Agenda

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

Meeting: Metro Technical Advisory Committee
Date: Wednesday, February 15, 2017
Time: 10:00 a.m. to Noon
Place: Council Chamber

Time	Agenda Item	Action Requested	Presenter(s)	Materials
10:00 a.m.	**CALL TO ORDER** **Updates from the Chair** · 2018 RTP Update: Regional Leadership Forum 3 Summary and Report		Tom Kloster, Chair Kim Ellis, Metro	In packet
	Citizen Communications to MTAC		All	
45 min.	**2018 RTP: Recommended Refinements to RTP System Evaluation Measures** *Purpose: MTAC review and comment on proposed refinements to the RTP System Evaluation Measures and provide suggestions for effectively summarizing recommended measures to policy makers.*	Informational/ Discussion	John Mermin Metro	In packet
45 min.	**Powell-Division Transit and Development Project** *Purpose: MTAC review and comment on the Project and next steps for MTAC action to amend the RTP to include the Locally Preferred Alternative*	Informational/ Discussion	Elizabeth Mros-O'Hara, Metro	In packet
Noon	**Adjourn**			

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បេើលោកអ្នកត្រូវការអ្នកបកប្រែភាសានៅពេលអងគ ប្រជុំសាធារណៈ សូមទូរស័ព្ទមកលេខ 503-797-1890 (ម៉ោង 8 ព្រឹកដល់ម៉ោង 5 ល្ងាច ថ្ងៃធ្វើការ) ប្រាំពីរថ្ងៃ ថ្ងៃធ្វើការ មុនថ្ងៃប្រជុំដើម្បីអាចឲ្យគេសម្រួលតាមសំណើរបស់លោកអ្នក

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August 2016

2017 MTAC Tentative Agendas

January 4 – Cancelled	**January 18 – Cancelled**
February 1 · 2018 RTP: Vision Zero and Safety Plan Update (McTighe) · Urban Growth Readiness Task Force Recommended Code Updates Update	**February 15** · Powell-Division Update · RTP Evaluation Framework (Mermin) o System Measures o Transportation equity analysis
March 1	**March 15** · Regional Transit Strategy · Regional Freight Plan · Building the RTP Investment Strategy* (Ellis)
April 5 · Evaluation Framework (Frisbee, Ellis) o Project Measures	**April 19** · Building the RTP Investment Strategy* (Recommendation to MPAC) (Ellis)
May 3	**May 17**
June 7 · 2018 Call for Projects update (Ellis) · Designing Livable Streets (McTighe)	**June 21**
July 5	**July 19** · Work plan for digital mobility policy (Frisbee)
August 2	**August 16**
September 6	**September 20** · Update on RTP Investment Strategy analysis (Ellis)
October 4	**October 18** · Technical drafts of modal/topical plans
November 1 · RTP Investment Strategy Finding (Ellis) · Background on RTP Regional Leadership Forum #4 (Ellis)	**November 15**
December 6	**December 20**

Updated 1/31/17

Parking Lot – Future Agenda Items

- Bonny Slope and North Bethany update
- ODOT Highway Performance Measures Project
- Economic Value Atlas
- City of Vancouver Columbia River Waterfront presentation
- Lessons learned from completed CPDG projects

Parking Lot – Future Events

- Regional Leadership Forum Series #4: Drafting our Shared Plan for the Region (Dec. 2017)

**RTP Revenue Forecast, Priorities, Evaluation Framework and Call for Projects*

January 2017

2018 Regional Transportation Plan update

Connecting our priorities to our vision

Regional Leadership Forum 3 summary

The region is looking ahead to how our transportation system will accommodate future growth and change – and what investments we should make over the next 25 years to build a safe, reliable, healthy and affordable transportation system.

On Dec. 2, 2016, the Metro Council convened Regional Leadership Forum 3, at the Oregon Convention Center. Nearly 60 city, county, regional and state policymakers, business and community leaders from across the Portland metropolitan area joined in bringing the perspectives of their constituents and communities to the conversation.

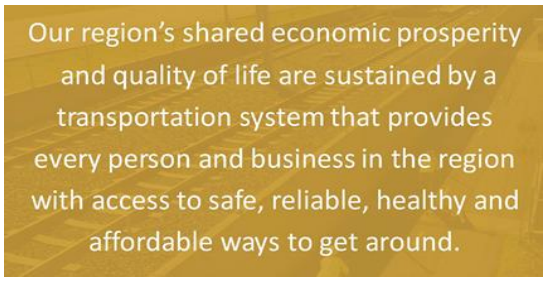
These leaders offered their views on:

- a **shared vision** for the region's transportation future
- the current **funding landscape** on the federal and state level
- **priority challenges** to address in the next 10 years and beyond
- building a **path to future funding**.

What did leaders say?

Shaping our shared vision and desired outcomes

Participants reviewed and provided feedback on a draft vision statement for the region's transportation future, developed from Regional Leadership Forums 1 and 2 discussions and additional engagement activities in 2015.



Draft vision presented at the forum

Feedback on the draft vision from the large group discussion and written comments submitted by participants included:

- It's not a question of how much money it is, it's a question of how persuasive the vision is to build public support.
- Equity and social justice should be integral to the vision and explicitly called out.
- "Sustain" feels like "stay where we are" rather than grow and enhance our prosperity.
- Need to include reference to a "well maintained transportation."
- We need a stronger look toward the future.

Transportation priorities and funding

Leaders participated in group discussions to review and prioritize the region's top transportation challenges and actions that need to be taken to improve the funding deficit. Feedback from the discussions and written comments submitted by participants included:

Addressing the region's most urgent challenges

1. **Everything is intrinsically tied together – congestion relief can't be achieved without safer streets, better transit and fixing aging infrastructure.**

   Leaders had a difficult time narrowing the challenges to the three most important, because they felt that they are all intertwined.

2. **We need to develop an equitable, inclusive transportation system.**

   Leaders discussed the need to focus on the shared values, health and well-being of the populations they serve.

3. **We need to focus on funding first.**

   Leaders agreed all of the transportation priorities need to be addressed through a comprehensive transportation package.

Building a path to funding our vision

1. **We need a big vision with specific projects that show how everyone will benefit from the region's transportation package.**

   Leaders agreed it is important to finish the vision and clarify regional goals and priorities.

2. **We need to build a coalition, with new and diverse voices, to make the vision a reality.**

   Many leaders agreed that to make the vision for the region's transportation system happen, a coalition with representation from throughout the region is needed.

3. **We need to engage communities in the process, build trust and be accountable to those we represent.**

   Leaders agreed that it is important to educate people about how the transportation system plan supports their communities.

More information

News coverage of the forum is available at **oregonmetro.gov/seedcorn**.

A report on the forum will be available in February 2017. Find out more about the 2018 RTP update at **oregonmetro.gov/rtp**.

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oregonmetro.gov

2018 Regional Transportation Plan update

Regional Leadership Forum 3 report

Connecting our priorities to our vision

A summary of the Dec. 2, 2016 forum about the future of transportation in the Portland metropolitan region in support of the 2018 Regional Transportation Plan update.

February 2017

If you picnic at Blue Lake or take your kids to the Oregon Zoo, enjoy symphonies at the Schnitz or auto shows at the convention center, put out your trash or drive your car – we've already crossed paths.

So, hello. We're Metro – nice to meet you.

In a metropolitan area as big as Portland, we can do a lot of things better together. Join us to help the region prepare for a happy, healthy future.

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

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process assures a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating transportation funds.

Project web site: www.oregonmetro.gov/rtp

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

January 2017

2018 Regional Transportation Plan update

Connecting our priorities to our vision

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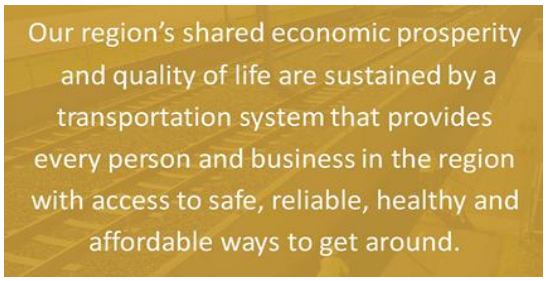

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More information

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Metro

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PURPOSE AND BACKGROUND

This report summarizes the discussions of the third of five regional leadership forums that will be convened by the Metro Council in support of the 2018 Regional Transportation Plan update.

2018 Regional Transportation Plan update

Our region's economic prosperity and quality of life depend on a transportation system that provides every person and business with access to safe, reliable, healthy and affordable ways to get around.

The Regional Transportation Plan provides a shared vision and investment strategy that guides investments for all forms of travel to keep people connected and commerce moving throughout the Portland metropolitan region. The plan is updated every four years to stay ahead of future growth and address trends and challenges facing the region.

Our region is growing rapidly and straining our aging transportation system. A half-million new residents are expected to live in the Portland region by 2040. Our communities are becoming more culturally diverse, bringing rich cultural activity to neighborhoods. A new generation will grow to adulthood as others move toward retirement. Climate change is happening, and our system is not prepared for the expected Cascadia Subduction Zone earthquake. We are experiencing technological changes in transportation that could radically alter our daily lives. Housing affordability and safe, reliable and affordable access to education, jobs and other important destinations are of concern.

The region is looking ahead to how our transportation system will accommodate future growth and change – and what investments we should make over the next 25 years to build a safe, reliable, healthy and affordable transportation system.

Find out more about opportunities to be involved in the 2018 RTP update at **oregonmetro.gov/rtp**.

#RTP2018

The 2018 Regional Transportation Plan update provides policymakers, community and business stakeholders and the public with an opportunity to work together across interests and communities to bring innovative solutions to the challenges facing our changing region. It provides a platform for updating our shared vision for the transportation system and defining strategies and investment priorities to help ensure people and products get where they need to go as congestion, safety and maintenance issues increasingly impact our daily lives.

The 2018 RTP update is an opportunity to define how we will create a safe, reliable, healthy and affordable transportation system that is environmentally responsible, efficiently moves

products to market and ensures all people can connect to the education and work opportunities they need to experience and contribute our region's economic prosperity and quality of life.

2016-18 regional leadership forums

To address the challenges and trends facing our region, the Metro Council is convening a series of five regional leadership forums as part of the 2018 Regional Transportation Plan update:

1. **Exploring Big Ideas for Our Transportation Future** 4/22/16
2. **Building the Future We Want** 9/23/16
3. **Connecting Our Priorities to Our Vision** 12/2/16
4. **Drafting Our Shared Plan for the Region** Dec. 2017
5. **Finalizing Our Shared Plan for the Region** June 2018

Forum participants include members of the Metro Policy Advisory Committee (MPAC), the Joint Policy Advisory Committee on Transportation (JPACT), state legislators, and community and business leaders from throughout the Portland region. Working side-by-side, regional and state leaders will bring the perspectives of their communities and constituents to the conversation around the challenges we are facing, our vision for the future and potential solutions for moving forward.

CONNECTING OUR PRIORITIES TO OUR VISION

On Dec. 2, 2016, the Metro Council convened Regional Leadership Forum 3, *Connecting our priorities to our vision*, at the Oregon Convention Center. Nearly 60 city, county, regional and state policymakers andbusiness and community leaders from across the Portland metropolitan area joined in bringing the perspectives of their constituents and communities to the conversation.

These leaders offered their views on:

- a shared vision for the region's transportation future
- the current funding landscape on the federal and state level
- priority challenges to address in the next 10 years and beyond
- building a path to future funding.

In addition to state legislators and members of MPAC and JPACT, participants included 21 invited community leaders working in transportation advocacy, environmental justice, workforce equity, skilled trades and issues impacting older adults and 17 invited business leaders from established firms, emerging businesses, business alliances and workforce partnerships. In all, more than 100 people attended the forum with 59 invited regional leaders and more than 40 general audience members.

John Williams, Metro Deputy Planning Director, facilitated the forum. A summary of the morning's opening remarks, featured speaker remarks and small group discussions follows.

Opening remarks

Metro Councilor Craig Dirksen, Joint Policy Advisory Committee on Transportation chair, welcomed participants and recognized the diverse representation in the room including elected officials, community advocates and business leaders. He acknowledged that while there are challenges that need to be discussed, there is also a lot of momentum for creating a shared vision for the region's transportation system.

Councilor Dirksen emphasized the need for everyone to share their ideas. We have big transportation problems in the Portland metropolitan area, he said, and our solutions have to be as big as our challenges. His advice: Be bold, be courageous.

Wood Village Council President Tim Clark, Metro Policy Advisory Committee chair, thanked everyone for being a part of the third leadership forum. He encouraged participants to help align the region's transportation priorities with public priorities to find long-term solutions. He also emphasized the importance of defining investment priorities for the region so people understand where transportation dollars are going.

SHAPING OUR SHARED VISION AND DESIRED OUTCOMES

Following the opening remarks, participants reviewed and provided feedback on a draft vision statement for the region's transportation future.

The draft vision statement was developed from regional leadership forums 1 and 2 discussions and additional engagement activities in 2015 and to work together to confirm a shared vision for the region.

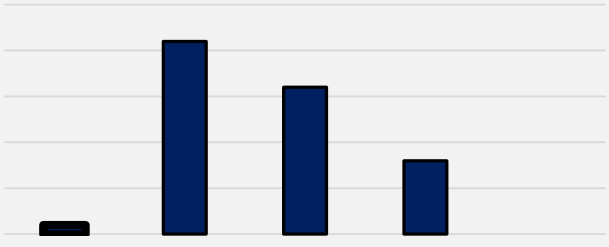
Feedback on the draft vision from the large group discussion and written comments submitted by participants included:

- It's not a question of how much money the plan needs, it's a question of how persuasive the vision is to build public support.
- "Sustain" feels like "stay where we are" rather than grow and enhance our prosperity.
- It should address a commitment to partnerships and innovation.
- Specific issues aren't specifically addressed, like climate change, social equity, income inequality, workforce opportunities, system maintenance and transportation options.
- We need a stronger look toward the future.

Discussion guide comments

In addition to the large group conversation, participants were offered the opportunity to provide written feedback about how well the draft vision reflected their vision for the transportation future via the discussion guide. Participants were asked to rank, from one to five, how well the draft vision reflected their vision and to provide comments. As with the larger group conversation, leaders felt the vision statement was headed in the right direction, but was missing some key elements.

How well does the draft vision reflect your vision for our transportation future?



"We need equity to be explicitly called out."

"The statement is trying to incorporate a lot, but doesn't seem inspiring."

respondents: 68

FEATURED SPEAKERS: THE FEDERAL AND STATE FUNDING LANDSCAPE

The first regional leadership forum identified big ideas for the region's transportation future, and the second forum explored what investments should be made over the next 25 years to address current needs and accommodate future growth and change.

This third regional leadership forum provided an opportunity for participations to work together to prioritize the ideas and investments after listening to two featured speakers. Travis Brouwer and Drew Hagedorn set the stage about future funding realities.

Travis Brouwer, Oregon Department of Transportation assistant director, provided a transportation funding overview markedly different from what state and metropolitan areas have relied on in the past. He explained that while the gas tax is probably the largest single source of funding for transportation for multiple levels of government across the nation, it does not rise automatically to keep pace with inflation. He also noted that gasoline sales have been flat or declining for a decade, in part because vehicles are rapidly becoming more fuel efficient.

"Even as Oregon's population grows and people continue to drive more miles, growing fuel efficiency is projected to cause Oregon's fuels tax collections to stagnate in coming years before beginning a long decline."

– Travis Brouwer, Oregon Department of Transportation

He also explained that this is also true of motor vehicle registration fees. They don't rise with inflation, so over time a greater share of DMV revenue is needed for the rising costs of administration, leaving less net revenue available to invest in roads.

Brouwer urged leaders not to count on the federal government to make up the funding deficit. He explained that the current federal transportation bill expires in 2020, and the incoming administration is talking about transportation financing, not funding. He clarified there is a key distinction between the two: Funding is like a grant – though it's often at least partially matched with local or state funds – while financing has to be paid back, often with interest.

The changing landscape of federal and state transportation funding means Oregon and the Portland metropolitan region should be ready to pursue new resources to fund priority transportation projects, like tolling or other pricing mechanisms, he said. He also noted that financing tends to work only for big projects, not more vital things like maintenance, transit operations or smaller walking and biking projects.

Brouwer concluded by encouraging leaders to look to the Oregon State Legislature to help fund the priorities identified during the forum and through the update to the Regional Transportation Plan.

Following Brouwer's presentation, Drew Hagedorn, Oregon Transportation Forum chair, built on Brower's presentation, recommending leaders focus on a state transportation funding package to make up the gaps.

Hagedorn referenced Brouwer's presentation and that the gas tax is declining but remains the only funding mechanism we currently have. He also talked about the federal impediments to tolling, though he called it a good potential revenue source.

Hagedorn shared that recent listening tours by Oregon's governor and legislators revealed that transportation is a concern all over the state. The legislature could raise the gas tax, he went on, or propose another way to fund transportation projects, but it isn't a sure thing.

"There is a big coalition in the room, which is a really neat thing. We need to hear your commitment to funding transportation."

– Drew Hagedorn
Oregon Transportation Forum chair

Hagedorn expressed optimism, despite the funding challenges. The Oregon Transportation Forum will be proposing a yet to be determined gas tax increase during the 2017 legislative session, he said, and there is a lot momentum for a transportation package. It isn't a partisan or urban versus rural issue, he continued, congestion throughout the Portland region impacts Oregon's rural communities that are dependent on reliable freight movement throughout the state's economic center. Addressing congestion and expanding transit service are top priorities in both urban and rural areas. Legislators pay attention to that.

Hagedorn also said that stakeholders like the automobile and freight industries might support a gas tax increase that is capped at around $300 million on a statewide transportation package, with the possibility of referral to voters if the legislature tries to raise more from a gas tax or other user fee.

Hagedorn argued for transportation policy objectives and priorities for the region that includes maintenance and preservation, ODOT's Fix-it-First policy, seismic retrofitting and investments in transit. Transit isn't just for urban populations. It is also important for people living in rural areas that need to connect to communities, especially the aging population and millennials. It is critical that legislators hear a consistent message from all of you, Hagedorn concluded.

Discussion on the federal and state funding landscape

Following Brouwer and Hagedorn's presentations, leaders shared their thoughts and questions. Several participants urged leaders to develop a bigger vision for transportation and encouraged developing a coalition to push it through the legislature. Others cautioned that there is work to be done building support with stakeholders and engaging the public to build support for a vote or legislative action.

Other leaders advised that for a vote to pass, there needs to be something in the transportation package for everyone in the region, everyone needs to see the benefits.

Successful transportation funding campaigns in Seattle and Los Angeles were brought up as examples to consider. TriMet general manager Neil McFarlane responded that while there is a lot to learn from those examples, we have to be cautious because our funding needs and goals are unique to this region, he said.

Some questioned why alternatives to a coalition weren't being discussed, such as a corporate tax. Responses included the need to make sure everyone paid for the benefits of a healthy transportation system. Wealthy people needed to pay more, one leader said, but we all need to pay. Metro planning and development director Elissa Gertler responded, saying it was a fair question to ask what else we are going to do to fund transportation.

Other comments included the need to incorporate new and emerging technology to achieve climate change goals and improve air quality.

"Let's go big. Let's go to the public and talk about something that's actually inspiring."

– Ted Wheeler, Portland Mayor-elect and former Oregon State Treasurer

"I am hearing a lot this going back to coalition building, having a vision and a project that is inclusive… Why am I not hearing about corporate taxes around transportation funding?"

– Emily Lai, Momentum Alliance

OUR FUNDING REALITY

Metro Councilor Craig Dirksen and Metro planning and development director Elissa Gertler introduced a jar filled with seed corn to provide a visual representation of the funds that the region thought in 2014 would be available to spend for transportation projects over the next 25 years.

While Councilor Dirksen scooped out cups of corn, Gertler explained that since 2014, much of the $31 billion has been committed or targeted for transportation projects over the next 25 years. This includes road and maintenance operations, transit service increases as part of the region's adopted strategy to address climate change, and several other major projects, including the Southwest Corridor light rail project, Division Street bus rapid transit and three freeway bottlenecks.

When container was almost empty, Gertler clarified that the remaining seed corn was representative of what is left for the region to spend on transportation projects – around $3 billion, or $120 million annually over 25 years.

We need to go from here to a future with more transportation funding, she challenged. Moving forward, how we can use the Regional Transportation Plan update to set a vision for what we need, define our priorities for getting there and build the leadership needed to fund it, Gertler said, referencing the nearly empty jar.

Councilor Dirksen reminded forum participants that the demonstration is illustrative and based on a lot of assumptions, some that have been realized and some that haven't. He concluded by asking who in the room was satisfied with what was left to work with for the next 25 years. No hands were raised in the room.

"Instead of using our seed corn to plant in the spring, over the lean winter we've been eating our seed corn."

– Metro Councilor Craig Dirksen, JPACT chair

"We need to go from here to a future with more transportation funding."

– Elissa Gertler, Metro planning and development director

GROUP DISCUSSIONS ON PRIORITIES AND FUNDING

After the seed corn demonstration, leaders were asked to participate in small group discussions to review the region's top transportation challenges and prioritize the top three that should be addressed in the next 10 years. Leaders were then asked what actions need to be taken to improve the region's transportation funding deficit.

The following is a summary of the group discussions.

Addressing our most urgent challenges through our investment priorities

Leaders had a difficult time narrowing the challenges to the three most important, because they felt that they are all intertwined. They discussed the interconnectedness of all of the region's transportation challenges and that an equitable transportation system isn't possible without taking a holistic approach.

Everything is intrinsically tied together – congestion relief can't be achieved without safer streets, better transit and fixing aging infrastructure.

Leaders agreed it was important to finish the vision and leadership needed to be fully aligned with it.

Comments and suggestions included:

- Everything is a priority, and the region should be bold in making the case for more funding.
- Any one of the listed challenges can be used as a lens to look at the others.
- Services and amenities should be provided where people already are rather than make them travel to reach goods and services.

We need to develop an equitable, inclusive transportation system.

Leaders discussed the need for creating a more equitable transportation system for everyone. Their direction was to focus on the shared values, health and well-being of the population that government is there to serve.

Comments and suggestions included:

- All of the challenges are important, but if we look at the issues through an equity lens, maybe we can prioritize properly; everything is intertwined and social equity is key.
- We need to support women and people of color getting into construction, providing good paying jobs and career pathways.
- Opportunities for jobs and services are not distributed equally.

We need to focus on funding first

Leaders felt that rather than prioritize the challenges already identified, we should concentrate on how to pay for the investments needed for a comprehensive transportation package that addresses all of them.

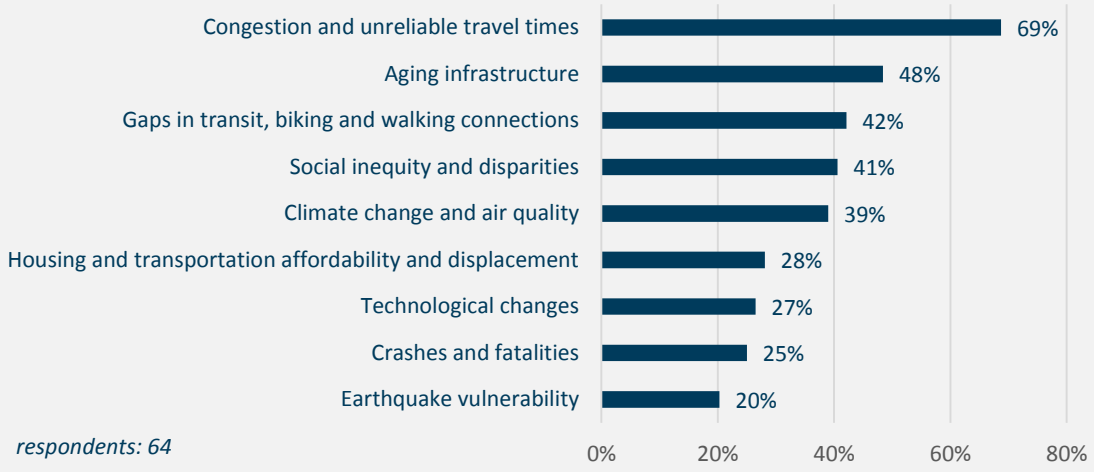
Comments and suggestions included:

- We need to focus on funding first.
- The elephant in the room is funding – Measure 97 failed and if that's not addressed, a bold transportation system will probably not get any traction.

Discussion guide comments

In addition to the large group conversation, participants provided written feedback in the discussion guide for addressing the region's most urgent transportation challenges through investment priorities. Participants were asked to choose three transportation challenges from a list – developed through discussions at the previous forums and prior public feedback – that were the most urgent for the region to focus on in the next 10 years and to provide comments.

What three challenges are most urgent for the region to focus on in the next 10 years with our current funding reality?



"Reliability, economic impact and alternative transportation are most important."

"All of the choices will be addressed by prioritizing other challenges. They are all tied together."

"Aging Infrastructure needs to be prioritized - maximizing the existing system is a safety issue and improves economic opportunity and quality of life in areas of pre-existing residential or commercial presence."

Building a path to funding our vision

We need a big vision with specific projects that show how everyone will benefit from the region's transportation package.

Comments and suggestions included:

- We – as a region and as leaders – have to find inspiring messages and the partners that are going to advance those inspiring messages.
- Specificity is important and how we get to that specificity is also important.
- We need to recreate the kind of coalition that Los Angeles talked about at the last forum.

We need to build a coalition, with new and diverse voices, to make the vision a reality.

Many leaders agreed that to realize the vision for the region's transportation system, a coalition with representation from throughout the region is needed – as a cohesive group of people that come together and respect one another's opinions and priorities.

Comments and suggestions included:

- The coalition is perhaps the needed leadership element.
- Everything can't be built at once because the funds aren't there, but a coalition can develop a strategy for meeting the transportation needs of the region.

We need to engage communities in the process, build trust and be accountable to those we represent.

The general consensus was that to be successful, specific effort is needed to engage the people who have not historically been part of the conversation. If the region is to go big, we need a big vision, which requires talking to a lot of people. People need to understand what the funds are buying and how it will benefit them and their communities.

