Fund Source	Phase	Requested amount	Funded amount	Equity	Safety	Climate	Con. Rel.	Trails	Overall	Risk Rating	Previous RFFA?	Public Comment	CCC Priority	Additional Information	Subregion
	RFFA projects																	
	162nd Ave	Gresham	RFFA	Const	$ 7,575,882	$ 7,575,882	100%	83%	67%	79%	N/A	82%						Mult
	MLK Blvd	PBOT	RFFA	Const	$ 5,532,955	$ 5,532,955	78%	63%	78%	88%	N/A	76%		Y				Port
	Council Ck Trail	Washington Co	Either	Const	$ 5,511,000	$ 5,511,000	67%	92%	67%	79%	N/A	76%		Y				Wash
	NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,745,541	$ 2,745,541	78%	83%	44%	79%	N/A	71%						Port
100%	Beaverton Creek Trail	THPRD	RFFA	Const	$ 2,055,647	$ 2,055,647	78%	71%	56%	79%	N/A	71%		Y				Wash
	I-205 MUP	Clackamas Co	RFFA	Plan/PD	$ 1,094,858	$ 1,094,858	78%	71%	56%	71%	N/A	69%						Clack
	Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000	$ 245,000	67%	71%	56%	79%	N/A	68%						Wash
	7th Ave	PBOT	RFFA	Const	$ 10,692,227	$ 10,692,227	56%	71%	67%	79%	N/A	68%						Port
	148th Ave	PBOT	RFFA	Const	$ 7,100,335	$ 7,100,335	89%	63%	67%	54%	N/A	68%						Port
	57th Ave-Cully Blvd	PBOT	RFFA	Const	$ 7,643,201		67%	63%	67%	71%	N/A	67%						
150%	Allen Blvd	Beaverton	RFFA	Plan/PD	$ 723,670		67%	50%	67%	79%	N/A	66%						
	Marine Dr Trail	PPR	Either	Const	$ 2,899,104		56%	71%	56%	79%	N/A	65%						
	Fanno Ck Trail	Tigard	RFFA	Plan/PD	$ 1,606,705		89%	58%	56%	54%	N/A	64%		Y				
	Sandy Blvd	Multnomah Co	RFFA	Const	$ 6,500,000		44%	63%	67%	79%	N/A	63%		Y				
	Taylors Fy Rd	PBOT	RFFA	Const	$ 10,124,236		56%	58%	56%	67%	N/A	59%						
	Cornfoot Rd	PBOT	Either	Const	$ 6,698,345		56%	46%	44%	83%	N/A	57%						
	Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000		44%	71%	33%	67%	N/A	54%						
	NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 4,465,605		56%	58%	44%	54%	N/A	53%						
	Troutdale Rd	Multnomah Co	RFFA	Plan/PD	$ 1,720,000		56%	58%	44%	50%	N/A	52%						
	Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000		56%	63%	33%	54%	N/A	51%						
	Willamette Falls Dr	West Linn	RFFA	Const	$ 3,497,580		33%	63%	56%	54%	N/A	51%		Y				
	Lakeview Blvd	Lake Oswego	RFFA	Plan/PD	$ 450,036		67%	13%	56%	13%	N/A	37%						

100% Total	$ 42,553,445
Available	$ 47,300,000
Difference	$ 4,746,555

Sub-regional distribution (100%)		
Clack	$ 1,094,858	1
Mult	$ 7,575,882	1
Portland	$ 26,071,058	4
Wash	$ 7,811,647	3
Total	$ 42,553,445	9

Example 3. Construction emphasis

Legend: BEST | BETTER | GOOD

	Project	Applicant	Fund Source	Phase	Requested amount	Funded amount	Equity	Safety	Climate	Con. Rel.	Trails	Overall	Risk Rating	Previous RFFA?	Public Comment	CCC Priority	Additional Information	Subregion
	Trails Bond projects																	
100%	Council Ck Trail	Washington Co	Either	Const	$ 5,511,000		67%	92%	67%	N/A	82%	77%		Y				
100%	Trolley Trail	NCPRD	Bond	Const	$ 651,750	$ 651,750	67%	71%	56%	N/A	88%	70%		Y				Clack
100%	NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,647,950		78%	83%	44%	N/A	71%	69%		Y				
100%	Gresh-Fairview Trail	Gresham	Bond	Const	$ 4,232,979	$ 4,232,979	67%	79%	56%	N/A	65%	67%						Mult
100%	Marine Dr Trail	PPR	Either	Const	$ 2,261,645	$ 2,261,645	56%	71%	56%	N/A	59%	60%		Y				Port
100%	NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 3,483,699	$ 3,483,699	56%	58%	44%	N/A	56%	54%						Port
100%	Cornfoot Rd	PBOT	Either	Const	$ 5,225,500	$ 5,225,500	56%	46%	44%	N/A	59%	51%						Port
100%	Sandy River Greenway	Troutdale	Bond	Const	$ 1,945,800	$ 1,945,800	22%	67%	44%	N/A	47%	45%						Mult
100%	Clackamas River Trail	Happy Valley	Bond	Const	$ 666,175	$ 666,175	33%	42%	11%	N/A	29%	29%						Clack
100%	Scott Creek Trail	Happy Valley	Bond	Plan/PD	$ 89,562	$ 89,562	78%	79%	44%	N/A	47%	62%						Clack
100%	Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000	$ 200,000	56%	63%	33%	N/A	53%	51%						Wash
100%	Westside Trail: Seg 1	King City	Bond	Plan/PD	$ 210,000	$ 210,000	44%	58%	22%	N/A	56%	43%		Y				Wash
150%	Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000		67%	71%	56%	N/A	82%	69%						
150%	Westside Trail Bridge	THPRD	Bond	Plan/PD	$ 1,907,500		89%	71%	33%	N/A	76%	67%						
150%	Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000		44%	71%	33%	N/A	71%	55%						

100% Total $ 18,967,110
Available $ 20,000,000
Difference $ 1,032,890

Sub-regional distribution (100%)		
Clack	$ 1,407,487	3
Mult	$ 6,178,779	2
Portland	$ 10,970,844	3
Wash	$ 410,000	2
Total	$ 18,967,110	10

	RFFA projects																	
100%	162nd Ave	Gresham	RFFA	Const	$ 7,575,882	$ 7,575,882	100%	83%	67%	79%	N/A	82%						Mult
100%	MLK Blvd	PBOT	RFFA	Const	$ 5,532,955	$ 5,532,955	78%	63%	78%	88%	N/A	76%		Y				Port
100%	Council Ck Trail	Washington Co	Either	Const	$ 5,511,000	$ 5,511,000	67%	92%	67%	79%	N/A	76%		Y				Wash
100%	NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,745,541	$ 2,745,541	78%	83%	44%	79%	N/A	71%						Port
100%	Beaverton Creek Trail	THPRD	RFFA	Const	$ 2,055,647	$ 2,055,647	78%	71%	56%	79%	N/A	71%		Y				Wash
100%	7th Ave	PBOT	RFFA	Const	$ 10,692,227	$ 10,692,227	56%	71%	67%	79%	N/A	68%						Port
100%	148th Ave	PBOT	RFFA	Const	$ 7,100,335	$ 7,100,335	89%	63%	67%	54%	N/A	68%						Port
100%	NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 4,465,605	$ 4,465,605	56%	58%	44%	54%	N/A	53%						Port
100%	I-205 MUP	Clackamas Co	RFFA	Plan/PD	$ 1,094,858	$ 1,094,858	78%	71%	56%	71%	N/A	69%						Clack
100%	Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000	$ 245,000	67%	71%	56%	79%	N/A	68%						Wash
100%	Allen Blvd	Beaverton	RFFA	Plan/PD	$ 723,670	$ 723,670	67%	50%	67%	79%	N/A	66%						Wash
150%	57th Ave-Cully Blvd	PBOT	RFFA	Const	$ 7,643,201		67%	63%	67%	71%	N/A	67%						
150%	Marine Dr Trail	PPR	Either	Const	$ 2,899,104		56%	71%	56%	79%	N/A	65%						
150%	Sandy Blvd	Multnomah Co	RFFA	Const	$ 6,500,000		44%	63%	67%	79%	N/A	63%		Y				
	Taylors Fy Rd	PBOT	RFFA	Const	$ 10,124,236		56%	58%	56%	67%	N/A	59%						
	Cornfoot Rd	PBOT	Either	Const	$ 6,698,345		56%	46%	44%	83%	N/A	57%						
	Fanno Ck Trail	Tigard	RFFA	Plan/PD	$ 1,606,705		89%	58%	56%	54%	N/A	64%		Y				
	Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000		44%	71%	33%	67%	N/A	54%						
	Troutdale Rd	Multnomah Co	RFFA	Plan/PD	$ 1,720,000		56%	58%	44%	50%	N/A	52%						
	Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000		56%	63%	33%	54%	N/A	51%						
	Willamette Falls Dr	West Linn	RFFA	Const	$ 3,497,580		33%	63%	56%	54%	N/A	51%		Y				
	Lakeview Blvd	Lake Oswego	RFFA	Plan/PD	$ 450,036		67%	13%	56%	13%	N/A	37%						

100% Total $ 47,742,720
Available $ 47,300,000
Difference $ (442,720)

Sub-regional distribution (100%)		
Clack	$ 1,094,858	1
Mult	$ 7,575,882	1
Portland	$ 30,536,663	5
Wash	$ 8,535,317	4
Total	$ 47,742,720	11

Example 4. Project Development Emphasis

Legend: BEST | BETTER | GOOD

	Project	Applicant	Fund Source	Phase	Requested amount	Funded amount	Equity	Safety	Climate	Con. Rel.	Trails	Overall	Risk Rating	Previous RFFA?	Public Comment	CCC Priority	Additional Information	Subregion
	Trails Bond projects																	
	Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000		67%	71%	56%	N/A	82%	69%						
	Westside Trail Bridge	THPRD	Bond	Plan/PD	$ 1,907,500	$ 1,907,500	89%	71%	33%	N/A	76%	67%						Wash
	Scott Creek Trail	Happy Valley	Bond	Plan/PD	$ 89,562	$ 89,562	78%	79%	44%	N/A	47%	62%						Clack
	Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000	$ 4,500,000	44%	71%	33%	N/A	71%	55%						Wash
	Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000	$ 200,000	56%	63%	33%	N/A	53%	51%						Wash
	Westside Trail: Seg 1	King City	Bond	Plan/PD	$ 210,000	$ 210,000	44%	50%	22%	N/A	56%	43%		Y				Wash
100%	Council Ck Trail	Washington Co	Either	Const	$ 5,511,000		67%	92%	67%	N/A	82%	77%		Y				
100%	Trolley Trail	NCPRD	Bond	Const	$ 651,750	$ 651,750	67%	71%	56%	N/A	88%	70%		Y				Clack
	NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,647,950		78%	83%	44%	N/A	71%	69%		Y				
	Gresh-Fairview Trail	Gresham	Bond	Const	$ 4,232,979	$ 4,232,979	67%	79%	56%	N/A	65%	67%						Mult
	Marine Dr Trail	PPR	Either	Const	$ 2,261,645	$ 2,261,645	56%	71%	56%	N/A	59%	60%		Y				Port
	NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 3,483,699	$ 3,483,699	56%	58%	44%	N/A	56%	54%						Port
	Sandy River Greenway	Troutdale	Bond	Const	$ 1,945,800	$ 1,945,800	22%	67%	44%	N/A	47%	45%						Mult
	Clackamas River Trail	Happy Valley	Bond	Const	$ 666,175	$ 666,175	33%	42%	11%	N/A	29%	29%						Clack
	Cornfoot Rd	PBOT	Either	Const	$ 5,225,500		56%	46%	44%	N/A	59%	51%						
					100% Total	**$ 20,149,110**												
					Available	**$ 20,000,000**												
					Difference	**$ (149,110)**												

Sub-regional distribution (100%)		
Clack	**$ 1,407,487**	**3**
Mult	**$ 6,178,779**	**2**
Portland	**$ 5,745,344**	**2**
Wash	**$ 6,817,500**	**4**
Total	**$ 20,149,110**	**11**

	Project	Applicant	Fund Source	Phase	Requested amount	Funded amount	Equity	Safety	Climate	Con. Rel.	Trails	Overall	Risk Rating	Previous RFFA?	Public Comment	CCC Priority	Additional Information	Subregion
	RFFA projects																	
	I-205 MUP	Clackamas Co	RFFA	Plan/PD	$ 1,094,858	$ 1,094,858	78%	71%	56%	71%	N/A	69%						Clack
	Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000	$ 245,000	67%	71%	56%	79%	N/A	68%						Wash
	Allen Blvd	Beaverton	RFFA	Plan/PD	$ 723,670	$ 723,670	67%	50%	67%	79%	N/A	66%						Wash
	Fanno Ck Trail	Tigard	RFFA	Plan/PD	$ 1,606,705	$ 1,606,705	89%	58%	56%	54%	N/A	64%		Y				Wash
	Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000	$ 4,500,000	44%	71%	33%	67%	N/A	54%						Wash
	Troutdale Rd	Multnomah Co	RFFA	Plan/PD	$ 1,720,000	$ 1,720,000	56%	58%	44%	50%	N/A	52%						Mult
100%	Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000	$ 200,000	56%	63%	33%	54%	N/A	51%						Wash
	Lakeview Blvd	Lake Oswego	RFFA	Plan/PD	$ 450,036	$ 450,036	67%	13%	56%	13%	N/A	37%						Clack
	162nd Ave	Gresham	RFFA	Const	$ 7,575,882	$ 7,575,882	100%	83%	67%	79%	N/A	82%						Mult
	MLK Blvd	PBOT	RFFA	Const	$ 5,532,955	$ 5,532,955	78%	63%	78%	88%	N/A	76%		Y				Port
	Council Ck Trail	Washington Co	Either	Const	$ 5,511,000	$ 5,511,000	67%	92%	67%	79%	N/A	76%		Y				Wash
	NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,745,541	$ 2,745,541	78%	83%	44%	79%	N/A	71%						Port
	Beaverton Creek Trail	THPRD	RFFA	Const	$ 2,055,647	$ 2,055,647	78%	71%	56%	79%	N/A	71%		Y				Wash
	7th Ave	PBOT	RFFA	Const	$ 10,692,227	$ 10,692,227	56%	71%	67%	79%	N/A	68%						Port
###	148th Ave	PBOT	RFFA	Const	$ 7,100,335		89%	63%	67%	54%	N/A	68%						
###	57th Ave-Cully Blvd	PBOT	RFFA	Const	$ 7,643,201		67%	63%	67%	71%	N/A	67%						
	Marine Dr Trail	PPR	Either	Const	$ 2,899,104		56%	71%	56%	79%	N/A	65%						
	Sandy Blvd	Multnomah Co	RFFA	Const	$ 6,500,000		44%	63%	67%	79%	N/A	63%		Y				
	Taylors Fy Rd	PBOT	RFFA	Const	$ 10,124,236		56%	58%	56%	67%	N/A	59%						
	Cornfoot Rd	PBOT	Either	Const	$ 6,698,345		56%	46%	44%	83%	N/A	57%						
	NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 4,465,605		56%	58%	44%	54%	N/A	53%						
	Willamette Falls Dr	West Linn	RFFA	Const	$ 3,497,580		33%	63%	56%	54%	N/A	51%		Y				
					100% Total	**$ 44,653,521**												
					Available	**$ 47,300,000**												
					Difference	**$ 2,646,479**												

Sub-regional distribution (100%)		
Clack	**$ 1,544,894**	**2**
Mult	**$ 9,295,882**	**2**
Portland	**$ 18,970,723**	**3**
Wash	**$ 14,842,022**	**7**
Total	**$ 44,653,521**	**14**

Example 5. Specific Outcomes emphasis (equity+safety)

Legend: BEST | BETTER | GOOD

	Project	Applicant	Fund Source	Phase	Requested amount	Funded amount	Equity|Safety	Equity	Safety	Climate	Con. Rel.	Trails	Overall	Risk Rating	Previous RFFA?	Public Comment	CCC Priority	Additional Information	Subregion
	Trails Bond projects																		
100%	NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,647,950		81%	78%	83%	44%	N/A	71%	69%		Y				
	Westside Trail Bridge	THPRD	Bond	Plan/PD	$ 1,907,500	$ 1,907,500	80%	89%	71%	33%	N/A	76%	67%						Wash
	Council Ck Trail	Washington Co	Either	Const	$ 5,511,000		79%	67%	92%	67%	N/A	82%	77%		Y				
	Scott Creek Trail	Happy Valley	Bond	Plan/PD	$ 89,562	$ 89,562	79%	78%	79%	44%	N/A	47%	62%						Clack
	Gresh-Fairview Trail	Gresham	Bond	Const	$ 4,232,979	$ 4,232,979	73%	67%	79%	56%	N/A	65%	67%						Mult
	Trolley Trail	NCPRD	Bond	Const	$ 651,750	$ 651,750	69%	67%	71%	56%	N/A	88%	70%		Y				Clack
	Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000		69%	67%	71%	56%	N/A	82%	69%						
	Marine Dr Trail	PPR	Either	Const	$ 2,261,645	$ 2,261,645	63%	56%	71%	56%	N/A	59%	60%		Y				Port
	Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000	$ 200,000	59%	56%	63%	33%	N/A	53%	51%						Wash
	Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000	$ 4,500,000	58%	44%	71%	33%	N/A	71%	55%						Wash
	NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 3,483,699	$ 3,483,699	57%	56%	58%	44%	N/A	56%	54%						Port
	Westside Trail: Seg 1	King City	Bond	Plan/PD	$ 210,000	$ 210,000	47%	44%	50%	22%	N/A	56%	43%		Y				Wash
	Sandy River Greenway	Troutdale	Bond	Const	$ 1,945,800	$ 1,945,800	44%	22%	67%	44%	N/A	47%	45%						Mult
	Clackamas River Trail	Happy Valley	Bond	Const	$ 666,175	$ 666,175	38%	33%	42%	11%	N/A	29%	29%						Clack
	Cornfoot Rd	PBOT	Either	Const	$ 5,225,500		51%	56%	46%	44%	N/A	59%	51%						
					100% Total	$ 20,149,110													
					Available	$ 20,000,000													
					Difference	$ (149,110)													

Sub-regional distribution (100%)		
Clack	$ 1,407,487	3
Mult	$ 6,178,779	2
Portland	$ 5,745,344	2
Wash	$ 6,817,500	4
Total	$ 20,149,110	11

	RFFA projects																		
100%	162nd Ave	Gresham	RFFA	Const	$ 7,575,882	$ 7,575,882	92%	100%	83%	67%	79%	N/A	82%						Mult
	NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,745,541	$ 2,745,541	81%	78%	83%	44%	79%	N/A	71%		Y				Port
	Council Ck Trail	Washington Co	Either	Const	$ 5,511,000	$ 5,511,000	79%	67%	92%	67%	79%	N/A	76%		Y				Wash
	148th Ave	PBOT	RFFA	Const	$ 7,100,335	$ 7,100,335	76%	89%	63%	67%	54%	N/A	68%						Port
	Beaverton Creek Trail	THPRD	RFFA	Const	$ 2,055,647	$ 2,055,647	74%	78%	71%	56%	79%	N/A	71%		Y				Wash
	I-205 MUP	Clackamas Co	RFFA	Plan/PD	$ 1,094,858	$ 1,094,858	74%	78%	71%	56%	71%	N/A	69%						Clack
	Fanno Ck Trail	Tigard	RFFA	Plan/PD	$ 1,606,705	$ 1,606,705	74%	89%	58%	56%	54%	N/A	64%		Y				Wash
	MLK Blvd	PBOT	RFFA	Const	$ 5,532,955	$ 5,532,955	70%	78%	63%	78%	88%	N/A	76%		Y				Port
	Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000	$ 245,000	69%	67%	71%	56%	79%	N/A	68%						Wash
	57th Ave-Cully Blvd	PBOT	RFFA	Const	$ 7,643,201	$ 7,643,201	65%	67%	63%	67%	71%	N/A	67%						Port
150%	Marine Dr Trail	PPR	Either	Const	$ 2,899,104		63%	56%	71%	56%	79%	N/A	65%						
	7th Ave	PBOT	RFFA	Const	$ 10,692,227		63%	56%	71%	67%	79%	N/A	68%						
	Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000		59%	56%	63%	33%	54%	N/A	51%						
	Allen Blvd	Beaverton	RFFA	Plan/PD	$ 723,670		58%	67%	50%	67%	79%	N/A	66%						
	Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000		58%	44%	71%	33%	67%	N/A	54%						
	Troutdale Rd	Multnomah Co	RFFA	Plan/PD	$ 1,720,000		57%	56%	58%	44%	50%	N/A	52%						
	Taylors Fy Rd	PBOT	RFFA	Const	$ 10,124,236		57%	56%	58%	56%	67%	N/A	59%						
	NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 4,465,605		57%	56%	58%	44%	54%	N/A	53%						
	Sandy Blvd	Multnomah Co	RFFA	Const	$ 6,500,000		53%	44%	63%	67%	79%	N/A	63%		Y				
	Cornfoot Rd	PBOT	Either	Const	$ 6,698,345		51%	56%	46%	44%	83%	N/A	57%						
	Willamette Falls Dr	West Linn	RFFA	Const	$ 3,497,580		48%	33%	63%	56%	54%	N/A	51%		Y				
	Lakeview Blvd	Lake Oswego	RFFA	Plan/PD	$ 450,036		40%	67%	13%	56%	13%	N/A	37%						
					100% Total	$ 41,111,124													
					Available	$ 47,300,000													
					Difference	$ 6,188,876													

Sub-regional distribution (100%)		
Clack	$ 1,094,858	1
Mult	$ 7,575,882	1
Portland	$ 11,697,581	4
Wash	$ 13,099,602	4
Total	$ 33,467,923	10

Example 6. Other Considerations

Legend: BEST | BETTER | GOOD

Project	Applicant	Fund Source	Phase	Requested amount	Funded amount	Equity	Safety	Climate	Con. Rel.	Trails	Overall	Risk Rating	Previous RFFA?	Public Comment	CCC Priority	Additional Information	Subregion
Trails Bond projects																	
Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000		44%	71%	33%	N/A	71%	55%			TBD	TBD	Bridge over parkway as portion of Crescent Greenway. Connect to future employment area, link to section of trail being constructed in 2022	Wash
Clackamas River Trail	Happy Valley	Bond	Const	$ 666,175		33%	42%	11%	N/A	29%	29%			TBD	TBD	MUP along section of Clackamas River, part of series of improvements and natural area	Clack
Cornfoot Rd	PBOT	Either	Const	$ 5,225,500		56%	46%	44%	N/A	59%	51%			TBD	TBD	Connects EFA with employment area, improves freight route, builds section of regional trail	Port
Council Ck Trail	Washington Co	Either	Const	$ 5,511,000		67%	92%	67%	N/A	82%	77%		Y	TBD	TBD	Improves 20 street crossings of regional trail. Creates safe AT route parallel to high crash road (OR 8).	Wash
Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000		56%	63%	33%	N/A	53%	51%			TBD	TBD	Connector to other trails in regional and state networks. May potentially receive $2.24 million federal funding award in July	Wash
Gresh-Fairview Trail	Gresham	Bond	Const	$ 4,232,979		67%	79%	56%	N/A	65%	67%			TBD	TBD	Adds safe AT improvements on high crash street. Continuation northward of regional trail	Mult
Marine Dr Trail	PPR	Either	Const	$ 2,261,645		56%	71%	56%	N/A	59%	60%		Y	TBD	TBD	Fills gap of regional trail between I-205 & 122nd. Replaces narrow bike lanes on high crash street, heavy truck traffic	Port
NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,647,950		78%	83%	44%	N/A	71%	69%		Y	TBD	TBD	Completes section of regional trail, adds safer crossing of Columbia Blvd, safer on-street connections, improves access to town center, natural areas and parks	Port
NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 3,483,699		56%	58%	44%	N/A	56%	54%		Y	TBD	TBD	Completes section of regional trail, adds safer crossing of Marine Drive, connections to other regional trails, improves access to nature, water	Port
Sandy River Greenway	Troutdale	Bond	Const	$ 1,945,800		22%	67%	44%	N/A	47%	45%			TBD	TBD	Regional trail connection between town center, transit and industrial area. Connects to state trail, add safe crossing of rail line, improves access to nature, parks	Mult
Scott Creek Trail	Happy Valley	Bond	Plan/PD	$ 89,562		78%	79%	44%	N/A	47%	62%			TBD	TBD	Creates off street trail option to 117th, safer crossing of Sunnyside Rd, connection between parks	Clack
Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000		67%	71%	56%	N/A	82%	69%			TBD	TBD	Planning for potential regional trail connection through I-5 & OR 217 interchange. Will connect to bike/ped crossing of I-5	Wash
Trolley Trail	NCPRD	Bond	Const	$ 624,250		67%	71%	56%	N/A	88%	70%		Y	TBD	TBD	Improves deficiencies to heavily used section of existing regional trail, access to park and river	Clack
Westside Trail Bridge	THPRD	Bond	Plan/PD	$ 1,907,500		89%	71%	33%	N/A	76%	67%			TBD	TBD	Planning and project development of trail crossing of US 26. Improves access to high school, employment, recreation sites	Wash
Westside Trail: Seg 1	King City	Bond	Plan/PD	$ 210,000		44%	50%	22%	N/A	56%	43%		Y	TBD	TBD	Planning for section of regional trail network. Creates safer AT access to park and recreation opportunities	Wash

