

## 2018 Regional Transportation Plan



*safe • reliable • healthy • affordable*

# PUBLIC REVIEW DRAFT

## 2018 Regional Transportation Plan

### Chapter 6

## Regional Programs and Projects to Achieve Our Vision

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June 29, 2018

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## 6.1 INTRODUCTION

Implementing projects and programs of the 2018 Regional Transportation Plan (RTP) will help achieve the desired outcomes for a great region. Six desired outcomes for the region have been endorsed by the Metro Policy Advisory Committee (MPAC) and approved by the Metro Council. The 2018 Regional Transportation Plan seeks to help achieve the desired outcomes:

- Vibrant communities
- Economic prosperity
- Safe and reliable transportation
- Leadership on climate change
- Clean air and water
- Equity



Six Desired Outcomes  
for Greater Portland

### 6.1.1 Addressing our most urgent needs through our investments

We know the transportation funding landscape is changing, and building a safe, reliable and sustainable transportation system requires steady, long-term investment. But, we don't have the resources to invest at the levels needed to address all of the challenges the region faces and achieve our shared vision and goals for the transportation system. Prioritizing where and how to invest limited transportation funding is a key part of developing and implementing the RTP.

Prioritizing starts with understanding the challenges we need to address. Regional transportation challenges were identified through the engagement process during the update of the RTP. The regional investment strategy was developed to address these challenges and achieve the investment priorities discussed in the next section. Each of the challenges listed below are described in Chapter 4.

- Aging infrastructure
- Climate change and air quality
- Congestion and reliability
- Fatal and life-changing crashes
- Earthquake vulnerability, security and emergency management
- Gaps in transit, biking and walking connections
- Social inequity and disparities

- Housing and transportation affordability and displacement
- Technological change

### 6.1.2 Chapter organization

This chapter describes how the region plans to invest in the transportation system across all modes, with expected funding, to provide a safe, reliable, healthy and affordable transportation system with travel options.

**6.1 Introduction:** This section introduces the chapter, including challenges the region is facing that the project lists address.

**6.2 What Are the Region's Investment Priorities?** This section describes the investment priorities identified through the updated of the RTP. The project lists were developed in response to the identified investment priorities.

**6.3 2018 RTP Projects and Programs:** This section describes the 2040 Constrained project list, which are the projects and programs that fit within the constrained budget of federal, state and local funds the greater Portland region can reasonably expect through 2040 under current funding trends. The section describes how the project list was developed, and the types and cost of projects (investment categories) that are in the 2040 Constrained list.

**6.4 The 2040 Strategic Project List:** This section describes the 2040 Strategic list of projects and programs, which reflect the full list of projects needed to meet the region's transportation needs, but for which funding has not been identified.

## 6.2 WHAT ARE THE REGION'S INVESTMENT PRIORITIES?

The Regional Transportation Plan (RTP) responds to the 2040 Growth Concept through an approach that views the transportation system as an integrated and interconnected system, shifting the emphasis from simply moving vehicles to moving people and goods, providing access, and helping to create and connect places. The six desired outcomes adopted are supported by goals of the RTP and become the focal point for identifying investment priorities.

During the update of the RTP, regional investment priorities were identified to address the challenges listed in the section above. These regional transportation investment priorities are described below, and guided the development and refinement of the 2018 RTP projects and programs.

### *Major trends and shifts*

Technological change, housing and transportation affordability and displacement, changing demographics and an aging population, and social inequities and disparities are major societal trends and shifts which impact and are impacted by investments in the regional transportation system.

Policies, projects and programs of the RTP seek to inform these major shifts and trends in order to achieve the region's six desired outcomes, while acknowledging that many forces and influences are at play and there are more unknowns than knowns.

### 6.2.1 Maintaining the system we have

The RTP is an important tool to helping to maintain the existing transportation system. The RTP recognizes the importance of prioritizing maintaining the system we have before building new roadways.

Maintenance of the transportation system is the largest transportation cost and it is growing. Maintaining and updating aging infrastructure, retrofitting to address earthquake vulnerability, and providing for security and routes for efficient emergency services are growing concerns across the region.

### 6.2.2 Implementing the 2040 Growth Concept

Implementing the 2040 Growth Concept is one of the main roles of the RTP. The RTP recognizes the importance of prioritizing transportation investments in the 2040 growth areas to support the region's economic vitality and commercial activity. These are the areas where the greatest growth is planned for, and where the most trips will be occurring.

- City center, regional centers and town centers
- Station communities
- Main streets
- Corridors
- Industrial and employment areas

Transportation investments also play an important role in placemaking, which helps achieve the 2040 Growth Concept vision for a strong economy, a healthy environment and

communities that serve the needs of all. Refer to Chapter 1 for more information on the 2040 Growth Concept.

### **6.2.3 Implementing the Climate Smart Strategy**

The 2018 Regional Transportation Plan is a key tool for implementing the adopted Climate Smart Strategy and achieving a new 2040 target adopted by the Land Conservation and Development Commission in 2017. The RTP recognizes the importance of prioritizing transportation investments that help reduce greenhouse gas emissions from cars and small trucks while making our transportation system safe, reliable, healthy and affordable.

### **6.2.4 Focusing on transportation equity**

The RTP is a key tool for implementing Metro's adopted Strategic Plan to Advance Racial Equity, Diversity and Inclusion. The RTP recognizes the importance of prioritizing transportation investments that will reduce barriers and disparities faced by communities of color and other historically marginalized communities, while making our transportation system safe, reliable, healthy and affordable.

### **6.2.5 Implementing Vision Zero**

The RTP is a key tool for implementing the adopted Regional Transportation Safety Strategy and achieving a new Vision Zero target to eliminate traffic deaths and life changing injuries by 2035. The RTP recognizes the importance of prioritizing transportation investments that will move the region as quickly as possible towards Vision Zero, especially in communities of color and other historically marginalized communities that experience disparate impacts from traffic crashes.

### **6.2.6 Managing congestion to improve reliability**

The RTP is a key tool to addressing congestion by improving reliability. The RTP recognizes the importance of prioritizing strategic transportation investments that will make travel more reliable on the region's busiest roadways and regional bus routes. While the RTP acknowledges that congestion cannot be eliminated, there are projects and tools that can make travel times reliable. Refer to Chapter 4 for more information on congestion and regional highway bottlenecks.

### **6.2.7 Expanding travel options**

The RTP is a key tool to expanding travel options. Completing gaps in the walking and bicycling networks, increasing safe access to transit, and supporting travel decisions with community, neighborhood, and employment outreach programs are a top priority of the RTP. These types of investments are foundational to achieving other desired outcomes such as safety and reduced vehicle miles traveled per capita.

## 6.3 2018 RTP PROJECTS AND PROGRAMS

The Regional Transportation Plan (RTP) comprises two main parts: the policy sections and the project lists. The policy sections, in Chapters 2 and 3, set the vision, goals, objectives, performance targets and policies for the greater Portland region's system of thoroughways, arterials, bridges, bikeways, sidewalks, and transit and freight routes.

The project lists, described in this Chapter and provided in Appendices A, B and C, are priority projects from local, regional or state planning efforts that provided opportunities for public input.

### 6.3.1 Developing the project lists

To develop the RTP lists of projects and programs, Metro issued a call for projects to its regional partners to begin updating the region's transportation investment priorities into three separate funding scenarios.



2018–2027

The 2027 Constrained funding scenario identifies the highest priority projects and programs that the greater Portland region anticipates funding in the first 10-years of the plan.



2018–2040

The 2040 Constrained funding scenario includes all of the projects and programs that fit within a constrained budget of federal, state and local funds the greater Portland region can reasonably expect through 2040 under current funding trends. In order to be eligible for federal or state transportation funding, a project must be included on the 2040 Constrained list.

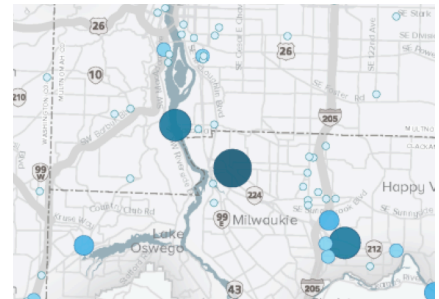


2018–2040

The 2040 Strategic includes additional strategic priority investments (not constrained to the budget based on current funding trends) that could be built with additional resources. This is referred to as the 2040 Strategic and are not anticipated to be completed unless new, as of yet identified funding becomes available.

Working with a constrained budget and funding targets, Clackamas, Multnomah and Washington counties and cities within each county recommended priority projects for their jurisdictions at county coordinating committees; the Oregon Department of Transportation (ODOT), the Port of Portland, TriMet, SMART and other agencies worked with county coordinating committees and the City of Portland to recommend priority

### *Did you know?*



Since the last update of the RTP in 2014, of the 1,256 projects listed in the RTP, 132 have been built or will be completed by 2019 – a total of \$3.15 billion invested in the regional transportation system

projects; and the City of Portland recommended projects after reviewing priorities with its community advisory committees. These projects were provided to Metro to build the draft project lists for initial public review and technical evaluation in winter 2018.

For the first time, Metro and regional partners refined the draft project lists based on a system performance and transportation equity evaluation of the draft project lists, initial public input and regional priorities identified through the fourth, and final, regional leadership forum. Based on the system performance results and priorities affirmed by city, county and regional policymakers and business and community leaders from across the greater Portland area, Metro provided a set of recommendations to regional partners to guide finalizing the RTP project lists for public review and technical evaluation.

**Table 6.1** summarizes the seven overall recommendations from the system performance evaluation results and priorities from policymakers and leaders in the region, and illustrates how the draft projects lists for each funding scenario was refined to address the recommendations. Refer to Appendix E for additional information on what changed.

