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

Meeting: Transportation Policy Alternatives Committee (TPAC)
Date: Friday, June 24, 2016
Time: 9:30 a.m. to 12 p.m. (noon)
Place: Metro Regional Center, Council Chamber

9:30 AM	**1.**		**CALL TO ORDER AND DECLARATION OF A QUORUM**	**John Williams, Chair**
9:35 AM	**2.**		**COMMENTS FROM THE CHAIR AND COMMITTEE MEMBERS** • 2018 RTP Update • RFFA Workshop Update	**John Williams, Chair**
9:45 AM	**3.**		**CITIZEN COMMUNICATIONS ON AGENDA ITEMS**	
9:50 AM	**4.**		**CONSIDERATION OF THE TPAC MINUTES FOR MAY 27, 2016**	
9:55	**5.**	* #	**SW CORRIDOR ENVIRONMENTAL REVIEW PACKAGE** • Purpose - Review and recommend proposed range of alternatives, including project Purpose & Need, for distribution in NEPA scoping. Recommendation to JPACT	**Malu Wilkinson, Matt Bihn, Noelle Dobson, Metro**
10:35	**6**	*	**2018 RTP: REVENUE FORECAST APPROACH** • Purpose –Provide a status update on the development of the RTP Finance Plan and Financially Constrained Revenue Forecast. Information/Discussion	**Ted Leybold Ken Lobeck, Metro**
11:00	**7.**	*	**MAP-21 RULEMAKING DRAFT COMMENTS** • Purpose - Provide a Provide an update on recent federal MAP-21 rulemaking, and seek comments on the draft System Performance Rule Information/Discussion	**Tyler Frisbee Kim Ellis, Metro**
11:40	**8.**	*	**CMAQ FUNDING** • Purpose –Provide an update on the process for allocating CMAQ funds and gather input on technical factors that should be considered. Information/Discussion	**Ted Leybold Grace Cho, Metro**
12:00 PM	**9.**		**ADJOURN**	**John Williams, Chair**

Upcoming TPAC Meetings:
- Friday, July 29
- Friday, August 26
- Friday, September 30

* Material will be emailed with meeting notice
** Material will be emailed at a later date after notice
\# Material will be distributed at the meeting.

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ការគោរពសិទ្ធិពលរដ្ឋរបស់ ។ សំរាប់ព័ត៌មានអំពីកម្មវិធីសិទ្ធិពលរដ្ឋរបស់ Metro ឬដើម្បីទទួលពាក្យបណ្តឹងរើសអើងសូមចូលទស្សនាគេហទំព័រ www.oregonmetro.gov/civilrights។
បើលោកអ្នកត្រូវការអ្នកបកប្រែភាសានៅពេលអង្គប្រជុំសាធារណៈ សូមទូរស័ព្ទមកលេខ 503-797-1890 (ម៉ោង 8 ព្រឹកដល់ម៉ោង 5 ល្ងាច ថ្ងៃធ្វើការ) ប្រាំពីរថ្ងៃថ្ងៃធ្វើការ មុនថ្ងៃប្រជុំដើម្បីអាចឲ្យគេសម្រួលតាមសំណើរបស់លោកអ្នក ។

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November 2014

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2016 TPAC Work Program

As of 6/17/16

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

June 24, 2016 • SW Corridor Environmental Review Package Information/Discussion (Wilkinson, 40 mins) • 2018 RTP: Revenue Forecast Approach Information/Discussion (Leybold, Lobeck; 25 mins) • MAP-21 Rulemaking Draft Comments Information/Discussion (Kloster, Ellis; 40 mins) • CMAQ Funding Information/Discussion (Leybold, Cho; 20 mins)	**July 29, 2016** • 2018 RTP: Transportation Equity Priority Outcomes Information/Discussion (Cho; 35 mins) • 2018 RTP: Regional Freight Needs Information/Discussion (Collins; 35 mins) • 2018 RTP: Project Solicitation Approach Information/Discussion (Kim Ellis; 40 mins) • MAP-21 Rulemaking Comment Letter Discussion (Kloster, Ellis; 40 mins) • *2018 RTP: Regional Transit Vision & Service Enhancement Plans Update Information/Discussion (Snook, Hesse, Lashbrook; 30 mins)*
August 26, 2016 • 2018 RTP: Background for Regional Leadership Forum #2 Information/Discussion (Kim Ellis, 30 mins) • 2018 RTP: Revenue Forecast Information/Discussion (Leybold, Lobeck; 30 mins) • *Step 1 Active Transportation Project Development Funding proposal and process* Event: RTP Regional Leadership Forum #2 (September 23, 8:00a.m. - noon) Navigating Our Funding Landscape	**September 30, 2016** • 2018-2021 MTIP and 2018 RTP Air Quality Conformity Consultation Approval (Cho, 15 mins) • 2018 RTP: Update on Project Solicitation Approach Information/Discussion (Kim Ellis; 40 mins) • 2018 RTP: Performance Measures and Targets Information/Discussion (John Mermin; 40 mins) • *Highway Freight Bottlenecks Information/Discussion (ODOT, 40 mins)*
October 28, 2016 • 2018 RTP Update: Background for Regional Leadership Forum #3 Information/Discussion (Kim Ellis, 30 mins) • 2018 RTP: Performance Measures and Targets Information/Discussion (Mermin, Cho, McTighe; 40 mins) • 2018 RTP: Safety Strategies and Actions Information/Discussion (McTighe; 25 mins) • **Regional Flexible Fund Allocation** Discussion (Ted Leybold/Dan Kaempff, 55 mins)	**November 18, 2016** • **Regional Flexible Fund Allocation** Recommendation to JPACT (Ted Leybold/Dan Kaempff, 45 mins) • 2018 RTP: Project Update Information/Discussion (Ellis, 30 mins) • Special Transportation Fund Allocation Process Information/Discussion (Cho) • Event: RTP Regional Leadership Forum #3 (December 2, 8:00 am to noon) Transforming Our Vision into Regional Priorities

2016 TPAC Work Program

As of 6/17/16

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

December 16, 2016	**January 27, 2017**
•	

Parking Lot

- TAP project delivery contingency fund pilot update (Leybold, Cho)
- Vehicle Electrification Project Options Information/Discussion (Leybold, Winter)
- Step 1 AT Project Development Funding proposal and process

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2016 JPACT Work Program

As of 06/17/16

Items in italics are tentative; ***bold*** *denotes required items*
****Reflects new 2016 meeting schedule: 3rd Thursday of each month****

July 21, 2016 • Chair comments TBD (5+ min) • ***Resolution No. 16-4713, For the Purpose of Endorsing the Proposed Range of SW Corridor High Capacity Transit Alternatives for Environmental Review and the Updated Project Purpose and Need Approved by the Southwest Corridor Steering Committee*** – *Recommendation (Chris Ford, Malu Wilkinson, Metro; 30 min)* • OTF Update (Drew Hagedorn, OTF; 15 min) 2018 RTP Update: RTP Revenue Forecast Approach (Ted Leybold, Ken Lobeck, Metro; 35 min)	**August 18, 2016** • Chair comments TBD (5+ min) • 2018 RTP Update: Draft Regional Transit Vision (Jamie Snook, Metro; Stephan Lashbrook, SMART; Eric Hesse, TriMet; 30 min) *JPACT Finance Subcommittee: TBD*
September 15, 2016 • Chair comments TBD (5+ min) • 2018 RTP Update: Background for Regional Leadership Forum #2 and Draft RTP Revenue Forecast (Kim Ellis, Ted Leybold, Ken Lobeck, Metro; 40 min) • *Step 1 Active Transportation Project Development Funding Proposal & Process - Recommendation (Ted Leybold, Dan Kaempff, Metro; 35 min)* Sept. 23, 8am – 12pm (OCC): RTP Regional Leadership Forum #2 (Navigating Our Transportation Funding Landscape)	**October 20, 2016** • Chair comments TBD (5+ min) • *2018 RTP Update: Project Update (Kim Ellis, Metro; 30 min)* Oct. 9-12: RailVolution 2016, Bay Area, CA

November 17, 2016	**December 15, 2016**
• Chair comments TBD (5+ min) • Regional Flexible Fund Allocation – Discussion (Ted Leybold/Dan Kaempff, Metro; 30 min) • 2018 RTP Update: Background for Regional Leadership Forum #3 (Kim Ellis, Metro; 20 min) • 2018 RTP Update: Safety Strategies & Actions (Lake McTighe, Metro; 20 min)	• Chair comments TBD (5+ min) • *Regional Flexible Fund Allocation – Decision (Ted Leybold/Dan Kaempff, Metro)* • *HOLD for SW Corridor* Dec. 2, 8am – 12pm (OCC): RTP Regional Leadership Forum #3 (Transforming Our Vision into Regional Priorities)

2017-18 Events/Forums:

- **October 2017**: RTP Regional Leadership Forum #4 (Drafting Our Shared Plan for the Region)
- **June 2018**: RTP Regional Leadership Forum #5 (Finalizing Our Shared Plan for the Region)

Parking Lot:

- Southwest Corridor Plan
- Land use & transportation connections
- Prioritization of projects/programs
- Westside Freight Study/ITS improvements & funding
- All Roads Safety Program (ODOT)
- Air Quality program status update
- Washington County Transportation Futures Study (TBD)
- *Step 1 Active Transportation Project Development Funding Proposal & Process (Ted Leybold, Dan Kaempff, Metro; 35 min)*

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TRANSPORTATION POLICY ALTERNATIVES COMMITTEE
MAY 27, 2016
Metro Regional Center, Council Chamber

MEMBERS PRESENT	AFFILIATION
John Williams	Metro
Nancy Kraushaar	City of Wilsonville, representing Cities of Clackamas County
Katherine Kelly	City of Gresham
Chris Deffebach	Washington County
Karen Buehrig	Clackamas County
Don Odermott	City of Hillsboro, representing Cities of Washington County
Cora Potter	Community Representative
Heidi Guenin	Community Representative
Lynda David	Southwest Washington Regional Transportation Council
Adrian Esteban	Community Representative
Charity Fain	Community Representative
Patricia Kepler	Community Representative

MEMBERS EXCUSED	AFFILIATION
Jared Franz	Community Representative
Nick Fortey	Federal Highway Administration
Eric Hesse	TriMet
Susie Lahsene	Port of Portland
Dave Nordberg	Oregon Department of Environmental Quality
Joanna Valencia	Multnomah County
Judith Gray	City of Portland

ALTERNATES PRESENT	AFFILIATION
Phil Healy	Port of Portland
Alan Lehto	TriMet
Todd Juhasz	City of Beaverton, representing Cities of Washington County
Jon Makler	ODOT
Jessica Berry	Multnomah County
Jason Gibben	WSDOT

STAFF and GUESTS: Dan Kaempff, Ken Lobeck, Juan Carlos Ocana-Chiu, Ted Leybold, Malu Wilkinson, Kim Ellis, Tom Kloster, Grace Cho

1. CALL TO ORDER AND DECLARATION OF A QUORUM

Chair John Williams declared a quorum and called the meeting to order at 9:30 a.m.

2. COMMENTS FROM THE CHAIR AND COMMITTEE MEMBERS

City of Portland's Smart City Application - Margi Bradway, City of Portland, gave an update on City of Portland's application for the Smart City Challenge. U.S. Department of Transportation's (USDOT) has pledged up to $40 million (funding subject to future appropriations) to one city to help it define what it means to be a "Smart City "and become the country's first city to fully integrate innovative technologies – self-driving cars, connected vehicles, and smart sensors – into their transportation network. The City submitted a 25 page application which required a great deal of collaboration between agencies, stakeholders, and private partners, .Five cities were to be picked but seven were eventually chosen as finalists. The City of Portland received $100,000 to the next round. Mr. Alan Lehto (TriMet) noted that the competition was fierce and the other finalist cities included Austin, TX; Columbus, OH; Denver, CO; Kansas City, MO; Pittsburgh, PA; and San Francisco, CA.

Committee members appreciated the update and were excited to consider ways that technology might be used to support the region's goals. On June 8-9, there is an interview process with Secretary Foxx, followed by a public process. Letters of support to Secretary Foxx's office would still be welcomed.

Members were also curious about how the application might integrate with RTP. Ms. Kim Ellis noted that the work that has been done to prepare the application will be useful and could be brought into the RTP update, and that the momentum would continue with PSU and others who are involved in the data analytics.

Safe Routes to School - Metro is awarding $25,000 grant through the Regional Travel Options program to support the development of a Regional Safe Routes to School Strategy. The Strategy will provide a regional snapshot and inventory of student travel behaviors, needs, and readiness to improve active travel opportunities (walking, bicycling, rolling} within a 1- mile walk zone at all K-12 public schools in all districts within the metropolitan planning area boundary. The Strategy benefits from and builds on other efforts around the region such as Portland's recent needs assessment for Portland Public Schools and Washington County's School Access Improvement Study. The Strategy will develop a fact sheet for each school, and a prioritization of SRTS needs and potential for impact. This phase of the strategy is projected to be completed in Fall 2016.

RFFA Draft Calendar - Chair Williams provided a brief update on the deadlines and timeline for the RFFA application process. Members provided feedback regarding the due date for proposals, and agreed that it be adjusted from August 12 to August 26, in order to meet committee timelines during that time frame. Mr. Dan Kaempff clarified and members understood that changing the deadline comes at the expense of a tighter timeline for the review process to take place. He also noted that Metro staff is working on the TPAC work group composition and will be sharing that information soon.

3. CITIZEN COMMUNICATIONS ON AGENDA ITEMS.

There were none.

4. CONSIDERATION OF THE TPAC MINUTES FOR APRIL 29, MAY 6, AND MAY 13, 2016.

MOTION: Mr. Alan Lehto moved and Ms. Heidi Guenin seconded the motion to approve the TPAC minutes for April 29, May 6, and May 13, 2016.

ACTION: With all in favor, the motion passed.

5. EQUITY STRATEGY ADVISORY COMMITTEE

Mr. Scotty Ellis and Ms. Irene Konev presented the final draft of the diversity equity and inclusion strategic plan. Mr. Ellis provided an overview of the presentation, reviewed the work that has been ongoing, updates since last presentation and next steps in the timeline.

Mr. Ellis noted that in the past Metro's racial equity work hasn't been coordinated across departments, and has not been the most targeted and strategic to integrate and collaborate with community, business leaders, and staff. Communities of color face widespread and pervasive barriers than any other group. Metro will take a racial equity approach and ensure participatory evaluation and implementation

He identified five long-term goals that will guide the work and be implemented in the coming years:

A. Metro convenes and supports regional partners to advance racial equity
B. Metro meaningfully engages communities of color
C. Metro hires, trains and promotes a racially diverse workforce
D. Metro creates safe and welcoming services, programs and destinations
E. Metro's resource allocation advances racial equity

Irene Konev, a Clackamas County resident, provided her perspective as a Steering Committee member, and discussed her experience of the work as rich and rewarding. She commended Metro for providing leadership in the region for this important work.

Mr. Ellis asked TPAC members to consider how Metro might work with their organization and agencies to consider or partner to advance racial equity.

Committee members appreciated the work and commended the committee and the team on this important work. Some suggestions and notes by the committee included:

- As the region's MPO, Metro manages the investments in transportation throughout the region. From the aspect of transportation, perhaps the equity lens could be reflected in the RFFA. Metro staff noted that each department will develop an action plan and social equity group is being developed. ODOT is represented. RTP work will also reflect this equity focus.
- Encouragement to share resources and information to best engage communities with outreach and engagement opportunities. Member organizations and agencies can learn from Metro's experience and connections to ensure communities to engage communities better.
- Suggestion to help individual organizations to build capacity for engaging communities so that they might best represent themselves.
- Partner with non-profits and community organizations that are already working in the immigrant community and communities of color that already have gained trust and respect, and have successfully fine-tuned outreach methods might help guide the work.
- An opportunity to systematically share data, demographic information, best practices, survey results, and information from focus groups. Metro might be able to actively capture other work and share those resources.
- Focusing on new leadership and youth is critical.
- While it appears to be an internal document it is of regional significance and can set the stage for other organizations to emulate, to scrutinize how these goals fit with local actions.
- Ms. Chris Deffebach provided comments from Andrew Singelakis, a member of the equity strategy steering committee and Director of Land Use and Transportation for the County, regrets that he

was unable to make it to this meeting, due to a sudden conflict. He noted: "I'm sorry that I am unable to attend TPAC this morning for reasons that are beyond my control. I came on to ESAC recently because I support Metro in their advancement of racial equity. Equity work is always very difficult, but necessary and worth it. For transportation professionals in this region, the topic is very timely. As you all know vulnerable populations in this region tend to live in communities that lack basic transportation infrastructure. We need to focus our efforts in fixing this problem. I believe that the work that Metro is doing will serve as a model for the rest of the region to follow. "

Chair Williams noted that focus of work will be reflected and noticeable in all Metro programs and projects as the equity strategy work is implemented in the coming months. Mr. Ellis invited TPAC members to attend the June 23 Council Meeting during which the plan will be adopted by Council.

6. PORTLAND STREETCAR UPDATE

Dan Bower gave a presentation regarding the Portland Streetcar. He noted that The City of Portland owns and maintains the Portland Streetcar system; it's also the lead development agency and in charge of land use planning in Portland. TriMet is the regional transit provider and supports Streetcar by providing trained operators and mechanics as well as providing operational expertise and funding. The non-profit Portland Streetcar, Inc., through its Board of Directors, and with authority granted by the City, provides oversight and assistance for planning, operations, budgeting, customer relations and streetcar best practices. All three agencies collaborate on transportation and land use planning in the region. Their relationship is governed by the Streetcar Master Agreement which was adopted by the TriMet Board of Directors and City Council in 2013.

Additionally, Mr. Bower discussed ridership, challenges, and opportunities. He noted that next steps for the streetcar include

- Update of assumptions for 2009 Streetcar Concept Plan
- Consistency with Comprehensive Plan and Regional Transit Strategy
- Provide certainty to property owners and planners
- Value capture opportunities
- Roadmap to doubling streetcar ridership.
- Project(s) to be included in update of 2018 Regional Transportation Plan (RTP)

He noted that there is an expectation in planning documents and from the public that the private sector will fund a new streetcar line. However, public money is needed since not enough private investment is available.

7. 2018 RTP UPDATE – LEADERSHIP FORUM #1

Ms. Kim Ellis provided a summary of the April 22, 2016 forum about the future of transportation in the Portland metropolitan region in support of the 2018 Regional Transportation Plan update. Staff has finalized a full report which will be sent as a supplemental information packet to TPAC members, alternates, and interested parties following the meeting. Regional Leadership Forums (RLF) will engage policy makers with state legislators, business leaders and community members throughout the RTP update. The goal is to define a shared vision and to discuss how the region might work together to obtain funding to accomplish shared goals.

Six key takeaways came from the forum:

1. Our region is growing and changing and so is the world around us. New partners and innovation need to be part of shaping a shared vision for the future and defining how we work together to achieve it.
2. The region's transportation system is a shared experience and a shared responsibility. Transportation is a top concern for most people, but we each have our own experience of getting around. Understanding these perspectives will help build a coalition to pursue a mix of investments and strategies that work together and accomplish multiple goals.
3. We need to define a bold vision for the future of transportation and the role it should play in our communities. Transportation is not an end unto itself, but a means to an end. There's more to be done to communicate the value of investing in all parts of our transportation system.
4. Our transportation system must be inclusive and benefit all families, communities and our economy. We need to take care of our existing system and invest in all travel options in ways that create an integrated system that is safe, reliable and affordable for all users.
5. Technology and data will be transformational and are key to a bold vision. Our challenge is to figure out how we harness the connectivity and efficiencies technology can provide while ensuring that it doesn't make existing problems worse or leave some communities behind.
6. We need partnerships and leadership to create a great future. We can build the future we want for our region. To keep it prosperous and moving, we need to work together to pursue more funding and embrace new voices and ideas.

Ms. Ellis noted that there is a lot of work underway in the technical work groups in each of the subject areas. The next forum will be focused on Navigating Our Transportation Funding Landscape on September 23, 2016.

Members provided the following comments and feedback:

- Information was requested about the intent of the forum as some officials who attended the event expressed that it didn't provide an opportunity to have tangible discussions about specific projects. Ms. Ellis noted that this first forum was intentionally focused on building relationships, and initiating discussions about a higher vision for our transportation system. The goal was to discuss what the region wants to collectively achieve, and to focus on our regional priorities as we update the project list for 2017. It was important to start with the discussion of outcomes and what we need to be working towards in a bigger picture way. There are also other venues at which partners can discuss specific projects outside the leadership forums including the technical work groups. The September leadership forum will be focused on funding. The December leadership forum will delve into more specific questions about projects.
- Information was requested about what assumptions are being made regarding autonomous and shared vehicles and whether those are being built into the RTP transportation model. Ms. Ellis noted that conversations are underway with the Metro research center.

8. 2018 RTP UPDATE - COORDINATED TRANSPORTATION PLAN FOR SENIORS AND PERSONS WITH DISABILITIES

Mr. Alan Lehto provided an overview of the work underway on the Coordinated Transportation Plan for Seniors and Persons with Disabilities (CTP) and its relationship to the 2018 RTP and the 2018-2021 MTIP. As background context, he noted that 5 percent of Americans identify as disabled with critical disability.

The CTP is comprehensive strategy that serves the transportation needs of people with disabilities and older adults. As a planning document, the CTP has three main functions that include: 1) providing an inclusive snapshot of the region's available services and a comprehensive vision of special needs transportation now and in the future; 2) providing direction for where to expend federal and state transportation funding dedicated towards special needs transportation; and 3) fulfilling certain key federal compliance provisions to remain eligible for allocating special transportation funding.

TriMet serves as the lead in developing the CTP in the Portland metropolitan region, because of its federal and state-designated role as the STF Agency to receive and disburse the Federal Transit Administration's (FTA) 5310 Enhanced Mobility of Seniors and Individuals with Disabilities and Special Transportation Funds (STF) from the State of Oregon. As part of TriMet's responsibility in developing the CTP, the agency ensures the plan addresses:

- An inventory of current services;
- Identification and assessment of transportation needs for individuals with disabilities and older adults;
- The identification of coordination actions to eliminate or reduce duplication in services and strategies for more efficient utilization of resources;
- Strategies to address identified gaps in services; and
- The prioritization of implementation actions.

Through the update effort, some key findings and takeaways from the draft 2016 CTP include:

- Actions placed into three tiers based on urgency, available capacity and funding
- Create an STFAC subcommittee to encourage progress on actions in between annual funding process
- Greater focus on measuring performance
- Encourage fixed-route service when possible
- Manage demand for ADA service
- Maintain current cost-effective services and expand or establish new services and programs
- Strong coordination, collaboration, and innovation
- Enhancing safety and pedestrian access and participating in land use decision-making
- Improve the customer experience

Members appreciated the update and asked about public-private partnerships, leveraging Uber and Lyft for paratransit ability and whether there might be an opportunity for that in the future. Other comments included discussion of geographic locations, and other funds that support these services.
Mr. Lehto noted that this CTP plan is focused on the two above-mentioned funding sources due to federal requirements. There are other funding sources, but they are small and are being cobbled together. Most other funding sources are allocated to non-emergency medical transportation.
Mr. Jon Makler noted that there is a new shuttle bus from Gateway Transit Center to Rooster Rock or Multnomah Falls that will run every 30 minutes.
Members engaged in a brief discussion of MAP-21 and ensuring adequate time is allocated to the MAP-21 discussion on the June TPAC Agenda.

9. ADJOURN

Chair Williams noted that the next TPAC meeting would be convened on June 24, 2016. The meeting was adjourned at 11:45 a.m.