100% Total $ -
150% Total $ -
Available $ 20,000,000
Difference $ 20,000,000

Sub-regional distribution (100%)		
Clack	$ -	
Mult	$ -	
Portland	$ -	
Wash	$ -	
Total	$ -	

RFFA projects																	
148th Ave	PBOT	RFFA	Const	$ 7,100,335		89%	63%	67%	54%	N/A	68%			TBD	TBD	Adds protected bike lanes, sidewalks, lighting safe crossings to major N/S arterial in E Portland. Improves access to MAX	Port
162nd Ave	Gresham	RFFA	Const	$ 7,575,882		100%	83%	67%	79%	N/A	82%			TBD	TBD	Adds bike lanes, sidewalks, lighting safe crossings to major N/S arterial on Gresham/Portland boundary. Improves AT gap in network, access to school, transit	Mult
57th Ave-Cully Blvd	PBOT	RFFA	Const	$ 7,643,201		67%	63%	67%	71%	N/A	67%			TBD	TBD	Continues previous phases of protected bike and pedestrian facilities S of Prescott. Adds safer crossings, access to grocery, pharmacy, transit	Port
7th Ave	PBOT	RFFA	Const	$ 10,692,227		56%	71%	67%	79%	N/A	68%			TBD	TBD	Upgrades existing AT infrastructure in high traffic corridor. Protected bike lanes, upgraded signals, parallels freight route	Port
Allen Blvd	Beaverton	RFFA	Plan/PD	$ 723,670		67%	50%	67%	79%	N/A	66%			TBD	TBD	Planning and design options for safety improvements on high-volume street in EFA	Wash
Beaverton Creek Trail	THPRD	RFFA	Const	$ 2,055,647		78%	71%	56%	79%	N/A	71%			TBD	TBD	Replaces on-street sections of regional trail. Improves access to MAX, bus lines. Connects to Westside Trail	Wash
Brookwood Ped Overpass	Hillsboro	Either	Plan/PD	$ 4,500,000		44%	71%	33%	67%	N/A	54%			TBD	TBD	Bridge over parkway as portion of Crescent Greenway. Connect to future employment area, link to section of trail being constructed in 2022	Wash
Cornfoot Rd	PBOT	Either	Const	$ 6,698,345		56%	46%	44%	83%	N/A	57%			TBD	TBD	Connects EFA with employment area, improves freight route, builds section of regional trail	Port
Council Ck Trail	Washington Co	Either	Const	$ 5,511,000		67%	92%	67%	79%	N/A	76%		Y	TBD	TBD	Improves 20 street crossings of regional trail. Creates safe AT route parallel to high crash road (OR 8).	Wash
Emerald Necklace Trail	Forest Grove	Either	Plan/PD	$ 200,000		56%	63%	33%	54%	N/A	51%			TBD	TBD	Connector to other trails in regional and state networks. May have additional federal funding award.	Wash
Fanno Ck Trail	Tigard	RFFA	Plan/PD	$ 1,606,705		89%	58%	56%	54%	N/A	64%		Y	TBD	TBD	Planning and design options for 3/5 of final section of regional trail. Technically challenging area. Improves access to schools	Wash
I-205 MUP	Clackamas Co	RFFA	Plan/PD	$ 1,094,858		78%	71%	56%	71%	N/A	69%			TBD	TBD	Design for section of regional MUP which is currently on-street	Clack
Lakeview Blvd	Lake Oswego	RFFA	Plan/PD	$ 450,036		67%	13%	56%	13%	N/A	37%			TBD	TBD	Planning and design options for street bordering residential and industrial zones	Clack
Marine Dr Trail	PPR	Either	Const	$ 2,899,104		56%	71%	56%	79%	N/A	65%		Y	TBD	TBD	Fills gap of regional trail between I-205 & 122nd. Replaces narrow bike lanes on high crash street, heavy truck traffic	Port
MLK Blvd	PBOT	RFFA	Const	$ 5,532,955		78%	63%	78%	88%	N/A	76%		Y	TBD	TBD	Continues previous phases of crossing, intersection improvements	Port
NP Greenway (Col to Cath)	PPR	Either	Const	$ 2,745,541		78%	83%	44%	79%	N/A	71%		Y	TBD	TBD	Completes section of regional trail, adds safer crossing of Columbia Blvd, safer on-street connections, improves access to town center, natural areas and parks	Port
NP Greenway (Kelley to Slough)	PPR	Either	Const	$ 4,465,605		56%	58%	44%	54%	N/A	53%		Y	TBD	TBD	Completes section of regional trail, adds safer crossing of Marine Drive, connections to other regional trails, improves access to nature, water	Port
Sandy Blvd	Multnomah Co	RFFA	Const	$ 6,500,000		44%	63%	67%	79%	N/A	63%		Y	TBD	TBD	Serves low-income housing, improves transit access, connections to employment, extends previous RFFA funded improvements eastward	Mult
Taylors Fy Rd	PBOT	RFFA	Const	$ 10,124,236		56%	58%	56%	67%	N/A	59%			TBD	TBD	Improves access to transit, adds AT infrastructure, improves crossings. Design options limited due to geographical, environmental constraints	Port
Tigard-LO Trail	Tigard	Either	Plan/PD	$ 245,000		67%	71%	56%	79%	N/A	68%			TBD	TBD	Planning for potential regional trail connection through I-5 & OR 217 interchange. Will connect to bike/ped crossing of I-5	Wash
Troutdale Rd	Multnomah Co	RFFA	Plan/PD	$ 1,720,000		56%	58%	44%	50%	N/A	52%			TBD	TBD	Planning and design for AT network gap. Improves fish passage with new culvert, access to community college, schools	Mult
Willamette Falls Dr	West Linn	RFFA	Const	$ 3,497,580		33%	63%	56%	54%	N/A	51%		Y	TBD	TBD	Parallels I-205, improves safety and transit access on street likely to see increased traffic due to tolling	Clack

100% Total $ -
150% Total $ -
Available $ 47,300,000
Difference $ 47,300,000

Sub-regional distribution (100%)		
Clack	$ -	
Mult	$ -	
Portland	$ -	
Wash	$ -	
Total	$ -	

5.2 Earthquake Ready Burnside Bridge – Introduction

Information/Discussion Items

Joint Policy Advisory Committee on Transportation
Thursday, July 21, 2022

JPACT Worksheet

Agenda Item Title: Multnomah County Earthquake Ready Burnside Bridge Update

Presenters: Alex Oreschak, Metro; Shane Phelps & Megan Neill, Multnomah County

Contact for this worksheet/presentation: Alex Oreschak, Metro

Purpose/Objective

This meeting is to:

1. Update JPACT on the progress of the Earthquake Ready Burnside Bridge Project
2. Answer questions JPACT may have about the project

Outcome

Discussion on the Earthquake Ready Burnside Bridge Project.

What has changed since JPACT last considered this issue/item?

Since JPACT was last briefed on this project in February 2021, Multnomah County has published a Draft Environmental Impact Statement (EIS) and a Supplemental Draft EIS, which included identifying cost-saving measures including bridge structure type and a narrowing of the overall bridge width. The revised preferred alternative was supported by a community task force, staff working group, and Multnomah County Board of County Commissioners, with a resolution adopting the preferred alternative anticipated by the City of Portland in July 2022. Staff with Metro and Multnomah County are currently working with FHWA to identify a timeline and next steps for FHWA to issue a Record of Decision on the project and allow the County to advance the project designs.

What packet material do you plan to include?

Project Memo

Project Fact Sheet

Date: July 7, 2022
To: Joint Policy Advisory Committee on Transportation and Interested Parties
From: Alex Oreschak, Senior Transportation Planner
Subject: Multnomah County Earthquake Ready Burnside Bridge Update

Purpose

This meeting is to:

1. Update JPACT on the progress of the Earthquake Ready Burnside Bridge Project
2. Answer questions JPACT may have about the project

Request to TPAC

Discussion on the Earthquake Ready Burnside Bridge Project.

Project Overview and History

The primary purpose of the Earthquake Ready Burnside Bridge (EQRB) Project is to create a seismically resilient Burnside Street lifeline crossing of the Willamette River that would remain fully operational and accessible for vehicles and other modes of transportation immediately following a major Cascadia Subduction Zone (CSZ) earthquake.

The adopted 2018 RTP's financially constrained project list includes Phase 1 and Phase 2 of the EQRB Project, which reflect planning and project development activities, including planning required under the National Environmental Policy Act (NEPA) process, project design and right-of-way acquisition. Additionally, the adopted 2018 RTP's strategic project list, which identifies additional priority projects the region would pursue if more funding becomes available, includes the EQRB Project's Phase 3, reflecting the construction phase of the project.

Over 100 options were studied during the EQRB Project's Feasibility Study Phase (2016-2018), including tunnels, ferries, a fixed bridge, and other bridge alignments. From that study, four bridge alternatives were recommended for further study in an Environmental Impact Statement (EIS). The Replacement Long Span alternative was recommended by the Community Task Force and Policy Group in late fall 2020. Responses from an online public survey showed 88% support for the recommendation. On February 5th, 2021, the County published a Draft Environmental Impact Statement that included the recommended Preferred Alternative followed by a 45-day public comment period.

Following publication of the Draft EIS, the County asked the project team to identify ways to bring the overall cost of the project down, while maintaining the core purpose and need of the project, in order to help ensure a new bridge is funded and built. Any significant changes to the project as a result would be documented in Supplemental Draft Environmental Impact Statement and published for public review and comment. Over the course of the summer of 2021, the project team worked to identify a range of cost saving measures and presented them to the Community Task Force in October 2021.The range of cost saving measures included the selection of a conventional girder style structure type for the west approach span over Tom McCall Waterfront Park, a bascule style structure type for the movable span in the river, and the narrowing of the overall bridge width resulting in the reduction of one vehicular lane of traffic. The Community Task Force then provided a preliminary approval of the range of cost saving measures, subject to hearing feedback from the public on the changes being proposed.

After reviewing the results from the public outreach campaign conducted in late fall of 2021, the Community Task Force voted by majority on January 24th, 2022 to recommend that the cost saving measures be adopted as part of an updated recommended Preferred Alternative. On March 3rd, 2022 the Policy Group of the Earthquake Ready Burnside Bridge Project approved the recommendation put forth by the Community Task Force. The Board of County Commissioners approved the refined recommended Preferred Alternative on March 17th, 2022. Subsequently, the Supplemental Draft

Environmental Impact Statement was published on April 29th, 2022, followed by a 45-day public comment period.

Next Steps

In July 2022, the Portland City Council will consider a resolution to adopt the recommended Preferred Alternative. Multnomah County and the Federal Highway Administration (FHWA) anticipate publishing a Final EIS and Record of Decision (ROD) for the EQRB Project in late 2022. Metro and Multnomah County staff are coordinating with FHWA to determine the appropriate timeline and actions that will allow the Project to demonstrate fiscal constraint and for FHWA to issue a ROD for the Project. Issuance of the ROD will allow Multnomah County to advance the Project into the Design Phase. The Project will return to TPAC, JPACT, and Metro Council in the coming months with additional updates.

Attachments:

Attachment 1: Project Fact Sheet

Earthquake Ready Burnside Bridge

BETTER. SAFER. CONNECTED.

MULTNOMAH COUNTY'S FUTURE REGIONAL LIFELINE

Experts say we are past due for a magnitude 8+ earthquake to hit Oregon. None of **Multnomah County's** aging downtown bridges are expected to withstand such an earthquake. An Earthquake Ready Burnside Bridge will play a critical role in disaster response and regional recovery.

Funding Status

$895 M Estimated project cost

$300 M Multnomah County funded

$595 M Funding need

Federal Grant Requests

- **Rebuilding American Infrastructure with Sustainability and Equity (RAISE)**
  $5 million for planning
- **Multimodal Projects Discretionary Grant (MPDG)**
  $535 million for construction
- **Bridge Investment Program:**
  pending NOFO, to be determined

A Valuable Asset to Our City

Seismic Resiliency

Supports disaster relief and emergency response to reunite families and accelerate economic recovery. For every $1 spent pre-disaster saves $6 post-disaster.

Multimodal

Provides a wider, protected multi-use path for pedestrians, bicyclists, and people with disabilities. Designed to support streetcar and transit-only facilities.

Equity

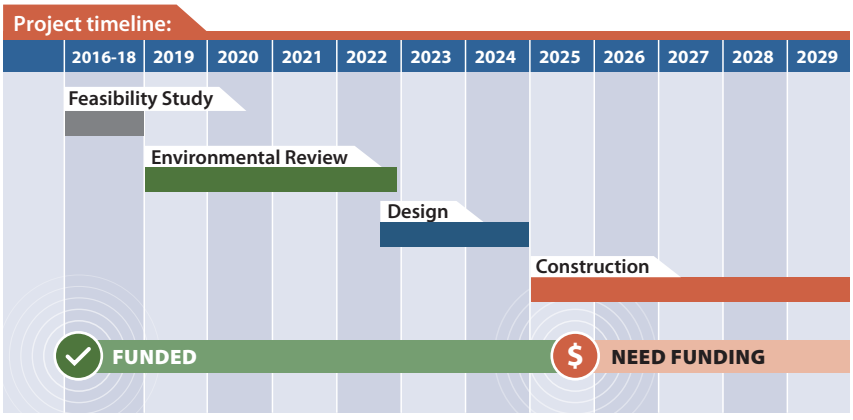
Maintains a connection to vital social services, shelters, transit and recreation facilities downtown. Many social service providers that provide safety net services to County residents across the region are located adjacent to the bridge. A resilient Burnside Bridge will be poised to serve our most vulnerable populations after the earthquake.

Equitable Jobs

Brings 4,000 job-years of employment to the region and will establish a Project Labor Agreement focusing on local hiring and apprenticeships for disadvantaged, minority, and women-owned businesses. This Agreement would be the first of its kind in Oregon on a Federal Aid project.

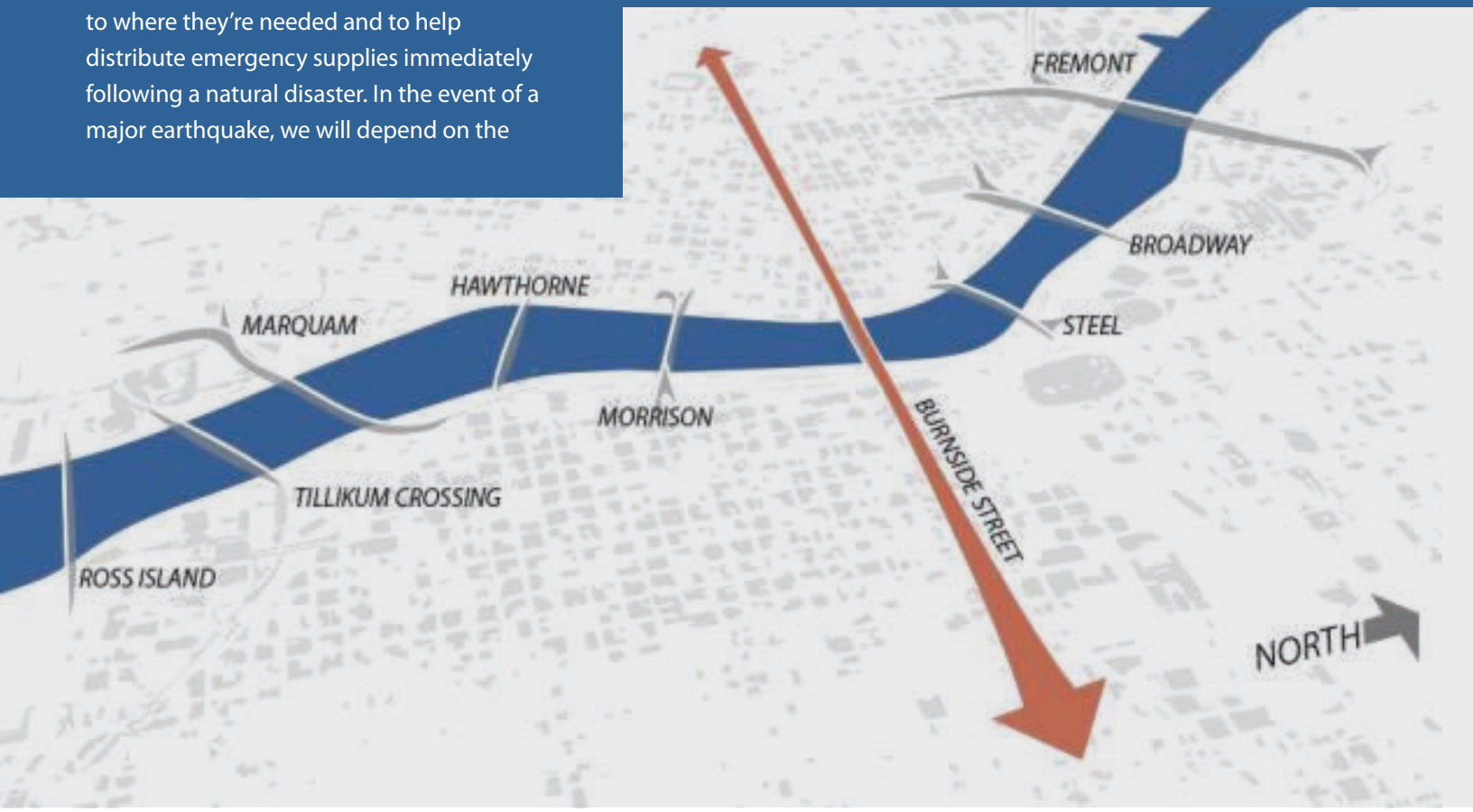
Environment

Supports future transportation uses that generate fewer emissions, enhances stormwater treatment, supports habitat restoration, instills Clean Air Construction Act and is seeking a Greenroads Sustainability Certification Rating.



A Regional Lifeline Route

A lifeline route allows first responders to get to where they're needed and to help distribute emergency supplies immediately following a natural disaster. In the event of a major earthquake, we will depend on the Burnside Bridge as the main emergency lifeline route across the Willamette River, connecting the region from east to west. In the longer term, a lifeline route is vital in the efforts of a regional recovery.



Broad Community Support and Engagement

350+ Briefings

7 Online Open Houses and Surveys

13K+ Survey Responses

88% Community Approval rating*

* support from community survey for the Preferred Alternative

Letters of Support

14 Community Organizations/ Businesses

5 Government Levels of Support

6 Agencies

Congressman Earl Blumenauer • Congresswoman Suzanne Bonamici • Senator Jeff Merkley • Senator Ron Wyden • State Senator Elizabeth Steiner Hayward • State Representative Maxine Dexter • State Representative Rob Nosse • City of Gresham • City of Portland • Metro • Oregon Environmental Council • Regional Disaster Preparedness Organization • TriMet • Mercy Corps • Because People Matter / Nightstrike • Business for a Better Portland • City Club of Portland • Climate Solutions • Pacific Building and Construction Trades Council • Neighbors for Clean Air • Northwest Carpenter's Union • Northwest Oregon Labor Council • Oregon Association of Minority Entrepreneurs • Portland Business Alliance • Portland Neighborhood Emergency Teams • Professional Business Development Group • The Street Trust

EARTHQUAKE READY BURNSIDE BRIDGE

Multnomah County

BETTER. SAFER. CONNECTED.

www.BurnsideBridge.org

5.3 Better Bus Program

Information/Discussion Items

Joint Policy Advisory Committee on Transportation
Thursday, July 21, 2022

JPACT Worksheet

Agenda Item Title: Enhanced Transit Concepts / Better Bus Program

Presenters: Matt Bihn, Transportation Planner, Metro; David Aulwes, Capital Planning Manager, TriMet

Contact for this worksheet/presentation: Matt Bihn, Metro

Purpose/Objective

- Provide an overview of results from the Enhanced Transit Concepts (ETC) Pilot Program
- Introduce the Better Bus Program and discuss the changes from ETC
- Ask JPACT members to consider how Better Bus projects could be incorporated into other planned projects in their jurisdictions
- NO ACTION WILL BE TAKEN AT THIS MEETING

Outcome

JPACT will be briefed about the performance of the ETC program, including completed projects, and informed about the transition from the ETC program to the Better Bus program.

What has changed since JPACT last considered this issue/item?

Metro and TriMet's ETC Pilot Program is complete, with over $5M invested in small-scale transit capital projects that improve bus speeds and reliability. The success of the program led Metro and TriMet to initiate the Better Bus program, which continues the basic concepts of ETC with some modifications.

Like ETC, the Better Bus program is a data-driven approach to planning and designing transit priority projects, and builds on existing partnerships between Metro, TriMet and local jurisdictions to implement them.

Changes in the new program from the ETC program include:

- Different funding source
- Greater emphasis on equity
- Greater emphasis on geographic distribution of projects
- Funding available for construction

What packet material do you plan to include?

No materials.

Materials following this page were distributed at the meeting.

Climate and transportation expert panel summary

On June 22, 2022 Metro hosted a panel to learn from national experts about the best practices and tools being used nationally to assess and monitor climate impacts of transportation.

The attached materials capture the panel discussion and provide an easy guide for those interested in learning what was discussed. A full video recording of the panel discussion is available: https://vimeo.com/manage/videos/723107656/16bc305fea

1. Agenda
2. A discussion guide with timestamps from the video recording indicating when specific questions were asked of the panelists.
3. A summary of the panel discussion
4. Background materials:
    - Background on Climate Action in Oregon and the Greater Portland Region's Climate Smart Strategy
    - Background on Use of Vision Eval and Key Transportation Assumptions for Climate Smart Strategy Proxy
    - Metro Modeling Overview

Agenda

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

Meeting:	Climate and transportation expert panel
Date:	June 22, 2022
Time:	7:30 am – 10:00 a.m.
Place:	Zoom webinar. Register: https://us02web.zoom.us/webinar/register/WN_BYx9mF6gTWymXUr1Q-vqdA

Objectives:

- Learn from national experts about the best practices and tools they are using to assess and monitor climate impacts at the system, corridor and project levels, including the known strengths and limitations of the tools being used to inform VMT and GHG reduction strategies and monitor progress toward adopted VMT and GHG reduction targets.
- Ask for feedback and gain insight on modeling and monitoring practices currently being used and considered by Metro, including the opportunities to improve Metro's current approach.
- Build a shared understanding of what the 2023 RTP is expected to demonstrate in terms of VMT and GHG performance in response to Executive Order 20-04 and the statewide Climate-Friendly and Equitable Communities rulemaking.
- Set the foundation for a collaborative regional approach to reducing transportation's impact on climate change by convening agency and community partners to inform how Metro works with state, regional and local partners to meet adopted VMT and GHG reduction targets.

