600 NE Grand Ave.
Portland, OR 97232-2736

Metro | *Agenda*

2018 REGIONAL TRANSPORTATION PLAN UPDATE

Regional Freight Work Group - Meeting # 9

Date: February 22, 2018
Time: 3 p.m. – 5 p.m.
Place: Metro Regional Center, Room 401
600 NE Grand Avenue, Portland, OR 97232

Agenda items

3:00	**Welcome, and introductions** • Overview of meeting expectations	Tom Kloster/All
3:10	**2018 Regional Freight Strategy – Reorganized Table of Contents** Metro staff will provide overview of changes/new sections from last draft • Chapter 2 is now Trends for Regional Freight and Goods Movement and the Greater Portland Economy (was 1.5 to 1.13) • Chapter 3 is Regional Freight Vision (was Chapter 2, 2.3 to 2.5) • Chapter 4 is Regional Freight Needs and Issues (issues that have been addressed are organized by category) • Chapter 5 (Freight generation) combines the old Chapters 4 and 5 • Old Chapter 6 is now Chapter 6 (Technology) and Chapter 7 (Funding Freight Needs and Priorities) • Chapter 8 is Freight Strategies and Actions (was 8.1 and Chap. 9)	Tim Collins
3:20	**Regional Freight Vision – Chapter 3** • New Figure 1. Regional freight concept • Regional Freight Network Policies (3.5) combines old freight goals and policies to have one set of freight policies (Policies A-G) • Policy G is the new regional freight safety policy	Tim Collins
3:30	**The Freight Action Plan – Chapter 8** (Discussion on some of the additional actions highlighted in Chapter 8) • Policies and Actions Memo (dated Feb. 12, 2018) • Policy B - Action B5 Connected vehicle infrastructure and ITS • Policy E - Action E2 Freight in Metro's Streets Design Guidelines • Policy G - Action G1 Implementation of truck side guards • Policy G – Action G2 Design guidance for regional intermodal connectors	Tim Collins/All
4:05	**Implementation – 9.2 RTP Freight Projects and Programs** (Freight Work Group discussion on updated list and freight priorities for round 2 of RTP call for projects)	Tim Collins/All

Irving Street Garage visitor parking policy
Visit our website for a list of parking options for visitors conducting business at the Metro Regional Center: http://www.oregonmetro.gov/metro-regional-center

4:20	**Freight System Evaluation Measures and Results – Chapter 10** (Freight Work Group discussion on measures and results) • *Freight Performance Target* • *Freight System Evaluation Measure Results* • *Feedback on converting Truck Hours of Delay to an annual cost of truck delay*	Kim Ellis/ Tim Collins/All
4:45	**Next steps and celebration of last freight work group meeting** • Final review and comments on the Freight Action Plan • Review RTP freight projects for Regional Freight Strategy • Review and comments on technical draft of the Regional Freight Strategy • Briefings to TPAC on March 9 and MTAC on March 21 about the technical draft of the Regional Freight Strategy • Briefings to Metro Council on April 10 and MPAC on April 25	Tom Kloster/ Tim Collins
5:00	**Adjourn**	

Meeting packet:

- Agenda
- Meeting minutes from Regional Freight Work Group meeting on November 20, 2017
- Updated Draft Table of Contents dated February 8, 2018
- Policies and Actions Memo dated February 12, 2018
- Regional Freight Strategy Chapters for review (PowerPoint available at the meeting)
  1. Chapter 3 Regional Freight Vision
  2. Chapter 8 Freight Strategies and Actions
  3. Chapter 10 Measuring Progress (updated version available at the meeting)
- Updated 2018 RTP Freight Projects and Programs List (final draft)
- Freight Performance Target (available at the meeting)
- Freight System Evaluation Measure Results (available at the meeting)
- Proposed methodology for converting truck hours of delay to an annual cost of truck delay (available at the meeting)
- Technical Draft of the Regional Freight Strategy (available at the meeting)

Meeting minutes

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

Meeting:	**2018 RTP Freight work group meeting**
Date/time:	Monday, Nov. 20, 2017 | 3-5 p.m.
Place:	Metro Regional Center, Council chamber
Purpose:	Regional Freight Strategy Plan review, Chapters 5-11, Discussion of new freight technologies and updated industrial and supply, Review Freight Action Plan and RTP Freight Project List

Work Group Attendees	**Affiliate**
Tim Collins, Work Group Lead	Metro
Lynda David	Regional Transportation Council, WA
Brendon Haggerty	Multnomah County, Public Health
Phil Healy	Port of Portland
Robert Hillier	City of Portland
Jana Jarvis	Oregon Trucking Association
Steve Kelley	Washington County
Steve Kountz	City of Portland
Kate McQuillan	Multnomah County
Zoe Monahan	City of Tualatin
Don Odermott	City of Hillsboro
Patrick Sweeney	City of Vancouver
Steve Williams	Clackamas County

Interested Parties	**Affiliate**
Mark Lear	City of Portland
Lidwien Rahman	Oregon Department of Transportation

Staff Attendees
Kim Ellis, Metro
Chris Johnson, Metro
Tom Kloster, Metro
Marie Miller, Metro
Jeffrey Raker, Metro
Eliot Rose, Metro
Andre Lightsey Walker, Metro Intern
Ben Kahn, Metro Intern

Welcome & introductions

The meeting was called to order by Tim Collins at 3 p.m. A round of introductions was made.

2018 Regional Freight Strategy – Draft Table of Contents

Changes from updates and reviews have led to the following changes/ new sections from the last draft review of the Table of Contents:

- Yellow highlights indicate areas of new information or significant revision from 2010 freight plan
- Prior Chapter 6 has been combined with Chapter 5

- Added Economic Value Atlas has been moved to section 6.3
- Reginal Industrial Site Readiness in now placed in section 7.2
- Section 7.7 now includes the 2017 Federal Transportation Bill

Following discussion of changes, Tim Collins reported the draft Chapters 5-11 would be sent to member via a link, in which to further review and provide comment.

Plans and Policies on Technology in Freight Transportation

Eliot Rose, Metro Technology Strategist, was introduced. Rose presented information on definitions of different applications for connected vehicle technology that are applicable to freight, and general new freight technologies.

Vehicle-to- Infrastructure (V2I) is the next generation of Intelligent Transportation Systems (ITS). V2I technologies capture vehicle-generated traffic data, wirelessly providing information such as advisories from the infrastructure to the vehicles that inform the driver of safety, mobility, or environmental-related conditions. The State of Oregon and local agencies are likely to install V2I alongside or integrated with existing ITS equipment. The majority of deployments may qualify for similar federal aid programs as ITS deployments, if the deploying agency meets certain eligibility requirements. Deploying V2I technologies in freight trucks and the region's roadway infrastructure will be of key importance for improving freight mobility, reliability and safety.

Definitions of V2I communications deployment help the region better understand how useful different applications of connected vehicle (CV) technology will be in improving commodity movement within the next five years (short term):

- V2I Safety: Safety applications that help truck drivers anticipate and respond to potentially unsafe conditions to help avoid incidents and delays.
- Agency Data: Applications that focus on communicating agency data to connected vehicles (CVs) or using CVs to collect data that agencies can use to plan and manage the transportation system
- Road Weather: Applications that help truck drivers anticipate and respond to severe weather conditions and events.
- Mobility: Applications that enhance mobility, increase efficiency, and reduce delay of freight vehicle travel.
- Smart Roadside: A set of applications to be deployed at strategic points along commercial vehicle routes to improve safety, mobility, and efficiency of truck movement and operations on the roadway.

In the long term (more than five years), the region, state and local agencies will need to acknowledge, monitor, study and plan for the impacts of driverless vehicles, changes in the demand for distribution centers, and the decline in retail stores due to on-line ordering of goods and services.

Comments from the committee:

- Steve Williams asked how a technology broadcast system could be created for the region. The requirements for specific protocol are still being designed for the system, with unknown vehicle participation at this point. Agreement found on designing with future projects to encompass these technical capabilities.
- Jana Jarvis commented on the need to identify options for freight routes with technology, but being careful on how this framed to carriers. Freight signal changes were a good option. These

options were felt to be a good payback for investment in the system, in addition to roadway infrastructure.

- Don Odermott commented on the freight time of travel with transmitted data. Standards are coming soon, and placing conduits of communication built into the system should be a priority.
- Kate McQuillan asked what the benefits were pairing this technology with AVs? Interactive information is now available for drivers. With AVs, how could they respond for more flexibility and accuracy with this technology?
- Lidwien Rahman commented on the terms of actions, with infrastructure being the most useful in the RTP.
- Jana Jarvis cautioned against calling "driverless trucks", which are really "assisted trucking via autopilot". Federal regulations are coming. Safer and more productive freight movement is expected.
- Steve Williams commented on creating smart truck parking for better parking space and connections in the region.

Regional Freight Strategy Needs and Findings

Regional Industrial Site Readiness:

This report examines the supply of large (25+ acre) industrial sites available to accommodate existing and future employers. The objectives of the 2017 report include:

- Track the changes in inventory since the 2014 update
- Analyze the readiness for each site inventoried
- Inform policy makers about policy changes and investments that have influenced the development-readiness
- Summarize investments, tax base, and jobs created from development of inventory sites
- Identify policy and investment actions that can ensure a consistent inventory of these vital sites in the future.

The report also introduces a tier system that assists in better prioritization of various development sites.

- Tier 1: Development ready within 180 days (considered recruitment ready)
- Tier 2: Requires 7-30 months to be development ready
- Tier 3: Requires over 30 months to be development ready

A chart comparing changes in inventory by tiers and acreage shows that from 2014 to 2017 the inventory of sites has decreased from 54 to 47. Because of significant development of large industrial sites in the region, only 10 Tier 1 sties remain and no Tier 1 sites of 50 acres or greater. Maintaining and improving freight access to industrial areas and intermodal facilities is critically important for long-term viability of industry in the region. From the report, recommendations are given to policymakers on proposed actions on Regional, Local and State levels.

Comments from the Committee:

- Lidwien Rahman commented that the findings do not show where transportation access to industrial land as an issue. The RTP should focus on transportation, the rest of the Regional Industrial Site Readiness report should be reported on in the Regional Growth Report.
- Steve Williams where the economic development departments from local governments fit in with these numbers. More land use context in the language of the report is needed for elected officials to understand the importance. Tim Collins will confer with Ted Reid on this matter.

- Bob Hillier commented on certain sites not being shown as a hyperlink on the map. To be identified for these tiers, the sites would be 25+ acres.
- Don Odermott commented on the significance of the investments with these sites in the RTP, with access to infrastructure and jobs. The data needs to match investment and tell the story for building a case for each site development.
- Patrick Sweeney suggested showing the Washington side of the river with interstates and parallel routes, as investments with industrial lands are part of the whole region.

Regional Freight Strategy Findings:
Freight Rail: Increases in rail volumes on Class 1 rail lines will mean heavier per car loads and longer trains. This will require upgrading tracks and increase the need to grade separate more intersections with roadways.
Trucking: Truck access between port facilities, industrial sanctuaries and the National Highway System is critically important to shippers, carriers and distributors of freight.
Air Cargo: Air cargo requires efficient access for perishable and high value goods. However, area industries shipping via air freight have adjusted production schedules due to roadway congestion to meet air freight departure deadlines.
Marine Cargo: Marine ports ship large quantities of bulk agricultural commodities from Oregon, Idaho and Washington to the rest of the world. The ports will grow by moving a wide range of marine cargoes, such as energy and transportation project related materials, manufactured goods, automobiles, agricultural and mining related products and fuel.

Comments from the Committee:
- Lidwien Rahman commented on the order of the information, to report on performance or lack of efficiency at the end. More definitions would be useful with the findings.
- Steve Williams suggested showing the MPO boundaries with the Freight Plan. Freight systems extend beyond what is shown on the map. It was suggested that Metro coordinate with others on intermodal capabilities statewide for shipping needs. Emphasizing benefits to the Portland area is also recommended.
- Steve Kountz suggested a matrix for related findings to recommended actions. The findings could have a disciplinary section that plays into land use and freight issues. Environmental and freight need to be discussed together.
- Don Odermott questioned the transportation providers listed in the handout (Summary of HB 2017 and funding for regional freight projects). Certain corridors are not showing at the same level of major highways. About half the funds will be distributed to local governments to fund local road and street maintenance and improvements, while the rest will be provide to the State Highway Fund to fund different types of projects around the state.

The Freight Action Plan
Tim Collins led discussions on draft Chapter 9 with updated freight action plans and goals. The 2010 Regional Freight Plan had a longer list of freight action items that has been winnowed down into a smaller selection of important, achievable near-term actions, and a few long term actions that will require additional scoping and determining the availability of staff time. The near-term action items should be achievable within the next 5 years and the long-term actions would take longer than 5 years.

Goal A: Multimodal system planning for efficient freight mobility and access.

1. Maintain private sector cooperation with Metro staff with goods movement policy and technical coordination.
2. Freight goods movement data collection and reporting
3. Coordinate research, modeling and planning with ODOT

Lidwien Rahman questioned where A4 fit in with developing and conducting freight and goods movement research programs. For clarity and consistency, it was suggested to have the freight data more focused on the Freight Plan. Patrick Sweeney suggested having Washington State DOT included with A3 for coordination with impacts on travel sheds.

Goal B: System management to increase network efficiency

1. Better define, preserve and enhance freight function in mobility corridors
2. Assess need to develop and fund better incident management and traveler information
3. Continue support for use and expansion of ITS system management tools
4. Support workforce access to the region's industrial jobs through Metro RTO/TDM programs

Steve Kounz asked how the pre-capacity was addressed with this goal. Were the freight flows/volumes vs. no truck movements? Or were the system management vs. system expansion? Tim Collins reported that these concerns are addressed in Goal F.

Goal C: Public understanding of freight and goods movement issues

1. Establish stakeholder outreach program
2. Provide support for topical fact sheets, and other published media that expands awareness of freight issues
3. Coordinate with Economic Value Atlas work which includes the economic development community

Don Odermott asked what the role with the Economic Value Atlas would be to link economic development to transportation investments. Discussion was held on the Atlas a key indicator of economic conditions with the capability to delve into specifics for the region. Travel times with major freight lines are needed to be shown more clearly that show evaluated projects and investments. The value of freight on roads needs to be identified. But getting actual commodities researched and evaluated not always easy. It may be possible to use a new truck model in the Regional Mobility Corridors, primarily for truck movement. Lidwien Rahman asked for more definition on regional freight to define deliveries with residential vs. business.

Goal D: Sustainable freight transportation system

1. Provide useful "green freight" links from Metro's freight program webpage
2. Pursue greenhouse gas and other pollutant reduction policies and strategies for freight (DEQ could take on this action item as part of their work program)

Goal E: Freight-sensitive land use planning

1. Develop strategies to protect existing supply of industrial land
2. Examine need for additional industrial land

3. Provide freight perspective to revision of Metro's livable street design guide

Lidwien Rahman commented on the distinction between providing and protecting freight mobility and access to industrial lands on the one hand (which belongs in the RTP), and protecting industrial lands from land use conflicts and from being converted to other uses on the other hand (which belongs under Growth Management). Steve Kountz added this was a coordination function of the regional freight plan, not a stand-alone issue.

Goal F: Strategic transportation investments

1. Work toward implementation of the RTP freight priority projects
2. Strengthen the tie between project prioritization and the framework for freight performance
3. When appropriate, focus regional funds on large capital projects
4. Make strategic incremental improvements when large capital projects are unfunded
5. Ensure that unfunded freight projects are on an aspirational or illustrative RTP project list
6. Develop regional freight rail strategy

Steve Kountz asked how this would accommodate growth. Relating to analysis, forecasts, directional streets and more, this goal doesn't plan for freight growth. The region is not called out with this goal but appears to be developed around access to transportation areas. Enhancing quality of life is prioritized in the RTP. This goal with strategic investments is of key importance in the system. Lidwien Rahman added that point 4 of this goal was outdated and should be more defined.

Freight System Evaluation Measures and Results

The committee reviewed Measure 12d Freight Truck Travel Times and Measure 13c Freight Truck Vehicle Hours of Delay system evaluation results. The freight travel times were shown for selected routes between intermodal facilities or key industrial areas, on corridors to compare between 2040 No Build, 2027 Constrained, 2040 Constrained and 2040 Strategic. Data is available for Clark County, but not shown on these specific reports.

Comments from the committee:

- Steve Williams commented on a different spreadsheet from the RTP Performance work group. The reported percentages of delay don't convey the seriousness of delay times. A different message to show the significance of these needs to be put in front of policymakers for decisions.
- Steve Kountz commented on the reality of freight routes used in locations when delays occur, and not tracked in the model with data. This understates the number or times and costs of freight delays. More explanation on costs of delay, percentage changes, and context in the freight plan needs to be made
- Don Odermott mentioned changing the focus on real time tracking so the measure of delay could provide a better forecast with the model data. Mobility corridors listed in Tualatin areas needed refinement, which will be addressed in the RTP.
- Jana Jarvis that Federal Highway dollar should be added to the Freight Plan for inclusiveness and framework. This includes cost of congestion.
- Steve Kountz recommending adding the growth of ecommerce and importance of higher percentages added to travel times.

- Phil Healy mentioned the modeling shows huge increases to delay times, which relates to a shift in regional strategy for freight movement.

Additional Comments:

- Kim Ellis announced that a TPAC/MTAC workshop would be held on Dec. 4 in the Council Chamber. Members of the Freight work group would be receiving meeting invites for this.
- Tim Collins offered to send the work group links on the delay times for further review
- Zoe Monahan asked if comments on previous chapters of the Regional Freight plan draft were being accepted. Tim Collins concurred and asked that all comments be sent to him.
- Tim Collins noted the handouts at the back of the packet: Regional Freight Network Map, and 2018 RTP Draft Freight Project List. Input is requested on these materials. The committee should send comments directly to Tim Collins. Tim.collins@oregonmetro.gov

Adjourn

There being no further business, the meeting was adjourned at 5 p.m.

Respectfully submitted,
Marie Miller

Attachments to the Record, RTP Freight work group meeting, November 20, 2017

Item	Topic	Document Date	Description
1	Agenda	11/20/2017	Agenda for Nov. 20, 2017 Freight work group meeting
2	Meeting summary	10/18/2017	Meeting summary from Oct. 18, 2017 Freight work group meeting
3	Presentation	11/20/2017	Presentation: Regional Freight Strategy – Update on Chapter 5-11
4	Handout	11/3/2017	Draft Table of Contents, 2018 Regional Freight Strategy
5	Handout	11/20/2017	6.5 Innovation and technology in freight transportation
6	Handout	11/20/2017	Regional Industrial Site Readiness – 2017 Inventory Update Summary
7	Handout	11/20/2017	Draft Regional Freight Strategy Needs and Findings
8	Handout	11/20/2017	Summary of HB 2017 and funding for regional freight projects
9	Handout	11/20/2017	9. The Freight Action Plan – From Goals to Implementation
10	Table	11/17/2017	RTP System Evaluation Results: Measure 12d Freight Truck Travel Times
11	Table	11/17/2017	RTP System Evaluation Results: Measure 13c Freight Truck Vehicle Hours of Delay
12	Map	10/4/2017	Regional Freight Network Map (draft)
13	Handout	11/15/2017	2018 RTP Draft Freight Project List

2018 Regional Freight Strategy

February 8, 2018

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8.2 Policy A. Use multimodal system planning for efficient freight mobility and access
A1: Maintain private sector cooperation and technical coordination with Metro planning and goods movement policy
A2: Continue baseline freight and goods movement data collection and reporting activities.
A3: Coordinate research, modeling and planning with ODOT
A4: Develop and conduct freight and goods movement research program
8.3 Policy B. Provide system management to increase freight network efficiency
B1: Better define, preserve and enhance freight function in mobility corridors

B2: Assess need to develop and fund better incident management and traveler information
B3: Continue support for use and expansion of ITS system management tools
B4: Support workforce access to the region's industrial jobs through Metro RTO/TDM programs
B5: Identify key mobility corridors for testing and development of Connected Vehicle infrastructure and other ITS strategies
8.4 Policy C. Provide understanding of importance of freight and goods movement issues
C1: Establish stakeholder outreach program
C2: Provide support for topical fact sheets and other published media that expands awareness of freight issues
C3: Coordinate with Economic Value Atlas work which includes the economic development community
8.5 Policy D. Pursue a sustainable freight transportation systems that support a healthy environment
D1: Provide useful "green freight" links from Metro's freight program webpage
D2: Pursue reduction in greenhouse gas and other pollutant reduction policies and strategies for freight
8.6 Policy E. Integrate freight into land use planning and street design
E1: Develop strategies to protect existing supply of industrial land
E2: Provide freight perspective to revision of Metro's livable street design guide Design Elements and Considerations for Freight
E3: Examine need for additional industrial land
8.7 Policy F. Adequately fund strategic freight transportation investments that include marine and rail facilities
F1: Work toward implementation of the RTP freight priority projects
F2: Strengthen the tie between project prioritization and the framework for freight performance
F3: When appropriate, focus regional funds on large capital projects
F4: Make strategic incremental improvements when large capital projects are unfunded
F5: Ensure that unfunded freight projects are on an aspirational or strategic RTP project list
F6: Develop regional freight rail strategy
F7: Develop policy and evaluation tools to guide public investment in private freight infrastructure, focused on rail projects
8.8 Policy G. Increase roadway and freight operational safety to eliminate fatalities and serious injuries caused by crashes
G1: Promote and advocate with the cities and counties for the implementation of truck side guards on large freight trucks, consistent with USDOT specifications
G2: Develop design guidelines for identifying and prioritizing improvements to regional intermodal connectors that should have separated bike lanes and sidewalks

Chapter 9: Implementation
9.1 Implementing Adopted Freight Plans
9.2 RTP Freight Projects and Programs (see Appendix A for list)
9.3 Freight data collection and analysis

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Acronyms

Glossary

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- Appendix A: 2018 Regional Transportation Plan freight priorities project list
- Appendix B: Regional Freight Goods Movement Task Force Members
- Appendix C: Metro Freight Model

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Memo

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

Date: February 12, 2018
To: Regional Freight Work Group
From: Tim Collins, Senior Transportation Planner
Subject: Regional Freight Strategy: Policies and Actions

PURPOSE

To provide information on the strategies and actions that addresses the regional freight policies. Receive feedback from the freight work group on the policy language and new draft strategies and actions that will be included in the technical draft of the Regional Freight Strategy.