Comments and suggestions include:

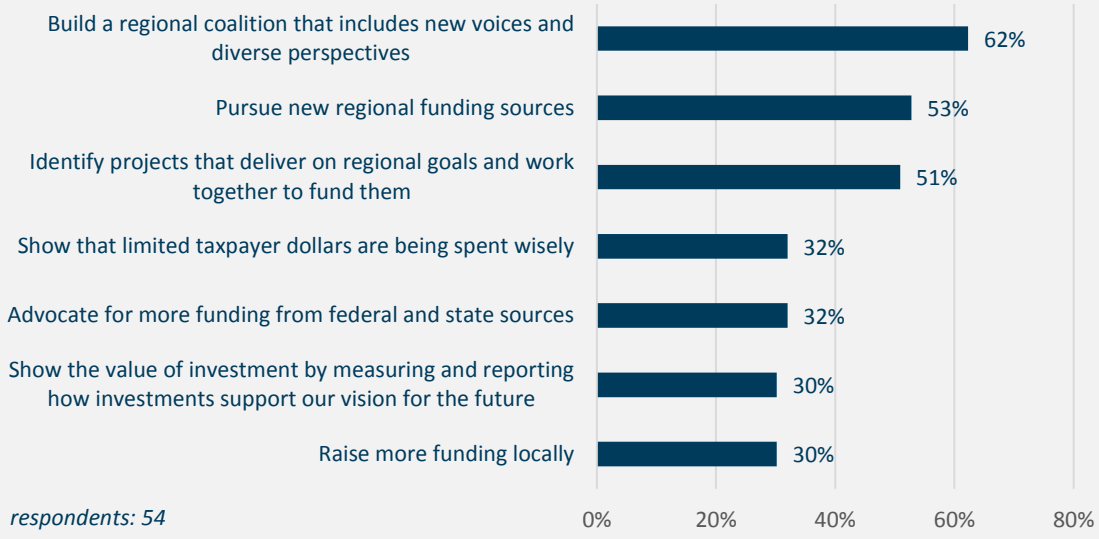
- We need inspiring messages that reach a diversity of interests.
- We need to engage those that are not traditionally part of the conversation.
- Education is key to success. We need to reach out to all communities by going to where they are. We need to speak in plain English and avoid jargon.
- It is imperative to stay committed and accountable to the diverse communities who are brought into the planning process.

- Leaders need to make sure constituents trust that the funds will be used wisely. We need to say what we're going to do and make sure we do what we say we're going to do.

Discussion guide comments

In addition to the large group conversation, participants were offered the opportunity to provide feedback on building a path to funding our vision via the discussion guide. Participants were asked where they would you like to focus their efforts – from a list developed through discussions at the previous forums – and for other actions the region needs to take to improve our funding situation.

Where would you like to focus your efforts to improve our funding situation?



"Build coalitions across interest groups to help everyone understand the benefits of funding the regional transportation system plan."

"We need to fund a campaign with communications, organizing and campaign experts on staff."

"The process must be transparent and open minded."

NEXT STEPS

The Dec. 2 forum focused on discussing the region's vision for the future, defining regional priorities given the region's current funding reality and identifying the work ahead to build a path to new funding. There is strong support for building a coalition to make a shared vision a reality. Leaders recognized the importance of developing a transportation investment strategy that is equitable and makes progress on addressing all of the region's transportation challenges. Leaders also agreed that this forum was one step in the continuing, important discussions about how the region prioritizes and funds our transportation system.

In 2017, Metro and local, regional and state partners will update the region's near-term and long-term transportation priorities and strategies as part of the 2018 Regional Transportation Plan update. This forum and the previous two forum discussions will inform the direction the Metro Council and the Joint Policy Advisory Committee on Transportation provide in May 2017 to guide updating the plan's projects and strategies and future regional funding conversations. The next forum is planned for December 2017 and will focus on a discussion of how well the updated projects and programs address the region's transportation challenges while advancing regional goals.The forum will result in further direction on drafting a shared plan that will be released for public review in spring 2018.

Find out more about upcoming opportunities to be involved in the 2018 Regional Transportation Plan update at oregonmetro.gov/rtp.

Memo

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

Date: February 8, 2017
To: Metro Technical Advisory Committee (MTAC) and interested parties
From: John Mermin, Performance Measures Work Group Lead
Subject: 2018 RTP: Recommended Refinements to RTP System Evaluation Measures

Action Requested
MTAC review and comment on proposed refinements to the RTP System evaluation measures and provide suggestions for effectively summarizing the recommended measures to policymakers. This discussion follows up on MTAC's previous discussion on November 2, 2016.

Background
The Performance Measures Work Group is one of eight technical work groups identified to provide input and technical expertise to support development of the 2018 Regional Transportation Plan (RTP). The main charge of the work group is to provide technical input and make recommendations to Metro staff on updating the RTP performance measures. Additionally, work group members have been asked to:

- Provide information to their organization's leadership and/or staff about the progress of the work (in addition to technical and policy committee representatives).
- Integrate input from partners, the public and other RTP work groups (safety, transit, equity and freight) to develop recommendations to Metro staff.
- Identify issues that need to be resolved by Metro Council, MPAC and JPACT.

The Performance Measures work group met six times in 2016 to review and recommend updates to the *RTP system evaluation measures,* with an emphasis on simplifying and decreasing the number of measures. Measures were pulled from and based upon industry best practices, the 2014 RTP, the 2014 Climate Smart Strategy and those identified by other RTP work groups. The system evaluation measures will be used to evaluate performance of the 2018 RTP as a whole. The evaluation will help policymakers understand the degree to which projects and programs advance the region towards RTP goals, and identify where additional efforts may be needed.

Recommended changes to RTP System Evaluation Measures
Attachment 1 summarizes recommended changes to the existing RTP system evaluation measures based on discussion at the Performance work group meetings as well at the meetings of the Transit, Equity, Safety and Freight work groups. The proposed refinements include changes to methods, geographies, collapsing measures into themes, and the addition of new measures. Further refinements to the measures may be recommended pending the RTP system evaluation in 2017.

Attachment 2 summarizes how each measure relates to each RTP goal.

Attachment 3 provides information to be included in the methodology documentation to be included in the RTP appendix. MTAC will not be asked to approve the methodologies, but a*ny comments or suggestions are welcome through the end of February, 2017. Please submit them to john.mermin@oregonmetro.gov*

Attachment 4 provides the membership roster for the RTP Performance Measures workgroup

Next Steps

MTAC will take action at their April 19 meeting (and TPAC will take action at their April 28 meeting). This recommendation will be included within a package of items to support building the RTP Investment Strategy: the revenue forecast, priorities, evaluation framework and call for projects.

In 2017, the work group will focus on setting performance targets and establishing monitoring measures for the RTP. Target setting will address recent federal rulemaking in response to the Moving Ahead for Progress in the 21st Century Act (MAP-21) and the Fixing America's Surface Transportation Act (FAST Act), as appropriate. As noted previously, further refinements to the measures may be recommended pending the RTP system evaluation.

Attachment 1. Summary of Recommended changes to RTP System Evaluation Measures for MTAC **February 8, 2017**

ID#	Recommended System Evaluation Measure[1]	Initial Staff Recommendation	Notes	Comments from Work Group(s), TPAC & MTAC
How much do people and goods travel in our region?				
1.	**Multimodal travel** System-wide # of miles traveled (total and share of overall travel), sub-region # of miles (total and share of overall travel) A) Vehicle Miles Traveled (VMT) *(total, per capita, and per employee)* B) Bicycle miles traveled *(total and per capita)* C) Freight miles traveled D) Pedestrian miles traveled *(total and per capita)* E) Person miles traveled	**Refine and rename** ~~Vehicle travel and Bicycle travel~~ Multimodal travel Previously Metro reported vehicle miles traveled and bicycle miles traveled *(both total and per capita)*. Staff now recommends reporting auto, bike, pedestrian and freight, as well as auto vmt per employee and person miles traveled.	This measure provides information on the amount of travel in the region. VMT per employee may better factor in fluctuation in VMT due to economic swings. For geographies smaller than regionwide, this calculation covers travel to, from and within the boundary of the geography.	Performance work group supports the staff recommendation and recommends reporting by # of miles and % of overall miles traveled by sub-region (urban Washington Co, urban Clackamas County, Portland, East Multnomah County) to better show variations across the region. TPAC - "Travel Characteristics" is too ambiguous of a theme name. Try phrasing themes as questions, e.g. initial staff response for this theme: *"How much and by what methods are we traveling?"*
2.	**Active transportation and transit mode share** System-wide (total and share): A) walking B) bicycling C) transit Non-driving travel (total and share): A) Central City B) Regional Centers C) Mobility corridors D) Sub-regions.	**Refine and rename:** "Active transportation and transit mode share "	Narrow this measure to evaluate mode share for the Central City and Regional Centers (as well as region-wide and by mobility corridor) as done in past RTP updates. This formally acknowledges that Metro cannot accurately measure mode share at geographies as small as town centers, industrial and employment areas. Chapter 2 of the RTP (p.2-22) and table 2.5 will need to be updated to reflect this recommended change. These refinements are consistent with the state's Transportation Planning Rule (TPR) - the original impetus for creating these targets. Regional-level mode share targets will be addressed in 2017 as part of the broader RTP target-setting discussions. Report "non-driving" travel rather than "non-SOV" travel to address issue of model's generous definition of shared ride (includes driving kids to school).	Performance and transit work groups support the staff recommendation and requested the analysis be reported by sub-region (urban Washington Co, urban Clackamas County, Portland, East Multnomah County) to better show variations across the region.
How much do households spend on housing and transportation in our region?				
3.	**Affordability*** Combined cost of housing and transportation	**Refine** methodology. *Updated 12.5.16 – Staff is continuing to work through the methodology development, but may consider this a monitoring measure recommendation.*	Staff will continue to develop a methodology. This measure is a major priority of the equity work group. The methodology will identify cost burdened households in the region.	The Equity work group supports the staff recommendation with the recognition that there are a number of methodological components that need further work in order to be useful. Transit Work Group has expressed concerns that current tools and methods won't capture the transit cost component very well.

[1] Reflects staff, workgroup, TPAC and MTAC input.

ID#	Recommended System Evaluation Measure[1]	Initial Staff Recommendation	Notes	Comments from Work Group(s), TPAC & MTAC
				TPAC - A challenge with this measure is that current H+T tools are better at monitoring what's happening currently rather than projecting into the future (which is needed for a system evaluation measure).
How safe is travel in our region?				
4.	**Share of safety projects*** Percent of number and cost of safety projects in the RTP investment packages regionwide, in areas with historically marginalized communities, in areas with focused historically marginalized communities and per person in each area.	**Add** as new measure.	Safety is a key concern of the RTP and has not been part of past system evaluations. This measure will assess where safety investments are being made. Safety projects are defined as: "Transportation infrastructure projects with the primary intent to address a safety issue, and allocate a majority of the project cost to a documented safety countermeasure(s) to address a specific documented risk, or improve safety for vulnerable users, including people walking and bicycling, people with disabilities, older adults and youth."	The Safety, Equity and Performance work groups support the staff recommendation. In response to feedback from the performance and safety work groups, references to high-injury corridors and safe routes to school projects were removed from an earlier draft safety project definition. TPAC - Safety is a difficult issue for Washington County. Its arterials have access management, so they don't have as many high-injury crash locations as other parts of the region.
5.	**Exposure to crash risk*** The sum of all non-freeway vehicle miles traveled (VMT) in Transportation Area Zones (TAZ) for RTP investment packages region-wide, in historically marginalized communities, and in focused historically marginalized communities.	**Add** as new measure.	Safety is a key concern of the RTP and has not been part of past system evaluations. This is an interim measure until a safety and crash predictive model is developed involving other factors. Measuring transportation safety is a priority topic area for historically marginalized communities and there is interest in looking at forecastable indicators to flag potential transportation safety issues. Staff has found a statistical correlation between VMT and crashes.	The Safety, Equity and Performance work groups support the general approach of the staff recommendation. Additionally, the Performance work group provided general support to continue to explore this measure and use It for an initial assessment, and asked staff to use "non-throughway" or "non-freeway" instead of "non-interstate" to ensure that limited access facilities such as US 26 and OR 217 are accounted for. The safety work group recommends further testing the measure, including whether per capita is the right approach. *In response, staff tested and decided that per TAZ area would be used instead of per capita.* TPAC – Crash risk is more of an output measure than an outcome measure.
How easily, comfortably and directly can we access jobs and destinations in our region?				
6.	**Access to travel options – system connectivity & completeness *** Miles, network percent complete, connectivity, density and timing of sidewalk, bikeway, trail and new street investments region wide, in historically marginalized communities, in focused historically marginalized communities and within 1/2mile of transit.	**Refine, continue to develop methodology and rename** -"~~Basic Infrastucture~~ Access to travel options – system connectivity and completeness"	Developing this measure will have resource impacts for both Metro and local governments. This measure replaces the basic infrastructure measure that was composed of total mileage of (regional networks) of sidewalk, bikeways and trails. The access to transit sub-measure supports the transit supportive elements part of the regional transit vision.	The Equity work group's preliminary recommendation is to expand this measure to add street connectivity to sidewalks, bikeways and trails with an emphasis on looking at the timing of basic infrastructure investments in historically marginalized communities. The Performance work group recommends packaging all of the "access" measures as a suite, being sure to address completeness, route directness/ connectivity, origins & destinations.

ID#	Recommended System Evaluation Measure[1]	Initial Staff Recommendation	Notes	Comments from Work Group(s), TPAC & MTAC
7.	**Access to jobs*** Number of jobs *(classified by wage groups – low, middle, and high) accessible within* *A) 30 minutes by auto* *B) 45 minutes by transit* *C) 30 minutes by bike* *D) 20 minutes by walking.*	**Add** as a new measure.	Access to jobs is a significant transportation priority identified by historically marginalized communities. Metro Planning and Research Center staff will work to further develop this accessibility-related measure.	This measure was recognized by work groups and staff as extremely important. Equity, Transit and Performance work groups support the staff recommendation. TPAC – Noted the importance of high wage jobs (accessed via US 26). Asked if the data set will capture the low wage jobs at Intel's Ronler Acres campus? *Staff response: Yes.*
8.	**Access to community places*** *1) Measure access by bicycling, walking, transit, driving* *2) Adjust the time sheds for each mode* *3) Define existing "daily needs" consistent with other similar efforts, including the TriMet Equity Index.*	**Refine and rename** - "~~Access to Daily Needs~~ Access to Community Places."	Metro staff recommends this measure replace the Access to Daily needs measure that was composed of**:** Number of essential destinations accessible within 30 minutes by bicycling & public transit for low-income, minority, senior and disabled populations. Metro Planning and Research Center staff will work to further develop this accessibility-related measure.	This measure was recognized by work groups and staff as extremely important. Equity, Transit and Performance work groups support the staff recommendation.
9.	**Access to bicycle and pedestrian parkways** Number and percent of households within ½ mile of a bicycle or pedestrian parkway.	**Refine and rename** – "Access to ~~Trails~~ Bicycle and Pedestrian Parkways	This change would better reflect access to the major regional off-street and on-street bicycling and walking routes throughout the region.	The Performance work group supports the staff recommendation.
10.	**Access to transit** Number and share of households, low-income households and employment within ¼- mile of high capacity transit or frequent service transit	**Add** as a new measure.	This measure was recommended through the Climate Smart Strategy and by the Transit Work Group. This measure provides information on how much of the region's households and jobs are served by transit.	The Transit work group supports the staff recommendation. The Performance work group noted that this measure will eventually be replaced by the access measures.
11.	**Access to industry and freight intermodal facilities**	**Under development.** Intending to look at the extent that industrial land and freight intermodal facilities are transportation constrained – which is the way the state defines a bottleneck based on a combination of volume/capacity, travel times and unreliability	This will be measured by determining the number of forecasted truck trips that are coming from or going to areas of industrial land and freight intermodal facilities; and evaluating any improvements in congested locations or freight bottlenecks that these truck trips encounter. Maps will display the locations for industrial land and intermodal facilities and the corresponding number of truck trips along with locations where major truck delay occurs.	

ID#	Recommended System Evaluation Measure[1]	Initial Staff Recommendation	Notes	Comments from Work Group(s), TPAC & MTAC
How efficient is travel in our region?				
12.	**Multi-modal travel times** Between key origin-destinations for mid-day and 2-hr PM peak	**Refine and rename – "Multimodal travel times"**	Metro staff recommends renaming and refining this measure to evaluate bicycling and freight travel times in addition to auto and transit for each regional mobility corridor. *Note: the regional travel model is not currently able to forecast walking travel times.* Metro Staff developed pairs of origins & destination that match up with each mobility corridor, plus others for biking and freight that don't match up with mobility corridors. There is a lot of overlap between auto, transit and bike O/D pairs which will allow for comparisons between modes to see where each corridors where various modes are competitive. After the system evaluation is completed in Summer 2017, staff will review these to determine whether these pairs should be changed.	The Performance and Transit work groups support the staff recommendation.
13.	**Congestion** A) Vehicle hours of delay per person B) Interim Regional Mobility Policy - Locations of throughways, arterials, and regional freight network facilities that that exceed LOS threshold C) Freight Truck delay D) Total cost of delay on freight network	**Under development.**	Discussions are underway with ODOT regarding updates to regional and state congestion measures and the Interim Regional Mobility Policy. Developing a recommendation for this measure is especially challenging since the new federal regulations relating to congestion measurement were not finalized until January 17. The Freight work group recommends evaluating delay per truck trip exclusively on regional freight network rather than the entire roadway system. Also, the measure should be called "Freight truck delay" rather than the current misnomer, "freight reliability", since it does not measure reliability. A freight reliability measure for current conditions will be developed as part of RTP Monitoring Measures discussions in 2017.	Work Group – Don't lose the importance of reliability in the congestion story, even if it is difficult to forecast with travel model. TPAC – Continuing to measure delay *per capita* is very important to factor all people into the measure, including those that walk, bike, drive, take transit or telecommute.

ID#	Recommended System Evaluation Measure[1]	Initial Staff Recommendation	Notes	Comments from Work Group(s), TPAC & MTAC
14.	**Transit efficiency** A) Boarding rides per revenue hour for HCT & bus B) Revenue hours by transit mode C) Transit ridership system-wide by each transit service type	**No change to measure but rename** Transit Efficiency ~~Productivity~~.	The measure provides information on the productivity and efficiency of transit service provided. Revenue hours was recommended through Climate Smart Strategy and by the Transit Work Group and provides information on the amount of transit service provided.	The Transit work group supports collapsing transit productivity and revenue hours into one measure as recommended by staff.
How will transportation impact climate change, air quality and the environment?				
15.	**Climate change** Tons of transportation-related greenhouse gas emissions (total and per capita)	**No change.**	The region is required to measure greenhouse gas emissions to help demonstrate whether the RTP is meeting state-required per capita greenhouse gas emissions reductions. During 2017 target setting discussion, ensure that the new target is consistent with statewide target and Climate Smart Strategy.	The Performance work group supports the staff recommendation.
16.	**Clean air** Tons of transportation related air pollutants (e.g. CO, ozone, PM-10)	**Refine** air pollutants reported. *Updated 12.5.16 – Staff will continue looking into the potential of sub-regional air quality analysis, but this may be a recommendation for future work in subsequent RTPs.*	Metro staff recommends this measure be refined. This is an important measure for evaluating transportation impact on air quality and human health. Pollutants reported may change pending further consultation with DEQ.	The Performance work group supports the staff recommendation. The work group member requested staff to provide mapping at the sub-regional level if possible since the Tualatin Valley has unique air quality compared to the east side of the region.
17.	**Habitat impact*** Number and percent of projects that intersect high value habitat	**Refine methodology.** *Updated 12.5.16 – methodology refined to include contextual language about the purpose, clearly indicate the measure is a "flagging" mechanism for projects, and recognize that project development will look into these issues more in depth.*	The Equity work group recommends assessing whether there are disparities between historically marginalized communities and transportation projects that may impact habitat conservation/ preservation, primarily focusing the assessment on roadway projects.	The Equity and Performance work groups support the staff recommendation. The Performance work group recommends adding contextual language to describe the purpose of this measure, better define high value habitat, and note that it is tied to federal requirements to consult with resource agencies as part of an RTP update. The Performance work group also supports continuing to use this measure to identify projects in the RTP for informational purposes for the public and project sponsors. TPAC – Remember that many transportation projects improve habitat. MTAC – transportation project impact on habitat is very complex and varies depending on many factors – width of asphalt, retaining walls, wildlife crossing treatments, volume of auto traffic, etc.

** Reflects the transportation priorities identified by historically marginalized communities and will serve as the basis for the federally-required Title VI Benefits and Burdens analysis.*

Attachment 2. RTP System Evaluation Measures and RTP Goals Comparison for TPAC **January 20, 2017**

	RTP System Evaluation Measures	RTP Goals										
		Foster Vibrant Communities and Compact Urban Form	Sustain Economic Competitiveness and Prosperity	Expand Transportation Choices	Effective and Efficient Management of System	Enhance Safety and Security	Promote Environmental Stewardship	Enhance Human Health	Demonstrate leadership reducing greenhouse gas emissions	Ensure Equity	Ensure Fiscal Stewardship	Deliver Accountability
	How much do people and goods travel in our region?											
1	**Multimodal Travel** – System-wide # of miles traveled (total and share of overall travel) and subregion # of miles traveled (total and share of overall travel): Vehicle miles traveled (VMT) – total, per capita, per employee, Bicycle miles traveled – total and per capita, Freight miles traveled, Pedestrian miles traveled- total and per capita, Person miles traveled total and per capita.	I	I	I	I	I	I	I	I			
2	Active transportation and transit mode share – System-wide – total and share for walking, bicycling, transit. Non-Single Occupancy Vehicle (SOV) – total and share for: Central City, Regional Centers, Mobility corridors, sub-regions.	I	I	I	I		I	I	I			
	How much do households spend on housing and transportation in our region?											
3	Affordability* – Combined Housing and Transportation (methodology TBD)											
	How safe is travel in our region?											
4	Share of Safety Projects* – Percent of number and cost of projects in the RTP investment packages regionwide and in areas with historically underrepresented communities.		I		I		I	I	I	I		
5	Exposure to crash risk* – Non-Freeway VMT exposure per TAZ area.Exposure to crash risk through the sum of all non-interstate vehicle miles traveled (VMT) in Transportation Area Zones (TAZ) for RTP investment packages region-wide, and in historically underrepresented communities.		I		I			I		I		
	How easily, comfortably and directly can we access jobs and destinations in our region?											
6	Access to Travel Options – system connectivity & completeness* - methodology TBD. Sub measure: Access to transit (percent of bike or pedestrian network gaps completed within ½-mile of transit)	I		I		I	I	I	I	I		
7	Access to Jobs* - Number of jobs (classified by wage groups – low, middle, and high) accessible within 30 minutes by auto; 45 minutes by transit; 30 minutes by bike, and 20 minutes by walking	I	I	I			I	I		I		
8	Access to Community Places* - 1)Measure access by bicycling, walking, transit, driving 2)Adjust the time sheds for each mode 3) Define existing "daily needs" consistent with other similar efforts, including the TriMet Equity Index.	I		I			I	I		I		
9	Access to Bicycle and Pedestrian Parkways – Number and percent of households within ½ mile of a bicycle or pedestrian parkway.	I	I	I		I	I	I	I	I		
10	Access to transit – Number and share of households, low-income households and employment within ¼-mile of high capacity transit or frequent service transit	I		I		I	I	I	I	I		
11	Access to Industry and Freight Intermodal Facilities – Methodology TBD											
	How efficient is travel in our region?											
12	Multi-modal Travel Times – between key origin-destinations for mid-day and 2-hr PM peak	I	I	I	I							
13	Congestion – A) Vehicle hours of delay per person B) Interim Regional Mobility Policy – Locations of throughways, arterials, and regional freight network facilities that exceed LOS threshold C) Freight Truck delay D) Total cost of delay on freight network		I		I	I	I		I			
14	Transit efficiency – A)Boarding rides per revenue hour for HCT & bus B) Revenue hours by transit mode C) Transit ridership systemwide by each transit service type	I		I		I	I	I	I			
	How will transportation impact climate change, air quality and the environment?											
15	Climate Change - Tons of transportation-related greenhouse gas emissions *(e.g. CO_2)*		I	I			I	I	I			
16	Clean Air - Tons of transportation-related air pollutants *(e.g.CO, ozone, and PM-10)*		I	I			I	I		I		
17	Habitat impact* - Number and percent of projects that intersect high value habitat	I					I	I		I		

There are no system evaluation measures for the "Ensure Fiscal Stewardship and Deliver Accountability goals.

There are no system evaluation measures for the "Ensure Fiscal Stewardship and Deliver Accountability goals.

*Reflects the transportation priorities identified by historically underrepresented communities and will serve as the basis for the federally-required Title VI Benefits and Burdens analysis.

Getting there with a connected region

2018 REGIONAL TRANSPORTATION UPDATE

DRAFT System Evaluation Measures Methodologies

January 2017

Metro
Making a great place

2018 RTP Draft System Evaluation Measures Methodologies

TABLE OF CONTENTS

**Reflects the transportation priorities identified by historically marginalized communities and will serve as the basis for the federally-required Title VI Benefits and Burdens analysis.*

Measure #1 – Multimodal travel

Evaluation Measure Title: **Multimodal travel**

Purpose and Goals

Overall Purpose: To identify whether the package of future transportation investments will increase different forms of travel including auto, bicycle, pedestrian, freight and overall travel (person miles traveled).

Questions to Be Addressed:

The **Multimodal travel** performance measures look to assess the following questions for the region's transportation system:

1) How much travel is happening in the region? And within each subregion? (Portland, urban Washington County, urban Clackamas County, East Multnomah County)
2) By what modes is this travel happening?

2014 RTP Goals

●	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
●	Sustain economic competitiveness and prosperity	●	Enhance human health
●	Expand transportation choices	●	Demonstrate leadership at reducing greenhouse gas emissions
●	Effective and efficient management of system		Ensure equity
●	Enhance safety and security		

Function of Performance Measure

●	System Evaluation		Project Evaluation		System Monitoring	●	Performance Target

Associated 2014 RTP Target – By 2040, reduce vehicle miles traveled per person by 10 percent compared to 2010.

Measure #1 – Multimodal travel

Methodology Description:

Miles traveled is a direct output of the regional travel model. For each trip, the trip distance is calculated between the origin and destination. For per capita calculations these trip distances are divided by the regional population.

