

Agenda



Metro

600 NE Grand Ave.
Portland, OR 97232-2736

2018 REGIONAL TRANSPORTATION PLAN UPDATE RTP Performance Work Group - Meeting # 5

Date: December 12, 2016
 Time: 10 a.m. to noon
 Place: Metro Regional Center, Room 401
 600 NE Grand Avenue, Portland, OR 97232
 Purpose: Discuss recommendations to TPAC and MTAC on updates to RTP
 Performance Measures
 Outcome: Finalized list of recommendations to TPAC and MTAC

Working together across interests and communities can help ensure every person and business in the Portland metropolitan region has access to safe, reliable, affordable and healthy ways to get around. Find out more at oregonmetro.gov/rtp.

Agenda

10:00	Welcome & introductions	Tom Kloster
10:05	Partner Updates <i>Who have you talked to about this work? What have you heard?</i>	Everyone
10:10	Review Agenda & Brief update on RTP <ul style="list-style-type: none"> • Regional Leadership Forum #3 takeaways and next steps • Schedule (Call for projects, System Analysis and Findings) 	Tom Kloster
10:15	Review updated Goals and Measures comparison table	John Mermin
10:25	Discuss recommended refinements to 2018 RTP system evaluation measures	
	<i>10:25-10:55 Freight truck delay, Total cost of delay on freight network, Access to industry & freight</i>	Tim Collins
	<i>10:55 – 11:20 Updates on VMT, Mode share, Multimodal travel times, Congestion & Interim Regional Mobility Policy</i>	John Mermin
	<i>11:20 – 11:45 Access to travel options-system connectivity, Safety-exposure to crash risk</i>	Lake McTighe
	<i>11:45 – 11:55 Habitat impact, clean air, Access to community Places</i>	Grace Cho
11:55	Next Steps for system evaluation measures	Tom Kloster / John Mermin

Noon Adjourn

Meeting Packet	Next Meeting
<ul style="list-style-type: none"> • Agenda • Summary from Oct 14 meeting • Summary memo on Performance Measures recommendations • RTP goals vs Measures table 	June 2017

Directions, travel options and parking information

Covered bike racks are located on the north plaza and inside the Irving Street visitor garage. Metro Regional Center is on TriMet bus line 6 and the streetcar, and just a few blocks from the Rose Quarter Transit Center, two MAX stations and several other bus lines. Visit our website for more information: <http://www.oregonmetro.gov/metro-regional-center>



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, origins & 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

RTP System Evaluation Measures and RTP Goals Comparison (Performance work group 12/12/16)

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 - 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 per VMT	•	•	•	•	•	•	•	•		
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.	•	•	•	•		•	•	•		
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.		•		•		•	•	•	•	
5	Exposure to crash risk* – Non-Freeway VMT exposure per capita 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.		•		•			•		•	
How easily, comfortably and directly can we access jobs and destinations in our region?											
6	Access to Travel Options – system connectivity* - methodology TBD. Sub measure: Access to transit (percent of bike or pedestrian network gaps completed within ½-mile of transit)	•		•		•	•	•	•	•	
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	•	•	•			•	•		•	
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.	•		•			•	•		•	
9	Access to Bicycle and Pedestrian Parkways – Number and percent of households within ½ mile of a bicycle or pedestrian parkway.	•	•	•		•	•	•	•	•	
10	Access to Industry and Freight Intermodal Facilities – Methodology TBD										
How efficient is travel in our region?											
11	Multi-modal Travel Times – between key origin-destinations for mid-day and 2-hr PM peak	•	•	•	•						
12	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		•		•	•	•		•		
13	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	•		•		•	•	•	•	•	
How will transportation impact climate change, air quality and the environment?											
14	Climate Change - Tons of transportation-related greenhouse gas emissions (e.g. CO ₂)		•	•			•	•	•		
15	Clean Air - Tons of transportation-related air pollutants (e.g.CO, ozone, and PM-10)		•	•			•	•		•	
16	Habitat impact* - Number and percent of projects that intersect high value habitat	•					•	•		•	

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.