ACTION REQUESTED

The purpose of this presentation is to receive feedback from the freight work group on the policy language and strategies and actions in the technical draft of the Regional Freight Strategy. This memorandum presents the draft policies and actions for review, and Chapter 8 of the Regional Freight Strategy has full descriptions and a context for each of the actions.

DRAFT REGIONAL FREIGHT POLICIES AND THE REGIONAL FREIGHT ACTION PLAN

The policies and the draft freight action plan focus on the key areas where public agencies need to act in the next 5 years, and in the long term (beyond 5 years), to respond to the most pressing freight and goods movement issues that are identified in the Regional Freight Strategy. Freight policies describe the outcomes that we want to achieve; freight actions and strategies describe the actions that we can take to achieve those outcomes or policies. Below is a table that shows each of the regional freight policies (A to G), and the draft actions and strategies that will address each of the freight policies. Actions highlighted in yellow are new, and come from internal coordination with work on the Emerging Technology Strategy, updates to Creating livable streets: Street design guidelines, and the Regional Safety Strategy.

Freight Policies	Actions and Strategies
Multimodal Planning	
A. Use multimodal system planning for efficient freight mobility and access	A1: Maintain private sector cooperation with Metro planning staff, and with goods movement policy and technical coordination. A2: Continue baseline freight and goods movement data collection and reporting activities. A3: Coordinate research, modeling and planning with Oregon Department of Transportation (ODOT)

Freight Policies	Actions and Strategies
	A4: Develop and conduct freight and goods movement research program. (Long-term)
System Efficiency	
B. Provide system management to increase freight network efficiency	B1: Better define, preserve and enhance freight function in mobility corridors B2: Assess need to develop and fund better incident management and traveler information B3: Continue support for use and expansion of ITS system management tools B4: Support workforce access to the region's industrial jobs through Metro RTO/TDM programs B5: Identify key mobility corridors for testing and development of Connected Vehicle (CV) infrastructure and other ITS strategies (Long-term)
Public and Stakeholder Outreach	
C. Provide education and understanding of the importance of freight and goods movement issues	C1: Establish stakeholder outreach program C2: Provide support for topical fact sheets, and other published media that expands awareness of freight issues C3: Coordinate with Economic Value Atlas work which includes the economic development community
Environmental	
D. Pursue a sustainable freight transportation systems that support a healthy environment	D1: Provide useful "green freight" links from Metro's freight program webpage D2: Pursue greenhouse gas and other pollutant reduction policies and strategies for freight
Industrial Land and Street Design	
E. Integrate freight mobility and access into land use planning and street design	E1: Develop strategies to protect existing supply of industrial land E2: Provide freight perspective to the revision of Metro's 'Creating Livable Streets' design guidelines E3: Examine need for additional industrial land (Long-term)

Freight Policies	Actions and Strategies
Project Funding	
F. Adequately fund investments in the freight system, including marine and rail facilities, to ensure the region is economically competitive	F1: Work toward implementation of the RTP freight priority projects F2: Strengthen the tie between project prioritization and the framework for freight performance F3: When appropriate, focus regional funds on large capital projects F4: Make strategic incremental improvements when large capital projects are unfunded F5: Ensure that unfunded freight projects are on an aspirational or illustrative RTP project list F6: Develop regional freight rail strategy F7: Develop policy and evaluation tools to guide public investment in private freight infrastructure, focused on rail projects (Long-term)
Roadway and Operational Safety	
G. Increase roadway and freight operational safety to eliminate fatalities and serious injuries caused by crashes	G1: Promote and advocate with the City of Portland, and other cities and counties for the implementation of truck side guards on large freight trucks providing public services, consistent with USDOT specifications G2: Develop design guidance for identifying and prioritizing improvements to regional intermodal connectors that should have bike and pedestrian facilities that are separated from the roadway, and other design treatments to enhance the safety of non-motorized modes

3 REGIONAL FREIGHT VISION

3.1 Regional Freight Vision Framework

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

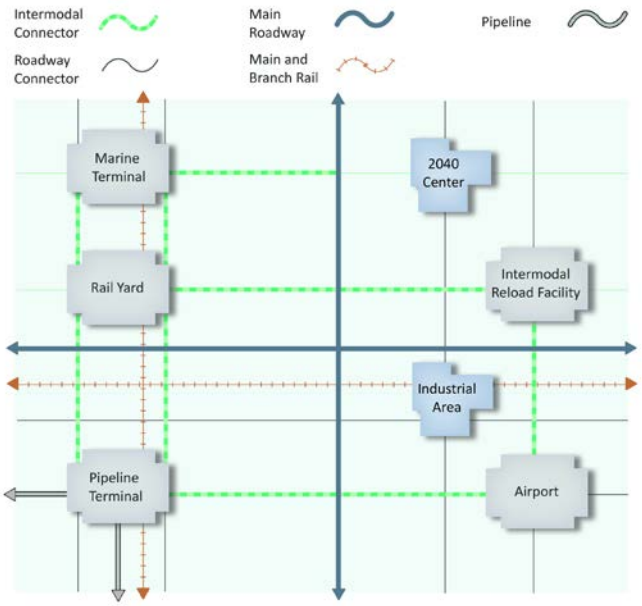
The Regional Freight Strategy addresses the needs for freight through-traffic as well as regional freight movements, and access to employment, industrial areas, and commercial districts.

3.2 Regional Freight Concept

The Regional Freight Network Concept contains policy and strategy provisions to develop and implement a coordinated and integrated freight network that helps the region's businesses attract new jobs and remain competitive in the global economy.

The transport and distribution of freight occurs via the regional freight network, a combination of interconnected publicly and privately owned networks and terminal facilities. The concept in Figure 1 shows the components of the regional freight system and their relationships.

Figure 1. Regional freight concept



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

Note: Figure 1- Regional freight concept, will also be in Chapter 2 of the updated RTP.

The Regional Freight Network map, shown as Figure 2 on the next page, applies the regional freight concept on the ground to identify the transportation networks and freight facilities that serve the region and state's freight mobility needs.

3.3 **Regional** Freight Network Classifications and Map

The Regional Freight Network map has been updated for the latest Regional Freight Strategy and is significantly different than the one found in the 2014 Regional Transportation Plan and the 2010 Regional Freight Plan. To show the continuity of the freight system in both Oregon and Washington State, the map now shows the freight routes in Clark County, north of the Columbia River. The previous Regional Freight Network map was difficult to read and many of the main roadway routes and road connectors were being covered up by the main rail lines and branch rail lines. The updated Regional Freight Network map now has the main roadway routes and road connectors as the top GIS layers and has offset the rail lines where possible to make them more visible. The Regional Freight Strategy now features the Regional Freight Network map as an 11x17 inch map to enhance readability. To highlight the importance of the rail network, and have better visibility for the rail lines that are still partially hidden on the main map, the updated Regional Freight Network map has added six inset maps (brown dotted line boxes) that focus on the key intermodal facilities (marine terminals, rail yards and pipeline facilities) and rail lines. These inset maps are located on the back side of the main map (see the next page).

The other major update to the Regional Freight Network map is the addition of a new freight roadway designation for Regional Intermodal Connectors. The Regional Intermodal Connectors represent National Highway System (NHS) intermodal connectors and other Tier 1 intermodal connectors that were designated by ODOT as part of the Oregon Freight Intermodal Connector System (OFICS) Study completed in 2017. The description and importance of NHS intermodal connectors and other Tier 1 intermodal connectors is described in the next section of this strategy.

3.4 Regional Freight Network and Intermodal Connectors

National Highway System (NHS) intermodal connectors are roads that provide the "last-mile" connections between major rail, port, airport, and intermodal freight facilities and the rest of the National Highway System. NHS Intermodal Connectors are defined by the FHWA's Freight Management and Operations as "roads that provide access between major intermodal facilities and the other four subsystems making up the National Highway System"[1] (footnote: FHWA Freight Management and Operations NHS Connectors). The four subsystems are Interstates; Other Principal Arterials; the Strategic Highway Network; and Major Strategic Highway Connectors. NHS intermodal connectors account for less than one percent of total nationwide NHS milage, but these roads are critical for the timely and reliable movement of freight.[2]

1. *FHWA Freight Management and Operations NHS Connectors*

2. *USDOT Federal Highway Administration, Freight Intermodal Connectors Study, April 2017*

Oregon Freight Intermodal Connector System (OFICS) Study

The Oregon Freight Intermodal Connector System (OFICS) Study was completed by ODOT in April of 2017, and defined and identified freight intermodal terminals and intermodal connectors within the Portland region (and the rest of Oregon). Freight intermodal terminals are defined as facilities which provide for the transfer of freight from one freight mode to another. Examples include the NHS intermodal terminals such as Port of Portland's Terminal 5 and Union Pacific's Brooklyn Yard. Smaller intermodal terminals and businesses that use more than one freight mode onsite, along with the smaller intermodal terminals are defined as "Intermodal Terminals/Businesses" (ITB), and were identified by the study.

The OFICS Study identified the locations of new intermodal connectors using the following criteria:

- They must be a public road
- They must serve as a primary access between an ITB and a state highway or an existing NHS intermodal connector
- Be a maximum length of 5 miles unless a longer length is justified

A review of the existing NHS Intermodal Connectors was completed as part of the study. The review determined if the connectors still met the FHWA's criteria for NHS Intermodal Connectors. All of the NHS Intermodal Connectors in the Portland region meet the NHS primary criteria of an average of 100 trucks in each direction per day.

Since a wide range of freight activity occurs on intermodal connectors, the study developed three tiers that sort the already recognized and new intermodal connectors by levels of importance. One of the main criteria for determining which tier an intermodal connector should be in is the average number of trucks per day on the intermodal connector. Sometimes this data was difficult to obtain so the study developed other criteria. The Tier 1 Primary Intermodal Connectors must meet the NHS Intermodal Connector criteria, which generally include:

- 50,000 TEUs/year or 100 trucks/day in each direction [3]
- Secondary Criteria: Connecting routes targeted by the state or MPO to address existing deficiency caused by increased traffic

The study defined Tier 2 Secondary Intermodal Connectors and Tier 3 Minor Intermodal Connectors. However, Metro determined that these intermodal connectors that don't meet NHS criteria, and have less than 100 trucks/day each direction or serve smaller ITBs, are not of regional significance and are not included on the Regional Freight Network map. The Regional Freight Network map includes the Tier 1 Primary Intermodal Connectors and designates them as Regional Intermodal Connectors.

3. *TEU is a Twenty-foot Equivalent Unit that is equal to a 20 foot shipping container*

The Tier 1 intermodal connectors are the highest level of connectors and are considered as the primary classification in Oregon. The majority of the state's and the Portland region's ITBs are served by the Tier 1 intermodal connectors. In the Portland region the Tier 1 intermodal connectors consist of 16 existing NHS intermodal connectors and 3 recommended additional

intermodal connectors. The three additions meet the NHS Intermodal Connector Criteria, and ODOT recommended to FHWA that these three additional intermodal connectors be designated as NHS intermodal connectors. These three additions are:

- North Rivergate Blvd. – between Terminal 5 and multiple ITBs, and N. Lombard St.
- North Leadbetter Road – a loop road south of Marine Dr. between the Terminal 6 access road and Portland French Bakery.
- NE Alderwood Road – between NE Cornfoot Road and Columbia Blvd.

Regional Intermodal Connectors

It is important to understand the truck usage and performance of the region's tier 1 and NHS intermodal connectors since they have a direct impact on goods movement efficiency and the health of the region's economy. Marine terminals, truck to rail facilities, rail yards, pipeline terminals, and air freight facilities are the primary types of intermodal terminals and businesses that the tier 1 and NHS intermodal connectors are serving in the Portland Metro region. An example of a NHS intermodal connector is Marine Drive between the marine terminals (Terminal 5 and 6) and I-5; which in 2014 had over 4,100 average daily trucks. Another NHS intermodal connector is Columbia Boulevard between I-5 and OR 213 (82nd Avenue) which had over 3,500 average daily trucks and is a vital freight connection between the air-freight terminal at Portland International and both I-5 and I-205. Another example is NW Front Avenue/NW 26th Drive that provides a vital connection between the energy pipeline terminals (near NW 61st), and marine Terminal 2 and US 30, which had between 568 and 866 average daily trucks.

These Regional Intermodal Connectors are carrying many more trucks than the typical road connectors on the Regional Freight Network map. They are also of critical importance for carrying commodities that are being exported from and imported into the state and across the county.

3.5 Regional Freight Network Policies

In 2008, the Regional Freight and Goods Movement (RFGM) Task Force developed six goal statements to elaborate a policy framework that would protect and improve the cost-effective functioning of the critical regional freight network. They also developed five policies to serve as the foundation of the freight network concept that somewhat mirrored the goal statements, but did not exactly match up. As part of the 2018 update to the Regional Freight Strategy, the intent of the RFGM Task goal statements has been maintained by combining them with the RFGM Task Force policies, and for consistency and simplicity, renaming them the Regional Freight Policies. These freight policies are used for development of the freight strategies and actions that are outlined in Chapter 8. The following are the seven updated freight policies that guide the Regional Freight Strategy:

- Policy A: Use a systems approach to plan and manage our multimodal freight transportation infrastructure, recognizing and coordinating both regional and local decisions to maintain seamless flow and access for freight movement.

- Policy B: Provide system management of first-rate multimodal freight networks that reduce delay, increase reliability, improve safety and provide choices.
- Policy C: Provide education and an understanding of the importance of freight and goods movement issues to the public and decision makers.
- Policy D: Pursue a sustainable multimodal freight transportation system that supports the health of the economy and the environment through clean, green and smart technologies practices.
- Policy E: Integrate freight mobility and access needs into land use planning and street design to ensure the protection of industrial lands, and protection of critical freight corridors with access to commercial delivery activities.
- Policy F: Adequately fund and sustain investment in our multimodal freight transportation system, including marine and rail facilities, to ensure that the region and its businesses stay economically competitive.
- Policy G: Increase roadway and freight operational safety to eliminate fatalities and serious injuries caused by freight vehicle crashes with autos, bicycles, and pedestrians.

New Freight Safety Policy

In the spring of 2017 the Metro Council added the seventh policy that will serve the freight network concept. The seventh policy (Policy G) addresses the issue of freight safety regarding the interaction of different freight modes (trucks, railroad trains, etc.) with passenger cars, bicyclist and pedestrians.

8 THE FREIGHT STRATEGIES AND ACTIONS

8.1 Linking Freight Policy and Issues to Investments and Action

This chapter includes a "tool kit" of freight strategies and actions that respond to a broad range of needs and issues clustered around the seven policies in Chapter 3. Chapter 8 constitutes the regional freight action plan.

Many of the actions described are foundational activities that hold the regional freight action plan together – planning, coordinating, research and policy making, and take place on both an ongoing and cyclic basis. The current list of efforts will need to find staff, time and funding resources, whether that includes Metro, members of the freight, goods movement and economic development community, or other agencies or organizations. The 2010 Regional Freight Plan had a longer list of freight action items that has been winnowed down into a smaller selection of important, achievable near-term actions, and a few long term actions that will require additional scoping and determining the availability of staff time. The near-term action items should be achievable within the next 5 years and the long-term actions would take longer than 5 years.

Achievable near-term action and long-term action items are included and recommended for implementation to support the approved regional freight and goods movement policies. Each of the freight action items is associated with one of the seven regional freight and goods movement policies (Policies A to G).

The 2018 RTP Freight Projects and Programs are included in an appendix to this freight strategy and are also included by reference as part of Action F1.

Policy A. Use multimodal system planning for efficient freight mobility and access

This policy, as well as its related actions, speaks to Metro's mission as the metropolitan planning organization for the Portland metro area. Actions described below will give us better freight and goods movement data and will guide planning efforts to ensure that freight considerations are in mind, and to implement a multimodal plan that facilitates freight movements required for a vibrant regional and state economy.

Near-term Actions:

A1: Maintain private sector cooperation with Metro's planning and technical coordination, and with goods movement policy

Areas where the private sector and government agencies could provide value to Metro include:

Implementation of the Regional Freight Strategy

- Review, assist, comment, contribute and/or lead various elements of the action plan
- Contribute to future freight strategy refinements and updates

Regional planning efforts

- System planning, modeling and analysis
- Freight access/industrial land aspects of land use planning
- Input into selecting and carrying out regional corridor refinement plans
- Metropolitan Transportation Improvement Program (MTIP) funding and project selection processes
- Provide input into ConnectOregon criteria and selection
- Development of analytical tools, data bases, performance measures and policies
- Prioritization of investments and projects with a freight and economic development perspective
- Metro's freight program staff will participate on effective local, state and national freight-relevant organizations, such as the Portland Freight Committee, the Columbia Corridor Association, ODOT's statewide freight planning group, and the Oregon Freight Advisory Committee,.
- Assisting localities with transportation system plan (TSP) freight components

Freight and goods movement, jobs and economic development

- Develop policy and business support for transportation funding initiatives, including possible fees or pricing strategies
- Define economic development context and goals for freight and goods movement policies and investments
- Support for broad regional prosperity and environmental justice with an economic development strategy

Sustainability

- Greening freight and industry while promoting sustainable jobs and economic growth
- Greenhouse gas and other environmental impact reduction strategy development

Public education and stakeholder engagement

- Feature freight issues in periodic Regional Snapshots and the Snapshot speakers series (as defined in C2)

A2: Continue baseline freight and goods movement data collection and reporting activities

Keeping current in an environment that is volatile, in an era which is increasingly unpredictable, is as challenging as it is essential. This recommended action ensures needed support for ongoing data collection and necessary expansions to existing efforts, such as PORTAL, ensuring updates to the commodity flow forecast, continuing to seek more detailed freight and goods movement flow data at the regional level, etc. Freight and business stakeholder interviews should be held periodically to provide early detection of problems and opportunities affecting the flow of goods and our regional economy. Collecting data sufficient to support other tasks, enabling the region to assess a wide variety of outcomes, including jobs creation, value/tons moved, economic impacts, cost of delays, emissions, energy use, neighborhood impacts and others associated with freight movement. In addition, new goals and programs for greenhouse gas reduction, and a regional congestion pricing pilot program, will change regional data needs.

A3: Coordinate research, modeling and planning with Oregon Department of Transportation (ODOT)

Coordination with ODOT is sufficiently important to be called out specifically. All efforts in recommendation A4 should include ODOT as a partner. Metro staff will work with ODOT's freight planners to consult and coordinate with respect to the statewide freight plan as well as periodic updates to the National Highway System/National Network freight designations.

Long-term Actions:

A4: Develop and conduct freight and goods movement research program

In general, freight is a less well understood component of the regional transportation system; many regions are struggling to improve and integrate such tools as basic freight data, performance measures and analytic and modeling tools. The Regional Freight Strategy distinguishes between the specialized needs for moving industrial/agricultural commodities through and beyond the region and the day-to-day needs of urban goods movement within the region's mobility corridors and 2040 centers. Yet this distinction requires the use of analytical tools which can shed light on those two categories of goods movement within our region. It also requires close coordination between Metro and ODOT.