**Table 6.1 Seven key recommendations and refinement of RTP projects lists**

<b>Make more near-term progress on key regional priorities – equity, safety, travel options, Climate Smart Strategy implementation and congestion.</b> Advance projects that address these outcomes to the 10-year list to make travel safer, ease congestion, improve access to jobs and community places, attract jobs and businesses to the region, save households and businesses time and money, and reduce vehicle emissions.	
<b>Make more near-term progress to reduce disparities and barriers that exist for historically marginalized communities.</b> Advance projects that improve safety and expand travel options to the 10-year list to reduce disparities and barriers, especially for people of color and households of modest means.	
<b>Prioritize projects that focus on safety in high injury corridors.</b> Advance projects in high injury corridors to the 10-year list and ensure all projects in high injury corridors address safety to reduce the likelihood and severity of crashes for all modes.	
<b>Accelerate transit service expansion.</b> Increase transit service as much as possible beyond Climate Smart Strategy investment levels. Focus new and enhanced transit service to connect transit to underserved communities to jobs and community places, in congested corridors and in areas with more jobs and housing.	
<b>Make more near-term progress to tackle congestion and manage travel demand.</b> Advance lower cost projects to the 10-year list that use designs, travel information, technologies, and other strategies to support and expand travel options and maximize use of the existing system. It will be important to ensure that lower income households are not financially burdened by strategies to make road use more efficient.	
<b>Prioritize completion of biking and walking network gaps in the near-term.</b> Advance projects that fill gaps for biking and walking in high injury corridors or that provide connections to transit, schools, jobs and 2040 centers to the 10-year list.	
<b>Continue to build public trust through inclusive engagement, transparency and accountability.</b> Continue to engage the region’s diverse communities in the planning and implementation of projects to achieve desired outcomes, including equity, safety, reliability affordability and health. Report back whether projects deliver (or don’t deliver) anticipated outcomes and adjust course as needed.	







### 6.3.2 RTP 2040 Constrained projects and programs

Once the final RTP project lists were developed, Metro conducted a final system performance evaluation and assessment of the project lists. Results from the system performance evaluation are provided in Chapter 7. This section describes the projects and programs from the 2040 Constrained list of projects. This is the list that the region can reasonably assume it will fund and complete based on funding assumptions. Projects and programs identified in the 2040 Strategic list are not described in this section because funding has not been identified. The 2040 Strategic list of projects is described in **Section 6.4**.

**Table 6.2** shows the breakdown of RTP projects in the constrained lists by investment category, and provides a quick reference for comparing the relative cost of the 2027 Constrained (the 10-year plan) and full 2040 Constrained investment strategies. For comparison and context, information is provided from the adopted Climate Smart Strategy to help decision-makers understand how much of the region's commitment will be implemented. The strategic investment scenario is not included because funding has not been identified for projects on that list. Refer to **Section 6.4** for costs associated with the strategic list.

**Table 6.2 Estimated costs for investment strategies (2016\$)**

RTP Capital Costs	Climate Smart Strategy 2010-2035	 2018–2027	 2018–2040
Transit capital	\$4.7 billion	\$3.2 billion	\$5.1 billion
Throughways capital	\$4.1 billion	\$1.1 billion	\$4.6 billion
Roads and bridges capital	\$5.2 billion	\$1.5 billion	\$3.3 billion
Freight access	<i>Not evaluated</i>	\$156 million	\$248 million
Active transportation	\$2.2 billion	\$770 million	\$1.8 billion
Technology – system management	\$219 million	\$71 million	\$189 million
Information – travel options	\$197 million	\$51 million	\$127 million
RTP Operations and Maintenance Costs	Climate Smart Strategy 2010-2035	 2018–2027	 2018–2040
Transit operations and maintenance	\$8.5 billion	\$5.7 billion	\$13.7 billion
Roads and throughways operations and maintenance	\$12.8 billion	\$6 billion	\$13 billion
<b>Total estimated costs (2016\$)</b>	<b>\$38 billion</b>	<b>\$18.5 billion</b>	<b>\$42 billion</b>

## Why the constrained project list matters

In order to be eligible for federal or state transportation funding, a project must be included on the “constrained” list and must be part of the planned regional transportation system.

The region’s operations and maintenance commitment is significant and consumes the majority of federal, state, and local revenues identified for the greater Portland region through 2040 – an estimated \$26.7 billion. The draft constrained list of capital projects represents another \$15.4 billion in capital investment in the region’s transportation system. A well-maintained, complete and efficient transportation system must meet multiple needs and offer options for people, goods and services to get around.

**Figure 6.1** shows the total estimated cost of the draft constrained list of capital projects and estimated operations and maintenance of the transportation system by investment category for the period 2018-2040.

### Defining terms

#### Constrained budget

The budget of federal, state and local funds the greater Portland region can reasonably expect through 2040 under current funding trends – presumes some increased funding compared to current levels

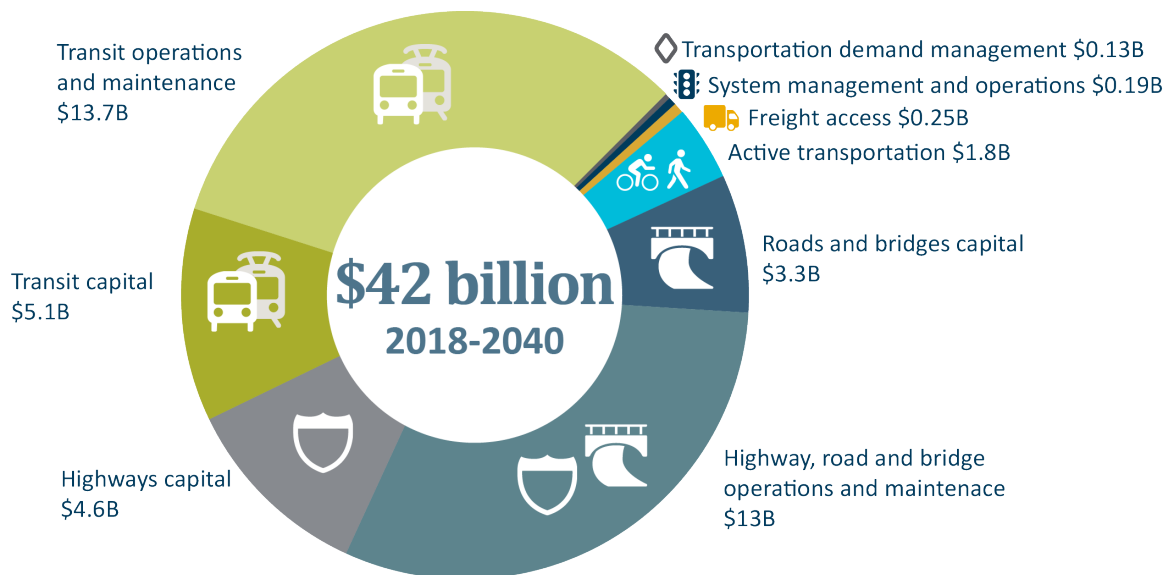
#### Constrained list

Projects that can be built by 2040 within the constrained budget – makes up the federal constrained transportation plan

#### Strategic list

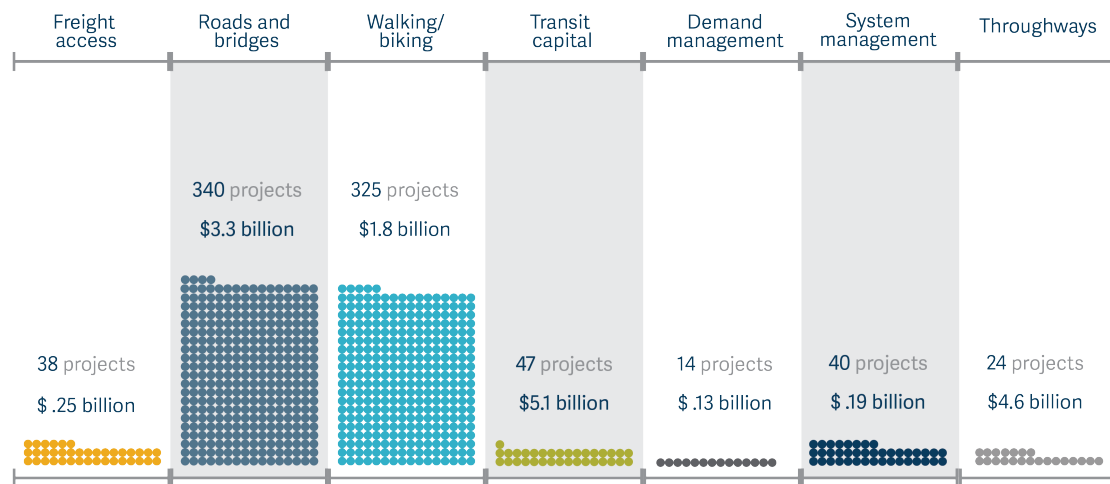
Additional priority projects that could be achieved with additional resources

**Figure 6.1 Total estimated investment by 2040 (2016\$)**



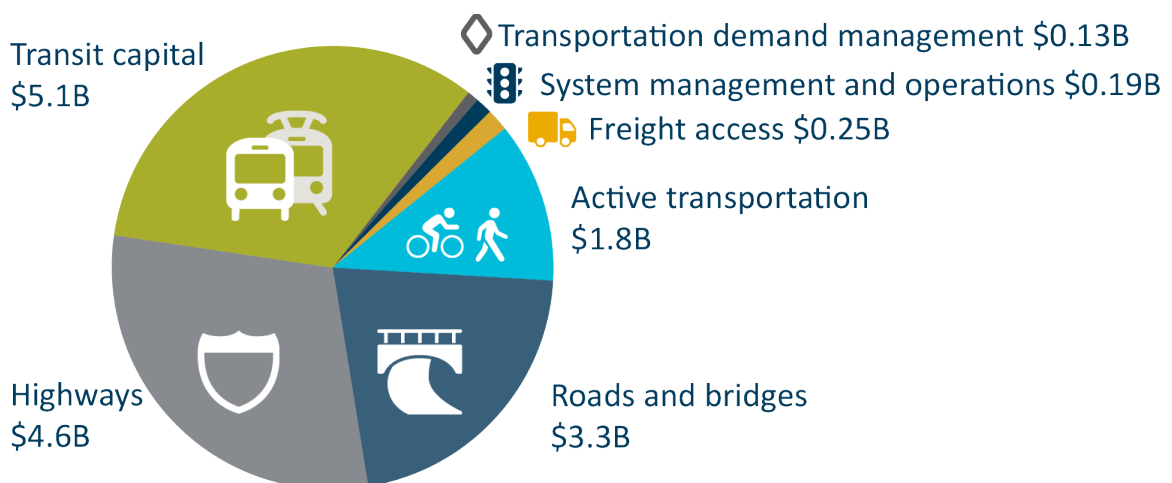
The figures below show the breakdown of capital projects by cost and number for each investment category, for the region, for each of the counties and for the City of Portland.