Output Units: Miles traveled (total and per capita) by mode

Potential Output of Assessment:

	Base Year	Interim Year	Future Year - Financially Constrained	Future Year - Strategic
Regionwide Person Miles Traveled (PMT)				
Regionwide Vehicle Miles Traveled (VMT)				
Regionwide Bicycle Miles Traveled (BMT)				
Regionwide Pedestrian Miles Traveled				
Regionwide Freight Miles traveled				

Key Assumptions to Method:

Dataset Used:

Dataset	Type of Data
Geospatial project information for proposed transportation projects	observed
Miles traveled	forecasted

Tools Used for Analysis: Metro Travel Demand Model,

Other assumptions

For analysis by sub-regional geography, staff included all TAZs within the subregion. Any TAZ crossing sub-regional boundaries has been assigned to the sub-region for which the majority of the area of the TAZ is located.

Evaluation Measure Title: **Active Transportation and Transit Mode Share**

Purpose and Goals

Overall Purpose: To identify whether the package of future transportation investments will increase

A) Walking, Bicycling and Transit usage(total and share):
   - Systemwide

B) Non-driving travel (total and share):
   - Central City
   - Regional Centers
   - Mobility Corridors
   - Sub-regions (Portland, urban Washington County, urban Clackamas County, East Multnomah County)

Questions to Be Addressed:

The **Active Transportation and Transit Mode Share** performance measures look to assess the following questions for the region's transportation system:

1) What is the share of travel utilizing non driving modes across the region and within various sub-geographies.

2014 RTP Goals

●	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
●	Sustain economic competitiveness and prosperity	●	Enhance human health
●	Expand transportation choices	●	Demonstrate leadership at reducing greenhouse gas emissions
●	Effective and efficient management of system		Ensure equity
	Enhance safety and security		

Measure #2 – Active transportation and transit mode share

Function of Performance Measure

●	System Evaluation		Project Evaluation		System Monitoring	●	Performance Target

Associated 2014 RTP Target – By 2040, triple walking, biking and transit mode shares compared to 2010 modeled mode shares.

<u>Methodology Description</u>:

Mode Share is a direct output of the regional travel model. Modal accessibility functions were estimated as an input to the mode choice modes. For each trip purpose, they measure the utility of choosing one of seven discrete modes. Drive alone, Drive with passenger, Transit by walk access – Transit by park-and-ride access , Bike, Walk .Probabilities are applied to distributed trips to determine the number of trips by each mode.

Output Units:

% share of travel by a given mode.

Potential Output of Assessment:

	Base Year	**Interim Year**	**Future Year - Financially Constrained**	**Future Year - Strategic**
% by Transit				
% by Bicycle				
% by Walk				

<u>Key Assumptions to Method</u>:

Dataset Used:

Dataset	**Type of Data**
Geospatial project information for proposed transportation projects	observed
Share of travel by mode	forecasted

Tools Used for Analysis: Metro Travel Demand Model,

Other assumptions:

For analysis by sub-regional geography, staff included all TAZs within the subregion. Any TAZ crossing sub-regional boundaries has been assigned to the sub-region for which the majority of the area of the TAZ is located.

Measure #3 – Affordability

Evaluation Measure Title: **Affordability**

This methodology for this measure is under development.

Measure #4 – Multimodal travel

Evaluation Measure Title: **Share of safety projects**
(New System Evaluation Measure)

Purpose: To identify where and at what level of investment the package of future transportation projects addresses transportation safety through the development of transportation infrastructure with proven safety countermeasures, region-wide and in areas with high concentrations of historically marginalized communities and in areas with high concentrations of focused historically marginalized communities.[1]

The **Share of safety projects** performance measure will assess the following questions for the region's transportation system region-wide and in areas with high concentrations of historically marginalized communities:

1) What percentage of the region's proposed transportation projects are identified as safety projects? [2]
2) What percentage of the total transportation investment package (cost) is attributed to safety projects?
3) What percentage of the total number of transportation safety investments are located in historically marginalized communities?
4) Is there a difference of transportation safety investment levels (cost) in areas with historically marginalized communities?
5) What is the per-person expenditure of transportation safety investments region-wide and for historically marginalized communities?

2014 RTP Goals

	Foster vibrant communities and compact urban form		Promote environmental stewardship
●	Sustain economic competitiveness and prosperity	●	Enhance human health
	Expand transportation choices		Demonstrate leadership at reducing greenhouse gas emissions
	Effective and efficient management of system	●	Ensure equity
●	Enhance safety and security		

[1] Historically marginalized communities are areas with high concentrations (compared to the regional average) of people of color, people with low-incomes, people with limited English proficiency, older adults and/or young people. Focused historically marginalized communities are areas with high concentrations (compared to the regional average) of people of color, people with low-incomes, and people with limited English proficiency.

[2] Safety Projects in the RTP are capital infrastructure projects with the primary intent to address a safety issue, and allocate a majority of the project cost to a documented safety countermeasure(s) to address a specific documented risk, or improve safety for vulnerable users, including people walking and bicycling, older adults and youth. Safety countermeasures are actions taken to improve transportation safety and therefore decrease the number of injuries and fatalities. Safety countermeasures may include geometric design, systemic safety, and intelligent transportation systems. Examples of proven safety countermeasures include, but are not limited to, FHWA's nine proven safety countermeasures: road diets, medians and pedestrian crossing islands, pedestrian hybrid beacons, roundabouts, access management, retroreflective backplates, safety edge, enhanced curve delineation, and rumble strips.

Measure #4 – Multimodal travel

Function of Performance Measure

•	System Evaluation		Project Evaluation		System Monitoring	•	Performance Target

Associated 2014 RTP Performance Target: By 2040, reduce the number of fatal and severe injury crashes for pedestrians, bicyclists and motor vehicle occupants each by 50% compared to 2007-2011 average. (*Target proposed to be updated in 2018 to: By 2040 eliminate transportation related fatalities and serious injuries for all users of the region's transportation system, with a 16% reduction by 2020 (as compared to the 2015 five year rolling average), and a 50% reduction by 2025.*)

Methodology Description:

The method for calculating the **Transportation Safety – Infrastructure Investments** performance measure will entail:

1. Calculating the number of safety projects in the regional transportation investment packages region-wide, in historically marginalized communities and in focused historically marginalized communities;
2. Calculating the cost of safety projects in the regional transportation investment packages region-wide, in historically marginalized communities and in focused historically marginalized communities;
3. Geospatial analysis of safety projects in the regional transportation investment packages region-wide, in historically marginalized communities and in focused historically marginalized communities.
4. Calculating the per-person expenditure of transportation safety projects for the number of people region-wide and for the number of people identified within in historically marginalized communities and focused historically marginalized communities.

Output Units: Percentage (%) of transportation safety projects and percentage of cost for transportation safety projects region-wide, in historically marginalized communities, in focused historically marginalized communities, and per person in each of these areas.

Potential Output of Assessment:

Area	Base Year	Interim Year	Future Year – Financially Constrained	Future Year – Strategic
Region-wide	% Safety Projects, % cost allocated to Safety Projects, % Per person			
Historically marginalized communities	% Safety Projects, % cost allocated to Safety Projects, % Per person			
Focused historically marginalized communities	% Safety Projects, % cost allocated to Safety Projects, % Per person			

Key Assumptions to Method:

Dataset Used:

Dataset	Type of Data
Geospatial and cost information for proposed transportation safety projects	Observed

Tools Used for Analysis: ArcGIS

Measure #5 – Exposure to crash risk

Evaluation Measure Title: **Exposure to Crash Risk**
(New System Evaluation Measure)

Purpose: To approximate risk of exposure to crashes by identifying whether the package of future transportation investments increases or decreases non-freeway vehicle miles traveled (VMT) within each transportation area zone (TAZ), region-wide, and in areas with high concentrations of historically marginalized communities and focused historically marginalized communities.[1]

The **Exposure to Crash Risk** performance measure will assess the following questions for the region's transportation system region-wide and in areas with high concentrations of historically marginalized communities:

1) What is the region's vehicle miles traveled in each TAZ and how does it change with the proposed package of transportation investments?
2) Is there a difference in exposure to vehicle miles traveled in TAZ's with high concentrations of historically marginalized communities?
3) Has the proposed transportation investment program held steady, increased or decreased the vehicle miles traveled exposure in historically marginalized communities?

2014 RTP Goals

	Foster vibrant communities and compact urban form		Promote environmental stewardship
●	Sustain economic competitiveness and prosperity	●	Enhance human health
	Expand transportation choices		Demonstrate leadership at reducing greenhouse gas emissions
	Effective and efficient management of system	●	Ensure equity
●	Enhance safety and security		

Function of Performance Measure

●	System Evaluation		Project Evaluation		System Monitoring	●	Performance Target

Associated 2014 RTP Performance Target: By 2040, reduce the number of fatal and severe injury crashes for pedestrians, bicyclists and motor vehicle occupants each by 50% compared to 2007-2011 average. (*Target proposed to be updated in 2018 to: By 2040 eliminate transportation related fatalities and serious injuries for all users of the region's transportation system, with a 16% reduction by 2020 (as compared to the 2015 five year rolling average), and a 50% reduction by 2025.*)

[1] Historically marginalized communities are areas with high concentrations (compared to the regional average) of people of color, people with low-incomes, people with limited English proficiency, older adults and/or young people. Focused historically marginalized communities are areas with high concentrations (compared to the regional average) of people of color, people with low-incomes, and people with limited English proficiency.

Measure #5 – Exposure to crash risk

Methodology Description: This analysis uses vehicle miles traveled per capita as a proxy for crash exposure risk. The **Transportation Safety – Vehicle Miles Traveled Exposure** system evaluation performance measure is calculated by:

1. Aggregating non-freeway vehicle miles traveled (VMT) within each transportation analysis zone (TAZ).

2. To determine increased or decreased exposure to VMT, the total non-freeway, average weekday VMT for each TAZ is divided by the area of the TAZ.

3. Calculate the total area of TAZs within the Metropolitan Planning Area boundary and the area of TAZs comprising historically marginalized communities and focused historically marginalized communities; divide the average weekday VMT by the area of TAZs with above average historically marginalized communities and the remainder of the region to control for the differing geographical extents of historically marginalized communities (around 28% of the region's land area) and the remainder of the region (around X%).

Output Units: Vehicle miles traveled per TAZ area (VMT/sq. foot TAZ)

Potential Output of Assessment:

	Base Year	Interim Year	Future Year – Financially Constrained	Future Year – Strategic
Region-wide	VMT			
Historically Marginalized Communities	VMT			
Focused Historically Marginalized Communities	VMT			

Key Assumptions to Method

Dataset Used:

Dataset	Type of Data
Geospatial project information for proposed transportation projects	Observed
Vehicle miles traveled by TAZ	Forecasted

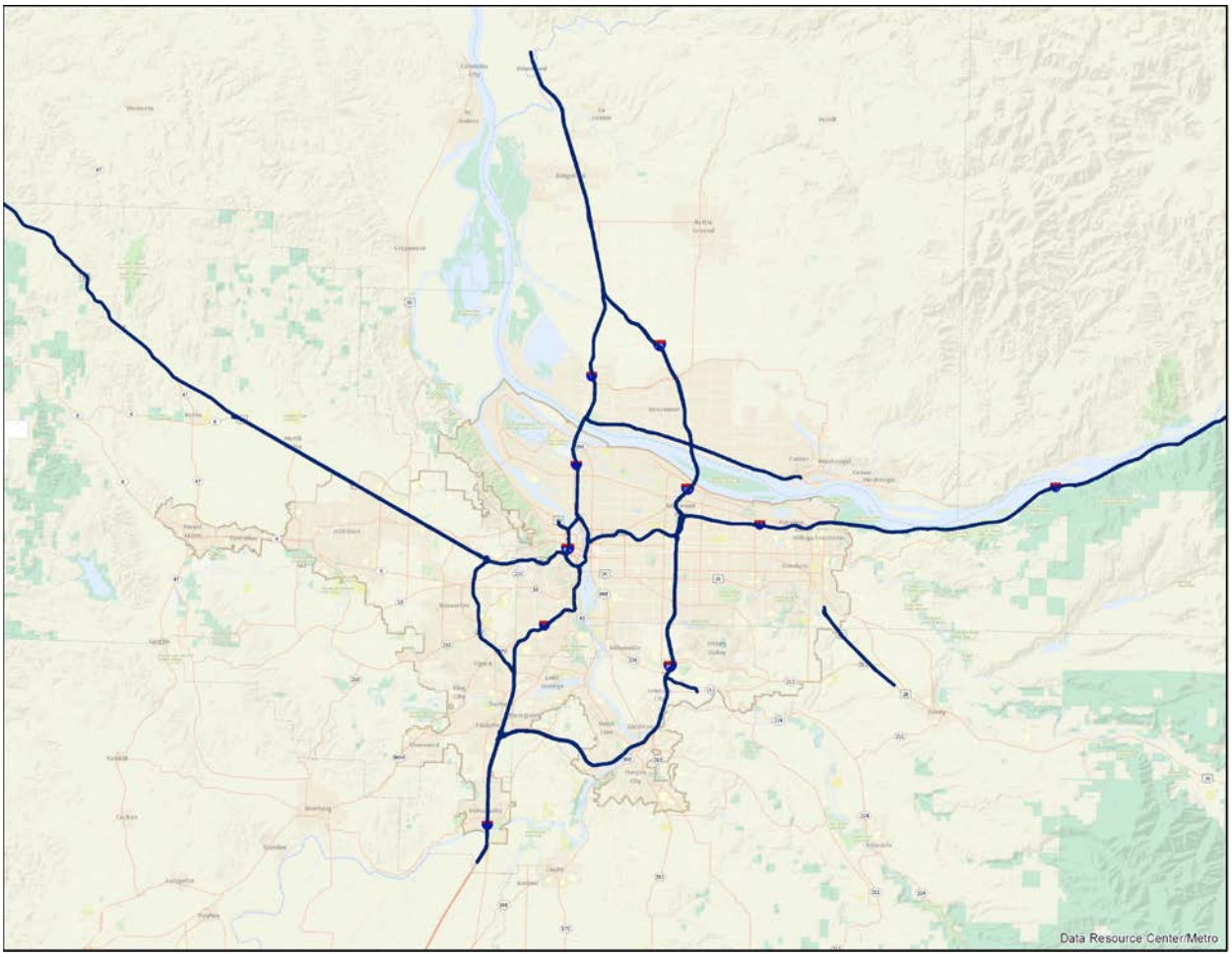
Tools Used for Analysis: Metro's travel demand model and ArcGIS

Considerations:

Analysis conducted showed correlation between VMT and crashes in the region; the R2 was just over 0.25, so ¼ of the crash relationship can be explained by exposed VMT at the TAZ level.

Facilities excluded from VMT exposure analysis are (see map):

- Hwy 26 W
- Hwy 217
- Hwy 224 the sunrise corridor
- Hwy 26 E from Burnside intersection in Gresham
- I-5
- I-205
- I-84
- I-405



Measure #6 – Access to travel options

Evaluation Measure Title: **Access to Travel Options – System Connectivity and Completeness**
(Replacing the 2014 RTP System Evaluation Measure– Miles of sidewalk, bikeways, and trails)

Purpose: To identify how the package of future transportation investments will increase the connectivity and completeness of the pedestrian, bicycle, trail and roadway network and increase access to transit through the development of sidewalks, bikeways, trails and new street connections, region wide, and in areas where there are high concentrations of historically marginalized communities and focused historically marginalized communities.[1]

The **Access to Travel Options – System Completeness and Connectivity** performance measures will assess the following questions for the region's transportation system, region-wide and in areas with historically marginalized communities and focused historically marginalized communities:

1) How many miles of the pedestrian, bicycle, trail and street networks are completed? How many miles are left to complete?
2) What percentage of bicycle and pedestrian gaps within ½ mile of transit stops and stations are completed?
3) Has connectivity and density of the walking, bicycling and roadway networks increased?
4) What time-frame are the infrastructure investments being proposed for, compared to other investments in the RTP?

2014 RTP Goals

●	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
	Sustain economic competitiveness and prosperity	●	Enhance human health
●	Expand transportation choices	●	Demonstrate leadership at reducing greenhouse gas emissions
	Effective and efficient management of system	●	Ensure equity
	Enhance safety and security		

Function of Evaluation Measure

●	System Evaluation		Project Evaluation		System Monitoring	●	Performance Target

Associated 2014 RTP Performance Target: Basic Infrastructure: Increase by 50% the miles of sidewalk, bikeways, and trails compared to the regional network in 2010. *(This target will be updated in the 2018 RTP.)*

Methodology Description:

[1] Historically marginalized communities are areas with high concentrations (compared to the regional average) of people of color, people with low-incomes, people with limited English proficiency, older adults and/or young people. Focused historically marginalized communities are areas with high concentrations (compared to the regional average) of people of color, people with low-incomes, and people with limited English proficiency.

Measure #6 – Access to travel options

1) Sidewalk, bikeway, trail and street completeness: Use a geospatial analysis to compare miles of existing facilities and miles of proposed projects to miles in planned regional pedestrian, bike, trail and street networks.

    a) Calculate the **miles** of sidewalks, bikeways, trails and street connections for the base year and future year investment packages, region-wide and in areas where there are high concentrations of historically marginalized communities and focused historically marginalized communities.
    b) Calculate **percent** sidewalk, bikeway, trail and new street connections complete for the base year and future year investment packages, compared to the planned regional pedestrian, bicycle, trail and street networks region-wide and in areas where there are high concentrations of historically marginalized communities and focused historically marginalized communities.

2) Access to transit: Use geospatial analysis to calculate the linear **miles and percentage** of sidewalks and bikeways completed within ½ mile buffer of all transit stops and stations region-wide and in areas where there are high concentrations of historically marginalized communities.

3) Network connectivity and density: Use a geospatial analysis to measure the **spacing and intersection** of sidewalks, bikeways, trails and streets and compare the existing networks and miles of proposed facilities in the investment packages to planned networks to produce connectivity ratios and density levels.

    a) *Street connectivity*: calculate the ratio of three-way or more intersections per Transportation Area Zone (TAZ) for the base year and future year investment packages, region-wide and in areas where there are high concentrations of historically marginalized communities. A higher number would indicate more intersections, and presumably, higher connectivity.

    b) *Street density*: calculate the linear miles of streets per TAZ for the base year and future year investment packages, region-wide and in areas where there are high concentrations of historically marginalized communities. A higher number would indicate higher density.

    c) *Sidewalk connectivity*: first calculate the linear miles of streets per TAZ for the base year and future year investment packages, region-wide and in areas where there are high concentrations of historically marginalized communities. Next, remove street segments with less than fifty percent of sidewalk complete. Re-calculate the linear miles of streets per TAZ area. The ratio of the first two calculations is the sidewalk connectivity measure. A high ratio indicates better sidewalk connectivity.

    d) *Sidewalk density*: calculate the miles of street segments with more than 50 percent of sidewalks completed per TAZ area for the base year and future year investment packages, region-wide and in areas where there are high concentrations of historically marginalized communities. A higher number would indicate higher density.

e) *Bikeway connectivity*: first calculate the linear miles of streets per TAZ for the base year and future year investment packages, region-wide and in areas where there are high concentrations of historically marginalized communities. Next, remove street segments with no bikeway. Re-calculate the linear miles of streets per TAZ area. The ratio of the first two calculations is the sidewalk connectivity measure. A high ratio indicates better sidewalk connectivity.

f) *Bikeway density*: calculate the miles of street segments with bikeways completed per TAZ area for the base year and future year investment packages, region-wide and in areas where there are high concentrations of historically marginalized communities. A higher number would indicate higher density.

4) Timing of investments: Calculate the percentage of sidewalk, bikeway, trail and new street connections proposed for the first ten-years of the RTP (from 2017-2027) for the region and in areas with higher concentrations of historically underrepresented communities. Then the measure will look at the percentage of proposed active transportation investments for the latter years (2028 – 2040) for the region and in areas with higher concentrations of historically underrepresented communities. This will help to determine whether there is an imbalance in the timing and locations of these types of investments.

Output Units: Miles and percentage (%) of bikeways, sidewalks, trails and new street connections, region-wide and in areas with high concentrations of historically underrepresented communities

Potential Output of Assessment: Maps and tables

	Base Year				**Interim Year**				**Future Year – Financially Constrained**				**Future Year – Strategic**			
Type of investment	B	S	T	NS	B	S	T	NS	B	S	T	NS	B	S	T	NS
Region-wide	Number of miles, % network complete, connectivity ratio, density level															
Historically Underrepresented Communities																
Focused Historically Underrepresented Communities																

B – Bikeways; P –Sidewalks; T –Trails; NS – New Street Connections

Measure #6 – Access to travel options

Key Assumptions to Method

Dataset Used:

Dataset	Type of Data
Line features in a GIS for proposed sidewalk, bikeway, trail and new street connection projects	Observed
Line features in a GIS for existing (constructed) sidewalks, bikeways, trails, and streets	Observed
Line features in a GIS for planned regional bicycle, pedestrian and roadway networks	Observed

Tools Used for Analysis: ArcGIS

Definitions

Connectivity is defined as the directness of links and the density of connections in path or road network. A well connected road or path network has many short links, numerous intersections, and minimal dead-ends (cul-de-sacs). As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations, creating a more accessible and resilient system.[2]

Completeness is defined as the percentage of miles of the planned pedestrian, bicycle or roadway network that has been completed.

New Street Connection Project is a project that creates a new street where none existed before; street widening projects are not new street connections.

Active Transportation Project are projects that allocate a majority of the project cost to increasing bicycling and/or walking access on the regional active transportation network.

Bikeway Project is a project that allocates a majority of the project cost to developing a bikeway. Bikeways included in larger street projects will be included in this analysis.

Sidewalk Project is a project that allocates a majority of the project cost to developing a sidewalk. Sidewalks included in larger street projects will be included in this analysis.

Trail Project is a project that allocates a majority of the project cost to developing a trail.

[2] Victoria Transport Policy Institute

Measure #7 - Access to Jobs

Evaluation Measure Title: **Access to Jobs**
(New System Evaluation measure)

Purpose and Goals
Overall Purpose: To identify whether the package of future transportation investments will increase the ability of region's residents to get to jobs (by wage profile) in the region.

Transportation Equity Purpose: Furthermore, to look at how the region's future transportation investments increase access jobs, but more specifically to low and middle-wage jobs, particularly for those areas where there are high concentrations of communities of color, lower-income communities, limited English proficiency populations, older adults, and youth relative to the region.

The **Access to Jobs** performance measure looks to assess the following questions for the region's transportation system:

1) How many jobs can be reached in a given time window by different travel modes?
2) How many more jobs can be reached with the future package of transportation investments? Is the increase in jobs accessible in proportion or providing greater access to jobs in light of anticipated future employment and population growth?
3) Are different transportation modes outpacing its ability to get the region's residents to jobs?

More specifically, from the transportation equity perspective, the **Access to Jobs** performance measure looks to assess the following questions:

1) How many low and middle-wage jobs can be reached in a given time window by different travel modes?
2) What are differences in low and middle-wage job access for the region and specifically for communities of color, lower-income communities, limited English proficiency populations, older adults, and youth?
3) Is the difference in low and middle-wage job access between automobile and transit? Is there a difference which extends beyond a reasonable threshold and creating a "transit access disadvantage" to low and middle-wage jobs in certain areas? If so, do those "transit access disadvantage" areas overlap with areas with high concentrations of communities of color, lower-income communities, limited English proficiency populations, older adults, and youth?
4) Is the access to low and middle-wage jobs also in proportion or providing greater access to jobs in light of anticipated future population and employment growth?

2014 RTP Goals

●	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
●	Sustain economic competitiveness and prosperity	●	Enhance human health
●	Expand transportation choices		Demonstrate leadership at reducing greenhouse gas emissions
	Effective and efficient management of system	●	Ensure equity
	Enhance safety and security		

Measure #7 - Access to Jobs

Function of Performance Measure

●	System Evaluation		Project Evaluation		System Monitoring		Performance Target

Associated 2014 RTP Performance Target: None to date

Methodology Description:

The **Access to Jobs** performance measure is calculated by using forecasted data from Metroscope to identify and geographically distribute jobs throughout the region, including categorized low-wage and middle-wage jobs (defined in assumptions). The analysis will determine the number of jobs, and additionally the low and middle-wage jobs, reached using the existing transportation system. The analysis will look at the differences in jobs, including low and middle-wage jobs, accessed by travel mode (automobile, transit, bicycle, and walking) in a given travel time window for the entire region and in areas with high concentrations of communities of color, lower-income communities, limited English proficiency populations, older adults, and youth to determine base year conditions. The next step is to conduct the same assessment, but use the proposed package of transportation investments in the long-range regional transportation plan as the input to determine the future year accessibility to forecasted jobs, including more focused look at low and middle-wage jobs, by mode for the entire region and in areas with high concentrations of communities of color, lower-income communities, limited English proficiency populations, older adults, and youth. Lastly, the measure will look at the change in the accessibility to jobs between the base year and future year with the added transportation investments, but with a particularly emphasis on the change in access to low and middle-wage jobs in areas with high concentrations of communities of color, lower-income communities, limited English proficiency populations, older adults, and youth. In considering transportation equity further, the **Access to Jobs** measure will also look at the number of low and middle-wage jobs accessible by transit and by automobile and compared the access. A threshold will be applied to determine whether there is a "transit access disadvantage" to low and middle-wage jobs. (Meaning there is significantly less access to low and middle-wage jobs by transit compared to automobile access.) These areas which are identified as "transit access disadvantaged" will be compared to areas where there are higher concentrations of historically underrepresented communities.

Output Units: Number of jobs, by wage profile, accessed by mode (Auto; Transit; Bike; Walk)

Potential Output of Assessment: Number of jobs reached within different travel time sheds by different modes.