Respectfully submitted,

Lisa Hunrichs, Planning and Development

ATTACHMENTS TO THE PUBLIC RECORD FOR THE MEETING OF MAY 27, 2016

ITEM	TYPE	DOC DATE	DOCUMENT DESCRIPTION	DOCUMENT NO.
1	Agenda	5/27/16	5/27/16 TPAC Agenda	052716T-01
2	Work Program	5/20/16	2016 TPAC Work Program	052716T-02
3	Work Program	5/17/16	2016 JPACT Work Program	052716T-03
4	Meeting Summary	4/29/16	4/29/16 TPAC meeting summary	052716T-04
5	Meeting Summary	5/6/16	5/6/16 TPAC meeting summary	052716T-05
6	Meeting Summary	5/13/16	5/13/16 TPAC meeting summary	052716T-06
7	Flyer	May 2016	2018 RTP Update – Regional Transportation Forum #1 Summary	052716T-07
8	Document	June 2016	Strategic plan to advance racial equity, diversity and inclusion	052716T-08
9	Memo	5/20/16	To: TPAC and Interested parties From: Grace Cho and Ted Leybold Re: 2018-2021 MTIP Coordinated Transportation Plan for Seniors and Persons with Disabilities	052716T-09
10	Executive Summary	n/a	Executive Summary – PBOT Application for USDOT Smart Cities Grant	052716T-10
11	Handout	Undated	Draft 2019-21 RFFA Project Proposal Evaluation and Process & Timeline	052716T-11
12	Memo	5/27/16	To: TPAC and Interested parties From: Kari Schlosshauer and Hannah Day, SRTS National Partnership Re: Metro Safe Routes to School Strategy Project	052716T-12
13	Presentation		Strategic plan to advance racial equity, diversity and inclusion	052716T-13
14	Presentation		Portland Streetcar Update	052716T-14
15	Presentation		Coordinated Transportation Plan for Seniors and Persons with Disabilities	052716T-15

2018 REGIONAL TRANSPORTATION PLAN UPDATE

STATUS REPORT FOR MAY - JUNE 2016

June 17, 2016

www.oregonmetro.gov/rtp

Our region's economic prosperity and quality of life depend on a transportation system that provides every person and business access to safe, reliable, healthy and affordable ways to get around. Through the 2018 Regional Transportation Plan update, the Metro Council is working with communities of the Portland metropolitan region to update the region's shared vision and strategy for investing in the transportation system for the next 25 years.

A list of accomplishments and activities that are underway for different elements of the update follows.

Outreach and public engagement	Accomplishments ✓ Summary and final report on Regional Leadership Forum #1 completed and posted online ✓ Summary report of 30-day winter 2016 online survey results completed and posted online ✓ Ongoing updates to regional technical and policy committees ✓ Project website maintained at **oregonmetro.gov/rtp** Underway ☐ Identification of future Regional Snapshots speaker series transportation topics and speakers (e.g., safety, technology, freight trends, seismic and disaster preparedness) ☐ Planning for next two Regional Leadership Forums to be held on Sept. 23 and Dec. 2 ☐ Focused engagement with communities of color
Safety	Accomplishments ✓ First Safety Work Group meeting held to seek input on *draft* updated regional safety target ✓ Draft safety policy review available for comments ✓ Draft Status review of Regional Transportation Safety Plan available for comments Underway ☐ Updating crash data analysis ☐ Finalizing Regional High Injury Network (HIN) ☐ Finalizing status review of Regional Transportation Safety Plan ☐ Finalizing Safety Policy framework report ☐ Developing draft annual targets and performance measures ☐ Identifying draft actions and strategies
Transportation equity	Accomplishments ✓ Work group review of draft transportation equity measures identified for further research ✓ Worked with PSU team through NITC grant on methods for evaluating draft measures ✓ Coordination between work groups, including specific coordination with performance measures, safety and transit work groups ✓ Focused engagement to validate community priority findings Underway ☐ Development of draft transportation equity measures for the 2018 RTP ☐ Focused engagement activities with historically underrepresented communities to validate draft transportation equity measures

Transit	Accomplishments ✓ Reviewed draft transit related existing conditions measures ✓ Coordination between work groups, including specific coordination with performance measures and transportation equity work groups Underway ☐ Developing transit related system performance measures ☐ Continue preparing existing conditions report on transit
Freight	Accomplishments ✓ Prepared Draft of Key Freight Trends and Logistics Issues Report ✓ Identified individual freight modal needs, for trucks, rail, air, freight, marine and river, and constraints in the freight system ✓ Convened second work group meeting on May 23, 2016 ✓ Reviewed existing freight action plan, freight vision and freight policies with work group Underway ☐ Preparing final draft of Key Freight Trends and Logistics Issues Report ☐ Prepare draft work scope of Regional Freight Strategy for work group review ☐ Refine RTP freight performance measures
Finance	Accomplishments ✓ Completed Washington County agency local revenue templates ✓ Meetings with local agency staff to identify local revenue sources ✓ Prepared draft County revenue summaries for agency review ✓ Refined various federal and state revenue funding scenarios with the ODOT Long-Range Funding Assumptions (LRFA) workgroup to develop statewide funding assumptions for RTP ✓ Received conceptual approval from the LRFA and State for RTP High Capacity Transit funding methodology ✓ Convened two work group meetings and briefed TPAC on RTP revenue forecast approach ✓ Initiated operations and maintenance (O&M) revenue versus costs discussions Underway ✓ Developing Multnomah and Clackamas County agency local revenue templates ✓ Documenting local revenues to include in the RTP constrained revenue forecast ✓ Participation in ODOT Long-Range Funding Assumptions (LFRA) work group ✓ Identifying possible new revenue sources for inclusion in the RTP revenue forecast
Performance	Accomplishments ✓ Coordination between 2018 RTP work groups ✓ Convened third Performance work group meeting on June 27, 2016 ✓ Completed Performance Measures Scoping report based on work group feedback and updated MAP-21 rulemaking ✓ Began review of 2014 RTP and Climate Smart Strategy modeling results Underway ☐ Exploring new ways to measure congestion and reliability ☐ Reviewing modeling results of 2014 RTP and Climate Smart Strategy Investments ☐ Metro staff review of draft Federal System Performance rule released on April 22, 2016 at **fhwa.dot.gov/tpm/rule/pm3_nprm.cfm**
Design	Accomplishments ✓ No new activity - work group anticipated to meet in winter 2016 Underway ☐ Developing visual library and calendar of forums, workshops and best practice tours
Policy actions	*This work will begin in 2017.*

June 2016

GREAT PLACES
SW Corridor
Portland • Sherwood • Tigard • Tualatin
Beaverton • Durham • King City
Washington County • ODOT • TriMet • Metro

October 2014 - May 2016 Public Engagement Summary

In fall 2014 Southwest Corridor project partners defined an 18-month workplan to refine the proposed set of high capacity transit (HCT) alignments and roadway, bicycle and pedestrian projects that would enter federal environmental review in the fall of 2016. Another major milestone of this refinement period was to determine if light rail or bus rapid transit would be the preferred mode. The purpose of this public engagement summary is to document the activities and outcomes of Southwest Corridor Plan outreach from October 2014 through May 2016. This work builds on public engagement activities conducted from the beginning of the Southwest Corridor Plan process.

Creating a Preferred Package

Six years ago, regional leaders began envisioning a set of transportation and land use solutions to address key challenges and enhance livability in the Southwest Corridor. The Southwest Corridor Plan is a package of transit, roadway, bicycle and pedestrian solutions that can help reduce congestion, improve circulation and improve quality of life in the corridor. The Southwest Corridor Plan defines transportation investments to help realize the local land use visions adopted by each community in the area. Community members, business leaders, transit providers, the state and local governments are working together now to plan for these transportation and community development improvements in this corridor.

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503-797-1756

Overall themes

Throughout the refinement period staff repeatedly asked the public what they felt were the most important outcomes that the Southwest Corridor Plan should deliver. In multiple online and in-person settings, key desired benefits rose to the top:

- Delivers fast, reliable transit travel times
- Attracts a significant number of new transit riders
- Increases access to employment and education centers in the corridor
- Results in fewer cars on the road
- Includes walking and biking improvements to transit stations and throughout local communities.

Much of our outreach was place-based, asking residents to tell us what they valued about their neighborhoods, what they wanted to preserve and how they hoped high capacity transit could bring benefit. While each community has unique history and perspective, here are some key themes that emerged from our conversations:

- Desire for less congestion on the roads
- Concern that HCT may take away driving lanes
- Provide fast, reliable transit service with adequate park and rides
- Improve local bus service

- Safety concerns for people who take transit, walk and ride bikes
- Residents want to maintain the local character of neighborhoods and businesses
- Provide benefit to neighborhoods, don't just pass through on the way to someplace else
- Avoid or mitigate negative impacts to local traffic and business access
- High capacity transit should link parts of the community together, not be a wall that divides the community
- Improved sidewalks and bike lanes are important to local livability and safety
- Interest in how transportation investment can serve other communities not immediately on the HCT alignment, including Lake Oswego, Kruse Way, Wilsonville, King City.

Public Engagement Objectives

- Provide relevant information to the public about upcoming project deliberations
- Generate public feedback and ideas and ensure that feedback is presented to decision makers
- Communicate with stakeholders in a way that generates understanding and enthusiasm for the project
- Build on existing relationships with engaged members of the public and build new relationships with public whose perspectives have been underrepresented to date
- Demonstrate that decision makers are receiving and considering community input when deliberating decisions

Public Engagement Desired Outcomes

- Input on key issues and trade-offs specific to each key community in the corridor
- Summary of stakeholder perspectives on HCT alignment choices
- Input on desired benefits that Southwest Corridor Plan investments can bring to communities in the region
- Elevated voices of champions for the project
- Public stakeholders feel they have access to project details, technical staff and decision makers
- Decision-makers understand and consider public input in their decision making

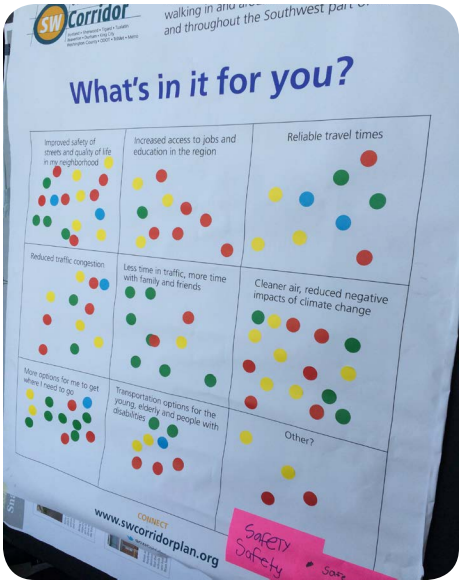
Tabling events

Throughout the year project staff attends a number of tabling events at communities, local colleges and business centers, especially in the summer months when we can connect with residents at the area's farmers markets and community celebrations.

These events are a great opportunity to meet people who may not be familiar with the project and to ask people what benefits they want to see a Southwest Corridor project deliver to their community. Here's what we heard at our tabling events:

- Improve safety and quality of streets in my neighborhood
- Reduce negative impacts of climate change, improve air quality
- Provide more options for me to get where I need to go
- Reduce traffic congestion
- I want to spend less time in traffic, more time with family and friends
- Increase access to jobs and education in the region
- Provide transportation options for the young, elderly and people with disabilities
- Provide reliable travel times.

- National College of Natural Medicine, November 2014
- PCC Sylvania Earth Day, April 2015
- Tualatin Movies on the Commons, May 2015
- OHSU Farmers Market, June 2015
- Tualatin Farmers Market, July 2015
- Sherwood, OR Robinhood Festival, July 2015
- Tigard Farmers Market, September 2015
- Orange MAX line opening day, September 2015
- PCC Sylvania Student Welcome Day, September 2015
- PCC Sylvania Staff In-service Day, September 2015
- Well and Good Coffee House, Tigard June 2016



Key themes on major steering committee decisions

Each major decision by the steering committee is informed by a public comment period that includes public forums or open house, online survyes and solicitation of public testimony regarding the upcoming decision. The following is a summary of input received for major steering committee decisions July 2015-May 2016. Summaries of each outeach period and the input we received have been previously published in multiple documents available on our website, and collected into the online appendix of this document.

July 2015 steering committee decisions

Should the Marquam Hill-Hillsdale light rail tunnel continue to be part of the project?

Should the Hillsdale loop cut-and-cover tunnel for bus rapid transit and light rail continue to be part of the project?

When asked via online surveys, an open house and other community dialogues which factors were most important for decision makers to consider, respondents highlighted:

- High construction cost: input was divided among those who felt tunnel cost was too high and others who felt the cost was worth the benefit
- Desire for high ridership
- Desire for fast travel times
- Desire for direct connection to Marquam Hill
- Need to include walk and bike improvements to Capitol Highway and Barbur Boulevard
- Neighborhood construction impacts: input was divided among those with strong concern over neighborhood construction impacts and others who felt this should not be a major factor in decision making.

January 2016 steering committee decisions

Should the Ash Avenue, Branch Service, Clinton Crossing, Commercial Loop and Downtown Loop alignment options in Tigard continue to be part of the project?

Should the downtown Tualatin terminus be removed from consideration?

When asked via online surveys and the online map tool which factors were important to consider when selecting Tigard alignments for further study, respondents highlighted:

- Faster travel times
- Better connected streets, bicycle and pedestrian facilities between downtown Tigard and Tualatin.

When asked which factors were most important for decision makers to consider when deciding where a future high capacity transit line should end (called the terminus), respondents highlighted:

- Ease of access by bikes and pedestrians
- Effect on travel times
- Potential for extending line in the future
- Effect on ridership.

People also highlighted additional issues including concern for removing auto lanes for transit capacity, concerns about potential property impacts, support for viable alternatives to driving to reduce congestion and questions about how a high capacity transit line will interact with WES.

May 2016 steering committee decisions

What is the preferred mode–bus rapid transit or light rail–for the Southwest Corridor?

Should a light rail tunnel directly serving the PCC Sylvania campus be advanced into the Draft Environmental Impact Statement?

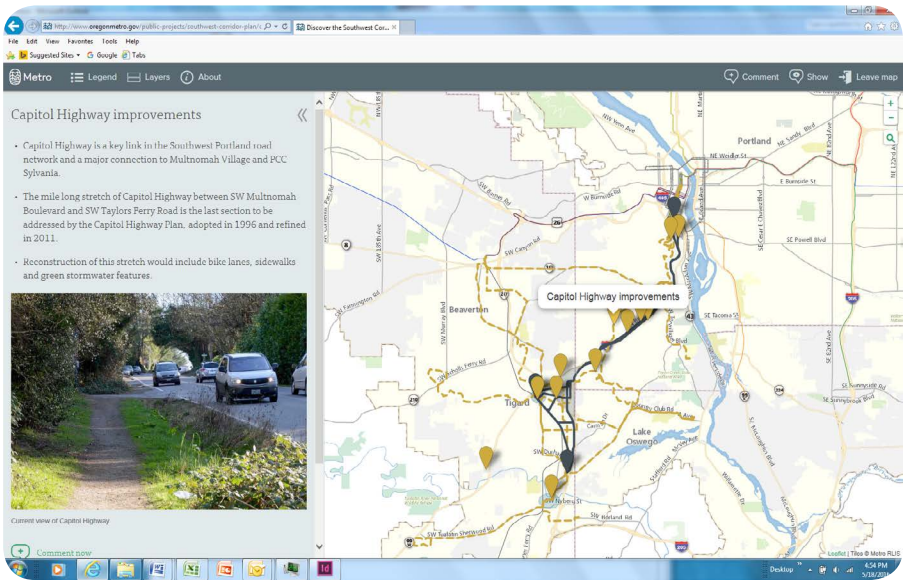
When asked via an online survey, open house and other community dialogues about the choice between light rail and bus rapid transit, respondents echoed the desire for overall project benefits including fast, reliable travel times, high ridership and access to key places. Other important factors regarding the mode decision included:

- Capacity to serve future rush hour demand
- Capacity to extend the line in the future
- Lower ongoing cost to operate per rider
- Flexibility under road blockages and extreme weather.

The public had a diverse set of opinions regarding the benefits and trade offs of a light rail tunnel to serve the PCC Sylvania campus. Overall themes from online surveys, open houses and community dialogues include:

- Finding ways to improve transit service to campus is very important
- Many felt the high cost of tunnels exceeded their benefit; others felt the cost was worth the long term benefit to the region
- Some residents felt strongly that negative construction impacts to neighbors should be a major factor in deciding to build a tunnel
- Improving connections to the campus from communities in Washington County is important.

Southwest Corridor map tool



In 2015 the project team launched an online map tool where users can click on various points thoughout the corridor to learn more and provide feedback. Thousands of people have visited the map and shared input through survey questions and open ended comment boxes throughout the map. In spring 2015 the map tool provided information on HCT alignment options and gathered feedback on HCT tunnels being considered. In fall 2015 staff updated the map to focus information and survey questions on HCT alignments in the Tigard and Tualatin areas and possible HCT terminus locations. In spring 2016 staff updated the map again to highlight a variety of bicycle, pedestrian and roadway projects that are crucial components of the Southwest Corridor Plan.

We want to continue to better understand how our online map tool can be a useful resource for project stakeholders and an opportunity to provide feedback. Please let us know what you think and how we can continue to improve the map tool.

Transit rider intercept surveys

In Spring 2016, Metro public involvement staff worked with the Bicycle Transportation Alliance and TriMet to design a transit rider intercept survey that assessed the following:

- Current ridership habits including how frequently riders use transit and how they access their current transit stop
- Desired safety/access improvements at existing Southwest Corridor-area transit stops
- High-priority destinations in the Southwest Corridor
- Riders' feelings on potential negative impacts of a new light rail line.

A total of 134 rider surveys were completed at four different transit stations in the Southwest Corridor during late afternoons in April 2016. Of the 134 respondents:

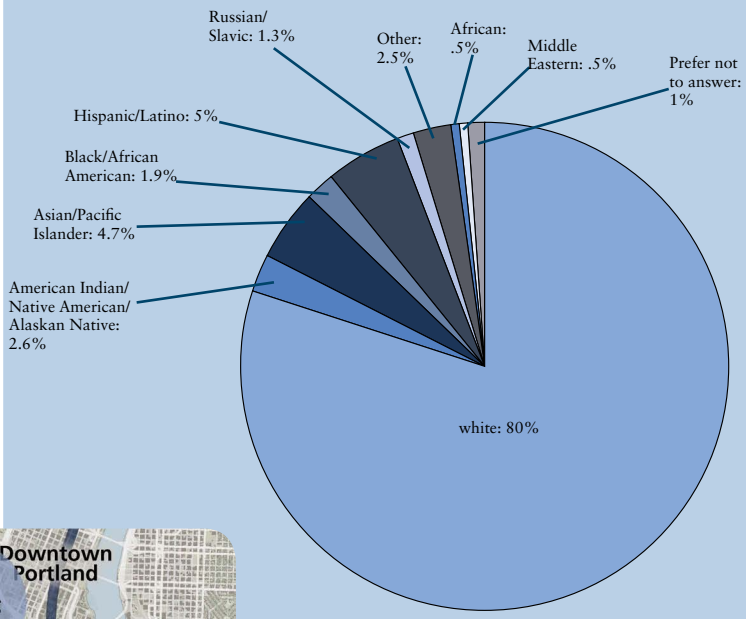
- 83% frequently ride transit ("Most Days")
- 75% walk to their bus stop
- 49% did not identify any needed improvements to access their stop, while 27% said complete sidewalks were needed to access their stop
- 31% identified downtown Portland as a priority destination, 28% identified PCC Sylvania, 21% identified the Tigard Triangle and 18% identified Bridgeport Village
- 35% had no concerns about negative impacts, 28% chose air quality as a priority impact to address, 21% chose impacts to homes and 19% chose interference with auto traffic.

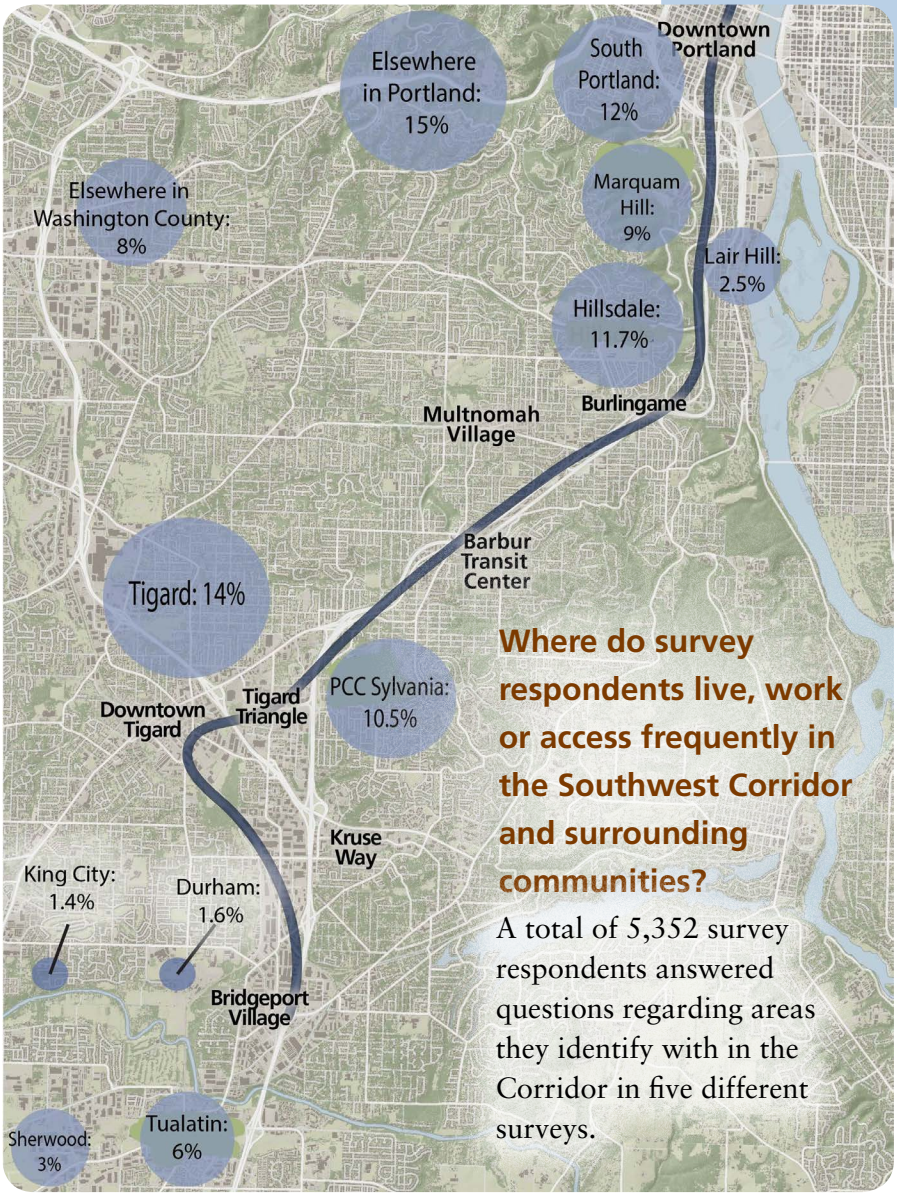
Who did we hear from?

Project online surveys include a set of optional demographic questions. Asking respondents for their age, income, race/ethnicity, gender, and areas where they live and work in the corridor helps us improve our outreach and strive for full participation by potentially affected communities in the transportation decision-making process. The charts on this page combine demographic data from multiple surveys. We realize that some of the same people responded to multiple surveys and there may be duplicate representation. Our intent in providing these charts is to provide a general sense of who is responding to project surveys.

Racial/Ethnic Demographics

A total of 4,284 survey respondents answered questions regarding race/ethnicity in five different surveys.





Where do survey respondents live, work or access frequently in the Southwest Corridor and surrounding communities?

A total of 5,352 survey respondents answered questions regarding areas they identify with in the Corridor in five different surveys.

Age Demographics

A total of 3,460 survey respondents answered questions regarding age in five different surveys.