**Figure 6.2 Greater Portland region 2040 Constrained RTP: Cost and number of projects by investment category**



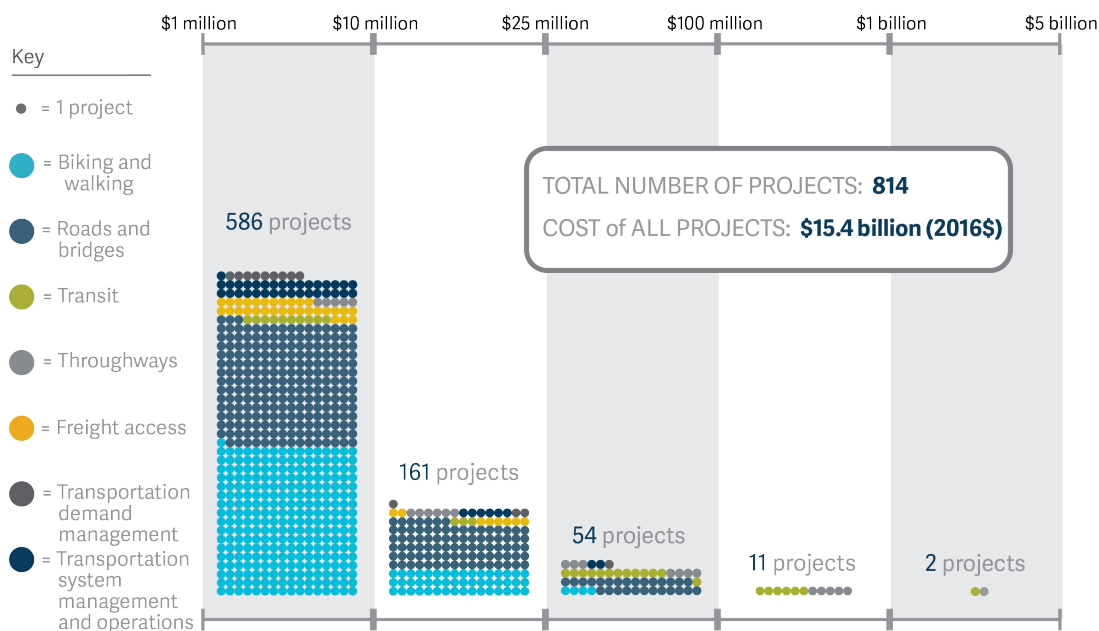
**Figure 6.3** shows RTP investments broken down by investment category and percent of total cost. Roads, bridges, and walking and biking connections have the most projects in the draft 2018 Regional Transportation Plan constrained list, though the cost of projects vary greatly as shown in **Figure 6.4** Projects in the draft 2018 Regional Transportation Plan constrained list range from \$1 million to nearly \$3 billion.

**Figure 6.3 Greater Portland region 2040 Constrained RTP: Cost of capital projects by investment category**



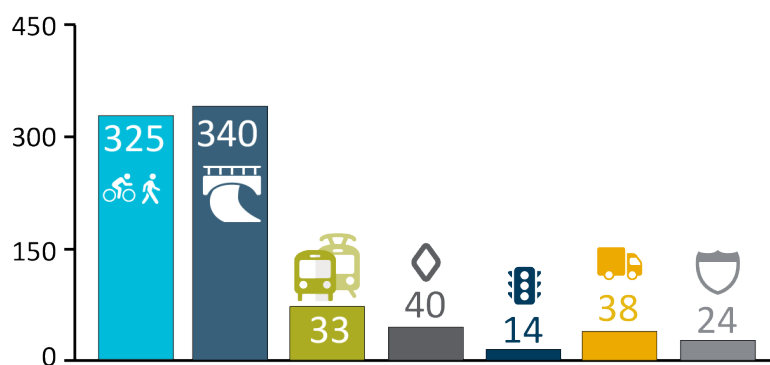
*Note: Road and transit operations and maintenance costs are not included in the project list or information presented here.*

**Figure 6.4 Greater Portland region 2040 Constrained RTP: Cost range of projects by investment category**



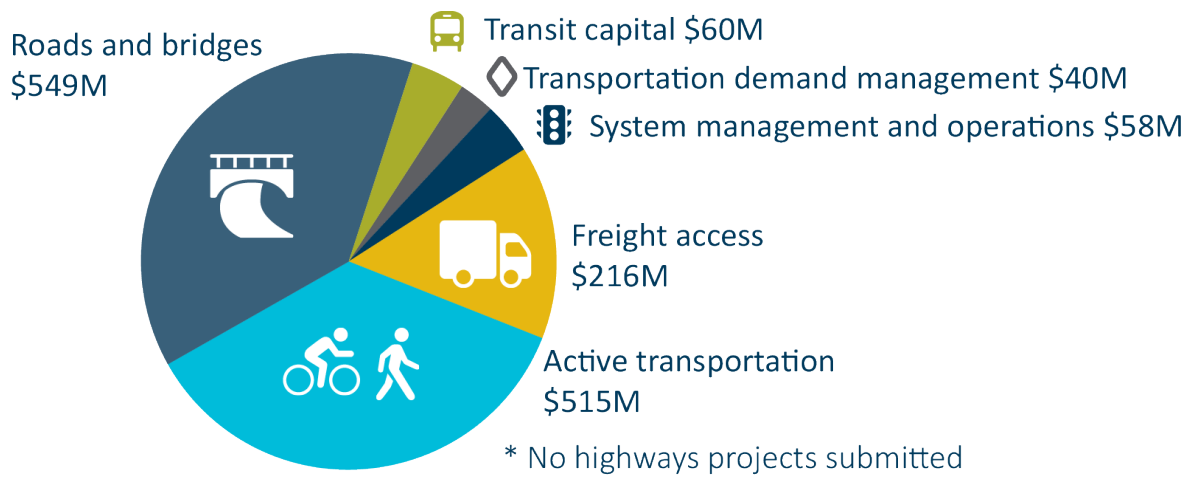
Roads, bridges, and walking and biking connections have the most projects in the 2040 Constrained list, though the cost of projects vary greatly.

**Figure 6.5 Greater Portland region 2040 Constrained RTP: Number of capital projects by investment category**

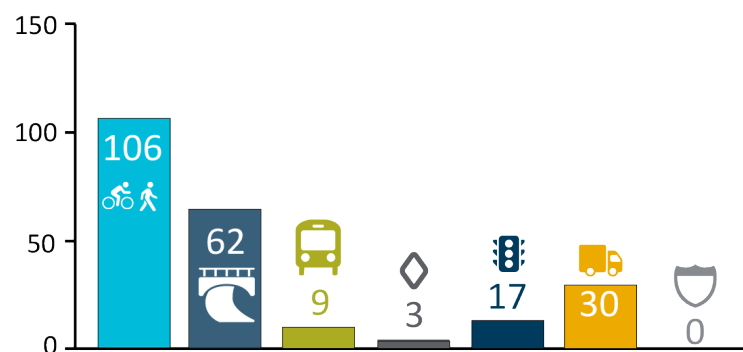


Similar to the region as a whole the City of Portland projects includes a relatively small number of transit capital and highway projects that together comprise the majority of costs in their list. In the City of Portland, active transportation projects comprise a majority of the projects, but are relatively low cost. See figures below.

**Figure 6.6 City of Portland 2040 Constrained RTP: Cost of capital projects by investment category**

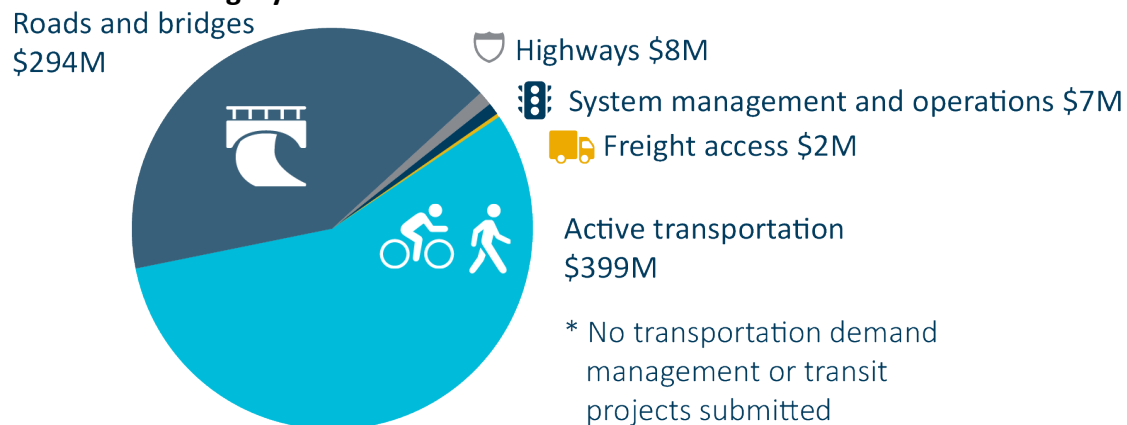


**Figure 6.7 City of Portland 2040 Constrained RTP: Number of capital projects by investment category**



Unlike the region as a whole, in Clackamas County active transportation projects comprise a majority of costs and number of projects. See figures below.