Measure #7 - Access to Jobs

Job Access – All Jobs:

	Base Year				Interim Year				Future Year – Financially Constrained				Future Year – Strategic			
	A	T	B	W	A	T	B	W	A	T	B	W	A	T	B	W
Region-wide																
Historically Marginalized Communities																
Focused Historically Marginalized Communities																

A – Automobile; T – Transit; B – Bicycle; W - Walk

Job Access – Low-Wage Jobs:

	Base Year				Interim Year				Future Year – Financially Constrained				Future Year – Strategic			
	A	T	B	W	A	T	B	W	A	T	B	W	A	T	B	W
Region-wide																
Historically Marginalized Communities																
Focused Historically Marginalized Communities																

A – Automobile; T – Transit; B – Bicycle; W - Walk

Job Access – Middle-Wage Jobs:

	Base Year				Interim Year				Future Year – Financially Constrained				Future Year – Strategic			
	A	T	B	W	A	T	B	W	A	T	B	W	A	T	B	W
Region-wide																
Historically Marginalized Communities																
Focused Historically Marginalized Communities																

A – Automobile; T – Transit; B – Bicycle; W - Walk

Measure #7 - Access to Jobs

Job Access – Transit Access Disadvantage

	Base Year		Interim Year		Future Year – Financially Constrained		Future Year – Strategic	
	Jobs Inaccessible By Transit		Jobs Inaccessible By Transit		Jobs Inaccessible By Transit		Jobs Inaccessible By Transit	
	LW	MW	LW	MW	LW	MW	LW	MW
Region-wide								
Historically Marginalized Communities								
Focused Historically Marginalized Communities								

LW – Lower-wage; MW – Middle-wage

Key Assumptions to Method:

Dataset Used:

Dataset	Type of Data
Geospatial project information for proposed transportation projects	Observed
Employment/jobs outputs from Metroscope[1]	Forecasted

Tools Used for Analysis: Metro's Travel Demand Model, Metro's Metroscope Model

Specifically for the transportation equity assessment, populations to apply in this measure include:

- People of Color
- Persons with Limited English Proficiency
- Low-Income Households

Young people and older adults are not being proposed for assessment in this system evaluation as it considered that traveling to and from employment is less likely a priority.

Definition of Low-Wage Jobs: Jobs which pay an annual salary between $0 - $39,999.[2]

Definitions of Middle-Wage Jobs: Jobs which pay an annual salary between $40,000 – $65,000. [3]

Methods for Defining and Identifying All Jobs:

The projections (total jobs) and geographic distribution of employment is based on underlying U.S. Bureau of Labor Statistics data and assumptions regarding growth for the employment industries in MetroScope. (See MetroScope documentation regarding employment forecast.)

[1] Forecasted estimates are based on MetroScope assumptions on employment industries and based off U.S. Bureau of Labor Statistics data. Documentation can be found at: http://www.oregonmetro.gov/forecasting-models-and-model-documentation

[2] Wages are set as static for the purposes of the analysis and are not indexed to inflation. Therefore, the wage bands for low-wage and middle wage will not adjust between the based-year and future year.

[3] See Footnote 4.

Measure #7 - Access to Jobs

Methods for Defining and Identifying Low and Middle-Wage Jobs:
The annual salary band was based on the average household size of three (3) and a combination of different income, program eligibility, and self-sufficiency definitions (HUD median income, UW self-sufficiency index, federal poverty level, and uniform relocation assistance and real property acquisition act) The definition of low and middle-wage jobs is not taking into consideration employer benefits provided as part of the identification of wages.

Distribution of Low and Middle-Wage Jobs Assumptions:
The distribution of low and middle-wage jobs is based on underlying U.S. Bureau of Labor Statistics data and assumptions regarding growth for the employment industries in MetroScope. (See MetroScope documentation regarding employment industry forecast assumptions.) The low and middle-wage band will not change according to inflation. Low and middle-wage jobs were determined by the wage profile of each MetroScope industry, looking at the percentage of jobs, which paid within the annual salary range. This range was applied to the employment forecast for the future year to determine the distribution.

Definition of Transit Access Disadvantage: TBD through initial baseline and beta testing work to take place prior to the conducting the transportation equity system evaluation.

Travel Time Windows by Mode[4]:
- Automobile – 30 minutes*
- Transit – 45 minutes*
- Bicycle – 30 minutes
- Walk – 20 minutes

*Includes access and egress times.

Travel Time Assumptions:
Travel time windows by mode were developed with information from the Oregon Household Activity Survey (OHAS) and research from around the country on travel time by different modes for different types of trips. Additionally, internal Metro staff consultation was conducted and work groups were provided the opportunity to give input.

Transit Service Networks Used:[5]
- Peak – Transit service running from 6am – 9am & 3pm – 6pm
- Off-Peak – Transit service running at any other time

[4] The travel time windows represents the average number of places which can be reached within a +/- 5 minutes of the stated travel time window. For example, for automobile, the number of jobs accessed will be an average of places reached between 25 minutes – 35 minutes. This is to address in the travel demand model the potential for a "cliff effect" when a hard cut off time is used and a number of jobs may not be reached because the travel time to reach the jobs in the travel model is one (1) second beyond the cut off time.
[5] Metro is currently transitioning how it will be developing its transit service networks in the demand model to better reflect transit service within the model. This transition is looking at service typology. If this method is used for the system evaluation, information will be updated in the assumptions and available to the work group.

Measure #8 - Access to Community Places

Evaluation Measure Title: **Access to Community Places**
(Replacing the 2014 RTP System Evaluation Measure– Access to daily needs - # of essential destinations accessible within 30 minutes by bicycling and public transit for low-income minority, senior and disabled populations)

Purpose and Goals
Overall Purpose: To identify whether the package of future transportation investments will increase the ability of region's residents to get to existing community places that provide/serve daily or weekly needs.

Transportation Equity Purpose: Furthermore, to look at how the region's future transportation investments increase access to existing community places that provide/serve daily or weekly needs, but with a particular emphasis in areas where there are high concentrations of communities of color, lower-income communities, limited English proficiency populations, older adults, and youth relative to the region.

Questions to Be Addressed:
The **Access to Community Places** performance measure looks to assess the following questions for the region's transportation system:

1) What are the number of existing community places (i.e. places which provide services or items) that can be reached on the existing transportation system by travel mode (e.g. driving, transit, biking, and walking) in a given travel time?
2) How does accessibility, measured by the number of existing community places reached, change (across travel modes) with the proposed set of transportation investments?

More specifically from a transportation equity perspective, the **Access to Community Places** performance measures looks to further assess the additional question:

1) What are the differences between the number of community places accessible by communities of color, lower-income communities, limited English proficiency populations, older adults, and youth relative to the entire region? Are there large differences in access seen between travel modes?
2) Are there significant differences (or lack of differences) seen between communities of color, lower-income communities, limited English proficiency populations, older adults, and youth and the region once the proposed transportation investments are added?

2014 RTP Goals

●	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
●	Sustain economic competitiveness and prosperity	●	Enhance human health
●	Expand transportation choices		Demonstrate leadership at reducing greenhouse gas emissions
	Effective and efficient management of system	●	Ensure equity
	Enhance safety and security		

Measure #8 - Access to Community Places

Function of Performance Measure

●	System Evaluation		Project Evaluation		System Monitoring	●	Performance Target

Associated 2014 RTP Performance Target – By 2040, increase by 50% the number of essential destinations accessible within 30 minutes by bicycling & public transit for low-income, minority, senior and disabled populations compared to 2010.

Methodology Description:

The **Access to Community Places** performance measure is calculated by using existing data from the U.S. Bureau of Labor Statistics to identify the existing community places which provide key services and/or daily needs (defined in assumptions) for people in the region. The analysis will determine the number of community places reached using existing transportation system and looking at the differences in places accessed by travel mode (automobile, transit, bicycle, and walking) in a given travel time window for the entire region and for areas with a high concentration of communities of color, lower-income communities, limited English proficiency populations, older adults, and youth to determine base year conditions. The same assessment will be conducted, but use the proposed package of transportation investments in the long-range regional transportation plan as the input to determine the future year accessibility to community places by mode for the entire region and in areas with high concentrations of communities of color, lower-income communities, limited English proficiency populations, older adults, and youth. Lastly, the measure will look at the change in the accessibility to these existing community places between the base year and future year with added transportation investments, with an emphasis in looking at the change in communities of color, lower-income communities, limited English proficiency populations, older adults, and youth.

Output Units: Number of community places accessed by mode (# - Auto; # - Transit; # - Bike; # - Walk)

Potential Output of Assessment:

	Base Year				**Interim Year**				**Future Year – Financially Constrained**				**Future Year – Strategic**			
	A	T	B	W	A	T	B	W	A	T	B	W	A	T	B	W
Region-wide																
Historically Marginalized Communities																
Focused Historically Marginalized Communities																

A – Automobile; T – Transit; B – Bicycle; W - Walk

Measure #8 - Access to Community Places

Key Assumptions to Method:
Dataset Used:

Dataset	Type of Data
Geospatial project information for proposed transportation projects	Observed
U.S. Bureau of Labor Statistics – Quarterly Census of Employment and Wages (2013)	Observed

Tools Used for Analysis: Metro Travel Demand Model and ArcGIS

Definitions of Places:
Select North American Industry Classification System (NAICS) codes. Codes include those used as part of TriMet's Transit Equity Index with select additions based on consultation with 2018 RTP work groups, TPAC, and Metro Planning and Development Department and Diversity, Equity, and Inclusion staff.

Category	NAICS	Description
Civic/Health	491110	Postal Service
	519120	Libraries and Archives
	611110	Elementary and Secondary Schools
	611210	Junior/Community Colleges
	611310	Colleges, Universities, and Professional Schools
	624110	Child and Youth Services
	624120	Services for the Elderly and Persons with Disabilities
	624190	Other Individual and Family Services
	624210	Community Food Services
	624229	Other Community Housing Services
	624230	Emergency and Other Relief Services
	624310	Vocational Rehabilitation Services
	624410	Child Day Care Services
	624221	Temporary Shelters
	813110	Religious Organizations
Essential Retail	444130	Hardware Stores
	446110	Pharmacies and Drug Stores
	452111	Department Stores
	452990	All Other General Merchandise Stores
	812111	Barber Shops
	812112	Beauty Salons
	812310	Coin-Op Laundry
	812320	Dry Cleaning and Laundry Service
Financial/Retail	522110	Commercial Banking
	522120	Savings Institutions
	522130	Credit Unions
Food	445110	Supermarkets and Other Grocery (except convenience) Stores
Medical	621111	Offices of Physicians (except Mental Health Specialists)
	621112	Office of Physicians, Mental Health Specialists
	621210	Offices of Dentists
	621310	Offices of Chiropractors

	621320	Offices of Optometrists
	621330	Offices of Mental Health Practitioners (except Physicians)
	621340	Offices of Physical, Occupational, and Speech Therapists and
	621391	Audiologists
	621399	Offices of Podiatrists
	621410	Offices of All Other Miscellaneous Health Practitioners
	621420	Family Planning Centers
	621491	Outpatient Mental Health and Substance Abuse Centers
	621492	HMO Medical Centers
	621498	Kidney Dialysis Centers
	621512	All Other Outpatient Care Centers
	622110	Diagnostic Imaging Centers
	622210	General Medical and Surgical Hospitals
	622310	Psychiatric and Substance Abuse Hospitals
		Specialty (except Psychiatric and Substance Abuse) Hospitals

For the purpose of the analysis, the existing places which currently provide/serve daily needs are being used to determine access to community places in both the base year conditions and the future year. This approach is being taken because Metro's land use forecast model, Metroscope, currently does not project the locations of these types of businesses (i.e. food, commercial, retail, civic, and health-related services). In assessing the access to existing places which provide/serve daily needs, the rational is that greater access to existing community places will further increase as new places to provide services open as a result of population and employment growth.

Travel Time Windows by Mode[1]:

- Automobile – 20 minutes*
- Transit – 30 minutes*
- Bicycle – 15 minutes
- Walk – 20 minutes

*Includes access and egress times.

Travel Time Assumptions:
Travel time windows by mode were developed with information from the Oregon Household Activity Survey (OHAS) and research from around the country on travel time by different modes for different types of trips. Additionally, work groups provided input and suggested manual adjustments to travel time windows as reflected in the final.

Transit Service Networks Used:[2]

[1] The travel time windows represents the average number of places which can be reached within a +/- 5 minutes of the stated travel time window. For example, for automobile, the number of daily needs accessed will be an average of places reached between 15 minutes – 25 minutes. This is to address in the travel demand model the potential for a "cliff effect" when a hard cut off time is used and a destination may not be reached because the travel time to reach the destination in the travel model is one (1) second beyond the cut off time.

- Peak – Transit service running from 6am – 9am & 3pm – 6pm
- Off-Peak – Transit service running at any other time

[2] Metro is currently transitioning how it will be developing its transit service networks in the travel demand model to better reflect transit service within the model. This transition is looking at a transit service typology. If this method is used for the system evaluation, information will be updated in the assumptions and available to the work group.

Measure #9 - Access to Bicycle and Pedestrian Parkways

Evaluation Measure Title: **Access to Bicycle and Pedestrian Parkways**

Purpose and Goals

Overall Purpose: To identify whether the package of future transportation investments will increase the number and percent of households within ½ mile of a bicycle or pedestrian parkway.

Questions to Be Addressed:

The **Access to Bicycle and Pedestrian Parkways** performance measure looks to assess the following questions for the region's transportation system:

1) How easily can people in the region get to high quality and comfortable biking and walking routes that provide mobility for non-motorized travel.

2014 RTP Goals

●	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
●	Sustain economic competitiveness and prosperity	●	Enhance human health
●	Expand transportation choices	●	Demonstrate leadership at reducing greenhouse gas emissions
	Effective and efficient management of system	●	Ensure equity
●	Enhance safety and security		

Function of Performance Measure

●	System Evaluation		Project Evaluation		System Monitoring	●	Performance Target

Associated 2014 RTP Performance Measure: RTP Target – None

Measure #9 - Access to Bicycle and Pedestrian Parkways

Methodology Description:

Evaluates household access to regional bicycle and pedestrian parkways by number and percent of homes. The regional bicycle and pedestrian parkway designations are overlaid on the existing and future transportation networks. These facilities will be used to calculate the # and % of households within ½ mile of them.

Output Units:

and % of households

Potential Output of Assessment:

	Base Year		Interim Year		Future Year - Financially Constrained		Future Year - Strategic	
	# of HH	% of HH	# of HH	% of HH	# of HH	% of HH	# of HH	% of HH
Bicycle Parkways								
Pedestrian Parkways								

Key Assumptions to Method:

Dataset Used:

Dataset	Type of Data
Geospatial project information for proposed transportation projects	observed
Metroscope household data at the Census block level	forecasted

Tools Used for Analysis: Metro Travel Demand Model, U.S Census,

Definitions:

Regional Bicycle Parkway: A bicycle route designed to serve as a bicycle highway providing for direct and efficient travel for large volumes of cyclists with minimal delays in different urban environments and to destinations outside the region. These bikeways connect 2040 activity centers, downtowns, institutions and green spaces within the urban area. The specific design of a

bike parkway will vary depending on the land use context within which it passes through. These bikeways could be designed as an off-street trail along a stream or rail corridor, a cycle track along a main street or town center, or a bicycle boulevard through a residential neighborhood.

Regional Pedestrian Parkway: The highest functional class for pedestrian route sin the Regional Transportation Plan. They are high quality and high priority routes for pedestrian activity. Pedestrian parkways are major urban streets that provide frequent and almost frequent transit service (existing and planned) or regional trails. Adequate width and separation between pedestrians and bicyclists should be provided on shared use path parkways.

Other assumptions:

Staff is assuming equal area distribution assumption of households within a census block.

Measure #10 – Access to transit

Evaluation Measure Title: **Access to transit**
(New System Evaluation Measure)

This methodology for this measure is under development.

Measure #11 - Access to industrial land and freight intermodal facilities

Evaluation Measure Title: **Freight – Access to industrial land and intermodal facilities**
(New System Evaluation Measure)

Purpose and Goals

Overall Purpose: To identify whether the package of future transportation investments will change the accessibility to designated industrial land and freight intermodal facilities. This will be measured by determining the number of forecasted truck trips that are coming from or going to areas of industrial land and freight intermodal facilities; and evaluating any improvements in congested locations or freight bottlenecks that these truck trips encounter. Maps will display the locations for industrial land and intermodal facilities and the corresponding number of truck trips along with locations where major truck delay occurs.

2014 RTP Goals

	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
●	Sustain economic competitiveness and prosperity	●	Enhance human health
	Expand transportation choices		Demonstrate leadership at reducing greenhouse gas emissions
●	Effective and efficient management of system		Ensure equity
	Enhance safety and security		

Function of Performance Measure

●	System Evaluation	●	Project Evaluation		System Monitoring		Performance Target

Methodology Description:
This analysis uses truck volumes from the regional travel demand model at various times of the day. The hours during the day for calculating truck volumes from the model would be from 7:00 – 9:00 AM (AM peak), 1:00 – 3:00 PM (off-peak) and from 5:00 - 7:00 PM (PM peak). The congested locations or freight bottlenecks will be determined by evaluating regional freight network facilities with the highest levels of truck hours of delay. General truck trip routing will be determined by the regional travel demand model (select zone).

Freight – Access to industrial land and intermodal facilities system evaluation performance measure is calculated by:

1. Determine the locations of industrial land and freight intermodal facilities (based on groups of TAZs), and determine the number of truck trips from the travel demand model for each of the time periods (AM peak, off-peak and PM peak).

2. Determine the locations for major truck delay from maps of the freight truck delay and the magnitude of that truck delay (see measure: Congestion – Freight truck delay and Cost of delay on the freight network).

3. Evaluate the general truck trip routes used (using select zone results) for each of the industrial land and freight intermodal facilities locations truck trips.

4. Evaluate all of the industrial land and freight intermodal facilities locations region-wide for improvements to accessibility (more access points and reductions in truck delay at major truck delay locations), by comparing the 2015 base year, the 2040 financially constrained, and 2040 strategic. Also evaluate each of the industrial land and freight intermodal facilities locations separately to help determine which facilities, with high levels of truck delay, are impacting truck access and could provide better accessibility with an improvement project.

Output Units:

Potential Output of Assessment:

	Base Year	**Interim Year**	**Future Year – Financially Constrained**	**Future Year – Strategic**
Region-wide	Truck volumes and delay locations		Truck volumes and delay locations	Truck volumes and delay locations
Separate clusters of TAZs for intermodal facilities	Truck volumes and delay locations		Truck volumes and delay locations	Truck volumes and delay locations
Separate clusters of TAZs for industrial land	Truck volumes and delay locations		Truck volumes and delay locations	Truck volumes and delay locations

Key Assumptions to Method
Dataset Used:

Dataset	**Type of Data**
Truck volumes from Travel Demand Model	Forecasted
Truck Vehicle hours of delay at major truck delay locations	Forecasted

Tools Used for Analysis:
Metro Travel Demand Model

Evaluation Measure Title: **Multi-modal Travel Times**

Purpose and Goals

Overall Purpose: To identify whether the package of future transportation investments will change the travel times between key origin-destinations for the mid-day and 2-hr PM peak

Questions to Be Addressed:

The **Multi-modal travel times** performance measure looks to assess the following questions for the region's transportation system:

1) How long does it take to travel between key regional origin and destinations by driving, biking, transit and freight.

2014 RTP Goals

●	Foster vibrant communities and compact urban form		Promote environmental stewardship
●	Sustain economic competitiveness and prosperity		Enhance human health
●	Expand transportation choices		Demonstrate leadership at reducing greenhouse gas emissions
●	Effective and efficient management of system		Ensure equity
	Enhance safety and security		

Function of Performance Measure

●	System Evaluation		Project Evaluation		System Monitoring	●	Performance Target

Associated 2014 RTP Performance Measure: RTP Target – None

Measure #12 – Multimodal travel times

Methodology Description:

Evaluates the time it takes to travel between key regional origin and destinations by driving, biking, transit and freight.

Output Units:

Minutes of travel time.

Potential Output of Assessment:

	Base Year		Interim Year		Future Year - Financially Constrained		Future Year - Strategic	
	Mid-day	PM Peak	Mid-day	PM Peak	Mid-day	PM Peak	Mid-day	PM Peak
Central City to Beaverton (auto)								
Central City to Beaverton (transit)								
Central City to Beaverton (bike)								

Key Assumptions to Method:

Dataset Used:

Dataset	Type of Data
Geospatial project information for proposed transportation projects	observed
Travel times by mode	forecasted

Tools Used for Analysis: Metro Travel Demand Model,

Other assumptions:

Includes "in vehicle" travel times, not the amount of time to get to and from the automobile, bicycle or transit vehicle. When a tour-based model is available in the future, this measure will include the full travel time for each mode.

Measure #13 Congestion –
A) Hours of delay per person
B) Interim mobility policy

Evaluation Measure Title: **Congestion**

Purpose and Goals

Overall Purpose: To identify whether the package of future transportation investments will change congestion levels as measured by vehicle hours of delay person and maps displaying locations of throughways, arterials, and regional freight network facilities that exceed the congestion threshold.

Questions to Be Addressed:

The **congestion** performance measures look to assess the following questions for the region's transportation system:

A) How much delay is occurring for vehicles in the region
B) Where is is it occurring in relation to the interim regional mobility policy which includes different thresholds for different facilities and locations within the region.

2014 RTP Goals

	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
●	Sustain economic competitiveness and prosperity		Enhance human health
	Expand transportation choices	●	Demonstrate leadership at reducing greenhouse gas emissions
●	Effective and efficient management of system		Ensure equity
●	Enhance safety and security		

Function of Performanc Measure

●	System Evaluation		Project Evaluation		System Monitoring	●	Performance Target

Associated 2014 RTP PerformanceTarget – By 2040, reduce vehicle hours of delay (VHD) per person by 10 percent compared to 2010.

Measure #13 Congestion –
A) Hours of delay per person
B) Interim mobility policy

Methodology Description:

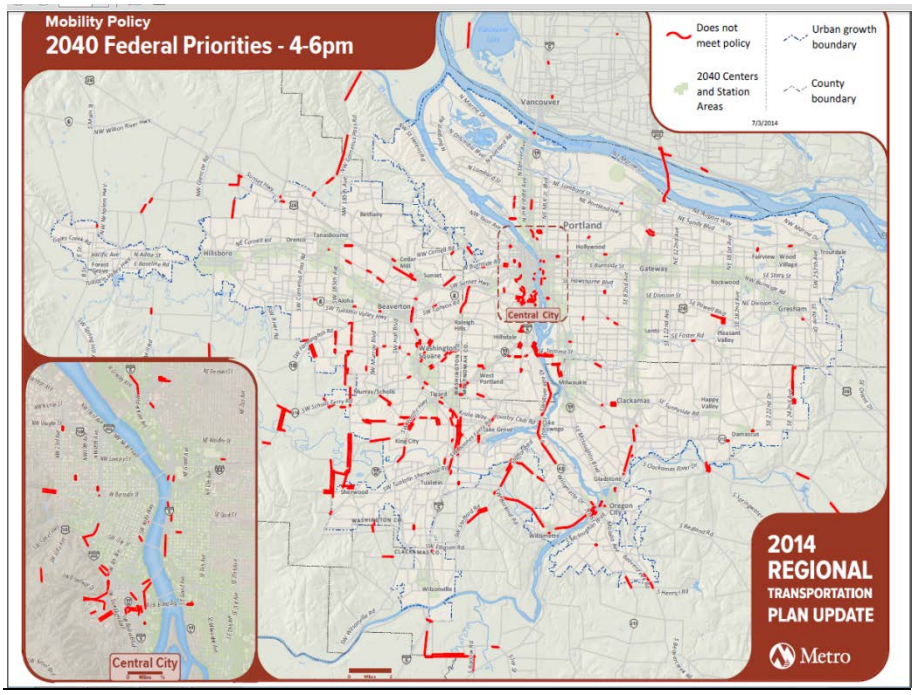
The model identifies how much delay is occurring for vehicles in the region and where it is occurring in relation to the interim regional mobility policy which includes different thresholds for different facilities and locations within the region.

Output Units:

Hours of delay

Potential Output of Assessment:

	Base Year	Interim Year	Future Year - Financially Constrained	Future Year - Strategic
Mid-day				
PM Peak				



Measure #13 Congestion –
A) Hours of delay per person
B) Interim mobility policy

Key Assumptions to Method:

Dataset Used:

Dataset	Type of Data
Geospatial project information for proposed transportation projects	observed

Tools Used for Analysis: Metro Travel Demand Model,

Definitions:

Motor vehicle delay is the time accrued above the travel time in congested conditions (vehicle / capacity is greater than 0.90)

Measure #13 Congestion –
C) Freight truck delay
D) Total cost of delay on freight network

Evaluation Measure Title: Congestion – Freight truck delay and Cost of delay on freight network

Purpose and Goals

Overall Purpose: To identify whether the package of future transportation investments will change the overall truck delay on the region-wide system and the regional freight network. This will be measured by truck vehicle hours of delay on these networks. Maps of the regional freight network will display locations where truck delay occurs and the magnitude of that truck delay. The cost of delay will be determined by multiplying the hours of truck delay on the regional freight network by the hourly value of time for truck trips.

2014 RTP Goals

	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
●	Sustain economic competitiveness and prosperity		Enhance human health
	Expand transportation choices	●	Demonstrate leadership at reducing greenhouse gas emissions
●	Effective and efficient management of system		Ensure equity
●	Enhance safety and security		

Function of Performance Measure

●	System Evaluation		Project Evaluation		System Monitoring	●	Performance Target

Associated 2014 RTP performance target: By 2040, reduce vehicle hours of delay per truck trip by 10 percent compared to 2010.

Methodology Description:
This analysis uses truck vehicle hours of delay (VHD) from the regional travel demand model (see Definitions). The selected hours during the day for calculated truck delay from the model would be from 7:00 AM to 7:00 PM. After looking at the results of these hours, the reported hours for the RTP would be determined for a morning peak hour, multiple mid-day hours and an evening peak hour. The hourly value of freight truck travel will be determined by using the value assumed in ODOT's truck model or the value in USDOT's 2015 update of "The Value of Travel Time Savings" (departmental guidance).

Congestion – Truck Vehicle Hours of Delay (VHD) system evaluation performance measure is calculated by:

1. Determining the number of hours of truck delay during each of the selected hours (both peak period and off-peak hours) on the regional freight network.

Measure #13 Congestion –
C) Freight truck delay
D) Total cost of delay on freight network

2. Comparing the regional freight network hours of truck delay for each of the selected hours between the 2015 base year, the 2040 (future year) financially constrained, and the 2040 (future year) strategic.

3. Determining the hourly value of freight truck travel to use for the cost of truck delay on the regional freight network.

4. Comparing the regional freight network cost of truck delay for each hour between the 2015 base year, the 2040 (future year) financially constrained, and the 2040 (future year) strategic.