- 4% of respondents, 20 or younger
- 8% of respondents, 20-24
- 18% of respondents, 25-34
- 32% of respondents, 35-50
- 25% of respondents, 51-65
- 12% of respondents, 66 or older

Tools/Methods	What we did/Who we met with
My Place Dialogues and Community Conversations Meetings with formal and informal civic, business, resident and youth groups to connect with the public in key places in the corridor. These events focus on geographic, social and cultural issues to elevate the unique local benefits and impacts of the project and also set each community's choices in the context of corridor-wide project performance and decision-making.	• National College of Natural Medicine • South Portland Neighborhood Association • Hillsdale Neighborhood Association • Far Southwest Neighborhood Association • Homestead Neighborhood Association • Markham Neighborhood Association • Southwest Neighborhoods, Inc. Transportation Subcommittee • Hillsdale residents • Concerned Citizens for Social Justice • Drinking Liberally in Tigard • Portland Business Alliance • Tigard Downtown Alliance • Tigard Transportation Advisory Committee • Westside Economic Alliance • Washington County Coordinating Committee • Tigard City Center Advisory Committee • Tualatin Youth Advisory Council • Tigard Youth Advisory Council • Supa Fresh Farm, Youth Source • Oregon Somali Family Education Center • Greenburg Oaks residents, Community Partners for Affordable Housing • Somali American Council of Oregon • Lair Hill residents and business owners • 1000 Friends of Oregon • Coalition for a Livable Future • Center for Intercultural Organizing
Online information and surveys Online surveys to generate specific feedback to staff and decision-makers on project decisions. Up-to-date web site that provides access to project materials, upcoming events and summaries of steering committee decisions. See appendix for online survey data.	• Online survey, May 8-22, 2015 • Online survey, June 12-26, 2015 • Online survey, September 15-October 5, 2015 • Online survey, October 19-November 9, 2015 • Online survey, December 4-31, 2015 • Online survey, January 4-February 15, 2016 • Online survey, April 18-28, 2016 • Monthly updates to web site design and content

Tools/Methods	What we did/Who we met with
Corridor-wide planning forums Structured events geared at large numbers of public stakeholders, opportunities to provide in-depth project detail and generate feedback.	• May 12, 2015, Wilson High School • October 19, 2015 Tigard Public Works Building • April 6, 2016, Southwest Community Center
Open houses and tabling events Semi-structured opportunities for interested people to drop by to talk and ask questions of staff and decision makers.	• Southwest Corridor Plan Open House, June 2015 • National College of Natural Medicine, November 2014 • PCC Sylvania Earth Day, April 2015 • Tualatin Movies on the Commons, May 2015 • OHSU Farmers Market, June 2015 • Tualatin Farmers Market, July 2015 • Sherwood, OR Robinhood Festival, July 2015 • Tigard Farmers Market, September 2015 • Orange MAX line opening day, September 2015 • PCC Sylvania Student Welcome Day, September 2015 • PCC Sylvania Staff In-service Day, September 2015 • Well and Good Coffee House, Tigard, June 2016
ID Southwest Appointed committee of community leaders who can activate local dialogue that shapes transportation and land use investment in the corridor, and can make the most of public-private partnerships.	• ID Southwest Meetings, May 2015, October 2015, March 2016 • Membership in ID Southwest is representative of communities and expertise throughout the study area.
Focused discussions Public meetings with a specific focus on technical or special interest topics.	• Technical Workshops: Southwest Neighborhoods Inc., April 2015, May 2016 • Marquam Hill Design Connection: Ahavath Achim synagogue, Friends of Terwilliger, OHSU, Veterans Hospital, Southwest Neighborhoods Inc.

Proposed Range of Alternatives for Environmental Review

Southwest Corridor High Capacity Transit Package

WORKING DRAFT
June 16, 2016

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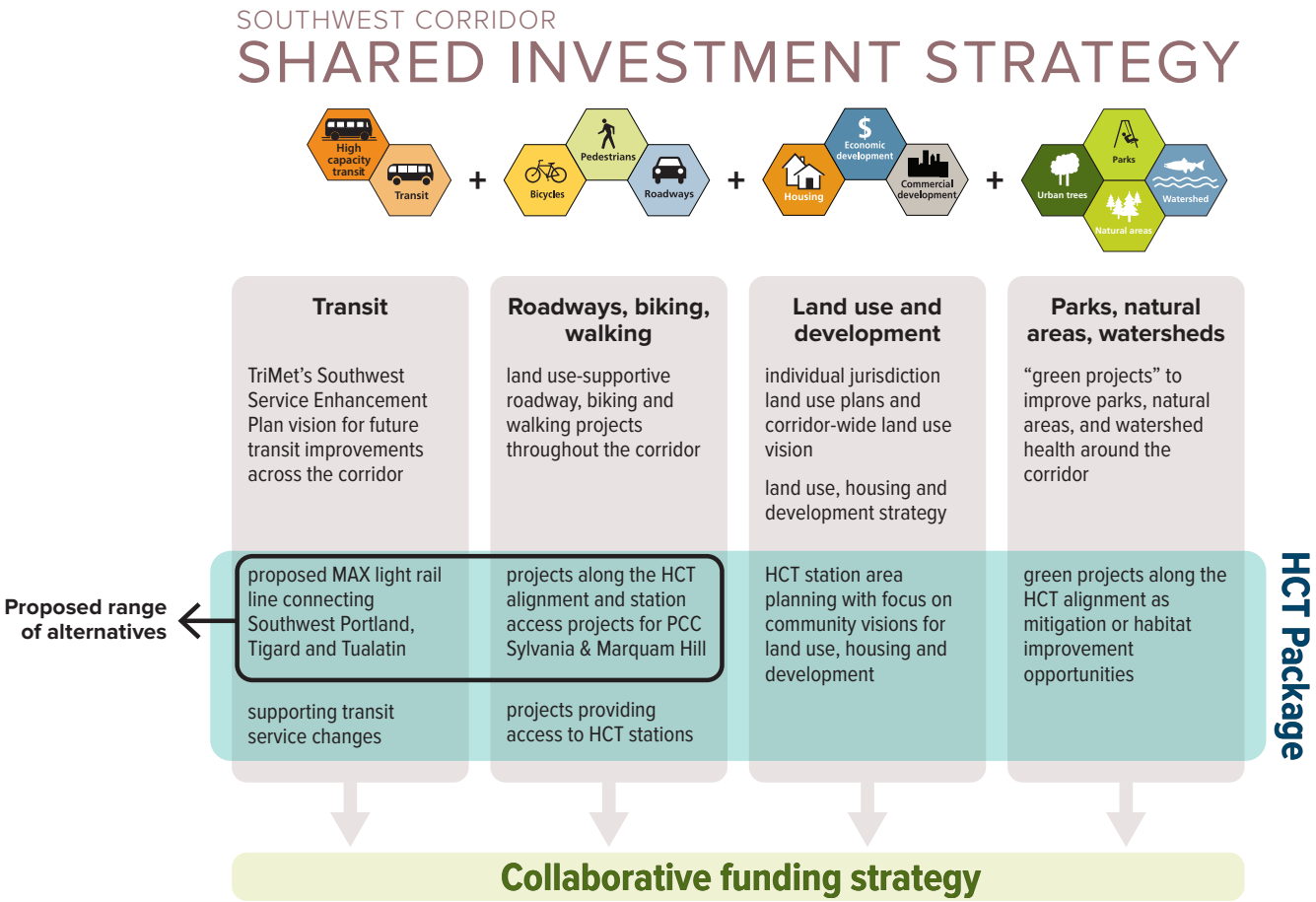
Overview

The Southwest Corridor Plan is a broad array of transit, roadway, bicycle and pedestrian solutions that can help reduce congestion, improve circulation and improve quality of life in the area stretching from Southwest Portland to Sherwood and Beaverton to Tualatin. The Plan defines investments to help realize the local land use visions adopted by each community in the area. Community members, business leaders, transit providers, the state and local governments are working together now to plan for these transportation and community development improvements in this corridor. In 2013, the Southwest Corridor Steering Committee adopted a comprehensive Shared Investment Strategy (SIS) that established a vision of investments in parks, trails, sidewalks, bikeways, transit and roadways to support community goals.

A new high capacity transit (HCT) line is a critical component of the broader Shared Investment Strategy. The HCT line acts as the spine of the improvements envisioned for the corridor and its design inherently includes roadway connectivity improvements, stormwater and streetscape improvements, and bikeways, sidewalks, and safe crossings along and to the HCT line. The HCT Package includes both the HCT line itself and these associated roadway, bike, pedestrian and "green" projects. Shared Investment Strategy projects not included in the HCT Package remain part of the overall Southwest Corridor Plan, but require a separate collaborative funding strategy.

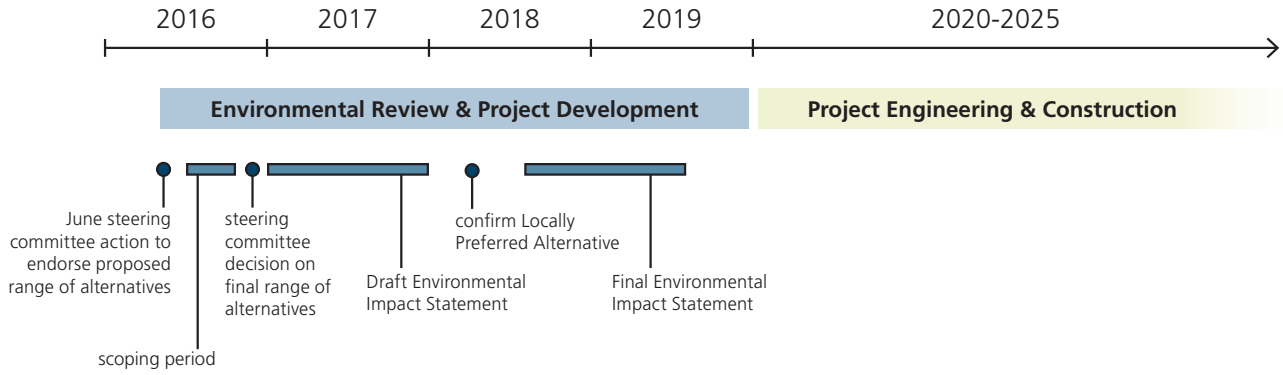


Environmental review phase

Based on technical analysis and public engagement, the steering committee identified light rail transit (LRT) as the preferred HCT mode for the Southwest Corridor in May 2016. The next phase of the planning process for a Southwest Corridor LRT line is a detailed review of anticipated environmental impacts and mitigation strategies under the National Environmental Policy Act (NEPA). An in-depth Environmental Impact Statement (EIS) will analyze the potential impacts of a range of reasonable alternatives that meet the project's adopted Purpose and Need (see attachment). and identify any necessary mitigation strategies. The EIS will analyze both the LRT line and the other projects contained in the HCT Package.

The first step of the environmental review phase is the scoping period, during which the public and federal agencies will have the opportunity to comment on both the range of alternatives and the potential impacts to consider. After scoping, a final range of alternatives to study will be identified, including consideration of any new alternatives suggested during scoping. A Draft Environmental Impact Statement (DEIS) will then be completed to assess the impacts of these alternatives and help inform the selection of a Locally Preferred Alternative (LPA). The DEIS will be circulated for public and agency comment. After the LPA selection, a Final Environmental Impact Statement (FEIS) will be completed. The FEIS will include responses to all comments on the DEIS and commitments to mitigate adverse impacts of the project.

This graphic illustrates the environmental review phase for the Southwest Corridor LRT line:



Purpose and use of this document

This document defines the initial set of investments proposed for environmental review, including the high capacity transit mode, alignments and terminus, as well as associated roadway, bicycle, and pedestrian projects along the HCT alignment or providing critical access to PCC Sylvania and Marquam Hill. The Southwest Corridor Steering Committee endorsed this proposed range of alternatives at their June 2016 meeting.

During the scoping period, currently scheduled for August and September 2016, additional station access projects will be analyzed and considered for inclusion in the DEIS. In late 2016, the steering committee will consider this analysis and the comments received during the scoping period to decide on the final range of alternatives to study in the DEIS.

Proposed range of alternatives

Light rail alignment options and preliminary station locations

The proposed high capacity transit investment for the Southwest Corridor is a new 11- to 12-mile MAX line connecting Portland, Tigard and Tualatin with fast, reliable transit service. The line would include stations serving many destinations, including South Portland, Marquam Hill, Burlingame, the Barbur Transit Center, PCC Sylvania, Tigard Triangle, downtown Tigard and Bridgeport Village. These preliminary station areas and the remaining alignment options are described below, from north to south by general geographic area.

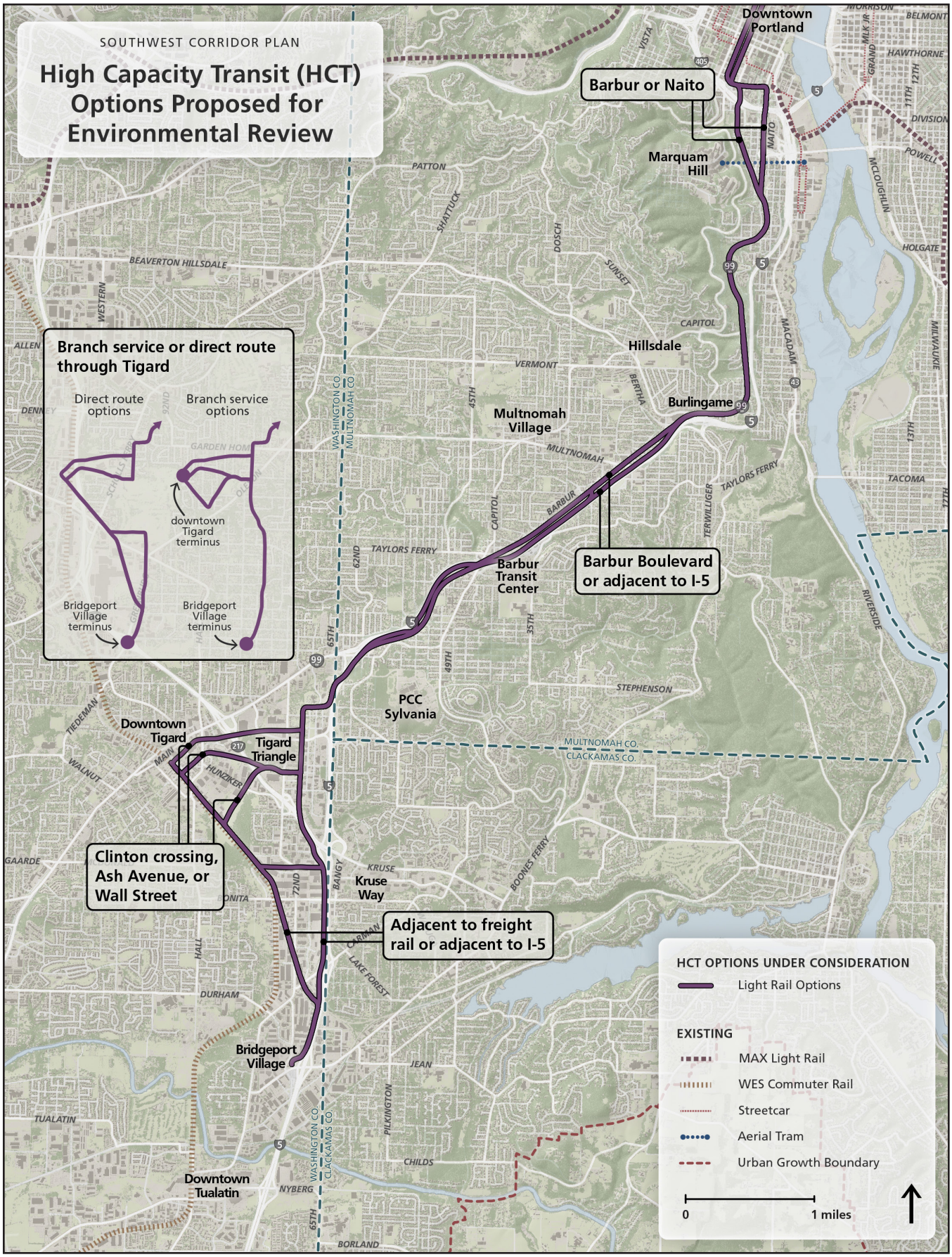
The alignments proposed in this document reflect changes proposed in a staff recommendation released in May 2016. Staff recommends replacing the 68th/70th Avenue couplet with a 70th two-way option in the Tigard Triangle and replacing the branch service option that splits at Hunziker Street with a branch option that splits in the Triangle. At their June 2016 meeting, the steering committee will act on this recommendation prior to considering the proposed range of alternatives.

South Portland

The light rail line would extend south from the existing Green/Yellow/Orange Line MAX tracks that run through the downtown Portland Transit Mall. Two alignment options remain in the South Portland area: Barbur Boulevard or Naito Parkway. With the Barbur option, the Southwest Corridor light rail line would cross over I-405 on a new structure parallel to the 4th Avenue bridge, then run in the center of Barbur Boulevard south of Caruthers Street. With the Naito option, the light rail line would follow the Yellow/Orange Line tracks to the existing station on Lincoln Street, then turn south at Naito Parkway to cross over I-5 and continue south to Barbur on Naito.

Both alignments would include a station near Gibbs Street to serve both Marquam Hill and the Lair Hill area, including the Oregon Health & Science University (OHSU), the Veterans Affairs (VA) Medical Center and the National College of Natural Medicine (NCNM). Either alignment would include a new mechanized connection between Barbur Boulevard and Marquam Hill (included in the roadway, bicycle and pedestrian projects on page 9). A station near Gibbs Street would also serve the South Waterfront via the Hooley Pedestrian Bridge, which is located three blocks east of Naito and five blocks from Barbur.

South of the point where Barbur and Naito converge, the line would continue in the center of Barbur, with a second South Portland station located near Hamilton Street.


SOUTHWEST CORRIDOR PLAN
High Capacity Transit (HCT) Options Proposed for Environmental Review
Downtown Portland
Barbur or Naito
Marquam Hill
Hillsdale
Burlingame
Multnomah Village
Barbur Transit Center
Barbur Boulevard or adjacent to I-5
PCC Sylvania
Downtown Tigard
Tigard Triangle
Clinton crossing, Ash Avenue, or Wall Street
Kruse Way
Adjacent to freight rail or adjacent to I-5
Bridgeport Village
Downtown Tualatin
Branch service or direct route through Tigard
Direct route options
Branch service options
downtown Tigard terminus
Bridgeport Village terminus
Bridgeport Village terminus
HCT OPTIONS UNDER CONSIDERATION
Light Rail Options
EXISTING
MAX Light Rail
WES Commuter Rail
Streetcar
Aerial Tram
Urban Growth Boundary
0
1 miles

Southwest Portland

South of Hamilton, the light rail line would continue in Barbur Boulevard to 13th Avenue. No stations have been identified for "The Woods" section of the alignment, which has relatively little development and is largely bordered by parks. Construction of the light rail alignment through this area would require reconstruction of the Vermont and Newbury viaducts, which would be widened to accommodate transit as well as bike lanes and sidewalks.

Between 13th Avenue and the Portland-Tigard city limits near 60th Avenue, the light rail line could run in the center of Barbur Boulevard. The line could also start on Barbur and switch to run adjacent to I-5 at 13th Avenue, 26th Avenue or near the Barbur Transit Center. The line could then switch back over to Barbur near the Barbur Transit Center or continue adjacent to I-5 to 60th Avenue.

Several station locations are proposed through the Southwest Portland area along the Barbur/I-5 corridor, with a few variations:

- Both the adjacent to I-5 and the Barbur alignment would include a station near 13th Avenue to serve the area around the Burlingame Fred Meyer.
- The Barbur alignment would include a station at Capitol Hill Road and 19th Avenue to serve the area around Safeway. Because of the existing bridges and I-5 ramps, the adjacent to I-5 alignment would not be able to serve a station at 19th. Instead, a station at 22nd Avenue and Spring Garden Street would be served with the adjacent to I-5 alignment.
- Either alignment could include a station near 26th Avenue, which has an existing underpass under I-5 to connect to the adjacent neighborhood. For the Barbur alignment, a station in this general area could also be located at 30th Avenue instead of 26th.
- Both alignments would include stations at the Barbur Transit Center, which could include additional park-and-ride capacity. The Barbur Transit Center would provide transfer opportunities to bus lines and walk access to the surrounding West Portland town center.
- Both alignments would include a station and a new park-and-ride lot at 53rd Avenue. This station would also include improvements to 53rd Avenue between Barbur and the PCC Sylvania campus to provide a safer and more accessible walk/bike connection to the campus.

Near the Portland-Tigard city limits, just west of where Barbur crosses over I-5 and turns into Pacific Highway, the light rail line would turn south to cross over I-5 and into the Tigard Triangle on a new structure.

Tigard and Tualatin

After crossing over I-5 from Southwest Portland into the Tigard Triangle, the light rail alignment would run along the west side of I-5 and then merge into the center of Atlanta Street.

Through Tigard, there are two general service scenarios: a direct route through downtown Tigard continuing to Bridgeport Village or a branched route with a split in the Tigard Triangle, where every other train would either continue south to Bridgeport Village or turn west to serve downtown Tigard.

For the direct route scenario, there are two options for traveling through the Triangle and downtown Tigard.

- With the Ash Avenue option, the light rail line would run on 70th Avenue to Beveland Street, including construction of new segments of 70th Avenue that do not exist today. From 70th, the line would run on Beveland Street and a new structure over Highway 217 extending from Beveland to Hall Boulevard near Knoll Drive, then connect to Ash Avenue. The Ash Avenue option would include light rail stations near Baylor Street in the northern Tigard Triangle, on Beveland Street in the southern Tigard Triangle and on Ash Street to serve downtown Tigard and the Tigard Transit Center.
- With the Clinton crossing option, the light rail line would turn south onto 69th Avenue then cut west near Clinton Street on a long structure extending from 70th over Dartmouth Street and Highway 217. The alignment would cross Hall Boulevard at grade just south of OR-99W (Pacific Highway), and run on a new street segment connecting Scoffins Street and Commercial Street near the Tigard Transit Center. The Clinton option would include a station near Baylor street in the northern Tigard Triangle and on the new street between Scoffins and Commercial to serve downtown Tigard and the Tigard Transit Center.

South of downtown Tigard, both direct route options would run adjacent to the WES commuter rail tracks toward Bridgeport Village. South of Tech Center Drive, light rail could either continue adjacent to freight rail tracks or run east between industrial buildings and then adjacent to I-5 south to Bridgeport Village. Both alignment options would include stations near Bonita Road, Upper Boones Ferry Road and Bridgeport Village.

For the branched service scenario, the downtown Tigard leg of the branch could run on the Clinton crossing option, the Ash Avenue option or on a Wall Street alignment. Similar to the Ash Avenue alignment, the Wall option would run along 70th Avenue and Beveland Street in the Triangle with stations near Baylor Street and Beveland Street. The Wall alignment would cross over Highway 217 on a new structure extending from Beveland Street to Hunziker Street, then continue on Wall Street and run parallel to the WES tracks into downtown Tigard with a station at the Tigard Transit Center. The Bridgeport Village leg of the branch would continue south on 70th Avenue and cross over Highway 217 on a new structure, then run adjacent to I-5 to Bridgeport Village. The Bridgeport Village branch would include stations near Baylor Street, Beveland Street, Bonita Road, Upper Boones Ferry Road and Bridgeport Village.

Roadway, bicycle and pedestrian projects

The process of identifying which roadway, bicycle and pedestrian projects are studied in the DEIS along with light rail will continue into the scoping period. Only projects that are likely to receive federal funding need to be evaluated under NEPA. Project partners have sorted the list of Shared Investment Strategy (SIS) roadway, bicycle and pedestrian projects into three "buckets" according to their likelihood of being included in the DEIS. Bucket 1 projects are included in the proposed range of alternatives, which was endorsed by the steering committee in June 2016. Bucket 2 projects and several additional station access projects will undergo more detailed analysis prior to the scoping period to inform which projects are included in the DEIS. Bucket 3 projects will be pursued separately from the HCT project.

A full list of SIS roadway, bike and pedestrian projects organized into the three buckets will be released prior to scoping.