**Figure 6.8 Clackamas County 2040 Constrained RTP: Cost of capital projects by investment category**

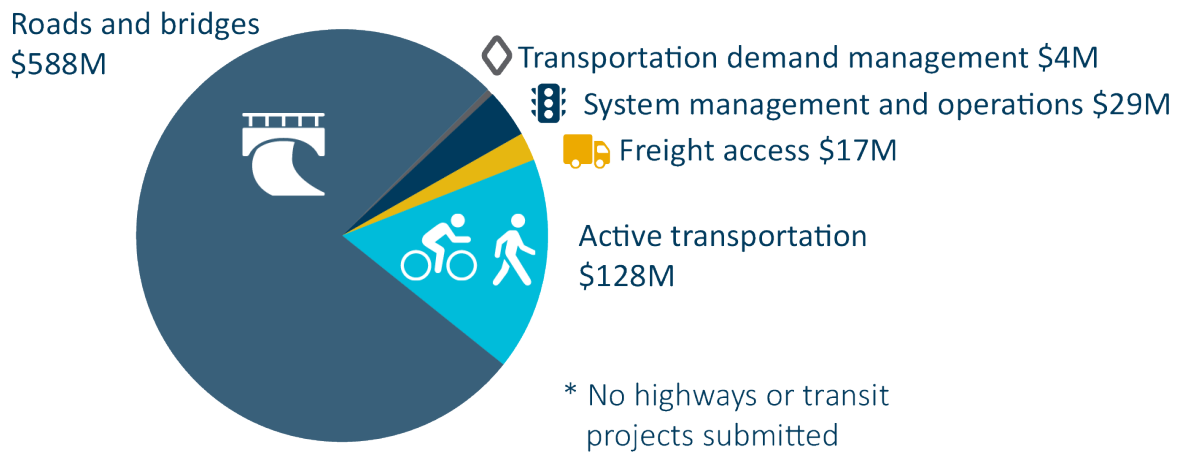


**Figure 6.9 Clackamas County 2040 Constrained RTP: Number of capital projects by investment category**

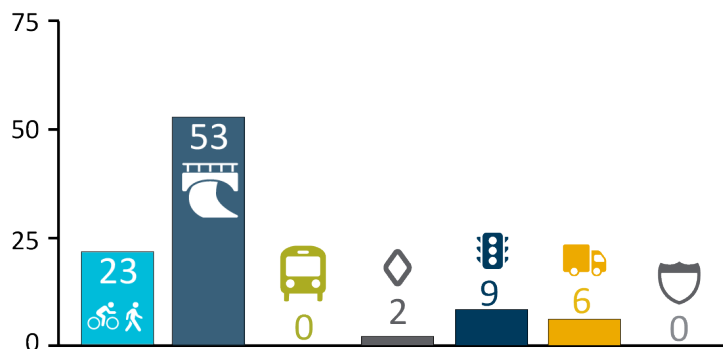


Unlike the region as a whole, in Multnomah County, Roads and Bridges projects comprise a majority of costs and number of projects. See figures below.

**Figure 6.10 Multnomah County 2040 Constrained RTP: Cost of capital projects by investment category**

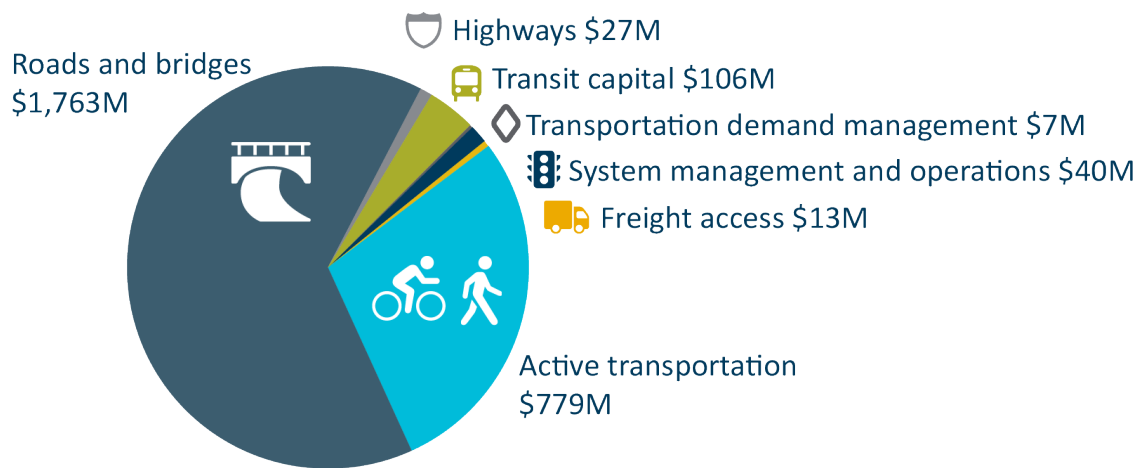


**Figure 6.11 Multnomah County 2040 Constrained RTP: Number of capital projects by investment category**



Unlike the region as a whole, in Washington County (as in Multnomah County), Roads and Bridges projects comprise a majority of costs and number of projects. See figures below.

**Figure 6.12 Washington County 2040 Constrained RTP: Cost of capital projects by investment category**



**Figure 6.13 Washington County 2040 Constrained RTP: Number of capital projects by investment category**



**Map 6.14** shows the general location of projects on the 2027 and 2040 Constrained list of projects. For an interactive map of the projects visit [www.oregonmetro.gov/rtp](http://www.oregonmetro.gov/rtp).

**Figure 6.14 Map of Constrained RTP Projects (2018-2040)**

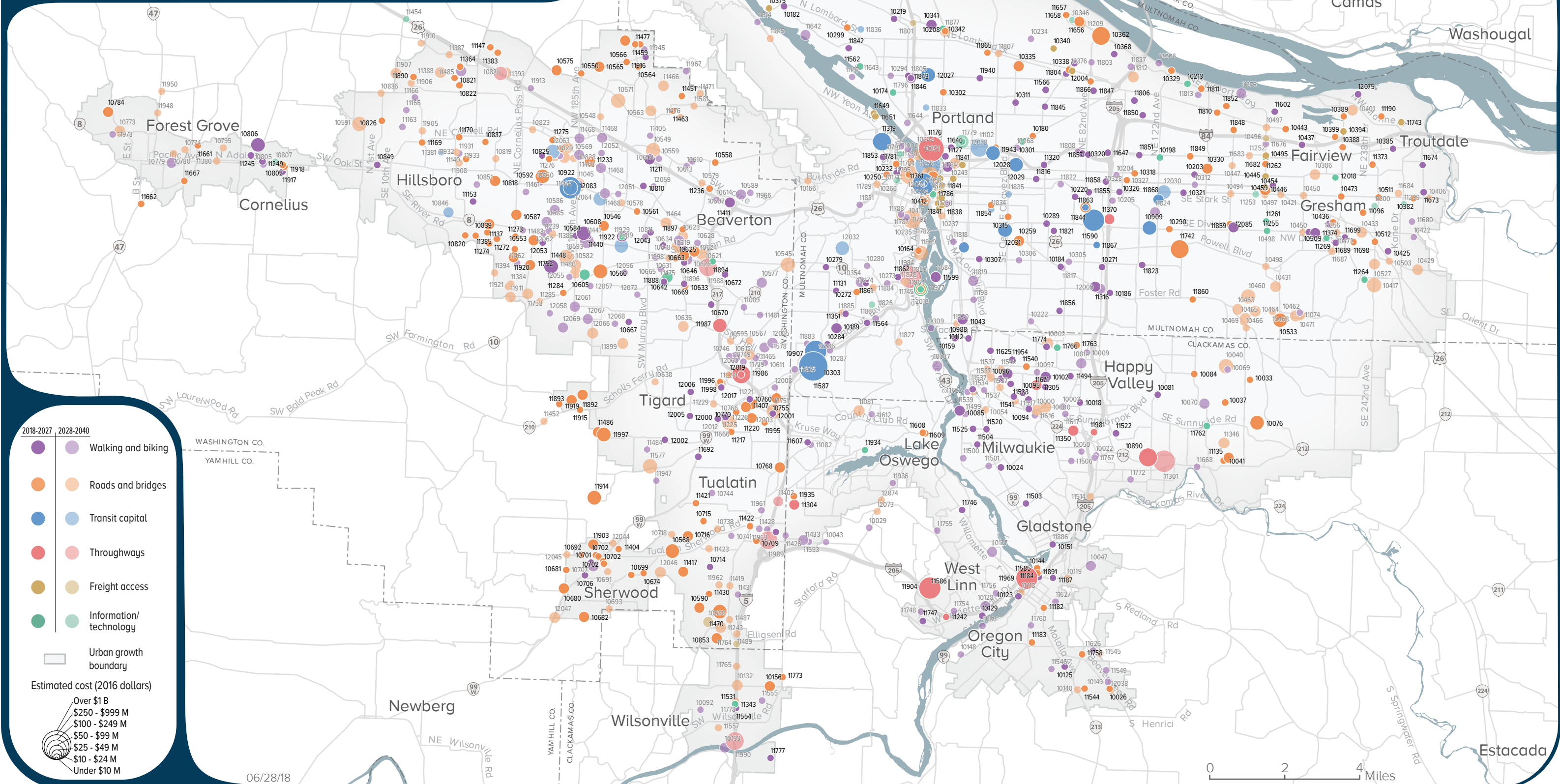


# Draft 2018 Regional Transportation Plan 2040 Financially Constrained projects

The financially constrained projects are the highest priority projects given limited transportation funding and quality for regional, state and federal funding. This list of projects includes projects for which funding has been committed and projects that can be implemented with the funds the region currently expects to have available.

These projects have been divided into two investment time frames; 2018-2027 and 2028-2040.


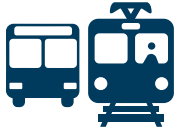
For more information and to access an interactive online map, visit <https://arcg.is/1WT9Gq>



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**Table 6.3** provides an overview of the major Throughway and transit projects in the RTP.