Output Units:

Potential Output of Assessment:

	Base Year	Interim Year	Future Year – Financially Constrained	Future Year – Strategic
Region-wide	Truck VHD		Truck VHD	Truck VHD
Regional Freight Network	Truck VHD and cost of truck VHD		Truck VHD and cost of truck VHD	Truck VHD and cost of truck VHD
Highway and roadway segments within the Regional Freight Network	Truck VHD and cost of truck VHD		Truck VHD and cost of truck VHD	Truck VHD and cost of truck VHD

Key Assumptions to Method
Dataset Used:

Dataset	Type of Data
Value of time for truck trips	Sourced data
Truck Vehicle hours of delay on Regional Freight Network	Forecasted

Tools Used for Analysis:
Metro Travel Demand Model

Definitions:
Truck Vehicle Hours of Delay is the total truck travel time on each of the roadway segments in the travel demand model that exceed the threshold for congestion.

Measure #10 – Access to transit

Evaluation Measure Title: **Transit efficiency**

This methodology for this measure is under development.

Measure #10 – Access to transit

Evaluation Measure Title: **Transit efficiency**

This methodology for this measure is under development.

Measure #15 Climate Change

Evaluation Measure Title: **Climate Change**

Purpose and Goals

Overall Purpose: To identify how the package of future transportation investments will affect the greenhouse gas emissions per capita from transportation sources and determine whether the region is making progress towards its state and regional targets.

Questions to Be Addressed:

The **Climate Change** performance measure looks to assess the following questions for the region's transportation system:

1) What is the per capita of greenhouse gas emissions does proposed set of transportation investments produce? Do the tons of greenhouse gas emissions change, relative to a baseline and no-build scenario, with the proposed set of transportation investments? Are there differences in the growth?
2) Are the per capita of greenhouse gas emissions increasing, decreasing, or holding steady with the proposed set of transportation investments? Is the per capita greenhouse gas emissions change in proportion to population growth?
3) How does the proposed set of transportation investments get the region towards its greenhouse gas target(s)? (State and regional)

2014 RTP Goals

	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
●	Sustain economic competitiveness and prosperity	●	Enhance human health
●	Expand transportation choices		Demonstrate leadership at reducing greenhouse gas emissions
	Effective and efficient management of system	●	Ensure equity
	Enhance safety and security		

Function of Performance Measure

●	System Evaluation		Project Evaluation		System Monitoring	●	Performance Target

Associated 2014 RTP Performance Target – Reduce per capita transportation-related greenhouse gas emissions below 2010 levels.

Methodology Description:

The **Climate Change** performance measure is calculated by using existing and proposed transportation project information and inputting the project information into the travel demand model to understand the travel behavior in the region with and without the proposed investments at key times in the future. Key travel behavior outputs include trip generated, mode split (i.e. percentage of trips taken by different transportation modes), trip distances, and vehicles miles traveled. This information is then taken into a post-processing model which includes information about vehicle fleet mix, fuel composition, and emissions rates to determine what the projected emissions of greenhouse gases would be with and without the proposed transportation

investments. The analysis will determine the tons of transportation-generated greenhouse gas emissions for the entire region. The same assessment will be conducted, but use the proposed package of transportation investments in the long-range regional transportation plan as the input to determine the future year tons of greenhouse gas emissions produced for the entire region. Finally the tons of greenhouse gas emissions will be converted to a per capita emissions rate to understand how the proposed package of transportation investments are making progress towards state and regional greenhouse gas targets.

Output Units: per capita greenhouse gas emissions and percent (%) reduction from 2010 levels.

Potential Output of Assessment:

	Base Year	**Interim Year**	**Future Year - Financially Constrained**	**Future Year - Strategic**
Greenhouse Gas (GHG) per capita				
Percent (%) reduction				

Key Assumptions to Method:

Dataset Used:

Dataset	**Type of Data**
Geospatial project information for proposed transportation projects	Observed
Greenhouse gas emissions	Forecasted

Tools Used for Analysis: Metro Travel Demand Model, ArcGIS, EPA Emissions Model – MOVES2014b

Measure #16 Clean air

Evaluation Measure Title: **Clean Air**

Purpose and Goals

Overall Purpose: To identify how the package of future transportation investments will affect the tons of vehicle emissions of air pollutants. Emphasis is placed on air pollutants: ozone (as represented by its precursors), fine particulates, coarse particulates, and transportation generated air toxics (defined in definitions).

Questions to Be Addressed:

The **Clean Air** performance measure looks to assess the following questions for the region's transportation system:

1) How many tons of air pollutant emissions does proposed set of transportation investments produce? Do the tons of air pollutant emissions change, relative to a baseline and no-build scenario, with the proposed set of transportation investments?
2) Are the tons of air pollutants emissions increasing, decreasing, or holding steady with the proposed set of transportation investments? If the tons of air pollutant emissions is increasing or decreasing, is the change in proportion to population growth?
3) How does the proposed set of transportation investments get the region towards it target of reaching zero days of at-risk exposure to transportation-related air pollution?

More specifically from a transportation equity perspective, the **Clean Air** performance measure looks to further assess the additional question:

1) What are the differences between the tons of air pollutant emissions in areas where there are high concentrations of communities of color, low-income populations, limited English proficiency populations, older adults, and youth and the entire region? Are there large differences seen between the region and the communities?

2014 RTP Goals

	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
●	Sustain economic competitiveness and prosperity	●	Enhance human health
●	Expand transportation choices		Demonstrate leadership at reducing greenhouse gas emissions
	Effective and efficient management of system	●	Ensure equity
	Enhance safety and security		

Function of Performance Measure

●	System Evaluation		Project Evaluation		System Monitoring	●	Performance Target

Associated 2014 RTP Performance Target – By 2040, ensure zero percent population exposure to at-risk levels of air pollution from transportation sources.

Methodology Description:

Measure #16 Clean air

The **Clean Air** performance measure is calculated by using existing and proposed transportation project information and inputting the project information into the travel demand model to understand the travel behavior in the region with and without the proposed investments at key times in the future. Key travel behavior outputs include trip generated, mode split (i.e. percentage of trips taken by different transportation modes), trip distances, and vehicles miles traveled. This information is then taken into a post-processing model which includes information about vehicle fleet mix, fuel composition, and emissions rates to determine what the projected emissions of individual air pollutants would be with and without the proposed transportation investments. The analysis will determine the tons of transportation emissions per identified air pollutant (see potential output table below) for the entire region and aggregate for those areas with a high concentration of communities of color, low-income populations, limited English proficiency populations, older adults, and youth to determine base year conditions. The same assessment will be conducted, but use the proposed package of transportation investments in the long-range regional transportation plan as the input to determine the future year tons of air pollutant emissions produced for the entire region and in areas with high concentrations of communities of color, low-income populations, limited English proficiency populations, older adults, and youth. Lastly, the measure will look at the change tons of air pollutant emissions between the base year and future year with added transportation investments, with an emphasis in looking at the change in areas with communities of color, low-income populations, limited English proficiency populations, older adults, and youth.

Output Units: Tons of emissions by air pollutant (i.e. fine particulates, ozone, etc.)

Potential Output of Assessment:

	Base Year			**Interim Year**			**Future Year - Financially Constrained**			**Future Year - Strategic**		
	RW	HMC	FHMC	RW	HMC	FHMC	RW	HMC	FHMC	RW	HMC	FHMC
NOx – Nitrogen Oxide												
VOC – Volatile Organic Compounds												
$PM_{2.5}$ – Fine Particulates												
PM_{10} – Coarse Particulates												
Diesel Particulate Matter plus Diesel Exhaust Organic Gases (Diesel PM)												
Acrolein												
Arsenic												
Benzene												
1,3-Butadiene												

Chromium 6												
Formaldehyde												
Naphthalene												
Polycyclic Organic Matter												

RW – Region-wide; HMC – Historically Marginalized Communities; FHMC – Focused Areas of Historically Marginalized Communities

Key Assumptions to Method:
Dataset Used:

Dataset	Type of Data
Geospatial project information for proposed transportation projects	Observed
Emissions per air pollutant	Forecasted

Tools Used for Analysis: Metro Travel Demand Model, ArcGIS, EPA Emissions Model – MOVES2014b

Definitions
Transportation Generated Air Toxics:
Of the 188 air toxics identified and regulated through the Environmental Protection Agency (EPA), seven have been identified with significant contributions from mobile source (i.e. transportation sources) that pose national and regional-scale public health risk. Additionally, consultation with Oregon Department of Environmental Quality (DEQ) staff identified two more air toxics of particular interest to the region because they have been closely associated with transportation facilities in the Portland Air Toxics Study (PATS). These are:

- Acrolein
- Arsenic
- Benzene
- 1,3-Butadiene
- Chromium 6
- Diesel particulate matter plus diesel exhaust organic gases (Diesel PM)
- Formaldehyde
- Naphthalene
- Polycyclic organic matter[1]

[1] EPA research work can be found at:
https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/100109guidmem.cfm

Measure #17 Habitat impact

Evaluation Measure Title: **Habitat impact**

Purpose and Goals

Overall Purpose: To identify and flag those proposed future transportation investments within the 2018 RTP investment package which intersect with the region's identified high value habitat areas and note additional environmental consideration and potential mitigation may be needed in implementing the investment.

Transportation Equity Purpose: Furthermore, to look at those proposed future transportation investments within the 2018 RTP investment package which overlap with high value habitat and in areas of high concentrations with communities of color, lower-income communities, limited English proficiency populations, older adults, and youth relative to the region. These projects would be flagged and noted that in addition to further environmental considerations, other environmental justice considerations mitigation and/or strategies may be needed in implementing the investment.

Questions to Be Addressed:

The **Habitat impact** performance measure looks to assess the following questions for the region's transportation system:

1) What percentage of the region's proposed roadway transportation investments intersect and have may have a potential conflict with the region's resource habitats and needs further assessment of environmental considerations through project development?
2) What is the per-person expenditure of roadway transportation investment for the number of people region-wide which intersect the region's resource habitats?

More specifically, from the transportation equity perspective, the **Habitat impact** performance measure looks to assess the following questions:

1) What percentage of resource habitats overlap with areas with high concentrations of communities of color, lower-income communities, limited English proficiency populations, older adults, and youth? Are these resource habitats seeing a greater percentage of proposed roadway transportation investments which may have a potential conflict with the region's resource habitats? Is the percentage in historically underrepresented communities greater than the region?
2) What is the per-person expenditure of roadway transportation investment for the number of people identified within in communities of color, lower-income communities, limited English proficiency populations, older adults, and youth which intersect the region's resource habitat?

2014 RTP Goals

●	Foster vibrant communities and compact urban form	●	Promote environmental stewardship
	Sustain economic competitiveness and prosperity	●	Enhance human health
	Expand transportation choices		Demonstrate leadership at reducing greenhouse gas emissions
	Effective and efficient management of	●	Ensure equity

	system		
	Enhance safety and security		

Function of Performance Measure

●	System Evaluation		Project Evaluation		System Monitoring		Performance Target

Associated 2014 RTP Performance Measure: Percent of projects which intersect high value habitats

<u>Methodology Description</u>:

The method for calculating the **Habitat impact** performance measure will entail a geospatial analysis the region's proposed transportation investments which intersect the region's resource habitats. The percentage of projects which intersect resource habitats will be looked at region-wide and in areas where there is a concentration of communities of color, lower-income communities, limited English proficiency populations, older adults, and youth. Additionally, the per person expenditure of transportation investments will be calculated to determine whether the per capita roadway transportation investments which intersect/overlap with the region's high value habitats and areas where there are concentrations of historically underrepresented communities is greater.

Output Units: Percentage (%) of transportation projects intersecting identified resource habitats and per capita expenditure

Potential Output of Assessment:

	Base Year	Interim Year	Future Year – Financially Constrained	Future Year – Strategic
Region-wide				
Historically Marginalized Communities				
Focused Historically Marginalized Communities				

<u>Key Assumptions to Method</u>:

Dataset Used:

Dataset	Type of Data
Geospatial project information for proposed transportation projects	Observed
Geospatial resource conservation information from Metro identified resource and conservation habitat areas	Observed

Tools Used for Analysis: ArcGIS

Definition of Resource Habitats:

Resource habitats are those areas with the top 25% modeled score of high value habitat or riparian quality. Habitat quality took into account factors such as habitat interior, influence of roads, total

patch area, relative patch area, habitat friction, wetlands, and hydric soils. The riparian areas took into account criteria of floodplains, distance from streams, and distance from wetlands. The analysis and modeled scoring was conducted for the entire Portland-Vancouver region and conducted through a collaborative effort with partners across the region and topic area experts through the development in the Resource Conservation Strategy process. More detail about the high value habitats can be found at www.regionalconservationstrategy.org.

2018 RTP System Evaluation Measures Methodologies

Background information for the equity measures

(Reflects the transportation priorities identified by historically marginalized communities and will serve as the basis for the federally-required Title VI Benefits and Burdens analysis).

- #3 Affordability
- #5 Exposure to crash risk
- #6 Access to travel options – system connectivity & completeness
- #7 Access to jobs
- #8 Access to community places
- #17 Habitat impact

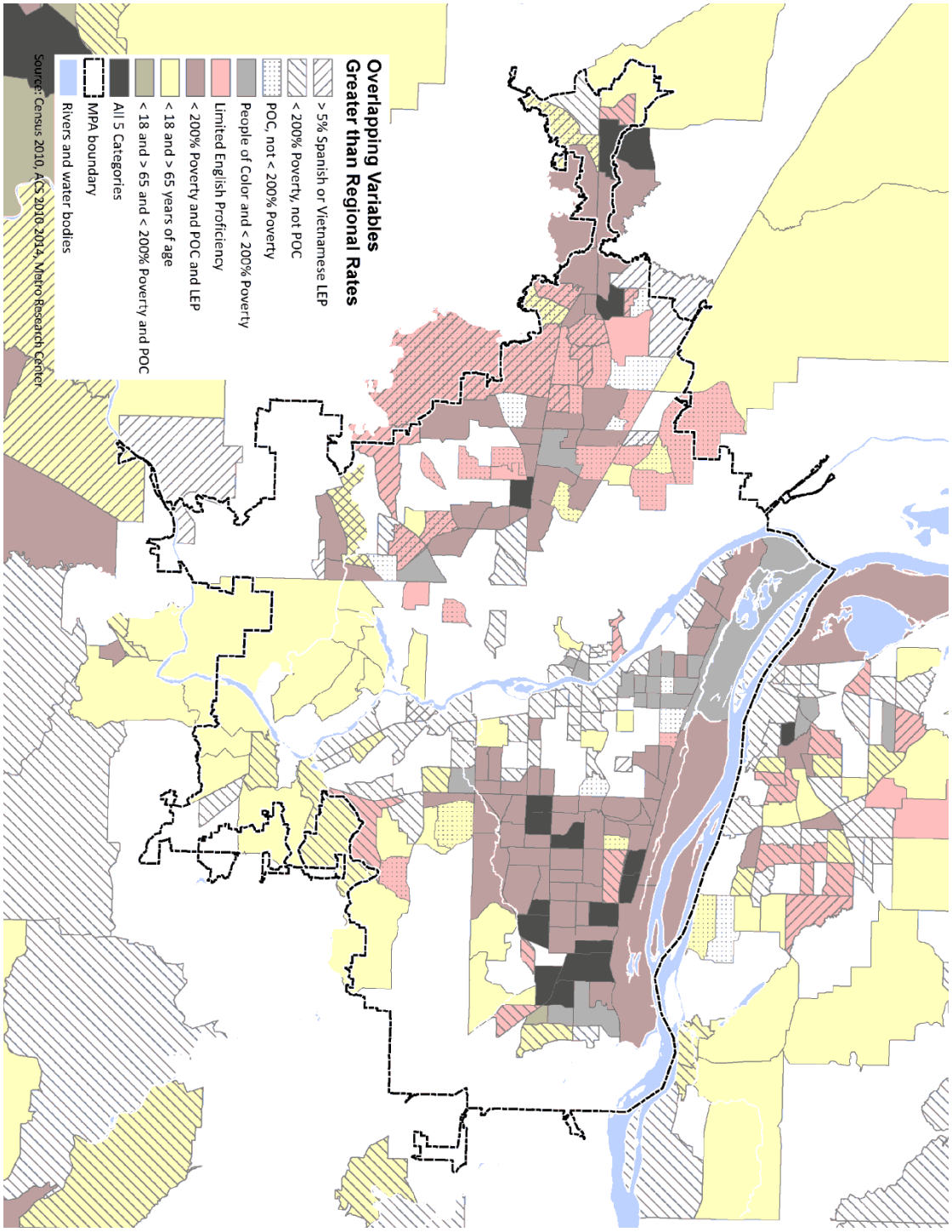
Definition of Communities & Geography

Community	Definition	Geography Threshold*	Date Source
People of Color	Persons who identify as non-white.	Census tracts above the regional rate (26.5%) for people of color.	2010 Decennial Census
Low-Income	Households with incomes equal to or less than 200% of the Federal Poverty Level (2016); adjusted for household size	Census tracts above the regional rate (31.8%) for Household with Lower-Income	American Community Survey, 2009-2013
Limited English Proficiency	Persons who identify as unable "to speak English very well."	Census tracts above the regional rate (8.5%) for Limited English Proficiency AND those census tracts which were identified as "safe harbor" tracts for individual language isolation.[1]	
Older Adults	Persons 65 years of age and older	Census tracts above the regional rate for Older Adults (11%) AND Young People (22.8%)	2010 Decennial Census
Young People	Persons 17 years of age and younger		

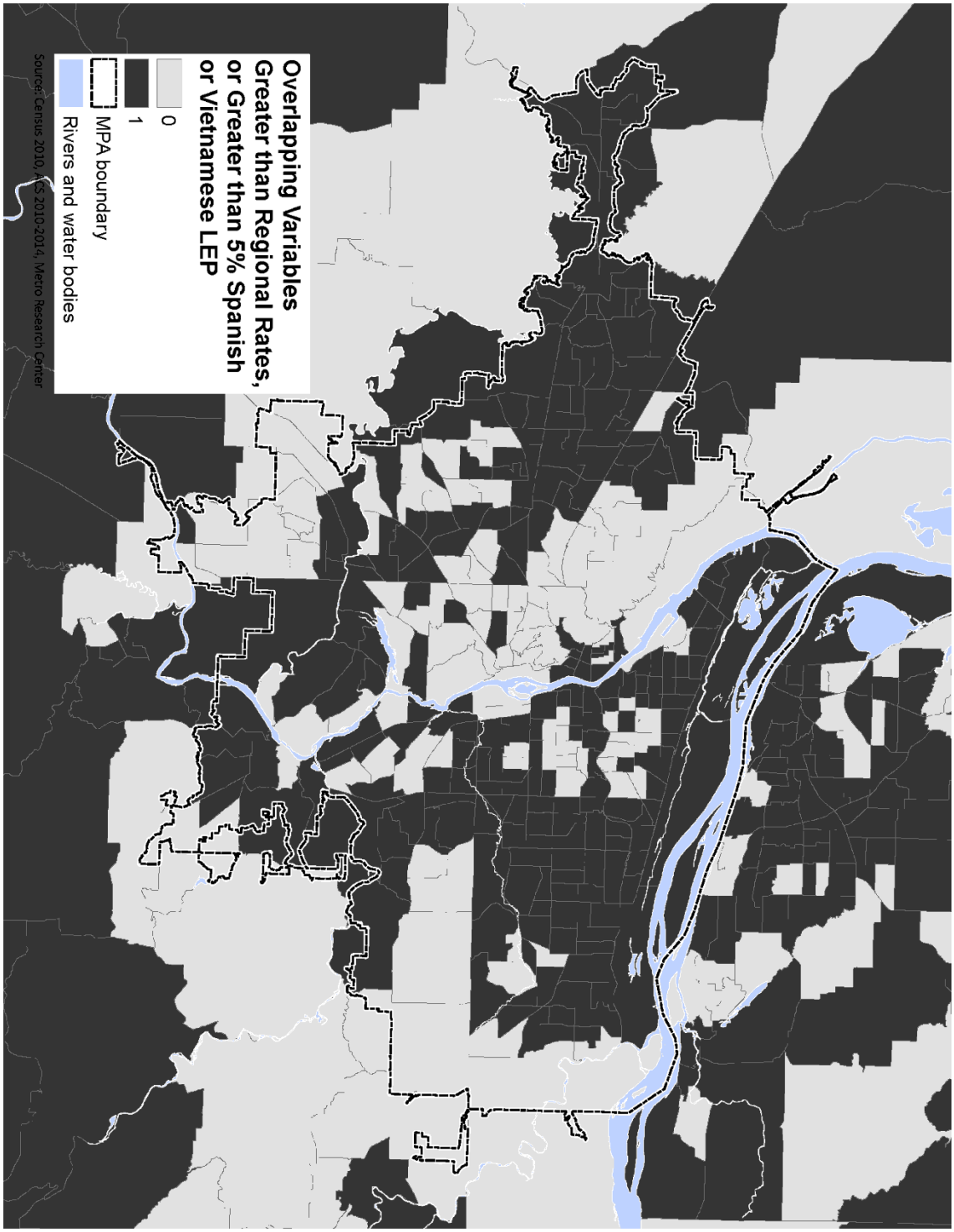
*See attached map of communities.

[1] Safe Harbor is a provision within Title VI of the Civil Rights Act of 1964 which addresses for when and how agencies are to provide language assistance to limited English proficiency persons to ensure access to all public resources. The safe harbor provision mainly addresses translation of documents and language assistance, however for analysis purposes, it may help to identify areas where additional attention is warranted because of a concentration of language isolation. Safe harbor applies when a language isolated group constitutes 5% or 1,000 persons of the total population in the given area.

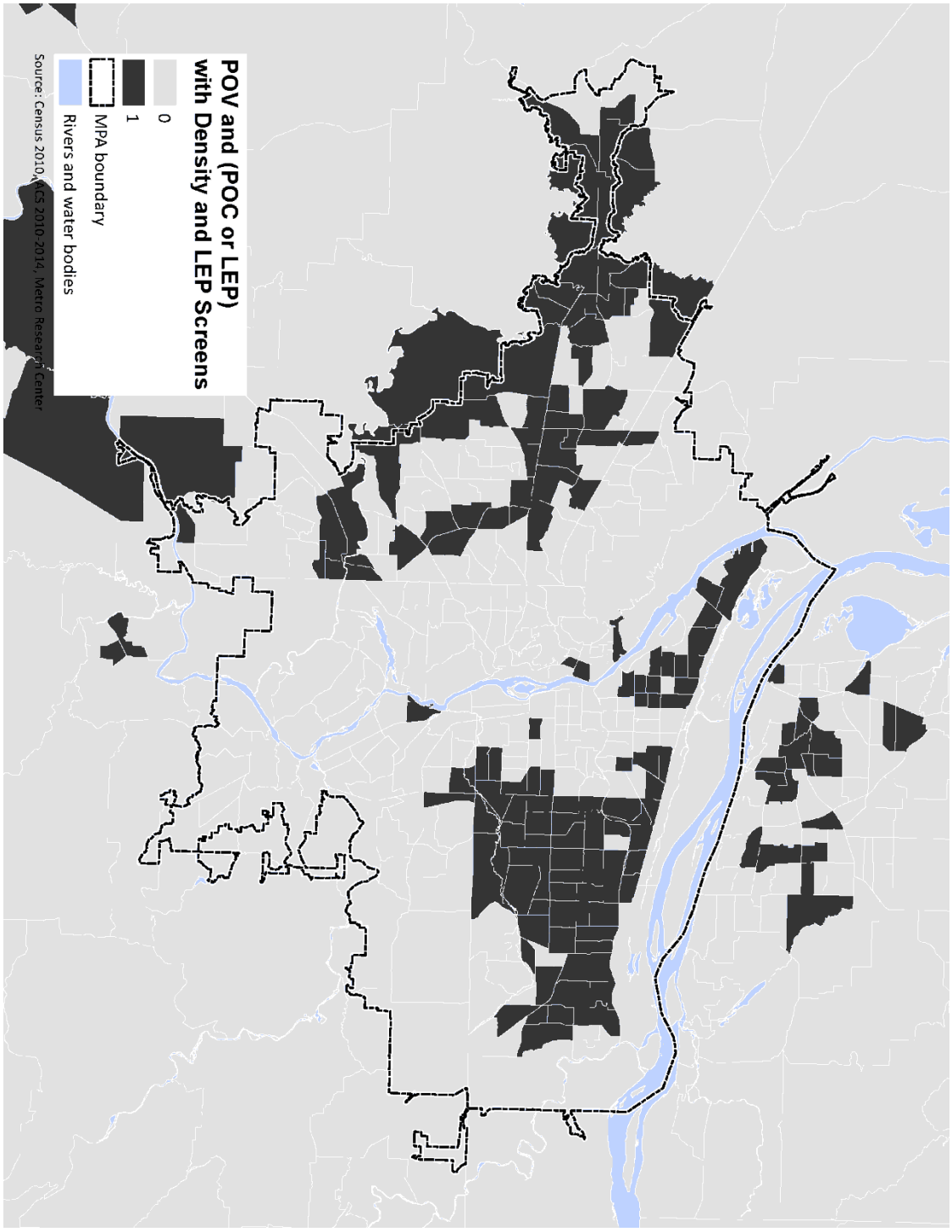
Historically Marginalized Communities – Census Tracts Above the Regional Rate and Limited English Proficiency Safe Harbor Tracts



Historically Marginalized Communities – Binary Map (YES/NO) for Transportation Equity Analysis Purpose



Focused Historically Marginalized Communities – Binary Map (YES/NO) – People of Color, Limited English Proficiency Populations, and People with Lower-Incomes with Population Density



Analysis Years Assumptions and Inputs

Analysis Year	Transportation Inputs	Land use Inputs
Base Year (2015)	All transportation projects completed by 2015	Adopted growth distribution (2016) from MetroScope[2][3]
Interim Year (2027)	Proposed transportation projects to be completed by 2027 (financially constrained only)	
Future Year (2040)	All proposed transportation to be completed by 2040 (financially constrained and strategic project lists)	

Forecasted Methods Approach for Communities

Community	Base Year	Interim Year	Horizon Year
People of Color	Identifying the correlating transportation analysis zones (TAZ) to census tracts which have greater than the regional rate of people of color.		Will not produce results for the horizon year.
Low-Income	Identifying the correlating transportation analysis zones (TAZ) to census tracts which have greater than the regional rate for lower-income households.	Forecasted spatial distribution of households with incomes under 200% of the Federal Poverty Level (2016).	
Limited English Proficiency	Identifying the correlating transportation analysis zones (TAZ) to census tracts which have greater than the regional rate of limited English proficiency.		Will not produce results for the horizon year.
Older Adults	Identifying the correlating transportation analysis zones (TAZ) to census tracts which have greater than the regional rate for older adults.	Forecasted spatial distribution of households with older adults.	
Young People	Identifying the correlating transportation analysis zones (TAZ) to census tracts which have greater than the regional rate for young people.	Forecasted spatial distribution of households with older adults.	