Panelists

- Kyung-Hwa Kim, Performance Analysis and Monitoring Manager at the Atlanta Regional Commission
- Eric Sundquist, Sustainability Advisor; SB 743 Program Manager, California Department of Transportation
- Shoshana M. Lew, Executive Director, Colorado Department of Transportation
- Rebecca White, Director, Division of Transportation Development, Colorado Department of Transportation
- Susan Handy, Professor of Environmental Science and Policy and Director of the National Center for Sustainable Transportation at the University of California, Davis
- Dan F.B. Flynn, Data Scientist, U.S. Department of Transportation Volpe Center

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AGENDA

7:30 – 8:10 a.m. **Welcome and introductions**

- Welcome (Margi Bradway, Moderator)
- Opening remarks (Metro Councilor Gonzalez)
- Presentation: Overview of state and regional climate policies and strategies and Metro's modeling and monitoring toolbox (Metro staff)
- Panelist introductions (Panelists)

8:10 – 9:05 a.m. **Expert panel discussion**

The moderator will facilitate a discussion with the expert Panel focused on using climate analysis tools for strategy development, evaluation and monitoring and assumptions for the future of electric vehicle technology.

9:05 – 9:10 a.m. **Break**

9:10 – 9:40 a.m. **Facilitated Q&A with Metro Council and JPACT members**

Metro Council and JPACT members will be promoted to "panelists" to ask the panelists questions.

9:40 – 10 a.m. **Expert Panel Final Thoughts & Closing**

Climate and transportation expert panel discussion guide

Date: June 22, 2022
Time: 7:30 – 10:00 a.m. PT
Place: Zoom webinar

Webinar link:
https://vimeo.com/manage/videos/723107656/16bc305fea
Numbers below indicate the time stamp from the webinar.

Panelists and presenters:
Director Shoshana Lew, Executive Director, Colorado Department of Transportation
Director Rebecca White, Division of Transportation Development Director, Colorado Department of Transportation
Erik Sabina, Colorado Department of Transportation
Eric Sundquist, Sustainability Advisor; SB 743 Program Manager, California Department of Transportation
Susan Handy, Professor of Environmental Science and Policy and Director of the National Center for Sustainable Transportation at the University of California Davis
Kyung-Hwa Kim, Performance Analysis and Monitoring Manager at the Atlanta Regional Commission
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Metro Council and JPACT members:
Councilor Juan Garcia Gonzalez
Councilor Christine Lewis
Councilor Shirley Craddick
Councilor Gerritt Rosenthal
Mayor Steve Calloway, City of Hillsboro
Councilor Kathy Hyzy, City of Milwaukie

Presenters and moderator:
Thaya Patton, Senior Researcher and Lead Climate Modeler
Kim Ellis, Principal Transportation Planner, Metro
Margi Bradway, Deputy Director, Planning, Research & Development, Metro; moderator

Expert panel discussion

Margi Bradway, Metro, facilitated a discussion with the panelists. The questions that were asked of panelists answered are noted below.

Timestamp 43.00 What are your processes for conducting the EMTR analysis? What are the tools you are using, and how are they accounting for different factors?
Timestamp 49.00 How does California measure GHG or VMT?
Timestamp 55.20 How does what California is doing contrast with the Colorado approach?
Timestamp 58.28 How does each model help with decision-making?

Timestamp 1.02.23 What are Atlanta's processes and tools and how do they help with decision-making?
Timestamp 1.12.21 How do fleet assumptions fit into analysis at region, state or project level? Where do fuels fit, or don't fit into induced demand analysis? In the study of induced demand, are fleet assumptions held solid or is focus solely on the VMT?
Timestamp 1:18:25 Do MPOs use different approaches and assumptions in modeling related to GHG emissions?
Timestamp 1.23.26 How do you monitor progress?

Metro Council/JPACT discussion

Timestamp 1.36.22 Councilor Hyzy said there is tension around induced demand – what is the best response? What does modelling show that induced demand will do in terms of addressing climate issues and reducing GHGs? How do we, as a region, most effectively think about it?
Timestamp 1.46.24 Margi asked Colorado panelists if they are taking into account induced demand.
Timestamp 1.49.00 Councilor Lewis asked about the effectiveness of modeling GHG at the project level. Are we diverting GHG emissions from a highway to a neighborhood street?
Timestamp 1.54.02 Councilor Lewis asked about getting a level of granularity in a project, or is it only possible once it has gone through NEPA?
Timestamp 1.57.10 Councilor Rosenthal asked if models have been used to identify the impacts of the increase of gas prices. How much GHG reduction could we get if gas prices continue to rise to European rates? Will the increase in gas prices be a significant factor in decreasing GHG?
Timestamp 2.04.57 Mayor Steve Calloway asked at what point is there benefit to adding an auxiliary lane or widening, to increase efficiency and decrease GHG?
Timestamp 2.11.00 Councilor Gonzalez asked if climate modeling is at point as a performance tool where it has done enough to change/alter projects across the country, or is it too new to really model for, so projects that were going to happen, happen anyway? As climate modeling is advancing across the country, how is it impacting, improving or stopping projects?

Summary Notes: Climate and transportation expert panel

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Presenters and moderator:
Thaya Patton, Senior Researcher and Lead Climate Modeler
Kim Ellis, Principal Transportation Planner, Metro
Margi Bradway, Deputy Director, Planning, Research & Development, Metro; moderator

Welcome and Introductions
00.00: Metro Planning, Development and Research Deputy Director Margi Bradway welcomed panelists, guests and Councilor Juan Garcia Gonzalez. She said Metro is working on modeling and policy development for the 2023 Regional Transportation Plan. She began the event by referencing Oregon's state goals on climate and Governor Kate Brown's executive order directing agencies to reduce climate pollution even further. She reviewed the agenda and ground rules.

02.20: Councilor Gonzalez gave opening remarks, noting that over 110 people (this later increased to 156) are in the audience and expressing gratitude to the panelists. He noted that in Oregon, transportation is one of the largest contributors to greenhouse gas emissions. The Regional

Transportation Plan (RTP) outlines all transportation planning over the next 25 years. Metro's climate modeling work is a cornerstone, and the Metro region has a history of collaboration.

Margi invited the panelists to introduce themselves and give a short overview of their work.

05.24: Director Shoshana Lew, Executive Director, Colorado Department of Transportation, began with a history of their policy rulemaking as a requirement. Senate Bill 260 focused on combining traditional investment in roads and bridges while broadening the way they think about it. The bill specifically directs them to think about greenhouse gas emissions and vehicle miles travelled. She stressed the importance of having a big tent to include everyone in the conversation. They held 10 public meetings plus many small meetings, including technical meetings that included modelers. She recommended having regulators be very aware of policy making. They tried to create a rule - conformity policy framework for greenhouse gases related to infrastructure. There have a couple of opportunities to hit the target, and if that doesn't work, there are opportunities for mitigation. It includes all Colorado MPOs and the state. She talked about mitigations. All projects have built into them some form of VRT. Director Rebecca White and Erik Sabina are also in attendance.

14.24: Eric Sundquist, Sustainability Advisor; SB 743 Program Manager, California Department of Transportation said he focuses on implementing legislation as a result of Senate Bill 743,which forces them to look at induced demand in their projects. He showed a slide on induced demand, saying it is unintuitive. He listed three motivations. 1. It is bad for congestion. Studies that review road widenings show they become just as congested as before widening. 2. The impacts - environmental/emissions, safety, noise, equity 3. Widening roads puts a huge burden on maintaining and operating the system. Like other impacts, traffic congestion is measured under California Environmental Quality Act (CEQA). They have to assess project impact, then make changes to the project scope or provide mitigation. They try to avoid the latter as it is costly. Consider a benefit cost ratio.

18.47: Susan Handy, Professor of Environmental Science and Policy and Director of the National Center for Sustainable Transportation at the University of California, Davis works with the state and CalTran to implement its AB 32 policy which puts in place reduction of GHG and also a Senate Bill to reduce Vehicle Miles Traveled (VMT) in urban areas. Strategies include investments in transit, land use policies and bike/pedestrian policies. She mentioned their induced travel calculator and the benefits of active travel projects. She said key themes are to look at empirical evidence and extract from that. Most of work is project level.

21.44: Kyung-Hwa Kim, Performance Analysis and Monitoring Manager at the Atlanta Regional Commission talked about the role of planner and modeler. She uses facts and performance measures. Modelers can provide date to planners explaining if a project is achievable. Modeling describes how to get there but one model will not answer all questions and multiple scales are needed.

25.30: Dan F.B. Flynn, Data Scientist, U.S. Department of Transportation Volpe Center, said he supports the VisionEval tool which evaluates the impacts of potential policies and looks at performance metrics such as GHG from transportation. It can be used at a higher strategic level.

27.00: Margi introduced Metro's Kim Ellis, Principal Transportation Planner and Thaya Patton, Senior Researcher and Lead Climate Modeler. Kim presented on Metro's Climate Smart Strategy.

34.50: Thaya Patton presented on Metro's Climate Analysis Toolbox.

Expert Panel Discussion

43.00: Margi opened the discussion with two questions:
What are your processes for conducting the EMTR analysis?
What are the tools you are using, and how are they accounting for different factors?

Daniel Flynn said he develops and promotes the modeling tools at the Volpe Center, which is part of the US Department of Transportation. Volpe Center is a fee for service in-house consultancy that works with the Federal Highway Administration Office of Planning that developed the GreenSet model, which then was developed into VisionEval. He supports users of the model. It is in between more detailed models and has components that interact with land use at regional levels and has the features of a sketch model, for example determining the range of uncertainty given policy choices. It is good at estimating VMT at the regional level and at a more granular level, including within census tracks. It is not a project level analysis tool. He showed a slide illustrating VisionEval.

49.00: Margi turned to Eric Sundquist, asking how they measure GHG or VMT. He explained the GHG measurement comes out of the conformity setting. With VMT, they use other tools such as …He talked about VMT and where it departs from GHG. If demand models were great, it is laborious, project by project and for some, impossible. There are no transportation land use models. If area was big enough, he said you would still have to create a new no-build land use area. Doing project by project is very laborious. They have opted for a more targeted assessment that uses models to a lesser extent.

NCSD calculations take a big step up. More lane miles equals more VMT. It is straightforward, but does not cover everything, for example, a new interchange. Assessment of VMT is moving forward. The NCSD calculator allows interpolation of results with the demand model. It does not work with looking at transit or VMT reduction and mitigations. GHG goes through a conformity type process, though MOVES. They are looking at the fleet mix and emissions per mile from different vehicles. An example of a conflict: a road diet can look bad in GHG or conformity because the cars are going slower, while it looks great in VMT because cars are going slower or idling. Also, the BC model does not have feedback loop in terms of induced demand.

Margi commented that California has found a way to do both; use a VMT calculator and travel demand model.

55.20: Margi asked Colorado panelists to contrast what California is doing with the Colorado approach.

Erik Sabina said he heads the travel demand forecasting group at Colorado DOT and led the development of the activity based model project. He said that a couple of years ago they had the only fully desegregate activity based models at the state level in the U.S. After that, his focus switched to GHG. He agreed with Eric Sundquist, saying the activity based machines took a lot of crank turning to get an answer out and that small projects cannot be seen in that type of model. They worked with the FTA and now make use of two models: a large desegregate model, and EERPAT. They also mine studies around the country for elasticity and reasonable relationships around input and output.

58.28: Margi said Colorado has done great work on GHG goals. She asked the Colorado panelists how each model helps with decision-making.

Erik Sabina said when GHG rules were created, they developed a set of three scenarios, using the terms aggressive but feasible, using a combination of EERPAT and the statewide model. They came up with low, medium and high estimates with groups of measures that were attached to each. This way people could see what they did and how it related to each outcome.

Rebecca added that they used the model tools to develop the GHG standard. Colorado is now implementing the standard and using the tools to determine if they are meeting it. They use the travel model to look at their ten year long range plan. If they cannot meet the goals with the mix of projects, they will look at mitigation tools. They will use EERPAT. They have a spreadsheet of expected GHG reductions when looking at different options. This is based on a lot of literature review. To reiterate, it is an art and a science. We are dealing with the limitation of MOVES and complete streets. When you run a complete street through MOVES, it shows a worse outcome, yet complete streets meet our goals. Should we move away from MOVES and adopt more of a spreadsheet model? Colorado is right in the middle of this process now.

Margi said this is timely given the federal infrastructure bill and the focus on complete streets.

1.02.23: Margi invited Kyung-Hwa Kim to talk about their processes and tools and how they help with decision-making in the Atlanta region. Kyung-Hwa shared slides describing models and modelling. She made several points including that there are many factors that impact travel demand including economic, but what is measured are accessibility and mobility. Travel modelling cannot reflect the full reality. She reviewed MPO modeling history. She said we need separate models to understand. She said they use the activity based model and also the three-based model for the purpose of analyzing. She concluded saying TIP project evaluation and prioritization are important.

1.12.21: Margi noted that no one has talked about how fleet assumptions fit into their analysis, at region, state or project level. She asked Professor Handy to weigh in on where fuels fit, or don't fit into the induced demand analysis.

Susan Handy said the California Air Resources Board (CARB), in its efforts to meet targets to reduce GHG, concluded that even a very aggressive effort to convert to electric vehicles is not enough; it is also necessary to reduce vehicle miles traveled. They are coming out with a new scoping plan. Regardless of what happens to the fleet, we need to reduce how much people are driving. There is a life cycle of emissions attributed to driving. It is not just about what comes out of the tailpipe; it is also about manufacturing the car and tires, building the roads. [2022 Scoping Plan Documents | California Air Resources Board]

Margi asked, in their study of induced demand, do they hold fleet assumptions solid or do they focus solely on the VMT aspect?

Susan responded that she uses the term induced travel. Aside from inducing changes in land use or promoting growth in a region, shifts in travel will occur when there is change in the capacity of the highway system. They created the estimator for change in VMT and for change in highway capacity and it doesn't look at fleet mix.

1.16.18: Margi asked Erik Sabina about Colorado's inputs on fleet. He said that Colorado's energy office developed a target of 940,000 light duty EVs on the road by the year 2030, compared to about 5 million total vehicles on the road. It has been challenging with stakeholders to communicate that this number is more impactful now than it will be in the future. For example by 2050, they hope that 100% of light duty vehicles will be EV. They use these numbers in the background for other analysis.

1:18.25: Margi asked Daniel if MPOs use different approaches and assumptions in modeling related to GHG emissions. He replied that at Metro, they asked if they could isolate the assumptions about EV growth in households versus all other vehicles on the road. New York State has used the VisionEval model to look at impacts on the EV market and growth of GHG emissions.

1.20.35: Eric Sundquist said they are in VMT and less in fleet mix. We will not know the exact answer. Various uptakes of EVs usually leave us behind, rather than ahead of whatever the scenario is. He suggested estimating conservatively and go from there. On SB 375, they are not meeting their goals and Portland is not meeting their goals.

1.22.01: Kyung-Hwa said it is complicated. It is related to economics, the demand and consumption. A crucial question is, what is our uncertainty? Narrow the uncertainty through assumptions.

1.23.26: Margi asked if anyone was monitoring progress. How do you monitor progress? Rebecca replied that it is not as simple as putting up an air quality monitor. They have committed to doing annual reports and every three years, a comprehensive look. It is challenging to detect how much change is occurring when looking at issues like land use. Margi asked, is progress based on specific strategies to reduce GHG or is it actual numbers compared to planning goals? Rebecca replied they would generate a CO2 equivalent number for the light duty fleet and compare that to the goal. The rule for 2030 would reduce 1.5 million metric tons.

1.25.38: Eric Sundquist said they monitor at a gross level and that they are going in the wrong direction. They've legislatively required analysis. The SB 150 report, AB 285 talk about why they are getting bad results. There is the GHG, VMT, what are is being built and why, where is the money going, what are the financial/policy/legal/institutional/educational constraints that are pushing in the wrong direction? He mentioned there are two recent reports that could be helpful. Margi said Molly Cooney Mesker will send out these reports. Reports:

- California Transportation Assessment Report - Pursuant to AB 285
- DRAFT 2022 PROGRESS REPORT (ca.gov)

1.28.18 – 1.36.21: **Break**

Facilitated Q&A between panelist experts and Metro Council and JPACT members

1.36.22: Margi invited Metro Council and JPACT members to ask questions of the panel.
Councilor Hyzy thanked the panelists and noted how useful this context and modeling information is for her as an elected official. She said she wants to do the climate work right and well and not in a way that feels imposed, but that invites everyone in. There is tension around induced demand – what is the best response? What does modelling show that induced demand will do in terms of addressing climate issues and reducing GHGs? How do we, as a region, most effectively think about it? There are multiple mega projects coming up. She said she advocates for true solutions for problems, not the usual, not necessarily comprehensive solutions.

Susan said there are great resources that explain how induced travel works, including her lecture through the National Center for Transportation and videos on YouTube. She said it is a basic economic principle. If you expand highways, you reduce the price of driving. If you reduce the price, people will do or consume more of it. With driving, decisions revolve around destinations, mode and over the longer term, live/work locations and what kind of land development happens where. All impact VMT. Travel demand models do not do a good job of measuring these factors, hence the need for the induced travel calculator. If the goal is to reduce VMT, we should not expand the capacity of the highway or roadway system. All of the evidence shows this. We are overselling to the public that highway expansion is a solution to congestion. It may reduce congestion in the short run, but the highway capacity will fill up again.

1.43.50: Eric Sundquist added that there is a vicious cycle effect - as there is more auto-centric development, it undercuts work on other modes: transit, walking, biking. There is not enough money for transit to serve low density development and employment sites that occur alongside highways. Auto-centric development causes a mode shift away from transit, walking and biking.

1.45.11: Kyung-Hwa noted uncertainties include not knowing the future location of housing and types of land use. Autonomous vehicles are coming and people are teleworking. Despite people moving to the suburbs in Atlanta, there is still congestion. There are no good predictions, but scenario testing provides a glimpse of what might or might not happen.

1.46.24: Margi asked Colorado panelists if they are taking into account induced demand.
Erik Sabina said the virtue of their large activity-based model list is that it covers 6 elements of induced demand. The activity-based models covers 5 of them; they illuminate inter-relationships and effects. If driving is so dominant, it pushes other modes to the sidelines. A difficulty remains with the land use effect, which is very complex. Land use is one of the six elements. They do scenarios that include land use to illustrate a range of possibilities to policy makers.

1.49.00: Councilor Lewis asked about the effectiveness of modeling GHG at the project level. She mentioned diversionary impact – shifts of modality but also shifts of corridor. Are we diverting GHG emissions from a highway to a neighborhood street?

Kyung-Hwa said the Atlanta Regional Commission has a very detailed way of understanding and modeling the pollutants at a link level, using a tool consistent with the travel demand model to understand the impact the diversion will create. They also have a project level model, a simple spreadsheet to demonstrate air quality impact. She said sometimes they need to do a comprehensive model to get a result on the network fatalities but some can be dealt with at a smaller, project scale.

Eric Sundquist said with GHG it doesn't where it's emitted, but particulate emissions do matter. For example, a highway widening diverts traffic from a neighborhood, reducing safety and other impacts but raising GHG. Under the statute, they need to weigh impacts and mitigate. Models are really about distributing traffic on the network. To the extent that the model is granular enough to show neighborhood effects, they would look at that as well as countervailing effects. They can look at different project alternatives, scope the project, and decide if it can go forward or how to mitigate.

1.54.02: Councilor Lewis asked about getting a level of granularity in a project, or is it only possible once it has gone through NEPA? Eric Sundquist replied that it is possible to do it sooner but because NEPA kicks in after the alternatives have been selected, it is kind of backwards. They are trying to switch the order by redoing purpose and need statements to encompass the environmental outcomes.

Margi noted that in California, the California Environmental Quality Act (CEQA) is the state equivalent of NEPA.

Erik Sabina added that the tools are available to do project level analysis. It takes a multi set of tools including the larger models we've been discussing. Larger level models will measure the effects of diversion. Simulation models can look at things like road design elements.

1.57.10: Councilor Rosenthal said the price of gas is key factor in the choice to drive, yet there is also pent up demand due to the pandemic. Have models been used to identify the impacts of the increase of gas prices? How much GHG reduction could we get going forward if gas prices continue to rise to European rates? Will the increase in gas prices be a significant factor in decreasing GHG?

Kyung-Hwa replied that we can estimate people's propensity of how they will react to gas price increases before the prices go up. We observe their behaviors through household surveys or transit board surveys; they provide historical information and help us estimate their propensity for choice of travel mode and time of travel. The model will not predict correctly on this question, but if we change sensitivity to high prices, the result will change. No one knows if gas prices will stay up and if this will be a significant factor in decreasing GHGs.

Eric Sundquist added that this question is more along the lines what Susan shared on induced travel and short and long term elasticities. There has been research on travel outcomes based on gas prices. This can be added to the model, but it is a lot of work leading to a false outcomes. You might look at doing something literature or broad based.

Susan added that there is a lot of research that indicates that elasticity is smaller than you would think; people don't change their behaviors and often, because many don't have a choice. They have to drive so they adapt to the higher price. Research has been done on the range of price changes that have occurred in the American reality. We don't know what the impact of extreme changes will be.

2.04.00: Margi mentioned that Metro completed a congestion pricing study using scenarios which compared tolling to VMT tax to other tools.

2.04.57: Mayor Steve Calloway said we have hours of congestion that creates GHG. At what point is there benefit to adding an auxiliary lane or widening, to increase efficiency and decrease GHG?

Kyung-Hwa asked if this would be more an engineering level analysis, a micro-simulation.

Margi said that you could run into a conflict looking at the travel demand model versus NEPA analysis, which uses a more granular model. How do you reconcile these?

Susan said there is a tradeoff between traffic flow and the induced travel. Travel speed will increase immediately after construction, but do we account for the extra congestion and emissions caused by construction? Traffic flow will speed up but this will induce additional driving. There is a need to take into account both, but there is not a good net assessment of benefits.

Rebecca said she appreciated the question. Colorado is a rapidly growing state with a lot of people sitting in traffic. She said it depends on the corridor. They are working on lane balancing, where two lanes increase to three then drop back to two lanes. In other corridors, they widen the highway and the traffic levels initially improve, then come back to congested levels five years later. For this reason, in the metro areas they look at managed lanes or improving transit.

Margi recalled that Director Shoshana Lew, in her introduction, talked about bus rapid transit as a mitigation that is used by Colorado DOT.

2.11.00: Councilor Gonzalez said projects and mega projects take a life of their own because of legislative mandate or the DOT. Are we at a point where climate modeling as a performance tool has done enough to change/alter projects across the country, or is it too new to really model for, so projects that were going to happen, happen anyway? As climate modeling is advancing across the country, how is it impacting, improving or stopping projects?

Kyung-Hwa said that at the Regional Commission they adopted a regional evaluation performance measure that includes GHG. For every project, they look for a quantified GHG benefit. It is hard to move the needle but they try to account for or understand the impact of large and small projects.

Eric Sundquist added that the tools are there but that this group is the outlier. Most of country is not doing this, so there are no outcomes but where it is being done, there are some good outcomes. There is increasing counterweight to institutional pressure to widen highways. There are project examples. It is not for lack of technical tools; it is lack of political will.

2.15.54: Margi asked panelists for lessons learned, advice for Metro or takeaways.

Dan said that given the interest in induced demand, project level analysis and work at the regional level, there is a need more than one tool.

Erik Sabina said using better modeling tools will pay dividends. For policy, aim for clear discussions to help know what the limitations are. Do not be paralyzed by lack of perfect analysis. You can make a lot of progress with less than 100% perfect numbers. Rebecca added that they took the leap and are seeing results. Keep the tent broad and the stakeholder group diverse. They had a lot of people who were upset, they took a lot of time talking to them, and they have made progress as a state.