Bucket 1: Proposed for environmental review	Bucket 2: Proposed for further analysis and input during scoping	Bucket 3: Pursue separately from HCT project
Walking and biking improvements along the light rail alignments Critical station access projects serving Marquam Hill and PCC Sylvania Priority roadway connectivity projects that could be constructed with the light rail line	Projects providing walk or bike access to light rail stations Additional roadway connectivity projects that could be constructed with the light rail line	Projects not providing access to stations or along light rail alignments Projects moving forward in the near term with other funding sources

Bucket 1: Proposed for environmental review

Bucket 1 includes bicycle and pedestrian improvements along the light rail alignments and critical station access projects that are already incorporated into the transit design. The major roadway connectivity projects included in bucket 1 are key priorities of the partner jurisdictions and combine improvements for autos, bikes and pedestrians. Because these projects fall along the proposed light rail alignments and may be eligible for federal New Starts funds, they could be constructed together with the transit project and merit joint environmental analysis.

While most of the bucket 1 projects were included in the Shared Investment Strategy (SIS) list of roadway and active transportation projects, others have emerged as opportunities during the design process. In the project descriptions on the following page, related SIS project ID numbers are listed where applicable.

Walking and biking improvements along the proposed light rail alignments:

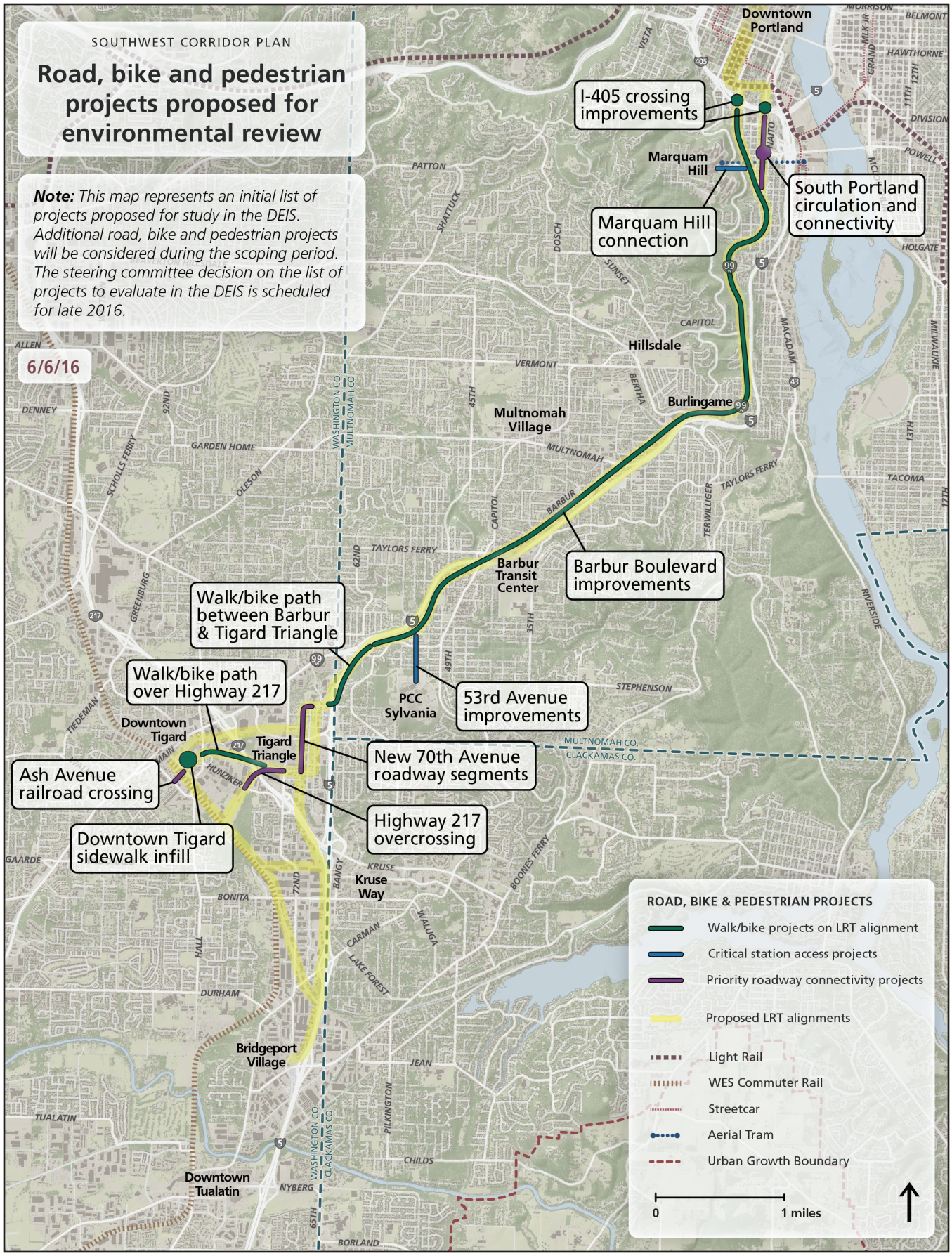
- ***I-405 crossing improvements:*** Improve opportunities for bicycles and pedestrians to cross over/under I-405. (SIS project ID: 6022)
- ***Walk/bike improvements on Barbur Boulevard:*** Add new and upgrade existing sidewalks, bike lanes and safe crossings on Barbur Boulevard from 3rd Avenue to 60th Avenue, including reconstruction of Vermont and Newbury viaducts. (SIS project IDs: 3044, 4002, 5005, 6003, 6004, 6005)
- ***Walk/bike path between Barbur Boulevard and the Tigard Triangle:*** Build new multi-use path connecting Barbur Boulevard near 60th Avenue to the northern Tigard Triangle area.
- ***Walk/bike path over Highway 217:*** Include new multi-use path on the light rail structure over Highway 217, between Hall Boulevard and either Clinton Street or Beveland Street.
- ***Downtown Tigard sidewalk infill:*** Build sidewalks, where there are none, along the light rail alignment in downtown Tigard. (SIS project ID: 2080)

Critical station access projects serving Marquam Hill and PCC Sylvania

- ***Marquam Hill connection:*** Construct a new pedestrian connection between Marquam Hill and Barbur Boulevard to access a light rail station on Barbur Boulevard or Naito Parkway near Gibbs Street. (SIS project ID: 2999)
- ***53rd Avenue improvements:*** Reconfigure and improve intersection of Barbur Boulevard, 53rd Avenue and Pomona Street to manage traffic turning speeds and improve safety of pedestrians and bicyclists. Build neighborhood greenway connection on 53rd Avenue between Barbur and PCC Sylvania. Potential designs include updated sidewalks, bike lanes, pervious pavement, landscaping and ramp connection to campus. (SIS project IDs: 5057, 6013)

Major roadway connectivity projects that could be constructed with the light rail line

- ***South Portland circulation and connectivity:*** Reconfigure ramp access to the west end of the Ross Island Bridge. Reconnect streets and pedestrian/bike facilities across Naito Parkway. (SIS project IDs: 1044, 5013)
- ***New 70th Avenue roadway segments:*** Construct new segments of 70th Avenue to improve connectivity in the Tigard Triangle street grid, including one auto lane each direction and sidewalks.
- ***Highway 217 overcrossing:*** Build new connection of Beveland Street to Hunziker Street over Highway 217 for cars, bikes and pedestrians. (SIS project ID: 1107)
- ***Ash Avenue railroad crossing:*** Extend Ash Avenue at-grade across the railroad tracks between Commercial Street and Burnham Street, including sidewalks. (SIS project ID: 1077)


SOUTHWEST CORRIDOR PLAN
Road, bike and pedestrian projects proposed for environmental review
Note: This map represents an initial list of projects proposed for study in the DEIS. Additional road, bike and pedestrian projects will be considered during the scoping period. The steering committee decision on the list of projects to evaluate in the DEIS is scheduled for late 2016.
6/6/16
Downtown Portland
I-405 crossing improvements
Marquam Hill
Marquam Hill connection
South Portland circulation and connectivity
Hillsdale
Burlingame
Multnomah Village
Barbur Transit Center
Barbur Boulevard improvements
Walk/bike path between Barbur & Tigard Triangle
Walk/bike path over Highway 217
PCC Sylvania
53rd Avenue improvements
Downtown Tigard
Tigard Triangle
New 70th Avenue roadway segments
Ash Avenue railroad crossing
Highway 217 overcrossing
Downtown Tigard sidewalk infill
Kruse Way
Bridgeport Village
Downtown Tualatin
ROAD, BIKE & PEDESTRIAN PROJECTS
Walk/bike projects on LRT alignment
Critical station access projects
Priority roadway connectivity projects
Proposed LRT alignments
Light Rail
WES Commuter Rail
Streetcar
Aerial Tram
Urban Growth Boundary
0
1 miles

Bucket 2: Proposed for further analysis and input during scoping

Bucket 2 projects may qualify for federal New Starts funds because the projects could improve walk or bike access to the proposed light rail stations. Prior to the scoping period, project staff will prepare a preliminary analysis of the bucket 2 projects to inform public input solicited during scoping. Several additional station access projects suggested by project partners will undergo this same analysis. Projects proposed during scoping will also be considered for inclusion in the DEIS. Staff analysis and public input will inform the steering committee decision on which projects to include in the final range of alternatives to study in the DEIS.

Bucket 3: Pursue separately from HCT project

Project staff has identified bucket 3 projects as likely ineligible for federal New Starts funding, and therefore not requiring environmental review as part of the transit project. These projects will continue to be included in the broader Southwest Corridor Plan, but will be pursued separately from the light rail project.

Next steps

During the DEIS public scoping process, currently scheduled for August and September 2016, the proposed range of alternatives will be available on the project website (www.swcorridorplan.org) and provided at public scoping meetings. In addition, project staff will provide information on the roadway, bike and pedestrian projects considered for inclusion in the DEIS (bucket 2 projects and other station access projects proposed by project partners). The public will be invited to submit comments on the proposed range of alternatives, including suggestions on which roadway, bike and pedestrian projects to study, other reasonable alternatives that meet the project's Purpose and Need, and impacts to be evaluated in the DEIS. After the public scoping period, the steering committee will decide on the range of alternatives to be evaluated in the DEIS.

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ATTACHMENT

Purpose and Need for the Southwest Corridor Light Rail Project

The Southwest Corridor light rail project is one component of the overall Southwest Corridor Plan Shared Investment Strategy.

Project Purpose

The purpose of the Southwest Corridor light rail project is to directly connect Tualatin, downtown Tigard, Southwest Portland, and the region's central city with light rail, high quality transit and appropriate community investments in a congested corridor to improve mobility and create the conditions that will allow communities in the corridor to achieve their land use vision. Specifically, the project aims to, within the Southwest Corridor:

- Provide light rail transit service that is cost-effective to build and operate with limited local resources
- Serve existing transit demand and significant projected growth in ridership resulting from increases in population and employment in the corridor
- Improve transit service reliability, frequency, and travel times, and provide connections to existing and future transit networks including WES commuter rail
- Support adopted regional and local plans including the 2040 Growth Concept, the Barbur Concept Plan, the Tigard Triangle Strategic Plan and the Tigard Downtown Vision to accommodate projected significant growth in population and employment
- Complete and enhance multimodal transportation networks to provide safe, convenient and secure access to transit and adjacent land uses
- Advance transportation projects that increase active transportation and encourage physical activity
- Provide travel options that reduce overall transportation costs
- Improve multimodal access to existing jobs, housing and educational opportunities and foster opportunities for commercial development and a range of housing types adjacent to transit
- Ensure benefits and impacts promote community equity
- Advance transportation projects that are sensitive to the environment, improve water and air quality, and help achieve the sustainability goals and measures in applicable state, regional, and local plans

Project Need

A light rail transit project in the Southwest Corridor is needed to address the following issues:

- Transit service to important destinations in the corridor is limited, and unmet demand for transit is increasing due to growth
- Limited street connectivity and gaps in pedestrian and bicycle networks create barriers and unsafe conditions for transit access and active transportation
- Travel is slow and unreliable on congested roadways
- There is a limited supply and range of housing options in the Southwest Corridor with good access to multimodal transportation networks, and jobs and services are not located near residences
- Regional and local plans call for high capacity transit in the corridor to meet local and regional land use goals
- State, regional and local environmental and sustainability goals require transportation investments to reduce greenhouse gas emissions.

These project needs are described in more detail below:

Transit service to important destinations in the corridor is limited, and unmet demand for transit is increasing due to growth. There is a need to improve transit connections to the economic and educational opportunities and services in the corridor. The corridor has 11 percent of the region's population and 26 percent of the region's employment. The five colleges and universities in the corridor serve over 45,000 students. The region's largest shopping destinations are located in the corridor. However, transit service in the Southwest Corridor varies in availability and frequency and struggles to serve areas due to an incomplete and congested road network with congested bottlenecks. As a result, many of the corridor's more heavily-traveled areas, major employment centers, and industrial areas do not have frequent transit service. Taking transit between some of the major destinations in the corridor can take four to six times as long as driving and the corridor generally lacks sidewalk and bicycle connectivity, as discussed below. As a result, driving is the most functional travel option for many people, adding to the corridor's traffic congestion.

There is also increasing unmet demand for transit service in the corridor. In 2010, there were 85,100 households in the corridor; projections show this number growing to 126,000 households in 2035. In Metro's 2009 High Capacity System Plan the corridor between Portland City Center and Sherwood had the highest projected light rail ridership of any future corridor. The number of transit trips in the corridor is projected to increase by 81 percent in the next 25 years. In 2010, there were 121,000 average weekday transit trips in the corridor. The 2035 forecast shows an increase to 219,000 average weekday transit trips. Today eight bus lines serve the corridor with up to 26 buses per hour in each direction in peak periods, with buses arriving approximately every 2 minutes on average in some locations. In 2035, with service adjusted to accommodate projected demand, the number of buses would increase to over 35 per hour.

Limited street connectivity and gaps in pedestrian and bicycle facilities create barriers and unsafe conditions for transit access and active transportation. The lack of complete sidewalk networks and crosswalks in the corridor impedes walking to transit and other destinations. The bicycle network also has gaps that hinder connectivity. Travel options are also constrained by the geography and development patterns in the corridor, and roads in much of the corridor are winding and discontinuous. The area lacks well-connected street network that would facilitate transit access, make it easier and safer to make short trips on foot or by bike, and provide travelers alternative routes. A safe and complete pedestrian network is needed in order to maximize transit use.

Travel is slow and unreliable on congested roadways. A lack of arterials results in traffic funneling onto a few key travel routes, such as OR-99W and I-5. Because of the limited road network, transit operating in mixed traffic is often slowed by congestion, especially at key bottlenecks. Travel times for automobiles are expected to increase by 17 percent by 2035 with average speeds slowing to 20 mph. Bus trips operating in mixed traffic between the Portland central city and Tigard are projected to take 12 percent more time in 2035. These travel times are likely to vary more in the future than today due to increases in congestion, incidents, and variation in traffic levels. Unreliable travel times results in travelers in the corridor planning extra time to ensure they will arrive on time. Sections of OR-99W, the major transit route in the corridor, are among the most unreliable road segments in the corridor. Over a 1.7 mile segment in Portland (north of Multnomah Boulevard) and a 2.8 mile segment in Tigard travelers need to budget more than double the average travel time in the PM peak hour to ensure they arrive at destinations on time. Transit travel times are subject to the same lack of reliability and can be expected to vary significantly from the forecast "average condition" because of unreliable travel conditions on congested roadways.

There is a limited supply and range of housing options in the Southwest Corridor with good access to multimodal transportation networks, and jobs and services are not located near residences. The Southwest Corridor is projected to add around 41,000 households from 2010 to 2035, an increase of 48 percent. Presently, the majority of housing in the project area consists of low density, single family housing and little affordable housing is available. As the region grows, providing a variety of housing options and increased housing supply in the corridor will be necessary to accommodate the additional residents. Concentrated development around light rail stations can provide a range of additional housing options, including affordable housing, with transit and walk access to jobs and other amenities that can reduce the reliance on automobile travel and reduce transportation costs for households. Providing light rail transit will allow development of affordable and higher density housing, which is not currently possible due to State of Oregon Transportation Planning Rules related to capacity on state road facilities.

In addition, many of the major employment areas in the corridor have developed far away from the area's housing, requiring workers to commute over long distances. For example, 93% of workers in Tualatin and 92% of workers in Tigard live outside the city of their employment. With the transit service limitations described previously, driving on congested roadways is often the only choice for people to access their jobs. In addition, the incomplete sidewalk and bicycle networks in the

corridor require riders to access transit by car and, as a result, park and ride lots in downtown Tigard and near Bridgeport Village are often full.

As the region grows, implementation of light rail will be critical to improve transit connections between jobs and residences. A well-distributed park and ride system combined with place making principles will allow disconnected users to access light rail without impacting livability.

Regional and local plans call for high capacity transit in the corridor to meet local and regional land use goals. To help meet expected levels of growth, Metro's 2040 Growth Concept for the Portland region calls for "town center" development in downtown Tigard, the Tigard Triangle and West Portland. A town center is intended to provide services to tens of thousands within a two- to three-mile radius with one- to three-story buildings for employment and housing, and well served by transit. This regional land use strategy is supported by Tigard's adopted *High Capacity Transit Land Use Plan,* which identifies preferred station community concepts. The Tigard Triangle, however, is surrounded by congested regional highways and has only basic transit service. Providing light rail transit service to this area, which has half the acreage of downtown Portland, would allow for multi-story mixed use development to accommodate a substantial proportion of population and job growth in locations that can be efficiently serviced. This regional strategy is also supported by the City of Portland's *Barbur Concept Plan.* Light rail transit service is critical to fulfillment of that plan, including higher intensity infill development and a continuous and safe bike/pedestrian corridor along Barbur Boulevard. High capacity transit service will also support access to jobs in Tualatin, Sherwood and other employment areas in the corridor that are planned for significant job growth.

The 2035 Regional Transportation Plan (RTP) identifies the investments in multiple modes of transportation that will help accommodate the location and types of development designated by the Growth Concept, noting that, "HCT investments help the region concentrate development and growth in its centers and corridors." The RTP designates a high capacity transit system interconnecting the central Tigard and West Portland town centers and Portland's central city as a near-term regional priority.

State, regional and local environmental and sustainability goals require transportation investments to reduce greenhouse gas emissions. State and regional policies support actions to increase energy efficiency and reduce harmful greenhouse gas (GHG) emissions, especially from transportation sources. The state has mandated that the Portland region develop and implement a strategy to reduce per capita greenhouse gas emissions from cars and small trucks by 2035. In 2014, Metro adopted the Climate Smart Strategy to meet that requirement by achieving a 29 percent reduction in per capita greenhouse gas emissions. A high capacity transit project in the Southwest Corridor would advance Climate Smart by making transit convenient, frequent, accessible and affordable; making biking and walking safe and convenient; and making streets and highways safe, reliable and connected. However, the HCT project would need to ensure safe and comfortable access to transit for pedestrians, bicyclists and drivers and address major gaps in biking and walking routes in the corridor.

The City of Portland's Climate Action Plan also addresses GHG emissions with objectives including reducing daily per capita vehicle miles traveled by 30 percent from 2008 levels, improving the

efficiency of freight movement within and through the Portland metropolitan area, and ensuring that 80 percent of residents can easily walk or bicycle to meet all basic daily, non-work needs and have safe pedestrian or bicycle access to transit. Light rail transit project in the Southwest Corridor would advance these objectives, especially since that segment of I-5 is the only freeway in Portland not matched with high capacity transit to provide an alternative to driving.

Purpose and Need Background

This section provides additional information on previous planning and regional policy that led to the proposal for a transit project in the Southwest Corridor.

The Southwest Corridor High Capacity Transit Project proposal is based on extensive regional land use and transportation planning beginning in 1975, and regional policy to make better use of the existing transportation system and provide transportation options, including pedestrian, bike and transit, before adding new motor vehicle capacity. A HCT project in the vicinity of Barbur Boulevard and Oregon Highway 99W emerged as one of three near-term projects in the High Capacity System Plan (2009), a 30-year plan to guide investments in light rail, commuter rail, bus rapid transit and rapid streetcar in the region.

High capacity transit has played a significant role in defining the Portland, Oregon region for almost 40 years. Planning for high capacity transit began following the region's decision to move away from plans for large new freeways in favor of more modest street projects and a network of transitways to meet future travel demand. These plans were codified in the 1975 Interim Transportation Plan and refined in the Light Rail System Plan adopted by the Metro council in 1982. In 1978, the voters in the metropolitan areas of Clackamas, Multnomah and Washington counties made Metro responsible for coordinating the land-use and regional transportation plans of the region's 27 jurisdictions.

In 1995, the Metro Council adopted the 2040 Growth Concept to guide regional growth. The 2040 Growth Concept and the Regional Framework Plan, adopted in 1997 and updated in 2005, encourage growth in centers and corridors within an urban growth boundary and call for high capacity transit to serve the larger regional centers. The Regional Framework Plan requires transportation system management strategies, transit, bicycle and pedestrian system improvements, traffic calming, and land use strategies be considered to meet transportation needs before increasing motor vehicle capacity. The Regional Transportation Plan (RTP) links transportation investments to land use policy to implement the 2040 Growth Concept and sets the course for future transportation decisions. These plans and policies have resulted in over 80 miles of light rail, commuter rail and streetcar lines built or planned for construction by 2016.

Beginning in 2008, working in collaboration with regional partners and the public, Metro developed the High Capacity Transit System Plan (HCT Plan) to guide the next high capacity transit investments, including light rail, commuter rail, bus rapid transit and rapid streetcar. The HCT Plan included supportive land use, transit oriented development, comprehensive parking programs, access for pedestrians and cyclists, park and rides, and feeder bus networks. In 2009, based on and public input and the analysis conducted for the HCT Plan, the Metro council approved the plan and adopted 16 potential high capacity transit corridors in four priority tiers. The Barbur/OR-99W

corridor was in the top tier and was included as an element of the 2035 Regional Transportation Plan adopted by the Metro Council in 2010. In response, Metro initiated the Southwest Corridor Plan, a comprehensive transportation and land use planning effort, in 2011.

In July 2013, the Southwest Corridor Plan Steering Committee recommended further study of a set of high capacity transit alternatives, along with community investments in roadway, bicycle, pedestrian, parks, trails and natural area projects that would support the success of a transit project. The recommendations were based on the corridor vision adopted by the Steering Committee, which seeks to:

- balance enhancing employment, housing choices, the environment and quality of life
- use public resources efficiently, thoughtfully and equitably
- stimulate private and public investment.

The combination of transit and community investments is designed to support the land use vision for the Southwest Corridor. The land use vision, which is built on plans developed by the local jurisdictions, prioritizes areas where development would support high capacity transit.

Project partners include:

- City of Beaverton
- City of Durham
- City of King City
- City of Portland
- City of Sherwood
- City of Tigard
- City of Tualatin
- Washington County
- TriMet
- Oregon Department of Transportation
- Metro

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Metro | *Memo*

Date: June 16, 2016
To: TPAC and Interested Parties
From: Ken Lobeck, Funding Programs Lead, 503-797-1785
Subject: 2018 Regional Transportation Plan (RTP) Finance Plan Revenue Forecast Approach and Update

BACKGROUND:

Attached with this staff memo for your review is an update about the development of the RTP Finance Plan including the Financially Constrained Revenue Forecast. Three attachments are included with this memo:

- Attachment 1: Revenue Forecast Development and Status Update
- Attachment 2: HCT Funding Methodology
- Attachment 3: Sample Local Revenue Template

Developing a Finance Plan that meets the federal requirements of financial constraint involves inputs from multiple areas from numerous agencies. The final RTP Finance Plan will provide a financially constrained revenue forecast out to 2040 that will include the identification of local, state and federal revenue sources by individual fund type that meet the "reasonable availability" definition.

The first step in developing the overall RTP Finance Plan is to create the revenue forecast. Attachment 1 provides a summary overview of the process.

Please contact Ken Lobeck at if you have any questions.