ID#	System Evaluation Measure	Staff Recommendation	Rationale / Notes	Work Group(s) Recommendation	TPAC & MTAC comments
How much do people and goods travel in our region?					
1.	Multimodal travel A) Vehicle Miles Traveled (VMT) <i>(total, per capita, and per employee)</i> B) Bicycle miles traveled <i>(total and per capita)</i> C) Freight miles traveled D) Pedestrian miles traveled <i>(total and per capita)</i> E) Person miles traveled per VMT	Refine and rename Vehicle travel and Bicycle travel Multimodal travel Previously Metro reported vehicle miles traveled and bicycle miles traveled <i>(both total and per capita)</i> . Staff now recommends reporting auto, bike, pedestrian and freight, as well as auto vmt per employee and person miles traveled per VMT.	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.	Performance work group supports the staff recommendation and 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: <i>"How much and by what methods are we traveling?"</i>
2.	Active transportation and transit mode share System-wide (total and share): A) walking B) bicycling C) transit Non-SOV travel (total and share): A) Central City B) Regional Centers C) Mobility corridors D) Sub-regions.	Refine and rename: <u>"Active transportation and transit mode share"</u>	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.	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. <i>Updated 12.5.16 – Staff is continuing to work through the methodology development, but may consider this a monitoring measure recommendation.</i>	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.	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?					
n/a	Fatal & severe crashes Fatal & severe crashes for pedestrian, bicyclists, motorists	Move to RTP monitoring measures.	This measure cannot be used as a system evaluation measure due to the inability of the regional travel model to directly predict crashes.	The Performance and Safety workgroups support the staff recommendation.	MTAC - Look for opportunity to take into account seismic resiliency in evaluation. <i>Staff response: Yes.</i>

ID#	System Evaluation Measure	Staff Recommendation	Rationale / Notes	Work Group(s) Recommendation	TPAC & MTAC comments
4.	Share of safety projects Percent of number and cost of safety projects in the RTP investment packages regionwide and in areas with historically underrepresented communities.	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." 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.	The Safety, Equity and Performance work groups support the staff recommendation.	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 and in historically underrepresented 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 underrepresented 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. Staff will further test the measure to determine if using per capita is the right approach and refine which limited-access facilities are excluded from the analysis.	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.	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 * Sub-measure: Access to transit (percent of bike or pedestrian network gaps completed within ½-mile of transit)	Refine, continue to develop methodology and rename - " <u>Basic Infrastructure Access to travel options – system connectivity and completeness</u> "	A methodology to measure sidewalk connectivity will need to be developed to implement this recommendation. 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 underrepresented 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.	
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 underrepresented communities. The Access to jobs and access to daily needs measures have been recognized by work groups and staff as extremely important. Metro Planning and Research Center staff will work to further develop these accessibility-related measures.	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? <i>Staff response: Yes.</i>
8.	Access to community	Refine and rename -	Metro staff recommends this measure replace the Access to Daily needs measure that was	Equity, Transit and Performance work	

ID#	System Evaluation Measure	Staff Recommendation	Rationale / Notes	Work Group(s) Recommendation	TPAC & MTAC comments
	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.	"Access to Daily Needs Access to Community Places."	composed of: Number of essential destinations accessible within 30 minutes by bicycling & public transit for low-income, minority, senior and disabled populations. The Access to Jobs and Access to Daily Needs measures have been recognized by workgroups and staff as extremely important. Metro Planning and Research Center staff will work to further develop these accessibility-related measures.	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.	Under development by RTP Freight work group. The performance work group noted that the freight travel times measure within #12 "Multimodal travel times" partially addresses this measure. A new measure is being developed for freight intermodal facilities and industrial land that is transportation constrained.	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	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. <i>Note: the regional travel model is not currently able to forecast walking travel times.</i> Metro staff will bring back a list/map of proposed origins/destination that match up with each mobility corridor. It is possible that some important Origin/Destination pairs for biking, freight or transit don't match up within the mobility corridors.	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.	Metro staff will develop options for discussion by TPAC and the performance work group this winter. 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 are not yet finalized. The Freight work group recommends evaluating delay per truck trip exclusively on <u>regional freight network</u> rather than 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.	TBD	TPAC – Continuing to measure delay <i>per capita</i> is very important to factor all people into the measure, including those that walk, bike, drive, take transit or telecommute.

ID#	System Evaluation Measure	Staff Recommendation	Rationale / Notes	Work Group(s) Recommendation	TPAC & MTAC comments
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 <u>Transit Efficiency</u> 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. <i>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.</i>	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. <i>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.</i>	The Equity work group recommends assessing whether there are disparities between historically underrepresented 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 underrepresented communities and will serve as the basis for the federally-required Title VI Benefits and Burdens analysis.