In order to develop and/or refine freight-relevant analytical tools that can help Metro and its partners better predict, manage and invest for freight and goods movement; these elements of a research program should be considered:

- continuing to develop the regional freight model
- developing explicit linkages between improvements to freight components of Metro's regional model and the Oregon statewide model, focusing on enhancing the regional distribution component
- more fully incorporating freight trip time reliability performance measures into Metro's transportation and land use planning and project prioritization criteria.
- finding and evaluating solutions for reliability and economic impacts for the next RTP update
- exploring multiple data sources on the impacts that on-demand delivery is having on traffic, and identifying ways to keep goods moving efficiently
- seeking funding for desired elements of a research program through existing and new programs, as appropriate

Policy B. Provide system management to increase freight network efficiency

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

Near-term Actions:

B1: Better define, preserve and enhance freight function in mobility corridors

In general, the freight mobility function is addressed as part of the regional mobility corridors. Define, preserve and enhance the freight function of the freight network within

individual mobility corridors by evaluating deficiencies.

B2: Assess need to develop and fund better incident management and traveler information

Real-time travel information (focused on truckers) to avoid incidents and find detours is increasingly important, particularly to improving reliability performance. Incident clearing resources and regionally coordinated efforts to manage incidents must be sufficiently funded. This action item would direct attention on deficiencies to be addressed.

B3: Continue support for use and expansion of ITS system management tools

Begin to address need for 24/7 congestion mapping for the multimodal freight system, among other needs. Support PORTAL's program of real-time traffic delay; provide GPS active (in cab) truck route management, electronic routing and signage.

B4: Support workforce access to the region's industrial jobs through Metro RTO/TDM programs

The regional freight work group recognizes the need for Metro's transportation demand management programs and supports non-auto mobility choices for workers to get to their jobs. If options are limited in certain industrial areas, deficiencies will be highlighted for the region to address. Efforts to improve alternative transportation options for workers will include partnering with TriMet and other service providers to ensure good access to high employment areas.

Long-term Actions:

B5: Identify key mobility corridors for testing and development of Connected Vehicle (CV) infrastructure and other ITS strategies

Key mobility corridors for testing would be identified by the freight functions of roadways within the corridors and the truck usage of those roadways. Coordination with the state, counties and cities would be required to develop which types of CV infrastructure would be used, and for the selection of a few key mobility corridors and roadways for testing and implementation.

Policy C. Provide education and understanding of the importance of freight and goods movement issues

To gain public support for projects and funding of freight initiatives, and to help the public and elected officials make wiser land use and transportation decisions, a program of public education is required.

Near-term Actions:

C1: Establish stakeholder outreach program

Make use of an ongoing relationship with the freight community to provide topical and informative briefings to Metro's various audiences. The Portland Freight Committee and the Oregon Freight Advisory Committee (in which Metro staff participates).are the current groups to provide outreach to.

C2: Provide support for topical fact sheets, and other published media that expands awareness of freight issues

The Regional Snapshots are a series of quarterly web publications that provide readers with an approachable, engaging "State of the Region" update on a major topic of interest, such as housing, transportation, or the economy. The Snapshot tells the story of greater Portland through interactive charts, graphs, personal stories, interviews, videos, and profiles of places across the region.

The Snapshot Speaker Series is a complement to the online Snapshot that dives deeper into the issues discussed in each edition. They feature topical experts from across the nation who can share best practices and lessons learned with our local policymakers and other stakeholders, and can be any of a wide range of formats including walking tours, panel discussions, and workshops.

The Regional Snapshot program will be used to provide a spotlight on freight issues with periodic web topics and speakers. A key topic to articulate better is the link between freight and goods movement investments and environmental justice (reducing hot spot congestion and pollutants) and economic equity (good, family wage jobs in one of the few sectors that do not always require higher education).

C3: Coordinate with Economic Value Atlas work which includes the economic development community

Metro will reach out to the economic development community, including the Portland Business Alliance, the Columbia Corridor Association, West Side Economic Alliance and others. Metro staff will work with these partners, and the Economic Value Atlas program, to support an economic development strategy for the region that is coordinated with infrastructure investment.

Note: Metro staff will coordinate with ODOT Rail Division to place the action item of "Host Operation Lifesaver training" under their responsibility for a statewide program.

Policy D. Pursue a sustainable freight transportation systems that support a healthy environment

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

Near-term Actions:

D1: Provide useful "green freight" links from Metro's freight program webpage

This would be a simple web resource that could direct our regional stakeholders to useful local, state and national programs and resources. This web resource would help identify what emission and greenhouse gas reductions can be expected from regional freight and goods movement activities. This action would be covered under Metro's Regional Snapshot program web page.

D2: Pursue greenhouse gas and other pollutant reduction policies and strategies for freight

Metro staff will explore and define potential environmental benefits in the following areas:

- procedures for identifying greenhouse gas impacts of freight and evaluating the net greenhouse gas impact of freight projects
- programs, policies and projects for cost-effective net reduction of greenhouse gas and other pollutants, such as industrial symbiosis (businesses sharing resources and possibly using neighbors' waste products in their processes); and
- leveraging and possibly expanding diesel retrofit programs, promote idle reduction regulations, etc. *(see note)*

Note: Metro staff will be asking the Oregon Department of Environmental Quality (DEQ) to take this action as part of their work program.

Policy E. Integrate freight mobility and access into land use planning and street design

Quality of life begins with a job. With that fact in mind, this category targets land use planning and design issues that can affect the ability of freight, goods movement and industrial uses to live harmoniously with their neighbors. Freight-sensitive land use planning includes everything from long-range aspirations for freight and industrial lands to short-term and smaller scale design and access issues.

Near-term Actions:

E1: Develop strategies to protect existing supply of industrial land

Staff will identify lessons learned from previous efforts in the region and look at the most effective ways to protect high---value industrial land and prioritize and protect the value of freight investments to serve such areas. Protecting existing industrial land is part of the Urban Growth Management Functional Plan. This action will also focus on the economic impacts of failing to preserve and serve industrial lands. This would be tied in with action C3, above.

E2: Provide a freight perspective to the revision of Metro's 'Creating Livable Streets' design guidelines

Moving and delivering goods is a key function of the region's highways and streets. Integrating freight and goods movement into our livable communities will require special roadway design considerations.

As Metro updates its latest edition of "Creating livable streets: Street design guidelines for 2040", Metro will address the recommendations in the "Truck and Street Design Recommendations Technical Report" (May 2007). The update will coordinate with regional stakeholders to ensure that design guidelines on regional intermodal connectors and other key freight roadways keep in mind freight considerations.

Metro will ensure appropriate freight and goods movement representation on the technical work group that will provide input on the revision of the guidelines.

Design Elements and Consideration for Freight

To be completed later.

Long-term Actions:

E3: Examine need for additional industrial land

The region must ensure a continued adequate supply of appropriate industrial land. In addition to internal coordination between Metro planning and land use staff, and coordination with local jurisdictions and industry sectors, an understanding of how the City of Portland succeeded in this area could aid the larger regional effort to meet future industrial land needs. Metro currently tracks the availability and readiness of industrial tracks in the region that are 25 acres or larger, through the Regional Industrial Inventory Project.

Policy F. Adequately fund investments in the freight system, including marine and rail facilities, to ensure the region is economically competitive

This category of solutions focuses on planning and building capital projects and developing the funding sources, partnerships and coordination to implement them. It includes the list of

regional freight project priorities attached as Appendix B to this report, identifying a wide range of projects from preservation and maintenance to major facility construction.

Near-term Actions:

F1: Work toward implementation of the RTP freight priority projects

Advocacy for the prioritized list of regional freight projects within the approved RTP project list will be needed. This will include supporting funding needs and initiatives to build desired projects. In general, consistent with the message presented throughout this action plan, major investments for freight-oriented preservation, management and "build" projects should focus on:

- more carefully evaluating what, where and when the freight problems occur (noting, e.g., that they do not always coincide with the commute peaks)
- addressing core throughway system bottlenecks with substantial freight impacts, to improve truck mobility in and through the region. Examples include the Columbia River Crossing, the I-5 Rose Quarter, I-205 South and Highway 217.
- improving and protecting the throughway interchanges that provide access to major industrial areas, particularly: I-5/Marine Drive and I-5/Columbia Blvd serving the Columbia Corridor and Rivergate industrial areas, I-205/OR 212 serving the Clackamas and Milwaukie industrial areas, and I-205/Airport Way serving Portland International Airport and east Columbia Corridor industrial areas
- improving arterial connections to current and emerging industrial areas
- ensuring safe transport of hazardous loads with a regional routing strategy
- looking beyond the roadway network to address critical marine and freight rail transportation needs such as maintenance of the Columbia River channel and upgrading main line and rail yard infrastructure

F2: Strengthen the tie between project prioritization and the framework for freight performance

Metro recognizes that, while autos and trucks must share the same network, auto trips can more easily be diverted off the highway system via a number of satisfactory existing or planned alternatives, including high capacity transit, a supporting bus network, and regional and corridor bicycle and pedestrian systems in various stages of completeness. Thus, the dependence of trucks and truck-related commerce on the regional freight network system should be recognized as a factor in roadway project prioritization. This action item relies in part on improving the understanding and rigor of freight-related performance measures within Metro's modeling protocols: are we measuring what is relevant to know about freight? In addition, this action depends on technical staff and the freight/jobs/economic development community's ability to articulate fact-based net benefits of strategic goods movement and business-friendly investments and to compete effectively for regional dollars

and attention within the decision-making structure of their respective local jurisdictions.

F3: When appropriate, focus regional funds on large capital projects

Based on solid performance measures and other indicators of need and effectiveness, fully vetted through regional planning processes, it makes sense in some cases for the region to focus its funding on one large project. Examples are the throughway system bottleneck projects listed in F1.

F4: Make strategic incremental improvements when large capital projects are unfunded

When funds are not available for major system improvements, make incremental improvements to those facilities through less costly strategies using tools such as intelligent transportation systems, transportation system management and transportation demand management. Also, phase larger improvements, or ensure that projects move along through completing preliminary engineering, right-of-way acquisition or other steps toward construction.

F5: Ensure that unfunded freight projects are on an aspirational or strategic RTP project list

The region should be prepared to ensure that unfunded projects could at least be considered if unusual, one-time, or new funding sources become available.

F6: Develop regional freight rail strategy

Many hopes are pinned on the potential for regional freight rail to accommodate a greater share of the future demand for goods movement capacity. However, there is a lack of depth in understanding from an operational or investment perspective how that potential could be realized. For example, the I-5 Trade and Capacity studies indicated that there was adequate capacity for the existing level of passenger train frequency along the north/south corridor. However, that capacity would be at the expense of freight train operations for both UP and BNSF region-wide, create hot spot congestion, minimize the possibility of growing freight rail commerce and degrade freight rail service throughout the Pacific Northwest, resulting in more trucks on the region's highways. The Portland metro region is committed to a variety of passenger rail modes and must reckon with the interactions with the freight rail system.

In addition, regional demand and support for pedestrian and bicycle trails frequently puts pressure on existing freight rail capacity and operations. Issues of freight rail capacity, liability, safety, cost and efficiency must be balanced with other regional goals, based on common factual understanding of the underlying issues.

This recommendation contemplates a consultant-assisted technical regional rail study that would provide a foundation for developing the policy framework described in F6, above, and could incorporate that work as part of the study. Development of the strategy could

include evaluation of public ownership and control of current or potential future passenger rail routes within the region or state, as part of a regional freight management strategy.

In addition to Metro's local jurisdictional partners, both Class 1 railroads, the regional short line operator, TriMet, ODOT Region 1, ODOT Rail Division, the Ports and major shippers/customers would be critical stakeholders.

Long-term Actions:

F7: Develop policy and evaluation tools to guide public investment in private freight infrastructure, focused on rail projects

When staff capacity allows, more clearly define private and public sector roles, including incorporation of the identified state role in freight infrastructure planning and investment that is emerging from the statewide freight planning effort. This planning and analytical effort would answer the question "what are we trying to do with our investments?" And it would yield practical and usable performance measures and investment guidelines for public development of freight assets or services, when they are wholly or partially private. It would also help to correctly phase developments, based on public benefits, and identify equitable funding strategies. Rail/roadway grade separation projects and a short-line investment strategy could be key focus areas for such policy development.

Public investment could be appropriate, for example, when it:

- leverages private investment
- allows progression of a needed project that would otherwise not occur for a relatively modest investment
- involves a facility's yard or terminal but has regional impacts
- pays for intermodal links
- creates new passenger capacity by solving freight bottlenecks
- preserves or creates jobs, generates wealth and taxes
- allows for more competition, modes or choices to shippers, businesses or consumers
- increases overall benefits more than it improves any single mode or facility

Note that private investment in public infrastructure—apart from development fees—should also be part of this policy discussion.

Policy G: Increase roadway and freight operational safety to eliminate fatalities and serious injuries caused by crashes

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

Near-term Actions:

G1: Promote and advocate with the cities and counties for the implementation of truck side guards on large freight trucks providing public services (i.e. sanitation and recycling), consistent with USDOT specifications.

Side guards are safety equipment used on large trucks to reduce fatalities and major injuries with side impact crashes. Large cities across the United States are identifying side guards as a proactive way to provide a safer atmosphere for cycling and walking next to large trucks within increasingly dense urban areas.

City of Portland Bureau of Planning and Sustainability has committed to coordinate a pilot project to install side guards on 18 sanitation (garbage) and recycling trucks operating in Portland. As of November 2017, the city had overseen the installation of side guards on three trucks.

Metro will work with the City of Portland Bureau of Planning and Sustainability to promote the completion of the pilot project, and consider expanding the project to more sanitation and recycling trucks. Metro will advocate for the city to consider a program that eventually begins the installation of side guards on all large trucks that the city has control through licensing and franchises for city services. Metro may also consider a pilot project like the one at the City of Portland for the large trucks that handle the Solid Waste Disposal and Transportation services from Metro's two transfer stations to one or two landfills outside the region.

Metro will reach out Clackamas, Multnomah and Washington counties, and other larger cities in the region to see if there is interest in starting pilot projects to install side guards on large sanitation and recycling trucks operating within their jurisdiction.

G2: Develop design guidance for identifying and prioritizing improvements to regional intermodal connectors that should have bike and pedestrian facilities that are separated from the roadway, and other design treatments to enhance the safety of non-motorized modes.

As Metro updates its latest edition of "Creating livable streets: Street design guidelines for 2040", Metro will coordinate with regional stakeholders to identify design guidelines on regional intermodal connectors and other key freight roadways that enhance the safety of non-motorized modes (see action E2).

Due to the volume and size of trucks on the regional intermodal connectors, the design guidance will likely be separation of the bike and pedestrian facilities from the roadway whenever possible.

Once the design guidelines on regional intermodal connectors and other key freight roadways have been established, Metro will develop criteria for identifying which of these freight roadways has the greatest need for improvements that enhance safety for non-motorized modes. Potential criteria could include a history of locations with serious crashes, the number of daily trucks, the percentage of truck traffic, number of daily bike trips, number of daily pedestrian crossings at key intersections, and proximity to schools and other facilities that generate bike trips and pedestrian activity. Once the freight roadways and intersections with the greatest needs are identified, Metro would coordinate with the counties and cities to develop freight safety projects that would be included in the Regional Transportation Plan. Projects that enhance the safety of bicyclist and pedestrians could include off-street multi-use paths, or truck aprons and other intersection safety improvements.

10 MEASURING PROGRESS

In 2012, the Moving Ahead for Progress in the 21st Century (MAP-21) created the most significant federal transportation policy shift since the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA). A fundamental element of the legislation was its focus on performance-based planning and programming. Fixing America's Surface Transportation (FAST Act) passed Congress in December 2015, replacing MAP-21. The FAST Act did not make any major changes to the performance requirements of MAP-21 and did not add any new performance measures.

Performance-based planning

For the first time, MAP-21 established a performance-based planning framework intended to improve transparency and hold state transportation departments, transit agencies and metropolitan planning organizations (MPOs) accountable for the effectiveness of their transportation planning and investment choices. The objective of the new framework was to ensure States and MPOs invest federal resources in projects that collectively will make progress toward the achievement of the national goals identified in MAP-21.

National performance goals related to freight

The legislation established seven national performance goals for the federal-aid highway program and directed the USDOT to develop performance measures for each goal area. The following are the performance goals that relate to system reliability, and freight movement and economic vitality:

- **System reliability** – To improve the efficiency of the surface transportation system.
- **Freight movement and economic vitality** – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.

MAP-21 directed state transportation departments, transit agencies, and metropolitan planning organizations (MPOs) to incorporate a performance-based approach in their planning, including measures and targets, that are to be used in transportation decision-making. States, transit agencies and MPOs must set targets for measures specified by USDOT and track and report progress toward meeting these targets.

Performance measures have been identified through MAP-21 and subsequent USDOT rulemaking that must be reflect in the 2018 RTP. The table below summarizes the federal performance measures identified for the performance goals related to freight and compares them to the current 2014 RTP Targets/Measures:

MAP-21 National Goal Areas, Federal Performance Measures, and Existing RTP Measures

National Goal Areas	Federal Performance Measure(s)	2014 RTP Target(s) / Measure
System reliability	Percent of reliable person-miles traveled[1] on Interstate System and on the non-Interstate National Highway System	None – though reliability is called out as recommended as a system monitoring measure. Also, there's a target labeled "freight reliability" but it measures delay, not reliability.
Freight movement and economic vitality	Percent of Interstate System miles with reliable truck travel times[2]	By 2040, reduce vehicle hours of delay per truck trip by 10% compared to 2010.

10.1 Freight Performance Target

The 2014 RTP Performance Targets had identified one freight performance target. The performance target was called **Freight Reliability**, and was defined as:

- By 2040, reduce vehicle hours of delay per truck trip by 10 percent compared to 2010.

This is not a true reliability measure. Reliability is a measure of the variability in travel time, not simply the delay in travel time. Researchers have devised feasible, data-driven methods to measure roadway reliability.

Staff recommends discussing how the region could support and apply such techniques to freight and mobility corridors. Staff is currently proposing that the freight performance target would be replaced by the federal performance measure for ***Freight movement and economic vitality*** *using the same methodology:*

- Percent of Interstate System miles with reliable truck travel times[2].

(To be completed later)

[1] Reliable defined as the ratio of the 80th percentile travel time of a reporting segment to a "normal" travel time (50th percentile), using data from FHWA's free National Performance Management Research Data Set or equivalent. Data are collected in 15-minute segments during all time periods other than 8 p.m.-6 a.m. local time. The measures are the percent of person-miles traveled on the relevant NHS areas that are reliable

[2] The ratio will be generated by dividing the 95th percentile time by the normal time (50th percentile) for each segment. Then, the Index will be generated by multiplying each segment's largest ratio of the five periods by its length, then dividing the sum of all length-weighted segments by the total length of Interstate. Reporting is divided into five periods: morning peak (6-10 a.m.), midday (10 a.m.-4 p.m.) and afternoon peak (4-8 p.m.) Mondays through Fridays; weekends (6 a.m.-8 p.m.); and overnights for all days (8 p.m.-6 a.m.)

10.2 Freight Monitoring Measures

Freight monitoring measures should tell users how the freight system is performing over time to identify where and when adjustments in the freight network are needed.

Travel time reliability on throughways *and intermodal connectors*

Generally travel time reliability is the comparison of how long it takes to travel along a roadway route during a certain time of day (example - 4:00-4:15 PM) on a weekday using many samples, and comparing each sample to how long it would take to travel that route at that time of day under normal conditions (50th percentile of all samples). Higher frequencies of times with a high level of variability from the norm, means high unreliability.

(This is placeholder language and will be completed later)

10.3 Freight System Evaluation Measures

Truck Vehicle Hours of Delay (VHD) on all facilities

This measure uses the Metro travel forecasting model to calculate the hours of truck delay for all roadway facilities within the Metro Planning Area (MPA) during 2015 and various future years. The calculations have been made for the average weekday during the following times of day: 7AM to 9AM (morning peak), 1PM to 3PM, and 4PM to 6PM (evening peak). The 1PM to 3PM time-slot was chosen as the afternoon period that trucks travel in to avoid peak hours of congestion.

(To be completed later)

Truck Vehicle Hours of Delay (VHD) on the Regional Freight Network

This measure uses the Metro travel forecasting model to calculate the hours of truck delay for just the roadways on the Regional Freight Network map within the Metro Planning Area (MPA), during 2015 and various future years. Once again, the calculations have been made for the average weekday during the following times of day: 7AM to 9AM (morning peak), 1PM to 3PM, and 4PM to 6PM (evening peak).