Eric Sundquist reiterated that a lack of precision exists in all older tools. Given the uncertainties and lack of precision, assume that any highway widening will be eaten up by new demand in 5-10 years with a net increase in VMT and GHG, plus bring back all congestion and include impacts on adjacent neighborhoods. Have people who advocate for capacity improvements tell you why it is not true. Have them prove; be more skeptical.

Susan said we do modeling for statutory requirements and to make decisions but the modeling tools are imperfect and have limitations. There has been much false precision historically. They don't tell us what to do. We should be deciding what kind of future we want and work towards that future.

Kyung-Hwa wrapped up, saying we are all facing the same challenges. There is a need to work together and not re-invent the wheel. Go forward to the future we want, knowing modeling cannot solve all issues. When we work together we make a better region and society.

Margi thanked the panel for their time and sharing of resources, and thanked the audience.

JUNE 2022

2023 Regional Transportation Plan Update
Background on Climate Action in Oregon and the Greater Portland Region's Climate Smart Strategy

Prepared for members of the Transportation and Climate Expert Panel

Introduction

Climate change is the defining global challenge of the 21st century. And as the recent increase in climate-induced wildfires and extreme weather events has demonstrated, it is likely to have significant impacts on the Portland region.

The transportation sector is the largest contributor to greenhouse gas emissions in Oregon.[1] It is therefore a key focus of the greenhouse gas reduction efforts statewide and in the greater Portland region. Metro and the Oregon Department of Transportation (ODOT) each have a history of climate planning and an established "carbon reduction strategy" to reduce greenhouse gas (GHG) emissions from the transportation sector.

In 2007, the Oregon Legislature first set statewide climate change goals to reduce emissions by at least 10 percent below 1990 levels by 2020 and at least 75 percent below 1990 levels by 2050.[2] The goals apply to all emissions sectors – energy production, buildings, solid waste and transportation. More recently, Executive Order 20-04 set new greenhouse gas emissions reduction goals that call for the State of Oregon to reduce its GHG emissions at least 45 percent below 1990 emissions levels by 2035 and at least 80 percent below 1990 levels by 2050.[3] These updated goals are consistent with the reductions that climate scientists now believe are necessary to avoid catastrophic climate change impacts.

In 2009, the Oregon Legislature enacted HB 2001 directing Metro to develop and adopt a climate plan to reduce GHG emissions from light duty vehicles. The Legislature further directed the Land Conservation and Development Commission (LCDC) to adopt GHG emissions reduction targets for light duty vehicles for all of Oregon's metropolitan areas, although the Portland region was the only region with a mandated GHG reduction target. In 2010, the Oregon Legislature directed the ODOT to work with Metro and other metropolitan planning organizations, other state agencies and local governments to adopt a statewide transportation strategy on GHG emissions aimed at achieving the goals adopted by the Legislature in 2007.

In 2014, the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council adopted the Climate Smart Strategy[4] with broad regional support from community, business and elected leaders. Approved by LCDC in 2015, the strategy was based on extensive stakeholder and public input, scenario planning and analysis. As part of the process, Metro conducted detailed modeling and analysis of various greenhouse gas scenarios and identified the types of transportation-related mitigation strategies that would have the greatest potential for reducing greenhouse gas emissions in the long term. This informed the Climate Smart Strategy that was ultimately adopted and continues to guide the region's response to the climate crisis today.

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[1] https://www.oregon.gov/deq/aq/programs/Pages/GHG-Oregon-Emissions.aspx
[2] House Bill 3543, enacted on August 7, 2007. https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2007orLaw0907.html
[3] https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf
[4] https://www.oregonmetro.gov/climate-smart-strategy

Adopted in 2014, Metro's Climate Smart Strategy is grounded in Metro's land use goals and adopted 2040 Growth Plan. The Regional Transportation Plan is a key tool for the greater Portland region to implement the adopted Climate Smart Strategy and achieve the GHG reduction targets adopted for the region by the Land Conservation and Development Commission.

The strategy outlined how the Portland metropolitan region will reach targets to reduce transportation-related greenhouse gas emissions from light duty vehicles. The regional Climate Smart Strategy includes a set of policies, strategies and near-term actions to guide how the region moves forward to integrate reducing greenhouse gas emissions with ongoing efforts to create the future we want for our region. It is grounded in Metro's land use goals and adopted 2040 Growth Plan and implemented through the Regional Transportation Plan.

The Climate Smart Strategy includes a wide-range of strategies for reducing GHG emissions from light duty vehicles, many of which are not funded or are underfunded. The Climate Smart Strategy was updated in 2018 as part of the Regional Transportation Plan update and will be updated again in 2023 to ensure ongoing compliance with Oregon's GHG emissions reduction targets.

Targets for the year 2035 were first set by the LCDC for each of Oregon's metropolitan areas in 2011. LCDC set additional targets for each metropolitan area through the year 2050 in 2017, and recently adopted temporary rules to support achievement of these targets through the statewide Climate Friendly and Equitable Communities (CFEC) rulemaking. The targets adopted for the Portland region are to reduce greenhouse gas emissions from light vehicle travel (from 2005 levels) as follows:

- A 20 percent reduction for the year 2035
- A 25 percent reduction for the year 2040
- A 35 percent reduction for the year 2050
- Targets for the years 2041-2049 steadily increase from 26 to 34 percent in order to maintain progress toward the 2050 target.[5]

These targets reflect additional greenhouse gas emissions reductions needed beyond what was expected to be achieved through State-level policies and actions identified in the Statewide Transportation Strategy (STS) that aim to advance Oregon's transition to cleaner, low-carbon fuels and zero and low-carbon emissions vehicles. At the state level, the Oregon Transportation Commission formally adopted the STS into the Oregon Transportation Plan in 2018. The STS resulted from a state-level scenario planning effort that examined all aspects of the transportation system, including the movement of people and goods, and identified a combination of strategies to GHG emissions. The STS identified a variety of effective emissions reduction strategies at the statewide level in transportation systems, changes in vehicle and fuel technologies, and compact urban land use patterns served by transit, walking and biking connections in the state's eight metropolitan areas.

[5] Oregon Department of Land Conservation and Development, Climate-Friendly and Equitable Communities Proposed Amendments to OAR 660-044 (Division 44), May 5, 2022, p. 6. https://www.oregon.gov/lcd/Commission/Documents/2022-05_Item_3_CFEC_Attachment_E_Draft-Rules-for-Division-44.pdf

GHG Forecasting and Monitoring

Since 2010, ODOT and Metro have been developing, testing, and refining tools to measure and forecast transportation-related GHG emissions. Formally called GreenSTEP and Metropolitan GreenSTEP, the VisionEval Framework includes both a statewide (VE-State) and a metropolitan (VE-RSPM) version that is used in Oregon.[6] These are essentially the same suite of tools that the State of Oregon used to set the region's greenhouse gas reduction targets in 2012 and continues to be used to help monitor progress towards Oregon's legislatively mandated GHG reduction goals and implementation of the Statewide Transportation Strategy.

In 2018, ODOT reviewed and prepared a monitoring report on progress to date in implementing Oregon's STS, which sets a vision for meeting the State's transportation-related GHG reduction targets.[7] According to the report, "Oregon is on track to reduce GHG emissions by 15-20 percent below 1990 levels by 2050, which falls far short of the STS vision."[8] The report also evaluated the state's progress on different types of GHG reduction strategies and found that:

- implementation of all transportation options and land use strategies was on track or moving in the right direction.
- progress on intelligent transportation systems, pricing, and clean fuels strategies was mixed, with some strategies moving in the right direction and others making no progress or trending in a negative direction.
- vehicle technology strategies are "not making a lot of progress in the direction of the STS vision;"[9] the STS found that there has been slightly more negative change than progress in this category.

Metro conducted a similar review of the Climate Smart Strategy in 2018 as part of the update to the Regional Transportation Plan (RTP). Appendix J to the 2018 RTP showed that Metro is implementing the actions called for in the Climate Smart Strategy, as required by OAR 660 Division 44, and found that our region was making satisfactory progress implementing the Climate Smart Strategy and was on track to meet its targets for 2035 and 2040.[10] Greenhouse gas emissions analysis conducted for the 2018 RTP relied on use of the regional travel demand model (RTDM) and MOVES – the Environmental Protection Agency (EPA) approved model for forecasting on-road mobile source greenhouse gas emissions in the region. Significant methodological differences in how VisionEval and MOVES estimate on-road vehicle emissions do not allow for direct comparison of forecasted on-road vehicle emissions results. As a result, while the RTDM and MOVES analysis forecasted GHG emissions, the analysis could not be used to demonstrate progress toward the GHG reduction targets defined in OAR 660-044-0060. Finally, Metro's review found that more investment, actions and resources are needed to ensure the region achieves the mandated greenhouse gas emissions reductions. In particular, additional funding and prioritization of Climate Smart Strategy investments and policies that substantially reduce greenhouse gas emissions will be needed.

While ODOT analysis tools are focused at the state level, Metro is working with ODOT to build upon ODOT's VisionEval suite of tools to allow analysis at the regional level in support of the 2023 RTP update. The focus of this work is to allow a more detailed evaluation at the regional scale using transportation

[6] https://www.oregon.gov/odot/Planning/Pages/Technical-Tools.aspx#GreenSTEP
[7] ODOT, Oregon Statewide Transportation Strategy, 2018 Monitoring Report, April 19, 2018. https://www.oregon.gov/odot/Planning/Documents/STS-2018-Monitoring-Report.pdf
[8] ODOT 2018, p. 26.
[9] ODOT 2018, p. 22.
[10] Metro, Climate Smart Strategy implementation and monitoring, 2018 Regional Transportation Plan Appendix J, December 6, 2018. https://www.oregonmetro.gov/sites/default/files/2019/04/02/RTP-Appendix_J_Climate_Smart_Strategy_Monitoring181206.pdf

networks and behavioral models to better understand and manage the impacts of transportation policies and investments on GHG emissions and determine if the 2023 RTP is meeting GHG reduction targets. This work is intended to complement the state-level analysis tools currently available, and advance ongoing efforts to integrate GHG outcomes into the regional transportation planning process.

Looking Ahead

Much has changed since 2018. Metro is now beginning the 2023 RTP update amid increasing evidence of our changing climate and its impacts. Major climate studies have found that changes are stronger and are happening more rapidly than expected, and that emissions need to fall dramatically by 2030 to prevent irreversible global damage.[11] Oregon did not meet its 2020 goal to reduce emissions to 10 percent below 1990 levels; at last count emissions were roughly 10 percent above 1990 levels.[12] And though our region demonstrated it was on track to meet our greenhouse gas reduction targets in 2018, the global pandemic and other urgent challenges suggest we may now be falling behind implementing some of the policies and investments called for in the Climate Smart Strategy. In addition, the region is contemplating new and updated policies that should be considered for inclusion in an updated Climate Smart Strategy.

Since 2018, the State has adopted new policies and programs to support clean vehicles and fuels in response to Executive Order 20-04.[13] The Every Mile Counts Program and its coordinated STS Multi-Agency Implementation Work Plan are focused on reducing greenhouse gas emissions and implementing the STS. Recent actions include the formation of climate offices within ODOT and ODEQ and the statewide CFEC rulemaking by the LCDC and the Department of Land Conservation and Development (DLCD). In addition, several Oregon vehicles and fuels legislative actions and Environmental Quality Commission (EQC) rules are expected to be in place by the end of 2022 that will help greatly advance the STS goals to "clean up every mile" and associated air quality impacts:

1. Clean Car Standards Program (ZEV1) (EQC adopted in 2005)
2. Clean Fuels Program (CFP1) (HB2186, 2009)
3. Clean Electricity Standard (HB2021, 2021)
4. Advanced Clean Truck Rules (ACT) (EQC adopted in November 2021)
5. Climate Protection Program (CPP) (EQC adopted in December 2021)
6. Clean Fuels Program Expansion (CFP2) (EQC expected adoption in 2022)
7. Clean Car Standards Program Expansion (ZEV2) (EQC expected to initiate rulemaking mid-2022)

The first three are expected to achieve by 2026 a roughly 10 percent reduction in state GHG emissions. The Climate Protection Program is an overarching policy that will restrict sales of fossil fuel sales in the state across multiple sectors increasingly each year starting in 2022. The latter programs are critical to implementing that policy to ease the transition to a low carbon future for all vehicle groups. Some credit trading is allowed prior to 2030, which makes it hard to predict exact forecasts in the near term. The ZEV programs when fully implemented should roughly conform to the goals set out in SB1044.

Metro continues to explore opportunities to evolve and enhance its capabilities and approach to forecasting GHG emissions and monitoring progress implementing the Climate Smart Strategy. To further advance that work in support of the 2023 RTP update, Metro is hosting an Expert Review Panel on Transportation and Climate Planning and Modeling on June 22, 2022.

[11] Intergovernmental Panel on Climate Change (IPCC), Climate Change 2021: The Physical Science Basis, Summary for Policymakers, October 2021. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM_final.pdf

[12] Oregon Department of Environmental Quality, Oregon Greenhouse Gas Sector-Based Inventory Data. https://www.oregon.gov/deq/aq/programs/Pages/GHG-Inventory.aspx

[13] https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf

JUNE 2022

CLIMATE SMART STRATEGY

Metro

2023 Regional Transportation Plan Update

Background on Use of VisionEval and Key Transportation Assumptions for Climate Smart Strategy Proxy

Prepared for members of the Transportation and Climate Expert Panel

Background on VisionEval

In order to ensure that the 2023 Regional Transportation Plan makes meaningful and measurable progress in reducing greenhouse gas emissions, Metro and the Oregon Department of Transportation (ODOT) Climate Office collaborated to adapt the state-level VisionEval to operate at a regional-level. Formally called GreenSTEP and Regional Strategic Planning Model (RSPM), VisionEval is the essentially the same suite of tools that the State of Oregon has used to set the region's greenhouse gas reduction targets in 2012 and 2017, and monitor progress implementing the Statewide Transportation Strategy since 2013.

Since 2013, ODOT has used a state-level version of VisionEval that uses county-level data as inputs. To support the 2023 RTP Update, the ODOT and Metro team developed a regional-scale version of VisionEval that uses regional, sub-regional, and census tract level data as inputs. The goals of this effort are to:

- Adapt the state-level version of VisionEval to create a regional-scale VisionEval to inform local and regional GHG planning efforts in the Portland region.
- Evaluate the potential effectiveness of new and emerging strategies to reduce GHG emissions that were not adopted in the 2014 Climate Smart Strategy or 2018 RTP – especially congestion pricing, a proven emissions reduction strategy that is moving forward in our region.
- Examine what reductions in vehicle miles traveled (VMT) per capita are necessary to meet our greenhouse gas emissions reduction targets, assuming different rates of transition to cleaner, low and zero carbon fuels and more fuel-efficient vehicles.
- Provide an updated reality check on the assumptions underlying in the Climate Smart Strategy by comparing them to ongoing developments in clean fuels, clean vehicles, and RTP implementation during the 8 years since the strategy was adopted, and particularly during the 4 years since ODOT and Metro last assessed the implementation of their respective climate strategies.
- Better understand how the tools used to analyze GHG emissions account for different policies and strategies to help ensure that emissions reductions that are forecast in the RTP actually occur.
- Inform how best to forecast GHG emissions in the 2023 RTP update, recognizing limitations in the various tools available.
- Frame a regional discussion on what changes to the Climate Smart Strategy may be needed to stay on track, and even accelerate achieving the region's greenhouse gas emissions reduction targets.

Climate Smart Strategy: review of key transportation assumptions

The first phase of this work focused on examining whether the region and state are making progress toward the many milestones that must be met for Climate Smart Strategy to be a success. Staff developed two scenarios in VisionEval – a proxy of the adopted Climate Smart Strategy, slightly updated to be consistent with the more detailed inputs in the new regional-scale version of VisionEval, and a scenario that extrapolates current trends, and compared these two scenarios order to analyze progress in implementing the Climate Smart Strategy as reflected in the 2018 Regional Transportation Plan.

Through the 2023 Regional Transportation Plan update, future tasks will assess whether the assumptions underlying the Climate Smart Strategy need to be updated based on more recent information, estimate the change in GHG reductions due to changing assumptions, and if needed, to explore additional actions that can help the region stay on track to meet its GHG reduction targets.

The two scenarios developed for the first task of the analysis are:

Reference Case Scenario which assumes that current trends in Oregon's transition to cleaner fuels, more fuel-efficient vehicles (as assumed in the 2013 Statewide Transportation Strategy), and transportation demand management continue into the future, and does not account for future actions to reduce GHG emissions. The Climate Smart Proxy Scenario (described below) will be compared to this scenario in order to assess whether the Climate Smart Strategy as adopted in the 2018 RTP is on track to meeting the region's GHG reduction targets.

A **Climate Smart Strategy Proxy Scenario** representing the 2014 Climate Smart Strategy as currently adopted in the 2018 RTP.[1] This scenario is based on adopted policies and plans, including:

- assumptions about Oregon's transition to cleaner, low carbon fuels and more fuel-efficient vehicles from the 2013 Statewide Transportation Strategy[2] and
- assumptions about implementation of VMT-reducing strategies in the 2018 RTP.

This scenario produces greater GHG reductions than the Reference Case because it assumes that policies and plans that have yet to be fully implemented will drive emissions downward in the future. We also analyzed each component of this strategy, estimating the potential GHG emissions reduction from each individual change in assumptions between the Climate Smart Strategy proxy scenario and the Reference Case. This analysis will allow an evaluation of whether the key assumptions underlying the Climate Smart Strategy (as reflected in the 2018 RTP) are still reasonable, and to better understand the impact

[1] The Climate Smart Strategy scenario is a "proxy" because the analysis used a different tool that draws on different assumptions and data to estimate GHG assumptions than were used when analyzing GHG emissions during development of the 2014 Climate Smart Strategy and subsequent analysis conducted during the 2018 RTP update. During development of the Climate Smart Strategy, Metro worked in partnership with ODOT to develop and use the Metropolitan GreenStep tool to forecast GHG emissions reductions from light duty vehicles. During the 2018 RTP update, Metro used a separate, more detailed set of network-based tools, including the regional travel demand model in conjunction with the federally-approved Environmental Protection Agency (EPA) tool, MOVES, to forecast greenhouse gas emissions reductions. Due to significant methodological differences in how GreenStep/VisionEval and MOVES estimate on-road vehicle emissions, the results of the 2018 RTP GHG analysis could not be compared directly with GHG analysis conducted during development of the Climate Smart Strategy. Though the assumptions used in creating this scenario mirror those used for the 2018 RTP (Climate Smart Proxy) as closely as possible, neither the assumptions nor the results are identical because of significant underlying differences between GreenStep, VisionEval and our travel model which do not allow for direct comparison of forecasted on-road vehicle emissions results from each GHG modeling tool.

[2] https://www.oregon.gov/odot/Planning/Pages/STS.aspx. In 2018, the Oregon Transportation Commission adopted an amendment to incorporate the STS as part of the Oregon Transportation Plan (https://www.oregon.gov/odot/Planning/Pages/Plans.aspx)

that changing individual policy assumptions would have on achieving the region's GHG reduction targets. **Table 1** describes how the key assumptions underlying state and regional climate plans vary between the reference case and the climate smart strategy proxy scenarios.

Table 1: Key transportation assumptions, by scenario

VisionEval Input	Reference case – 2035 assumptions	Climate Smart Strategy Proxy – 2035 assumptions	Notes on current assumptions
Gas Prices	Gas prices are $2.47 per gallon[3]	Gas prices are $6.75 per gallon	
Electricity Prices	Electricity prices are $0.14/kWh	Electricity prices are $0.23/kWh	
Commercial Fleet Age	The average lifetime of commercial vehicles is 9 years	The average lifetime of commercial vehicles is 7.6 years	Commercial vehicle lifetimes currently average 14.2 years and are increasing.[4]
Fleet Electrification	7% of commercial trucks are hybrid or electric	50% of commercial trucks are hybrid or electric	
Commercial Fleet Share	80% of light-duty commercial vehicles are trucks/SUVs and 20% are cars	20% of light-duty commercial vehicles are trucks/SUVs and 80% are cars	58% of light-duty commercial vehicles are trucks, and that percentage has been increasing.[5]
Household Fleet Share	42% of light-duty passenger vehicles are trucks/SUVs and 58% are cars	20% of light-duty passengers vehicles are trucks/SUVs and 80% are cars	80% of new U.S. vehicle sales are trucks, and that percentage has been increasing.[6]
Household Vehicle Fleet Age	The average lifetime of passenger cars is 10.7 years / 11.54 years for trucks/SUVs	The average lifetime of passenger cars is 7 years / 7.7 years for trucks/SUVs	Passenger vehicle lifetimes currently average 11.9 years and are increasing.[7]
Transit Service	Transit service hours continue to grow at current rates.	Transit service hours grow at the rate envisioned in the RTP, leading to ~20% more	Between 2010 and 2019, transit service hours grew at roughly half the rate of the

[3] Vision Eval uses 2010 dollars for price inputs.

[4] Brusseau, D., Aging Trucks Create More Service Opportunities, NTEA News, https://www.ntea.com/NTEA/Member_benefits/Industry_leading_news/NTEANewsarticles/Aging_trucks_create_more_service_opportunities.aspx?fbclid=IwAR3mkimdcKilEbdqwvYYSwODX5Hop5g6odQWuQdIt9cJ37I30kwxgv209PU

[5] Bureau of Transportation Statistics, U.S. Automobile and Truck Fleets by Use, https://www.bts.gov/content/us-automobile-and-truck-fleets-use-thousands

[6] FRED Blog, Long-term trends in car and light truck sales, March 15, 2021. https://fredblog.stlouisfed.org/2021/03/long-term-trends-in-car-and-light-truck-sales/

[7] Bureau of Transportation Statistics, Average Age of Automobiles and Trucks in Operation in the United States, https://www.bts.gov/content/average-age-automobiles-and-trucks-operation-united-states

VisionEval Input	Reference case – 2035 assumptions	Climate Smart Strategy Proxy – 2035 assumptions	Notes on current assumptions
		service than under the Reference case	population.[8] The region plans to increase transit service significantly,[9] but agencies have cut service during the COVID pandemic.
Pay-As-You-Drive Insurance	18% of the region uses pay-as-you-drive (PAYD) insurance	40% of the region uses PAYD insurance	Both scenarios assume that 6% of drivers use PAYD in 2020.
Employer-based Travel Options Programs	5.5% of workers receive regular travel options programming	40% of workers receive regular travel options programming	
Household-based Travel Options Programs	<1% of households receive regular travel options programming	45% of households receive regular travel options programming	

[8] TriMet, TriMet Service and Ridership Statistics, November 30, 2021. https://trimet.org/about/pdf/trimetridership.pdf.

[9] Metro, Regional Transit Strategy, 2018 Regional Transportation Plan, December 6, 2018.

TRANSPORTATION RESEARCH AND MODELING SERVICES

Metro transportation modeling

Transportation modeling is an essential component of planning for regional infrastructure improvements, such as highway and transit projects. The process of travel demand forecasting uses what we know about the existing world to predict what conditions will be like in the future. It is not a guess or an estimate, but a projection based on empirical data and foreseeable circumstances. The transportation modeling used in the Portland metro region is peer-reviewed and validated against observed data. Past model performance on project forecasts is another relevant indicator for model validation.

To understand how people will make trips, modelers look at the reasons why people travel. The model takes into consideration the real choices made by residents in our region. This information is collected from rigorous surveys. Metro's last survey--the Household Travel Behavior Study--tracked 6,000 households to understand how factors such as age, income, children, car ownership, and transportation infrastructure characteristics affect travel choices.

Data input into the transportation model includes population and employment, both existing conditions and forecast, in a way that is consistent with local comprehensive plans as well as roadway and transit routes.