BIKE

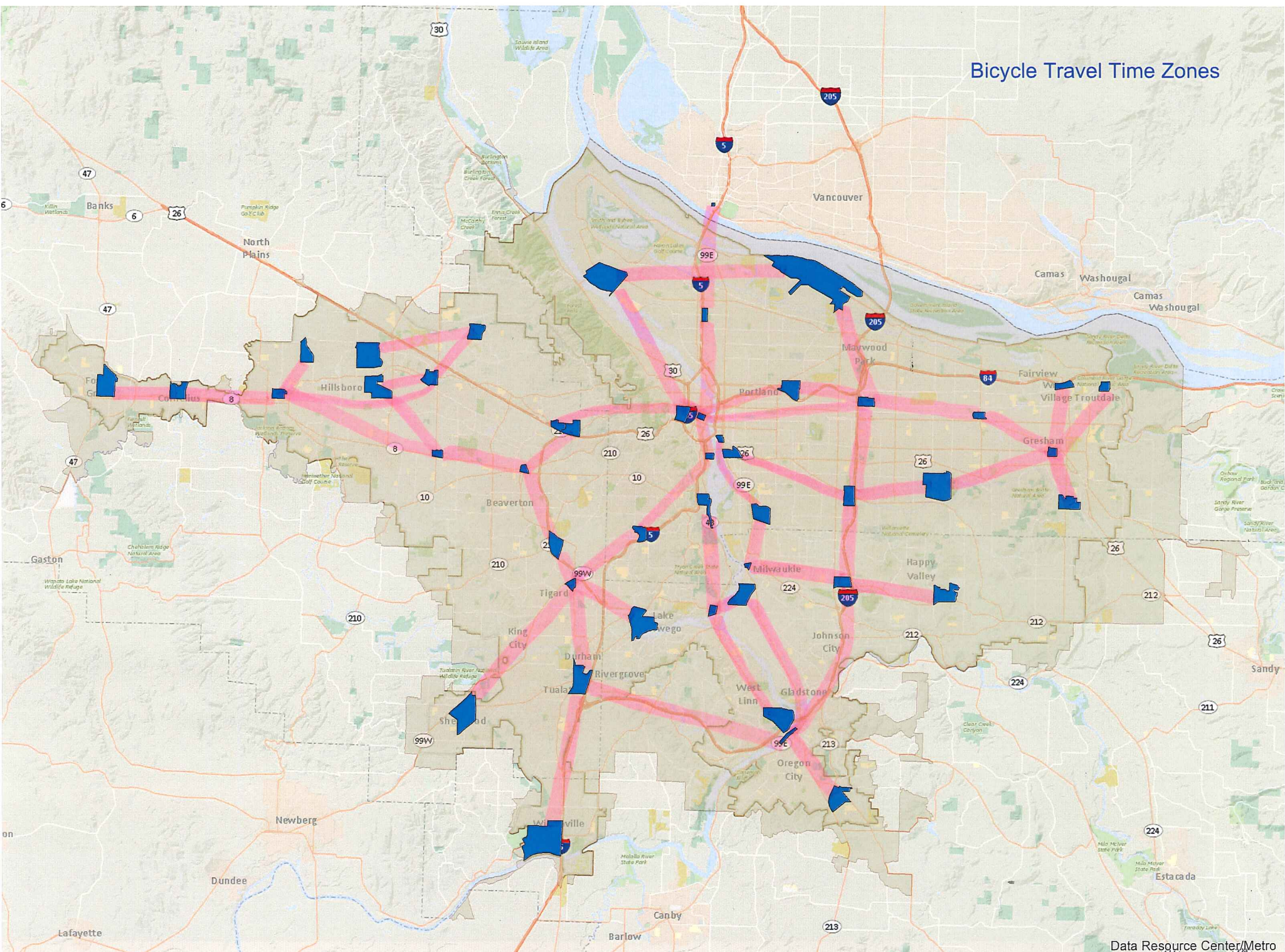
TRANSIT

AUTO

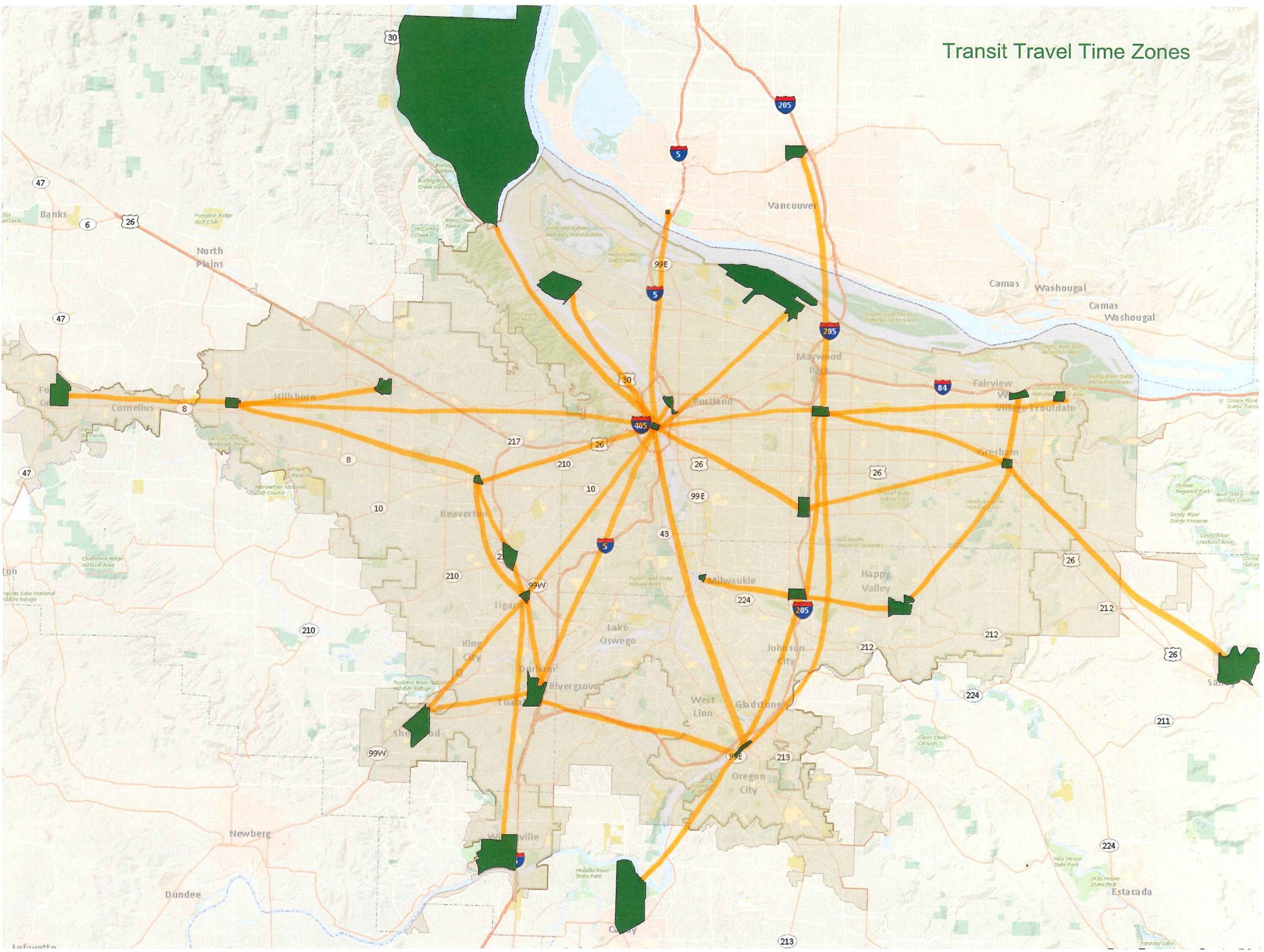
12/09/16

Mobility	Mobility	Mobility
Corridor	Corridor	Corridor
Origin --> Destination	Origin --> Destination	Origin --> Destination
1 1	1 1	1 1
CBD to Rosa Parks Rosa Parks to Vancouver CBD	CBD to Vancouver CBD	CBD to Vancouver CBD (SOV & HOV)
2 2 2 2	2 2 2 2	2 2 2 2
South Waterfront Tram to Barbur TC Barbur TC to Tigard Tigard to Tualatin Tigard to Lake Grove	CBD to Tigard CBD to Tualatin Tigard to Tualatin	CBD to Tigard Tigard to Tualatin
3	3	3
Tualatin to Wilsonville	Tigard to Wilsonville	Tigard to Wilsonville
4	4	4
CBD to South Waterfront Tram	CBD to Rose Quarter	<i>no route specified</i>
5 5	5 5	5 5
CBD to Hollywood TC Hollywood TC to Gateway	CBD to Gateway	CBD to Gateway
6 6	6 6	6 6
Gateway to Rockwood Rockwood to Gresham	Gateway to Gresham Gateway to Troutdale	Gateway to Gresham Gateway to Troutdale
7 7	7 7	7 7
CBD to Gateway Gateway to PDX	CBD to PDX Gateway to Vancouver Mall	CBD to PDX Gateway to Vancouver Mall
8 8 8	8 8 8	8 8 8
Gateway to Lents Lents to Clackamas Town Center Clackamas Town Center Oregon City	Gateway to Oregon City Gateway to Clackamas Town Center Clackamas Town Center to Oregon City	Gateway to Oregon City Gateway to Clackamas Town Center Clackamas Town Center to Oregon City