**Table 6.3 Summary of major throughway and transit investments**

	2027 Constrained	2040 Constrained	2040 Strategic
<b>Throughways</b>  	<ul style="list-style-type: none"> <li>I-5 Rose Quarter</li> <li>I-5 south and I-205 operational improvements</li> <li>OR 217 NB and SB auxiliary lanes</li> <li>I-205 auxiliary lane (in Portland)</li> <li>I-205 SB widening to three lanes in each direction</li> <li>I-205/Abernethy Bridge widening</li> <li>OR 224 widening (third WB lane)</li> </ul>	<b>2027 Constrained, plus</b> <ul style="list-style-type: none"> <li>I-5/Columbia River Crossing (with tolling as defined in adopted LPA)</li> <li>US 26 widening to Brookwood Road</li> <li>OR 217 braided ramps</li> <li>More I-205 auxiliary lanes</li> <li>Sunrise Project, Phase 2</li> <li>I-5/Boone Bridge SB auxiliary lane</li> <li>I-5 NB braided ramps from I-205 to Nyberg Road</li> </ul>	<b>2040 Constrained, plus</b> <ul style="list-style-type: none"> <li>I-5/OR 217 Interchange Phase 2</li> <li>OR 217 operational improvements and widening to three lanes in each direction</li> <li>OR 217 auxiliary lane from Denney to Scholls Ferry Road</li> <li>Sunrise Project, Phase 3</li> <li>More I-5 auxiliary lanes</li> <li>Operational improvements on I-205, I-84, I-405 and US 26</li> </ul>
<b>Transit</b>  	<b>High Capacity Transit</b> <ul style="list-style-type: none"> <li>Southwest Corridor Project</li> <li>Division Transit Project</li> <li>Red Line Improvements Project</li> <li>Central City Transit Capacity Analysis</li> </ul> <b>Enhanced transit concept - hotspots</b> <ul style="list-style-type: none"> <li>Streetcar upgrades on Grand Avenue in Portland</li> <li>Central City Portals (downtown Portland bridges)</li> <li>82nd Avenue ETC (NE Killingsworth Street to SE Clatsop Street)</li> </ul>	<b>2027 Constrained, plus</b>  <b>High Capacity Transit</b> <ul style="list-style-type: none"> <li>Portland to Vancouver</li> <li>Steel Bridge Transit Bottleneck</li> </ul> <b>Enhanced transit concept - hotspots</b> <ul style="list-style-type: none"> <li>Inner North Portland ETC (Portland Central City to N Lombard Street)</li> <li>Caesar Chavez ETC (Sandy to Powell)</li> <li>Lombard Street ETC (St. Johns to MLK Jr. Boulevard)</li> <li>SE Hawthorne/50<sup>th</sup> Avenue ETC (Willamette River to SE Powell)</li> </ul>	<b>2040 Constrained, plus</b>  <b>High Capacity Transit</b> <ul style="list-style-type: none"> <li>HCT extension to Oregon City via McLoughlin</li> <li>HCT on I-205 (Clackamas to Bridgeport)</li> <li>Expansion of WES to all-day service</li> <li>WES extension to Salem</li> <li>Sunset Highway HCT (Sunset transit center to Hillsboro Fairplex)</li> <li>HCT extension to Forest Grove</li> </ul>

	2027 Constrained	2040 Constrained	2040 Strategic
	<ul style="list-style-type: none"> <li>▪ Powell Boulevard ETC (SE Portland to I-205)</li> </ul> <b>Enhanced transit concept - corridors</b> <ul style="list-style-type: none"> <li>▪ 122nd Avenue ETC (Lents to Parkrose transit center)</li> <li>▪ Martin Luther King Jr. Boulevard ETC (Portland Central City to N Vancouver Boulevard)</li> <li>▪ Sandy Boulevard ETC (Portland Central City to Parkrose TC)</li> <li>▪ 82nd Avenue ETC (Swan Island to Clackamas town center)</li> <li>▪ Hawthorne Boulevard/Foster Road ETC (downtown Portland to Lents town center)</li> <li>▪ Streetcar to Montgomery Park in NW Portland</li> </ul>	<b>Enhanced transit concept - corridors</b> <ul style="list-style-type: none"> <li>▪ Tualatin Valley Highway multimodal project (Maple Street to 160th Avenue)</li> <li>▪ E. Burnside/SE Stark Street ETC (Portland to Gresham)</li> <li>▪ Tualatin Valley Highway ETC from Beaverton to Forest Grove</li> <li>▪ Beaverton-Hillsdale Highway ETC from Portland to Washington Square</li> <li>▪ Cornell/Barnes ETC (Sunset transit center to Hillsboro TC)</li> <li>▪ 185th/Farmington Road ETC (PCC Rock Creek to Beaverton transit center)</li> <li>▪ Streetcar on NE Broadway to Hollywood town center</li> </ul>	<b>Enhanced transit concept - corridors</b> <ul style="list-style-type: none"> <li>▪ SE Powell Boulevard ETC (Portland to extent TBD)</li> <li>▪ Lombard/Caesar Chavez ETC (St. Johns to Milwaukie town center)</li> <li>▪ Belmont Street ETC (Portland to Gateway transit center)</li> <li>▪ Streetcar on Martin Luther King Jr. Boulevard in NE Portland</li> <li>▪ Streetcar in AmberGlen in Hillsboro</li> <li>▪ Streetcar to Johns Landing in SW Portland</li> </ul>



Note: ETC investments are identified on existing and planned frequent service bus routes and will be further defined through the Regional Transit Strategy and the Enhanced Transit Concept (ETC) Pilot Program.





### 6.3.3 Transit capital projects

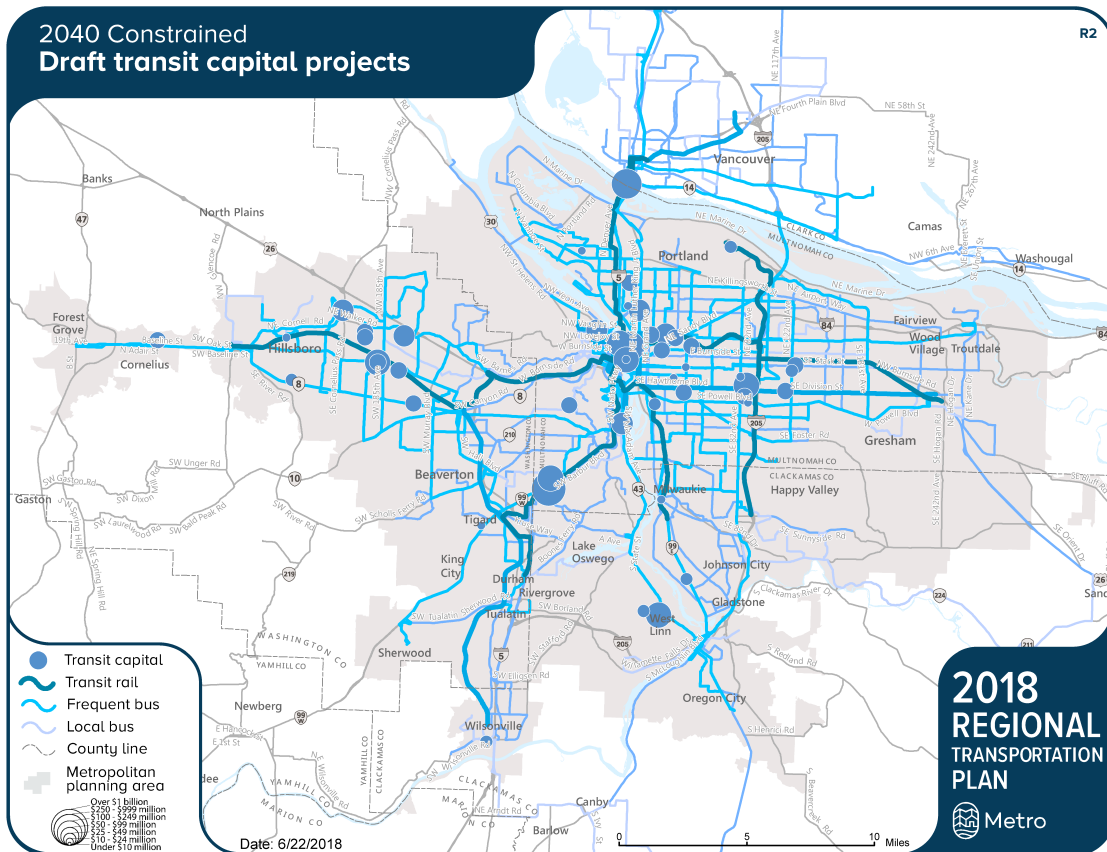
As shown in **Table 6.4**, transit capital projects in the 2040 Constrained project list include several enhanced transit corridors and high capacity transit projects. Transit investments make up about 1/3 of the 2040 Constrained project list. (\$5.1 billion out of \$15.4 billion)

**Table 6.4 Summary of Transit Capital Projects in Constrained RTP**

Transit capital projects	Climate Smart Strategy 2010-2035	 2018–2027	 2018–2040
Number of transit capital projects	<i>Not evaluated</i>	19	33
Number of transit capital projects on a high injury corridor	<i>Not evaluated</i>	14	27
Daily revenue hours	9,400	8,100	9,500
Service expansion	44% increase from 2010	38% increase from 2015	60% increase from 2015
New high capacity transit connections	MAX extension to Vancouver; WES operates all day with 15-min service and bus rapid transit in five corridors: Southwest, Division Street, I-205 South, Tualatin Valley Highway to Forest Grove, and McLoughlin Boulevard to Oregon City	4 HCT projects, including Division Transit, Southwest Corridor, Red Line extension and the Central City Capacity Analysis	2 additional HCT projects (from 2027 Financially Constrained): HCT connecting Portland to Vancouver, WA, improvements on the Steel Bridge
Other service enhancements	4 new streetcar connections, further implementation of locally-developed SMART and TriMet service enhancement plans	9 enhanced transit projects and 1 streetcar extension to Montgomery Park	10 additional enhanced transit projects and 1 streetcar extension to Hollywood (from 2027 Financially Constrained)

Transit capital projects	Climate Smart Strategy 2010-2035	 2018–2027	 2018–2040
Public and private shuttles	More major employers and some community-based organizations work with TriMet to operate shuttles	More major employers and some community-based organizations work with TriMet to operate shuttles	More major employers and some community-based organizations work with TriMet to operate shuttles
Fares	Reduced fares provided to youth, older adults, people with disabilities and low-income families	Reduced fares provided to youth, older adults, people with disabilities and low-income families	Reduced fares provided to youth, older adults, people with disabilities and low-income families
Estimated capital cost (\$2016)	\$4.7 billion	\$3.2 billion	\$5.1 billion

**Figure 6.5 Transit Capital Projects Map**





### 6.3.4 Throughway projects for safe and reliable long-distance travel

Maintenance and efficient operation of the existing throughway system is critical. Keeping throughways in good repair and using information and technology to manage travel demand and traffic flow help improve safety and boost efficiency of the existing system. With limited funding, more effort is being made to maximize system operations prior to building new capacity in the region. Building a connected roadway network will also preserve the throughway system for longer-distance, freight and transit trips.