In the model, our region is divided into over 2,000 discrete geographic areas called transportation analysis zones. Census data, land characteristics, economic factors and accessibility measurements feed into land use models that project the number of households and jobs located in each zone.

Metro uses a standard four-step modeling process for travel demand forecasting. This four-step process consists of the following parts:

1. Trip generation
2. Trip distribution
3. Mode choice
4. Trip assignment

Trip generation: Do I want or need to take a trip?

The first step in the modeling process forecasts the number and types of trips generated from each transportation analysis zone. The projection is based on the number and demographic profiles of households and employment in each zone.

Households are separated into 64 profiles stratified by size, income and age. Employment is categorized into nine types, ranging from service sector and retail, to finance and agriculture. Using behaviors identified in the Household Travel Behavior Study, the model forecasts the likelihood of households to make certain types of trips based on household type and employment mixes in each zone. Trip types are classified as work, shopping, recreation, college, school, and other.

Trip distribution: Where do I want to go?

Next, the model predicts where the trips produced in the first step are destined. Each zone's availability of attractions—work, shopping, recreation and other opportunities—and the accessibility (access to auto networks and transit) from the zones where trips are produced determines where trips are likely to go.

continued

For more information on transportation modeling in the Portland Metro region, contact the Metro Research Center at 503-797-1915.

Metro

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

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

Mode choice: How will I get there?

As in the real world, travelers in the model have many transportation choices, including walking, biking, driving alone or with others, and walking or driving to transit. For the model to forecast travel demand with a reasonable degree of confidence, it must account for why people make those decisions.

The model considers the following factors when determining mode choice:

- Cost - What are the expenses of operating and maintaining a car? Are there parking expenses? How much does transit cost? Are there tolls?
- Travel time - Is it faster to drive, take transit, walk or bike?
- Auto availability - Do I have access to a car?
- Transit access - Can I get to transit easily?
- Urban design - Am I in a high-density, mixed-use area where I'm more likely to walk or bike?
- Socio-economic relationships - What is my household income? Are there as many cars as employed people in my household?

Trip assignment: What route should I take?

The model uses data from the previous three steps to simulate the way people will travel. For auto trips, the model assigns traffic to streets in specified time periods. The model assumes the availability of multiple routes between origins and destinations, accounting for congestion.

The base year assignment of vehicle trips is validated against actual traffic counts to ensure that the model is performing well. To forecast the transit trips route, the model considers the time segments of the journey, including walk time, wait time and time in vehicle. Again, the results of a model run are validated to actual transit boarding counts.

Model review

Transportation modeling plays a crucial role in funding and implementing transit projects. Therefore, the Federal Highway Administration and Federal Transit Administration require regular reviews of the travel demand model to ensure that it meets federal guidelines. Metro's transportation model and its outputs are regularly peer-reviewed by modeling professionals from academia, consulting firms, and metropolitan planning organizations, as well as the Federal Transit Administration.

For more information on transportation modeling, visit Metro's Transportation Research and Modeling Services program:

www.oregonmetro.gov/transportationmodeling

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

June 22, 2022 Climate Smart Expert Panel Registrant List

Adams	Steve	City of Milwaukie
Albrecht	Gary	Clark County Public Works
Alfred	Roger	Metro
Amiton	David	Oregon Department of Transportation
Andersen	Michael	Sightline Institute
Anderson	Jovi	Bend Metropolitan Planning Organization
Appanaitis	Garth	DKS Associates
Appenbrink	Nadine	
Armstrong	Tom	City of Portland
Ayers	Connor	Metro
Barker	Ken	volunteer
Barrett	Andrew	Wilsonville
Bassok	Alon	Washington State Department of Transportation
Bates	Jordan	Representative Maxine Dexter
Bayer	Maureen	Jordan Ramis
Bell	Katherine	Oregon DOT
Benoit	Emily	City of Vancouver
Berry	Jessica	Multnomah County
Bettinardi	Alex	Oregon DOT
Bezner	Mike	Clackamas County
Blackhorse	Summer	Metro
Bolen	Glen	ODOT
Bosa	Peter	Oregon Metro
Boyd	Allison	Multnomah County
Boylan	Kevin	City of Beaverton
Bradway	Margi	Oregon Metro
Breakstone	Aaron	Metro
Brey	Hailey	
Bruun	Scott	Oregon Business & Industry
Buchanan	Paul	
Buehrig	Karen	Clackamas County
Callaway	Steve	City of Hillsboro
Campos	Jennifer	RTC
Carlson	Suzanne	ODOT
Celentano	Andrea	Metro
Cheek	Maddie	City of Tualatin
Cho	Grace	Metro Planning and Development
Christopher	Basil	
Clarke	Kelly	Lane Council of Governments
Collins	Tim	Metro
Cooney-Mesker	Molly	Metro
Cooper	Colin	City of Hillsboro
Craddick	Shirley	Metro Council/JPACT Chair
Cunningham	William	City of Portland Bureau of Planning and Sustainability
Daleo	Sharon	City of Portland
Dartnell	Camilla	
David	Lynda	RTC

Dea	John	City of Gresham
Deffebach	Christina	Washington County
Degner	Andrew	Portland Metro Regional Water Consortium
Deke	Tyler	Bend MPO
DeMarco	Lyndsey	Air Sciences Inc
DePriest	Patrick	ODOT
DePriest	Patrick	ODOT
Dill	Jennifer	Portland State University
DiLoreto	Greg	
Dirks	Greg	City of Wood Village
Dobson	Cassandra	Parametrix
Dolata	Mat	WSP
Dorfman	Rachel	Lane Council of Governments
Drake	Markley	Happy Valley
Dyar	Ryan	City of Milwaukie
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Elbel	Elizabeth	Oregon DEQ
Elias	Evan	Oregon Dept. of Energy
Ellis	Kim	Metro
Engelmann	Jessica	City of Beaverton
Farwell	Tracy	Better Energy LLC
Fenton	Kellie	
Flynn	Dan	U.S. Department of Transportation Volpe Center
Francis	Carley	WSDOT
Freels	Michael	Oregon Department of Energy
Frohning	Rebecca	
Fryer	Barbara	City of Cornelius
Garber	Sorin	Sorin Garber & Associates
Gonzalez	Juan Carlos	Metro Regional Government
Gregor	Brian	Oregon Systems Analytics LLC
Gudman	Jeff	
Hackett	Sarah	Oregon Department of Transportation
Hampton	Matthew	Metro
Handy	Susan	UC Davis
Hardesty	Jo Ann	Portland City Commissioner
Hesse	Eric	PBOT
Higgins	Jay	City of Gresham
Hogg	Mel	Portland Bureau of Transportation (PBOT)
Holmqvist	Ally	Metro
Holmstrom	Bill	State of Oregon
Holthoff	Michael	Oregon Department of Transportation
Hoover	Sylvan	Oregon Department of Transportation
Hunrichs	Lisa	Oregon Metro
Hurley	Peter	Portland Bureau of Transportation
Hyzy	Kathy	JPACT Clackamas Cities Rep
Hyzy	Kathy	JPACT
Iannarone	Sarah	The Street Trust

Ibrahim	Idris	
Isbell	Grayson	ODOT
Jackson	Raymond	MWVCOG
Jefferson	Dwight	City of Portland Oregon
John	Jennifer	Interstate Bridge Replacement Program - Parametrix
Johnson	Chris	Metro
Kaempff	Daniel	Metro
Kelley	Steve	Washington County
Kelly	Katherine	CITY OF VANCOUVER
Kennedy	Rebecca	City of Vancouver WA
Kim	Kyung-Hwa	Atlanta Regional Commission
Kloster	Tom	Metro
Knudson	Becky	Oregon DOT
Knudson	Anthony	Oregon DOT
Koper	Steve	City of Tualatin
Kransky	Gerik	Oregon Department of Environmental Quality
KRINKE	MARA	Parametrix
Krueger	Monica	Metro
KUBEJA	LUKAS	CJTN
Labbe	Ted	Urban Greenspaces Institute
Lacy	Cassie	City of Bend
Lalonde	Ginette	WSP USA
Lee	Tammy	PSU
Lem	Lewis	Port of Portland
LEPROWSE	RYAN	
Lew	Shoshana	Colorado Department of Transportation
Lewis	Christine	Metro
Lightsey-Walker	André	The Street Trust
Liljenwall	Sharon	Oregon DOT
Lorenzini	Jaimie	City of Happy Valley
Lyman	Kate	TriMet
Mai	Chi	Oregon Department of Transportation
Main	Eric	Oregon Health Authority
Mangle	Katie	Alta Planning + Design
Marchant	Bret	Greater Portland Inc
Martin	Shannon	City of Gresham
McTighe	Lake	Oregon Metro
Melson	Christopher	Louisiana Transportation Research Center
Mermin	John	Metro
Meyer	Cody	DLCD
Milam	Ronald	Fehr & Peers
Millar	Stephanie	ODOT
Moland	Abe	
Mooring	Jessica	Portland Bureau of Planning and Sustainability
Morgan	Brett	1000 Friends of Oregon
Morrison	Hannah	Portland Bureau of Transportation
Mros-O'Hara	Elizabeth	Metro

Murshed	Delwar	WSDOT
Nameny	Phil	City of Portland Bureau of Planning & Sustainability
Napoli	Andrea	Bend MPO
Neild	Pam	City of Portland
O'Brien	Tara	TriMet
Ocken	Julie	
Odermott	Don	City of Hillsboro
Olds	Jonathan	Washington State Department of Transportation
Orman	Michael	Oregon Department of Environmental Quality
Pagenstecher	Gary	City of Tigard
Patton	Thaya	Metro
Paykar	Victoria	Climate Solutions
Pederson	Cindy	Metro
Pepper	Amy	City of Wilsonville
Pepple	Karl	US EPA R10
Perrault	Ramona	Metro
Peters	Sarah	Fehr & Peers
Peters	Bill	Oregon DEQ
Prior	Garet	ODOT
Ramirez	Lucia	Oregon DOT
Ramos	Eduardo	Metro
Ransom	Matt	Southwest Washington Regional Transportation Cou
Rice	Carly	City of Gresham
Richardson	Carole	Plangineering LLC
Roberts	Stephen	Washington County
Roll	Josh	Oregon DOT
Rosenthal	Gerritt	Metro
Roth	Dave	City of Tigard
Routh	Steph	Sightline Institute
Royce	Francie	npGreenway
Ruen	Cameron	Clackamas County
Ruenjinda	Piyawee	
Sapunar	Kim	MWVCOG SKATS
Schlosshauer	Kari	City of Portland
Schuytema	Peter	Oregon DOT
Sherman	Brett	City of Happy Valley
Shoaf	Syd	Lane Council of Governments
Skiles	Michaela	Metro
Small	Rebecca	City of Vancouver
Smith	Chris	Portland Transport
Sosnovske	Julie	Washington County, OR
Stasny	Jamie	
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Sundquist	Eric	California Department of Transportation
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Tritsch	Emily	City of Tigard
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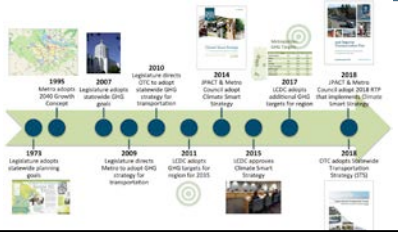
Webb	Dayna	City of Oregon City
Weidner	Tara	Oregon DOT
White	Rebecca	Colorado Department of Transportation
Wilcox	Robin	ODOT, Public and Active Transportation Division
Wilhelmsen	Zoë	Colorado Department of Transportation
Williamson	Tonia	North Clackamas Parks & Recreation District
Wills	Heather	WSP
Wilson	Kate	LCOG
Winans	Kiara	DEQ
Wind	Cory-Ann	Oregon DEQ
Windsheimer	Rian	Oregon Dept. of Transportation
Winter	Caleb	Metro
Wolff	Emily	WSP
Wright	Sara	

2023 Regional Transportation Plan Update

Climate and Transportation Expert Panel

June 22, 2022

History of reducing climate pollution from transportation in Oregon



2

Regional Greenhouse Gas Targets

per capita light vehicle greenhouse gas emissions reduction below 2005 levels (in addition to reductions anticipated from changes to fleet and technology)

OAR 660-044 adopted by the Oregon Land Conservation and Development Commission in 2011 and amended in 2017

Metropolitan area	2035 Target	2040 Target	2050 Target
Portland Metro[1]	20%	25%	35%
Albany	--	20%	30%
Bend	18%	20%	30%
Corvallis	21%	20%	30%
Eugene-Springfield[2]	20%	20%	30%
Middle Rogue	--	20%	30%
Rogue Valley	19%	20%	30%
Salem-Keizer	17%	20%	30%

[1] Required scenario planning, adoption and implementation
[2] Required scenario planning

3

2040 Growth Concept is our platform for local and regional climate action

Adopted in 1995

Implemented through adopted community and regional plans

Building toward six desired outcomes

4

Climate Smart Strategy

Regional policies and strategies for reducing emissions

Adopted in 2014 and approved by LCDC in 2015

5

Extensive, inclusive engagement built the Climate Smart Strategy

6

How were we doing in 2018?

We were making satisfactory progress if we fully implement the 2018 RTP, but recognized more work and funding needed

We exceeded Climate Smart targets for:

- land use and growth in 2040 mixed-use centers
- transit service hours
- households served by frequent transit service

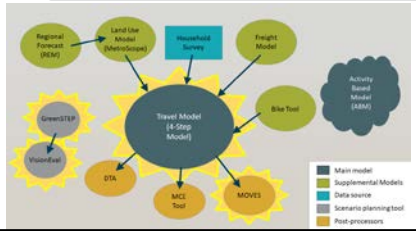
We fell short of RTP targets for:

- sidewalk and biking system completion
- tripling walking, biking and transit mode share
- reduced per capita vehicle miles traveled by 10 percent by 2040

oregonmetro.gov/rtp

7

Metro's Climate Analysis Toolbox



8

2040 Growth Concept (1995)

Region's first scenario planning effort

Travel Demand Model (early version)

MOBILE6 (air quality)

9

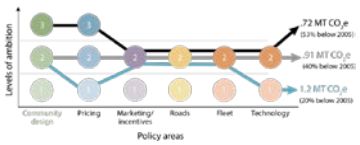
What is GreenSTEP?

A strategic planning tool that **estimates VMT and GHG emissions** based on demographic, roadway, fuel, and vehicle characteristics

10

Climate Smart Strategy Approach (2014)

Tested 144 combinations



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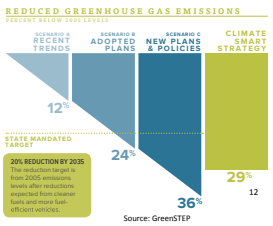
oregonmetro.gov/climatestrategy

Climate Smart Strategy Scenarios

144 scenarios narrowed to 3

3 scenarios narrowed to our preferred scenario



What is the travel model?

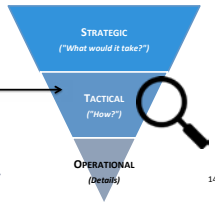
aka "the regional travel demand model"
aka "the 4-Step model"
aka "the trip based model"
aka "the federally mandated model"

- A network-based simulation of the ground transportation system
- A tool for testing future transportation alternatives
- A behavioral model based on observed choices
- The tool we must use for all regional transportation plans and NEPA activities

13

Emissions Modeling with MOVES

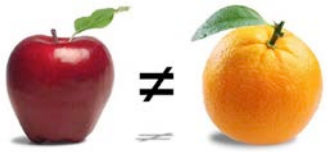
MOVES
+
Regional Travel Demand Model
=
Estimates emissions
(GHGs, criteria pollutants and air toxics)



14

Comparing apples and oranges

Results vary greatly depending on how you define the target and what you measure (e.g., year, household, on-road, per capita, vehicles, etc.)



15

What we learned from the 2018 Regional Transportation Plan

We can expect to meet our climate goals if:

- we fund and implement our plan
- funding of projects and programs in the plan are prioritized based on their potential carbon reduction

We should continue to improve our tools to measure and track carbon emissions

- 46 percent

expected reduction in per capita greenhouse gas emissions from passenger vehicles by 2040 (compared to 2015 levels)

Source: Metro regional travel demand model and Metro regional emissions model (MOVES)

16

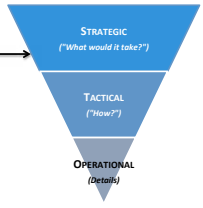
Evolution of VisionEval Suite of Tools

GreenSTEP->EERPAT->RSPM

VisionEval

VE-State

VE-RSPM
(Regional Strategic Planning Model)



17

What we've done since 2018

Developed regional VE-RSPM in partnership with ODOT and the City of Portland

Used by the City of Portland to support GHG planning

Can be used in 2023 RTP

Consistent with State level target setting tools

18

Where do we go from here?

19

oregonmetro.gov/rtp

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Thaya Patton
RTP Modeling Lead
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July 14, 2022

2023 REGIONAL TRANSPORTATION PLAN

JPACT and Metro Council Workshop Series

A series of monthly in-person workshops will take place for JPACT members or alternates and the Metro Council to discuss critical elements of the 2023 Regional Transportation Plan.

Due to COVID-19, non-essential staff and members of the public are invited to observe via an online livestream on YouTube. Phone call-in options are not available. Find the workshop livestream information at **oregonmetro.gov/calendar**

Find out more about the plan update at **oregonmetro.gov/rtp.**

1

Updating Our Vision and Goals for the Future of Transportation

Discuss our vision and goals for the future of transportation

Outcome: Provide feedback on updating the vision and goals for the transportation system serving greater Portland

June 30, 2022

2

Developing Regional Congestion Pricing Policy

Discuss proposed regional congestion pricing policies that build on findings and recommendations from Metro's Regional Congestion Pricing Study

Outcome: Provide feedback on draft policies for congestion pricing in the region

July 28, 2022 7:30-9:30 a.m.

3

Creating Safe and Healthy Arterials

Explore regional challenges and opportunities for making our major streets safe and healthy for everyone

Outcome: Provide feedback on addressing the challenges of major streets in the RTP update

Aug. 25, 2022 7:30-9:30 a.m.

4

Strengthening the Backbone of Regional Transit

Explore options for advancing our high capacity (fast, reliable) transit vision

Outcome: Provide feedback on corridors to be considered for high capacity transit investment, including which are most important today and in the future

Sept. 29, 2022 7:30-9:30 a.m.

5

Working Together to Tackle Climate Change

Discuss progress implementing the region's adopted Climate Smart Strategy

Outcome: Provide feedback on policies and investments needed to significantly reduce carbon emissions from our transportation system

Oct. 27, 2022 7:30-9:30 a.m.

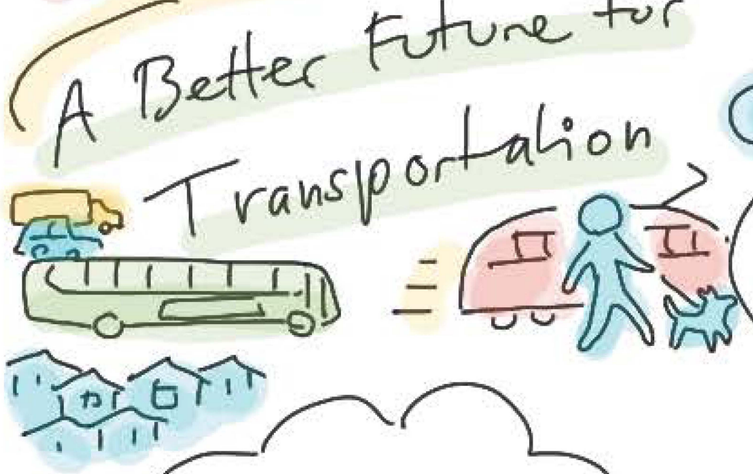
Metro

2023 REGIONAL TRANSPORTATION PLAN WORKSHOP 1

→ Listen, Learn, Collaborate

We Have Been Asked for...

A Better Future for Transportation



SAFETY

CONVENIENCE

CLIMATE

EQUITY

ACHIEVE

TO

COMMUNITY

RELIABILITY

SHARED PROSPERITY

WHAT WE WANT

CHOICE

HEALTHY PEOPLE & ENVIRONMENT

Small Group Discussion

Metro Council + JPACT

RTP 2023 GOALS

SAFETY & SECURITY

HEALTHY ENVIRONMENT & PEOPLE

VIBRANT & PROSPEROUS COMMUNITIES

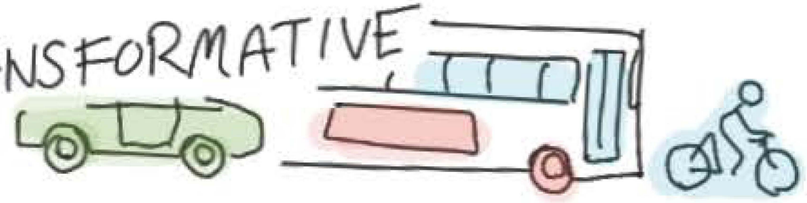
ANTICIPATORY SYSTEM & CONNECTIONS — LAND USE & NETWORKS

EQUITABLE

CLIMATE LEADERSHIP

TECHNOLOGY, MODERNIZATION

RELIABILITY, EFFICIENCY, FISCALLY TRANSFORMATIVE



ACTIONABLE GOALS WITH MEASURABLE RESULTS

Small Group Discussion

VISION STATEMENT

ACCESS

UNITY

SAFE

PROSPERITY

WORLD - CLASS

HEALTHY

LEADERSHIP

INCLUSION

QUALITY OF LIFE

REGIONAL

CLIMATE

RELIABLE

SUPPORTIVE

FUTURE

MEASURABLE

EQUITABLE

ENVIRONMENT

RESPONSIVE

June traffic deaths in Clackamas, Multnomah and Washington counties *

Unidentified person, driving, NW Tanasbourne Dr/NE Stucki Ave., Hillsboro, Washington County, 7/3
James Robert Sheehan, 57, motorcycling, Hwy 99E/ SE Jennings Lodge, Milwaukie, Clackamas County, 6/26
Robert Julian Hunker, 57, motorcycling, NE Kerkman Rd, Washington County, 6/22
Unidentified person, driving, NE Columbia Blvd & NE Alderwood Dr., Portland, Multnomah County, 6/16
Maksim Mishuk, 24, motorcycling, I-84/ NE Fairview Pkwy & 207th, Fairview, Multnomah County, 6/13
Shana Keplinger, 32, wheelchair (pedestrian), NE 162nd near NE Glisan St, Portland, Multnomah County, 6/11
Michael Eugene Sprague, 71, e-bicycle, NE Glisan St & NE 100th Ave., Portland, Multnomah County, 6/7
Unidentified person, walking, 82nd Ave & SE Center St., Portland, Multnomah County, 6/6 (may be ruled as homicide)

Metro

**ODOT preliminary fatal crash report as of 6/29/22, police and news reports; updated 7/8/22*

Developing funding recommendations for 2025-2027 Regional Funding: RFFA + Trails Bond