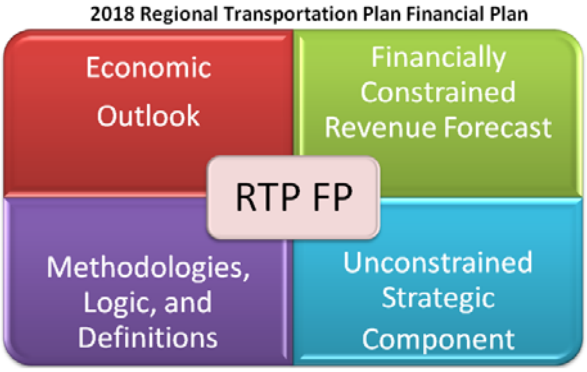
2018 Regional Transportation Plan (RTP)

Revenue Forecast Development and Status Update

BACKGROUND

RTP Financial/Fiscal Constraint Overview

Financial planning takes a long-range look at how transportation investments are funded, and at the possible sources of funds. The RTP, with a 20+ year planning horizon, must include a financial plan that estimates how much funding will be needed to implement recommended improvements, as well as operate and maintain the system as a whole, over the life of the plan. This includes information on how Metro and our partnering agencies reasonably expect to fund the projects included in the plan, including anticipated revenues from FHWA and FTA, state government, regional or local sources, the private sector, and user charges. The Metropolitan Transportation Plan must demonstrate that there is a balance between the expected revenue sources for transportation investments and the estimated costs of the projects and programs described in the plan. A Metropolitan Transportation Plan must be fiscally (or financially) constrained to satisfy the requirements identified by 23 CFR §450.322, Development and Content of the Metropolitan Transportation Plan.



The 2018 RTP Finance Plan will consist of four core elements: (1) An economic outlook that helps provide the justification for the revenue forecast, (2) a Financially Constrained Revenue Forecast, (3) an Unconstrained Strategic component, and (4) a section of methodologies and logic used plus a glossary/definitions section for reference. For the purposes of this update, the majority of the discussion will focus upon the development of the Financially Constrained Revenue Forecast.

The requirement for financial/fiscal constraint as part of the RTP development has been in place since the enactment of the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991. It was followed by the Transportation Equity Act for the 21st Century (TEA-21) in 1998. It continued as part of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in 2005, and as part of Moving Ahead for Progress in the 21st Century (MAP-21) in 2012. The requirement continues as part of the new Fixing America's Surface Transportation (FAST) Act.

The total of all federal, state, and local funding revenue streams identified in the RTP's 20+ year planning horizon that are expected to be available becomes the "financially constrained" portion to the RTP. This is the Financially Constrained Revenue Forecast. This is the region's check-

book to plan and implement strategies to fund specific projects identified in the RTP to meet the RTP's goals, strategies, and outcomes. The implementation portion of the RTP is the Metropolitan Transportation Implementation Program (MTIP). The MTIP represents the first four years of projects in the RTP to be implemented. The process to identify all appropriate federal, state, and local revenue sources to be included in the RTP involves using different methodologies which all must meet the federal criteria of "reasonable availability".

Reasonable Availability of Funds:

Projecting accurate revenue streams and expected funding levels beyond a five-year planning horizon is a difficult challenge to achieve. The current level of fiscal uncertainty surrounding the transportation planning and implementation process only exacerbates the difficulty. During the period of SAFETEA-LU, FHWA established the planning concept of "reasonable availability of funds" enabling MPO's the ability to develop revenue estimates, methodologies, and potential new funding streams that are expected to be available to fund projects and RTP strategies over identified in the plan. Over the life of SAFETEA-LU and MAP-21, the revenue forecasting concept of "reasonably expected to be available funding" has evolved and been clarified to include methodologies such as:

- Identification of new funding sources and levels of funding not currently in place, but are reasonably expected to be in place in the future.
- Projecting future revenues using historical trends including consideration of past legislative or executive actions.
- Projecting future revenues based on valid and agreed upon economic forecasting methodologies.
- Identification of new revenue sources that do not currently exist, or that require additional actions before the state DOT, MPO, or public transportation operator can commit such funding to transportation projects.

Determining whether a future funding source is reasonably expected to be available is a judgment call. When developing and utilizing the reasonably available concept, two key considerations must be included to determine if the new revenue assumption is reasonable:

1. Evidence of review and support of the new revenue assumptions by state and local officials.
2. Documentation of the rationale and procedural steps to be taken with milestone dates for securing the funds.

The 2018 RTP financial plan includes a number of reasonably available revenues to support identified projects and strategies within the RTP. Metro's financially constrained plan includes a core revenue forecast consisting of federal, state, and local funds. Developing the Financially Constrained Revenue Forecast began in November 2015 and has utilized multiple sources.

REVENUE FORECAST DEVELOPMENT APPROACH

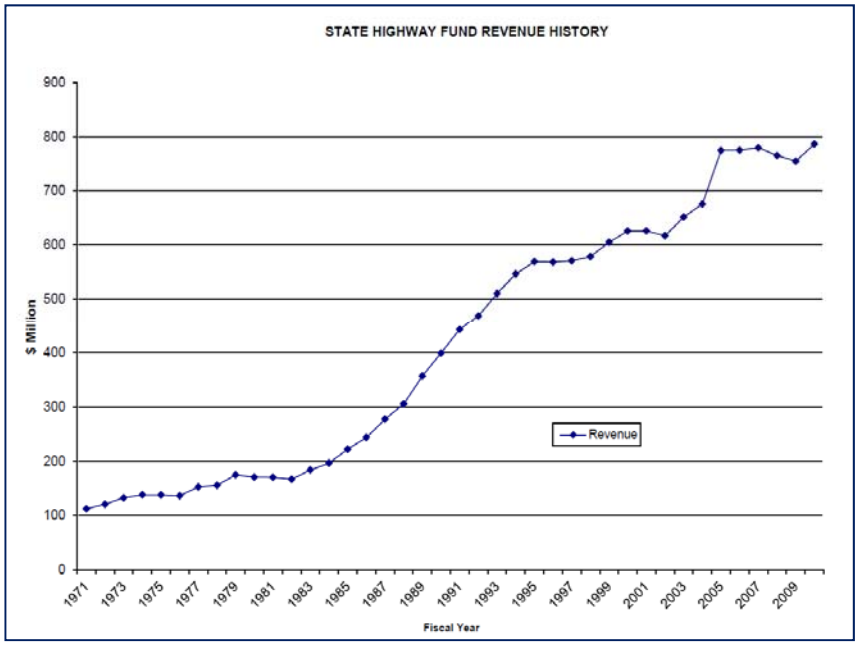
RTP Long Range Funding Assumptions (LRFA) Workgroup – Federal and State Revenues:

FINANCIAL ASSUMPTIONS FOR THE DEVELOPMENT OF METROPOLITAN TRANSPORTATION PLANS
SFY 2016-2047

The LRFA is a multi-agency group consisting of ODOT's Economic and Financial Analysis group, MPOs, transit agencies, and ODOT Region planning staff. The purpose of the group is to develop the specific federal and state revenue funding assumptions the MPOs can use as part of their RTP revenue forecasts. The statewide approach helps eliminate excessive variances in possible revenue assumptions.

The LRFA Workgroup is led by Jack Svadlenak, ODOT Senior Transportation Economist. The first task the LRFA was required to complete was to evaluate the long range economic outlook for the state. Developing a general economic outlook picture utilizes historical factors such as employment and unemployment, labor force participation, GDP, wages, inflation, etc. Metro also cross-checked the LRFA state projections against national and regional trends.

The purpose of this review was to validate or refute a continued long range optimistic economic picture for Oregon. The results support a continued optimistic economic picture for the State Highway Fund Revenues as shown in the historical graph at right.



With the long range economic picture set, the next steps involve developing various revenue assumptions and scenarios that could occur. The revenue assumptions and funding scenarios are based on previous historical funding, legislative precedents (e.g. the passage of FAST Act), projections of possible new transportation legislation from the Legislature, known changes in program funding areas, etc.

The LRFA proceeded to evaluate all major federal and state funding sources (e.g. Surface Transportation Program, Special Transportation Fund, etc.) and develop possible funding scenarios to determine if they meet the Reasonable Availability of funds definition. They were then narrowed down to three or four final revenue scenarios for each fund type. As of mid June 2016, the LRFA is in process of determining which of the final fund type revenue scenarios should be selected as the single funding assumption. The process has required extensive discussions among participants just to get down to the final four scenarios. Also impacting development of the revenue scenarios has been the FAST Act and how funding to the states will most likely occur.

SPECIAL TRANSPORTATION FUND:
PROJECTIONS OF REVENUE AND DISBURSEMENTS (2016 $s)
1% REAL AARG

Fiscal Year	Tri-Met -- 2016 $s	Salem Transit -- 2016 $s	Lane Transit -- 2016 $s	Rogue Valley Transit -- 2016 $s	Benton County -- 2016 $s	Deschutes County -- 2016 $s	Linn County -- 2016 $s	Josephine County -- 2016 $s
2016	6,178,001	1,423,311	1,281,379	756,235	316,248	614,304	429,793	302,055
2017	6,248,855	1,439,536	1,295,974	764,796	319,754	621,234	434,604	305,398
2018	6,311,343	1,453,931	1,308,934	772,444	322,952	627,446	438,950	308,452
2019	6,374,457	1,468,471	1,322,023	780,168	326,181	633,721	443,339	311,537
2020	6,438,201	1,483,155	1,335,244	787,970	329,443	640,058	447,773	314,652
2021	6,502,583	1,497,987	1,348,596	795,850	332,738	646,459	452,250	317,799
2022	6,567,609	1,512,967	1,362,082	803,808	336,065	652,923	456,773	320,977
2023	6,633,285	1,528,096	1,375,703	811,846	339,426	659,452	461,341	324,186
2024	6,699,618	1,543,377	1,389,460	819,965	342,820	666,047	465,954	327,428
2025	6,766,614	1,558,811	1,403,354	828,164	346,248	672,707	470,614	330,702
2026	6,834,280	1,574,399	1,417,388	836,446	349,711	679,435	475,320	334,010
2027	6,902,623	1,590,143	1,431,562	844,810	353,208	686,229	480,073	337,350
2028	6,971,649	1,606,045	1,445,877	853,258	356,740	693,091	484,874	340,723
2029	7,041,366	1,622,105	1,460,336	861,791	360,307	700,022	489,722	344,130
2030	7,111,779	1,638,326	1,474,940	870,409	363,910	707,022	494,620	347,572
2031	7,182,897	1,654,710	1,489,689	879,113	367,549	714,093	499,566	351,047
2032	7,254,726	1,671,257	1,504,586	887,904	371,225	721,233	504,561	354,558
2033	7,327,274	1,687,969	1,519,632	896,783	374,937	728,446	509,607	358,103
2034	7,400,546	1,704,849	1,534,828	905,751	378,687	735,730	514,703	361,684
2035	7,474,552	1,721,897	1,550,176	914,809	382,473	743,088	519,850	365,301
2036	7,549,297	1,739,116	1,565,678	923,957	386,298	750,518	525,049	368,954
2037	7,624,790	1,756,508	1,581,335	933,196	390,161	758,024	530,299	372,644
2038	7,701,038	1,774,073	1,597,148	942,528	394,063	765,604	535,602	376,370
2039	7,778,048	1,791,813	1,613,120	951,953	398,003	773,260	540,958	380,134
2040	7,855,829	1,809,731	1,629,251	961,473	401,983	780,992	546,368	383,935
2041	7,934,387	1,827,829	1,645,543	971,088	406,003	788,802	551,831	387,775
2042	8,013,731	1,846,107	1,661,999	980,799	410,063	796,690	557,350	391,652
2043	8,093,868	1,864,568	1,678,619	990,607	414,164	804,657	562,923	395,569
2044	8,174,807	1,883,214	1,695,405	1,000,513	418,306	812,704	568,553	399,525
2045	8,256,555	1,902,046	1,712,359	1,010,518	422,489	820,831	574,238	403,520

Once LRFA participants reach consensus of the revenue assumptions for a particular fund type, a final proposed revenue scenario against is proposed to LRFA participants and one last discussion occurs before a consensus vote is taken among the participating ODOT regions, MPOs, and transit agencies. At right is an example of the final proposed revenue scenario for the Special Transportation Fund with the specific revenue divisions among the transit agencies.

Narrowing down possible revenue assumptions and scenarios has been difficult. Example, the Surface Transportation Program (STP) funding has undergone multiple revenue scenarios that have ranged from a 0% no growth scenario to a high of over 4% annual growth. The final LRFA recommendation is now at an annual growth

Federal Revenue Forecasts

Fund and Administrator	Description and Assumption(s)	Existing Resources No Action	Financially Constrained		Strategic Unconstrained Scenario
			Conservative Scenario	Moderate Scenario	
Surface Transportation Program (STP) Funds (FHWA)	Description: The Surface Transportation Program (STP) provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals. Assumptions: ER-NA: Historical average of $24.7 million = 2018 amount, no annual growth from then on Conservative = FY18 with 1.5% annual growth Moderate = FY18 with 2.2% annual growth	$509,086,324	$674,237,026	$731,215,393	

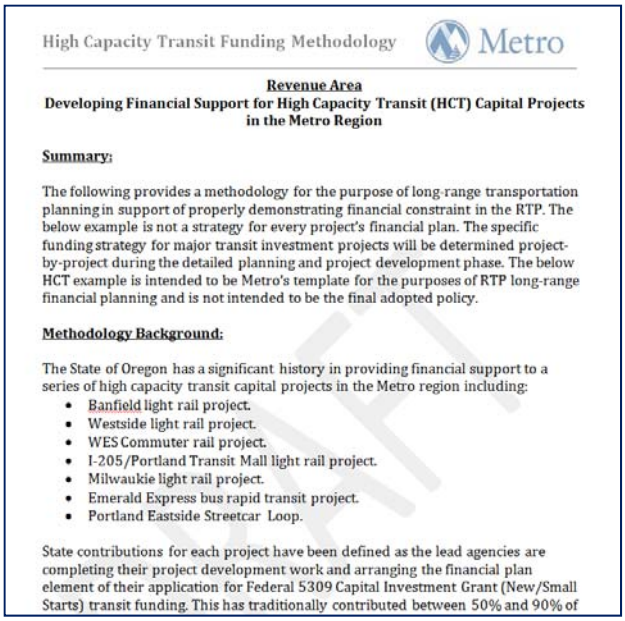
rate of 2.2%. Small changes in annual growth rate assumptions can have a large impact on the revenues. As an illustration of possible revenue variances, the STP table revenues out to 2040 are shown with a 0% growth rate, a 1.5% growth rate, and a 2.2% growth rate.

The end result of the LRFA effort will produce a listing of the major federal and state fund types with revenue projections out to 2040 to be included in the Financially Constrained Revenue Forecast. As illustrated in the below table, the final revenue projects will then be divided across the RTP segment years and provide a total projected revenue for the RTP Financially Constrained Revenue Forecast. Policy makers then can utilize the revenue information to assist with later funding strategies and goals.

Federal Revenue Sources Scenario
Divided into Multiple Year Summary Segments

Fund	Scenario	2018-2020	2021-2025	2026-2030	2031-2035	2036-2040	Total
FHWA							
STP	LRFA 2.2%	$75,942,191	$138,125,081	$154,002,236	$171,704,432	$191,441,454	**$731,215,393**
CMAQ	LRFA 2.2%	$	$	$	$	$	$
CMAQ State	LRFA 2.2%	$	$	$	$	$	$
TAP Metro	LRFA 2.2%	$	$	$	$	$	$
TAP State	LRFA 2.2%	$	$	$	$	$	$
G200	LRFA 2.2%	$	$	$	$	$	$

Developing the High Capacity Transit (HCT) Funding Methodology for the RTP:



High Capacity Transit Funding Methodology — Metro

Revenue Area
Developing Financial Support for High Capacity Transit (HCT) Capital Projects in the Metro Region

Summary:

The following provides a methodology for the purpose of long-range transportation planning in support of properly demonstrating financial constraint in the RTP. The below example is not a strategy for every project's financial plan. The specific funding strategy for major transit investment projects will be determined project-by-project during the detailed planning and project development phase. The below HCT example is intended to be Metro's template for the purposes of RTP long-range financial planning and is not intended to be the final adopted policy.

Methodology Background:

The State of Oregon has a significant history in providing financial support to a series of high capacity transit capital projects in the Metro region including:

- Banfield light rail project.
- Westside light rail project.
- WES Commuter rail project.
- I-205/Portland Transit Mall light rail project.
- Milwaukie light rail project.
- Emerald Express bus rapid transit project.
- Portland Eastside Streetcar Loop.

State contributions for each project have been defined as the lead agencies are completing their project development work and arranging the financial plan element of their application for Federal 5309 Capital Investment Grant (New/Small Starts) transit funding. This has traditionally contributed between 50% and 90% of

As part of the Financially Constrained Revenue Forecast, large program funding areas also need to be identified with their proposed funding methodology. The High Capacity Transit program concept is an example. The current draft example of the methodology is attached as Attachment 2. The HCT funding methodology does not guarantee Metro will receive a FTA New Starts or Small Starts grant. It does not mean Metro will receive the identified Lottery funds as the state match. It does not mean Metro will consume lottery funds dedicated to other state areas. The HCT funding methodology is a planning exercise for the RTP to ensure that if the investment is adopted in the RTP, Metro has based it on a logical funding methodology that will meet the Reasonable Availability of funds definition and can be included in the RTP Financially Constrained section.

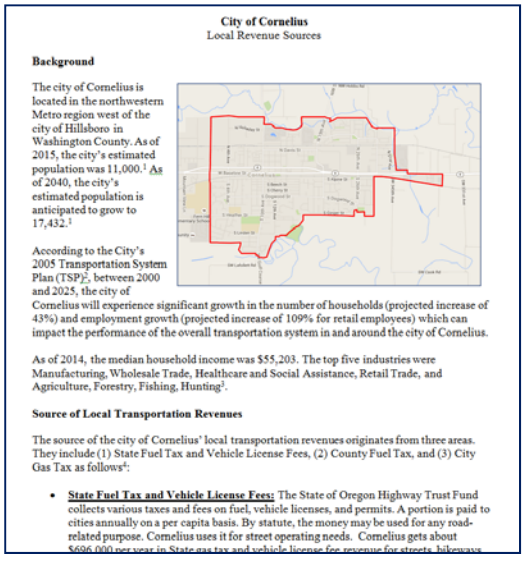
The HCT funding methodology has been in development with the LRFA and ODOT since last November. State review and approval of the methodology is required to ensure a concurrence statement is included in the next iteration of the State Financial Assumptions for the Development of Metropolitan Transportation Plans. As of mid June 2016, Metro has received conceptual approval from the LRFA.

Developing the Local Revenue Forecast:

Developing the local revenue forecast has utilized the RTP Finance Work Group to assist in identifying the local agency revenues. The initial approach has been to rely on the existing agency Transportation System Plans (TSP) and extract the required information. However, this has proved to be problematic as the TSPs possess numerous discrepancies, are old and contain out-of-date revenue assumptions, or have combined local revenues with county revenues which needed to be separated.

The current approach is now developing local agency draft revenue templates based on the TSP information. The draft templates are then sent out for review and required corrections. An example of an existing revenues template has been provided in Attachment 3 to this staff report. The revenue templates contain the following information about the local agency:

- A brief location description including a location map.
- Estimated population estimates.
- A brief overview of key industry sectors employing people in the jurisdictions.
- Identification and a description of existing local revenue programs.
- Revenue projections out to 2040 and divided into RTP segment years.
- A simple break-out of revenues committed to operation and maintenance (O&M) needs versus all other transportation improvement areas.



City of Cornelius
Local Revenue Sources

Background

The city of Cornelius is located in the northwestern Metro region west of the city of Hillsboro in Washington County. As of 2015, the city's estimated population was 11,000.[1] As of 2040, the city's estimated population is anticipated to grow to 17,432.[1]

According to the City's 2005 Transportation System Plan (TSP)[2], between 2000 and 2025, the city of Cornelius will experience significant growth in the number of households (projected increase of 43%) and employment growth (projected increase of 109% for retail employees) which can impact the performance of the overall transportation system in and around the city of Cornelius.

As of 2014, the median household income was $55,203. The top five industries were Manufacturing, Wholesale Trade, Healthcare and Social Assistance, Retail Trade, and Agriculture, Forestry, Fishing, Hunting[3].

Source of Local Transportation Revenues

The source of the city of Cornelius' local transportation revenues originates from three areas. They include (1) State Fuel Tax and Vehicle License Fees, (2) County Fuel Tax, and (3) City Gas Tax as follows[4]:

- **State Fuel Tax and Vehicle License Fees:** The State of Oregon Highway Trust Fund collects various taxes and fees on fuel, vehicle licenses, and permits. A portion is paid to cities annually on a per capita basis. By statute, the money may be used for any road-related purpose. Cornelius uses it for street operating needs. Cornelius gets about $696,000 per year in State gas tax and vehicle license fee revenue for streets, bikeways

Unfortunately, the process to identify all existing agency revenue has move slower than expected. Developing the draft revenue templates has been delayed due to conflicts with project delivery issues in order to obligate federal transportation funds before the end of federal year 2016. The goal to have all existing local revenues identified by the end of June 2016 will not occur. It is still possible the by the end of July 2016 all existing local revenues can be identified in the revenue templates.

As part of developing the revenue templates, local agencies also have the opportunity to identify possible new revenue sources that could meet the Reasonable Availability of funds definition. Upon receipt of the submitted revenues, Metro will evaluate if the new revenue source meets the criteria to be included in the Financially Constrained Revenue Forecast or should be included as part of the Strategic Unconstrained financial element.

As part of the local revenue templates, Metro is requesting a separation of the local revenues by those committed for O&M needs versus other transportation capital requirements. The purpose of this effort is to identify the significant commitments agencies have just to maintain their local streets and roads. Subsequent discussions have occurred about the need to also identify the maintenance costs and if this results in a maintenance gap or deferred maintenance issues for the agency. Capturing the maintenance costs within each agency will be completed as a separate and ongoing effort overseen by the RTP Finance Work Group. The final agency revenue templates will include a list of local revenues as shown in the below table. Once all revenues are identified, they will be grouped into a total local revenue table for the Financially Constrained Revenue Forecast.

City of Cornelius Local Revenues 2018-2040							
Fund	Annual 2018 Base Amount	2018-2020	2021-2025	2026-2030	2031-2035	2036-2040	**Total**
State Fuel Tax and Vehicle License Fee	$696,000	$2,088,000	$3,480,000	$3,480,000	$3,480,000	$3,480,000	**$16,008,000**
Washington County Gas Tax	$44,000	132,000	$220,000	$220,000	$220,000	$220,000	**$1,012,000**
City of Cornelius Gas Tax	$192,000	$576,000	$960,000	$960,000	$960,000	$960,000	**$4,416,000**
Totals:	$932,000	$2,796,000	$4,660,000	$4,660,000	$4,660,000	$4,660,000	**$21,436,000**

City of Cornelius O&M vs. Capital (and other transportation improvement types) Ratio Comparison							
2018 Annual Revenue	Total Revenues 2018-40	O&M Percent	Capital/Other Improvements Percent	2018 Annual Amount O&M	2018 Annual Capital/Other Amount	RTP Horizon Years Total O&M	RTP Horizon Years Total Capital/Other
$932,000	$21,436,000	100%	0%	$932,000	$0	$21,436,000	$0

SUMMARY

The final Financially Constrained Revenue Forecast will contain a detailed breakout of major federal, state and local revenue sources that meet the reasonable availability of funds definition. This will be the basis to help develop RTP long range strategies and goals and how they can be funded.

A status update of the RTP Revenue Forecast will be presented to JPACT in July 2016. However, it will not be presented from a technical viewpoint as this item is structured. TPAC members are requested to provide staff suggestions as to the best approach to present the RTP Revenue Forecast update to JPACT members.

Revenue Area

Developing Financial Support for High Capacity Transit (HCT) Capital Projects in the Metro Region

Summary:

The following provides a methodology for the purpose of long-range transportation planning in support of properly demonstrating financial constraint in the RTP. The below example is not a strategy for every project's financial plan. The specific funding strategy for major transit investment projects will be determined project-by-project during the detailed planning and project development phase. The below HCT example is intended to be Metro's template for the purposes of RTP long-range financial planning and is not intended to be the final adopted policy.

Methodology Background:

The State of Oregon has a significant history in providing financial support to a series of high capacity transit capital projects in the Metro region including:

- Banfield light rail project.
- Westside light rail project.
- WES Commuter rail project.
- I-205/Portland Transit Mall light rail project.
- Milwaukie light rail project.
- Emerald Express bus rapid transit project.
- Portland Eastside Streetcar Loop.