Adding lane miles to relieve congestion is an expensive approach and will not solve congestion on its own. However, targeted widening of roads and throughways, along with connectivity and system and demand management strategies, can help connect goods to market and support travel across the region.

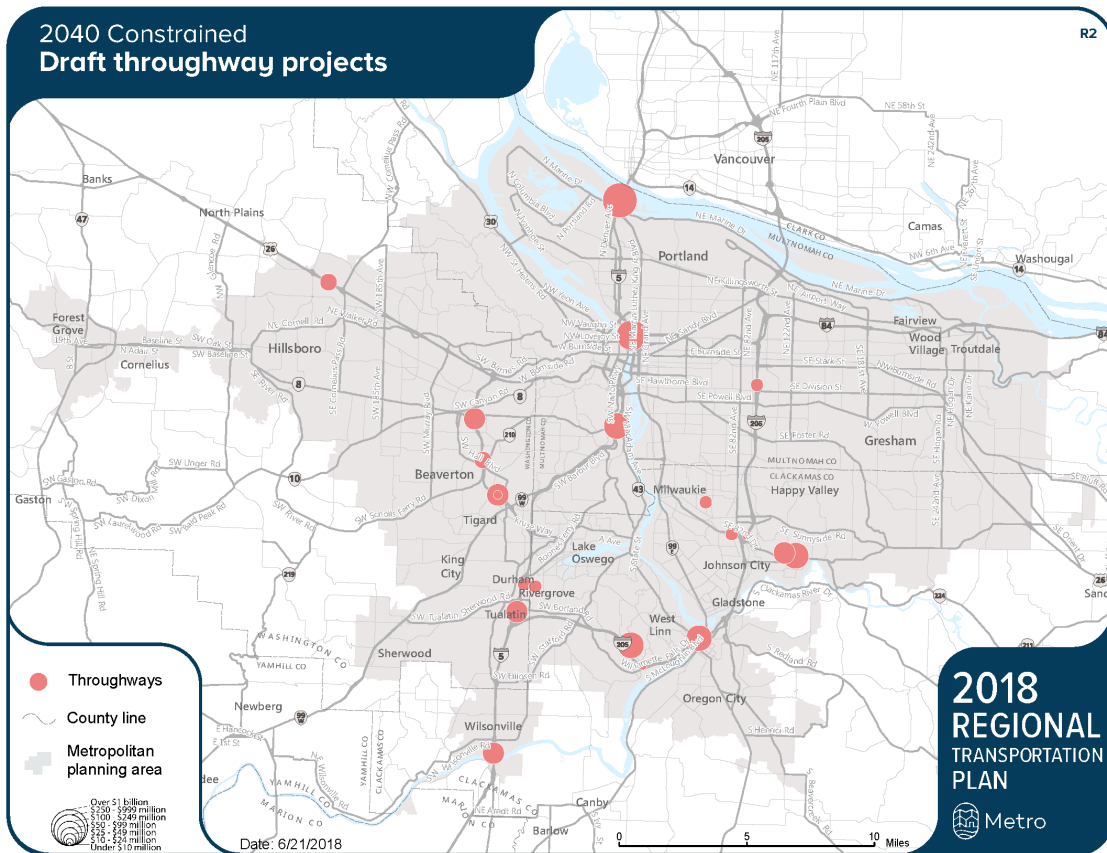
Throughway projects comprise about 3 percent of projects in the 2040 Constrained project list. Strategic throughway capacity was added to maintain regional mobility and enhance access to intermodal industrial areas and facilities where goods move from one transportation mode to another. **Table 6.6** lists the major throughway capital projects in the 2040 constrained list.

**Table 6.6 Summary of Transit Capital Projects in Constrained RTP**

<b>Throughway capital projects</b>	<b>Climate Smart Strategy 2010-2035</b>	 <b>2018–2027</b>	 <b>2018–2040</b>
Number of throughway projects	<i>Not evaluated</i>	17	24
Number of throughway projects with safety benefit	<i>Not evaluated</i>	4	12
Number of throughway projects on high injury corridor	<i>Not evaluated</i>	13	19
Throughway capacity – including auxiliary lanes	52 new lane miles	27 new lane miles	50 new lane miles
New major throughway capacity	<i>Not evaluated</i>	Sunrise Highway Phase 2, I-5 Rose Quarter	I-5 Columbia River Crossing, I-5 auxiliary lanes
Estimated capital cost (\$2016)	\$4.1 billion	\$1.1 billion	\$4.6 billion



**Figure 6.15 Throughway Projects Map**



### 6.3.5 Roads and bridges projects for a safe, reliable and connected system

Nearly 45 percent of all trips in the region made by car are less than three miles, and 15 percent are less than one mile, based on the 2011 Oregon Household Activity Survey. When road networks lack multiple routes serving the same destinations, short trips must use major travel corridors designed for freight and regional traffic, adding to congestion.

There are three key ways to make roads and bridges safe, reliable and connected for people walking, driving biking and taking transit.

**Maintenance and efficient operation of the existing road system** Keeping the road system in good repair and using information and technology to manage travel demand and traffic flow help improve safety and boost efficiency of the existing system. With limited funding, more effort is being made to maximize system operations prior to building new capacity in the region.



**Street connectivity and complete streets** Building a well-connected network of complete streets including new local and major street connections shortens trips,

improves overall network efficiency, improves access to community and regional destinations, and helps preserve the capacity and function of highways in the region for freight and longer trips. These connections include designs that support walking and biking and, in some areas, provide critical freight access between industrial areas, intermodal facilities and the interstate highway system.

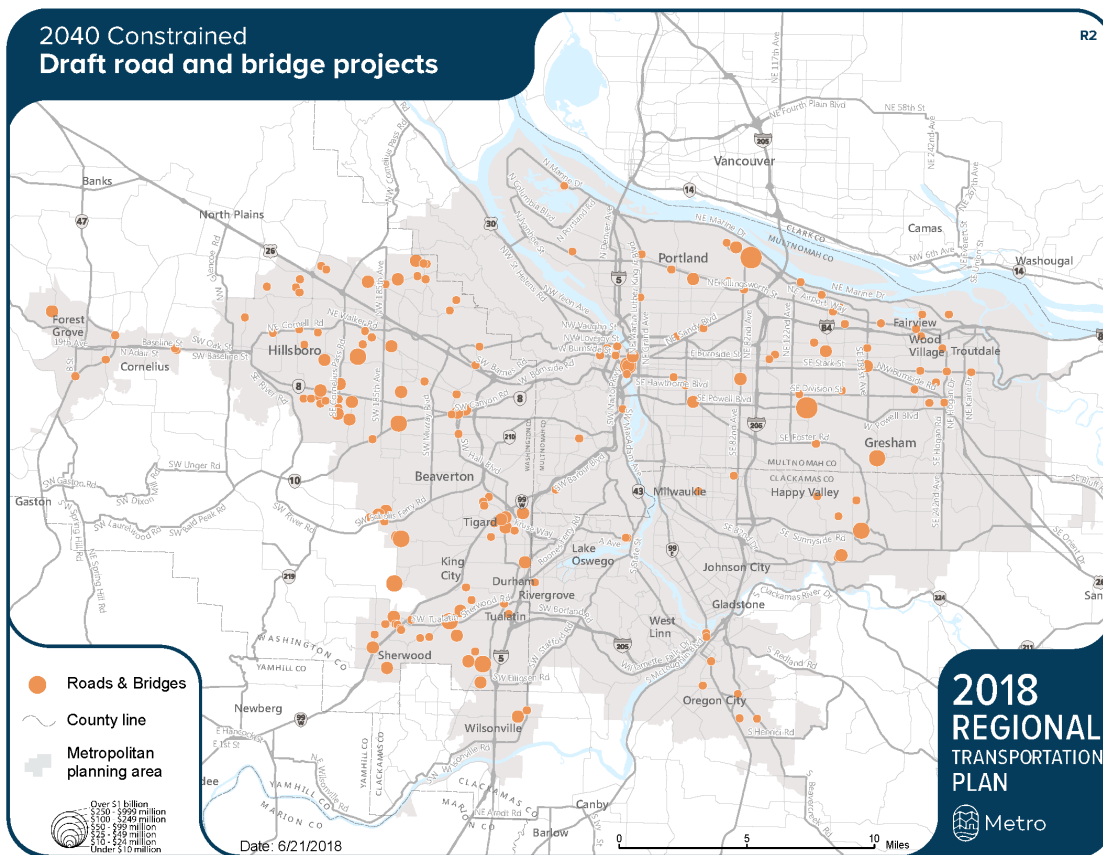
**Network expansion** Adding lane miles to relieve congestion is an expensive approach and will not solve congestion on its own. However, targeted widening of roads and throughways, along with connectivity and system and demand management strategies, can help connect goods to market and support travel across the region.

Road and bridges projects about 42 percent of the 2040 Constrained project list. Road and bridge projects include arterial street expansions and street reconstructions that are complemented by new connections to maintain access to the regional throughway system and provide circulation and access between the central city, regional centers and town centers.

**Table 6.7 Summary of Roads and Bridges Projects in Constrained RTP**

<b>Roads and bridges capital projects</b>	<b>Climate Smart Strategy 2010-2035</b>	 <b>2018-2027</b>	 <b>2018-2040</b>
Number of roads and bridges projects	<i>Not evaluated</i>	175	340
Number of roads and bridges projects with safety benefit	<i>Not evaluated</i>	100	183
Number of roads and bridges projects on a high injury corridor	<i>Not evaluated</i>	104	196
Arterial roadway capacity	386 new lane miles	167 new lane miles	289 new lane miles
New major arterial capacity	<i>Not evaluated</i>	Tualatin-Sherwood Rd, Farmington Rd, Sunnyside Rd east extension	172 <sup>nd</sup> -190 <sup>th</sup> connector, Rock Creek Blvd, Scholls Ferry Rd
Estimated capital cost (\$2016)	\$5.2 billion	\$1.5 billion	\$3.3 billion

**Figure 6.8 Constrained RTP Roads and Bridges Projects Map**



### 6.3.6 Freight access projects to move goods and services in safe, reliable, connected and sustainable ways

The greater Portland region is the trade and transportation gateway for Oregon and provides market access for many southwest Washington businesses. Our prosperity is directly tied to the investments we make in our transportation system, including the region's freight infrastructure. These investments make consumer goods readily available to us; provide air, ship, rail and road systems that help our businesses efficiently reach global and domestic marketplaces; and create family-wage jobs across the region.