Secondary/Focused Screening Analysis

By request of the work group, the transportation equity analysis will conduct a secondary assessment of the full suite of measures, but primarily focus on a subset of historically marginalized communities. The subset is defined as:

Secondary/Focused Assessment – Subset of Historically Underrepresented Communities for Focus

[2] Metro Ordinance No. 16-1371. More information regarding the 2016 land use forecast can be found at: oregonmetro.gov

[3] Metroscope geographically allocates population and employment projections in five year increments. Therefore, the nearest land use forecast input to be used for the interim analysis year analysis will be 2025. This is out of respect for the decision that certain communities are not being forecasted and spatially distributed and therefore assumed static for the interim analysis.

Historically Marginalized Community	Geographic Threshold
People of Color	The census tracts which are above the regional rate for people of color AND the census tract has twice (2x) the population density of the regional average (.48 person per acre).
Low-Income	The census tracts which are above the regional rate for low-income households AND the census tract has twice (2x) the population density of the regional average (.58 person per acre).
Limited English Proficiency	The census tracts which are above the regional rate for low-income households AND those census tracts which have been identified as "safe harbor" tracts for language isolation AND the census tract has twice (2x) the population density of the regional average (.15 person per acre).

This secondary assessment is to help take a more focused look at the transportation investments being made in areas in which there are highly concentrated populations of the communities required for evaluation by federal law. Ultimately, the secondary assessment will be able to address how well the 2018 RTP investments are performing and moving towards the priority outcomes identified by historically marginalized communities in areas with the greatest concentration.

Work Group Roster

The work group consists of local jurisdictions, topical experts and representatives from MTAC and TPAC, or their designees.

Name	Affiliation
John Mermin	Metro - Workgroup lead
Todd Juhasz	Beaverton, MTAC
Abbot Flatt	Clackamas County
Kelly Rodgers	Confluence Planning
Dan Riordan	Forest Grove
Kelly Clarke	Gresham
Don Odermott Christina Fera-Thomas (Alternate)	Hillsboro, TPAC
Karla Kingsley	Kittelson & Associates Inc.
Ken Lobeck	Metro – MTIP staff
Denny Egner	Milwaukie, MTAC
Jessica Berry	Multnomah County
Bill Holstrom	Oregon Department of Land Conservation & Development
Lidwien Rahman	Oregon Department of Transportation, MTAC alternate
Phil Healy	Port of Portland, TPAC
Judith Gray Peter Hurley (Alternate)	Portland, TPAC
Lynda David	Southwest Washington RTC, TPAC
Chris Rall	Transportation-4-America
Eric Hesse	TriMet, TPAC & MTAC
Steve Kelley Erin Wardell (Alternate)	Washington County
Steve Adams	Wilsonville

Memo

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

Date: Wednesday, February 15, 2017
To: MTAC and interested parties
From: Elizabeth Mros-O'Hara, Powell-Division Project Manager
Subject: Powell-Division Transit and Development Project Update

This memo outlines the Powell-Division Transit and Development Project Locally Preferred Alternative (LPA) and next steps for MTAC actions to amend the Regional Transportation Plan to include the LPA.

In November 2016, the Powell-Division Transit and Development Project Steering Committee recommended a Locally Preferred Alternative (LPA) for high capacity transit in the Powell-Division corridor for adoption by local and regional governments. In December 2016, the LPA was adopted unanimously by the local partners – City of Gresham, City of Portland, and Multnomah County. In addition, the Oregon Department of Transportation submitted a letter of support for the LPA to Metro.

The LPA is bus rapid transit (BRT) with general stations at the locations indicated on the attached map, operating between downtown Portland and the Gresham Transit Center. The route will operate on the transit mall (5th and 6th avenues) in downtown Portland, cross the Willamette River, and run on Division Street from SE 8th Avenue in Portland to the Gresham Transit Center. In 2017 Metro staff will lead the environmental review process, a necessary step required under the National Environmental Policy Act to receive federal funding toward construction of the BRT project.

In addition to the transit components, the project also included a development component focused on equitable development, affordable housing, and capturing opportunities for development in station areas. These efforts are carried forward in the City of Portland Local Action Plan (adopted July 2016) and the City of Gresham Local Action Plan (adopted November 2015).

The presentation on February 15 to MTAC will provide an update on the Powell-Division Transit and Development Project and prepare MTAC for April 19, 2017, when the committee will be asked to provide MPAC with a recommendation on the regional adoption of the LPA and related Regional Transportation Plan (RTP) Amendments. The presentation provides an update and overview of the following:

- Locally Preferred Alternative definition and development
  - Engagement
  - Project features
  - Powell-Division corridor-wide context
  - Project performance
- Local partners role and adoption of the LPA
- Amendments to the Regional Transportation Plan related to the LPA and Powell Boulevard
- Upcoming schedule for recommendations and adoption of the RTP Amendments and the LPA.
- Overall project schedule

LPA Recommended by Steering Committee October 24th and November 7th 2016

DIVISION BRT LOCALLY PREFERRED ALTERNATIVE

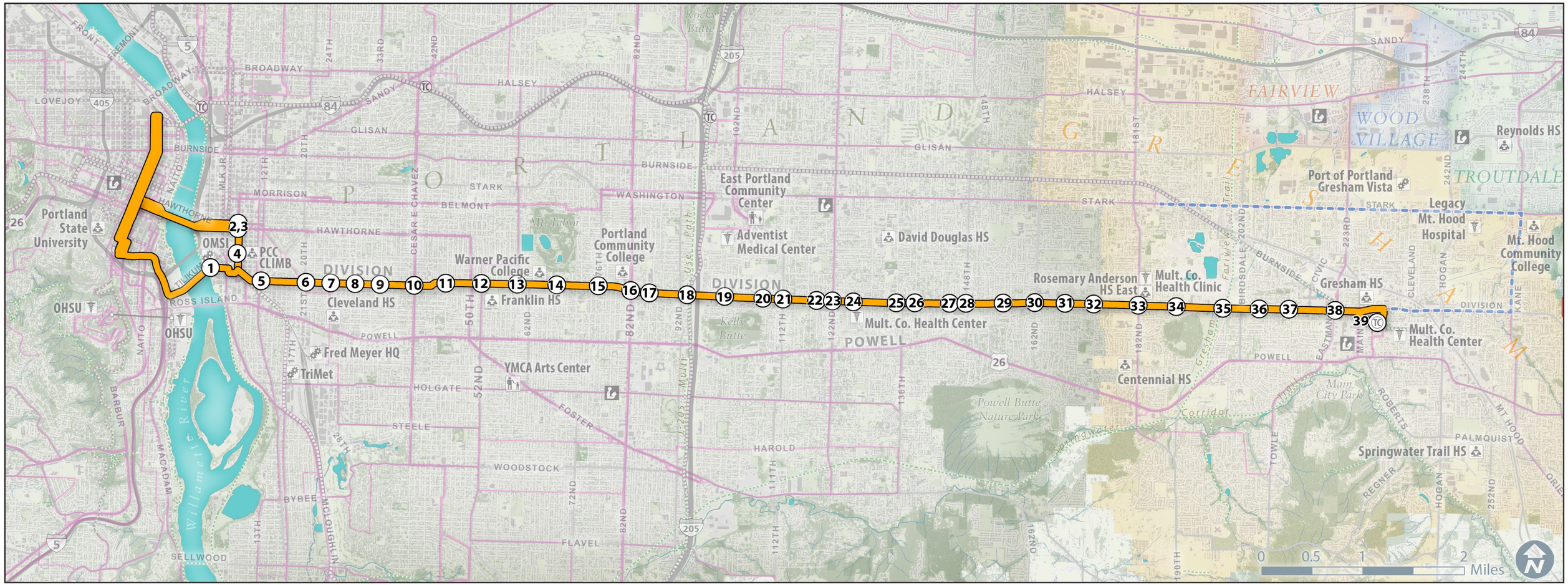
The recommended Locally Preferred Alternative for high capacity transit in the Powell-Division corridor is bus rapid transit with stations at the locations indicated on the attached map, operating between downtown Portland and the Gresham Transit Center. The route will operate on the transit mall (5th and 6th avenues) in downtown Portland, cross the Willamette River, and run on Division Street from SE 8th Avenue in Portland to the Gresham Transit Center.

LOCALLY PREFERRED ALTERNATIVE ADOPTION

- Dec. 6th Gresham City Council adoption of the LPA
- Dec. 7th Portland City Council adoption of the LPA
- Dec. 14th TriMet Board of Directors adoption of the LPA
- Dec. 22nd Multnomah County Commission adoption of the LPA
- Metro Adopts LPA with Regional Transportation Plan amendment Spring 2017

Powell-Division Transit and Development Project: Recommended Locally Preferred Alternative

Metro



Map Key	Station Location	Map Key	Station Location	Map Key	Station Location	Map Key	Station Location
1	OMSI	11	Division & 45th	21	Division & 112th	31	Division & 167th
2	Madison & 7th	12	Division & 51st	22	Division & 119th	32	Division & 174th
3	Hawthorne & 7th	13	Division & 60th	23	Division & 122nd	33	Division & 182nd
4	Harrison & 7th	14	Division & 68th	24	Division & 127th	34	Division & 190th
5	Division & 12th	15	Division & 76th	25	Division & 135th	35	Division & Gresham-Fairview Trail
6	Division & 20th	16	Division & 82nd	26	Division & 139th	36	Division & Bella Vista
7	Division & 26th	17	Division & 85th	27	Division & 145th	37	Division & Wallula/212th
8	Division & 30th	18	Division & MAX	28	Division & 148th	38	Division & Eastman
9	Division & 34th	19	Division & 101st	29	Division & 156th	39	Gresham Transit Center
10	Division & Chavez	20	Division & 109th	30	Division & 162nd		

Elements of the Recommended Locally Preferred Alternative*

- Bus Rapid Transit Alignment (River crossing to be determined)
- Approximate station location
- Line 20 connection to Mount Hood Community College

- Light rail
- Streetcar
- Aerial tram
- Frequent bus
- Standard bus
- Regional trail

*Recommended by project Steering Committee on November 7, 2016

November 8, 2016

Powell-Division Transit and Development Project

LOCALLY PREFERRED ALTERNATIVE ADOPTION SCHEDULE

- Dec. 6th Gresham City Council considers adopting LPA
- Dec. 7th Portland City Council considers adopting LPA
- Dec. 14th TriMet Board of Directors considers adopting LPA
- Dec. 22nd Multnomah County Commission considers adopting LPA
- Regional Transportation Plan amendment Spring 2017

RTP Ordinance and LPA Resolution Adoption Schedule

Round	**Meeting**	**Date**	**Time**
Introduce discussion and open up to Public Comment.	Metro Council Work Session	January 24	
	MTAC – Introduce discussion	February 15	10:00 a.m.
	DLCD Form 1 – 35 Days before Metro Council Public Hearing	*February 15*	
	Public Comment period	Feb 15-Mar 31	N/A
	TPAC – Introduce discussion	February 24	9:30 a.m.
	MPAC – Introduce discussion	March 8	5:00 p.m.
	JPACT – Introduce discussion	March 16	7:30 a.m.
	Metro Council Meeting – **Public hearing** as part of public comment period	March 23	2:00 p.m.
Seek Recommendation and Adoption of LPA & RTP Amendment	MTAC – Request recommendation to MPAC	April 19	10:00 a.m.
	TPAC – Request recommendation to JPACT	April 28	9:30 a.m.
	MPAC – **Public invited to comment**. Request recommendation to Metro Council	May 10	5:00 p.m.
	JPACT – **Public invited to comment**. Request recommendation to Metro Council	May 18	7:30 a.m.
	Metro Council Meeting – **Public Hearing** / 1st Read of Ordinance	May 25	2:00 p.m.
	Metro Council Meeting – **Adoption** **Public invited to comment** - **Council Action**	June 1	2:00 p.m.

Memo

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

Date: February 8, 2017
To: Metro Technical Advisory Committee (MTAC) and interested parties
From: Kim Ellis, RTP Project Manager
Subject: 2018 Regional Transportation Plan – Technical Work Group Meetings

PURPOSE

Provide electronic copies of meeting notes from technical work group meetings. No action requested.

BACKGROUND

At the request of members of the Transportation Policy Alternatives Committee (TPAC), meeting notes from work group meetings have been provided to TPAC and MTAC to help members stay informed of the work group discussions and progress.

The current schedule of work group meetings and copies of recently completed meeting notes are attached.

FOR MORE INFORMATION

All work group meeting materials and other project related information are posted online at: www.oregonmetro.gov/rtp.

Attachments

- Schedule of 2017 technical work group meetings *(2/8/17)*
- Roster for Technical Work *Groups (1/17/17)*
- Freight Work Group Meeting #3 *(9/27/16)*
- Performance Work Group Meeting #5 *(10/14/16)*
- Safety Work Group Meeting #3 *(10/20/16)*
- Freight Work Group Meeting #4 *(11/8/16)*
- Equity Work Group Meeting #6 *(11/17/16)*
- Performance Work Group Meeting #6 *(12/12/16)*

2018 RTP UPDATE | Technical Work Group Meetings

2017	Equity	Finance	Transit	Freight	Performance	Safety	Design
January			**Jan. 25** 1-3 p.m., Room 501, MRC			**Jan. 24** 9-11 a.m., Room 370A/B, MRC	
February			**Feb. 23** 1-3 p.m., room 401, MRC	**Feb. 6** 3-5 p.m., Council chamber MRC			
March		**TBD**					
April	**April 6** 1-4 p.m. Room 401, MRC		**TBD**			**April 4** 9-11 a.m. Room 270, MRC	
May			**TBD**	**TBD**			
June		**TBD**	**TBD**		**June 12** 2-4 p.m., Room 401, MRC		
July							
August	**August 11** 9 a.m.-noon Room 401, MRC					**TBD**	**TBD**
September	**Sept. 15** 9 a.m.-noon Room 401, MRC			**TBD**			
October	**Oct. 20** 9 a.m.-noon Room 401, MRC	**TBD**	**TBD**		**Oct. 2** 2-4 p.m. Room 401, MRC	**TBD** (if needed)	
November					**Nov. 3** 10-noon Room 401, MRC		**TBD**
December							

Meeting materials will be posted at oregonmetro.gov/rtp and oregonmetro.gov/calendar

2/8/17

Metro

www.oregon**metro.gov/rtp**

1/17/17

2018 REGIONAL TRANSPORTATION PLAN

Rosters for Technical Work Groups

Metro is working with local, regional and state partners and the public to update the region's shared vision and strategy for investing in the transportation system for the next 25 years.

To support development of the 2018 Regional Transportation Plan, Metro staff are convening eight technical work groups to provide input to the project team on implementing policy direction from the Metro Council and regional policy advisory committees. In this role, the work group members review and provide feedback to Metro staff on draft materials and analysis, keep their respective elected officials and agency/organization's leadership informed to identify issues and concerns early on, and integrate input from partners and the public. The work groups also help identify areas for further discussion by the Metro Council and regional technical and policy advisory committees.

Work group members include topical experts and representatives from the Metro Technical Advisory Committee (MTAC) and the Transportation Policy Alternatives Committee (TPAC) or their designees, and other community, business, city and county partners. Meetings of the technical work groups are posted on Metro's calendar at www.oregonmetro.gov/calendar and www.oregonmetro.gov/rtp.

Transit Work Group | *as of 1/17/17*

	Name	Affiliation
1.	Jamie Snook	Metro lead
2.	Eric Hesse	TriMet
3.	Stephan Lashbrook	City of Wilsonville's SMART
4.	Roger Hanson	C-TRAN
5.	Dan Bower	Portland Streetcar Inc.
6.	Karyn Criswell	Oregon Department of Transportation
7.	Dyami Valentine Chris Deffebach (alternate)	Washington County
8.	Karen Buehrig	Clackamas County
9.	Kate McQuillan	Multnomah County
10.	Mauricio LeClerc April Bertelsen (alternate)	City of Portland
11.	Brad Choi Gregg Snyder (alternate)	City of Hillsboro
12.	Jay Higgins	City of Gresham
13.	Jon Holan	City of Forest Grove
14.	Luke Pelz	City of Beaverton
15.	Nancy Kraushaar	City of Wilsonville/Cities of Clackamas County
16	Steve Hoyt-McBeth	City of Portland Bike Share program
17.	*Vacant*	*Public health*
18.	Alex Page	Ride Connection
19.	Dayna Webb	City of Oregon City
20.	Mike Coleman	Port of Portland
21.+	Regional Transit Providers Group	Varying transit providers in/around the region

Freight Work Group | *as of 1/17/17*

	Name	Affiliation
1.	Tim Collins	Metro lead
2.	Robert Hillier (PBOT)	City of Portland
3.	Phil Healy	Port of Portland
4.	Tony Coleman	Oregon Department of Transportation
5.	Steve Williams	Clackamas County
6.	Kate McQuillan Joanna Valencia (alternate)	Multnomah County - Planning
7.	Erin Wardell Karen Savage (alternate)	Washington County
8.	Kate Dreyfus	City of Gresham
9.	Zoe Monahan	City of Tualatin
10.	Sandra Towne Patrick Sweeney (alternate)	City of Vancouver
11.	Steve Kountz (PBPS)	City of Portland
12.	Don Odermott Gregg Snyder (alternate)	City of Hillsboro
13.	Nick Fortey	Federal Highway Administration
14.	Jana Jarvis	Oregon Trucking Association; Portland Freight Committee (Trucking)
15.	William Burgel	Burgel Rail Group; Portland Freight Committee (Railroads)
16.	Pia Welch	FedEx Express; Portland Freight Committee (Air)
17.	Jerry Grossnickle	Bernert Barge Lines; Portland Freight Committee (Marine/River)
18.	Lynda David	Regional Transportation Council
19.	Jim Hagar	Port of Vancouver
20.	Raihana Ansary	Portland Business Alliance
21.	Brendon Haggerty	Multnomah County - Public Health
22.	Kathleen Lee	Greater Portland Inc., Business Development Manager
23.	Carly Ritter	Intel, NW Region Government Affairs Manager
24.	Gary Cardwell	NW Container Service, Divisional Vice President
25.	Todd Juhasz	City of Beaverton
26.	Joel Much	Sunlight Supply (Vancouver, Wa.)

Transportation Equity Work Group | *as of 1/17/17*

	Name	Affiliation
1.	Grace Cho	Metro lead
2.	Scotty Ellis	Metro Diversity Equity Inclusion Program
3.	Jake Warr	TriMet
4.	Zan Gibbs April Bertelsen (alternate)	City of Portland
5.	Karen Savage Erin Wardell (alternate)	Washington County
6.	Jon Holan	City of Forest Grove
7.	Dan Rutzick Gregg Snyder (alternate)	City of Hillsboro
8.	Jay Higgins	City of Gresham
9.	Jessica Berry	Multnomah County - Planning
10.	Steve Williams	Clackamas County
11.	Nancy Kraushaar	City of Wilsonville/Cities of Clackamas County
12.	Heidi Guenin	GridWorks/Community Member
13.	Aaron Golub	Portland State University
14.	Kay Durtschi	Community Member
15.	Corky Collier	Columbia Corridor Business Association
16.	Duncan Hwang	Asian Pacific American Network of Oregon (APANO)
17.	Jared Franz	Community member
18.	Terra Lingley	Oregon Department of Transportation
19.	Cora Potter	Ride Connection - Paratransit transit provider
20.	Noel Mickelberry	Oregon Walks
21.	Kari Schlosshauer	National Safe Routes to School Partnership
22.	Sarah Armitage/Stephanie Caldera	Oregon Department of Environmental Quality
23.	Eddie Hill	Ground Work
24.	Nicole Phillips	OPAL/Bus Riders Unite
25.	Brendon Haggerty/Andrea Hamberg	Multnomah County - Public Health
26.	Steven Nakana	Port of Portland

Finance Work Group | *as of 1/17/17*

	Name	Affiliation
1.	Ken Lobeck	Metro lead
2.	Ted Leybold	Metro
3.	Jamie Snook	Metro
4.	Katherine Kelly	City of Gresham
5.	Richard Blackmun	City Of Forest Grove
6.	Nancy Young Eric Hesse (alternate)	TriMet
7.	Don Odermott Tina Bailey (alternate)	City of Hillsboro
8.	Chris Deffebach Steve Kelley (alternate)	Washington County
9.	Nancy Kraushaar	City of Wilsonville
10.	Mark Lear Ken Lee (alternate)	City of Portland
11.	Karen Buehrig	Clackamas County
12.	Kelly Brooks Talena Adams (alternate)	Oregon Department of Transportation
13.	Joanna Valencia Jessica Berry (alternate)	Multnomah County
14.	John Lewis	City of Oregon City
15.	Jaimie Lorenzini	City of Happy Valley

Performance Work Group | *as of 1/17/17*

	Name	Affiliation
1.	John Mermin	Metro lead
2.	Abbott Flatt	Clackamas County
3.	Bill Holstrom	Department of Land Conservation and Development
4.	Jessica Berry	Multnomah County
5.	Dan Riordan	City of Forest Grove
6.	Jay Higgins	City of Gresham
7.	Don Odermott Christina Fera-Thomas (alternate)	City of Hillsboro
8.	Lidwien Rahman	Oregon Department of Transportation
9.	Phil Healy	Port of Portland
10.	Judith Gray Peter Hurley (Alternate)	City of Portland
11.	Lynda David	Southwest Washington RTC
12.	Eric Hesse	TriMet
13.	Steve Kelley Erin Wardell (Alternate)	Washington County
14.	Steve Adams	City of Wilsonville
15.	Karla Kingsley	Kittelson & Associates Inc.
16.	Chris Rall	Transportation 4 America
17.	Kelly Rodgers	Confluence Planning
18.	Todd Juhasz	City of Beaverton

Safety Work Group | *as of 1/17/17*

	Name	Affiliation
1.	Lake McTighe	Metro lead
2.	Anthony Buczek	Metro
3.	Chris Strong	City of Gresham
4.	Clay Veka Zef Wagner/Dana Dickman (alternate)	City of Portland
5.	Jeff Owen	TriMet
6.	Dyami Valentine Stacy Shetler (alternate)	Washington County
7.	Mike Ward	City of Wilsonville
8.	Kari Schlosshauer	National Safe Routes to School
9.	Joe Marek	Clackamas County
10.	Aszita Mansor	Multnomah County – Planning and Engineering
11.	Becky Bodonyi	Multnomah County – Public Health
12.	Katherine Burns	Oregon Department of Transportation
13.	Tegan Enloe	City of Hillsboro
14.	Luke Pelz Stacy Revay (alternate)	City of Beaverton
15.	Amanda Owings	City of Lake Oswego
16.	Noel Mickelberry	Oregon Walks
17.	Nick Fortey	Federal Highway Administration
18.	Stephanie Noll	Street Trust
19.	Lidwien Rahman	ODOT Region 1

Policy Actions Work Group | *as of 1/17/17*

	Name	Affiliation
1.	Tim O'Brien	Metro lead
2.	Eric Hesse	TriMet
3.	Denny Egner	City of Milwaukie
4.	Jeannine Rustad	Tualatin Hills Parks and Recreation District
5.	Judith Gray Peter Hurley (alternate)	City of Portland
6.	Chris Deffebach	Washington County
7.	Jon Holan	City of Forest Grove
8.	Laura Weigel	City of Hillsboro
9.	Katherine Kelly	City of Gresham
10.	Miranda Bateschell	City of Wilsonville
11.	Karen Buehrig Steve Williams (alternate)	Clackamas County
12.	Lidwien Rahman	Oregon Department of Transportation
13.	Joanna Valencia	Multnomah County – Planning
14.	Jae Douglas	Multnomah County – Public Health
15.	Zoe Monahan	City of Tualatin
16.	Jaimie Lorenzini	City of Happy Valley
17.	Julia Hajduk	City of Sherwood
18.	Luke Pelz	City of Beaverton
19.	Darci Rudzinski	Angelo Planning Group

Design Work Group | *as of 1/17/17*

	Name	Affiliation
1.	Lake McTighe	Metro lead
2.	Anthony Buczek	Metro
3.	Robert Spurlock	Metro
4.	Chris Strong	City of Gresham
5.	Denver Igarta (planning) Scott Baston (engineering) Zef Wagner (alternate)	City of Portland
6.	Jeff Owen	TriMet
7.	Dyami Valentine Rob Saxton (alternate)	Washington County
8.	James Reitz Richard Blackmun (alternate)	City of Forest Grove
9.	Jeannine Rustad	Tualatin Hills Parks and Recreation District
10.	Lori Mastrantonio Meuser (planning) Rick Nys (engineering)	Clackamas County
11.	Carol Chesarek	Community member
12.	Stephanie Noll	Street Trust
13.	Zach Weigel	City of Wilsonville
14.	Andy Jeffrey	Oregon Department of Transportation
15.	Ryan Guy Hashagen	Better Blocks PDX
16.	Brendon Haggerty	Multnomah County – Public Health
17.	Bob Galati Julia Hajduk (alternate)	City of Sherwood
18.	John Boren	City of Hillsboro
19.	Allan Schmidt	Portland Parks and Recreation
20.	Mike Houck	Urban Greenspaces Institute
21.	Kathryn Doherty-Chapman	Oregon Walks
22.	Nico Larco	Sustainable Cities Initiative, University of Oregon
23.	Aszita Mansor	Multnomah County – Planning and Engineering
24.		*Clean Water Services*
25.		*Portland Bureau of Environmental Services*

Italics means the member is unconfirmed or tentative to date.

Meeting minutes

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

Meeting: RTP Freight work group meeting
Date/time: Tuesday, Sept. 27, 2016/ 8-10 a.m.
Place: Metro Regional Center Council Chambers
Purpose: **Phase 3: Regional freight vision, policies and needs – April 2016 to February 2017.** Update freight vision and supporting policies and tools, update freight needs, update evaluation framework.