(To be completed later)

Cost of Truck VHD on all facilities and on the Regional Freight Network

This measure uses the Truck VHD numbers that were calculated for both all roadway facilities and for the just the Regional Freight Network and factors them up by a two set values of time for trucks to obtain cost numbers. The value of time factor for medium trucks* is $28.20 per hour and represents 35% of the truck fleet. The value of time factor for heavy trucks* is $30.72 per hour and represents 65% of the truck fleet.

(To be completed later)

Freight Evaluation Measure and Refinement of Regional Mobility Policy (In development)

Freight Mobility and Industrial Access Measure

This measure is being developed and tested as part of the 2018 RTP Systems Evaluation work. The process has consisted of 1) choosing two industrial areas; one being the Tualatin Industrial Area off Tualatin-Sherwood Road; and the second being Marine Terminals 5 and 6, and the rail yards off Marine Drive; 2) calculating the number of trucks at certain times of day (modeled) that are coming into or leaving these area (zones); and 3) measuring the hours of delay (modeled) that these trucks are experiencing (within the region) at these times of day as they travel to and from these areas.

(This is placeholder language and will be completed later)

Refinement of the Regional Mobility Policy

The U.S. Department of Transportation issued new regulations for states and Metropolitan Planning Organizations that will require greater monitoring of mobility on the freeway system and setting targets for system performance.

To meet the new federal mandate and the growing challenges on the freeway system, ODOT and Metro propose to work in partnership after the completion of the 2018 RTP (2019–20) on a refinement to our regional mobility policy. This will allow the refinement work to build on a rich data set and updated policy framework from the RTP, with the goal of better informing system management and investments in the region.

In the interim, guidance will be provided in the RTP on how the mobility policy applies to planning decisions, and how it relates to and compliments other regional targets and policies. The mobility policy is principally an issue for the freeways and state highways on the region's principal arterial system, which are an important part of the regional freight network.

2018 RTP Freight Projects and Programs (final draft) - Appendix A

RTP Investment Category	County	Nominating Agency	2018 RTP ID	Project Name	Start Location	End Location	Primary Purpose	Description	Estimated Cost (2016 dollars)	Time Period	Financially Constrained?
Freight	Clackamas County	Milwaukie	11624	Local Street Improvements in Tacoma Station Area	Location-specific	Location-specific	Increase freight access to indust & intermodal fac	Construct street improvements on Stubb St, Beta St, Ochoco St, Hanna Harvester Dr, and Mailwell Dr. (TSAP)	$ 5,600,000	2028-2040	No
Freight	Clackamas County	Wilsonville	11764	Boones Ferry Road Extension	Commerce Circle	Ridder Road	Increase freight access to indust & intermodal fac	Construct 3-lane section with bike lanes and sidewalk	$ 2,100,000	2028-2040	Yes
Freight	Multnomah County	Gresham	10446	181st: at Burnside	181st/Burnside	181st/Burnside	Increase system efficiency	Optimize intersection operation. Transit/Enhanced Transit Corridor supportive project.	$ 1,000,000	2028-2040	Yes
Freight	Multnomah County	Gresham	10495	181st: at Halsey	Halsey St.	Halsey St.	Relieve current congestion	add 2nd LT lane to N & S legs, add RT lane to EB WB SB.	$ 1,089,615	2028-2040	Yes
Freight	Multnomah County	Gresham	10496	181st: at I-84	181st/I-84	181st/I-84	Increase freight access to indust & intermodal fac	Freight mobility improvements subject to refinement study. Transit/Enhanced Transit Corridor supportive project.	$ 1,000,000	2028-2040	Yes
Freight	Multnomah County	Multnomah County	11600	Marine Drive at 223rd	Marine Drive at 223rd	Marine Drive at 223rd	Increase freight access to indust & intermodal fac	Widen to accommodate freight traffic and provide bike/ped facilities	$ 10,630,000	2028-2040	No
Freight	Multnomah County	Port of Portland	10363	SW Quad Access	NE 33rd Ave.	SW Quad	Increase freight access to indust & intermodal fac	Provide street access from 33rd Ave. into SW Quad.	$ 6,290,303	2018-2027	Yes
Freight	Multnomah County	Port of Portland	10379	Marine Dr. Improvement Phase 2	BNSF grade crossing on Marine Drive	BNSF grade crossing on Marine Drive	Increase freight access to indust & intermodal fac	Construct rail overcrossing on Marine Dr.	$ 14,503,785	2018-2027	Yes
Freight	Multnomah County	Port of Portland	11207	T6 Modernization	Terminal 6	Terminal 6	Increase freight access to indust & intermodal fac	Provide improvements to container terminal including crane electronics and storm water improvements.	$ 8,504,000	2028-2040	Yes
Freight	Multnomah County	Port of Portland	11208	T4 Modernization	Terminal 4		Increase freight access to indust & intermodal fac	Renovate operation areas at T4 to create intermodal processing areas. Rail spur relocation and expansion, grain elevator demolition, wharf removal	$ 15,845,078	2018-2027	Yes
Freight	Multnomah County	Port of Portland	11306	T6 Second Entrance from Marine Drive	N. Bybee Lake Rd.	N. Pacific Gateway	Increase freight access to indust & intermodal fac	Construct 2nd entrance from Marine Drive and internal rail overcrossing to Terminal 6. .	$ 12,756,000	2028-2040	Yes
Freight	Multnomah County	Port of Portland	11307	T6 Suttle Road entrance	Terminus of N. Suttle Road	Terminal 6	Increase freight access to indust & intermodal fac	Access to the east end of Terminal 6 off the terminus of Suttle Road.	$ 3,189,000	2028-2040	Yes
Freight	Multnomah County	Port of Portland	11309	Cully Blvd. Grade separation	Columbia	Lombard	Increase system efficiency	Construct roadway overcrossing at NE Cully Blvd. over Kenton line.	$ 37,205,000	2028-2040	No
Freight	Multnomah County	Port of Portland	11353	West Hayden Island Rail Access	BNSF Rail Bridge	West Hayden Island	Increase freight access to indust & intermodal fac	Advance rail-dependent development.	$ 3,189,000	2028-2040	Yes
Freight	Multnomah County	Port of Portland	11354	West Hayden Island Rail Yard	West Hayden Island	West Hayden Island	Increase freight access to indust & intermodal fac	Advance rail development on West Hayden Island.	$ 10,098,500	2028-2040	Yes
Freight	Multnomah County	Port of Portland	11355	Barnes to Terminal 4 Rail	Terminal 4	Barnes Yard	Increase freight access to indust & intermodal fac	Improve Rail Access to Terminal 4.	$ 4,543,000	2018-2027	Yes

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Freight	Multnomah County	Port of Portland	11357	Terminal 6 Rail Support Yard Improvements	Terminal 6	Terminal 6	Increase freight access to indust & intermodal fac	Increase Terminal 6 rail capacity.	$ 10,630,000	2018-2027	Yes
Freight	Multnomah County	Port of Portland	11649	T2 Redevelopment	Terminal 2	Terminal 2	Increase freight access to indust & intermodal fac	Construct rail, rail scale, and crane modernization.	$ 4,783,500	2018-2027	Yes
Freight	Multnomah County	Port of Portland	11651	T2 Track Reconfiguration and Siding	Terminal 2	Terminal 2	Increase freight access to indust & intermodal fac	Construct rail loops and support siding.	$ 9,460,700	2018-2027	Yes
Freight	Multnomah County	Port of Portland	11652	Bonneville Rail Yard Build Out	Bonneville Rail Yard	Bonneville Rail Yard	Increase freight access to indust & intermodal fac	Construct two interior yard tracks at Bonneville Yard and complete the double track lead from the wye at the east end of the yard to UP Barnes Yard.	$ 3,826,800	2018-2027	Yes
Freight	Multnomah County	Port of Portland	11653	Ramsey Yard Utilization	Columbia Slough	Bonneville Yard	Increase freight access to indust & intermodal fac	Connect the existing set out track along the west side of the main lead with the industrial lead near the south end to provide a location to store a unit train.	$ 1,807,100	2018-2027	Yes
Freight	Multnomah County	Port of Portland	11654	Time Oil Road Reconstruction	Lombard	Rivergate Boulevard	Increase freight access to indust & intermodal fac	Reconstruct Time Oil Road	$ 9,567,000	2028-2040	Yes
Freight	Multnomah County	Port of Portland	11659	Rivergate Blvd. Overcrossing	N. Lombard	Time Oil Road	Relieve current congestion	Relieve a congestion point in Rivergate Industrial Area, improve rail access to Terminal 5.	$ 22,263,790	2018-2027	Yes
Freight	Multnomah County	Port of Portland	11743	Troutdale Airport Master Plan Transportation Improvements	Sundial Road	Swigert Way/Graham Road	Increase freight access to indust & intermodal fac	Implement transportation improvements developed as part of the Troutdale Airport Master Plan	$ 5,000,000	2018-2027	Yes
Freight	Multnomah County	Port of Portland	11949	North Portland Junction: Undoing the "X"	UPRR Peninsula Junction	North Portland Junction	Increase freight access to indust & intermodal fac	Eliminate the at-grade crossing of UPRR and BNSF tracks at North Portland Junction.	$ 33,598,000	2028-2040	No
Freight	Multnomah County	Port of Portland	11953	Six mph Curves Railroad Improvements	Steel Bridge	Just north of Steel Bridge	Increase system efficiency	Realign the curves just north of the Steel Bridge to improve rail speed and capacity.	$ 23,600,000	2028-2040	No
Freight	Multnomah County	Port of Portland	11955	Railroad Bridge and Track Improvements	Columbia Slough Rail Bridge	Columbia River Rail Bridge	Increase system efficiency	Improve rail track conditions on approaches to Willamette River and Columbia Rive bridges to increase railroad speed and capacity.	$ 10,751,000	2028-2040	No
Freight	Multnomah County	Port of Portland	11956	Rivergate Columbia Slough Rail Bridge	Terminal 6	Terminal 5	Increase freight access to indust & intermodal fac	Construct a rail bridge across Columbia Slough to provide rail connection to South Rivergate from Terminal 6.	$ 10,840,000	2028-2040	No
Freight	Multnomah County	Portland	10218	Burgard-Lombard Street Improvements	N Burgard St & Columbia Blvd	Burgard Viaduct	Increase freight access to indust & intermodal fac	Construct roadway improvements, including pedestrian and bicycle facilities.	$ 2,635,000	2018-2027	Yes
Freight	Multnomah County	Portland	10331	Columbia Blvd / Railroad Bridge Replacement	N Columbia Blvd over BNSF railroad	N Columbia Blvd over BNSF railroad	Keep system in good repair	Replace the existing fracture critical Columbia Blvd bridge (#078) over railroad tracks with a new structure, and perform seismic upgrades on parallel bridge (#078A).	$ 4,000,000	2028-2040	Yes
Freight	Multnomah County	Portland	10337	Marine Dr & 33rd Intersection Improvements	Marine Dr & 33rd Ave, NE	Marine Dr & 33rd Ave, NE	Increase freight access to indust & intermodal fac	Signalize intersection to improve freight operations.	$ 1,000,000	2018-2027	Yes

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RTP Investment Category	County	Nominating Agency	2018 RTP ID	Project Name	Start Location	End Location	Primary Purpose	Description	Estimated Cost (2016 dollars)	Time Period	Financially Constrained?
Freight	Multnomah County	Portland	10340	Cornfoot Rd Corridor Improvements	NE 47th Ave	NE Alderwood Rd	Increase freight access to indust & intermodal fac	Improve roadway and intersections to improve freight operations. Construct a multi-use path on the north side of Cornfoot Rd to separate pedestrians and bicyclists from motor vehicle traffic. Install guardrails where needed.	$ 7,000,000	2018-2027	Yes
Freight	Multnomah County	Portland	10376	Columbia Blvd Freight Improvements: Design/Construction	NE 60th Ave.	NE 82nd Ave.	Increase system efficiency	Construct street and intersection modifications to improve freight reliability and access to industrial properties.	$ 14,000,000	2028-2040	No
Freight	Multnomah County	Portland	11570	Columbia/Alderwood Intersection Improvements	NE Columbia Blvd & Alderwood Rd	Columbia/Alderwood	Increase system efficiency	Improve intersection and install traffic signal at Columbia & Alderwood.	$ 5,050,654	2018-2027	Yes
Freight	Multnomah County	Portland	11796	Going St Connected/Automated Vehicle Connection	Swan Island Industrial Area	I-5	Increase system efficiency	Design and construct a Connected/Automated Vehicle connection between Swan Island and I-5.	$ 5,000,000	2028-2040	Yes
Freight	Multnomah County	Portland	11799	Suttle Rd Freight Street Improvements	N Portland Rd	T6	Increase freight access to indust & intermodal fac	Improve Suttle Rd to meet Freight District Street standards, separate rail and truck movements, provide pedestrian access to nearby bus line, and enable future T6 entrance Port project.	$ 9,000,000	2028-2040	Yes
Freight	Multnomah County	Portland	11800	Columbia Blvd Pedestrian Overpass Replacement	N Columbia Blvd west of N Midway Ave	N Columbia Blvd west of N Midway Ave	Increase freight access to indust & intermodal fac	Replace the pedestrian overpass near George Middle School with either an at-grade crossing or a higher overpass to enable the use of Columbia Blvd as an over-dimensional freight route.	$ 3,000,000	2018-2027	Yes
Freight	Multnomah County	Portland	11801	Columbia Blvd Railroad Undercrossing Improvement	N Columbia Blvd at railroad bridge near I-5	N Columbia Blvd at railroad bridge near I-5	Increase freight access to indust & intermodal fac	Lower the Columbia Blvd undercrossing at the UP Railroad Bridge just west of I-5 to enable the use of Columbia Blvd as an over-dimensional freight route.	$ 3,000,000	2028-2040	Yes
Freight	Multnomah County	Portland	11802	N Portland Rd over Columbia Slough Bridge Replacement	N. Portland Rd at Columbia Slough	N. Portland Rd at Columbia Slough	Increase freight access to indust & intermodal fac	Replace the weight-restricted N. Portland Road bridge over the Columbia Slough to enable the use of N. Portland Road as an over-dimensional freight route and include a connection for the Columbia Slough Trail.	$ 7,500,000	2028-2040	Yes
Freight	Multnomah County	Portland	11841	Central Eastside Access and Circulation Improvements	Central Eastside	Central Eastside	Increase freight access to indust & intermodal fac	Improve access and circulation in the Central Eastside by adding new signals and crossings at Hawthorne & Clay ramp, Salmon & Grand, Salmon & MLK, Washington & Grand, Washington & MLK, Ankeny & MLK, Ankeny & Sandy, 16th & Irving, and modifying signals at Stark & Grand, Clay & Grand, and Mill & MLK. Improve Clay Street from Water to Grand and add multimodal safety improvements.	$ 5,205,879	2018-2027	Yes
Freight	Multnomah County	Portland	11871	Going/Greeley Interchange Improvements	N Going/Greeley	N Going/Greeley	Increase freight access to indust & intermodal fac	Redesign Going/Greeley interchange including climbing lane on Going to improve truck movement between Swan Island, Lower Albina, and I-5.	$ 16,750,000	2028-2040	No
Freight	Multnomah County	Portland	11880	Cully Blvd Rail Overcrossing	NE Cully Blvd (over Kenton line)	NE Cully Blvd (over Kenton line)	Increase freight access to indust & intermodal fac	Construct roadway overcrossing at NE Cully Blvd. over Kenton line.	$ 35,000,000	2028-2040	No

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Freight	Multnomah County	Portland	12004	Columbia Blvd Freight Improvements: Project Development	NE 60th Ave	NE 82nd Ave	Increase freight access to indust & intermodal fac	Alternatives analysis and project development to identify preferred street and intersection modifications to improve freight reliability and access to industrial properties.	$ 1,000,000	2018-2027	Yes
Freight	Washington County	Wilsonville	10588	Grahams Ferry Road Improvements	Day Road	Washington/ Clackamas County line	Increase freight access to indust & intermodal fac	Widen Grahams Ferry Road to 3 lanes, add bike/pedestrian connections to regional trail system and fix (project development only) undersized railroad overcrossing.	$ 13,200,000	2028-2040	Yes
Freight	Multnomah County	Gresham	10445	181st at Glisan: Intersection Improvements	181st/Glisan	181st/Glisan	Relieve current congestion	Construct Gresham/Fairview Trail between Halsey and Sandy. This ultimately connects the regional trail between the Springwater Trail and Marine Dr. Trail.	$ 4,899,153	2018-2027	Yes
Freight	Multnomah County	Multnomah County	10394	Replace RR Over-crossing on 223rd Ave.	2000' north of I-84		Build complete street	Reconstruct railroad bridge on 223rd Ave, 2000' north of I-84 to accommodate wider travel lanes, sidewalks and bike lanes.	$ 7,441,000	2018-2027	Yes
Freight	Multnomah County	Port of Portland	11952	Columbia River Rail Bridge Improvements	Columbia River Rail Bridge	Columbia River Rail Bridge	Increase system efficiency	Replace Existing swing span with lift span and relocate position to mid-river channel.	$ 35,548,800	2028-2040	No
Freight	Multnomah County	Portland	10244	Kittridge Bridge Seismic Retrofit	NW Kittridge/Yeon Bridge	NW Kittridge/Yeon Bridge	Keep system in good repair	Retrofit existing seismically vulnerable bridge (#010) across railroad tracks to ensure emergency response and access to petroleum supplies located along the Willamette River in the event of an earthquake.	$ 15,249,213	2028-2040	No
Roads and Bridges	Clackamas County	Clackamas County	10002	Johnson Creek Blvd. Improvements	55th Ave	82nd Ave.	Increase freight access to indust & intermodal fac	Widen to 3 lanes with bikeways and pedestrian facilities from 55th Ave to 82nd Ave improving freight access to industrial area and increasing accessibility for historically marginalized communities.	$ 14,237,510	2028-2040	Yes
Roads and Bridges	Clackamas County	Clackamas County	10023	82nd Dr. Improvements	Hwy 212	Strawberry Lane Intersection	Relieve current congestion	Widen to a consistent 4 lane cross section and include bike/ped improvement and ADA accessibility improvements as necessary. Not including intersection improvements at Strawberry Lane.	$ 18,521,712	2028-2040	No
Roads and Bridges	Clackamas County	Clackamas County	11514	82nd Drive/Strawberry Lane Intersection	82nd Dr/Strawberry Lane intersection	N/A	Relieve current congestion	Install traffic signal and turn lanes on eastbound and northbound approaches, improve ADA accessibility as necessary.	$ 1,520,870	2028-2040	Yes
Roads and Bridges	Clackamas County	Happy Valley	10033	172nd Ave & 190th Connector	Clatsop	Sunnyside Rd.	Relieve current congestion	Widen 172nd to 5 lanes; construct connector between 172nd and 190th Ave using adopted alignment; project includes bike lanes, sidewalks and continuous left turn lane; last connector in n/s freight route alternative to I-205 between I-84 and Hwy-212.	$ 39,841,240	2028-2040	Yes
Roads and Bridges	Clackamas County	Happy Valley	10041	162nd Ave. Extension South Phase 1	Rock Creek Blvd.	Hwy. 212	Relieve current congestion	Extend 162nd Ave from Rock Creek Blvd to Hwy-212; construct new, 3 lane roadway with continuous left turn lane, sidewalks, bike lanes, intersection improvements at Hwy. 212/162nd on all four approaches. Project terminates at industrial employment sector.	$ 5,315,000	2018-2027	Yes
Roads and Bridges	Clackamas County	Happy Valley	11135	Rock Creek Blvd. improvements	Hwy. 212/224 (planned Sunrise Corridor Rock Creek Interchange)	177th Ave.	Increase freight access to indust & intermodal fac	Construct new 5 lane road from Sunrise Corridor Rock Creek interchange to 162nd Ave; Widen existing alignment of Rock Creek Blvd to five lanes from 162nd to 177th Ave. Facility improvements include continuous left turn lane, sidewalks, bike lanes and traffic signals.	$ 23,673,010	2018-2027	Yes
Roads and Bridges	Clackamas County	Milwaukie	10000	Linwood/Harmony Rd./ Lake Rd. Intersection	Railroad Ave / Linwood Ave / Harmony Rd Intersection	Railroad Ave / Linwood Ave / Harmony Rd Intersection	Relieve current congestion	Railroad crossing and intersection improvements based on further study of intersection operations including bikeways and pedestrian facilities to be undertake jointly by the City of Milwaukie and the County	$ 21,300,000	2028-2040	Yes