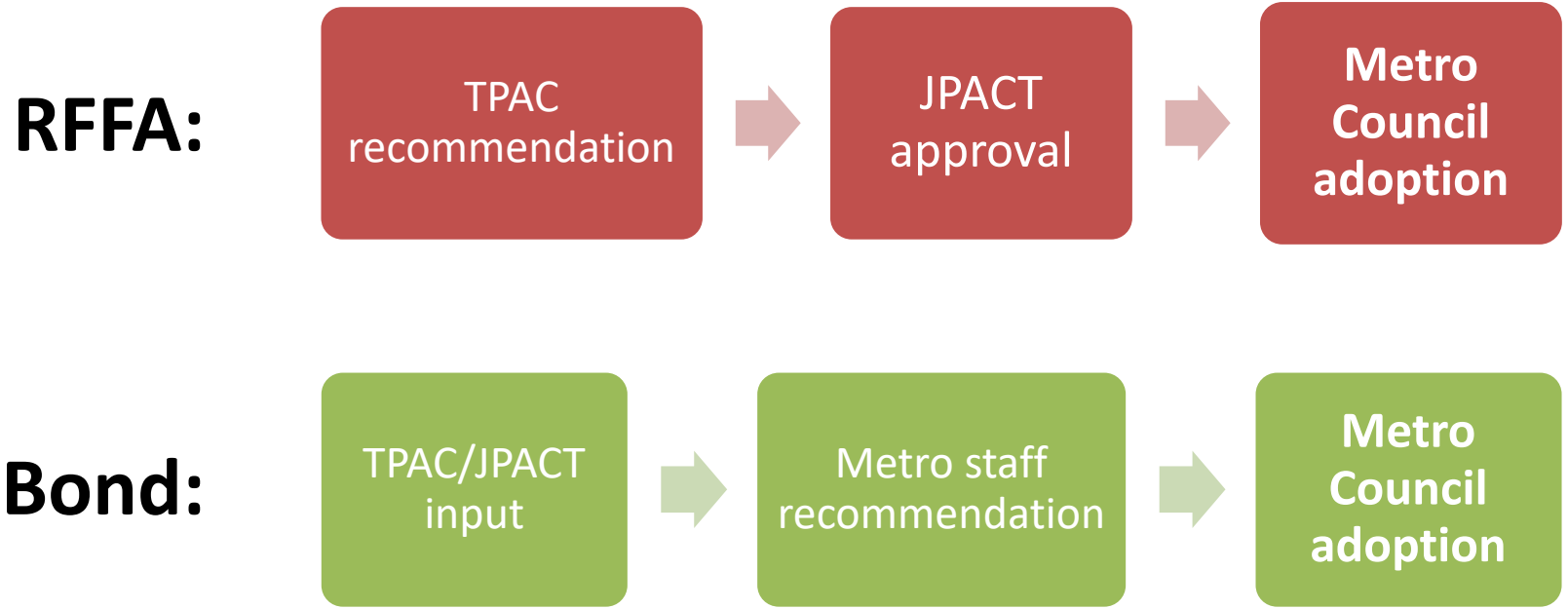
Presentation to JPACT

July 21, 2022

Today's discussion

- Review sources of available information and funding examples
- Provide update from TPAC workshop on developing draft recommendations
- Input on developing draft recommendations

Process for selecting projects



Upcoming schedule

August	• TPAC, JPACT input on draft recommendations
September	• TPAC RFFA recommendation to JPACT • JPACT **ACTION** on TPAC RFFA recommendation • Metro Council **ACTION** on Bond recommendation
October	• Metro Council **ACTION** on JPACT approved RFFA funding package

Review sources of information

- Outcomes Evaluation
- Risk Assessment
- Public Comment
- Coord. Comm. Prioritization
- RFFA process objectives
- Previous RFFA award
- Additional considerations

Updates to materials

- Risk assessment, public comment reports are on RFFA webpage: oregonmetro.gov/RFFA
- Updated examples, based on TPAC input & discussion today, will be available next week
- N. Portland Greenway (Columbia to Cathedral Pk) – RFFA funding request is $4,860,647

Risk assessment report

- Kittelson conducted evaluation based on:
  a) overall project scope, and
  b) project complexities
- Likelihood of presence of archeological resources
- Used to account for and address any risks to a project's ability to be delivered as approved by JPACT and Metro Council

Public comment report

- Online, multi-lingual survey: May 20 – June 21
- Widely distributed through a variety of channels
- Over 1,600 responses, including letters, email, etc.
- Summarized by number of responses (avg. 75), level of support per project (avg. 4.47)
- Includes detail by project, zip code, other demographics

Funding package examples for discussion and refinement

1. Illustrations of different methods for developing a starting point for funding packages
2. Provide a policy-based rationale for a funding decision
3. Not balanced to available funding
4. Additional information is not yet factored into these examples, but will be used in recommendation(s)

Five funding examples

1 & 2. Overall – projects ranked by overall ratings

3. Construction – focus on project completion

4. Project development – focus on preparing for future funding

5. Specific outcomes – focus on certain criteria areas

TPAC input for developing recommendation

Preference indicated for two examples:

- #2 – Overall outcomes
- #5 – Emphasis on specific outcomes (example: Equity & Safety)

2. Overall outcomes

- Projects sorted by averages of all criteria areas
- Example #2 moves four projects into specific sources
- Takes a **balanced** approach to using project ratings

5. Specific outcomes

- Focuses on **prioritizing** specific regional priorities
- Example looks at Equity + Safety
- Other approaches are possible

Discussion

- Are these descriptions of the information sources and process of developing a recommendation clear or raise any concerns?
- Do these materials reflect the input you've provided to date?
- What input do you have on outcomes you wish to see reflected in a final funding decision?
- What input do you wish to share with TPAC as they develop their recommendations?

Thank you!

oregonmetro.gov/RFFA

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Earthquake Ready Burnside Bridge –
JPACT Briefing

Multnomah County
Department of Community Services
Transportation Division

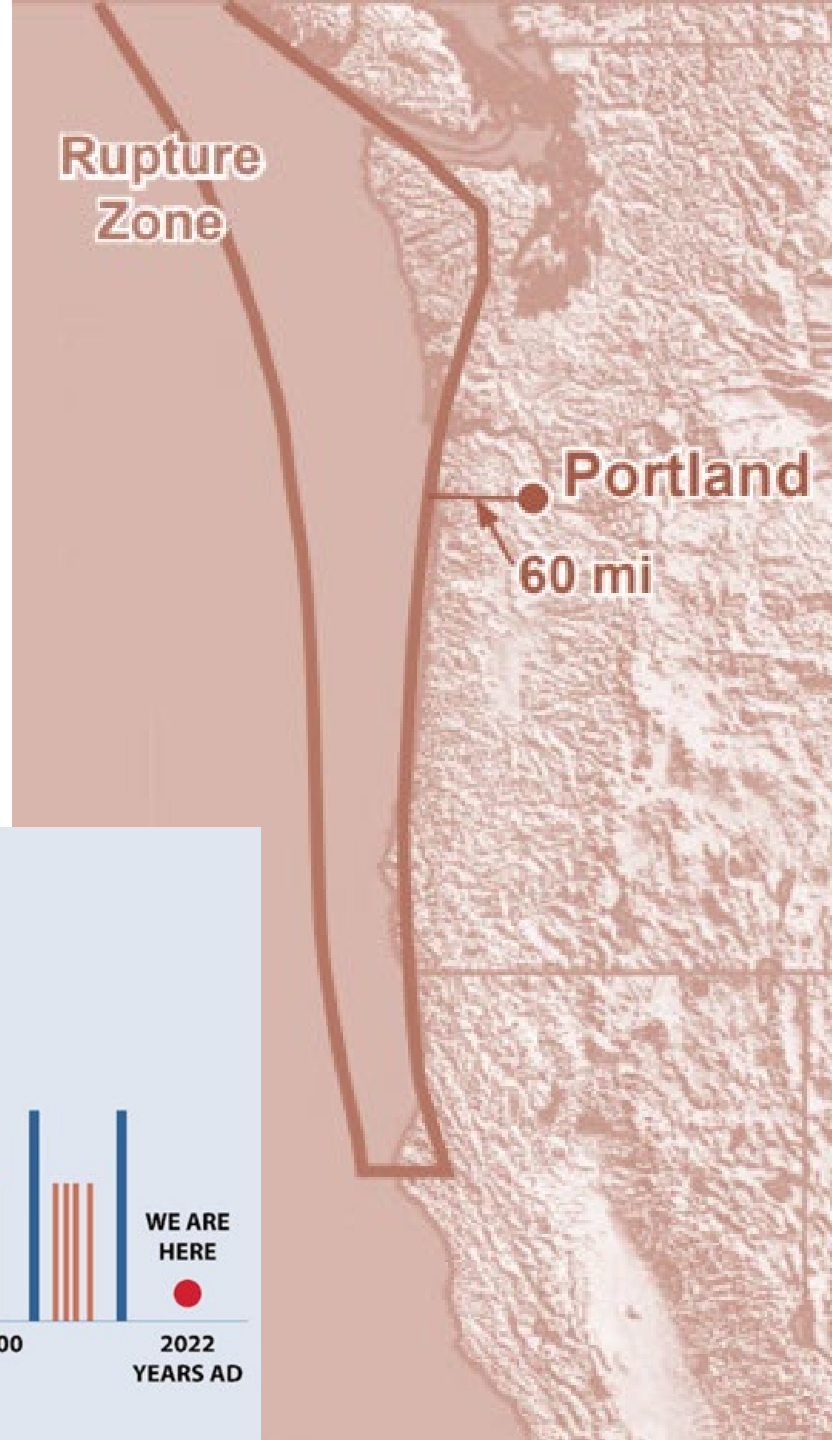
July 21, 2022

Multnomah County

EARTHQUAKE READY BURNSIDE BRIDGE

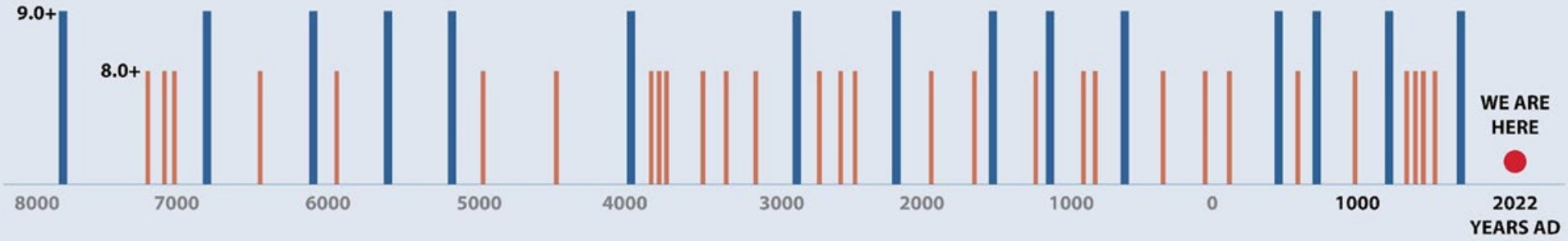
Why is there a need for a seismically resilient Willamette River Crossing?

- **Regional earthquake risk**
- **1 in 3 chance of a magnitude 8+ earthquake occurring within 50 years**



CASCADIA SUBDUCTION ZONE (CSZ) EARTHQUAKE

Last major quake in Oregon occurred 322 years ago, a timespan that exceeds 75% of the intervals between the major quakes to hit Oregon over the last 10,000 years.



EQRB Purpose

Seismic Resiliency and Emergency Response

Regional Recovery and Rebuilding

Long-term Multi-modal Use

Why rebuild the Burnside Street Bridge to be earthquake ready?

How will the EQRB Project help recovery?

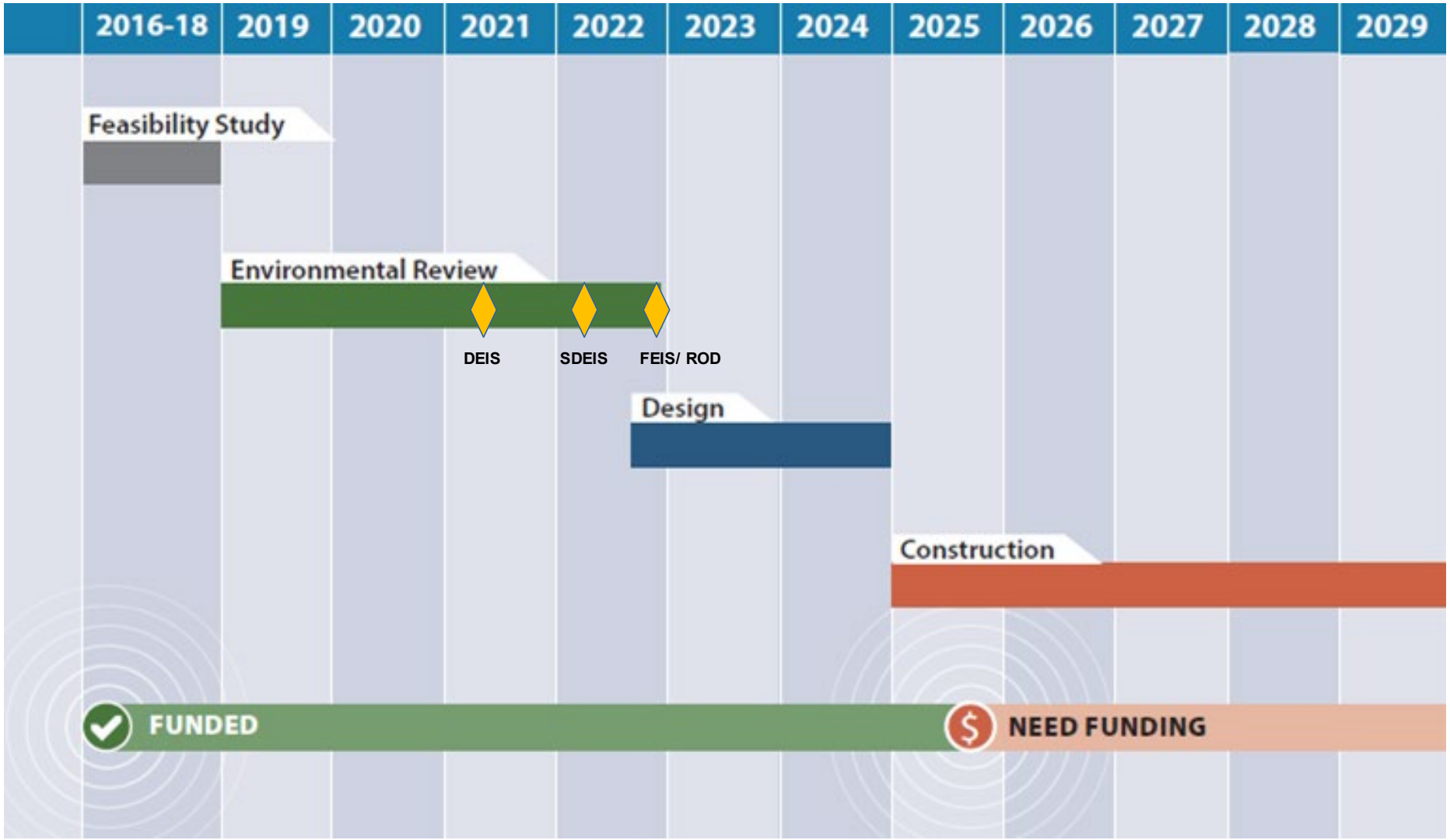
By bringing the **first seismically resilient bridge** to downtown Portland

By enhancing a link along a **regionally established emergency transportation route**

By saving taxpayers money. Every $1 spent pre-disaster saves $6 post-disaster

By preserving access to **critical downtown social service providers**, serving clients when they need it most

Project Timeline



Key Project Committees

Community Task Force

- Portland Saturday Market
- Portland Freight Advisory Committee
- Laurelhurst Neighborhood Association/ Laurelhurst NET
- Portland Spirit
- AAA of Oregon
- Mercy Corps
- Central Eastside Industrial Council
- Powell Valley Neighborhood Association
- University of Oregon
- Multnomah County Bike and Pedestrian Citizen Advisory Committee
- Gresham Area Chamber of Commerce
- Oregon Walks
- Buckman Community Association
- Burnside Skatepark
- Portland Business Alliance
- Central City Concern
- Community Members At-Large (3)

Policy Group

- Multnomah County (Chair Deborah Kafoury, Commissioner Jessica Vega Pederson)
- City of Portland (Chris Warner)
- Metro (Councilor Mary Nolan)
- ODOT (Rian Windsheimer
- FHWA (Phil Ditzler/Keith Lynch)
- TriMet (Doug Kelsey/Steve Witter)
- Prosper Portland (Justin Douglas)
- City of Gresham (Councilor Sue Piazza)
- Oregon Representative Barbara Smith Warner’s Office
- Oregon Senator Kathleen Taylor’s Office
- US Representative Earl Blumenauer's Office
- US Representative Suzanne Bonamici's Office
- US Senator Jeff Merkley's Office
- US Senator Ron Wyden's Office

Locally Preferred Alternative

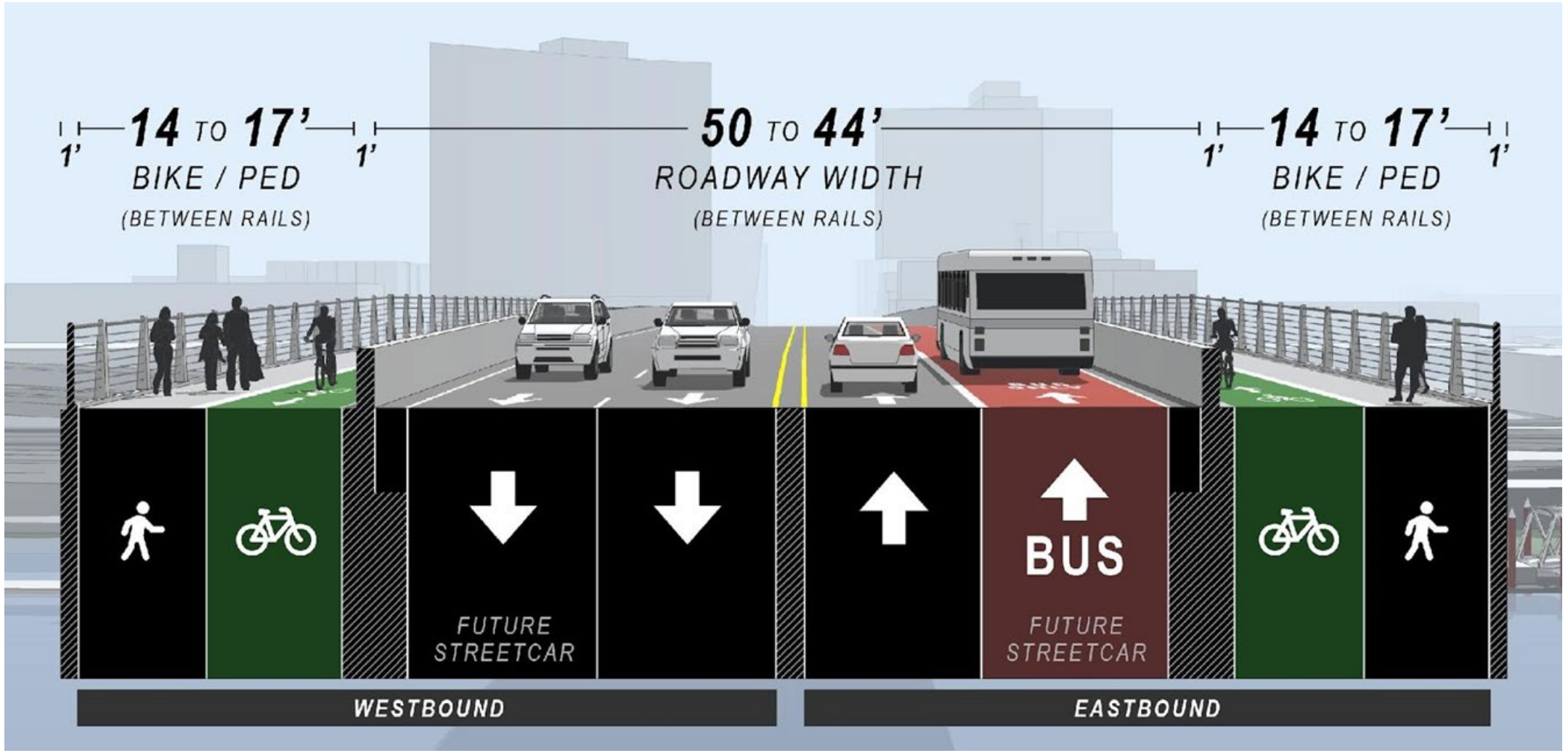
Replacement Long Span

with Tied Arch

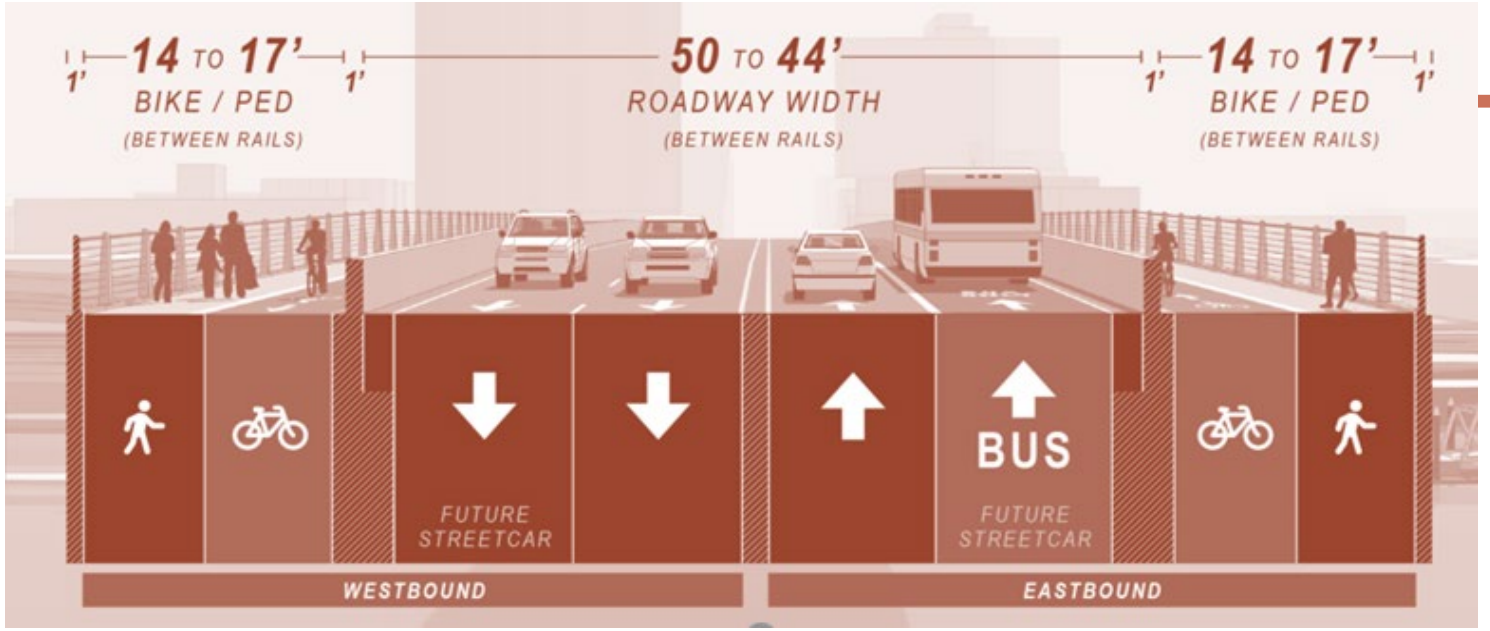
with Cable Supported

PBOT Updates

Traffic Configuration



How will the EQRB provide safer multi-modal connections?