Committee Attendees	Affiliation
William Burgel	Burgel Rail Group
Mike Coleman	Port of Portland
Tony Coleman	Oregon Department of Transportation
Kate Dreyfus	City of Gresham
Nicholas Fortey	Federal Highway Administration
Jerry Grossnickle	Bernert Barge Lines
Brendon Haggerty	Multnomah County Health Department
Robert Hillier	City of Portland
Jana Jarvis	Oregon Trucking Association
Todd Juhasz	City of Beaverton
Steve Kountz	City of Portland
Kate McQuillan	Multnomah County
Zoe Monahan	City of Tualatin
Don Odermott	City of Hillsboro
Lidwien Rahman	Oregon Department of Transportation
Pia Welch	FedEx
Erin Wardell	Washington County
Steve Williams	Clackamas County

Metro Attendees	
Tim Collins, Chair	Senior Transportation Planner
Cindy Pederson	Principal Researcher & Modeler
Jessica Martin	Administrative Supervisor
Marie Miller	Administrative Specialist

Welcome and Introductions

Tim Collins welcomed committee members to the meeting. An overview of the agenda was given. Additional handouts were noted

- Regional Freight Network Map
- List of priority freight needs by mode
- Buffer and Modified Planning Time Index

Review Regional Priority Freight Needs

Following the May 23, 2016 RTP Freight work group meeting, information has been gathered on freight needs by various modes. Discussion was held on concerns to address efficiency, safety and travel time with freight in the region, with ideas for options and improvements.

- Congestion on I-5 North continues to spread over more hours per day
- Commodities traveling from Washington Co. strain the current infrastructure

- Increase truck travel around the Rose Quarter and over the bridge on I-5 North
- Freight deliveries, when delayed, are being picked up by flight deliveries
- Rail crossings remain unsafe, particularly in highly used pedestrian and vehicle areas
- The $8.2 million North Portland junction improvements should help significantly
- Increase in passenger trains, as well as industrial
- The Kenton line along Sandy Blvd. with rail line study is in the works
- Union Pacific RR would benefit from higher speeds in the region, the Steel Bridge, in particular
- Air freight service at the Hillsboro Airport possible or needed?
- Congestion to rail freight facility on Westside
- High water levels impede barge access under bridges with freight and safety

Tim Collins reviewed the current list of priority freight needs and current restraints to freight movement identified by the work group. Comments on what might be added include:

- Identify the needs, not the projects in the list
- Define "Bottleneck" and be consistent with ODOT's definition.
- Issues of livability in the state highway system are not addressed
- Asking for a percentage better clarifies the need, and measures size/scope and reliability
- Freight oriented development – multiple access needs to be clustered, freight districts, and demands for freight facilities
- Marine issues with deepening channel (Hayden Island)
- The congestion on Highway 217 & Highway 26 and Cornelius Pass are not included.
- Reliable measurements for recording peak freight travel time
- Lack of information from east Multnomah County regarding freight movement
- Impact of completion of the east Multnomah County arterial roadway access projects and grid work
- Improvements are needed to the Willamette Falls Locks to allow river freight movement that would get some trucks off the highway coming into the region.
- Jana Jarvis will send a list of additional truck travel needs.

Committee members provided news and input:

- There are statewide legislative concerns, with the importance of "fix Portland first". There is a higher demand for freight mobility and scheduling needs. Need to have a priority list and make visible progress, on network throughout the Portland region. Costs need to be matched to projects; applications for funds need to be competitive.
- The Port of Portland is involved with freight issues at regional airports, business areas and other properties. We need to stay ahead of plans.
- Tualatin will benefit from transit plans, including freight projects that lighten traffic congestion.
- Damascus needs to be part of the Regional Freight Network map.
- Regarding the map, topography and geography challenges to transportation challenges are not shown.
- Connect the process: Rail to barge. Barge to trucking. Trucking to air service. Developed view of entire freight system helps evaluate and improve systems in high traffic areas.

Review 2018 RTP Regional Freight Performance Measures and potential measures for project prioritization

Tim Collins reminded the committee that the only RTP Performance Target for freight currently in the 2014 RTP is "by 2040, reduce vehicle hours of delay per truck trip by 10 percent compared to 2010". The committee discussed other proposed System Evaluation Measures.

Total truck delay on the regional freight network from 10 a.m. to 4 p.m. does not capture air travel transfer times. Should the time be extended to 6 p.m.? This measure keeps 4 – 6 PM and the PM peak hours. Pia Welch suggested including truck delay between 6 – 7 PM due to this being a key truck delivery period.

The current measurement of accessibility lists number and cost of freight projects on the regional freight network that improve accessibility to facilities. It fails to measure the movement of freight in and out of the region, off major systems, into other modes/facilities of freight travel. Federal levels focus on speed of delivery, rather than delay. Accessibility needs to measure both systems. Measuring one point of the system may focus on access locations and issues. Reliability should be measured as speed or delay on the whole system.

Forecast measurements to accommodate long-range and mid-range growth expected. Measuring various freight systems expected in the future will provide better planning in the region. Jana Jarvis suggested using a freight systems approach.

Rail travel operates and measures travel times 24 hours/day. Freight trains are staged outside the region for scheduling. We should be able to get reliability for rail travel times too. Reaching out for information with agencies and other freight travel modes through the region can better forecast needs.

There is a need to measure tangible projects with real travel time. Match these measurements with funding. Peak hours of congestion are spreading in the region. Intermodal measures give the opportunity to show outside benefits, focusing less on broad measurements, but level of regular freight plans with specific results and outcomes.

Freight demand has been increasing incrementally. The lack of investment with this is a great concern. Freight measures need to show the economic value to the region. Accessibility may not be an acceptable measure at the regional level.

Gaining time may be of more interest to measure than accessibility. The Port of Portland has future projected data on air freight forecasts. Accessibility may be measured by more localized means, with the last mile interconnection different than the state systems. Suggestion was to keep the accessibility measure simple. Maybe use travel time on the key (last mile) intermodal connector roadways. This could be a monitoring measure for the RTP at the Mobility Corridor level.

Ideas were shared on trends and logistics to better measure and monitor freight transportation:

- Develop smart phone collection data for 'real-time' freight travel times in congestion areas
- Infrastructure focus with the planning process
- Make policy changes easy to understand; known amount of policy changes to incorporate in the planning process
- Monitor GPS data on a regular basis, processing speed factors with costs, weather factors and regulations.

- Measure impacts within the whole system, including physical restraints, like rail crossings
- Metro is the guardian of the system. Look at the whole system; operating hours, freight traffic added to the system, housing on truck routes, shifts in population by area and regulations.
- Measures should identify needs, not projects. Use system measurements, including maps.
- Keep it simple. Policy and technology changes can help drive projects. Last mile measurements are useful.
- Colors on the Regional Freight Network Map: Can they become interactive? Geographic related? Other committees working on this? Goal of measures is to help map out bottlenecks/congestion. Utilize real-time map for increasing reliability.
- Rail side of freight has a mapping system in place that is very reliable.

Tim told the group that currently there are no monitoring measures for freight. The freight goal is to reduce fuel emissions with cleaner, new diesel truck engines with DEQ incentives. Focus on more conversions that monitor results with freight travel, matched to Federal requirements. The city of Portland has information about measuring fuel emissions with EPA/DEQ data and the percentage changes based on current regulations.

Tim Collins introduced a new RTP regional freight performance measure for determining how reliable the Main Roadway Routes on regional freight network are, 'Buffer Index and Modified Planning Time Index'. It was noted that the Index is the same one used in ODOT's Freight Highway Bottlenecks List Project to measure freight reliability on the Oregon State Highway System.

Comments on the Index:

- It assumes normal distribution, where variations in peak time could vary higher in travel time.
- Data comes from Metro and State Highway Systems. Certain projection data may not be known now to use this measure.

Next steps

More compilations of data for presentations and reports will be gathered to finalize the Freight Performance Measures. Additional Regional work group meeting will be needed in early November. A Doodle Poll will be sent to committee members asking for availability for a meeting during the first two weeks of November.

Adjourn

There being no further business, Chair Tim Collins adjourned the meeting at 10 a.m.

Respectfully submitted,
Marie Miller

Attachments to the minutes:

1. Agenda
2. 2018 RTP Regional Freight Performance Measures Memo
3. Draft Performance Measures Scoping Report (April 2016)
4. Regional Freight Network Map
5. List of Priority Freight Needs by Mode
6. Buffer and Modified Planning Time Index

2018 REGIONAL TRANSPORTATION PLAN UPDATE

RTP Performance Work Group - Meeting # 5

Date: October 14, 2016
Time: 9am-noon.
Place: Metro Regional Center, Room 401
600 NE Grand Avenue, Portland, OR 97232

Performance Work Group Meeting #5
October 14, 2016, 9am - noon
Metro Regional Center, Room 401

Committee Members Present:

Name	Affiliation
Joanna Valencia	Multnomah County
Phil Healy	Port of Portland
Don Odermott	Hillsboro
Abbot Flatt	Clackamas County
Eric Hesse	TriMet
Karla Kingsley	Kittelson & Associates
Bill Holstrom	Oregon Dept. of Land Conservation & Development
Steve Kelley	Washington County
Peter Hurley	Portland
Lidwien Rahman	Oregon Department of Transportation
Chris Rall	Transportation 4 America
Kate Dreyfus	Gresham

Metro Staff Present
John Mermin
Kim Ellis
Peter Bosa
Lake McTighe
Grace Cho
Tim Collins

Welcome, introductions and partner updates
Work Group members and other attendees introduced themselves. Work Group members shared partner updates.
A few members attended a recent transportation symposium at PSU and would to incorporate some of the approaches they learned into our work, especially California's experience shifting from LOS to VMT

Review Agenda & Brief update on RTP
Kim Ellis previewed the agenda and also shared a recap of the 9/23 Regional Leadership Forum and a preview of the 12/2 forum. The 12/2 forum will be similar to the April forum (small group discussion). Its focus will be funding – understanding our reality as well as the possibility of a regional funding measure.

Discuss recommended refinements to 2018 RTP System evaluation measures
John Mermin reiterated the purpose of this meeting is to finalize recommendations that will be discussed at TPAC at October 28th. Staff will document for TPAC any issues where is not agreement between varying workgroups or when a measure is still under development.

1. Climate Change

The group was fine with the recommendation of not changing this system evaluation measure. The state requires it. Next year when the group discusses target setting, we'll make sure we pick something that is consistent with the statewide target

2 . Vehicle Travel and 3) Bicycle travel

The group recommended this measure be combined into a "Travel" measure which would include:
Bike miles traveled
Pedestrian miles traveled
Auto miles traveled
Freight miles traveled
Personal miles traveled per VMT.

A member noted that we need to continue to note the importance of the VMT measure and recommended organizing the measures into 1)primary 2)secondary and note any that are state or federally mandated.

A member noted that one of our principles is to simplify the measures, so any time we're considering adding a new measure that we should be sure it's relevant to our RTP goals.

4. Motor Vehicle & Transit Travel Times

The group recommends refine and rename to "Multimodal travel" times and include bicycle and freight times in addition to auto and transit for each mobility corridor.
Follow up: Metro staff will bring back a proposal to review that includes the origins/destinations (including at least one pair matching up with each mobility corridor). There will likely also be some important combos for biking or freight that don't match up with the mobility corridors.

5. Trail Accessibility

The group recommends refining and renaming: "Access to Bicycle and Pedestrian Parkways – Number and percent of households within ½ mile of a regional bicycle or pedestrian Parkway."
Washington County suggested that there be some refinement of the ATP/RTP maps of what routes are designated parkways.

6. Mode Share

The group recommends refining and renaming "Active transportation and transit mode share" and evaluating regionwide Non-Driving mode shares for the Central City, Regional Centers, and mobility corridors. A member requested an analysis of the urban portion of Washington County. Metro will confer with its modeling staff regarding reporting mode share at a sub-regional level and will report back at the next meeting.

8. Congestion & 9. Interim Regional Mobility Policy

This measure is difficult since there are new federal regulations relating to congestion measurement that are not yet finalized. Metro and ODOT discussions are underway regarding updates to regional and state congestion measures and the Interim Regional mobility policy.

7. Habitat Impact

The group recommends testing this measure and adding contextual language to describe the goals of it better. Staff will note that this measure is tied to federal requirement to consult with resource agencies as part of an RTP Update.

10. Basic Infrastructure

Lots of discussion on the importance of connectivity and completeness.
A member suggested looking at all of the access measures together as a suite, being sure to address completeness, route directness/connectivity, orgins & destination.
There is a challenge to truly get to "completeness" with currently available data, since not all jurisdictions have pedestrian crossing, ADA compliance of sidewalks.

Metro staff will look at all the access measures and strategize how best to package them for TPAC.

11. Clean Air
The group recommended refining the air pollutants reported. A member requested looking at sub-regions e.g. Tualatin Valley gets unique air quality compare with the east side of the Tualatin mountains. Metro staff will inquire on whether mapping this at a sub regional level is possible and noted that this would be a DEQ led activity.

12. Affordability
The group recommends refining the methodology. Metro staff will explore a refined methodology.

13. Access to Daily Needs & 14. Access to Jobs
These measures were noted by members as being extremely important. The research center director has prioritized these to be improved in the long-term. The question is how far we can get now, and then improve them over time.
A member noted a "sugar tool" that has its pros and cons. Pro – it's realistic to how people think of access. Con – you can't explain exactly what's in it.

Metro staff will work with the research center staff to further develop these measures

15. Transit Productivity
The group recommended keeping this measure, and collapsing into one heading with #15 (transit productivity) to simplify. A member requested adding total ridership as well.

16. Transit Revenue Hours
This was recommended in the Climate Smart Strategy.

17. Transit Coverage
This was recommended to be a new measure, but that will be replaced by access measures eventually.

18. Access to Transit
This was recommended to be added and included as a subset of #10 Access to travel options.

19. Safety – fatal & severe crashes for ped, bike, motorists
Recommended to be moved to RTP monitoring measures, since it is not a system evaluation measure.

20. Safety - % of number and cost of safety projects in the RTP investment packages regionwide, and the % of safety projects in areas with historically underrepresented communities.
The definition of a safety project has been updated since the last work group meeting. The reference to Safe routes to school and High-injury network map have been removed:
"Safety projects: infrastructure projects with the primary intent to address a safety issue, and allocate a majority of the project cost to a documented safety countermeasure(s) to address a specific documented risk, or improve safety for vulnerable users, including people walking and bicycling, older adults and youth.
Example safety countermeasures include, but are not limited to, FHWA's nine proven safety countermeasures: road diets, medians and pedestrian crossing islands, pedestrian hybrid beacons, roundabouts, access management, retroreflective backplates, safety edge, enhanced curve delineation, and rumble strips."

This was recommended to be added. The safety workgroup will finalize its recommendation at its 10/20 meeting.

21. Safety – Exposure to crash risk through the sum of non-interstate VMT per capita in TAZs for RTP Investment packages regionwide and in historically underrepresented communities.

It was recommended to use “non-throughway” instead of “non-interstate”. Metro staff will bring a map to clarify this. e.g. to clarify that Hwy217 and US26 are excluded.
A correlation between VMT and crashes has been found by Metro staff.
There is general support to continue to explore this measure and use it for an initial assessment.

#22 Freight reliability
The group recommends refining and renaming to “Freight tuck delay”. There may be a possibility that the freight travel times within mobility corridors (measure #4) will make #25 (Freight accessibility) unnecessary
Other freight measures that are still under development will be brought back to this group at the next meeting.

Next Steps

- Discuss recommendations at 10/28 TPAC
- Early December work group meeting. Date TBD
- 2017 meetings to discuss target setting and monitoring

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Metro | *Meeting Summary*

Safety Work Group Meeting Summary
(Draft until approved by work group)
Meeting #3
October 20, 2016, 9 to 11 AM
Metro Regional Center, Room 501

ATTENDED (Work Group):
Becky Bodoyni, Multnomah County Health
Luke Pelz, Beaverton
Anthony Buczek, Metro
Tegan Enloe, Hillsboro
Nick Fortey, FHWA
Tom Kloster, Metro
Lake McTighe, Metro
Jeff Owen, TriMet
Lidwien Rahman, (alternate for ODOT/Oregon Walks)
Katherine Burns, ODOT
Kari Schlosshauer, SRTS National Partnership
Chris Strong, Gresham
Aszita Mansor, Multnomah County
Dyami Valentine, Washington County
Stacy Revay, Beaverton
Noel Mickelberry, Oregon Walks
Dana Dickman, Portland Bureau of Transportation
Eileen Cunningham, Multnomah County
Rob Sadowsky, BTA

ATTENDED (Interested Persons/Metro Staff/ Invited Guests):
Clint Chiavarini, Metro
Cindy Pederson, Metro
Jamie Snook, Metro
Mike Serritella, Metro

UNABLE TO ATTEND:
Joe Marek, Clackamas County
Stacy Shetler, Washington County
Mike Ward, Wilsonville
Clay Veka, Portland
Amanda Owings, Lake Oswego

Follow-up actions

- ✓ Investigate Metro developing a safety crash model **(Metro is pursuing this but it will not be available for the 2018 update)**
- ✓ Develop annual rolling targets for bicyclists and pedestrians
- ✓ Provide definition of proven safety counter measures
- ✓ Look at removing B, C and property damage only crashes from the High Injury Corridors analyses – areas with high levels of bicycling and walking, where a high number of minor crashes are occurring are showing up (**Metro reviewed and has determined to remove those crashes from the analysis)**

Welcome & introductions

Tom Kloster, meeting chair, welcomed the workgroup.

RTP update

Lake McTighe, safety work group lead, provided an update of the RTP process and the Regional Leadership Forums. She also recapped the purpose of the work group and the timeline for the update of the Regional Transportation Safety Plan. She highlighted the progress made by the group to date, referring to the first part of the meeting memo.

Safety System Evaluation Performance Measure Discussion

- Lake provided an overview of the relationship of system evaluation measures to monitoring measures and targets in the RTP.
- She noted that the region has never had system evaluation measures for safety.
- She reminded the work group that they had reviewed the draft safety evaluation measures at the July 26 meeting, and that the RTP performance measures work group had provided feedback at the Sept. 12 and Oct. 14 meetings. The recommended measures under discussion reflect the input from the work groups.

The work group discussed the **safety infrastructure investments system evaluation measure and the definition of a transportation safety project.** The discussion centered on how to incorporate safety and equity considerations priorities when developing project proposals. The work group agreed to moving forward with the definition of a safety project and the evaluation measure.

- Noel (Oregon Walks) - Clarifying question about defining Historically Underrepresented Communities
- Nick (FHWA) – Safety outcomes from more general projects? How are positive externalities considered within all transportation projects? Safety as a primary interest vs. safety as a general principal in transportation planning.
- Chris (Gresham) – Question regarding merging criteria around regional balance and Historically Underrepresented Communities – How are these different elements being measured?
- Tegan (Hillsboro) –Concern about including Historically Underrepresented Communities and equity lens in identifying where safety investments are going and potential prioritization; equity should be considered separately not as part of system evaluation measure, safety investments should be made regardless of race, income, etc.
- Should “proven countermeasures” be defined?

- Chris – Some jurisdictions do not call out 'safety projects' – so it may be challenging to identify them for the RTP

The work group discussed the **VMT exposure system evaluation measure.** The discussion focused on how VMT Exposure would be measured – particularly on how it would relate to specific local issues affecting VMT (new development, etc.) as well as how the data from this system evaluation measure would be used. The work group agreed to moving forward with continuing to test and analyze the evaluation measure.

- Kari (Safe Routes to School) – Have you thought about how outputs from the evaluation measure will impact actions, implementation?
- Lake – we will share information with local jurisdictions so they can use it to help guide project refinement for the RTP
- Chris – Is this used for tracking progress – seems to be more of a monitoring measure. How would the information gained from this system evaluation be used? Would this be used to judge projects as "good" or "bad"?
- Lake – it is just one tool to understand what is happening. It is a system measure, not a project measure. But if there was higher rise in VMT in one area compared to others it would be helpful to dig deeper and try to understand what is happening.
- Tom Kloster – Need to align functional class with highway's excluded from VMT exposure
- Dyami (Washington County) May be problematic to use 'per-capita' measures, some high density areas will not be flagged – should this be measured by physical space/area? How do we address the issue of VMT created by through-traffic?
- Kari – Wouldn't highways be helpful in looking at public health related outcomes – issues of environmental justice (air quality)?
- Grace – In our equity work group, we are looking at exposures impacts from pollution (this is separate from VMT Exposure; VMT is being looked at as it relates to "Safety" and as it related to "Air Quality"
- Nick – How can we make sure that the system doesn't flag/miss areas based on unique use/design characteristics or development patterns?

Regional High Injury Corridors Discussion

Lake provided a re-cap

- Refer to commonly asked questions and GIS methodology hand outs
- HIC is available on-line
- Why Metro developed – recommended as follow up action in 2014 RTP, provides a consistent approach across the region, has an urban focus and focuses on fatal and severe crashes.
- Methods described in FAQ – had several goals, including narrowing down to subset of streets to support planning and prioritization
- Aug 23, additional safety work group meeting to walk through HICs
- Updated the HICs to only include crashes on the regional transportation network. Captures 60% of severe crashes, which occur on 6% of all streets, and 23% of the regional transportation network
- Overlap with HICs identified by other jurisdictions – completely overlaps with Washington County's High Crash Corridors, with some distinctions (identifies Cornell

from Main to Butler, not the entire length; only segments of Hwy 217 are indentified, not the entire length)

- There was discussion about removing the bike and pedestrian weights for non-severe crashes

Next steps

- Next meeting will be January 24
- At that meeting the Work Group will finalize input on performance targets and measures and the high injury corridors
- Safety updates to Metro technical and policy advisory committees will take place in late January and February

Meeting minutes

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

Meeting:	RTP Freight Work Group Meeting #4
Date/time:	Tuesday, November 8, 2016 | 8-10 a.m.
Place:	Metro Regional Center, Council Chamber
Purpose:	**Phase 3: Regional freight vision, policies and needs – April 2016 to February 2017.** Update freight vision and supporting policies and tools, update freight needs, update evaluation framework.

Committee Attendees	**Affiliation**
William Burgel	Burgel Rail Group
Gary Cardwell	Northwest Containers Services, Inc.
Tony Coleman	Oregon Department of Transportation
Lynda David	RTC, Southwest Washington
Kate Dreyfus	City of Gresham
Brendon Haggerty	Multnomah County
Phil Healy	Port of Portland
Robert Hillier	City of Portland
Todd Juhasz	City of Beaverton
Steve Kountz	City of Portland
Kate McQuillan	Multnomah County
Joel Much	Sunlight Supply, Inc.
Gregg Snyder	City of Hillsboro
Patrick Sweeney	City of Vancouver, WA
Pia Welch	FedEx
Steve Williams	Clackamas County

Interested Party Attendees	
Corky Collier	Columbia Corridor Association
Jordan Vance	City of Wilsonville

Metro Staff	
Tim Collins, Chair	Senior Transportation Planner
Cindy Pederson	Principal Researcher & Modeler
Lake McTighe	Senior Transportation Planner
Jamie Snook	Principal Transportation Planner
Marie Miller	Administrative Specialist

Welcome and Introductions

Tim Collins welcomed committee members to the meeting, beginning at 8:05 a.m. Minutes from September 27, 2016 were presented for review. No additional comments or additions were noted.

Regional Freight Challenges and Opportunities

Discussion was held on the memo: *2018 RTP Regional Freight Challenges and Opportunities*, dated Nov. 7, 2016. The work group was reminded of their task in providing technical input and recommendations to Metro staff on updating the Regional Freight Plan. The work group roster was reviewed for accuracy.

Tim Collins asked if the plan could be framed as challenges with strategies, as opposed to a laundry list of projects. Could long-term and short-term investments be identified? Constraints and challenges on

- Roadways and highways
- On and around Rail Lines
- Around Air Freight
- Around Energy Pipelines
- Marine/River Traffic

A correction was made on page 4 of the memo, first line to read "The US Post Office is in the process of moving onto Air Trans Way near PDX."

Recommended changes to 2018 RTP Freight System Evaluation Measures

Discussion was held on *Attachment 1: Summary of Recommended changes to RTP System Evaluation Measures,* dated Nov. 4, 2016. The focus on the discussion was highlighted in section 11: Access to industry and Freight Intermodal Facilities, section 12: Multi-modal Travel Times, and section 13: Congestion.

The work group agreed that measurement of freight delay in the transportation system was important, with desired outcomes showing cost of delays, tracking bottlenecks and congestion to form improvements to the system, and optional systems for freight travel.

Members agreed that measuring the quantity of freight with cost of delays was an important element for tracking. National and international freight moves daily through the Metro area, with delays on all modes of transportation through the region costing companies dollars. A tracking system of this data helps evaluate improved freight movement for better cost savings and faster travel through the region.

Possible improvements for measuring freight travel for better efficiency and cost savings to recommend to RTP System Evaluation Measures:

- GPS Tracking Systems
- Incorporation of measurement tool NCA 089, mentioned by Todd Juhasz , Mitigating Freight Bottlenecks
- Quantify early and overnight freight activity; deliveries are not always available in expended hours of operations
- Targeting a realistic goal for reducing truck delays in the RTP

It was said we could not build our way out of bottlenecks or delays, but we can address the reliable measurements to address the issue. We need some type of economic measure that links investment to jobs. In discussion of congestion, the current system evaluation measure of travel times is the standard way of looking at the system. Members felt this may not be the most efficient and correct way of monitoring the system.

Members want RTP Freight plan to make the connection to having efficient, productive transportation system for moving goods because it costs consumers. This creates a message that will result in legislation at the State level for improved goods movement, reducing bottlenecks through the region, and lower emissions for better air quality. Funding requests can be tied to cost and levels of emissions that aim to be lower and produce better environment and address safety issues as well.

Discussion was held on standard way of looking at the system, which may not be the easiest to monitor, with no money for reducing delays, even with identifying them. It was asked if we are measuring delays to other users besides trucks. Are we using the right time periods to measure congestion, with all freight movements? Congestion is persistent in many areas outside the peak hours. Vehicle delay per truck and the cost of freight delay needs to be evaluated throughout the day, not just during peak periods.

Do our current freight traffic maps reflect corridors that include industrial lands, truck interchanges, rail crossings, technology that measures real-time data (where Bluetooth readers in WA State have proven effective), automated systems to collect data, shift in business hours with freight pick up and deliveries, the persistence of key routes with little options for other routes to travel.

It was noted that the State Task Force on this issue identified the Portland area with heavy freight delay challenges that translated into jobs and benefits statewide. The state of Oregon needs to know that investment in freight bottlenecks means jobs. Metro can increase emphasis with research on this, with political leverage across the state to make a likely passage for change.

To address System Evaluation Measure #11 (Access to industry and freight intermodal facilities), there should be a way to assess acres of industrial land that are transportation constrained.