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Roads and Bridges	Clackamas County	Milwaukie	11537	Group 4--Pedestrian Improvements at Hwy 224	Harrison St	Freeman Way	Relieve current congestion	Intersection Improvements at Hwy 224 and 37th Ave = Consolidate the two northern legs of 37th Ave and International Way into one leg at Hwy 224. Intersection Improvements at Hwy 224 and Oak St = Add left-turn lanes and protected signal phasing on Oak St approaches. Study of Pedestrian Crossings on Hwy 224 = Examine alternatives for improving pedestrian crossings at five intersections along Hwy 224 (Harrison St, Monroe St, Oak St, 37th Ave, Freeman Way). Intersection Improvements at Hwy 224 and Oak St = Improve pedestrian crossing. Intersection Improvements at Hwy 224 and 37th Ave = Improve pedestrian crossing. Hwy 224 Crossing Improvements at Oak and Washington St = Improve intersection crossing safety for bicyclists at Washington St and Oak St. Intersection Improvements at Hwy 224 and Freeman Way = Improve pedestrian crossing. Intersection Improvements at Hwy 224 and Harrison St = Improve pedestrian crossing. Intersection Improvements at Hwy 224 and Monroe St = Improve pedestrian crossing. Intersection Improvements at Harrison St and Hwy 224 = Add left-turn lanes and protected signal phasing on Harrison St approaches.	$ 3,100,000	2028-2040	Yes
Roads and Bridges	Clackamas County	Milwaukie	11623	Group 11--Intersection Improvements in North Industrial Area	Ochoco St	Harrison St	Relieve current congestion	Signage and Intersection Improvements at McLoughlin Blvd and Ochoco St = Establish signage for trucks and improve intersection. (TSAP) Intersection Improvements at McLoughlin Blvd and 17th Ave = Prohibit left-turn movement from 17th Ave to northbound McLoughlin Blvd and include in Hwy 224 & Hwy 99E Refinement Plan. Intersection Improvements at Main St and Mailwell Dr = Upgrade intersection turning radii to better accommodate freight movements.	$ 2,300,000	2028-2040	No
Roads and Bridges	Clackamas County	Oregon City	10119	OR 213 & Redland, Phase 2	Redland Road	Redland Road Undercrossing	Relieve current congestion	Add third through lane in both northbound & southbound directions. This is Phase 2 of the completed Jughandle Project. (TSP D79)	$ 9,800,000	2028-2040	Yes
Roads and Bridges	Clackamas County	Oregon City	10140	OR 213 Widening	Clackamas Community College	Conway Drive	Relieve current congestion	Add one Southbound through lane and one Northbound through lane, bike lanes, and sidewalks. (TSP D77, W31)	$ 5,200,000	2028-2040	Yes
Roads and Bridges	Clackamas County	Oregon City	10144	Hwy 99E & I-205 SB Interchange Access	Dunes Drive	I-205 SB Ramp Terminus	Relieve current congestion	Dual left turn lanes on 99E approach to SB I-205 ramp, ramp widening to accommodate approach. (Closely related to TSP D75, D76 but not actually these projects)	$ 3,000,000	2028-2040	No
Roads and Bridges	Clackamas County	Oregon City	11544	Meyers Road Extension (West)	OR 213	High School Avenue	Relieve current congestion	Construct new 3 lane roadway, sidewalks, buffered bike lanes, WB right turn lane and center turn lanes to serve adjacent Clackamas Community College & underdeveloped industrial properties. (TSP D46)	$ 4,500,000	2018-2027	Yes
Roads and Bridges	Multnomah County	Gresham	10416	Hogan Corridor Improvements	Stark	Burnside	Increase system efficiency	Interim capacity improvements and access controls.	$ 20,346,310	2028-2040	No

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Roads and Bridges	Multnomah County	Gresham	10417	Hogan: Palmquist to Rugg - New Arterial Connection	Palmquist	Rugg Rd.	Relieve future congestion	Complete project development and construct new principal arterial connection with multi-use path.	$ 36,152,117	2028-2040	No
Roads and Bridges	Multnomah County	Gresham	10430	Orient: South City limits to Kane Dr. widening	South City Limits	Kane Dr	Build complete street	Upgrades to arterial 4 lane standards.	$ 9,567,000	2028-2040	No
Roads and Bridges	Multnomah County	Gresham	10434	Burnside: 212th to Hogan Road	Wallula	Hogan	Build complete street	Complete boulevard design improvements on Burnside from Wallula/212 to Hogan. Improve intersection of Burnside at Division by adding eastbound RT and signal, and also improve the intersection of Burnside and Hogan.	$ 34,595,974	2028-2040	No
Roads and Bridges	Multnomah County	Gresham	10443	Sandy: 181st to 202nd Widening	181st Ave.	202nd	Relieve current congestion	Widens Sandy Blvd. to 5 lanes with sidewalks, bike lanes from 181st to 202nd Ave.	$ 5,000,000	2018-2027	Yes
Roads and Bridges	Multnomah County	Gresham	10445	181st at Glisan: Intersection Improvements	181st/Glisan	181st/Glisan	Relieve current congestion	Improve Intersection.	$ 1,107,505	2018-2027	Yes
Roads and Bridges	Multnomah County	Gresham	10493	181st: I-84 to Sandy Widening	Sandy	I-84	Relieve current congestion	Add southbound aux lane & widen RR overcrossing.	$ 1,000,000	2028-2040	No
Roads and Bridges	Multnomah County	Gresham	10497	181st: at Stark and Sandy Intersections	Sandy	Stark	Increase system efficiency	At Sandy: Northbound right turn, 2nd westbound left turn. Overlap eastbound right turn. At Stark, add 2nd left turn lane on east and west legs.	$ 2,003,107	2028-2040	No
Roads and Bridges	Multnomah County	Gresham	10503	Burnside at Powell	Powell	Powell	Increase system efficiency	At Powell: eliminate EB and WB left turn lanes.	$ 1,000,000	2028-2040	Yes
Roads and Bridges	Multnomah County	Gresham	10511	Hogan at Stark: Turn Lane Additions	Stark	Stark	Relieve future congestion	Add right turn lanes on all approaches and second northbound and southbound left turns.	$ 3,500,000	2018-2027	Yes
Roads and Bridges	Multnomah County	Gresham	10512	Hogan: Powell to Burnside Blvd. Design and Intersection Improvements	Powell	Burnside	Relieve current congestion	Improve to boulevard standards, and intersection improvements at Burnside, Division and Powell.	$ 9,289,906	2018-2027	Yes
Roads and Bridges	Multnomah County	Gresham	10527	Hogan: Powell to Palmquist Widening	Powell	Palmquist	Build complete street	Improve to arterial standards.	$ 13,228,630	2028-2040	No
Roads and Bridges	Multnomah County	Gresham	10533	190th: 30th to Cheldelin	30th	Cheldelin	Serve new urban area	Improve existing road to major arterial standards, signalize 190th @ Giese, Butler, Richey, Cheldelin.	$ 30,448,832	2018-2027	Yes
Roads and Bridges	Multnomah County	Gresham	11261	181st/182nd: ACM with Transit Priority Treatment	Glisan	Powell	Relieve current congestion	Includes the ACM project with transit signal priority added to traffic signals along a facility.	$ 4,252,000	2028-2040	Yes
Roads and Bridges	Multnomah County	Gresham	11262	181st: ACM with Adaptive Signal Timing and Transit Priority Treatment	I-84	Glisan	Increase system efficiency	Provide real time and forecasted traveler information on arterial roadways including current roadway conditions, congestion information, travel times, incident information, construction work zones, current weather conditions and other events that may affect traffic conditions. Transit/Enhanced Transit Corridor supportive project.	$ 3,933,100	2028-2040	Yes
Roads and Bridges	Multnomah County	Gresham	11264	US 26: Portland to Gresham Roadside Travel Time Information	Portland	Gresham	Increase system efficiency	Provide real time traveler information on westbound US 26 for different routes (arterial and freeway) between Portland and Gresham. The project or a portion of the project is outside the designated urban growth boundary as of March 2014.	$ 1,169,300	2018-2027	Yes
Roads and Bridges	Multnomah County	Gresham	11682	181st: Stark to I-84 Rockwood Safety Corridor	I-84	Stark	Reduce crashes	Safety corridor: 181st/Rockwood {I-84 - Stark}	$ 2,019,700	2018-2027	Yes
Roads and Bridges	Multnomah County	Gresham	11687	Powell at Eastman: Left Turn Lane Addition	Powell at Eastman	Powell at Eastman	Relieve current congestion	Powell and Eastman {additional southbound left turn}	$ 1,000,000	2028-2040	Yes

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Roads and Bridges	Multnomah County	Gresham	10431	190th/Highland: 11th to 30th Widening	200' south of SW 11th	30th	Build complete street	Reconstruct and widen street to five lanes with sidewalks and bike lanes. Widen and determine the appropriate cross-section for Highland Drive and Pleasant View Drive from Powell Boulevard to 190th Ave.	$ 20,884,252	2028-2040	Yes
Roads and Bridges	Multnomah County	Gresham	10454	181st: Glisan to Yamhill Boulevard Improvements	Glisan	Yamhill	Build complete street	Complete boulevard design improvements.	$ 12,160,785	2028-2040	Yes
Roads and Bridges	Multnomah County	Gresham	10473	223rd at Stark: Lane Additions	223rd at Stark	223rd at Stark	Increase system efficiency	Add EB and NB RT lanes and 2nd NB and SB LT lanes.	$ 5,500,000	2018-2027	Yes
Roads and Bridges	Multnomah County	Gresham	10498	182nd: Powell and Division Intersections	181st at Division	181st at Powell	Relieve current congestion	At Division: add second westbound left turn lane (TIF P1). At Powell, add northbound and southbound double left turn lanes (TIF P2 and TSP8).At Powell add SB and NB lanes. Transit/Enhanced Transit Corridor supportive project.	$ 1,788,678	2028-2040	Yes
Roads and Bridges	Multnomah County	Multnomah County	10386	Glisan Street Multi-Modal Improvements	202nd Ave./Gresham-Fairview Trail	207th Ave./Salish Ponds Natural Area	Build complete street	Reconstruct Glisan Street to provide multimodal connection between Gresham-Fairview Trail and Salish Ponds Natural Area. Include bike lanes, sidewalks, two travel lanes in each direction, and on-street parking. 4 lanes. Design green-street treatment for drainage improvements, including Fairview Creek culvert replacement. South side of Glisan St is in Gresham, north is City of Fairview.	$ 12,224,500	2028-2040	No
Roads and Bridges	Multnomah County	Multnomah County	10399	Reconstruct Sandy Blvd.	201st Ave.	230th	Increase system efficiency	Reconstruct Sandy Blvd to minor arterial standards with bike lanes, sidewalks and drainage improvements, utilizing recommendations from TGM grant.	$ 7,906,594	2018-2027	Yes
Roads and Bridges	Multnomah County	Multnomah County	10401	Reconstruct Marine Drive	Interlachen	I-84	Increase system efficiency	Reconstruct Marine Drive between Interlachen and the frontage roads in Troutdale.	$ 14,882,000	2028-2040	No
Roads and Bridges	Multnomah County	Multnomah County	11297	NE 207th Ave. ACM	Sandy	Glisan	Increase system efficiency	Install upgraded traffic signal controllers, establish communications to the central traffic signal system, provide arterial detection (including bicycle detection where appropriate) and routinely update signal timings. Provide real-time and forecasted traveler information on arterial roadways including current roadway conditions, congestion information, travel times, incident information, construction work zones, current weather conditions and other events that may affect traffic conditions.	$ 1,647,650	2028-2040	No
Roads and Bridges	Multnomah County	Multnomah County	11300	238th/ 242nd/ Hogan Drive ACM	Sandy	Palmquist	Increase system efficiency	Improve arterial corridor operations by expanding traveler information and upgrading traffic signal equipment and timings. Includes the ACM project with signal systems that automatically adapt to current arterial roadway conditions.	$ 4,889,800	2028-2040	Yes
Roads and Bridges	Multnomah County	Multnomah County	11373	NE 238th Drive Freight and Multimodal Improvements	Halsey St.	Glisan St	Increase freight access to indust & intermodal fac	Construct southbound travel lanes with passing lane and northbound travel lane. Add bike and pedestrian facilities on both northbound and southbound sides.	$ 9,567,000	2018-2027	Yes
Roads and Bridges	Multnomah County	Port of Portland	11951	Columbia Boulevard Rail Overcrossing	Columbia Boulevard at Penn Junction	Columbia Boulevard at Penn Junction	Relieve future congestion	Grade separate Columbia Blvd. at Penn Junction to eliminate three at-grade crossings.	$ 28,935,000	2028-2040	No
Roads and Bridges	Multnomah County	Portland	10237	Southern Triangle Access Improvements	Powell (12th/Ross Island Bridge)	Hawthorne Bridge (railroad mainline)	Increase access to jobs	Improve vehicle access to the Southern Triangle district from eastbound Powell Blvd, and improve vehicle access from CEID to westbound Powell and southbound I-5.	$ 4,000,000	2028-2040	Yes

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Roads and Bridges	Multnomah County	Portland	10242	Interstate-Larrabee Overpass	N Interstate/Larrabee Bridge	N Interstate/Larrabee Bridge	Keep system in good repair	Remove the existing weight-restricted, low-clearance, poor-condition Interstate to Larrabee southbound flyover ramp (Bridge #153) and replace with a new overpass including a multi-use path to connect the future N Portland Greenway Trail to the Broadway Bridge. Assess the costs and benefits of providing vehicle access on the new structure as part of project development.	$ 5,000,000	2028-2040	Yes
Roads and Bridges	Multnomah County	Portland	10334	11th/13th Ave Rail Overcrossing	NE 11th Ave & NE Lombard Pl	NE 11th Ave & NE Lombard Pl	Increase system efficiency	Construct roadway overcrossing at NE 11th/13th over Kenton line.	$ 35,000,000	2028-2040	No
Roads and Bridges	Multnomah County	Portland	10335	NE 42nd/47th Ave Bridge & Corridor Improvements	NE Killingsworth St	NE Columbia Blvd	Keep system in good repair	Replace the weight-restricted NE 42nd Ave Bridge (#075) over NE Portland Hwy and the adjacent railway, and add pedestrian and bicycle facilities to the bridge and the roadway from Killingsworth to Columbia. This project will remove the weight restriction, improve vertical clearance for over-dimensional freight, and provide pedestrian and bicycle facilities.	$ 12,000,000	2018-2027	Yes
Roads and Bridges	Multnomah County	Portland	10336	Columbia & Cully Intersection Improvements	NE Cully Blvd & Columbia Blvd	NE Cully Blvd & Columbia Blvd	Increase freight access to indust & intermodal fac	Reconstruct intersection to provide signalization, left turn pockets, enhancing turning radii and improving circulation for trucks serving expanding air cargo facilities south of Portland.	$ 5,000,000	2028-2040	Yes
Roads and Bridges	Multnomah County	Portland	11117	Willbridge Industrial Area Rail Overcrossing	NW Balboa	NW St Helens Rd	Increase system efficiency	Provide an alternative crossing of the BNSF Railroad to improve connectivity and safety between US 30 and the industrial properties served by NW Front Avenue in the Willbridge area of the NW Industrial District.	$ 23,113,022	2028-2040	No
Roads and Bridges	Multnomah County	Portland	11793	SE Yamhill /Taylor Couplet	SE Water	SE Grand	Increase system efficiency	Improve traffic safety and capacity by converting Yamhill and Taylor to couplet operation between Water and Grand Ave, including new traffic signals at Yamhill / MLK, Yamhill / Grand, and Taylor / Water. As part of the project, reconfigure the ramp from Belmont viaduct to MLK.	$ 3,000,000	2028-2040	Yes
Roads and Bridges	Multnomah County	Portland	11807	NE 33rd Ave Bridge Replacement	33rd Ave, NE (over railroad tracks and Columbia Blvd)	33rd Ave, NE (over railroad tracks and Columbia Blvd)	Keep system in good repair	Replace the existing seismically vulnerable 33rd Ave bridge (#009) over railroad tracks and provide pedestrian and bicycle facilities on the new structure. Improve and signalize the intersection of 33rd & Columbia, and remove the seismically vulnerable, fracture critical ramp over Columbia (#009A). Project design will consider freight movement needs, consistent with policies, street classification(s) and uses.	$ 9,200,433	2028-2040	Yes
Roads and Bridges	Washington County	Cornelius	10798	Davis Street Extension - West	4th Ave	7th Ave	Increase system efficiency	Construct new collector.	$ 4,130,629	2028-2040	No
Roads and Bridges	Washington County	Cornelius	10795	Holladay Street Extension - West	4th Ave	Yew St.	Increase freight access to indust & intermodal fac	Construct new collector.	$ 2,657,500	2028-2040	Yes
Roads and Bridges	Washington County	Cornelius	10802	29th Avenue Traffic Signals and Crossing Gates	TV Hwy (OR 8)	S. Alpine St.	Relieve future congestion	Install traffic signals at intersection of Hwy 8 and 29th Avenue and install crossing gates and signals at S. 29th railroad crossing between Baseline and Alpine Streets.	$ 2,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Forest Grove	10774	OR 47/23rd Ave Extension	OR HWY 47	24th Avenue	Increase access to jobs	Intersection improvement with connections to Martin Road intersection improvement.	$ 4,000,000	2028-2040	Yes

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Roads and Bridges	Washington County	Forest Grove	11661	Hwy 47/ Martin Road Intersection	OR 47	Martin Road	Relieve current congestion	Construct improvement (e.g. roundabout) at Highway 47 intersection with Holladay Street extension, Martin Road and 23rd Avenue extension.	$ 5,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Forest Grove	11950	Hwy 47/ Purdin Rd./Verboort Intersection	HWY 47	Purdin Road	Relieve future congestion	Add a northbound right turn slip lane on the south leg of the roundabout and a southbound right turn slip lane on the south leg of the roundabout to the overall roundabout intersection.	$ 4,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Forest Grove	10780	OR 47/ Pacific Avenue Intersection Improvements	OR 47	OR 8	Relieve future congestion	Construct intersection improvement to add a west-bound left turn lane.	$ 4,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Hillsboro	10817	Aloclek Dr Gap Completion	Cornelius Pass Rd	Amberwood Dr	Build complete street	Complete missing segment of Aloclek Dr between Cornelius Pass Rd and Amberwood Dr as three-lane road with bike lanes and sidewalks	$ 2,126,000	2028-2040	No
Roads and Bridges	Washington County	Hillsboro	10824	Cornell Rd Turn Lanes and Bike/Ped Improvements (Main to Arrington)	Main St	Arrington Rd	Build complete street	Widen roadway from four to five lanes with bike/ped facilities	$ 9,830,624	2028-2040	No
Roads and Bridges	Washington County	Hillsboro	10831	Century Blvd Extension and Over-Crossing (North Hillsboro)	Bennett St	Wagon Way	Relieve future congestion	Construct three-lane road including US 26 overpass with bike/ped facilities; connect existing segments to provide new north-south connectivity	$ 13,733,960	2028-2040	Yes
Roads and Bridges	Washington County	Hillsboro	11140	Brookwood Pkwy Widening	Ihly Way	Cornell Rd	Relieve future congestion	Widen roadway to five lanes (two through lanes in each direction with left-turn lane at intersections) with bike/ped facilities	$ 9,567,000	2028-2040	Yes
Roads and Bridges	Washington County	Hillsboro	11145	Airport Rd Bike/Ped Gaps	Brookwood Pkwy	48th Ave	Build complete street	Complete missing bike lanes and sidewalk	$ 1,594,500	2028-2040	No
Roads and Bridges	Washington County	Hillsboro	11169	Cornell Rd & 25th Ave Intersection Improvements	N/A	N/A	Relieve future congestion	Widen 25th Ave to provide double southbound left-turn lanes and second northbound through lane	$ 6,378,000	2018-2027	Yes
Roads and Bridges	Washington County	Hillsboro	11170	Cornell Rd & Brookwood Pkwy and Cornell & 48th Ave Intersection Improvements	N/A	N/A	Relieve future congestion	Widen Cornell to provide double left-turn lanes in both eastbound and westbound at Brookwood intersection; and double eastbound left-turn lanes at 48th	$ 4,704,000	2018-2027	Yes
Roads and Bridges	Washington County	Hillsboro	11280	Ronler Dr Extension	Cornelius Pass Rd	215th Ave	Increase system efficiency	Construct three-lane extension with bike/ped facilities	$ 1,000,000	2028-2040	No
Roads and Bridges	Washington County	Hillsboro	11284	Farmington Rd Widening and Bike/Ped Improvements, Phase 1	185th Ave	198th Ave	Serve new urban area	Widen roadway from two to five lanes with bike/ped facilities	$ 8,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Hillsboro	11285	Farmington Rd Widening and Bike/Ped Improvements, Phase 2	198th Ave	209th Ave	Serve new urban area	Widen roadway to five lanes with bike/ped facilities; new signal at 209th Ave	$ 7,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Hillsboro	11392	TV Hwy & River Rd Intersection Improvements	N/A	N/A	Relieve future congestion	Construct eastbound right-turn lane and second northbound left-turn lane; modify traffic signal; improve bike and ped crossing of TV Hwy	$ 2,126,000	2028-2040	No
Roads and Bridges	Washington County	Hillsboro	11905	25th Ave Turn Lanes and Bike/Ped Improvements	Cornell Rd	Griffin Oaks St	Build complete street	Widen roadway from two to three lanes (one through lane in each direction and center turn lane) with bike/ped facilities	$ 4,000,000	2028-2040	Yes