State contributions for each project have been defined as the lead agencies are completing their project development work and arranging the financial plan element of their application for Federal 5309 Capital Investment Grant (New/Small Starts) transit funding. This has traditionally contributed between 50% and 90% of project costs through a full funding grant agreement. Fifty percent of future project revenues to fund project costs will be forecasted from the federal New Starts or Small Starts programs, depending on which program is appropriate to the project type. Additional federal funding may be allocated to cover project costs through the allocation of financially constrained MPO directed funding (e.g. Urban STP, CMAQ, or TAP).

State contributions have ranged in type from dedication of right-of-way to lottery backed bond proceeds. The state contributions have been negotiated project by project, relative to needs and conditions of each project. Typically, the state contribution to the projects have been a proportional share in partnership with the transit agency, regional and local funding.

New Starts and Small Starts: The estimated cost of a new HCT corridor project such as the Southwest Corridor improvement project is estimated at $1.5-$2 billion. For a

project of this scale, a FTA "New Starts" grant is assumed to be the key federal funding source for the project. Smaller transit improvement projects (at costs ranging from $150-$300 million) also have been identified in the RTP such as Powell-Division project where a FTA "Small Starts" grant is assumed would be the logical federal funding source.

The identification of New Starts and Small Starts funding source, plus the use of Lottery funds and other state resources are considered to meet the Reasonable Availability of funds and is being incorporated into the 2018 RTP's Constrained Revenue forecast.

Local funding to fully fund projects proposed for the financially constrained list of projects will also be required to meet the reasonably available test before the project is approved for inclusion in the plan.

Proposed Approach:

Based on the past historical funding for similar activities, Metro proposes the following funding composition in support of a future HCT corridor improvement in the RTP as an example of the funding methodology. Using historical funding for similar project types, Metro considers the funding projection to be part of the RTP constrained section of the Financial Plan based on the following assumptions:

1. The federal funding mechanism is most likely to be a FTA based New Starts or Small Starts grant award allocated over a multi-year period.
2. State support will be on a project-by-project basis with the specific funding composition and conditions determined at that time.
3. The implementation of Metro's New Starts or Small Starts grants and associated state funding will not impact or reduce the funding levels of any other MPO across the state.

Sample Concept of New Starts and Small Starts Awards Staggered Across the RTP Planning Horizon Years with Some Overlap

Year	New Starts (Millions of dollars)			Small Starts (Millions of dollars)			Total
	Fed	State	Local	Fed	State	Local	
2018							
2019				$36	$12	$12	$60
2020				$36	$7	$7	$60
2021	$135	$45	$45	$36	$7	$7	$285
2022	$135	$45	$45	$36	$7	$7	$285
2023	$135	$45	$45				$225
2024	$135	$45	$45				$225
2025	$135	$45	$45				$225
2026	$135	$45	$45	$24	$8	$8	$265
2027	$135	$45	$45	$24	$8	$8	$265
2028				$24	$8	$8	$40
2029				$24	$8	$8	$40
2030	$114	$38	$38	$24	$8	$8	$230
2031	$114	$38	$38				$190
2032	$114	$38	$38				$190
2033	$114	$38	$38				$190
2034	$114	$38	$38	$30	$10	$10	$240
2035	$114	$38	$38	$30	$10	$10	$240
2036	$114	$38	$38	$30	$10	$10	$240
2037				$30	$10	$10	$50
2038				$30	$10	$10	$50
2039							
2040							

The staggered approach to implementing New Starts and Small Starts awarded grants is represented over the life of the RTP horizon years. The layout above is for RTP planning purposes. The actual grant award will determine the required implementation timing years.

4. Generally, only one New Starts project will be pursued at a time. For the purposes of demonstrating financial constraint, the total grant payment schedule for New Starts projects will reflect no more than an average of one revenue payment per year that does not exceed reasonable available amounts based on historic performance. This approach to planning and demonstrating financial constraint will also be applied to Small Starts projects.

5. Generally, the implementation of a New Starts and a Small Starts project will be staggered to transition project staff and funding between projects.

6. The receipt of a New Starts award does not preclude the award of a Small Starts grant which could overlap during the implementation period of the New Starts grant project.

7. The final amount of financially constrained New & Small Starts funding and the amount of State support of these HCT projects will be acknowledged as this proposed approach is implemented through the identification of a realistic schedule of specific HCT projects during the long-range planning process.

Example of a Proposed HCT Project Funding Composition – New Starts Scenario:

1. Federal share:
    a. 50% New Starts award.
    b. 10% Other federal funds (e.g. CMAQ, STP, etc.).
    c. Total federal contribution = 60%

2. State share:
    a. Up to 20% total contribution.
    b. Approximately up to ½ is projected to be Lottery funds based on the history of previous awards.
    c. Approximately up to ½ is projected to be other state funds that would be determined at the time of the grant award.

3. Local Share:
    a. Projected to be about 20% local funds:
    b. Specific local fund composition would be determined at time of grant award and subsequent programming in the MTIP, and would be from funds identified in the constrained section of the Financial Plan.

Summary of HCT Illustrative Funding Composition Example – New Starts:

HCT Project – New Starts Funding Proposed implementation over multiple years					
Project Cost	Federal Fund	Amount	State Fund	Amount	Local Funds
$2,000,000,000	New Starts	$1,000,000,000	Lottery	$200,000,000	$400,000,000
	CMAQ/STP	$200,000,000	Other	$200,000,000	
% of Funding	Federal = 60%		State = 20%		Local = 20%

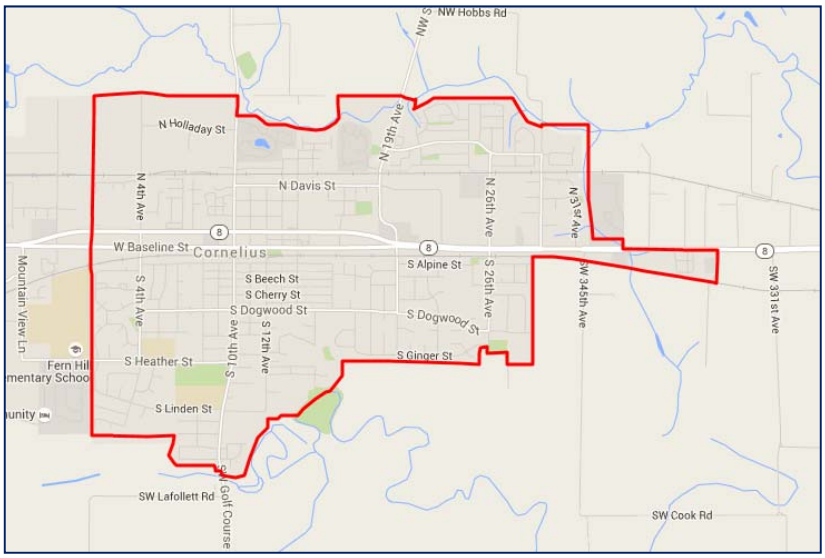
Summary of HCT Illustrative Funding Composition Example – Small Starts:

HCT Project – Small Starts Funding Proposed implementation over multiple years					
Project Cost	Federal Fund	Amount	State Fund	Amount	Local Funds
$300,000,000	Small Starts	$100,000,000	Lottery	$30,000,000	$110,000,000
	CMAQ/STP	$30,000,000	Other	$30,000,000	
% of Funding	Federal = 43%		State = 20%		Local = 37%

Note: The primary difference with a Small Starts funded project from a New Starts award (beyond the total cost) is that the federal share could be up to 50% depending upon the project cost. In this example, the federal share is set at 43% resulting in a higher local share commitment.

City of Cornelius
Local Revenue Sources

Background



The city of Cornelius is located in the northwestern Metro region west of the city of Hillsboro in Washington County. As of 2015, the city's estimated population was 11,000.[1] As of 2040, the city's estimated population is anticipated to grow to 17,432.[1]

According to the City's 2005 Transportation System Plan (TSP)[2], between 2000 and 2025, the city of Cornelius will experience significant growth in the number of households (projected increase of 43%) and employment growth (projected increase of 109% for retail employees) which can impact the performance of the overall transportation system in and around the city of Cornelius.

As of 2014, the median household income was $55,203. The top five industries were Manufacturing, Wholesale Trade, Healthcare and Social Assistance, Retail Trade, and Agriculture, Forestry, Fishing, Hunting[3].

Source of Local Transportation Revenues

The source of the city of Cornelius' local transportation revenues originates from three areas. They include (1) State Fuel Tax and Vehicle License Fees, (2) County Fuel Tax, and (3) City Gas Tax as follows[4]:

- **State Fuel Tax and Vehicle License Fees:** The State of Oregon Highway Trust Fund collects various taxes and fees on fuel, vehicle licenses, and permits. A portion is paid to cities annually on a per capita basis. By statute, the money may be used for any road-related purpose. Cornelius uses it for street operating needs. Cornelius gets about $696,000 per year in State gas tax and vehicle license fee revenue for streets, bikeways and sidewalks. Essentially all of these funds are spent on surface restoration of local streets.

- **Washington County Gas Tax:** Washington County collects a one-cent per gallon tax which is distributed to jurisdictions in the County. Distribution of Washington County gas tax revenue parallels the state model in that jurisdictions receive a portion of the county revenue based on population. The estimated annual Washington County gas tax

revenue for the City of Cornelius is $44,000.These funds have historically been used for roadway maintenance of local streets.

- **City of Cornelius Gas Tax:** The City collects a two-cent per gallon tax. The estimated annual City gas tax revenue is $192,000. These funds are used solely for maintenance of local streets.

Under the above funding programs, the City of Cornelius will collect approximately $932,000 for street construction and repair each year. Over the RTP 23 horizon year period, this totals $21,436,000.

City of Cornelius Local Revenues 2018-2040

Fund	Annual 2018 Base Amount	2018-2020	2021-2025	2026-2030	2031-2035	2036-2040	**Total**
State Fuel Tax and Vehicle License Fee	$696,000	$2,088,000	$3,480,000	$3,480,000	$3,480,000	$3,480,000	**$16,008,000**
Washington County Gas Tax	$44,000	132,000	$220,000	$220,000	$220,000	$220,000	**$1,012,000**
City of Cornelius Gas Tax	$192,000	$576,000	$960,000	$960,000	$960,000	$960,000	**$4,416,000**
Totals:	$932,000	$2,796,000	$4,660,000	$4,660,000	$4,660,000	$4,660,000	**$21,436,000**

City of Cornelius O&M vs. Capital (and other transportation improvement types) Ratio Comparison

2018 Annual Revenue	Total Revenues 2018-40	O&M Percent	Capital/Other Improvements Percent	2018 Annual Amount O&M	2018 Annual Capital/Other Amount	RTP Horizon Years Total O&M	RTP Horizon Years Total Capital/Other
$932,000	$21,436,000	100%	0%	$932,000	$0	$21,436,000	$0

Notes:

1. Operations and Maintenance (O&M) costs relate to any program revenue supporting or dedicated to the operations and maintenance of any and all existing roads within the agency's street network. Capital/Other costs are those funds committed to new capacity road projects, road expansion projects, or any other type of transportation improvement project that does not fit into the normal logic costs associated with the operations and maintenance of the existing road system for the agency.
2. The O&M vs. Capital/Other ratio comparison is intended to illustrate the significant investment the agency commits annually to maintain their existing roads.

New Revenue Sources:

- No new revenue sources identified for inclusion in the 2018 RTP.

Source Notes:

1. PSU 2040 Population Forecast Distribution, City of Cornelius, Oregon, May 5,2016.
2. Cornelius Transportation System Plan, Chapter 4: Future Needs and Improvements, June 2005.
3. Data USA, Cornelius, Oregon, http://datausa.io/profile/geo/cornelius-or/
4. Cornelius Transportation System Plan, Chapter 10, Financing & Implementation, June 2005 and staff review and updates.

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Metro | *Memo*

DATE: June 16, 2016

TO: Transportation Policy Advisory Committee (TPAC) and Interested Parties

FROM: Tyler Frisbee, Policy Development Manager
Tom Kloster, Regional Planning Manager
Kim Ellis, RTP Project Manager

SUBJECT: MAP-21 FHWA National Performance Measures Rulemaking

****

PURPOSE

- Seek input on draft comment letter on the draft System Performance Rule.

ACTION REQUESTED

- Do you have comments or suggestions on the draft comment letter?
- Do you have specific comments on the draft System Performance rule?
- Do you support making a recommendation to JPACT on the draft comment letter in July?

BACKGROUND

Moving Ahead for Progress in the 21st Century Act (MAP-21) directed the Federal Highway Administration (FHWA) to craft performance measures for the national highway system, interstate system, and CMAQ program. These measures are not attached to specific funding, but states are expected to use these measures and the data generated in meeting them to make better informed planning and investment decisions. Once the measures are finalized, states will be allowed to set their own targets, and while they will be required to report their progress in meeting those targets to FHWA, there are no punitive measures associated with the failure to meet those targets, given the language in MAP-21 and the Fixing America's Surface Transportation Act (FAST Act).

FHWA has been working on the proposed rulemaking process for the past three years, and released their proposed guidelines April 22nd. The statutory language requires them to set performance targets around congestion reduction, system reliability, freight movement and economic vitality, and environmental sustainability. The first comment period closes August 20th, 2016. Traditionally after a comment period closes, FHWA may either take comments into consideration and release a final set of rules, or release a second set of draft comments and incorporate another round of feedback. State DOTs, national organizations such as Transportation for America, and other MPOs have already weighed during this round of rulemaking, and Metro staff predict that there will be another round of draft comments, given the significant concerns regarding the rules as proposed.

The rules, as proposed, focused mostly on vehicle speed, delay, congestion and reliability. While Metro has advocated for the incorporation of reliability into federal metrics for a long time, and appreciates its inclusion in this round, we are significantly concerned that the measures are overly focused on congestion and vehicle speed, fail to address environmental sustainability as directed in the statutory language, and are process, rather than outcome, oriented. Metro's most significant concerns are:

1.) The measures are narrowly focused on a small set of measures, which is at odds with the region's trajectory to a broader set of metrics that measure outcomes as varied as greenhouse gas emissions, travel time reliability, and economic development.
2.) The focus on congestion and vehicle speed could result in the favoring of projects that increase VMT and expand roadway capacity at the expense of other modes, which could impede our ability to meet regional goals and our 2040 vision.
3.) The measures are narrowly focused on the National Highway System, which means that the majority of roadway miles in our region would not be included. This makes measuring goals such as greenhouse gas emissions, economic vitality, and accessibility difficult.
4.) The measures fail to count multimodal trips, which can make up to one third of the "traffic" on some of the region's busiest corridors.

Metro staff have prepared a technical analysis of the performance measures, along with responses to a few of FHWA's outstanding questions discussed in the proposed rulemaking. That analysis, along with the attached cover letter, make up our proposed response to FHWA.

These proposed performance measures matter for several reasons.

1.) If measures align with Metro's own internal performance measures and goals, it positions us well to seek additional funding at the state and federal level, as our internal priorities will help ODOT and the region meet our state goals.
2.) While these performance measures are merely perfunctory at this time, it is possible that in the future they are incorporated into decisions regarding grant funding, formula funding, etc. The more consistent these rules are with Metro's performance measures, they better positioned Metro is to seek funding.

ATTACHMENTS

- Cover letter to USDOT regarding the proposed guidelines for performance measures

August xx, 2016

Secretary Anthony Foxx
US Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Dear Secretary Foxx:

For nearly 50 years, the Portland region has been exploring new ways to efficiently invest our limited transportation funds in ways that reinforce our regional goals:

1. Quality jobs, living wages and a strong economy;
2. Vibrant communities with stable and affordable housing opportunities;
3. Safe and reliable travel options;
4. Clean air and water and a healthy environment;
5. Leadership on climate change; and
6. Equity for all our residents and communities relative to the benefits and burdens of growth and change to the region.

Meeting these ambitious goals requires data-driven, performance-based metrics that focus on the movement of people and goods and their access to destinations, regardless of mode of transportation.

In the past ten years, our region has intentionally moved away from measuring success using one or two narrow measures, and has instead focused on a comprehensive array of outcomes that provide a better assessment of where we have been, where we are going, and where we could do better. This broader array of outcomes allows Metro and our partners to better understand the needs of the region, and implement a variety of tools to continue to meet the region's goals.

In particular, the Portland region intentionally does not define success in our transportation investments by measuring congestion. While congestion is an important indicator that we consider in our investment decisions, it is only one of many. Using congestion as a sole or primary metric has resulted in price tags that are unachievable and unsupported by taxpayers, and unintended consequences that are at odds with our regional goals.

This is why we are concerned with the current performance metrics proposed by the U.S. Department of Transportation (USDOT). While we strongly support the move toward an outcomes-based federal policy for transportation planning, we are concerned that FHWA is actually taking a step backward,

toward a single measure of success that focuses only on highways – an approach our region has been moving away from for decades, and one that would significantly hamper our efforts to help the Portland region flourish.

Worse, while the draft rule released by the USDOT seems to include a range of congestion measures, these measures are all simply variations on vehicle speed and delay. In our experience, speed is a poor indicator of whether the highway system is working to move goods, provide access to jobs and protect air quality. Instead, we are developing regional measures that are focused on desired outcomes, including:

- improving the safety and reliability of the region's multi-modal freight network, which includes moving goods in the highway corridors that serve our industry and ports;

- providing every person with safe, reliable and affordable connections to essential destinations such as jobs, education, and healthcare, particularly our region's most underserved populations which include people of color, households with lower incomes, people with disabilities, older adults and youth;

- expanding our system's capacity and modal options in our most traveled corridors so that we can move more people and provide them real choices in selecting their preferred method of travel. This includes transit and bicycling, which carry up to one third of travelers in our busiest corridors;

- managing demand and improving street connectivity and system operations to address persistent bottlenecks where continued highway widening would have limited long-term benefit;

- linking our transportation and land use decisions to reduce how much people need to drive, thereby improving the region's air quality and public health outcomes, and reducing greenhouse gas emissions, part of a statewide effort in Oregon.

Performance measures will be among the most important tools USDOT has to inform federal, state, regional and local decisions about how to build a safe and reliable transportation system that meets the needs of all users. Reliance on vehicular-based speed and congestion measures to evaluate transportation systems will lead to decisions to build transportation projects for vehicles rather than the needs of people and freight.

We urge you to make significant changes to the draft rule to focus on the movement of actual people and goods and their access to destinations, regardless of transportation mode, rather than vehicles and speed. As written, the draft is mostly silent on people and accessibility, and instead proposes measures that have been shown to be harmful to the USDOT's

stated goals of safety, providing transportation options, and using transportation services to provide access to ladders of opportunity in an inclusive manner.

We also encourage the USDOT challenge states and metropolitan areas to be creative in tailoring measures specific to their regions that support a broader national set of desired outcomes and inspire inclusive and innovative solutions.

We have provided more specific comments on the draft rule in a separate correspondence. We hope these comments will lead to a more effective set of performance measurements that support the transportation vision we all share and appreciate the opportunity to participate in this review.

Sincerely,

Tom Hughes, President
Metro

Craig Dirksen, Chair
Joint Policy Advisory Committee on Transportation (JPACT)

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Metro | *Memo*

DATE: June 16, 2016

TO: Transportation Policy Advisory Committee (TPAC) and Interested Parties

FROM: Tom Kloster, Regional Planning Manager
Kim Ellis, RTP Project Manager

SUBJECT: MAP-21 and FAST Act Rulemaking – Update and Comments on Draft System Performance Rule

****

PURPOSE

- Provide an update on recent federal MAP-21 rulemaking.
- Seek comments on the draft System Performance Rule.

ACTION REQUESTED

- Do you have specific comments on the draft System Performance rule?

BACKGROUND

Significant federal rulemaking activities to implement the performance provisions first included in the Moving Ahead in the 21st Century Act (MAP-21) Act and subsequent provisions contained in the Fixing America's Surface Transportation (FAST) Act have been underway for nearly 4 years by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). These activities will impact state and regional transportation planning and programming responsibilities in the months and years ahead.

New requirements to frequently set short-range transportation performance targets will require significant staff time, new data and tools, and increased coordination between Metro, the Oregon Department of Transportation (ODOT), TriMet, the South Metro Area Regional Transit District (SMART) as well as the Southwest Washington Regional Transportation Council and Washington Department of Transportation to support required monitoring and reporting.

An update on four recent major federal milestones and next steps follows.

1. **Safety performance measures rule finalized on March 15.** The final safety rule can be accessed at: http://safety.fhwa.dot.gov/hsip/rulemaking/. ODOT has until April 14, 2017 to set required safety targets. Within six months of ODOT's targets adoption, Metro must also set its first safety targets. ODOT has incorporated the required performance measures and draft targets in the draft Transportation Safety Action Plan (TSAP)[1] that will be released by the Oregon Transportation Commission for public comment from June 17 to August 1, 2016.

   ODOT is expected to begin safety target-setting discussions with metropolitan planning organizations (MPOs) and other stakeholders this summer. Regional target-setting related to this

[1] https://www.oregon.gov/ODOT/TD/TP/TSAP/Draft_TSAP.pdf

rule will be conducted as part of developing the Regional Transportation Safety Action Plan during the 2018 Regional Transportation Plan update. More information on the process and approach for this target-setting will be provided at a future meeting.

2. **System performance measures proposed rule issued on April 22.** FHWA issued a proposed rule for congestion, reliability, goods movement, and air quality performance measures, with a heavy emphasis on vehicle speed on the National Highway System. Comments on the proposed rule, including whether to include a greenhouse gas emissions performance measure are due by August 20. The draft rule can be accessed at http://www.fhwa.dot.gov/tpm/rule/pm3_nprm.cfm.

   It should be noted that these measures have generated more concern amongst state DOTs and MPOs than previous rulemakings, resulting in a significantly delayed rulemaking schedule when compared to safety or infrastructure condition performance measures rules going into effect this year. Regional target-setting for this rule will depend on when the rule is finalized and its effective date. The region would have 1.5 years from the effective draft of the final rule to establish targets. Metro staff are preparing comments on the draft rule for discussion by the Transportation Policy Alternatives Committee (TPAC) at the June and July meetings. TransPort will also be provided an opportunity to discuss the comments at the committee's July meeting.

3. **State and metropolitan planning rule finalized on May 27.** FHWA and FTA recently released a joint final rule on statewide and metropolitan planning. This rule provides the overarching implementation framework for the new performance requirements and other DOT and MPO planning and programming responsibilities. The final rule can be accessed at: https://www.federalregister.gov/articles/2016/05/27/2016-11964/statewide-and-nonmetropolitan-transportation-planning-metropolitan-transportation-planning.

   Metro staff are reviewing this rule to understand implications for fully integrating federal performance measures and targets into the RTP and TIP and identify any necessary changes to the 2018 RTP work program activities. For example, the RTP must include the federally-required performance measures and targets and a system performance report with respect to the required performance targets. The rule also directs DOTs, MPOs and transit providers to jointly agree upon written provisions for developing and sharing information on data, selecting targets and reporting performance to be used in tracking progress toward the targets. In addition, the rule identifies two new planning factors to be considered in state and regional long-range transportation plans: (1) improve the resiliency and reliability of the transportation system to natural disasters, and reduce or mitigate stormwater impacts of surface transportation; and (2) enhance travel and tourism. More information on changes to the regional transportation planning and programming activities will be provided at a future meeting.

4. **Infrastructure condition performance measures comment periods closed in May.** The final rules for the infrastructure condition performance measures are anticipated to be released in November, meaning that target-setting will commence on pavement, bridge, and transit asset measures will overlap with or follow target-setting for the safety measures.

   Regional target-setting related to this rule is anticipated to occur as part of the 2018 RTP update, and will depend on when the rule is finalized and its effective date. More information on the process and approach for this target-setting will be provided at a future meeting.

The rulemaking schedule and factsheets about the final safety rule and draft system performance rule are provided at the end of this memo.

Table 1 provides a summary table of the 25 performance measures currently identified by FHWA or FTA. Measures 17-25 are proposed in the draft system performance rule.