**Freight reliability and safety** Facilitate the safe, reliable and efficient movement of goods by better utilizing existing road and freight rail infrastructure and capacity, separating freight traffic from other modes to increase safety and minimize conflicts, and strategically investing in the regional freight network to eliminate road and rail bottlenecks that create serious freight congestion.



**Freight network connectivity** Provide shippers with the ability to transfer freight seamlessly between different modes of transportation, as well as efficient access to local freight clusters and delivery points and regional, domestic and global markets.

**Intermodal freight facilities and connectors** Invest in intermodal facilities and freight intermodal connectors (e.g., reload facilities, marine ports, rail yards, freight access roads, etc.) that reduce highway demand for freight.

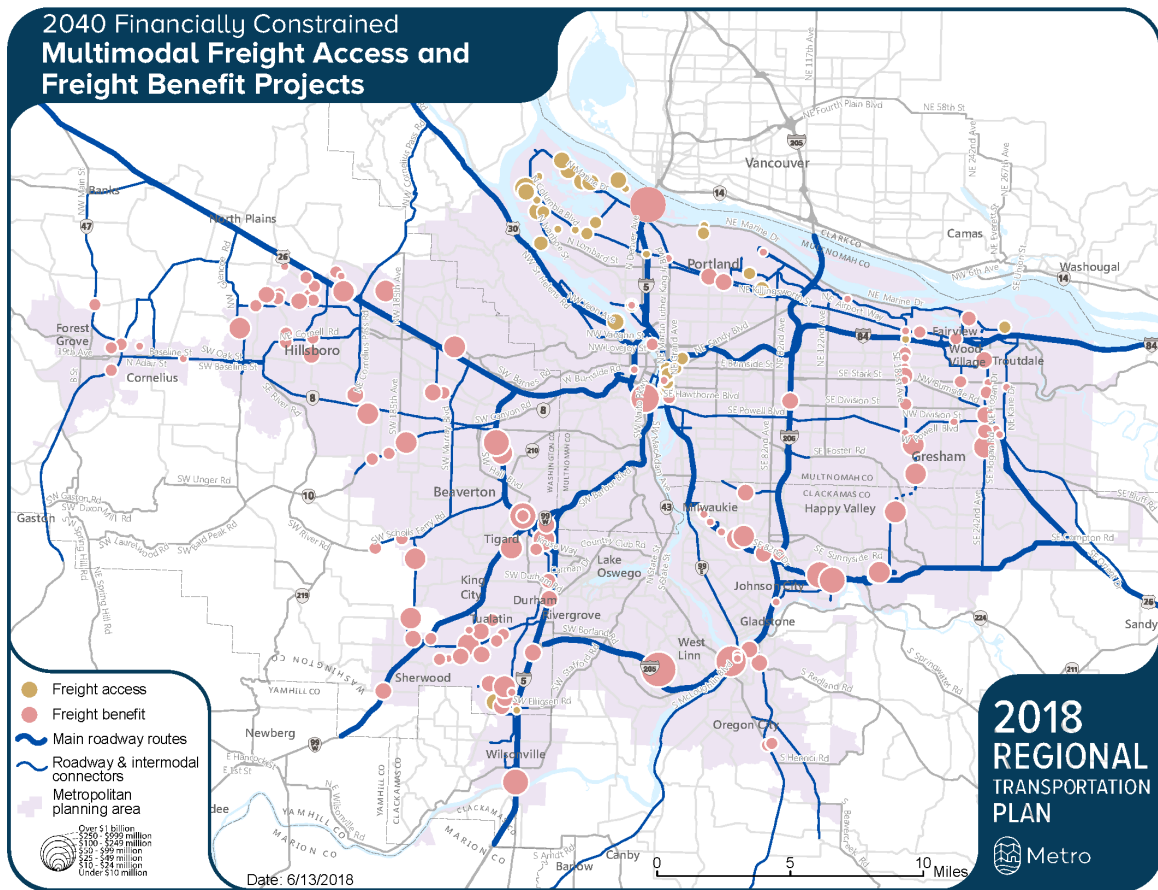
**Smart technology** Make use of intelligent transportation systems and emerging technologies to improve traffic flow along goods movement corridors.

Freight projects in the 2040 Constrained project list are focused on maintaining access and connections for national and international rail, air and marine freight to reach destinations within the region's industrial areas. Freight projects comprise five percent of the 2040 Constrained project list.

**Table 6.9 Summary of Freight Access Projects in Constrained RTP**

Freight access capital projects	Climate Smart Strategy 2010-2035	 2018–2027	 2018–2040
Number of freight access projects	<i>Not evaluated</i>	25	38
Number of freight access projects with a safety benefit	<i>Not evaluated</i>	8	12
Number of freight access projects on a high injury corridor	<i>Not evaluated</i>	10	14
Freight network lane miles	<i>Not evaluated</i>	61	105
New major freight access capacity projects	<i>Not evaluated</i>	Rivergate Blvd overcrossing, T4 modernization, Marine Drive Improvement Phase 2	Cully Blvd Grade separation, Columbia Blvd Rail Bridge, Going/Greeley Interchange
Estimated capital cost of freight access projects (\$2016)	<i>Not evaluated</i>	\$156 million	\$248 million

**Figure 6.16 Constrained RTP Freight Access and Freight Benefits Projects Map**



### 6.3.7 Active transportation projects to make biking and walking safe, convenient and accessible

Active transportation is considered non-motorized forms of transportation including walking and biking. Making it safe and convenient to walk, ride a bicycle and get to public transit benefits people and the environment in multiple ways. Active transportation is good for business, for household pocket books, for cleaner air and water, for public health and safer streets.

Approximately 45 percent of all trips made by car in the region are less than three miles and 15 percent are less than one mile, according to the 2011 Oregon Household Activity Survey. With complete walking and biking routes supported by education and incentives, many of the short trips made by car today could be replaced by walking and biking. There are four key ways to make biking and walking safe and convenient for people of all ages and abilities in our region.

**Fill the gaps** Completing missing sidewalks, pedestrian crossings, bikeways and multi-use paths creates complete streets and better connectivity, removes barriers; adds routes

across highways, railroads and waterways; makes high injury locations safer; and shortens trip distances and travel time.



**Design for safety** Designing bikeways and walking routes with greater separation and buffers from traffic increase safety and reduce the risk of traffic deaths. Making it safer for people walking and biking makes travel safer for all modes.

**Meet the demand** Upgrading high demand bikeways and walking routes and prioritizing active travel in high demand areas provides reliable travel options in congested corridors, reduces the need to drive and increases livability.



**Safe Routes to School** Providing programs and safe walking and biking routes to schools is proven to reduce driving trips and create healthy options for kids.

Active transportation investments have become a growing focus around the region and comprise 40% of all the 2040 Constrained list. RTP Active Transportation projects include streets, trails, and districts identified primarily to benefit pedestrian and bicycling.

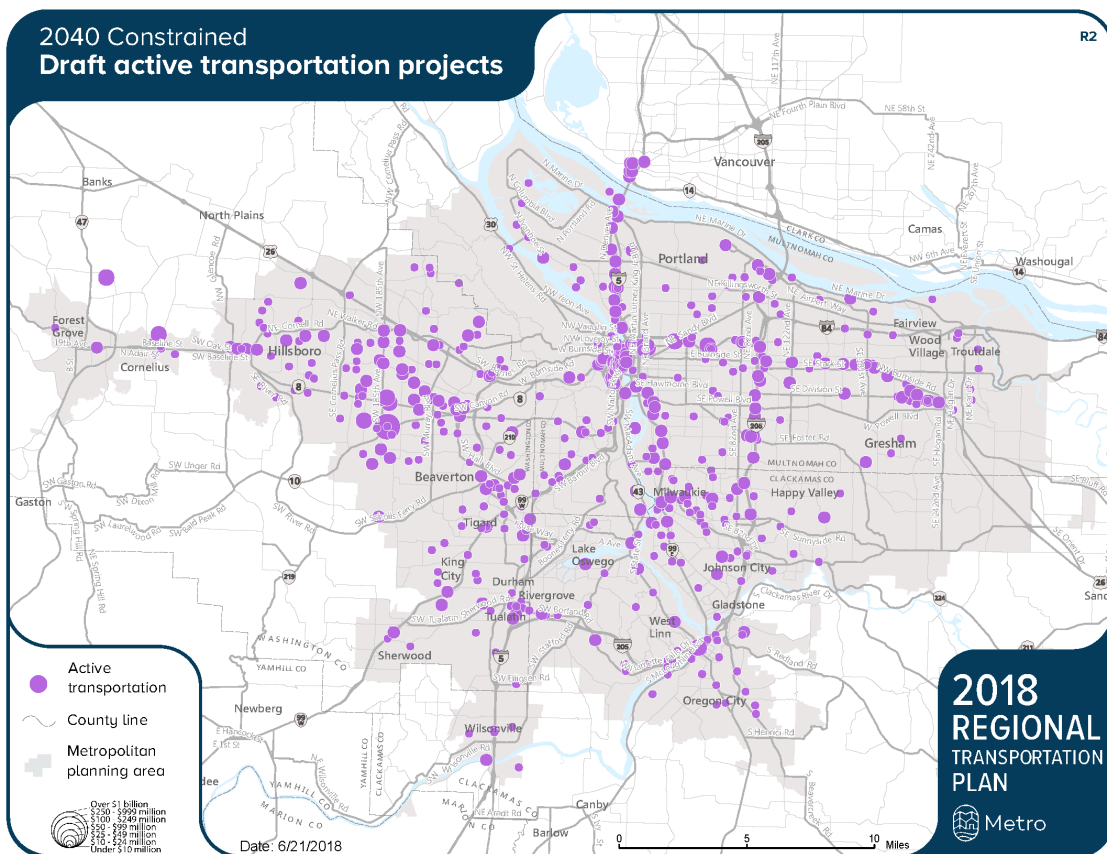
**Table 6.17 Summary of Active Transportation Projects in Constrained RTP**