Streetcar Ready

By providing a bridge that can support a future Streetcar line

Transit Only

By preserving the existing eastbound transit-only lane and provides a potential westbound transit-only lane

Multi-use Path

By providing a wider, protected multi-use path making it more comfortable for people of all abilities

Speed Reduction

By lowering the posted speed limit to 25 mph (5 mph reduction)

Cost Saving Measures - By the Numbers

45+ Briefings

8 Diverse community discussion groups

4,100+ Unique visitors to online open house

1,500+ Survey responses

490+ Briefing recipients

6 Language translations of online open house

21 Social media posts and advertisements

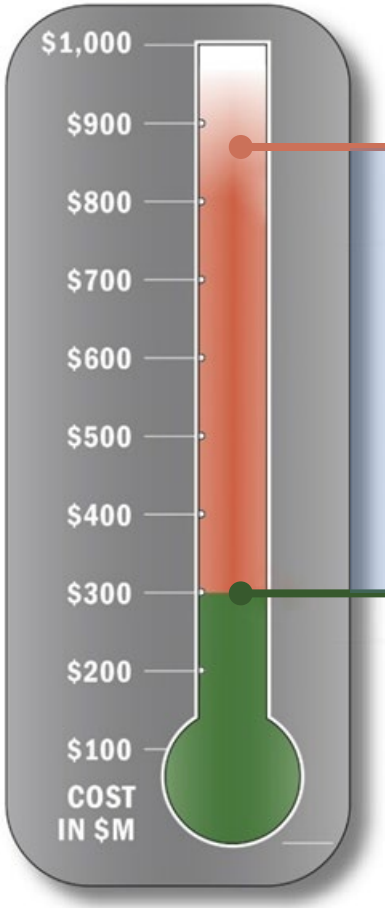
3,400+ project e-newsletter recipients

10 news releases & e-newsletters

11 media stories

- Approval received from Policy Group and Board of County Commissioners, Spring 2022
- City Council Adoption of Preferred Alternative Scheduled for July 20, 2022

How can we close the funding gap?



Manage cost and seek opportunities for savings

$895 million

Close the Funding Gap

$300 million

Secured Local Funds

Project cost estimated not to exceed

$895 million

$300 million identified from vehicle registration fee revenue

Currently pursuing local, state, and federal funding to close gap

Construction-ready in 2025

Federal Grant Opportunities

FY22 RAISE	FY22 MPDG Grant
$5M Planning Grant	$535M Construction Grant
FY22 Bridge Inv. Program	**FY23 RAISE**
$447M Construction Grant	$25M Construction Grant

Project Next Steps

ENVIRONMENTAL REVIEW PHASE

Summer/Fall 2022 – Address DEIS/SDEIS comments and finalize mitigation measures

December 2022: Publish Final EIS and Record of Decision

FINAL DESIGN PHASE

Summer 2022 - RFP for A&E Team

Fall 2022 - RFP for CMGC Contractor

Spring 2023 - Selection of Long Span Bridge Type

Metro Next Steps

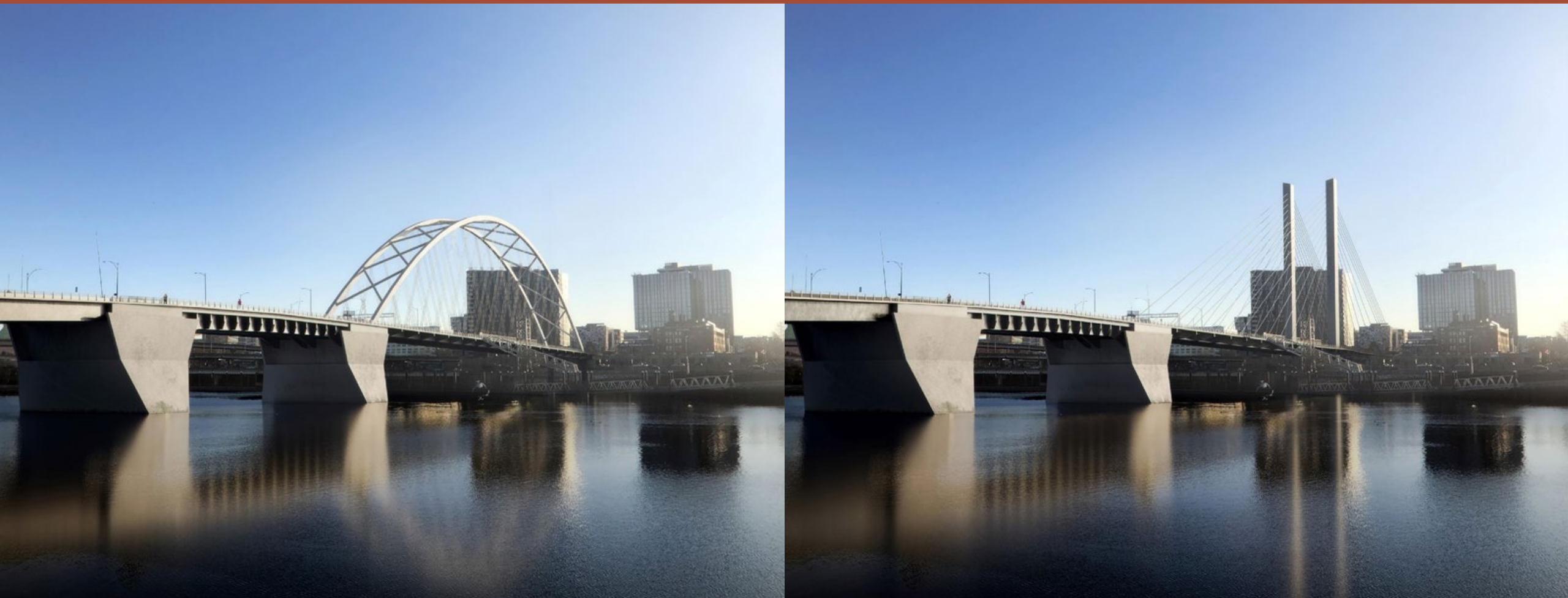
- All project phases (e.g., PE, final design, ROW, utility relocation, construction, and/or construction phases) planned within the life of the transportation plan have to be included in the fiscally constrained RTP ***in order for FHWA to sign the ROD***.[1]
- Metro no longer processing 2018 RTP amendments with 2023 RTP update underway.
- Metro, Multnomah County, and FHWA coordinating on timeline and actions to meet FHWA requirements.
- Project will return to TPAC in coming months with additional updates, next steps, request to support preferred alternative.

[1]https://www.fhwa.dot.gov/planning/tpr_and_nepa/tprandnepa.cfm

Thank You

Multnomah County

EARTHQUAKE READY BURNSIDE BRIDGE



ENHANCED TRANSIT CONCEPTS / BETTER BUS PROGRAM

JPACT JULY 21, 2022

TRIMET Metro

AGENDA

Enhanced Transit Concepts Pilot Program

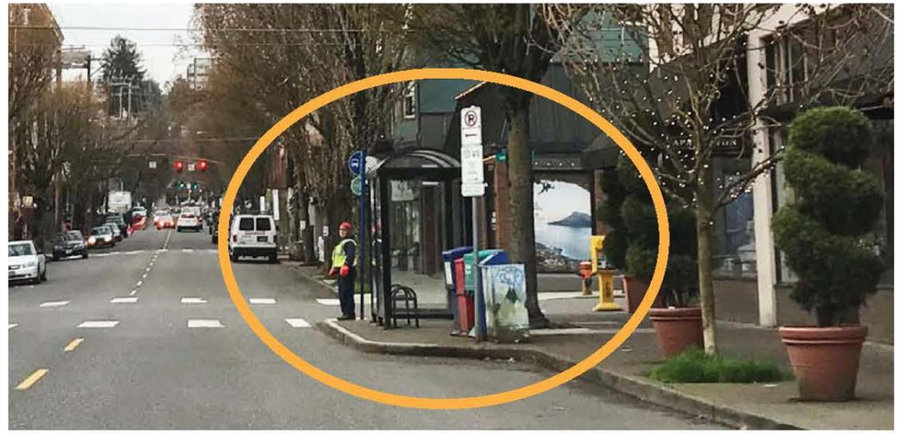
- What is ETC?
- Purpose
- Projects and Performance

Better Bus Introduction

What is ETC?

A data-driven approach to planning and designing transit priority projects.

Partnerships between Metro, TriMet, and local jurisdictions to help make bus travel more effective and more attractive.



What is ETC?

- Dedicated bus lanes
- Business access and transit (BAT) lanes
- Pro-time (peak period only) transit lanes
- Queue jumps / right turn except bus
- Transit signal priority and signal improvements
- Transit-only apertures
- Multi-modal interactions
- Bus stop consolidations
- Curb extensions at stops/stations
- Far-side bus stop placements

PURPOSE OF ENHANCED TRANSIT

Every day, **60% of the region's transit trips are by bus**. Enhanced transit on key corridors makes transit more convenient. This increases ridership and helps us meet our climate and equity goals.

01 Reliability

People want to be on time to work and appointments. Reliability means the bus arrives on schedule, day after day.

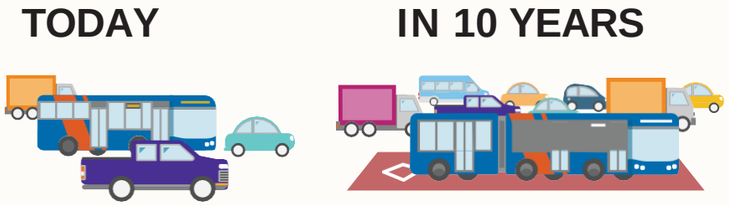
Consistency builds confidence in the bus

Riders rely on accurate real-time travel data

02 Speed

Transit priority treatments can make transit trips faster, better serving today's riders and attracting new riders.

Bus lanes make transit travel times closer to driving travel times



Investment today keeps the bus on time even if congestion increases

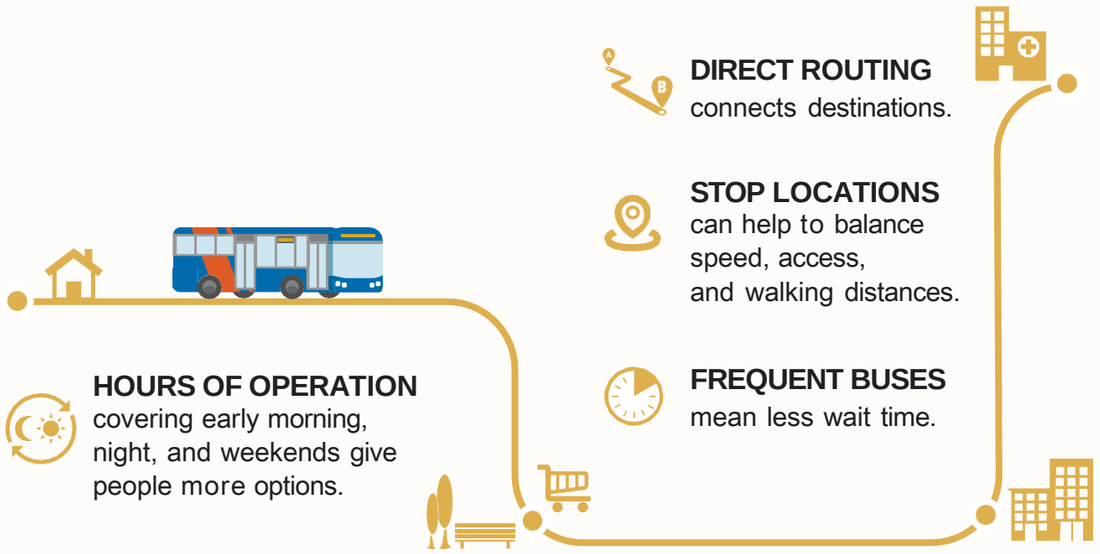
PURPOSE OF ENHANCED TRANSIT

03 Comfort

A comfortable and safe travel experience from door-to-door makes transit a stress-free option.

04 Convenience

Service design can make the bus a convenient option.



WHY IS ENHANCED TRANSIT NEEDED?

Daily hours of traffic congestion increased 13% from 2015 to 2018. This means buses are also stuck in traffic.

Where is the most delay in our region?

PASSENGER-WEIGHTED TRANSIT DELAY

Low — High

What is the cumulative effect of delay?

2,085

Daily hours of delay

across the TriMet system

Multiplied by the number of people taking the bus

21,312

Daily person-hours of delay

Up to

9%

slower bus speeds

on the busiest TriMet routes, 2009–2017

Delays are concentrated

Bus transit network miles

10% of the network ...

... accounts for 20% of the delay

Bus transit delay

THE IMPACTS OF DELAY

Delay means a trip can take different amounts of time on different days.

This makes the bus less reliable

Travel time on Line 72 from Clackamas Town Center to Cully.

Morning Rush Hour

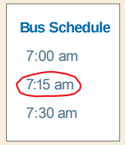
12.5 Minutes

Afternoon Rush Hour

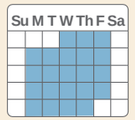
20 Minutes

The impacts of delay on individual lives

1. I plan for extra time traveling.



I take an earlier bus to make sure I arrive on time



15 minutes of extra travel time
x 5 days a week
= 75 minutes of extra time a week

Time that could be better spent on something else

2. It can cost me money

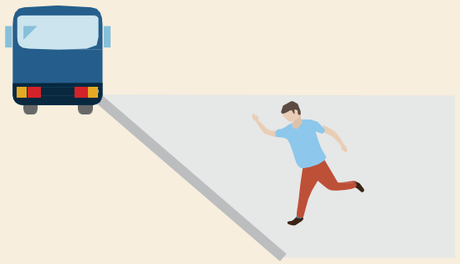
I'm late for work and could lose my job

I got a late pickup fee at childcare

I'm charged a no-show fee at the doctor

3. It adds stress to my day

The bus arrives so crowded that I have to wait for the next one



I miss my transfer

CREATING ENHANCED TRANSIT CORRIDORS IN OUR REGION

During the past five years, TriMet, Metro, and local partners launched a program dedicated to enhancing transit throughout the region.

Metro TRIMET

- In 2018, Metro, in partnership with TriMet, unveiled its **Regional Enhanced Transit Corridors pilot program.** Metro solicited applications from jurisdictions throughout the region and allocated **$5 million** to this initial raft of projects.
- From 2018 to 2022, hundreds of projects were studied and designed, and **more than 50 have been implemented.**
- Metro and TriMet will continue investing in enhanced transit projects through what has now been branded their **"Better Bus"** program.

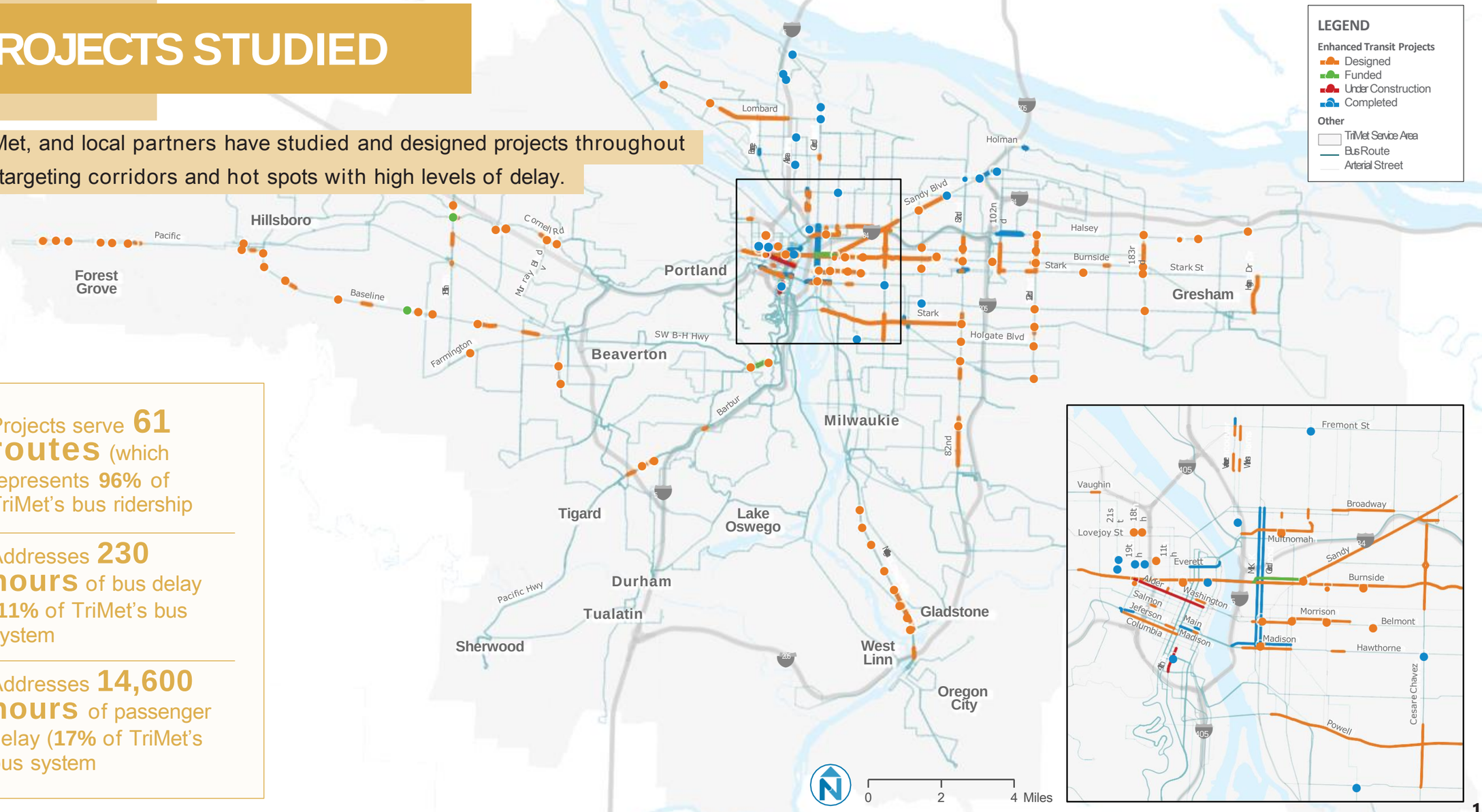
PBOT
PORTLAND BUREAU OF TRANSPORTATION

- **The City of Portland launched its own set of enhanced transit projects through two initial planning and design studies:**
  - The Enhanced Transit Corridors (ETC) plan identified transit priority treatments applicable to Portland and a set of corridors to apply these treatments.
  - Central City in Motion (CCIM) was a planning effort that resulted in 18 projects in the Central City improving the walking, bicycling, and transit environment.
- **Today, the City of Portland has two programs focused on enhanced transit:**
  - Rose Lanes are corridors with high delay and high ridership. These are corridors for ongoing investment.
  - The Transit Priority Spot Improvement program funds tactical improvements at intersections or short segments. These projects are generally low-cost and can be implemented quickly.

PROJECTS STUDIED

Metro, TriMet, and local partners have studied and designed projects throughout the region targeting corridors and hot spots with high levels of delay.

REGIONAL ENHANCED TRANSIT CORRIDORS



Projects serve **61 routes** (which represents **96%** of TriMet's bus ridership

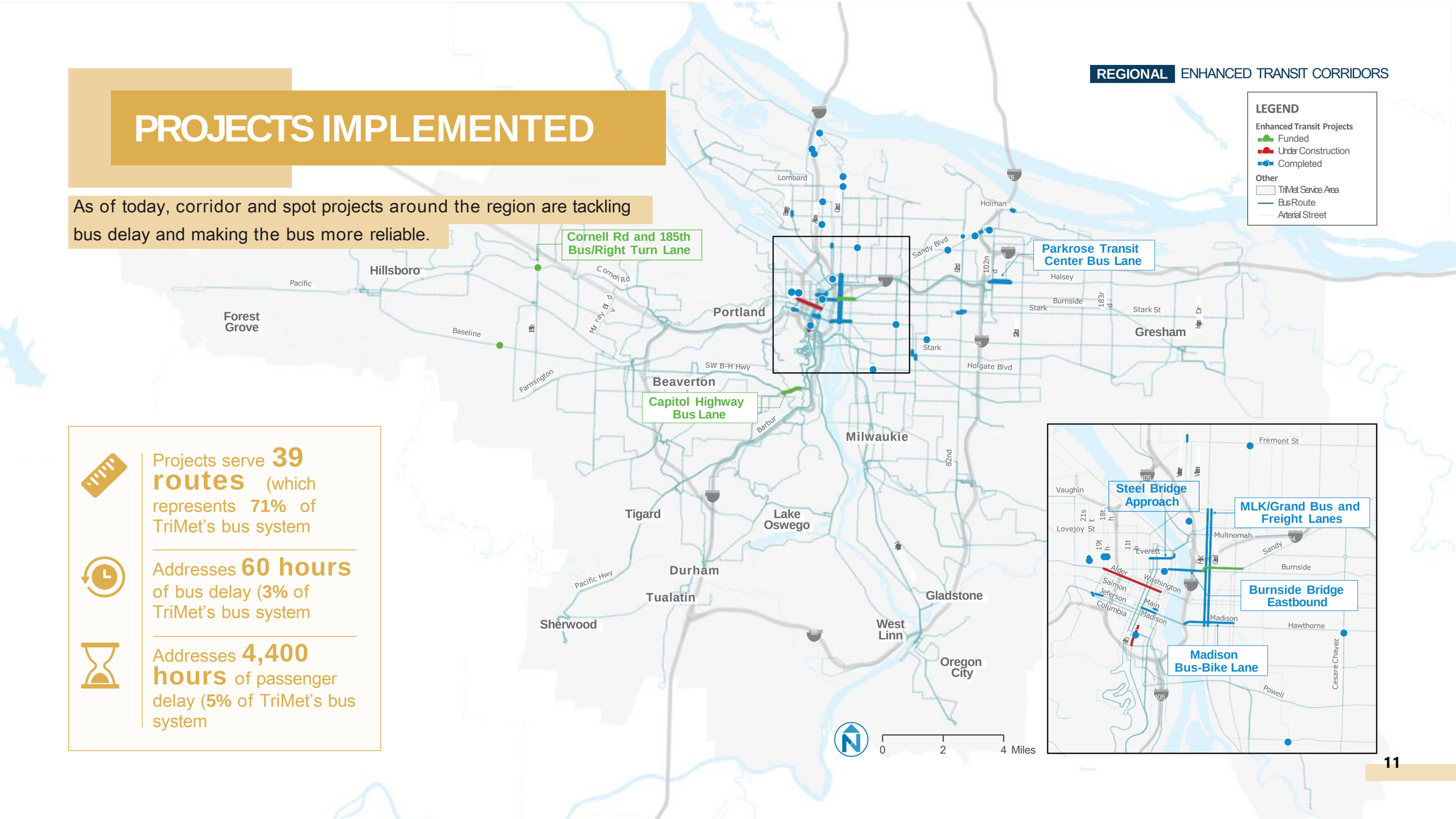
Addresses **230 hours** of bus delay (**11%** of TriMet's bus system

Addresses **14,600 hours** of passenger delay (**17%** of TriMet's bus system

PROJECTS IMPLEMENTED

As of today, corridor and spot projects around the region are tackling bus delay and making the bus more reliable.