Table 1. Summary of Federally-Required Performance Measures

MAP-21 GOALS AND PROGRAM AREAS	GENERAL MEASURES IN MAP-21	PERFORMANCE MEASURES DEVELOPED BY FHWA AND FTA
Safety Highway Safety Improvement Program (HSIP)	Number of fatalities on roads	1. Total number of fatalities on roads
	Rate of fatalities on roads	2. Road fatalities per 100 million VMT
	Number of serious injuries on roads	3. Total number of serious injuries on roads
	Rate of serious injuries on roads	4. Serious injuries per 100 million VMT
	Number of biking and walking fatalities and serious injuries	5. Number of biking and walking fatalities and serious injuries
	Safety of public transit systems	*6. Transit safety performance measure TBD*
Infrastructure Condition National Highway Performance Program (NHPP) National Transit Asset Management System (NTAMS)	Pavement condition on the Interstate Highway System	7. Percentage of pavements on the IHS in good condition* 8. Percentage of pavements on the HIS in poor condition*
	Pavement condition on the National Highway System	9. Percentage of pavements on the non-IHS in good condition* 10. Percentage of pavements on the non-HIS in poor condition*
	Bridge Condition on the National Highway System	11. Percentage of bridges on the NHS in good condition* 12. Percentage of bridges on the NHS in poor condition*
	State of good repair for public transit assets	13. Percentage of revenue vehicles that have met or exceeded their useful life benchmark (ULB) by asset class* *(examples below)* *a. 40-foot bus* *b. 30-foot bus* *c. light rail vehicle* *d. heavy rail vehicle* *e. etc.* 14. Percentage of facilities within a condition rating below fair* 15. Percentage of guideway directional route-miles with performance restrictions* *(examples below)* *a. light rail guideway* *b. heavy rail guideway* *c. streetcar guideway* 16. Percentage of non-revenue vehicles that have met or exceeded their ULB*

* = draft, comment period closed ** = draft, comment period open until August 20, 2016

Table 1. Summary of Federally-Required Performance Measures *(continued)*

MAP-21 GOALS AND PROGRAM AREAS	GENERAL MEASURES IN MAP-21	PERFORMANCE MEASURES DEVELOPED BY FHWA AND FTA
System reliability NHPP	Performance of the Interstate System	17. Percentage of IHS mileage providing reliable travel times** 18. Percentage of IHS mileage where peak hour travel times meet expectations**
	Performance of the National Highway System	19. Percentage of non-IHS NHS mileage providing reliable travel times** 20. Percentage of non-IHS mileage NHS where peak hour travel times meet expectations**
Freight Movement and Economic Vitality National Freight Performance Program	Freight movement on the Interstate System	21. Percentage of IHS mileage providing reliable truck travel times** 22. Percentage of IHS mileage uncongested (>50 mph)**
Congestion Reduction Congestion Mitigation Air Quality (CMAQ) Program	Traffic congestion	23. Annual excessive hours of delay per capita (<35 mph for Interstates, freeways, or expressways and <15 mph for other arterials)**
Environmental Sustainability CMAQ Program	On-road mobile source emissions	24. Total emissions reductions from CMAQ-funded projects by pollutant**: a. $PM_{2.5}$ b. PM_{10} c. CO d. VOC e. NOx
	N/A	25. Greenhouse gas emissions measure TBD** *(not specified in MAP-21; seeking comment on whether to include in the final rule)*
Reduced Project Delivery Delays	None	None

* = draft, comment period closed ** = draft, comment period open until August 20, 2016

/Attachments

- FHWA and FTA TPM Rulemaking Schedule
- FHWA Transportation Performance Management Factsheets (April 2016)

FHWA TPM Rulemaking Schedule

Performance Area	NPRM	Comments Due	Final Rule
Safety Performance Measures	March 11, 2014	Closed June 30, 2014	Published March 15, 2016
Highway Safety Improvement Program	March 28, 2014	Closed June 30, 2014	Published March 15, 2016
Statewide and Metro Planning; Non-Metro Planning	June 2, 2014	Closed October 2, 2014	Published May 27, 2016
Pavement and Bridge Performance Measures	January 5, 2015	Closed May 8, 2015	Anticipated November 2016
Highway Asset Management Plan	February 20, 2015	Closed May 29, 2015	Anticipated November 2016
Performance of the NHS, Freight, and CMAQ Measures	April 22, 2016	Open until August 2016 120 days	TBD

FTA Performance Management Rulemaking Schedule

Performance Area	NPRM	Comments Due	Final Rule
Statewide and Metro Planning; Non-Metro Planning	June 2, 2014	Closed October 2, 2014	Published May 27, 2016
Public Transportation Safety Program	August 14, 2015	Closed October 13, 2015	Under Development
National Public Transportation Safety Plan	February 5, 2016	Closed April 5, 2016	Under Development
Public Transportation Agency Safety Plan	February 5, 2016	Closed April 5, 2016	Under Development
Transit Asset Management Plan	September 30, 2015	Closed November 30, 2015	Under Development

Highway Safety Improvement Program and Safety Performance Management Measures Final Rules Overview

Background

The Federal Highway Administration (FHWA) published the Highway Safety Improvement Program (HSIP) and Safety Performance Management Measures (Safety PM) Final Rules in the Federal Register on March 15, 2016, with an effective date of April 14, 2016. The HSIP Final Rule updates the HSIP regulation under 23 CFR Part 924 to be consistent with MAP-21 and the FAST Act, and clarifies existing program requirements. The Safety PM Final Rule adds Part 490 to title 23 of the Code of Federal Regulations to implement the performance management requirements in 23 U.S.C. 150. The Safety PM rule supports the HSIP, as it establishes safety performance measures to carry out the HSIP and to assess serious injuries and fatalities on all public roads. Together, these regulations will improve data; foster transparency and accountability; and allow safety progress to be tracked at the national level. They will inform State DOT and MPO planning, programming, and decision-making for the greatest possible reduction in fatalities and serious injuries.

HSIP Final Rule

The HSIP is a core Federal-aid program with the purpose to achieve a significant reduction in fatalities and serious injuries on all public roads. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. The HSIP regulation under 23 CFR 924 establishes FHWA's HSIP policy, as well as program structure, planning, implementation, evaluation and reporting requirements for States to successfully administer the HSIP. The HSIP Final Rule contains three major policy changes related to: (1) the HSIP report content and schedule, (2) the Strategic Highway Safety Plan update cycle, and (3) the subset of the model inventory of roadway elements (MIRE), also known as the MIRE fundamental data elements.

Content and Schedule of the HSIP Report

The HSIP report schedule remains the same; the HSIP and Railway-Highway Crossing Program reports are due on August 31st each year. All States must now use FHWA's online reporting tool to submit their annual reports. In addition to the existing reporting requirements, the HSIP Final Rule also requires States to describe in their annual reports the progress toward achieving safety outcomes and performance targets, including:

- An overview of general highway safety trends;
- The safety performance targets established in accordance with 23 U.S.C. 150;
- A discussion of the basis of each established target and how the established target supports SHSP goals; and
- In future years, a discussion of any reasons for differences in the actual outcomes and targets.

Strategic Highway Safety Plan Update Cycle

The HSIP Final Rule requires States to update their SHSP at least once every 5 years, consistent with the current state of the practice. The first SHSP update is due no later than August 1, 2017.

Model Inventory of Roadway Elements (MIRE)

States must collect and use the MIRE fundamental data elements on all public roads to support enhanced safety analysis and safety investment decision-making. The HSIP Final Rule establishes three categories of MIRE fundamental data

elements based on functional classification and surface type, as shown in the table. States must incorporate specific quantifiable and measurable anticipated improvements for the collection of MIRE fundamental data elements into their Traffic Records Strategic Plan by July 1, 2017, and have access to the complete collection of the MIRE fundamental data elements by September 30, 2026.

Roadway Category	Number of MIRE Fundamental Data Elements
Non-local paved roads	37
Local paved roads	9
Unpaved roads	5

Safety PM Final Rule

The Safety PM Final Rule supports the data-driven performance focus of the HSIP. The Safety PM Final Rule establishes five performance measures to carry out the HSIP: the five-year rolling averages for: (1) Number of Fatalities, (2) Rate of Fatalities per 100 million VMT, (3) Number of Serious Injuries, (4) Rate of Serious Injuries per 100 million VMT, and (5) Number of Non-motorized Fatalities and Non-motorized Serious Injuries. These safety performance measures are applicable to all public roads regardless of ownership or functional classification. The Safety PM Final Rule also establishes a common national definition for serious injuries.

State Targets

States will establish statewide targets for each of the safety performance measures. States also have the option to establish any number of urbanized area targets and one non-urbanized area target for any or all of the measures. Targets will be established annually, beginning in August 2017 for calendar year 2018. For common performance measures (number of fatalities, rate of fatalities and number of serious injuries), targets must be identical to the targets established for the NHTSA Highway Safety Grants program. The State DOT must also coordinate with the MPOs in the State on establishment of targets, to the maximum extent practicable. States will report targets to the FHWA in the HSIP report due in August of each year.

MPO Targets

MPOs will establish targets for the same five safety performance measures for all public roads in the MPO planning area within 180 days after the State establishes each target. The targets will be established in coordination with the State, to the maximum extent practicable. The MPO can either agree to support the State DOT target or establish a numerical target specific to the MPO planning area. MPOs' targets are reported to the State DOT, which must be able to provide the targets to FHWA, upon request.

Met or Made Significant Progress Determination

A State is considered to have met or made significant progress toward meeting its safety targets when at least 4 of the 5 targets are met or the outcome for the performance measure is better than the baseline performance the year prior to the target year. Optional urbanized area or non-urbanized area targets will not be evaluated. Each year that FHWA determines a State has not met or made significant progress toward meeting its performance targets, the State will be required to use obligation authority equal to the baseline year HSIP apportionment only for safety projects. States must also develop a HSIP Implementation Plan.

Additional Information

The HSIP and Safety PM Final Rules are available at www.regulations.gov (Dockets: FHWA-2013-0019 and FHWA-2013-0020). FHWA will issue supplemental guidance to support implementation of the HSIP and Safety PM Final Rules. Additional information related to the HSIP and Safety PM Final Rules can be found at http://safety.fhwa.dot.gov/hsip/tpm/.

Sections discussed in this NPRM for Part 490, National Performance Management Measures, include:

- **Subpart A** – General Information
- **Subpart E** – Measures to Assess Performance of the National Highway System
- **Subpart F** – Measures to Assess Freight Movement on the Interstate System
- **Subpart G** – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – Traffic Congestion
- **Subpart H** – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – On-Road Mobile Source Emissions

This technical fact sheet provides a general overview of the NPRM's performance measures and requirements. Three additional fact sheets provide details, including data requirements and calculation methodologies, for the measures in Subparts E - H. These can be found on the TPM website (http://www.fhwa.dot.gov/tpm/rule.cfm), along with recorded webinars and information on related but previously published performance management NPRMs.

Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program

Overview of the Proposed Rulemaking

The Moving Ahead for Progress in the 21st Century Act (MAP-21) initiated and the Fixing America's Surface Transportation Act (FAST Act) continues the mandate that the Secretary develop regulations (23 CFR 490) to establish Transportation Performance Management (TPM) requirements to carry out the National Highway Performance Program (NHPP), Freight Movement on the Interstate, and the Congestion Mitigation and Air Quality Improvement (CMAQ) Program. This is the third of three proposed rules that together establish a set of performance measures for State DOTs and Metropolitan Planning Organizations (MPOs). This proposed rulemaking is available in docket number FHWA-2013-0054 at https://www.regulations.gov. The public is encouraged to review the proposed rule and submit comments to the docket, which will be considered in the process of writing the final rule.

Proposed Target Establishment

Within one year of the effective date of the rule, all State DOTs would establish 2-year and 4-year targets where their respective geographic boundary contains portions of the transportation network or project that are applicable to the measure. State DOTs would report their target(s) to FHWA within 30 days of establishment. For each measure area, State DOTs would be required to coordinate with relevant MPOs on the selection of targets to ensure consistency to the maximum extent practicable.

MPOs would have 180 days from when the State DOT establishes a target to establish a corresponding target within their metropolitan planning area (MPA). MPOs would establish 4-year targets for all applicable measures. MPOs would also establish 2-year targets for the Performance of the NHS, Traffic Congestion, and On-Road Mobile Source Emissions measures, as applicable. For all but the two Peak Hour Travel Time measures under Subpart E and the Traffic Congestion measure, MPOs would establish targets by either agreeing to support the Statewide target or establishing a quantifiable target specific to the applicable area. For the Peak Hour Travel Time and Traffic Congestion measures, State DOTs and MPOs would collectively establish single, unified 2-year and 4-year targets for each applicable urbanized area. For the On-Road Mobile Source Emissions measure, only MPOs that have applicable projects and are within MPAs that overlap urbanized areas with populations over one million would establish both 2-year and 4-year targets. For the first performance period, the non-Interstate NHS providing for Reliable Travel Times measure under Subpart E and the Traffic Congestion measure would not require 2-year targets.

Proposed Data Sources

The key data source for calculating measures in Subparts E, F, and G is the National Performance Management Research Data Set (NPMRDS) or an equivalent data set approved by FHWA. The primary source for calculating the Subpart H measure is the CMAQ Public Access System.

Proposed Performance of the National Highway System, Freight Movement on the Interstate, Congestion and Air Quality Performance Measures*

Part 490 Subpart	Proposed Performance Measures**	Proposed Metrics	Applicability
Performance of the National Highway System (NHS) (Subpart E)	Percent of the Interstate System providing for Reliable Travel Times	Level of Travel Time Reliability (LOTTR)	Interstate System mileage within the State or each MPA
	Percent of the non-Interstate NHS providing for Reliable Travel Times	Level of Travel Time Reliability (LOTTR)	Non-Interstate NHS mileage within the State or each MPA
	Percent of the Interstate System where Peak Hour Travel Times meet expectations	Peak Hour Travel Time Ratio (PHTTR)	Interstate System mileage within each urbanized area with a population over one million
	Percent of the non-Interstate NHS where Peak Hour Travel Times meet expectations	Peak Hour Travel Time Ratio (PHTTR)	Non-Interstate NHS mileage within each urbanized area with a population over one million
Freight Movement (Subpart F)	Percent of the Interstate System Mileage providing for Reliable Truck Travel Times	Truck Travel Time Reliability (TTTR)	Interstate System mileage within the State or each MPA
	Percent of the Interstate System Mileage Uncongested	Average Truck Speed	Interstate System mileage within the State or each MPA
CMAQ Traffic Congestion (Subpart G)	Annual Hours of Excessive Delay Per Capita	Total Excessive Delay	NHS roads in urbanized areas with populations over one million that are, all or in part, designated as nonattainment or maintenance areas for ozone (O_3), carbon monoxide (CO), or particulate matter (PM)
CMAQ On-Road Mobile Source Emissions (Subpart H)	2- and 4-year Total Emission Reductions for each applicable criteria pollutant and precursor	Annual Tons of Emission Reductions by project for each applicable criteria pollutant and precursor	All projects funded by CMAQ program in areas designated as nonattainment or maintenance for O_3, CO, or PM for each State or MPA

* State DOTs and MPOs would be required to establish targets for applicable measures. See page one for discussion of specific applicability for State DOTs and MPOs for establishing targets for each measure.
** Measures pertain to the mainline of the roadway for all applicable roadways.

Proposed Reporting Requirements

An initial performance report is due October 1, 2016. For each 4-year performance period, a Baseline Performance Period Report and Mid and Full Performance Period Progress Reports would be required. The biennial reports would be due at the beginning, middle, and end of the performance period. The first performance period is expected to begin January 1, 2018. For the On-Road Mobile Source Emissions measure (Subpart H), the first performance period would begin October 1, 2017. Baseline Reports would include the State DOT's targets for the performance period. Mid Period Reports would include analysis of the first two years and any adjustments to 4-year targets. Full Period Reports would include the analysis of conditions over the full period.

Proposed Significant Progress Assessment Process

The NPRM calls for FHWA to biennially assess progress made by each State DOT in achieving each individual NHPP and NHFP target. The four measures in Subpart E are the only NHPP measures in this NPRM. Subpart F contains the only two NHFP measures. A State DOT's progress would be considered significant if the actual condition is equal to or better than the established target or better than the baseline performance.

For NHPP and NHFP measures, if a State DOT has not made significant progress, then it would document in its next biennial performance report a description of the actions it will undertake to acheive targets. However, States DOTs are encouraged to document the actions sooner.

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NPRM Docket Number: FHWA-2013-0054

Please note:
The comment period on this NPRM will be open for 120 days from publication.

April 2016

U.S. Department of Transportation
Federal Highway Administration

TPM

Sections discussed in this NPRM for Part 490, National Performance Management Measures, include:

Subpart A – General Information
Subpart E – Measures to Assess Performance of the National Highway System
Subpart F – Measures to Assess Freight Movement on the Interstate System
Subpart G – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – Traffic Congestion
Subpart H – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – On-Road Mobile Source Emissions

Please see the technical fact sheet: *Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program: Overview of the Proposed Rulemaking* at http://www.fhwa.dot.gov/tpm/rule.cfm for additional details on the proposals for:

- Establishing targets
- Schedules for performance and target reporting
- Significant progress assessment process
- Consequences

Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program

Performance of the National Highway System (Subpart E)

This proposed rulemaking is available in docket number FHWA-2013-0054 at https://www.regulations.gov. The public is encouraged to review the proposed rule and submit comments, which will be considered in the process of writing the final rule. This technical fact sheet provides details on the National Highway System (NHS) performance measures, and is part of a series available at http://www.fhwa.dot.gov/tpm/rule.cfm.

State DOTs and MPOs would be required to establish targets for the following measures:

	Proposed Performance Measures*	Applicability
Travel Time Reliability	Percent of Interstate System providing for Reliable Travel Times	Interstate System mileage within the State or each MPA
	Percent of non-Interstate NHS providing for Reliable Travel Times	Non-Interstate NHS mileage within the State or each MPA
Peak Hour Travel Time	Percent of Interstate System where Peak Hour Travel Times meet expectations	Interstate System mileage within each urbanized area with a population over one million
	Percent of non-Interstate NHS where Peak Hour Travel Times meet expectations	Non-Interstate NHS mileage within each urbanized area with a population over one million

*Measures pertain to the mainline of the roadway for all applicable roadways.

Proposed Data Sources for Metric and Measure Calculation

Travel Time: Travel time data would come from the National Performance Management Research Data Set (NPMRDS) or an FHWA-approved equivalent data set. State DOTs, in agreement with MPOs, would be required to define reporting segments consistently for all measures and submit them to FHWA. In general, reporting segments in urbanized areas would have a maximum length of ½ mile, while the maximum length in non-urbanized areas would be 10 miles, unless an individual travel time segment is longer.

Urbanized Areas: The urbanized area population would be based on the most recent US Decennial Census data available at the time the State DOT Baseline Performance Period Report is due to FHWA. The urbanized area boundary would be based on the information in the Highway Performance Monitoring System (HPMS) at the time the Baseline Report is due. The urbanized area population and boundary would apply for the entire performance period.

Proposed Data Reporting Requirements

By June 15, 2018, and annually thereafter, State DOTs would be required to report the performance of the NHS metrics for the previous calendar year's data in HPMS.

Proposed Travel Time Reliability Metric

Metric: State DOTs would calculate the Level of Travel Time Reliability (LOTTR) metric for each reporting segment of the NHS for each of the required time periods:

- Non-Holiday weekdays (Monday through Friday) 6:00 to 10:00 am, 10:00 am to 4:00 pm, and 4:00 to 8:00 pm
- Weekends (Saturday and Sunday) 6:00 am to 8:00 pm

Any missing or null travel times for travel time segments contained within a reporting segment should be replaced with the calculated travel time for that segment, based on the segment length and posted speed limit (TT@PSL), rounded to the nearest second.

State DOTs would identify the Normal (50th Percentile) and 80th Percentile Travel Times using a full calendar year of data for each time period. They would determine Level of Travel Time Reliability (LOTTR) for each reporting segment to the nearest hundredth using the following formula:

$$\text{LOTTR} = \frac{\text{80th Percentile Travel Time}}{\text{50th Percentile Travel Time}}$$

Threshold: A reporting segment would provide for reliable travel times where the calculated value of the metric for all time periods is less than 1.50.

Proposed Peak Hour Travel Time Metric

Metric: State DOTs would calculate the Peak Hour Travel Time Ratio (PHTTR) for each reporting segment of the NHS within the boundaries of urbanized areas with populations over one million using the below steps.

Calculate annual average travel time for each reporting segment for each of the six single hour blocks within the peak periods (6:00 am to 9:00 am and 4:00 pm to 7:00 pm). All travel times equating to speeds less than 2 mph or greater than 100 mph, would be removed from the calculation. Then, select the highest numeric value of the annual average travel time among the hour blocks in the peak period as the Peak Hour Travel Time for calculating the PHTTR metric for each reporting segment.

State DOTs would assign Desired Peak Period Travel Times – one for the three morning peak hour blocks and one for the three evening peak hour blocks.

The Desired Peak Period Travel Time associated with the Peak Hour Travel Time would be used to calculate the PHTTR to the nearest hundredth using the following formula:

$$\text{PHTTR} = \frac{\text{Peak Hour Travel Time}}{\text{Desired Peak Period Travel Time}}$$

Threshold: A reporting segment would meet expectations where the calculated value of the metric is less than 1.50.

Proposed Performance of the NHS Measure

The Percent of the Interstate System and non-Interstate NHS providing for Reliable Travel Times and the Percent of the Interstate System and non-Interstate NHS where Peak Hour Travel Times meet expectations would be computed to the nearest tenth of a percent using the following formula:

$$100 \times \frac{\sum_{i=1}^{R} SL_i}{\sum_{i=1}^{T} SL_i}$$

Where:

- i = reporting segment
- R = total number of reporting segments operating at a specified performance level, as defined through a threshold proposed for each metric
- T = total number of reporting segments in the system and area applicable to the measure
- SL_i = length of the reporting segment, to the nearest thousandth of a mile

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U.S. Department of Transportation
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Sections discussed in this proposed NPRM for Part 490, National Performance Management Measures, include:

Subpart A – General Information
Subpart E – Measures to Assess Performance of the National Highway System
Subpart F – Measures to Assess Freight Movement on the Interstate System
Subpart G – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – Traffic Congestion
Subpart H – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – On-Road Mobile Source Emissions

Please see the technical fact sheet: *Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program: Overview of the Proposed Rulemaking* at http://www.fhwa.dot.gov/tpm/rule.cfm for additional details on the proposals for:

- Establishing targets
- Schedules for performance and target reporting
- Significant progress assessment process
- Consequences

Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program

Freight Movement on the Interstate System (Subpart F)

This proposed rulemaking is available in docket number FHWA-2013-0054 at https://www.regulations.gov. The public is encouraged to review the proposed rule and submit comments, which will be considered in the process of writing the final rule. This technical fact sheet provides details on the Freight Movement on the Interstate System performance measures, and is part of a series available at http://www.fhwa.dot.gov/tpm/rule.cfm.

State DOTs and MPOs would be required to establish targets for the following measures:

	Proposed Performance Measures*	Applicability
Truck Travel Time Reliability	Percent of the Interstate System Mileage providing for Reliable Truck Travel Times	Interstate System mileage within the State or each MPA
Mileage Uncongested	Percent of the Interstate System Mileage Uncongested	Interstate System mileage within the State or each MPA

*Measures pertain to the mainline of the roadway for all applicable roadways.

Proposed Data Sources for Metric and Measure Calculation

Travel Time: Travel time data would come from the National Performance Management Research Data Set (NPMRDS) or an FHWA-approved equivalent data set. State DOTs, in agreement with MPOs, would be required to define reporting segments consistently for all measures and submit them to FHWA. In general, reporting segments in urbanized areas would have a maximum length of ½ mile, while the maximum length in non-urbanized areas will be 10 miles, unless an individual travel time segment is longer.