9	9	9
Oregon City to Clackamas Community College	Oregon City to Canby	Oregon City to Canby
10	10	10
Tualatin to Oregon City	Tualatin to Oregon City	Tualatin to Oregon City
11	11 11	11
Tigard to Sherwood	Tigard to Sherwood Tualatin to Sherwood	Tigard to Sherwood
12 12 12	12 12 12	12 12 12
Beaverton to Washington Square Washington Square to Tigard Beaverton to Aloha	Beaverton to Washington Square Washington Square to Tigard Beaverton to Tigard	Beaverton to Washington Square Washington Square to Tigard Beaverton to Tigard
13	13	13
Beaverton to Providence Medical Center Sunset TC to Goose Hollow MAX Station	CBD to Beaverton	CBD to Beaverton
14 14 14 14 14 14	14 14 14	14 14 14
Aloha to Hillsboro Amberglen to Hillsboro Orenco Station to Aloha Orenco Station to Amberglen Bethany to Amberglen Bethany to Intel (East) Hillsboro to Intel (West)	Beaverton to Hillsboro Amberglen to Hillsboro CBD to Hillsboro	Beaverton to Hillsboro Amberglen to Hillsboro CBD to Hillsboro
15 15	15	15
Hillsboro to Cornelius Cornelius to Forest Grove	Hillsboro to Forest Grove	Hillsboro to Forest Grove
16	16 16	16
CBD to St Johns	CBD to Sauvie Island CBD to St Johns	CBD to Sauvie Island