Patrick Sweeney suggested creating a hierarchy for freight corridors, where physical delivery works better when identified at each level. This would include (a) Freight movement on the interstate system, (b) Freight distribution between intermodal facilities, and (c) Deliveries and distribution of goods to retailers and other local facilities.

Further comments on measure #12 (Multi-modal Travel Times) included measuring volumes of freight (tonnage or value) could be a better way of linking the growth rate, and travel time. Infrastructure improvements at terminal sites, lane widths, weight and height restrictions, linking forecasts to volumes, and the cost of investment at facilities with freight are all elements to consider.

These new questions and discussion points lead to the need for a subcommittee to meet, in mid-December. Members are:

Patrick Sweeney, City of Vancouver
Todd Juhasz, City of Beaverton
Steve Kountz, City of Portland
Robert Hillier, City of Portland
Phil Healy, Port of Portland
Steve Williams, Clackamas County
Erin Wardell, Washington County
Steve Kelley, Washington County
Gary Cardwell, Northwest Container Service
Corky Collier, Columbia Corridor Association
Tim Collins, Metro

Development of potential freight measures to inform near- and long-term investment priorities
Discussion was held on three potential freight measures that could be used to inform near and long-term investment priorities on the Regional Freight Network.

- Congestion Measure
- Reliability Measure
- Travel Time Measure on Key Intermodal Facilities

Rail travel has a more reliable tracking system for measuring congestion and travel time, but truck travel does not. The members felt the goals listed for minimum performance levels desired could not be reached and were unrealistic, and did not communicate how severe the problems are. Why set unachievable goals?

It was agreed that we first need to identify the problems with mapping and analysis, put this information in front of policy makers that show the impact to traffic, air quality, increasing jobs, safety and economy. Realistic measures need to be given with a good presentation for funding.

The New Reliability Index equation was discussed. Congestion and incident traffic was considered with the equation. General consensus was gained that travel time is hard to forecast; there was agreement to use ODOT's methodology in the Freight Highway Bottlenecks List Project to measure freight reliability.

Travel time measure on key intermodal facilities will be further discussed at the January 2017 meeting, with materials set to members prior to the meeting.

Next steps

1. Doodle Poll will be sent to subcommittee members identified in this meeting. Selection of subcommittee meeting date and time identified, meeting notice sent to those members. Meeting expected mid-December.
2. Review RTP freight projects for updated Regional Freight Plan; begin updating the Regional Freight Network map.
3. Next RTP Freight work group meeting in mid-January, 2017. Meeting notice will be sent to members in December.

Adjourn

There being no further business, Chair Tim Collins adjourned the meeting at 10 a.m.

Respectfully submitted,
Marie Miller

Attachments to the minutes:

1. Agenda
2. Meeting minutes from Sept. 27, 2016 Regional Freight work group meeting
3. Regional Freight Challenges and Opportunities memo
4. Summary of Recommended changes to RTP System Evaluation Measures table
5. Potential freight measures to inform investment priorities memo
6. Interim Regional Mobility Policy Table 2.4
7. Regional Freight Network Map

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Metro | *Meeting Summary*

2018 RTP Transportation Equity Work Group – Meeting #6
November 17, 2016
1 - 3 p.m.
Metro Regional Center, Room 401

Committee Members	**Affiliation**	**Attendance**
Dan Rutzick	City of Hillsboro	Present
April Bertelsen	City of Portland – Transportation	Present
Aaron Golub	Portland State University	Present
Jake Warr	TriMet	Present
Steve Williams	Clackamas County	Present
Andrea Hamberg	Multnomah County Public Health	Present
Terra Lingley	ODOT	Present
Radcliff Dacanay	City of Portland - Planning	Present
Jessica Berry	Multnomah County	Present
Jay Higgins	City of Gresham	Present
Interested Parties		
Katie Selin	Portland State University	Present
Eric Hesse	TriMet	Present
Metro Staff		
Grace Cho	Metro	Present
Lake McTighe	Metro	Present
Cliff Higgins	Metro	Present
Jamie Snook	Metro	Present
Cindy Pederson	Metro	Present
Ted Leybold	Metro	Present

I. WELCOME, INTRODUCTIONS, AND PARTNER UPDATES

Cliff Higgins welcomed meeting attendees and walked through the agenda for the work group meeting. Following the notification about the agenda changes, he asked for a quick round of introductions and partner updates.

Mr. Higgins gave an update on a staff discussion regarding the use of the term, "historically underrepresented communities" as shorthand for noting collectively communities of color, lower-income communities, and limited English proficiency populations. He discussed how there has been comments from community members about the negative connotation of the term. Mr. Higgins outlined that Metro staff has proposed to transition from using the term "historically

underrepresented communities" to "historically marginalized communities" or to list the individual communities to address the community concerns. He asked the work group for feedback and thoughts on the proposal. The work group supported the terminology change and the identification of individual communities.

II. 2018 RTP TRANSPORTATION EQUITY SYSTEM EVALUATION MEASURES – METHOD DEVELOPMENT UPDATE

Ms. Cho provided a brief recap of where the work group had left off at its last meeting from September 29th. She discussed how the work group had given Metro staff input on key areas of the individual transportation equity system evaluation measures. She also reminded the work group they collectively gave Metro staff the green light to move forward with sharing the transportation equity system evaluation measures to other 2018 RTP work groups and technical committees (e.g. TPAC and MTAC). Ms. Cho mentioned since the September work group meeting, a lot of technical feedback had been received and Metro staff has been working on incorporating and trying to balance the feedback received. She told the work group the feedback from the transportation equity work group was prioritized when trying to balance the other feedback considerations.

In recognizing the transportation equity evaluation measures had been adjusted to reflect the feedback received. Ms. Cho provided a recap of the different adjustments. She started with the adjustments based on the feedback of the work group on the key assumption areas for the transportation equity analysis. Ms. Cho noted at the previous work group meeting the work group were interested in revisiting: 1) the geography and definition of lower-income communities; and 2) taking a more focused look at places in which there are higher concentrations of communities of color, lower-income populations, limited English proficiency populations, older adults, and youth. Ms. Cho displayed some maps which illustrated the Metro staff proposals taking into consideration both a new definition of lower-income communities and also a proposal for taking a more focused look at concentrations of communities of color, lower-income populations, limited English proficiency populations, older adults, and youth.

For further detail, she pointed to the work group to the attachments in the work group packet which outlines the feedback and the adjustments accordingly.

At the end of the assumptions presentation, Ms. Cho paused to take any questions.

Questions and Discussion Regarding Key Assumptions for the Transportation Equity Analysis

Mr. Williams opened the discussion as to why certain limited English proficiency populations were not showing up in Clackamas County on the population maps. He noted there are language isolated populations in Clackamas County. Ms. Cho responded that in using the regional average (using a mean rather than a median as defining the average) the population numbers the relative concentration of a certain population may be high for that jurisdiction, but does not rise above the regional average. And in those cases, some places may not show up in the map. Ms. Cho noted those places are important for local jurisdictions to identify so the jurisdiction can look more closely at how its transportation investments are supporting the mobility needs of its underserved communities.

Additionally, Mr. Williams asked why people with disabilities are not being evaluated as part of the transportation equity analysis.

Ms. Cho and Mr. Higgins both responded that there have been issues with locating reliable population data for people with disabilities. However, Ms. Cho noted there had been some interesting planning work done through TriMet's Coordinated Transportation Plan (CTP) and as part of the policy recommendations and refinements for the 2018 RTP, the CTP recommendations can come forward through the development of the policies. The work group can voice support and provide input to staff as to how members would like to see the CTP work integrated into the 2018 RTP.

Mr. Rutzik commented that the first assessment is still too broad as to how it is defining communities. He asked staff to look at increasing the threshold being used to define the geography of concentrated communities of older adults and youth. He mentioned mapping at 150% or 200% of the regional average to see where the breakpoints are for looking at areas with very high concentrations of older adults and youth.

Mr. Warr further commented that instead of using an arbitrary threshold such as 150% or 200% of the regional average for older adults and youth, potentially looking at a standard deviation above or those census tracts in the top 25 percentile of older adults or young persons. Mr. Warr advocated that older adults and youth be uncoupled in defining communities. Mr. Warr also suggested Metro staff conduct a third screening specifically looking at how the transportation investment program is addressing the mobility needs of older adults and young people. He felt that not including older adults and youth in the secondary screening proposal warranted looking more closely are areas with high concentrations of older adults and youth as a third screening assessment. Mr. Hesse supported Mr. Warr's points and elaborated that the wave of older populations in the future will have a significant impact to the transportation system.

Mr. Dacanay suggested that as part of the mapping work of communities, potentially showing where there are greater concentrations of different populations, to help illustrate that there are places which have above the regional average of older adults and youth, but also to recognize the places with a greater concentration of older adults and youth.

Due to needing to move on to other items on the agenda and in recognizing that several work group members were not in agreement with the staff approach to identifying areas within the region with a higher concentration of older adults and young people, Ms. Cho said staff will relook at the demographic work and the thresholds for determining areas with concentrated numbers of older adults and youth prior to the April work group meeting and will communicate to the work group the staff recommendation. Ms. Cho alluded the communication will likely take place through email.

<u>Questions and Discussion of Transportation Equity System Evaluation Measures</u>
Following the discussion of the key assumptions, Mr. Higgins reminded the work group that an action was needed by the work group members at the meeting. The action being requested by is to allow Metro staff to finalize the draft transportation equity system evaluation measures and enter into a beta testing phase. Following the note from Mr. Higgins, he turned over the conversation to Ms. Cho.

Ms. Cho provided an overview of the adjustments and the status of the methodology development of the transportation equity system evaluation measures. Referring to the attachments, Ms. Cho noted how the individual system measures had changed according to the feedback. She also gave an update on two individual system evaluation measures which are receiving a greater overhaul based on the work group(s) and technical committee feedback received. She noted Metro staff has developed an approach for these measures, but they look different from what had been presented at the September meeting and the methodology has not been finalized. Lastly, Ms. Cho provided an update on the two transportation equity system evaluation measures in which Metro staff is determining whether or not they will move forward as part of the system evaluation of the 2018 RTP due to larger than expected technical methodology barriers to address and the resource capacity to undertake those issues as part of the 2018 RTP. Ms. Cho noted Metro staff is looking at different options for incorporating the two measures. Ms. Cho then reiterated the action she had been seeking from the work group and explained further the intention of wrapping up the technical discussion of the transportation equity system evaluation measures to allow staff to get to work and test how well the measures will work. She noted that in being able to test, Metro staff will be able to bring to the work group potential refinements and lessons learned.

Mr. Higgins asked Ms. Cho to clarify what "beta testing" means and what it would look like for the next four months. Ms. Cho explained that Metro staff will be utilizing a smaller batch of projects encompassed in the 2018-2021 MTIP to look at how well the transportation equity system evaluation measures work and how well it will be able to handle the scale of projects in the 2018 RTP.

Following her presentation, Ms. Cho opened up the transportation equity system evaluation measures for discussion. Work group comments focused on small technical details regarding the two measures unknown to-date to move forward in the system evaluation. A question emerged about the status of project evaluation as part of the 2018 RTP. Ms. Cho responded that policymaker direction has not been received as to whether that will be happening, but a decision is expected at some time in early 2017.

In general, the work group members were supportive in Metro staff moving forward in order to begin testing and learn from the results. The work group gave approval for Metro staff to finalize the methodology for the transportation equity system evaluation and to enter the beta testing phase throughout the winter and early spring 2017.

IV. 2018 RTP PERFORMANCE MANAGEMENT PROGRAM – OVERVIEW AND BRAINSTORM DISCUSSION

As the final item of the agenda item, Ms. Cho provided a brief presentation of the 2018 RTP performance management program. She described the three parts of the performance management program: 1) system performance evaluation, 2) performance targets, and 3) performance monitoring. Following, Ms. Cho discussed how for the past year, the work group had been focused on defining and refining the system performance evaluation with an equity focus. She explained in 2017, the work will shift as the work group will provide input to Metro staff on policy refinements. A key area of focus will be the performance targets and performance monitoring as both will be critical in setting policy direction for regional transportation planning activities and being accountable in making progress towards achieving policy outcomes (e.g. performance targets).

After…Ms. Cho asked the work group to look at an attachment within the work group packet which outlines the existing and any proposed refinements proposed to-date to the 2018 RTP performance management program. She noted the transportation equity work group's the….

In the limited amount of time available, brainstormed ideas to emerge included:

- Including enhanced transit corridor as part of the assessment and policy discussion in the 2018 RTP system evaluation in the accessibility measures.
    - Consider reporting the enhanced transit corridors separately
- Consider the balance of realistic/achievable vs. aspirational performance targets.
    - Use baseline performance data to help inform and set performance targets.
    - Encourage policymakers to have an open dialogue of about the challenges and benefits of different types of targets (aspiration and realistic) and to have them provide the direction and balance.
        - An example discussed was the Vision Zero target being proposed by the 2018 RTP Safety work group.
    - Consider adding an equity lens across all the 2018 RTP performance targets in addition to those targets which speak to the priority outcomes of communities of color, lower-income populations, limited English proficiency populations, older adults, and youth.

Because of time, the brainstorming discussion was wrapped up early. Ms. Cho noted even in the short amount of time available, the outcomes of the discussion were helpful to staff and would help springboard the discussion of policy refinements in 2017. She also noted that she will incorporate and return to the work group with some policy refinements pertaining to supporting the mobility of people with disabilities, despite the transportation equity analysis not taking an explicit focus on people with disabilities.

V. QUESTIONS AND ANSWERS

Due to time constraints, Ms. Cho skipped the question and answer session and mentioned to the work group members that she would be available after the meeting for any further questions.

VI. NEXT STEPS

Ms. Cho noted that the next work group meeting will not be until April 6, 2017. Following, she walked through a preview of the material to be covered at the April work group meeting. She walked through the homework assignments for the work group. She asked between the work group meetings, for members to complete the following "homework" assignments:

- Report back to others in your agency working, constituents, and leadership working on the 2018 RTP on what was discussed at the work group meeting and bring any feedback.
- Continue to stay connected to the events and activities happening with the 2018 RTP. She encouraged attendance to the December 2nd regional leadership forum.
- Her final homework assignment to her work group was to get excited and get ready for the 2018 RTP policy discussions to begin taking place at the 2017 work group meetings.

Lastly, Ms. Cho thanked the work group members for all their hard work over the course of 2016. She reminded the work group how much they had accomplished to date and appreciated their commitment to supporting the transportation equity work.

VIII. ADJOURN

There being no further business or questions, Ms. Cho and Mr. Higgins adjourned the meeting at 3:00 p.m.

Meeting summary prepared by: Grace Cho, Transportation Equity Project Manager

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2018 REGIONAL TRANSPORTATION PLAN UPDATE

RTP Performance Work Group - Meeting # 6

Date: December 12, 2016
Time: 10am - noon
Place: Metro Regional Center, Room 401

Committee Members Present:

Name	Affiliation
Jessica Berry	Multnomah County
Phil Healy	Port of Portland
Christina Fera-Thomas	Hillsboro
Abbot Flatt	Clackamas County
Eric Hesse	TriMet
Karla Kingsley	Kittelson & Associates
Bill Holstrom	Oregon Dept. of Land Conservation & Development
Steve Kelley	Washington County
Peter Hurley	Portland
Lidwien Rahman	Oregon Department of Transportation
Chris Rall	Transportation 4 America
Lynda David	RTC

Metro Staff Present
John Mermin
Tom Kloster
Peter Bosa
Lake McTighe
Grace Cho
Tim Collins
Jamie Snook

I. Partner Updates

The Portland City Council has initial performance measures – city council will adopt on Dec 21st (VMT, Mode Share, Greenhouse Emissions). A second round of measures, including congestion will be released as a discussion draft in January.

A member inquired about the Portland speed limit signage and relationship with ODOT. The City is seeking additional flexibility for city owned facilities. Other local jurisdictions are interested as well, e.g. Wilsonville.

II. Review Agenda & Brief Update on RTP

Tom Kloster summarized the outcomes/goals of the third regional leadership forum. One takeaway was Portland Mayor-elect Wheeler urging regional leaders to be bigger and bolder when developing a package of projects then past efforts, and added that voters needed to hear a compelling, well-articulated vision. A workgroup member added another takeaway that a coalition needs to form around what a funding package could look like. The leader of this coalition is yet to be determined.

Tom added that this RTP needs to outline a group of investments that could provide the basis for a regional funding measure. A workgroup member posed the question regarding the relationship between the system evaluation measures we've been discussing and any project evaluation criteria that may be developed? Tom responded that's to be determined, but there will be a connection – Tyler Frisbee is leading up our efforts and has been discussing with electeds how they want to include performance measures in the evaluation criteria. Metro is exploring the process for how projects are submitted to the RTP – providing a clear filter for what comes into the plan. The goal is not to 'kill' projects, but to help improve projects and provide guidance/feedback.

III. Review Updated Goals and Measures Comparison Table

John Mermin framed the desired outcomes of the meeting: 1) provide updates on measures under development 2) finalize recommendations that will be discussed at TPAC on January 27. He reminded the group that although we are wrapping things up today, there will still be another chance to discuss measures next summer when we are reviewing the results of the evaluation of the updated RTP project list. Refinements may be needed based on what we learn by using the measures.

John then described the updated table displaying a crosswalk of the system evaluation measures and the RTP Goals. It has been reorganized around themes and simplified based on feedback from this workgroup, TPAC and MTAC.

John clarified that staff is still working on developing an affordability measure. The boxes (for which RTP goals it relates to) will be filled in if the measures goes forward.

A member suggested suggests that the dots should be dynamic to show the extent to which each of these measures aligns with the goal. e.g. solid, half-filled, empty

IV. Discuss Recommended Refinements to 2018 RTP System Evaluation Measures

Update on the RTP Freight system evaluation measures under development.

Tim Collins presented to the group and explained that the RTP Freight workgroup met on 11/12 and there will be a sub-committee of that workgroup meeting later today to further discuss the "access to industry and freight intermodal facilities" measure. They are trying to develop a new measure that looks at the extent that industrial land and freight intermodal facilities are "transportation constrained." They'd like to know where in our region (beside just state owned facilities) are constrained.

Regarding travel time periods of importance to freight, Tim shared that the workgroup has been discussing with freight operators to see when they're traveling and to set any congestion measures based on when they're using the system. For congestion (cost of delay) they'd be looking at the general delay at multiple hours and calculate the cost of delay by truck.

A member asked what is meant by "constrained" Tim clarified that "constrained" is the way the state defines a bottleneck based on (V/C), travel times and unreliability . We intend to identify the bottlenecks in the system and .the number of acres and facilities that are impacted.

Regarding reliability, Tim clarified that we can't yet project it into the future, but we can describe current conditions. It was noted by a workgroup member that in general, reliability is better to measure than hours of delay – and this point of view is consistent with the region's comments to USDOT on their draft congestion rules.

A workgroup member asserted that while there are issues with our inability to project reliability, that we should not let that get in the way of measuring it somehow. USDOT has stated that crashes and response to crashes is the leading cause of unreliability. We can manage that and if we measure reliability we can address it more directly. If we can look at what is causing unreliability, then we can address those directly.

Tim mentioned that the State was planning to measure present-day reliability for freight based on a measure in a statewide bottleneck study. He believes that it's trying to match the guidelines from USDOT. Tim is trying to tie this to the regional freight routes.

A workgroup member reminded us that we need to include reliability in our storytelling, even if we don't have an ability to forecast it. Another member offered that the group will get more comfortable once they can see which other measures (beyond system evaluation measures) get at the goals more broadly (e.g. showing how monitoring connects to project selection).

A member described that the freight industry is currently planning around those key bottlenecks on the state system. They plan shipments to avoid certain locations at certain times. A tool that would forecast the extent of time of congestion and was connected to reliability (is it a reliable bottleneck?) and safety (what's the frequency of crashes at this bottleneck?) would be valuable.

Regarding freight travel times, Tim mentioned that we need to make a professional judgment around what are the most essential routes to measure. We're really trying to measure the connection between the most important origins and destinations.

A workgroup member mentioned that the route shown through Gresham is not the locally preferred route *(Note – she clarified after the meeting that she was mistaken, she thought the route was showing 257th. The route shown is actually correct – 242n/Hogan to 238th)*

A member raised issues with the routes shown on the Westside and offered to help provide more relevant routes that match Washington county data regarding truck travel patterns.

A member inquired whether Cornelius Pass Rd should be included, since it's the hazardous material route. (Those materials are not allowed through Hwy 26 tunnel).It was noted that Cornelius Pass Rd is part of a mobility corridor (if you can't get through the tunnel).

Update on VMT, Mode share, Multimodal travel times, Congestion & Interim regional mobility policy (John Mermin)

#1 Multimodal Travel
This measure will now include Person miles traveled (in addition to VMT, BMT, Freight miles traveled and pedestrian miles traveled). VMT will now be calculated at the sub-regional level as requested. (Portland, urban Washington Co, Urban Clackamas Co, East Mult Co). As one in the past for smaller than regionwide geographies, this calculation will include travel to, from, and within the boundary of the sub-region. For TAZ that are between two zones, we'll assign it to the jurisdiction it's mostly in.

#2 Active Transportation & Transit Mode share
In addition to regionwide, central city, regional centers, and mobility corridors, we will all also report this at the sub-regional level as requested.

#12 Multimodal Travel Times
In past RTPs we only looked at auto/transit travel times. For, this RTP we'll be adding bike pedestrian and freight as well. We have a lot of overlap between auto, transit and bike modes in terms of origin/destination pairs which will allow us to make comparisons between two modes to see where modes are competitive and which ones are suffering.
Jamie Snook added that the transit workgroup we added about 10 O/D pairs (not shown on the handouts) – mostly suburb to suburb. As much as possible they wanted Metro to compare all modes.

Lake McTighe mentioned that she'd be getting input from regionwide bike coordinators on the proposed O/D pairs for bike travel times.

A workgroup member raised the issue of suburb to suburb connections e.g. Wilsonville to Sherwood to Wilsonville to Canby.

Tom responded that we can do any of these, but which corridors do you want to be formally reported on as part of the RTP? (vs. local TSP analyses that you do with the data we provide)

A workgroup member noted that the Portland CBD to Milwaukie O/D pair was missing from the transit map and recommended that it get added (given the new light rail connection).

A workgroup member asked about the opportunity to add in more suburban centers in Washington County that are developing now or have developed recently. He noted that the bike O/D pairs included more than the auto.
John responded that it's a balance – we'd like to report on the most important pairs from a regionwide perspective, and that if we added too many pairs the volume of data outputs gets to be overwhelming.

A workgroup member suggested provide some criteria about which ones are key? That would allow him to provide more informed feedback on the draft list.

Tom reminded the group that the purpose of the travel time measure is about providing some guidance about how the system is functioning.

A workgroup member asked how the model accounts for the total travel time (e.g. parking c car or waiting for transit to arrive. Cindy responded that historically just at the in-vehicle time only, but that the goal is to include out of vehicle time when we have a tour-based model in the future. For now, there are just standard assumptions for parking times.

A workgroup member recommended adding Cornelius Pass as an auto corridor (St John's to Hillsboro via Cornelius Pass)

A workgroup member recommended highlighting connections that don't currently exist because of system gaps. Potential for creating/using a system completion map?

Lake noted that by looking at time by modes would help highlight gaps by modes (i.e. why is it taking so long to bike from here to here?)

A workgroup member asked if bicycle travel times are restricted to bike facilities or all possible routes. Lake replied that the model accounts for attractiveness of the facility and routes people accordingly – weighting time/ out of direction travel vs. attractiveness of the facility type.

A workgroup member noted it is important to extract/tell the story about what we can take away from the system measures

<u>#13 Congestion & Interim regional mobility policy</u>
John described that we're recommended keeping hours of delay per capita, even though hours of delay is not the preferred method of congestion. At least it is on a per capita basis so it factors in (and allows the region to take credit for) those using other modes who are not necessarily stuck in the delay.
John noted that the Interim Regional mobility policy will be kept in the plan for now, but that ODOT has agreed to help fund a refinement plan following the 2018 RTP that will update this policy.

A workgroup member noted that many local jurisdictions would like to be involved in these discussions, since those perspectives can differ from ODOT's/ Salem. Another adder that having scoping discussions for the refinement plan sooner rather than later would be desirable. A workgroup member noted that he'd like to explore with Metro additional flexibility to local jurisdictions regarding the IRMP within Metro's regulatory document – the Regional transportation Function Plan – prior to the refinement plan completion.

Safety System Evaluation Measures (Lake McTighe)

Lake provided an update for two measures.

<u>#5 Exposure to Crash Risk</u>

She clarified that this is measuring non-freeway miles (VMT will be excluded on specific limited access routes). VMT/TAZ Area as opposed to per capita

#6 Access to Travel Options
She is still trying to assess whether ADA/accessibility will be included.

Equity System Evaluation Measures (Grace Cho)
Grace provided an update for three measures.
#8 "Access to Community Places"
She clarified that name had changed to "Access to Community Places".
#3.Affordability
Metro planning staff is working with Research Center to develop a methodology around this (still scoping) – focuses on 'out-of-pocket-consumer-costs'.

#16 Clear Air
Metro staff has identified a list of 9 air toxics. Metro Staff is exploring with DEQ the potential to do sub regional evaluations on air quality and emissions as requested by this workgroup.

Next Steps

Peter Hurley emphasized that there are a number of things that we can't model/forecast but are really important when thinking about how we tell the story. He has concerns about congestion measures not considering reliability, etc. He recommends spending more time looking about how to tell the reliability story using the factors that research identifies as determinants of reliability. This will help us identify how improvements will impact the system as a whole.

Tom responded that he did not think we're retreating from the concept – but we may need to circle back and think about how we're communicating/telling the story, etc. Lake offered that increased VMT creates increased crashes, climate change impacts. She offered that we should consider how resilient/flexible the system is when there is an event (accident, weather, etc.)

John responded that prior to our next meeting (in June), we may hold have a 'workshop' to talk about reliability, project criteria, with all of the RTP workgroup members (e.g. equity, safety, freight, transit, performance measures)

Other next steps include presentations to TPAC on 1/27 and MTAC 2/15 and recommendation from TPAC to JPACT on 2/24. John instructed members to communicate with their TPAC and MTAC representatives in advance of those meetings.

John noted that methodologies for each member are being developed my Metro staff and will be shared with TPAC on 1/27 (and will be sent out to the workgroup as well). John thanked workgroup members for their time spent to date and Tom adjourned the meeting.