Using the NPMRDS or an FHWA-approved equivalent data set, State DOTs would create a truck travel time data set, which would include truck travel times, to the nearest second, for each 5-minute bin. Any truck travel times that are missing or not available would be replaced with an observed time that represents all traffic on the roadway during the same 5-minute interval, provided this time is associated with speeds that are less than the posted speed limit. In all other cases, a truck travel time based on the segment length and posted speed limit (TTT@PSL), rounded to the nearest second, would be used.

Proposed Data Reporting Requirements

By June 15, 2018, and annually thereafter, State DOTs would be required to report the freight movement metrics for the previous calendar year's data in HPMS.

Proposed Truck Travel Time Reliability Measure

Metric: State DOTs would identify the Normal (50th Percentile) and 95th Percentile Truck Travel Times for each reporting segment of the Interstate System using a full calendar year of data from the truck travel time dataset for each time period. Truck Travel Time Reliability would be then calculated to the nearest hundredth using the following formula:

$$\text{Truck Travel Time Reliability} = \frac{\text{95th Percentile Truck Travel Time}}{\text{50th Percentile Truck Travel Time}}$$

Threshold: A reporting segment would provide for reliable truck travel times where the calculated value of the metric is less than 1.50.

Measure: The Percent of the Interstate providing for Reliable Truck Travel Times would be computed for the Interstate System to the nearest tenth of a percent using the following formula:

$$100 \times \frac{\sum_{a=1}^{R} SL_a}{\sum_{i=1}^{T} SL_i}$$

Where:

- a = an Interstate System reporting segment exhibiting Reliable Truck Travel Times
- SL_a = segment length, to the nearest thousandth of a mile, of Interstate System reporting segment "a"
- R = total number of Interstate System reporting segments exhibiting Reliable Truck Travel Times
- i = an Interstate System reporting segment
- SL_i = segment length, to the nearest thousandth of a mile, of Interstate System reporting segment "i"
- T = total number of Interstate System reporting segments

Proposed Mileage Uncongested Measure

Metric: State DOTs would calculate the Average Truck Speed metric for each Interstate System reporting segment to the nearest hundredth using the following formula:

$$\text{Average Truck Speed (s)} = \frac{\left[\sum_{b=1}^{T} \frac{\text{Segment Length (s)}}{\text{Truck Travel Time}_b}\right]}{T} \times 60 \times 60$$

Where:

- b = a 5-minute time interval of a travel time reporting segment "s"
- s = a travel time reporting segment
- T = total number of time intervals in a calendar year
- Segment Length (s) = length of "s" to the nearest thousandth of a mile
- $\text{Truck Travel Time}_b$ = travel time of trucks for time interval "b" in the Travel Time Dataset or TTL@PSL for the reporting segment *s* to the nearest second
- Average Truck Speed (s) = average annual speed of trucks traveling through the reporting segment "s", to the nearest hundredth mile per hour

Threshold: A reporting segment is considered uncongested where the Average Truck Speed for the reporting segment is greater than 50.00 mph.

Measure: The Percent of the Interstate System Mileage Uncongested would be computed for the Interstate System to the nearest tenth of a percent using the following formula:

$$100 \times \frac{\sum_{g=1}^{U} SL_g}{\sum_{i=1}^{T} SL_i}$$

Where:

- g = an uncongested Interstate System reporting segment
- SL_g = segment length, to the nearest thousandth of a mile, of Interstate System reporting segment "g"
- U = total number of uncongested Interstate System reporting segments
- i = an Interstate System reporting segment
- SL_i = segment length, to the nearest thousandth of a mile, of Interstate System reporting segment "i"
- T = total number of Interstate System reporting segments

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April 2016

U.S. Department of Transportation
Federal Highway Administration

TPM

Sections discussed in this proposed NPRM for Part 490, National Performance Management Measures, include:

Subpart A – General Information
Subpart E – Measures to Assess Performance of the National Highway System
Subpart F – Measures to Assess Freight Movement on the Interstate System
Subpart G – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – Traffic Congestion
Subpart H – Measures to Assess the Congestion Mitigation and Air Quality Improvement Program – On-Road Mobile Source Emissions

Please see the technical fact sheet: *Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program: Overview of the Proposed Rulemaking* at http://www.fhwa.dot.gov/tpm/rule.cfm for additional details on the proposals for:

- Establishing targets
- Schedules for performance and target reporting
- Significant progress assessment process
- Consequences

Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and the Congestion Mitigation and Air Quality Improvement Program

Traffic Congestion (Subpart G) and On-Road Mobile Source Emissions (Subpart H)

This proposed rulemaking is available in docket number FHWA-2013-0054 at https://www.regulations.gov. The public is encouraged to review the proposed rule and submit comments, which will be considered in the process of writing the final rule. This technical fact sheet provides details on the CMAQ Program performance measures, and is part of a series available at http://www.fhwa.dot.gov/tpm/rule.cfm.

State DOTs and MPOs would be required to establish targets for the following measures:

	Proposed Performance Measures	Applicability
Traffic Congestion (Subpart G)	Annual Hours of Excessive Delay Per Capita*	NHS roads in urbanized areas with populations over one million that are, all or in part, designated as nonattainment or maintenance areas for ozone (O_3), carbon monoxide (CO), or particulate matter (PM)
On-Road Mobile Source Emissions (Subpart H)	2- and 4-year Total Emission Reductions for each applicable criteria pollutant and precursor	All projects funded by the CMAQ program in areas designated as nonattainment or maintenance for O_3, CO, or PM for each State or MPA

*Measure pertains to the mainline of the roadway for all applicable roadways.

Proposed Data Sources for Metric and Measure Calculation

Applicable Nonattainment and Maintenance Areas (G and H): These areas would be based on the U.S. Environmental Protection Agency's designation of the area under the National Ambient Air Quality Standards at the time when the State DOT Baseline Performance Period Report is due to FHWA.
Emission Reductions Estimates (H): Estimated emission reductions for each CMAQ funded project by applicable criteria pollutant and precursor would come from the CMAQ Public Access System.
Urbanized Areas (G): The urbanized area population would be based on the most recent US Decennial Census data available at the time the State DOT Baseline Performance Period Report is due to FHWA. The urbanized area boundary would be based on the information in the Highway Performance Monitoring System (HPMS) at the time the Baseline Report is due. The urbanized area population and boundary would apply for the entire performance period.
Travel Time (G): Travel time data would come from the National Performance Management Research Data Set (NPMRDS) or an FHWA-approved equivalent data set.
Traffic Volumes (G): Traffic volumes would come from continuous hourly traffic volume count stations ***or*** be estimated using Average Annual Daily Traffic (AADT) when no hourly volume counts exist. State DOTs would report their methodology to FHWA.

Subpart G: Proposed Traffic Congestion Measure

Data Reporting Requirements: By June 15, 2018, and annually thereafter, State DOTs would be required to report the traffic congestion metric for the previous calendar year's data in HPMS.

Metric: State DOTs would calculate the Total Excessive Delay for all vehicles traveling through each travel time segment on the NHS within an applicable urbanized area for a full year using the following steps.

Travel Segment Delay would be determined for each 5-minute bin as the difference between the Threshold Travel Time and the Average Travel Time when this difference is greater than zero. Travel Segment Delay should be capped at 300 seconds and none reported for bins where there is no travel time.

To calculate the Total Delay for each bin, multiply the Travel Segment Delay by $^{1}/_{12}$ of the hourly traffic volume, as a 5-minute bin represents travel conditions for $^{1}/_{12}$ of an hour. This provides the impact for all users of the segment.

Then calculate the Total Excessive Delay for a given segment (in vehicle-hours) to the nearest thousandth by summing the Total Delays for each bin for a full year.

Threshold: A travel time segment is considered to have excessive delay if the travel speed is equal to or slower than the following:

- 35 mph for Interstates, freeways, or expressways
- 15 mph for principal arterials and all other NHS roads

The Threshold Travel Time would be the travel time segment length divided by the threshold speed.

Measure: The Annual Hours of Excessive Delay Per Capita would be computed to the nearest tenth for each applicable urbanized area by summing the Total Excessive Delay (vehicle-hours) for all travel time segments and dividing it by the population of the urbanized area. A 2-year target would not need to be established in the initial Baseline Performance Period Report.

Subpart H: Proposed On-Road Mobile Source Emissions Measure

Data Reporting Requirements: State DOTs would enter project information into the CMAQ project tracking system for each CMAQ project funded in the previous fiscal year by March 1 of the following fiscal year.

Metric: For each project, calculate the Total Emission Reductions for each applicable criteria pollutant and precursor ($PM_{2.5}$, PM_{10}, CO, VOC, or NOx) by converting the kg/day data in the CMAQ Public Access System to short tons/year using the following formula:

$$\text{Annual Tons of Emission Reductions}(p)_i = \text{Reductions}(p)_i \times 0.4026$$

Where:

- p = criteria pollutant or precursor
- i = project obligated for CMAQ funding for first time
- Reductions_p = estimated daily emission reductions for a criteria pollutant or precursor. This is reported in kg/day in the first year the project is operational to the nearest thousandth
- 0.4026 = ratio to convert kg/day to short tons/year
- $\text{Annual Tons of Emission Reductions}(p)_i$ = total annual short tons of reduced emissions for "p" in the first year the project is obligated

Measure: The Total Emission Reductions for each of the applicable criteria pollutants and precursors would be computed to the nearest thousandth by summing the Annual Tons of Emission Reductions (short tons/year) for that pollutant for all applicable projects reported to the CMAQ Public Access System for the first two years and all four years of the performance period. State DOTs and MPOs would establish targets and calculate the cumulative Total Emission Reductions for 2- and 4-years in the Mid and Full Performance Period Progress Reports respectively, as applicable.

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U.S. Department of Transportation
Federal Highway Administration

TPM

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Metro | *Memo*

Date: June 17, 2016

To: Transportation Policy Alternatives Committee and Interested Parties

From: Grace Cho, Associate Transportation Planner
Ted Leybold, Resource Development Manager

Subject: Statewide Congestion Mitigation and Air Quality (CMAQ) Funding Allocation – Technical Considerations

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Purpose
In preparation for an ODOT led process to update the formula for the allocation of CMAQ funds across eligible areas in Oregon, describe initial ideas and gather input on technical factors that should be considered and incorporated into that formula. Update TPAC members with the most current information about the process and efforts within the region to participate.

Introduction
The Oregon Department of Transportation (ODOT) recently announced it will be revisiting the allocation formula for distributing CMAQ funding throughout the state because the Eugene and Salem regions are now eligible to receive those funds. ODOT has notified stakeholders of its intention to hold a statewide CMAQ discussion over the summer of 2016 to develop a recommendation to the Oregon Transportation Commission (OTC) by autumn.

The CMAQ funding program is one of three federal funding programs that comprise the regional flexible fund allocation. The current statewide sub-allocation formula of CMAQ funding provides approximately $13-$14 million annually in federal funding for projects in the Metro region. This represents approximately one third of the total regional flexible fund allocation. Providing CMAQ funding to the Eugene and Salem areas could reduce funding to the regional flexible fund process by several million dollars annually, depending on how the new distribution process is defined.

Further background information about the CMAQ program can be found as **Attachment A**.

Process on the Statewide CMAQ Funding Allocation Discussion (to date)
ODOT has released an initial timeline for the statewide CMAQ funding allocation process. Table 1. outlines ODOT's proposed timeline.

Table 1. Timeline for Statewide CMAQ Funding Allocation Discussions

Dates	Activities
July – August 2016	Technical Meetings: ODOT staff convenes 2-3 meetings with staff from CMAQ eligible areas to review the current allocation formula process, discuss issues and opportunities, and discuss the range of options for future allocations and identify challenges and benefits of each.
September 2016 (after	Policy Meeting(s): ODOT Director convenes a meeting with **policy**

Labor Day)	**leaders of the MPO** from the CMAQ eligible areas in an effort to come to consensus on a recommendation to take to the OTC, based on feedback from the prior technical meetings.
October – November 2016	Prepare recommendation for OTC consideration; OTC discussion and anticipated approval.

In June, JPACT and coordinating committee meetings, the region's elected officials were provided a briefing on the upcoming CMAQ statewide discussion. JPACT and Metro Council were in agreement the region's transportation stakeholders need to ensure that their interests are being considered in the new CMAQ distribution formula by ODOT as it prepares its new allocation proposal to the Oregon Transportation Commission. At the June JPACT meeting, a motion was passed for Metro staff to submit a comment letter to ODOT requesting adequate opportunities for the affected stakeholders to provide input to the different distribution formula options. JPACT members were also concerned the expedited timeline does not provide an opportunity to develop a transition strategy to implement the new statewide CMAQ funding allocation. Metro staff is developing the comment letter on behalf of the Portland MPO.

In addition, JPACT and the Metro Council tasked staff to work with TPAC to develop a set of distribution formula factors for submission to ODOT. In working on defining these factors in advance, the region will be prepared to communicate to ODOT the region's position prior to ODOT staff putting forward a recommendation to the OTC.

Draft Factors for Consideration in the Statewide CMAQ Funding Allocation
At the technical meetings, ODOT will convene technical staff of the CMAQ eligible regions to discuss potential options for the new CMAQ distribution formula. In recognizing the importance of this meeting to provide input directly to ODOT staff, the Metro region has identified the several factors that are important to the region in a new CMAQ distribution formula. These factors and a brief description can be found in Table 2. Table 3 identifies issues that need to be addressed as the state transitions from the current CMAQ distribution formula to a new formula. All of these factors need to undergo a vetting process with stakeholders across the state to develop a successful formula and transition strategy.

Table 2. Draft Factors for Consideration in the Statewide CMAQ Funding Allocation

Factor	Why This Factor is Important	Potential Implications for Metro area (for TPAC understanding only – not to be part of submission to ODOT)
Current population	The number of people and jobs contribute to the air quality conditions of a region. Population is also a factor in the level of health risk if a pollutant is above acceptable emission levels.	Combined with other factors, risk to size of population is important for our region and the state. The Metro area has the majority of Oregon's residents and jobs.
Air pollution source and severity	The source and severity of air pollution in a region is a fundamental component to the CMAQ program. Transportation needs to be a significant source contributor before credit is given for a pollutant factor within the CMAQ distribution formula. Combined with the population factor, this accounts for health risks.	Mobile sources are a major contributor to air quality pollution in our region AND the severity of air pollution from mobile sources tend to be greater.
Economic development and projected growth	The number of people and jobs contribute to the air quality conditions of a region. This factor is important to ensure that transportation emissions from projected job and population growth do not pose a risk to compliance with federal emission standards or state regulations and subsequently the benefit to the state of economic development.	Important as part of growth management strategy to ensure development is not restricted or put under undue costs and burdens. Economic development in the Metro region is critical to the economic health of the entire state.
Transportation emissions' role in compliance with federal regulations and maintenance plan designation	Maintenance Plans identify risks of different emission sources to violation of federal emission standards and adopt a local strategy for staying in compliance with those standards. If transportation (mobile source) emissions are not identified as a significant risk to violation of the national standards and/or are not a significant part of the local strategy to stay in compliance	The Metro region has much stronger mandates in the State Implementation Plan and linkage in our maintenance plans between our transportation emission reduction strategy and compliance with federal emission standards than other parts of the state.

	(usually because growth in mobile source emissions is not a significant risk for future violations of the Clean Air Act standards) those regions should not receive significant investment from the federal transportation funding program designed to help local areas comply with the federal emission standards.	
Other local implementation of transportation related air quality program requirements	Plan areas in the state that have gone to the expense and effort to implement transportation programs to ensure compliance with federal emission standards, such as vehicle inspection programs should receive credit in the CMAQ distribution formula.	The Metro region has more programs and requirements to address mobile source emissions beyond CMAQ funded activities than other parts of the state.
Air Quality Analysis and Reporting Requirements	The air shed maintenance plan designation in MPO areas require several mobile source emissions requirements. Areas with Limited Maintenance Plans are not required to conduct as much transportation emissions analysis because growth in mobile source emissions is not a significant risk for future violations of the Clean Air Act standards. MPOs that must maintain and utilize emissions models, conduct conformity analysis, demonstrate compliance with SIP Transportation Control Measures, etc., should receive credit in the CMAQ distribution formula for having to carry out these functions over those areas that do not.	MPO staff carries out these responsibilities in the Metro region, whereas in other parts of the state, these responsibilities are carried out by ODOT or other public entities.
Emissions reduction performance	With limited funding available, the best investment of CMAQ should be to the transportation projects with the greatest ability to reduce emissions.	The Portland region has applied CMAQ to transportation projects with high rates of emissions reductions and reduced traffic congestion by getting users off the motor vehicle portion of the highway system.
Applicable state air quality mandates	The Portland metropolitan region must comply with a number of air quality related state mandates which do not apply to other parts of the state. This includes the Climate Smart Strategy as well as a vehicle emissions inspection program. These state required transportation emission reduction actions should also be accounted for in	

	the CMAQ distribution formula.	
Geography and air movement	The geography, topography, and air movement can affect the air quality conditions of a region.	Mobile source air pollution produced in this region flows south and impacts the Salem-Keizer region. Targeting air pollution at the source is a more effective use of CMAQ funding.
Traffic congestion	Traffic congestion is a contributor to air pollution and mitigation/management of congestion to ensure good air quality is a purpose of the federal program.	This factor is important to the Portland metropolitan region as the worst congestion in Oregon is present in the Portland region and it is projected to grow.

Table 3. Draft Considerations in transitioning to the new CMAQ distribution formula

Factor	Why This Factor is Important	Potential Implications for Metro area
Impacts to existing commitments	Projects have already been selected and programmed in local MTIPs and the STIP for these funds through the year 2018. These commitments should be held harmless.	Existing projects in the TIP through 2018 are already in project development and in the process of committing funds to contracts.
Impacts to future commitments	The Metro region, with participation of ODOT Region 1, has utilized CMAQ to fund long-term commitments for high capacity transit corridor projects, with payments currently committed through 2027. The 2019-21 funding process is well underway and the current policy agreement, which includes an extension of bonding to the year 2034 for transit, ODOT highway and active transportation project development, is predicated on existing funding levels. Significant changes to funding amounts would jeopardize this agreement, with significant impacts to ODOT projects and facilities.	The ability of the region to proceed on a long-term agreed upon project development strategy could be in jeopardy if significant changes are made to CMAQ funds available to the region.
Ability to implement ODOT projects and policy objectives	CMAQ funding currently supports several activities in Region 1 that support ODOT projects and policy objectives. Significant cuts to currently funded programs and projects would impact the ability of ODOT to implement projects or demonstrate consistency/compliance with ODOT policies.	Significant changes to the CMAQ funding formula would require ODOT and its Region 1 partners to develop new funding strategies for ensuring ODOT adequately addresses it policy objectives.

Additionally, Metro staff has identified a number of key messages for the region to convey to ODOT staff and the OTC. Some of the messages developed to date are:

- Designation as a CMAQ eligible region is only one step of whether CMAQ should be used in a given area. Recognizing the program's purpose is to provide funding to transportation projects to help meet the requirements of the Clean Air Act, CMAQ program funds should focus on air pollution caused by mobile sources. Addressing other air pollution sources and issues, while important, are not aligned to the purpose of the CMAQ program.

- The way in which CMAQ funding has been used in the Portland metropolitan region has greatly benefited and implement elements of the Oregon Transportation Plan and state topic or modal plans, including:
    - Oregon Highway Plan
    - Oregon Bicycle and Pedestrian Plan
    - Oregon Transportation Options Plan
    - Oregon Public Transportation Plan

- The Portland metropolitan region continues to have the greatest level of risk factors for violating the Clean Air Act standards. While progress has been made to improve air quality in the region, each tool which gets taken away to address the air pollution issue diminishes the ability to address the issue and only further puts Oregon residents at risk.

Discussion Questions

Based on the outline of the key factors identified, the following questions are requested for TPAC discussion and consideration:

1. Are there any missing factors for the region to communicate to ODOT?
2. Are there ways in which the region can message and communicate the factors more effectively with ODOT staff?

Next Steps

Metro staff will provide regular updates to JPACT, TPAC, and other interested parties and continue to facilitate communication between ODOT and JPACT about the CMAQ funding distribution process. This will include talking points for elected officials and policy makers that effectively communicate key policy themes.

What is happening with CMAQ?

1) **What is the Congestion Mitigation and Air Quality (CMAQ) program?**
   The Congestion Mitigation and Air Quality (CMAQ) program is a U.S. Department of Transportation (U.S. DOT) funding program intended to "provide a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act." With the creation and implementation of the CMAQ program in 1991 as part of the Intermodal Surface Transportation Efficiency Act (ISTEA), funding became available to areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former nonattainment areas that are now in compliance (maintenance areas). The CMAQ program is housed and administered through the Federal Highway Administration (FHWA).

2) **Does the Portland metropolitan region receive CMAQ funds?**
   Yes, the Portland metropolitan region has received CMAQ funding since the start of the CMAQ program in 1991 because the region was formerly a non-attainment area for carbon monoxide and is currently required to implement a maintenance plan to address carbon monoxide emissions.

3) **How are CMAQ funds distributed? (Federal Government to State Government)**
   Since the creation and implementation of the CMAQ funding program, CMAQ funding has been disbursed through state department of transportation (DOT). The State DOT then decides how to allocate the CMAQ funds to eligible areas. Formulas which prescribe the amount of CMAQ funding to each state have evolved since the implementation of the program in 1991. In 2009 the authorization bill SAFETEA-LU changed the distribution formula from one that varied each year based on impacted populations and levels of exposure to emissions to one based on the proportion of funds each state received in 2009. Therefore, the proportion of funds to each state has not changed since 2009, even through the landscape of eligible areas and the air quality context has changed.

4) **How are CMAQ funds distributed? (State Government to Local Government)**
   Because State DOTs have the discretion for determining the allocation of CMAQ funding to those eligible areas in the state, the CMAQ funding program differs from state to state. FHWA does not have statewide distribution requirements for State DOTs aside from establishing eligible areas. In Oregon, ODOT has taken a sub-allocation approach to distributing CMAQ funding to eligible areas. Since 2006, ODOT has used the same sub-allocation formula for CMAQ funding, which was based on multiple factors including air quality status, pollution severity and population. Eligible areas outside of MPOs have received an "off the top" allocation of $65,000 per year, typically spent in one obligation of funds accumulated over several years.

5) **How much of that CMAQ funding comes to the Portland metropolitan region?**

The Portland metropolitan region currently receives approximately $13 million per year to implement transportation projects which address air quality issues. Amounts change slightly each year consistent with the rate of annual growth of overall federal transportation funding to the state. In general, the funds have grown slightly over time and with no changes in the sub-allocation formula would be approximately $14 million by the end of the current federal authorization bill in 2020.

6) **What is currently happening with CMAQ in Oregon and why is this discussion happening now?**
FHWA recently made a determination the Eugene and Salem regions are eligible to receive CMAQ funding. The Eugene and Salem MPOs have now requested ODOT to update the state distribution method to account for their eligibility. ODOT is considering how to update the distribution process and is expected to propose a process in the very near future.

7) **Does the end of the maintenance plan impact the eligibility of CMAQ funding to the Portland metropolitan region?**
No, regions which complete the maintenance requirements remain eligible and may continue to receive CMAQ funding, even after receiving full attainment status.

8) **If new places become eligible for CMAQ funding, does that mean the State of Oregon receives more CMAQ funding?**
No, the federal transportation reauthorization does not increase or decrease the level of CMAQ funding each state receives based on the current air quality conditions and newly eligible areas.

9) **How soon can the Portland metropolitan region be affected/impacted by the outcomes of the statewide CMAQ allocation discussions?**
The impacts to the funding amounts will be determined by the Oregon Transportation Commission when they adopt a new distribution process, including the date the new process will go into effect.

10) **What can elected officials do to contribute to conversation about the statewide CMAQ funding allocation?**
To date, ODOT has communicated a general description to undergo a process over the summer and looks to bring forward to the OTC a new recommendation on how to allocate CMAQ funds in the state by autumn 2016. Under such a short timeframe, it will be difficult for ODOT staff to facilitate a robust discussion with stakeholders. As ODOT prepares to define a more specific process proposal, agencies can send a message to ODOT asking for the process timeline needs to be extended so they can fully engage with the stakeholders, understand the impacts and implications, and design a solution which all stakeholders can agree, before taking a recommendation to the OTC.