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Roads and Bridges	Washington County	Hillsboro	10553	209th Ave Widening and Improvements, Phase 1	TV Hwy	Kinnaman Rd	Serve new urban area	Widen roadway from two/three lanes to five lanes; improve from rural to urban standard with bike facilities and sidewalks; improve intersections and railroad crossing; new signals at Blanton and Kinnaman; project to serve South Hillsboro UGB area	$ 22,327,000	2018-2027	Yes
Roads and Bridges	Washington County	Hillsboro	10821	Huffman St Extension, Phase 1	Brookwood Pkwy	Sewell Rd	Serve new urban area	Construct five-lane road with bike/ped facilities	$ 8,387,070	2018-2027	Yes
Roads and Bridges	Washington County	Hillsboro	10822	Starr Blvd Reconstruction and Improvements, Phase 1	Evergreen Rd	Huffman St (future extension)	Serve new urban area	Construct three-lane road with bike/ped facilities	$ 5,315,000	2018-2027	Yes
Roads and Bridges	Washington County	Hillsboro	10836	Evergreen Rd Widening and Bike/Ped Improvements	Glencoe Rd	15th Ave	Serve new urban area	Widen roadway from three to five lanes, complete missing sidewalks, and upgrade to buffered bike lanes	$ 5,782,720	2028-2040	Yes
Roads and Bridges	Washington County	Hillsboro	11147	Schaaf Rd Reconstruction	Helvetia Rd	New north-south collector	Serve new urban area	Reconstruct rural gravel road to three-lane roadway with bike/ped facilities	$ 4,252,000	2018-2027	Yes
Roads and Bridges	Washington County	Hillsboro	11149	Helvetia Rd Turn Lanes and Bike/Ped Improvements	Schaaf Rd	West Union Rd	Serve new urban area	Widen roadway to three lanes (one through lane in each direction and center turn lane) with bike/ped facilities	$ 4,252,000	2028-2040	No
Roads and Bridges	Washington County	Hillsboro	11150	Jacobson Rd Turn Lanes and Bike/Ped Improvements	Helvetia Rd	Century Blvd	Increase freight access to indust & intermodal fac	Widen roadway from two to three lanes (add center turn lane); complete bike/ped facilities; reconfigure intersection with Helvetia Rd to right-in, right-out only	$ 2,657,500	2028-2040	No
Roads and Bridges	Washington County	Hillsboro	11341	West Union Rd Widening and Improvements	Helvetia Rd	Cornelius Pass Rd	Serve new urban area	Widen to three lanes from Helvetia to Century, and five lanes from Century to Cornelius Pass, including bike/ped facilities along entire length	$ 12,000,000	2028-2040	No
Roads and Bridges	Washington County	Hillsboro	11364	Starr Blvd Reconstruction and Improvements, Phase 2	Huffman St (future extension)	Meek Rd	Serve new urban area	Construct three-lane road with bike/ped facilities	$ 4,252,000	2018-2027	Yes
Roads and Bridges	Washington County	Hillsboro	11383	New North-South Collector (North Hillsboro)	Jacobsen Rd	Schaaf Rd	Serve new urban area	Construct three-lane roadway with bike/ped facilities	$ 2,657,500	2018-2027	Yes
Roads and Bridges	Washington County	Hillsboro	11387	Meek Rd Improvements, Phase 1	Sewell Rd	Starr Blvd	Serve new urban area	Widen and improve roadway to three lanes with bike/ped facilities	$ 6,909,500	2028-2040	Yes
Roads and Bridges	Washington County	Hillsboro	11388	30th Ave Construction	Evergreen Rd	Meek Rd	Serve new urban area	Construct three-lane industrial collector with bike/ped facilities	$ 10,500,000	2028-2040	Yes
Roads and Bridges	Washington County	Hillsboro	11890	Huffman St Extension, Phase 2	Sewell Rd	Jackson School Rd	Serve new urban area	Construct five-lane road with bike/ped facilities	$ 6,500,000	2018-2027	Yes
Roads and Bridges	Washington County	Hillsboro	11906	25th Ave Extension	Evergreen Rd	Huffman St	Serve new urban area	Construct three-lane roadway with bike/ped facilities; realign intersection at Evergreen to avoid airport clear zone	$ 4,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Hillsboro	11907	Jackson School Rd Improvements	Evergreen Rd	Storey Creek (UGB)	Serve new urban area	Improve roadway from rural to urban standard and widen to three lanes with bike/ped facilities	$ 11,400,000	2028-2040	Yes
Roads and Bridges	Washington County	Hillsboro	11910	Meek Rd Improvements, Phase 2	Jackson School Rd	Sewell Rd	Increase freight access to indust & intermodal fac	Improve Meek Rd to address safety for industrial access to/from Jackson School Rd	$ 3,000,000	2028-2040	Yes

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Roads and Bridges	Washington County	Sherwood	10674	Oregon-Tonquin Roundabout	SW Oregon Street	SW Tonquin Rd	Relieve future congestion	Reconstruct and realign three leg intersection with a roundabout (partial two-lane roundabout) approx 400 feet northeast of existing roundabout at SW Oregon St & Murdock Rd. ROW, PE, design & construction. Potential for signal in-lieu of dual-roundabout system if better for development and once SW 124th Ave project is completed. If roundabout, project will include rapid flashing beacons at new roundabout and retrofit of adjacent roundabout to meet MUTCD suggestions for pedestrian crossings at roundabouts. This is currently a Washington County facility but would likely become Sherwood's upon completion of project to TSP standards.	$ 2,400,000	2018-2027	Yes
Roads and Bridges	Washington County	Sherwood	10699	Oregon Street	SW Murdock Rd	SW Langer Farms Pkwy	Build complete street	Widen existing substandard 2-lane road (no sidewalks, no median) to a 3-lane collector meeting current TSP standards (8' sidewalks, 5' landscape strip, 12' travel, 14' median, 12' travel, 5' landscape, 8' sidewalks, plus 2 on-street bike lanes or 4' added to each 8' sidewalk). On-street bike lanes vs. 2 multi-use paths TBD with future development.	$ 5,700,000	2018-2027	Yes
Roads and Bridges	Washington County	Sherwood	10700	Arrow St	SW Langer Farms Parkway	SW Gerda Lane	Link land use with transportation investments	Construct 3-lane collector street to TSP standards between SW Langer Farms Parkway and SW Gerda Lane.	$ 8,200,000	2028-2040	No
Roads and Bridges	Washington County	Sherwood	11404	Baler Way Extension	SW Langer Farms Parkway	SW Tualatin-Sherwood Road	Link land use with transportation investments	Extend SW Baler Way (3-lane collector) between SW Tualatin-Sherwood Road and SW Langer Farms Parkway, possibly SW Pacific Highway depending upon results of widening of SW Tualatin-Sherwood Road project by Washington County.	$ 3,800,000	2018-2027	Yes
Roads and Bridges	Washington County	Sherwood	12046	Tonquin Area East-West Collector	SW 124th Avenue	SW Tonquin Road	Relieve future congestion	Construct 3-lane collector status road between SW 124th Avenue and SW Tonquin Road through the Tonquin employment area to serve recent UGB annexation area.	$ 10,500,000	2028-2040	Yes
Roads and Bridges	Washington County	Sherwood	12047	Brookman Road Intersection Realignment	SW Pacific Highway	SW Brookman Road	Relieve future congestion	Realigns and relocates the SW Brookman Road intersection with SW Pacific Highway (OR 99W) to accommodate the expansion of SW Brookman Road for future development	$ 15,500,000	2028-2040	Yes
Roads and Bridges	Washington County	Tigard	10751	Hwy. 217 Overcrossing	Hunziker Road	Beveland	Relieve current congestion	Realign Hunziker Road to meet Hampton Street at 72nd Ave, remove existing 72nd/Hunziker Road intersection, provide bicycle, pedestrian and transit facilities. Project to be refined based on SW Corridor High Capacity Transit recommendations.	$ 30,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Tigard	10755	72nd Ave. Improvements - 99W to Hunziker	99W	Hunziker Road	Build complete street	Improve as determined by study, with bikeways and sidewalks.	$ 14,400,000	2018-2027	Yes
Roads and Bridges	Washington County	Tigard	10768	Upper Boones Ferry Intersection Improvements	Durham Road	I-5	Relieve current congestion	Construct intersection improvements at Durham Road and Upper Boones Ferry Road to provide dual southbound right-turns, dual eastbound left-turns, eastbound right-turns, existing and improve signal timing. Install bike lanes on both sides of the streets from just south of Durham Rd to just north of Durham Rd.	$ 5,000,000	2028-2040	No
Roads and Bridges	Washington County	Tigard	10770	OR 99W Intersection Improvements (PE)	64th Ave.	Durham Rd.	Increase system efficiency	Project development phase: Provide increased capacity at priority intersections, including bus queue bypass lanes in some locations, improved sidewalks, priority pedestrian crossings, and an access management plan, while retaining existing 4/5-lane facility from I-5 to Durham Road. See 2035 Tigard TSP Project #66 for specific improvements.	$ 5,000,000	2028-2040	No

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Roads and Bridges	Washington County	Tigard	11995	Hunziker Core Industrial Street	Hunziker Road	Tech Center Drive	Increase freight access to indust & intermodal fac	Construct new street with sidewalks and bike lanes from Hunziker Road (along Wall Street) to Tech Center Drive to improve freight access and connectivity to Tigard Triangle	$ 8,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Tualatin	10715	Herman	124th	Tualatin	Reduce crashes	Upgrade to standards. Improve the intersection of 118th and Herman Road.	$ 5,300,000	2018-2027	Yes
Roads and Bridges	Washington County	Tualatin	10738	Teton	Tualatin	Avery	Relieve current congestion	Reconstruct/widen to 3 lanes, Add bike lanes to Teton from Avery to Tualatin Rd. Right Turn Lane from Teton (N) to Tualatin-Sherwood Road (W). Signalize the intersection of Teton at Tualatin. Add southbound turn pocket on Teton to Avery and signalize intersection.	$ 5,151,298	2028-2040	Yes
Roads and Bridges	Washington County	Tualatin	11417	Blake Street Extension	115th	124th Ave	Increase access to jobs	Build the roadways from from the SW Concept Plan including; Extend Blake Street to create an east - west connection between 115th and 124th. Install signal at Blake and 124th. Extend 120th south to 124th.	$ 11,161,500	2018-2027	Yes
Roads and Bridges	Washington County	Tualatin	11420	Nyberg	I-5 on-ramp	I-5 on-ramp	Relieve current congestion	Add an additional on-ramp lane for vehicles traveling westbound on SW Nyberg Street to I-5 northbound (northeast quadrant of the Nyberg Interchange). Reduce the pedestrian island and improve illumination to enhance safety.	$ 1,138,473	2028-2040	No
Roads and Bridges	Washington County	Tualatin	11423	Avery	Teton	Tualatin-Sherwood	Build complete street	Widen to 3-lanes	$ 3,826,800	2028-2040	Yes
Roads and Bridges	Washington County	Tualatin	10716	Myslony	112th	124th Ave	Increase access to jobs	Reconstruct/widen from 112th to 124th to fill system, includes bridge. Improve the intersection of 124th and Myslony.	$ 10,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Tualatin	10717	Cipole Street Reconstruction	OR 99W	Tualatin-Sherwood	Increase access to jobs	Reconstruct/widen to 3 lanes from 99W to Tualatin-Sherwood Road and include shared-use path for the Ice Age Tonquin Trail, includes signal at Cipole and Herman. The project or a portion of the project is outside the designated urban growth boundary as of March 2014.	$ 21,291,890	2028-2040	No
Roads and Bridges	Washington County	Tualatin	10718	Herman	Cipole	124th Ave	Increase access to jobs	Reconstruction/ widen to 3-lanes from Cipole to 124th.	$ 2,736,162	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	10560	Farmington Rd. Improvements	185th	Kinnaman Rd.	Relieve current congestion	Widen roadway from 2/3 lanes to 4 lanes with turn lanes at major intersections, bike lanes, sidewalks, access management, realignment of Rosa/179th intersection.	$ 29,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	10561	Jenkins Rd. Improvements	158th Ave.	Murray	Relieve current congestion	Widen roadway from three to five lanes with bike lanes and sidewalks.	$ 7,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Washington County	10575	West Union Rd.	Cornelius Pass Rd.	185th Ave.	Relieve current congestion	Widen from two to five lanes with bike lanes and sidewalks.	$ 22,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Washington County	10578	Merlo/158th Improvements	170th Ave.	Walker Rd.	Relieve current congestion	Widen roadway to five lanes with bike lanes and sidewalks	$ 13,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	10587	Cornelius Pass Rd. Improvements	Frances St.	T.V. Hwy.	Relieve current congestion	Widen to five lanes with bike lanes and sidewalks	$ 16,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Washington County	10590	Tonquin Rd. Improvements	Grahams Ferry Rd.	124th	Build complete street	Realign and widen to three lanes with bike lanes and sidewalks and street lighting.	$ 11,400,000	2018-2027	Yes

2018 RTP Freight Projects and Programs (final draft) - Appendix A

RTP Investment Category	County	Nominating Agency	2018 RTP ID	Project Name	Start Location	End Location	Primary Purpose	Description	Estimated Cost (2016 dollars)	Time Period	Financially Constrained?
Roads and Bridges	Washington County	Washington County	10591	Glencoe Rd. Improvements	Evergreen Rd.	Jackson Ave.	Increase travel options/alt. to driving alone	Widen to three lanes with bike lanes and sidewalks.	$ 27,700,000	2028-2040	No
Roads and Bridges	Washington County	Washington County	11452	Scholls Ferry Rd. Improvements	West of Tile Flat Rd.		Reduce crashes	Realign Curves to Improve Safety.	$ 4,600,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	11486	Roy Rogers Rd.	Scholls Ferry Rd.	UGB	Relieve current congestion	Widen to five lanes with bike lanes and sidewalks	$ 21,300,000	2018-2027	Yes
Roads and Bridges	Washington County	Washington County	11487	Boones Ferry Improvements	Basalt Creek East-West Arterial	Day Rd.	Relieve future congestion	Widen from 3 lanes to 5 lanes with bike lanes, sidewalks and street lighting	$ 1,200,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	11490	Day Rd Overcrossing	Boones Ferry Rd	Elligsen Rd	Relieve future congestion	Extend new 4-lane overcrossing over I-5 from Boones Ferry Rd to Elligsen Rd.	$ 46,900,000	2028-2040	No
Roads and Bridges	Washington County	Washington County	11914	Roy Rogers Rd	UGB	Chicken Creek Bridge	Relieve current congestion	Widen roadway to 4-5 lanes, includes sidewalks and bike lanes	$ 25,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Washington County	11915	Scholls Ferry Rd	Tile Flat Rd.	Roy Rogers Rd.	Relieve future congestion	Widen roadway to 5 lanes, includes sidewalks and bike lanes	$ 8,300,000	2018-2027	Yes
Roads and Bridges	Washington County	Washington County	11924	Grahams Ferry Road (Tonquin to Day)	Tonquin Rd.	Day Rd.	Relieve future congestion	Widen roadway to 5 lanes, includes sidewalks and bike lanes	$ 6,000,000	2028-2040	No
Roads and Bridges	Washington County	Washington County	10557	Murray/TV Hwy. Intersection	Farmington Rd.	TV Hwy.	Relieve current congestion	Intersection improvement at TV Hwy. and Farmington with Murray Blvd.	$ 26,600,000	2028-2040	No
Roads and Bridges	Washington County	Washington County	10559	Cornell Improvements	Hwy. 26	Murray Blvd.	Relieve current congestion	Widen Cornell from three to five lanes with bike lanes and sidewalks.	$ 25,000,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	10568	Tualatin-Sherwood Rd. Improvements	Langer Farms Pkwy.	Teton Ave.	Relieve current congestion	Widen from three to five lanes with bike lanes and sidewalks.	$ 35,000,000	2018-2027	Yes
Roads and Bridges	Washington County	Washington County	10596	Scholls Ferry Rd. Improvements	Hwy. 217	121st Ave.	Relieve current congestion	Widen to seven lanes with bike lanes and sidewalks.	$ 21,000,000	2028-2040	No
Roads and Bridges	Washington County	Washington County	10598	Southern Arterial	Hwy. 99W	I-5	Relieve future congestion	Purchase ROW. Construct 2/3 lane arterial with bike lanes and sidewalks.	$ 116,000,000	2028-2040	No
Roads and Bridges	Washington County	Washington County	11436	East-West Arterial Overcrossing	Boones Ferry Rd	East of I-5	Relieve future congestion	Extend new 4-lane overcrossing over I-5 from Boones Ferry Rd to 65th and Stafford Rd.	$ 40,400,000	2028-2040	No
Roads and Bridges	Washington County	Washington County	11469	124th Ave Improvements	Tualatin-Sherwood Rd.	Grahams Ferry Rd	Relieve future congestion	Widen 124th from 2 lanes to 5 lanes with bike lanes and sidewalks	$ 14,900,000	2028-2040	No
Roads and Bridges	Washington County	Washington County	11470	Basalt Creek Parkway	Grahams Ferry Rd.	Boones Ferry Rd	Increase access to jobs	Extend new 5 lane Arterial with bike lanes, sidewalks and street lighting.	$ 31,700,000	2028-2040	Yes
Roads and Bridges	Washington County	Washington County	11737	Cornell @ 185th Intersection Improvements	185th Ave.	Cornell Rd	Relieve future congestion	Prioritize near-term improvements such as signal timing, transit prioritization, traffic operations, monitoring, and specific turn lane configurations. Intersection improvements (and/or other reasonable replacement improvements) are to be implemented and prioritized as funding allows. If, after such improvements have been considered and motor vehicle traffic congestion becomes unacceptable, then these intersections could be considered as candidates for grade separation and/or other improvements to meet travel needs.	$ 22,300,000	2028-2040	No
Roads and Bridges	Washington County	Washington County	11903	Roy Rogers Rd.	Chicken Creek Bridge	Borchers Rd	Relieve current congestion	Widen roadway to 5 lanes, includes sidewalks and bike lanes	$ 11,000,000	2018-2027	Yes