REGIONAL ENHANCED TRANSIT CORRIDORS



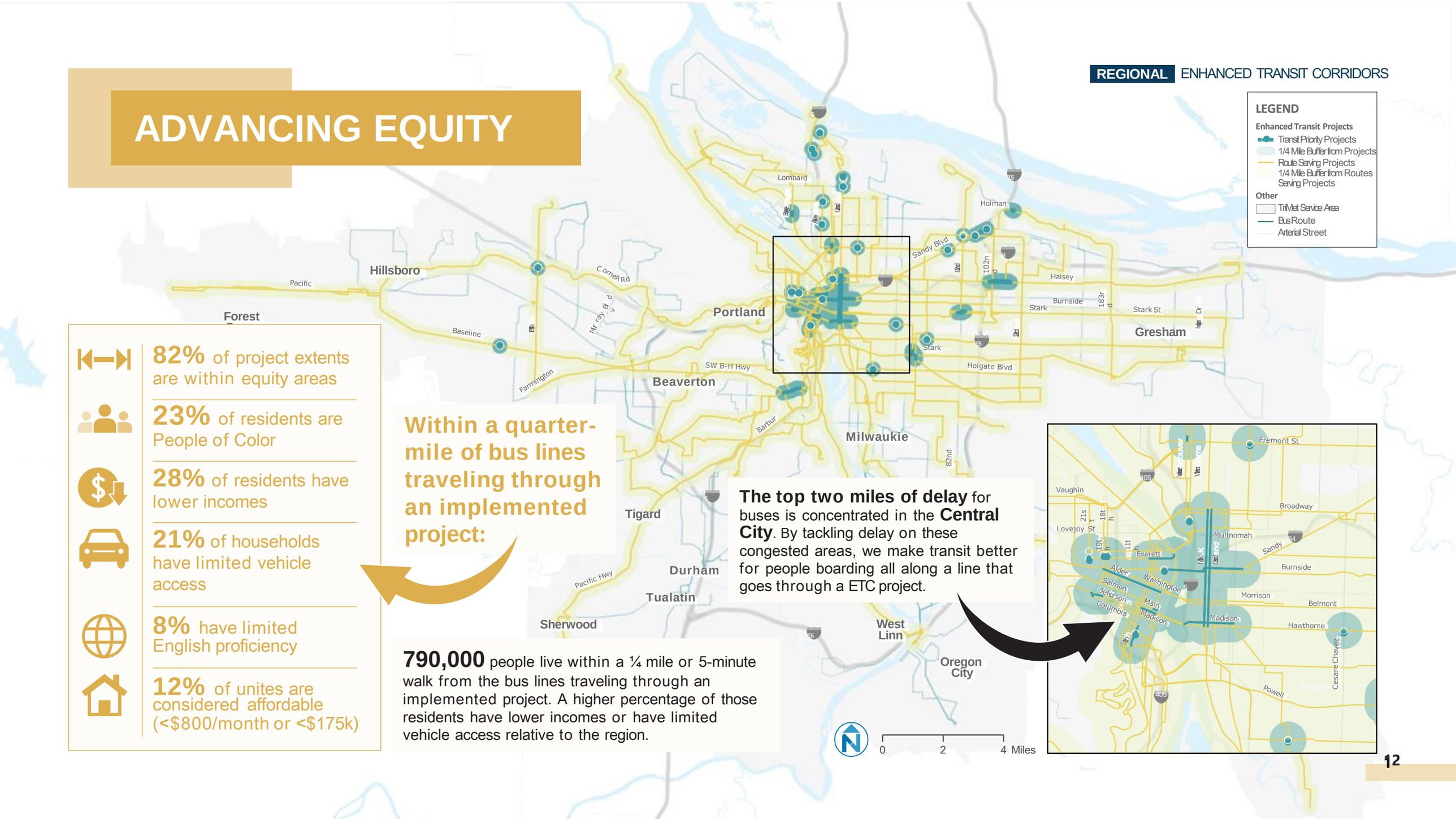
Projects serve **39 routes** (which represents **71%** of TriMet's bus system

Addresses **60 hours** of bus delay (**3%** of TriMet's bus system

Addresses **4,400 hours** of passenger delay (**5%** of TriMet's bus system

ADVANCING EQUITY

REGIONAL ENHANCED TRANSIT CORRIDORS



82% of project extents are within equity areas

23% of residents are People of Color

28% of residents have lower incomes

21% of households have limited vehicle access

8% have limited English proficiency

12% of unites are considered affordable (<$800/month or <$175k)

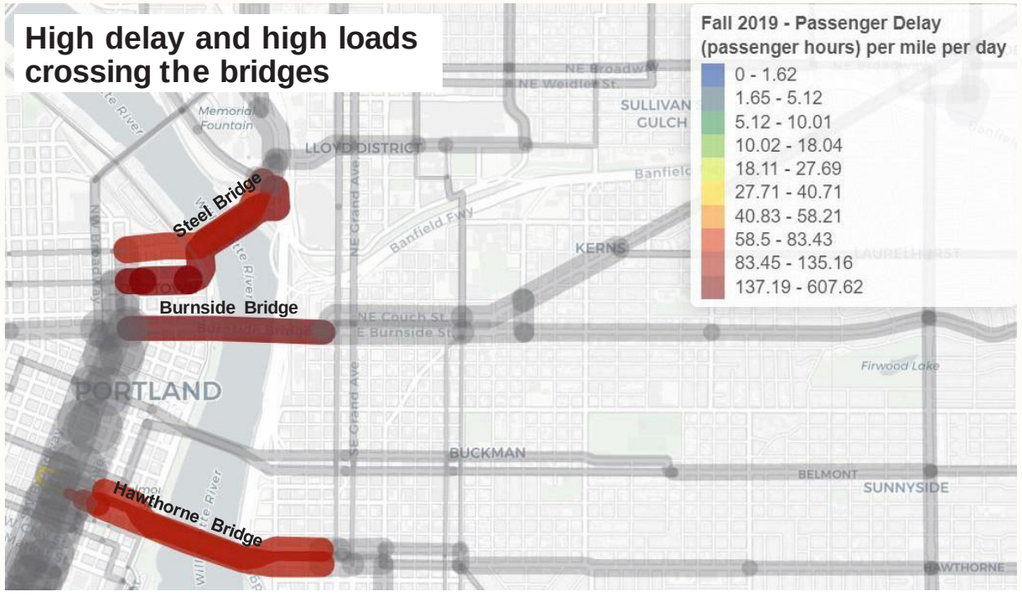
Within a quarter-mile of bus lines traveling through an implemented project:

790,000 people live within a ¼ mile or 5-minute walk from the bus lines traveling through an implemented project. A higher percentage of those residents have lower incomes or have limited vehicle access relative to the region.

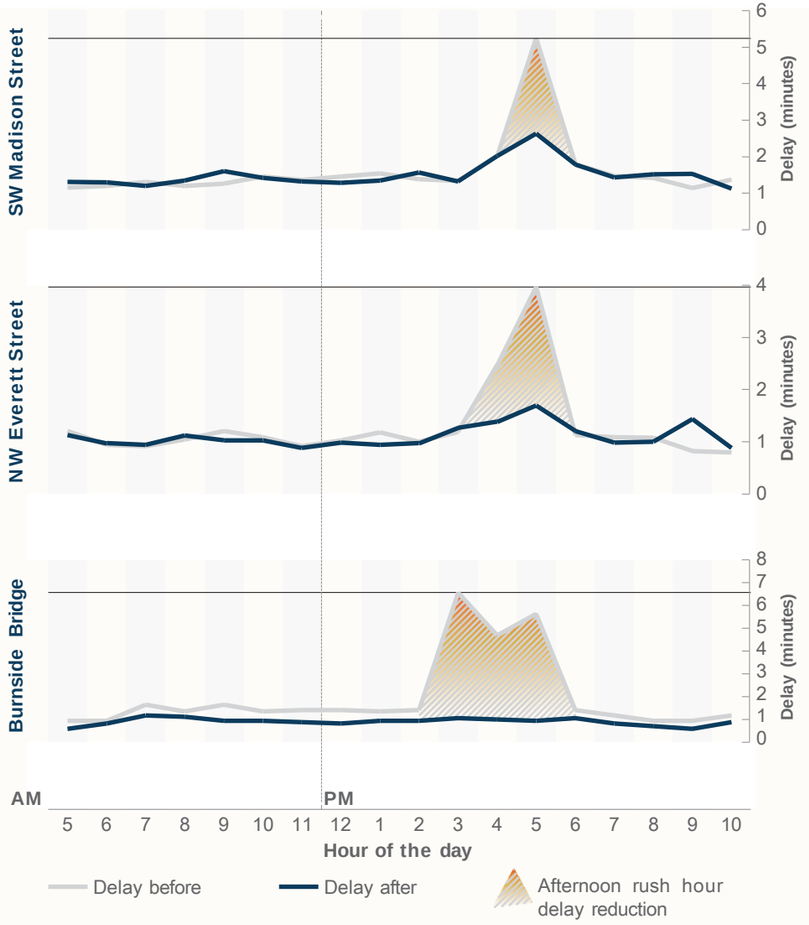
The top two miles of delay for buses is concentrated in the **Central City**. By tackling delay on these congested areas, we make transit better for people boarding all along a line that goes through a ETC project.

OUR ACHIEVEMENTS

Three major projects tackled high-delay areas through the Enhanced Transit Corridors program. Multiple bus lines cross the river via **the Steel, Burnside, and Hawthorne Bridges**. Bus lanes on and approaching these bridges made rush hour faster for thousands of daily riders.



Average minutes of delay before and after ETC investments



60%

reduction in delay approaching the Hawthorne Bridge

benefiting 3,360 riders daily traveling on five bus lines

20-30%

reduction in delay approaching the Steel Bridge

benefiting 3,550 riders daily traveling on six bus lines

35%

reduction in delay crossing the Burnside Bridge

eastbound, benefitting 3,670 passengers daily using three bus lines

OUR ACHIEVEMENTS

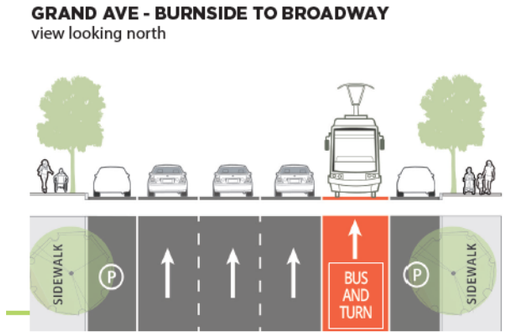
Metro/TriMet completed ETC projects:

- MLK/Grand
- 185th and Cornell
- SE Hawthorne/Madison (Grand to SE 12th Ave)
- Red Paint
- SW Alder (almost! SW 17th Ave to SW 2nd Ave)

Construction pending:

- East Burnside (bridge to SE 12th Ave)
- NE Couch (Grand to NE 12th Ave)
- SW Capitol Hwy
- SW 4th

Planning completed for many more, including TV Highway and McLoughlin



WHAT'S NEXT?

Agencies and jurisdictions continue to invest in transit projects both under the Enhanced Transit Corridors banner as well as through larger regional partnerships.

Enhanced Bus Projects

Portland's first Bus Rapid Transit (BRT) line is currently under construction. Branded as FX, this bus rapid transit service will operate on Division Street from Downtown Portland to Downtown Gresham. Service opens September 2022.

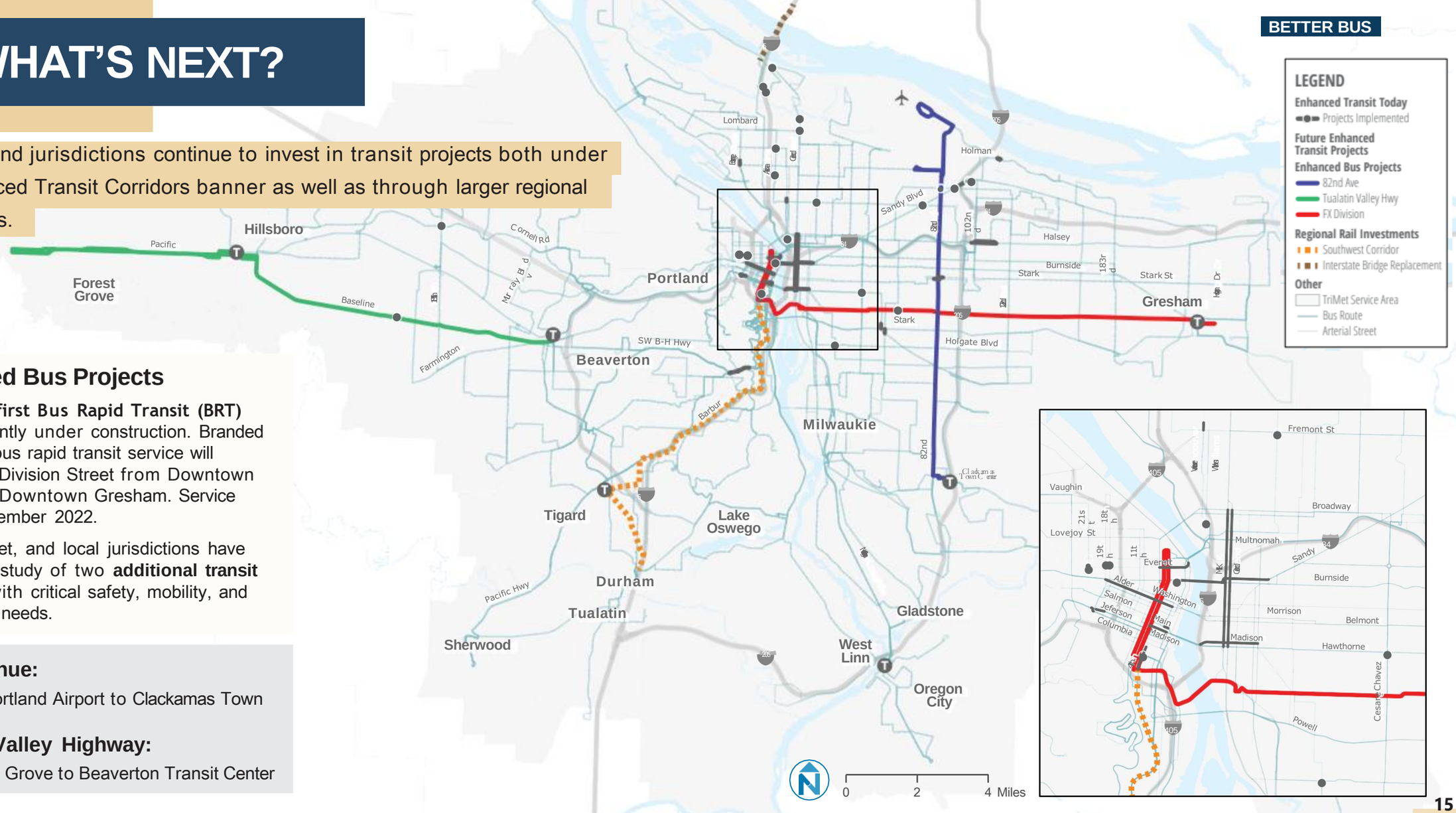
Metro, TriMet, and local jurisdictions have undertaken study of two **additional transit corridors** with critical safety, mobility, and community needs.

82nd Avenue:

From the Portland Airport to Clackamas Town Center

Tualatin Valley Highway:

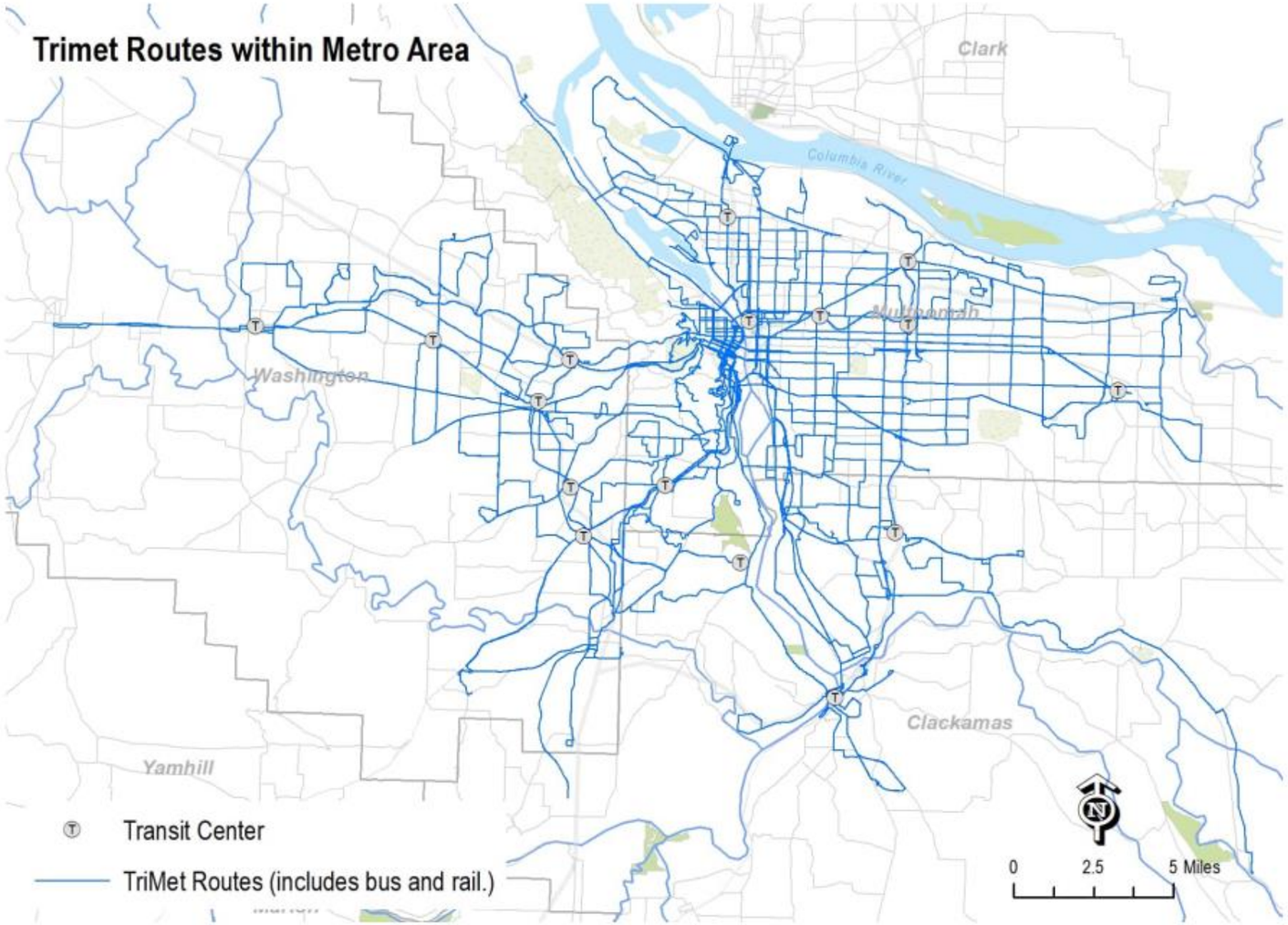
From Forest Grove to Beaverton Transit Center



WHAT'S NEXT?

Better Bus

- Next generation of ETC
- New funding stream
- Update to criteria
- Update to "Pipeline of Projects"
- Will include funding for construction

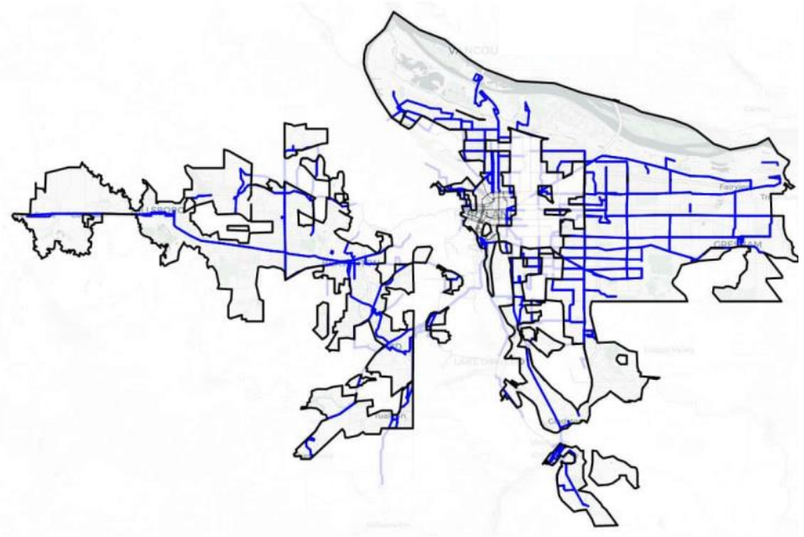


WHAT'S NEXT?

Better Bus

Stronger focus on geographic distribution and on equity

- Integrate transit priority treatments where local capital projects already planned (CIP)
- Identify project in areas with high densities of equity populations or areas where bus lines with high proportions of equity population riders

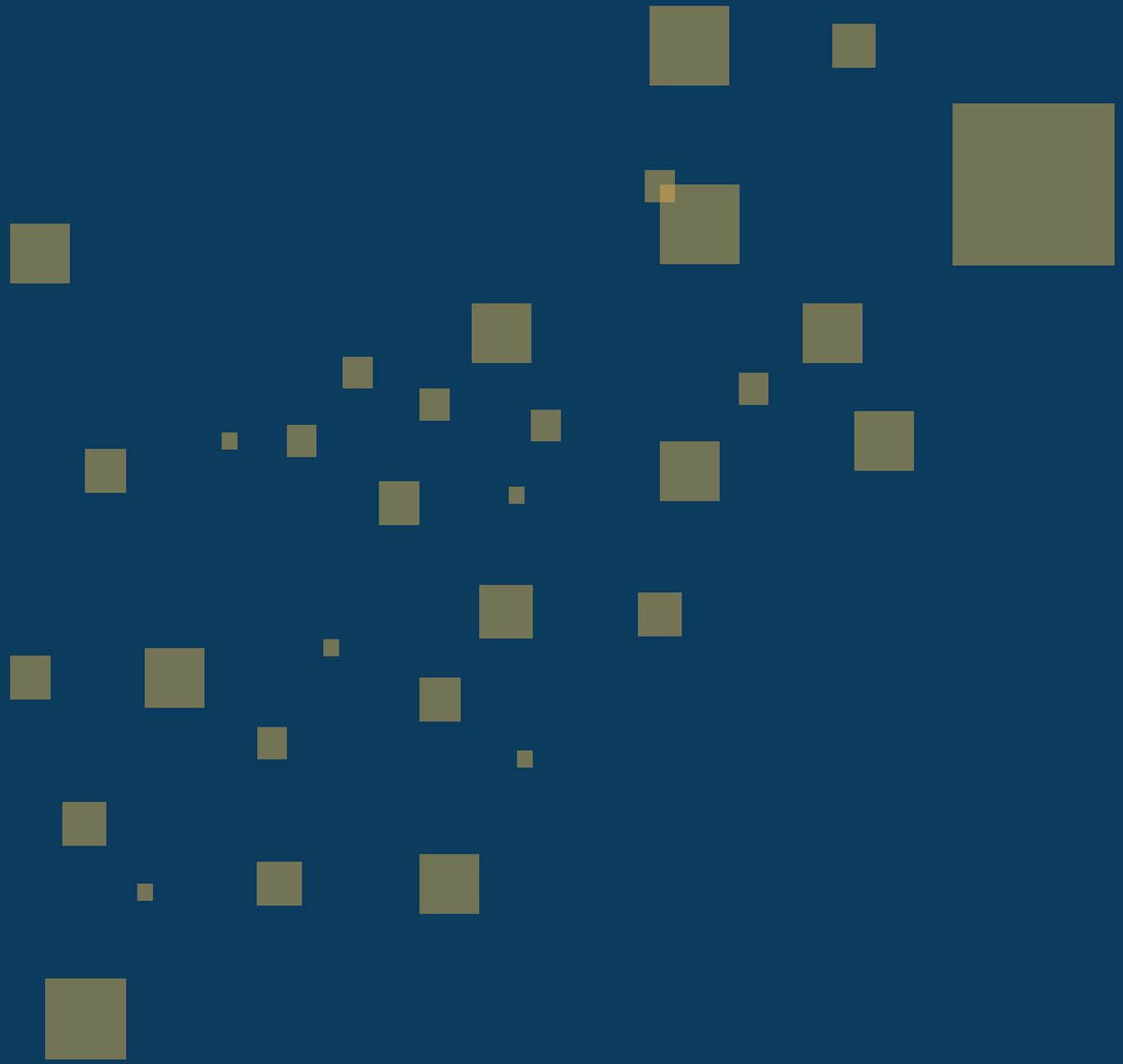


THANKS

Better Bus

How might Better Bus projects be incorporated into your jurisdiction’s projects?

Matt Bihn, Metro
Alex Oreschak, Metro
Dave Aulwes, TriMet
Jamie Snook, TriMet



TRIMET Metro

What is ETC?

- Partnerships
- Dedicated bus lanes
- Business access and transit (BAT) lanes
- Pro-time (peak period only) transit lanes
- Queue jumps / right turn except bus
- Transit signal priority and signal improvements
- Transit-only apertures
- Multi-modal interactions
- Bus stop consolidations
- Curb extension at stops/stations
- Far-side bus stop placements