17	17	17
St Johns to PDX	<i>no route specified</i>	<i>combined 17 & 18 to cover O-D pair below</i>
18	18	18
<i>no route specified</i>	<i>no route specified</i>	Rivergate to I-205 / Sandy
19 19	19	19
Bybee MAX Station to Tilikum Crossing East End Lents to Clinton St MAX Station	CBD to Lents	CBD to Lents
20 20	20	20
Lents to Powell Butte Powell Butte to Gresham	Lents to Gresham	Lents to Gresham
21 21 21 21	21	21
Lake Oswego to Park Ave MAX Station Lake Oswego to West Linn (Bolton) Milwaukie to Bybee MAX Station Park Ave MAX Station to Oregon City Lake Oswego to John's Landing - Sellwood Bridge	CBD to Oregon City	CBD to Oregon City
22	22	22
Clackamas Town Center to Milwaukie	Milwaukie to Clackamas Town Center	Milwaukie to Clackamas Town Center
23	23	23
Clackamas Town Center to Happy Valley	Clackamas Town Center to Happy Valley	Clackamas Town Center to Happy Valley
24 24 24	24 24 24	24 24 24
Wood Village (I-84 / 238th) to Gresham Troutdale TC to Gresham Gresham to Springwater Trail	Wood Village (I-84 / 238th) to Gresham Gresham to Happy Valley Gresham to Sandy	Wood Village (I-84 / 238th) to Gresham Gresham to Happy Valley
	N/A	Tualatin to Hillsboro

Bicycle Travel Time Zones



Transit Travel Time Zones



Auto Travel Time Zones