2018 RTP Freight Projects and Programs (final draft) - Appendix A

RTP Investment Category	County	Nominating Agency	2018 RTP ID	Project Name	Start Location	End Location	Primary Purpose	Description	Estimated Cost (2016 dollars)	Time Period	Financially Constrained?
Roads and Bridges	Washington County	Washington County	11923	Grahams Ferry Road (Helenius to Tonquin)	Helenius St	Tonquin Rd	Build complete street	Widen roadway to 3 lanes, includes sidewalks and bike lanes	$ 4,000,000	2028-2040	No
Roads and Bridges	Washington County	Wilsonville	11489	Boones Ferry / I-5 off ramp improvements	SB I-5 off ramp	Boones Ferry Rd	Relieve current congestion	construct second right-turn lane	$ 1,063,000	2028-2040	Yes
Roads and Bridges	Washington County	Wilsonville	11798	Elligsen Road Urban Upgrade	Parkway Center Drive	65th	Build complete street	Reconstruct street to 3 lanes with buffered bike lanes and sidewalks. (TSP project UU-P3)	$ 6,000,000	2028-2040	No
Roads and Bridges	Washington County	Wilsonville	10853	Garden Acres Road Extension	Day Road	Ridder Road	Increase freight access to indust & intermodal fac	Construct three lane road extension with sidewalks and bike lanes and reconstruct/reorient Day Road/Grahams Ferry Road/Garden Acres Road intersection.	$ 14,260,000	2018-2027	Yes
Roads and Bridges	Washington County	Wilsonville	11243	Day Road Improvements	Grahams Ferry Rd.	Boones Ferry Rd.	Relieve future congestion	Widen street from 3 to 5 lanes with bike lanes, sidewalks and street lighting. Improve structural integrity for increased freight traffic and provide congestion relief.	$ 10,560,000	2018-2027	Yes
Roads and Bridges	Washington County	Wilsonville	11809	Java Road Connection and Signal	Grahams Ferry Road	Garden Acres Road	Increase access to jobs	Construct new Java Road with buffered bike lanes and sidewalks, disconnect Clutter Street from Grahams Ferry Road, and install traffic signal at Grahams Ferry Road.	$ 1,500,000	2028-2040	No
Throughways	Clackamas County	ODOT	10890	OR 212/224 Sunrise Hwy Phase 2: I-205 to SE 172nd (PE, ROW)	I-205	172nd Ave.	Relieve current congestion	Conduct preliminary engineering (PE) and acquire right-of-way (ROW) on the OR 212/224 Sunrise Corridor from I-205 to SE 172nd Ave consistent with the Final Environmental Impact Statement (FEIS)/Record of Decision (ROD).	$ 70,000,000	2018-2027	Yes
Throughways	Clackamas County	ODOT	11301	OR 212/224 Sunrise Hwy Phase 2: I-205 to SE 172nd (CON)	I-205	172nd Ave.	Relieve current congestion	Construction (CON) improvements on the OR 212/224 Sunrise corridor from I-205 to SE 172nd Ave consistent with the FEIS/ROD.	$ 100,000,000	2028-2040	Yes
Throughways	Clackamas County	ODOT	11350	OR 224 Milwaukie Expressway improvements	I-205	Rusk Rd	Increase system efficiency	Construct a third westbound lane on Milwaukie Expressway (Hwy-224) from I-205 to Rusk Rd	$ 12,000,000	2018-2027	Yes
Throughways	Clackamas County	ODOT	11585	I-205 Abernethy Bridge (PE and ROW)	OR99E Interchange	Oswego Hwy (OR 43) Interchange	Relieve current congestion	Widen bridge to address recurring bottlenecks on the bridge.	$ 8,000,000	2018-2027	Yes
Throughways	Clackamas County	ODOT	11969	I-205 Abernethy Bridge (CON)	OR99E Interchange	Oswego Hwy (OR 43) Interchange	Relieve current congestion	Widen both directions of the I-205 Abernethy Bridge and approaches to address recurring bottlenecks on the bridge. Install Active Traffic Management (ATM) on northbound and southbound I-205. Preliminary Engineering (PE) and Right-of-Way (ROW) phase.	$ 200,000,000	2028-2040	Yes
Throughways	Clackamas County	ODOT	11981	I-205 Northbound Auxiliary Lane, Sunrise Expressway Entrance to Sunnybrook	Sunrise Expressway Entrance	Sunnyside/ Sunnybrook Exit	Increase system efficiency	Provide I-205 NB auxiliary lane between Sunrise Expressway entrance ramp and the Sunnyside Road/Sunnybrook Blvd interchange exit ramp.	$ 7,000,000	2018-2027	Yes
Throughways	Clackamas County	ODOT	11990	I-5 Southbound: Wilsonville Rd to Wilsonville-Hubbard Hwy	Wilsonville Rd	Wilsonville-Hubbard Hwy	Increase system efficiency	Add an auxiliary lane on I-5 from Wilsonville Road to the Wilsonville-Hubbard Highway, including improvements to the Boone Bridge. PE, ROW and Construction Phases.	$ 80,000,000	2028-2040	Yes
Throughways	Clackamas County	ODOT	11992	I-205 Operational Improvements	Columbia River	I-5	Increase system efficiency	Construct improvements to address bottlenecks and improve safety on I-205. Specific improvements as identified in operational analysis, mobility corridor analysis and refinement planning.	$ 20,000,000	2028-2040	No

2018 RTP Freight Projects and Programs (final draft) - Appendix A

RTP Investment Category	County	Nominating Agency	2018 RTP ID	Project Name	Start Location	End Location	Primary Purpose	Description	Estimated Cost (2016 dollars)	Time Period	Financially Constrained?
Throughways	Clackamas County, Multnomah County	ODOT	11305	I-205 Active Traffic Management	Columbia River	I-5	Increase system efficiency	Construct improvements to address recurring bottlenecks on I-205. Specific improvements as identified in operational analysis, Mobility Corridor analysis, refinement planning and Active Traffic Management Atlas.	$ 15,000,000	2018-2027	Yes
Throughways	Multnomah County	ODOT	10893	I-5 Columbia River Bridge	Victory Blvd.	Washington state line	Relieve current congestion	Replace I-5/Columbia River bridges and improve interchanges on I-5. Project adds protected/buffered bikeways, cycle tracks and a new trail/multiuse path or extension.	$ 3,169,866,000	2028-2040	Yes
Throughways	Multnomah County	ODOT	11304	I-5 South Operational Improvements	Marquam Bridge	Region Boundary	Increase system efficiency	Construct improvements to address recurring bottlenecks on I-5 south of the central city. Specific improvements as identified in operational analysis, Mobility Corridor analysis and refinement planning.	$ 15,000,000	2018-2027	Yes
Throughways	Multnomah County	ODOT	11370	I-205 Northbound Auxiliary Lane Powell to I-84	Powell Entrance Ramp	I-84	Increase system efficiency	Design and construct an auxiliary lane on northbound I-205 from Powell Blvd to the I-84 interchange.	$ 15,000,000	2018-2027	Yes
Throughways	Multnomah County	ODOT	11583	I-5 Northbound: Lower Boones Ferry to Carman Auxiliary Lane Extension	Lower Boones Ferry Rd. Interchange	Carman Dr. Interchange	Increase system efficiency	Extend existing auxiliary lane between the Lower Boones Ferry Road interchange and the Carman Drive interchange.	$ 22,500,000	2028-2040	No
Throughways	Multnomah County	ODOT	11974	I-405 Operational Improvements	Fremont Bridge	I-5	Increase system efficiency	Construct operational improvements to address bottlenecks and improve safety on I-405. Specific improvements as identified in operational analysis, mobility corridor analysis, and refinement planning	$ 50,000,000	2028-2040	No
Throughways	Multnomah County	ODOT	11993	I-84 Operational Improvements	I-5	Troutdale	Increase system efficiency	Construct improvements to address bottlenecks and improve safety on I-84. Specific improvements as identified in operational analysis, mobility corridor analysis and refinement planning	$ 20,000,000	2028-2040	No
Throughways	Multnomah County, Washington County	ODOT	11971	US 26 (Sunset Highway) Operational Improvements	I-405	West MPO Boundary	Increase system efficiency	Construct Improvements to address bottlenecks and improve safety on US 26 (Sunset Highway) Specific improvements as identified in operational analysis, mobility corridor analysis, and refinement planning	$ 50,000,000	2028-2040	No
Throughways	Region-wide	ODOT	11991	I-5 Freight Operational Improvements	Columbia River	South MPO Boundary	Increase system efficiency	Construct improvements to address bottlenecks and improve safety on I-5. Specific improvements as identified in operational analysis, mobility corridor analysis and refinement planning.	$ 200,000,000	2028-2040	No
Throughways	Washington County	Hillsboro	11279	US 26 & 185th Ave Interchange Refinement Study and Implementation	N/A	N/A	Relieve future congestion	Conduct interchange refinement study and implementation	$ 26,575,000	2028-2040	No
Throughways	Washington County	Hillsboro	11393	US 26 Widening - Brookwood to Cornelius Pass	Brookwood Pkwy/Helvetia Rd	Cornelius Pass Rd	Relieve future congestion	Widen US 26 from four to six lanes	$ 26,575,000	2028-2040	Yes
Throughways	Washington County	ODOT	11302	I-5/OR 217 Interchange Phase 2	I-5/OR 217 Interchange	N/A	Relieve current congestion	I-5/OR 217 Interchange Phase 2 - southbound OR 217 to southbound I-5 entrance ramp; southbound I-5 exit to Kruse Way loop ramp.	$ 53,000,000	2028-2040	No
Throughways	Washington County	ODOT	11402	I-5 Northbound: Auxiliary Lane Extension Nyberg to Lower Boones Ferry	Nyberg Rd. Interchange	Lower Boones Ferry Rd. Interchange	Increase system efficiency	Extend existing auxiliary lane.	$ 13,500,000	2028-2040	Yes

2018 RTP Freight Projects and Programs (final draft) - Appendix A

RTP Investment Category	County	Nominating Agency	2018 RTP ID	Project Name	Start Location	End Location	Primary Purpose	Description	Estimated Cost (2016 dollars)	Time Period	Financially Constrained?
Throughways	Washington County	ODOT	11582	OR 217 Capacity Improvements	US 26 (Sunset Hwy)	I-5	Relieve current congestion	Construct as a 6-lane freeway, adding 3rd through lane in each direction, and complete interchange reconstruction with ramp and overcrossing improvements	$ 398,500,000	2028-2040	No
Throughways	Washington County	ODOT	11976	OR 217 Northbound Auxiliary Lane Extension Scholls Ferry to Allen/Denney	Scholls Ferry Road	Allen/Denney Interchange	Increase system efficiency	Extend OR 217 auxiliary lane from Scholls Ferry to Allen/Denney interchange by filling in the existing auxiliary lane and modifying related ramp connections	$ 50,000,000	2028-2040	No
Throughways	Washington County	ODOT	11978	OR 217 Interchange, Safety, and Operational Improvements	US 26 (Sunset Highway)	I-5	Increase system efficiency	Design and construct improvements to OR 217 between US 26 and Allen/Denney interchange to improve safety, reliability and mobility	$ 75,000,000	2028-2040	No
Throughways	Washington County	ODOT	11986	OR 217 Northbound Auxiliary Lane 99W to Scholls Ferry (CON)	99W	Scholls Ferry	Increase system efficiency	Extend OR 217 Northbound (NB) auxiliary lane from OR 99W to Scholls Ferry. Construction (CON) phase	$ 50,000,000	2018-2027	Yes
Throughways	Washington County	ODOT	11987	OR 217 Southbound Auxiliary Lane Beaverton Hillsdale Hwy to 99W (CON)	Beaverton-Hillsdale Hwy	OR99W	Increase system efficiency	Extend Southbound (SB) auxiliary lane from Beaverton-Hillsdale Hwy to OR 99W. Build collector/distributor road from Allen Blvd to Denny Rd. Construction Phase	$ 45,000,000	2018-2027	Yes
Throughways	Washington County	ODOT	11988	OR 217 Southbound Braided Ramps Beaverton-Hillsdale Hwy to Allen Blvd	Beaverton-Hillsdale Hwy	Allen Blvd	Increase system efficiency	Design and construct braided ramps on southbound OR 217 at Canyon Rd and Beaverton Hillsdale Hwy.	$ 50,000,000	2028-2040	Yes
Throughways	Washington County	ODOT	12019	OR 217 Northbound Auxiliary Lane 99W to Scholls Ferry (PE, ROW)	OR99W	Scholls Ferry Interchange	Increase system efficiency	Extend OR 217 Northbound (NB) auxiliary lane from OR 99W to Scholls Ferry. ROW and PE phase	$ 7,500,000	2018-2027	Yes
Throughways	Washington County	Washington County	10599	Hwy. 217/72nd Ave. Interchange Improvements	OR 217/72nd Avenue	OR 217/72nd Avenue	Relieve future congestion	Complete interchange reconstruction with additional ramps and bridge structure replacement	$ 21,300,000	2028-2040	No
Throughways	Clackamas County	ODOT	11586	I-205 Southbound and Northbound widening (PE, ROW)	Oswego Hwy Interchange	Stafford Rd Interchange	Relieve current congestion	Widen highway to address recurring bottlenecks. The project or a portion of the project is outside the designated urban growth boundary as of March 2014.	$ 8,000,000	2018-2027	Yes
Throughways	Clackamas County	ODOT	11904	I-205 Southbound and Northbound widening (CON)	Oswego Hwy Interchange	Stafford Rd Interchange	Relieve current congestion	Widen Interstate 205 by one lane in both directions to address recurring bottlenecks. Construction (CON) phase.	$ 200,000,000	2028-2040	Yes
Throughways	Clackamas County	ODOT	12020	OR 212/224 Sunrise Project Phase 3	I-205	172nd Ave	Relieve current congestion	Construct remaining improvements in the Sunrise Corridor consistent with the FEIS/ROD	$ 475,000,000	2028-2040	No
Throughways	Clackamas County	West Linn	11242	I-205 / 10th Street Improvements	Willamette Falls Drive	Blankenship Rd / Salamo Road	Relieve current congestion	Construct a long-term interchange improvement to provide congestion relief, address safety issues, and improve bike/ped connectivity.	$ 7,800,000	2018-2027	Yes
Throughways	Multnomah County	ODOT	10867	I-5 from I-405 to I-84 (Rose Quarter/Lloyd District) PE, NEPA, ROW	I-84	Greeley St.	Reduce crashes	Conduct preliminary engineering and National Environmental Policy Act review, and right of way work to improve safety and operations on I-5, connection between I-84 and I-5, and multimodal access to and connectivity between the Lloyd District and Rose Quarter.	$ 15,000,000	2018-2027	Yes
Throughways	Multnomah County	ODOT	11176	I-5 from I-405 to I-84 (Rose Quarter/Lloyd District) Construction	I-84	Greeley St.	Reduce crashes	Construct improvements to enhance safety and operations on I-5, connection between I-84 and I-5, and multimodal access to and connectivity between the Lloyd District and Rose Quarter.	$ 375,000,000	2018-2027	Yes

2018 RTP Freight Projects and Programs (final draft) - Appendix A

RTP Investment Category	County	Nominating Agency	2018 RTP ID	Project Name	Start Location	End Location	Primary Purpose	Description	Estimated Cost (2016 dollars)	Time Period	Financially Constrained?
Throughways	Multnomah County	ODOT	11984	I-5 Southbound Truck Climbing Lane	Marquam Bridge	Multnomah Blvd	Keep system in good repair	I-5 Truck Climbing Lanes SB (Marquam to Multnomah Blvd). Preliminary Engineering (PE) and Right-of-Way (ROW) and Construction (CON) phases	$ 100,000,000	2028-2040	Yes
Throughways	Washington County	ODOT	11989	I-5 Northbound Braided Ramps I-205 to Nyberg	I-205	Nyberg Rd	Relieve current congestion	Replace the inside merge at I-205 entrance by constructing braided ramps.	$ 50,000,000	2028-2040	Yes
Throughways	Washington County	Tualatin	11420	Nyberg	I-5 on-ramp	I-5 on-ramp	Relieve current congestion	Add an additional on-ramp lane for vehicles traveling westbound on SW Nyberg Street to I-5 northbound (northeast quadrant of the Nyberg Interchange). Reduce the pedestrian island and improve illumination to enhance safety.	$ 1,138,473	2028-2040	No

Total Cost of Financially Constrained RTP Freight Projects and Programs	$ 5,772,020,404
Total Cost of Strategic (non-Financially Constrained) RTP Freight Projects and Programs	$ 2,358,837,102
Total Cost of "Freight" Investment Category	$ 479,150,870
Total Cost of "Roads and Bridges " Investment Category	$ 1,548,452,163
Total Cost of "Throughways" Investment Category	$ 6,103,254,473
Grand Total Cost of all 2018 RTP Freight Projects and Programs	$ 8,130,857,506
	$ 8,130,857,506
Cost of Financially Constrained "Freight" Investment Category	$ 230,378,857
Cost of Financially Constrained "Roads and Bridges " Investment Category	$ 905,987,525
Cost of Financially Constrained "Throughways" Investment Category	$4.6 billion

Freight System Evaluation Measures and Results – Chapter 10

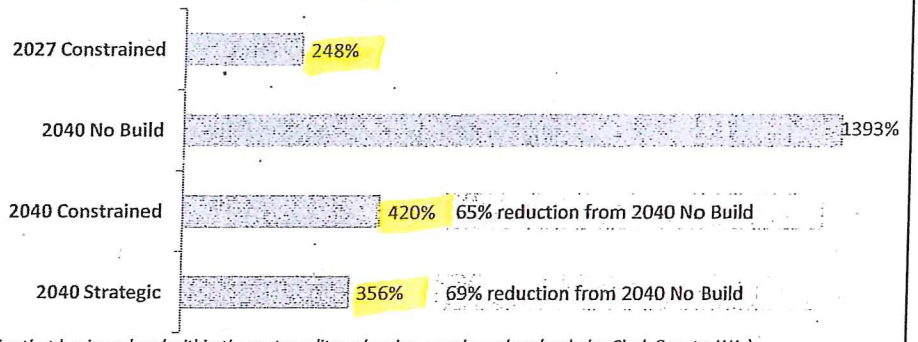
- Freight Performance Target in 2014 RTP was called Freight Reliability and defined as: "By 2040, reduce vehicle hours of delay per truck trip by 10 percent compared to 2010.
- Staff is currently proposing that the freight performance target be replaced by the federal performance measure for **Freight movement and economic vitality** using the same methodology: "Percent of Interstate System miles with reliable truck travel times"

DRAFT

Increased congestion delays freight and goods movement

Metro
Measure 13

Truck hours of delay from 1-3pm on regional freight network
(percent change from 2015)



Trips that begin and end within the metropolitan planning area boundary (excludes Clark County, WA.)

Source: Metro Travel Demand Model

This information is for research and discussion purposes only and does not reflect current or future policy decisions of the Metro Council, MPAC or JPACT. The information is subject to change pending final modeling and analysis in 2018.

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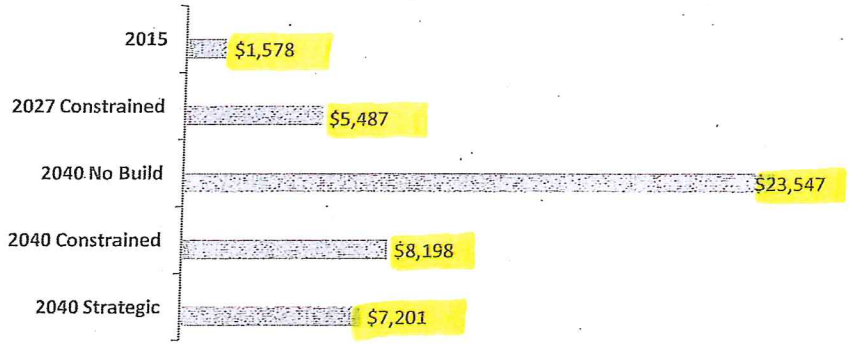
DRAFT

Cost of freight delay increases

Metro
Measure 13

Cost of truck hours of delay on freight network from 1-3pm



Trips that begin and end within the metropolitan planning area boundary (excludes Clark County, WA.)

Source: Metro Travel Demand Model, Value of time from ODOT

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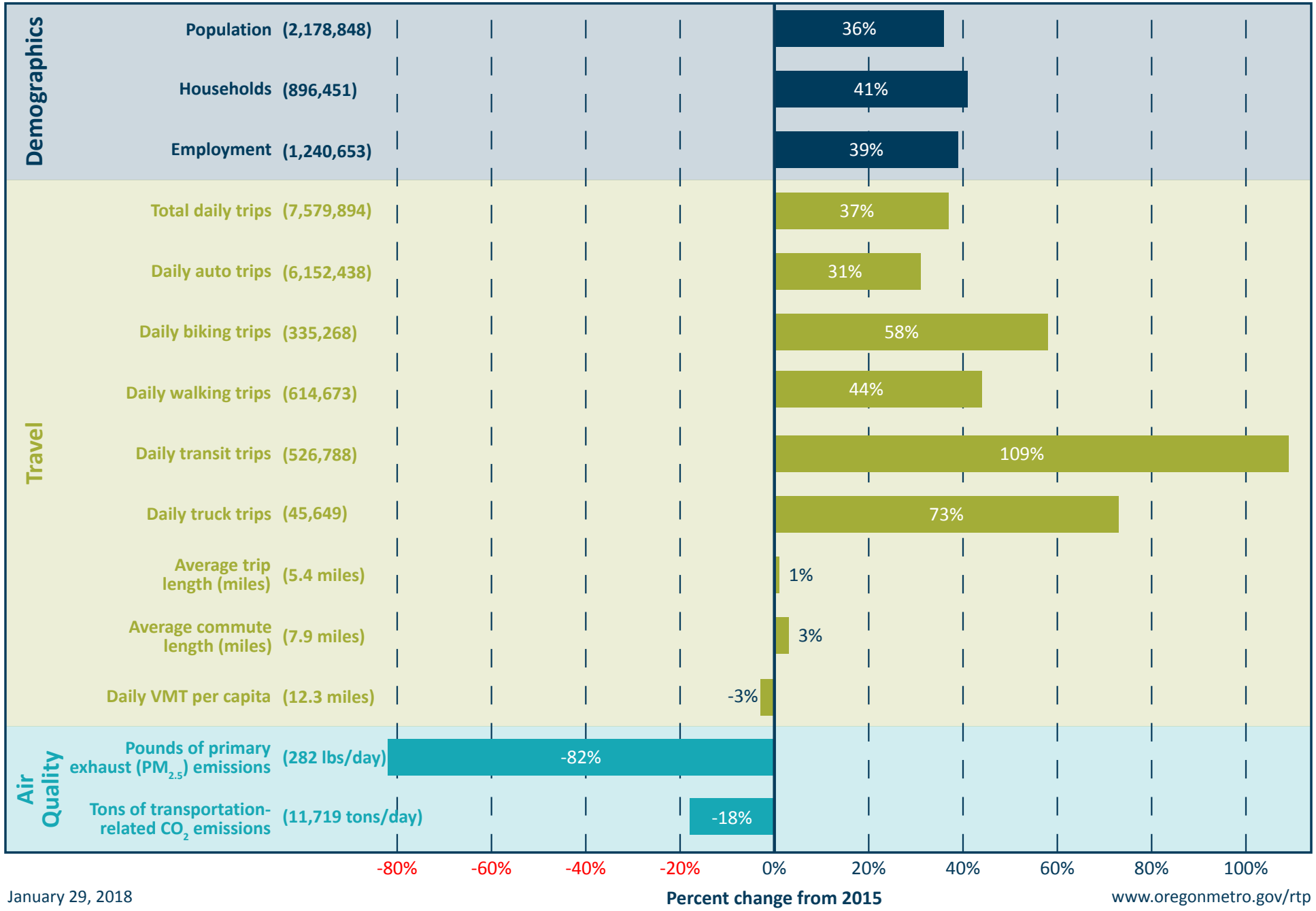
2018 RTP System Evaluation Results Summary

Totals are for travel within the Metropolitan Planning Area for the Portland region and assume the 2040 Financially Constrained System of Projects.

Metro



January 29, 2018

www.oregonmetro.gov/rtp

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Truck Vehicle Hours of Delay (VHD) on all facilities
(delay accrued where v/c exceeds 0.9)
Region

Time Period	2015 Base	2027 No Build	2027 Constrained	2040 No Build	2040 Constrained	2040 Strategic
7am - 9am	266	546	536	889	669	654
1pm - 3pm	72	253	235	953	328	289
4pm - 6pm	169	390	375	634	484	467

Truck Vehicle Hours of Delay (VHD) on all facilities
(delay accrued where v/c exceeds 0.9)
MPA

Time Period	2015 Base	2027 No Build	2027 Constrained	2040 No Build	2040 Constrained	2040 Strategic
7am - 9am	233	489	478	792	582	569
1pm - 3pm	71	248	231	926	321	282
4pm - 6pm	163	376	361	605	454	439

Cost of Truck Vehicle Hours of Delay (VHD) on all facilities
(delay accrued where v/c exceeds 0.9)
Region

Time Period	2015 Base	2027 No Build	2027 Constrained	2040 No Build	2040 Constrained	2040 Strategic
7am - 9am	$7,923	$16,296	$15,987	$26,515	$19,955	$19,529
1pm - 3pm	$2,153	$7,558	$7,025	$28,441	$9,775	$8,617
4pm - 6pm	$5,051	$11,629	$11,185	$18,930	$14,440	$13,941

Cost of Truck Vehicle Hours of Delay (VHD) on all facilities
(delay accrued where v/c exceeds 0.9)
MPA

Time Period	2015 Base	2027 No Build	2027 Constrained	2040 No Build	2040 Constrained	2040 Strategic
7am - 9am	$6,967	$14,585	$14,265	$23,620	$17,372	$16,972
1pm - 3pm	$2,127	$7,407	$6,883	$27,631	$9,563	$8,408
4pm - 6pm	$4,868	$11,205	$10,773	$18,049	$13,557	$13,086

Truck Vehicle Hours of Delay (VHD) on the Regional Freight Network
(delay accrued where v/c exceeds 0.9)
Region

Time Period	2015 Base	2027 No Build	2027 Constrained	2040 No Build	2040 Constrained	2040 Strategic
7am - 9am	241	488	472	787	573	559
1pm - 3pm	53	206	186	805	275	242
4pm - 6pm	153	358	343	586	436	419

Truck Vehicle Hours of Delay (VHD) on the Regional Freight Network
(delay accrued where v/c exceeds 0.9)
MPA

Time Period	2015 Base	2027 No Build	2027 Constrained	2040 No Build	2040 Constrained	2040 Strategic
7am - 9am	218	446	429	717	507	494
1pm - 3pm	53	203	184	789	275	241
4pm - 6pm	150	350	336	568	417	401

Cost of Truck Vehicle Hours of Delay (VHD) on the Regional Freight Network
(delay accrued where v/c exceeds 0.9)
Region

Time Period	2015 Base	2027 No Build	2027 Constrained	2040 No Build	2040 Constrained	2040 Strategic
7am - 9am	$7,193	$14,554	$14,078	$23,494	$17,104	$16,691
1pm - 3pm	$1,578	$6,143	$5,554	$24,019	$8,219	$7,220
4pm - 6pm	$4,566	$10,689	$10,249	$17,481	$13,008	$12,514

Cost of Truck Vehicle Hours of Delay (VHD) on the Regional Freight Network
(delay accrued where v/c exceeds 0.9)
MPA

Time Period	2015 Base	2027 No Build	2027 Constrained	2040 No Build	2040 Constrained	2040 Strategic
7am - 9am	$6,492	$13,306	$12,808	$21,384	$15,136	$14,752
1pm - 3pm	$1,578	$6,069	$5,487	$23,547	$8,198	$7,201
4pm - 6pm	$4,480	$10,458	$10,027	$16,936	$12,438	$11,973

Cost Assumptions

	Med Trk	Hvy Trk
Value of Time (2015$)*	$28.20	$30.72
Percent of fleet**	35%	65%

*VOT from ODOT document: "*The Value of Travel-Time: Estimates of the Hourly Value of Time for Vehicles in Oregon 2015)* ". ODOT PIAU, November 2016

**Assumptions from 2014 RTP, Chapter 4

Regional Freight Strategy – Freight Work Group Meeting #9

Presentation to Regional Freight Work Group

February 22, 2018

Tim Collins, Senior Transportation Planner

Meeting Purpose

- Update on reorganized Table of Contents
- Regional Freight Vision - Figure 1, and new freight policies A-G (combines old goals and policies)
- Freight Action Plan – Feedback on actions for policies B, E and G
- Update on RTP Freight Projects and Programs
- Feedback on Evaluation Measures and Results

Reorganized Table of Contents

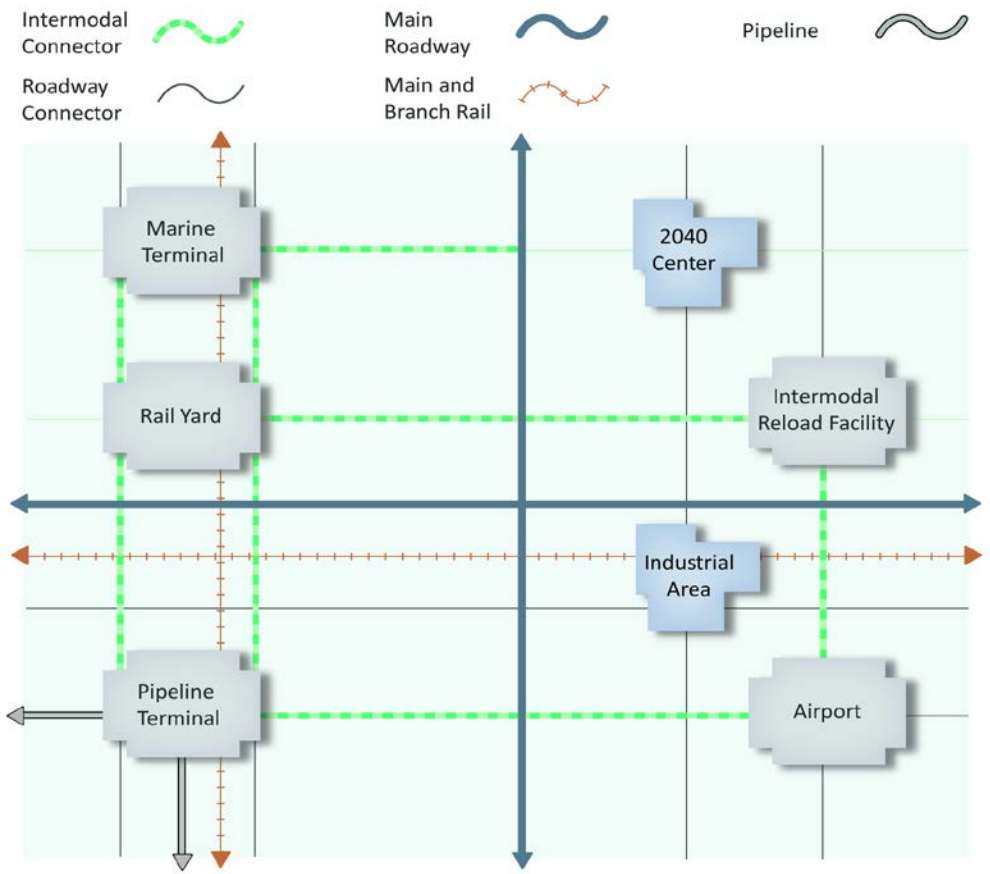
- Yellow highlights indicate areas of significant revision from the 2010 freight plan
- Chapters have been reorganized and condensed
- Chapter 1 Introduction is new
- Chapter 9 Implementation and Chapter 10 Measuring Progress are new

Regional Freight Vision – Chapter 3

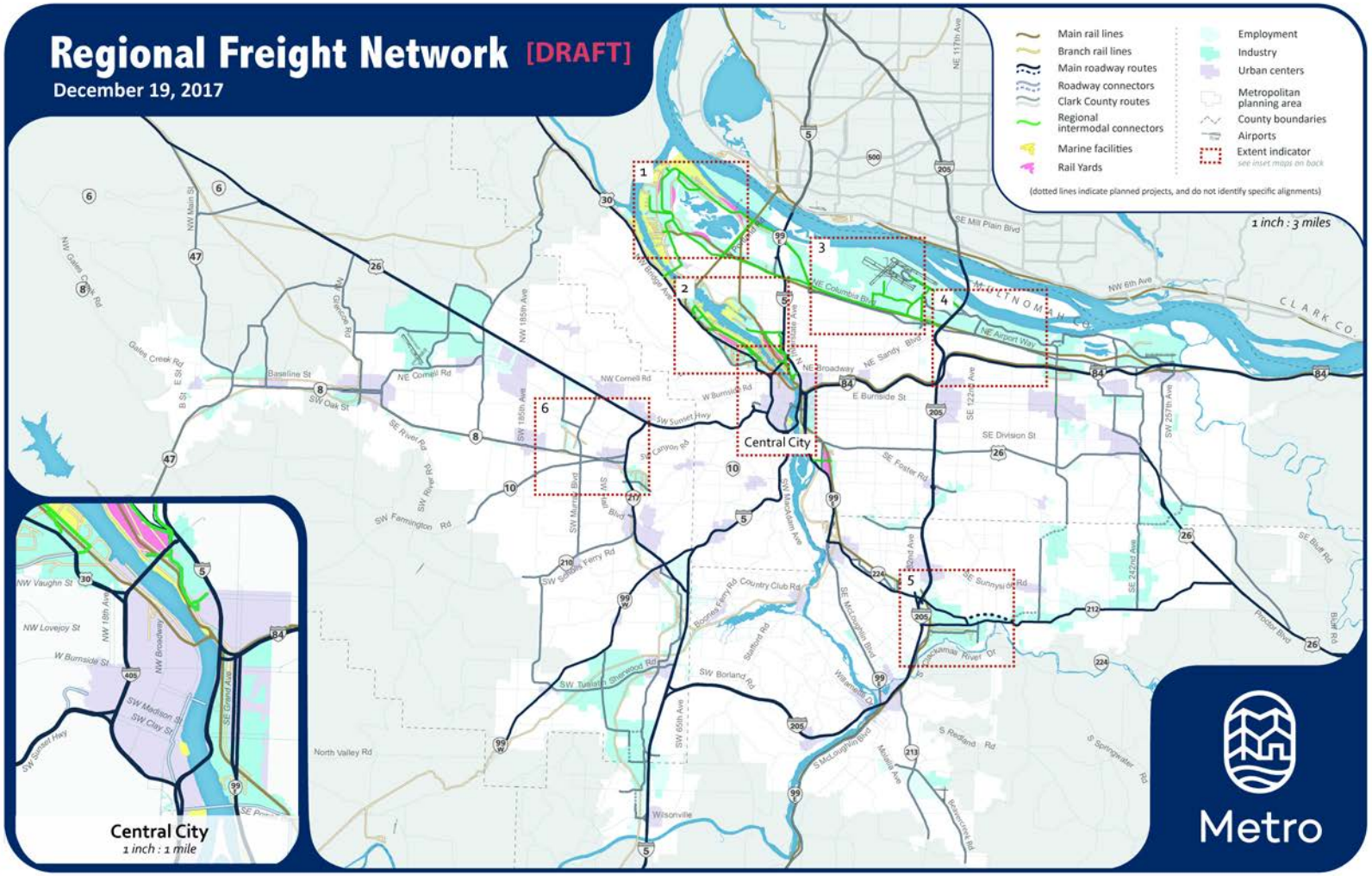
- Comments on New Figure 1 – Regional freight concept
- Freight Network Policies – combines old freight goals and policies into one set of freight policies
- Seven freight policies (A to G), with policy G being the new regional freight safety policy

Regional Freight Network Concept

RTP defines a vision and supporting policies to guide investments in the multimodal regional freight network.



Updating the Regional Freight Network Map



Regional Freight Network Policies

Six regional freight policies:

- **A.** Use a systems approach to plan and manage freight network
- **B.** Reduce delay, increase reliability and improve safety
- **C.** Provide education and understanding of the importance of freight and goods movement issues
- **D.** Pursue a freight system that supports a healthy economy and environment with clean, green and smart technologies
- **E.** Integrate freight mobility and access into land use planning and street design
- **F.** Adequately fund freight investments, including marine and rail facilities

Metro Council recommended Freight Safety Policy

- Metro Council recommended adding a seventh freight policy for safety
- Metro staff developed the following draft regional freight safety policy:
  - **G. Increase** roadway and freight operational safety to eliminate fatalities and serious injuries caused by freight vehicle crashes with autos, bicycles, and pedestrians.

Updated Freight Action Plan

- Action items are tied to implementing each of the seven freight policies.
- The list of freight action items has been updated and focused on achievable near-term actions, and a few long-term actions.
- Near-term action items should be achievable within the next 5 years and the long-term actions would take longer.

The Freight Action- Chapter 8

- Policies and Actions Memo (dated Feb.12, 2018)
- Policy B - Reduce delay, increase reliability and improve safety.
  Action B5 - Connected vehicle infrastructure and ITS
- Policy E – Integrate freight mobility and access into land use planning and street design.

  Action E2 – Provide freight perspective to revisions of ‘Creating Livable Streets’ design guidelines

The Freight Action- Chapter 8

- Policy G - Increase roadway and freight operational safety to eliminate fatalities and serious injuries caused by freight vehicle crashes
- Action G1 – Promote and advocate with Portland and the counties for implementation of truck side guards on large freight trucks proving public services
- Action G2 – Develop design guidance for identifying and prioritizing improvements to regional intermodal connectors that should have separated bike and pedestrian facilities

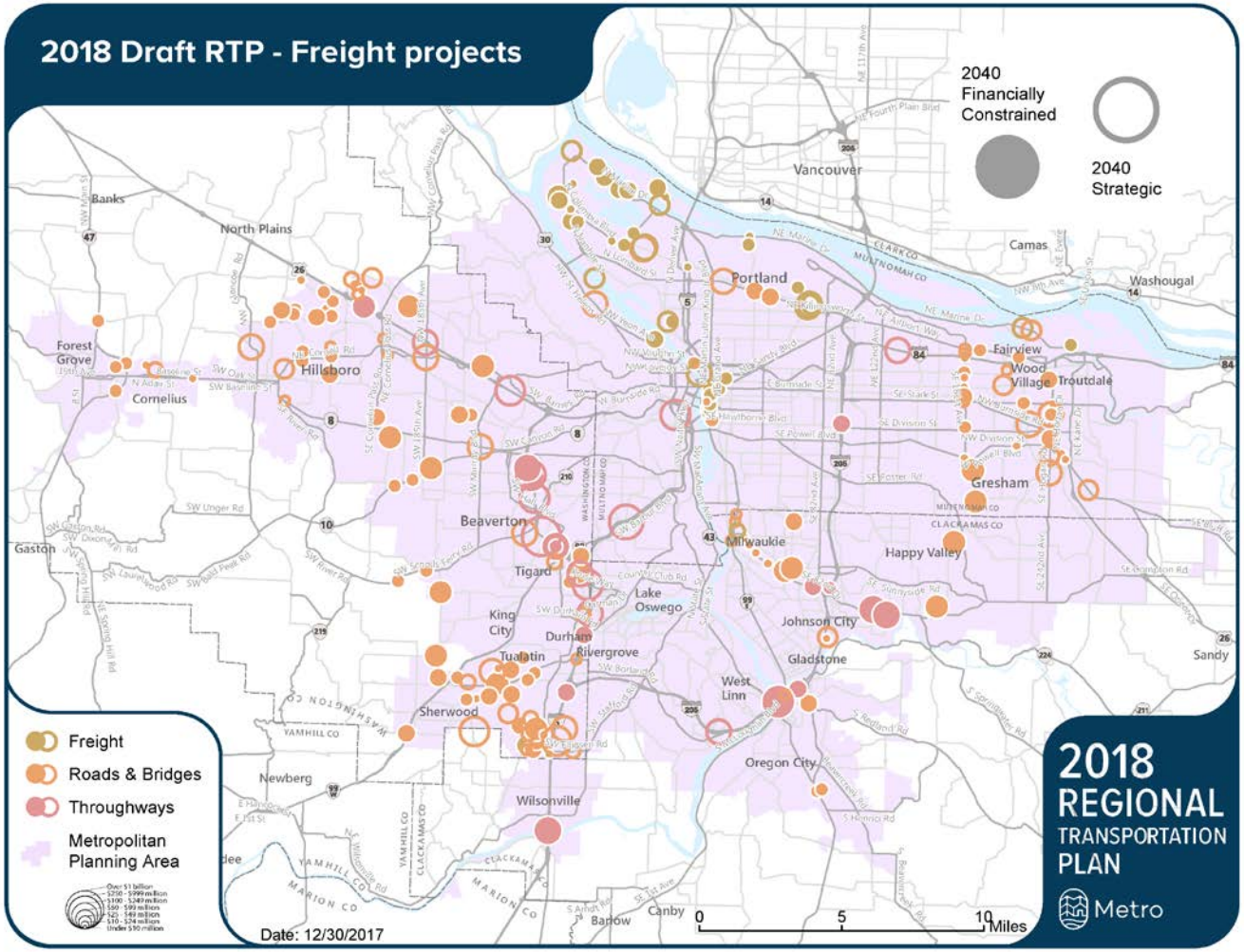
RTP 2040 Freight Projects and Programs

- RTP Freight Projects are a subset of the 2040 RTP projects submitted in round 1 of the RTP call for projects
- All projects in investment categories of “Freight” and ‘Throughways” are included
- Freight projects were reviewed by the Regional Freight Work Group, some projects were added
- Projects under “Roads and Bridges” must have a regional freight element

RTP 2040 Freight Projects and Programs

- Work group needs to consider the RTP Freight Project list for completeness and if the projects that are in the Financially Constrained list should be changed in round 2 of the RTP call for projects

RTP 2040 Freight Projects and Programs



Freight System Evaluation Measures and Results – Chapter 10

- Freight Performance Target in 2014 RTP was called Freight Reliability and defined as: "By 2040, reduce vehicle hours of delay per truck trip by 10 percent compared to 2010.
- Staff is currently proposing that the freight performance target be replaced by the federal performance measure for **Freight movement and economic vitality** using the same methodology: "Percent of Interstate System miles with reliable truck travel times"

Freight System Evaluation Measures and Results – Chapter 10

- Freight Monitoring Measure is: **Travel time reliability on throughways *and intermodal connectors***
- This section (10.2) will be completed later.
- Freight System Evaluation Measures are:

1. Truck Vehicle Hours of Delay (VHD) on all facilities
2. Truck Vehicle Hours of Delay (VHD) on the Regional Freight Network
3. Cost of truck hours of delay for all facilities and the Regional Freight Network

Next Steps

- Final review and comments on the Freight Action Plan
- Review RTP freight projects for Regional Freight Strategy
- Review and comments on technical draft of Regional Freight Strategy
- Briefings on Draft Regional Freight Strategy to TPAC on March 9th and to MTAC on March 21st
- Briefings on Draft Regional Freight Strategy to Metro Council on April 10th and to MPAC on April 25th