Active transportation projects	Climate Smart Strategy 2010-2035	 2018–2027	 2018–2040
Number of active transportation projects	<i>Not evaluated</i>	154	325
Number of active transportation projects with a safety benefit	<i>Not evaluated</i>	148	317
Number of active transportation projects on a high injury corridor	<i>Not evaluated</i>	106	202
Sidewalk, bikeway and trail projects	663 miles added	183 miles added	412 miles added
Examples of active transportation projects	<i>Not evaluated</i>	Aloha-Reedville pedestrian Improvements, Council Creek Regional Trail, Division-Midway Connected Centers project, Westside	Lake Oswego to Portland Trail, Reedway Bike/ped overcrossing, Washington County pedestrian arterial crossings, East-Buttes Loop Trail



Active transportation projects	Climate Smart Strategy 2010-2035	 2018–2027	 2018–2040
		Trail Hwy 26 bridge crossing, Milwaukie Monroe Street Neighborhood Greenway	
Active transportation projects with safety benefit	<i>Not evaluated</i>	148	409
Estimated capital cost (\$2016)	\$2.2 billion	\$770 million	\$1.8 billion

**Figure 6.18 Constrained RTP Active Transportation Projects Map**



### 6.3.8 Transportation system management and operations projects to manage the system

Using technology to actively manage the greater Portland region's transportation system means using intelligent transportation systems and services to reduce vehicle idling associated with delay and help improve the speed and reliability of transit. Nearly half of all congestion is caused by incidents and other factors that can be addressed using these strategies.

Local, regional and state agencies work together to implement transportation system technologies. Agreements between agencies guide sharing of data and technology, operating procedures for managing traffic, and the ongoing maintenance and enhancement of technology, data collection and monitoring systems.

**Arterial corridor management** Advanced technology at each intersection actively manages traffic flow. This may include coordinated or adaptive signal timing; advanced signal operations such as cameras, flashing yellow arrows, bike signals and pedestrian count down signs; and communication to a local traffic operations center and the centralized traffic signal system.



**Freeway corridor management** Advanced technology manages access to the freeways, detects traffic levels and weather conditions, provides information with message signs and variable speed limit signs, and deploys incident response patrols that quickly clear breakdowns, crashes and debris. These tools connect to a regional traffic operations center.



**Traveler information** Variable message and speed limit signs and 511 internet and phone services provide travelers with up-to-date information regarding traffic and weather conditions, incidents, travel times, alternate routes, construction and special events.

Many RTP projects are focused entirely around implementing new technology or maximizing existing technology to improve network connectivity. Transportation system management and operations (TSMO) represent 5 percent of the 2040 Constrained list of projects.

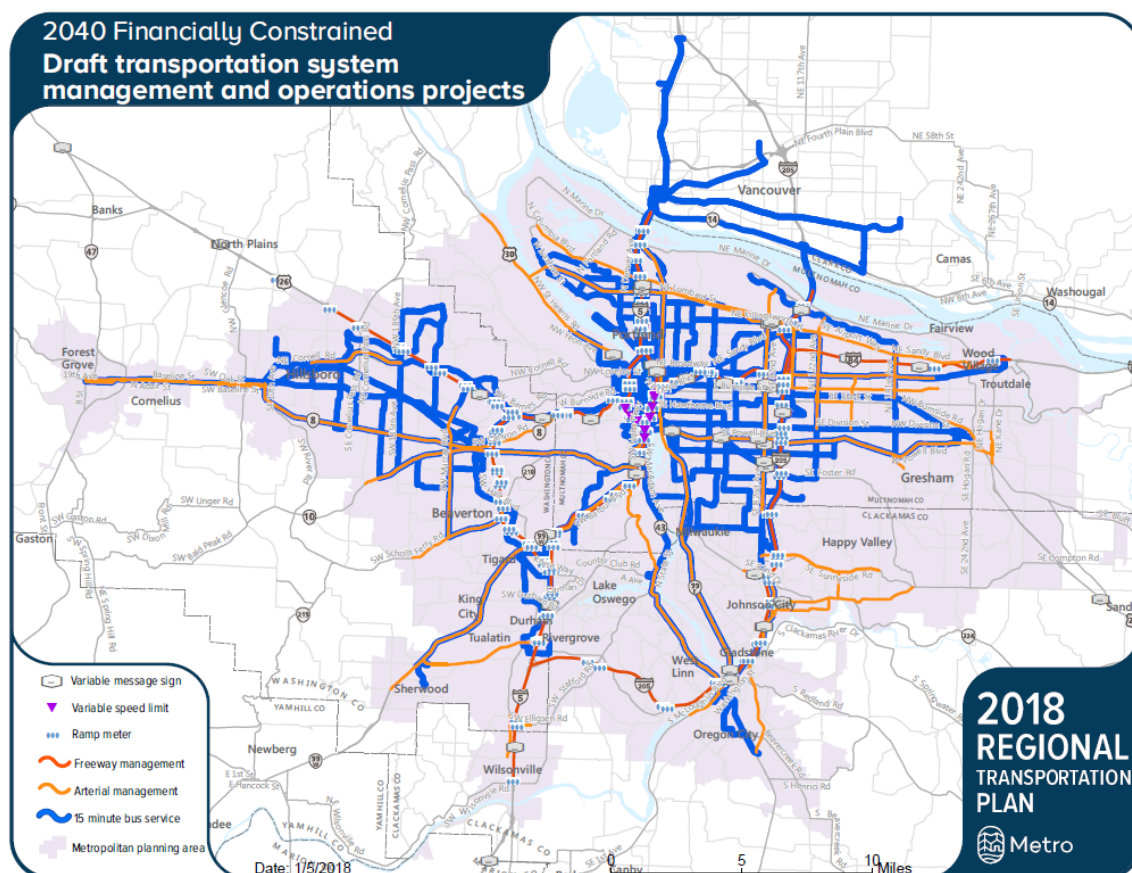


**Table 6.19 Summary of Transportation System Management and Operations Projects in Constrained RTP**

<b>Transportation system management and operations projects</b>	<b>Climate Smart Strategy 2010-2035</b>	 2018–2027	 2018–2040
Provide for real-time and forecasted traveler information	<i>Not evaluated</i>	Information on current travel conditions and alerts are available to the public and third party developers	Current Conditions data is used by operators to forecast changing travel conditions
Multimodal integrated corridor management	Agencies integrate operations strategies in some of the region's major travel corridors	Agencies integrate operations strategies in a few of the region's major travel corridors	Agencies integrate operations strategies in some of the region's major travel corridors
Advanced traffic signal operations	All traffic signals are interconnected in a centralized system	Traffic signals are interconnected in some industrial areas and major travel corridors	Traffic signals are interconnected in some industrial areas and major travel corridors
Transit signal priority	All bus routes with 10-minute service	Some frequent bus routes	Most frequent bus routes
Freeway ramp meters	All urban interchanges	All urban interchanges	All urban interchanges
Freeway variable speed signs	All high incident locations	Some high incident locations	Most freeways
Incident response vehicles	Incident response vehicles monitor all area freeways and major arterials adjacent to	Incident response vehicles monitor some high incident locations	Incident response vehicles monitor all area freeways and major arterials adjacent to freeways

Transportation system management and operations projects	Climate Smart Strategy 2010-2035	 2018–2027	 2018–2040
	freeways		
Estimated capital cost (\$2016)	\$219 million	\$71 million	\$189 million

**Figure 6.20 Constrained RTP Transportation System Management Projects Map**



### 6.3.9 Transportation demand management projects to expand the use of travel options

Public awareness, education and travel options support tools are cost-effective ways to improve the efficiency of the existing transportation system through increased use of travel options such as walking, biking, carsharing, carpooling and taking transit. Local, regional and state agencies work together with businesses and non-profit organizations to implement programs in coordination with other capital investments. Metro coordinates partners' efforts, sets strategic direction, evaluates outcomes and manages grant funding.

**Public awareness strategies** Events and other outreach strategies provide information about and encourage the public's use of travel options.



**Commuter programs** Employer-based commuter outreach efforts include: financial incentives, such as transit pass programs and offering cash instead of parking subsidies; facilities and services, such as carpooling programs, bicycle parking, emergency rides home and work-place competitions; and flexible scheduling such as working from home or compressed work weeks.



**Individualized marketing** Focused outreach encourages individuals, families or employees interested in making changes in their travel choices to participate in a program. A combination of information and incentives is tailored to each person's or family's specific travel needs. This outreach can be part of a comprehensive commuter program.



**Travel options support tools** Reduce barriers to travel options and support continued use with tools, such as online rideshare matching, trip planning tools, wayfinding signage, bike racks and carsharing.

Transportation demand management (TDM) projects comprise 2 percent of the 2040 Constrained list of projects.

**Table 6.10 Summary of Transportation Demand Management Projects in Constrained RTP**

Transportation demand management projects	Climate Smart Strategy 2010-2035	 2018–2027	 2018–2040
Local program implementation	n/a	All cities with >30k population lead travel options efforts, covering about 80% of regional population	All cities with >20k population lead travel options efforts, covering about 90% of regional population
Individualized marketing participation	60% of households plus the addition of Safe Routes to school and equity-based campaigns	Current program reaches about 3% of households	TBD% of employees reached
Commuter program	40% of employees	TBD% of employees reached (same as	TBD% of employees

Transportation demand management projects	Climate Smart Strategy 2010-2035	 2018–2027	 2018–2040
participation	reached  Oregon Employee Commute Options rule include work sites with more than 100 employees to have workplace programs	2015)  Oregon Employee Commute Options rules require work sites with more than 100 employees to have workplace programs	reached
Public awareness marketing campaign	60% of public reached  Existing ongoing and short-term campaigns lead to more awareness of <i>DriveLess. Connect.</i> Plus added resources promote new travel tools, safety education and regionally specific campaigns dedicated to safety and underserved communities	TBD% of public reached  Existing ongoing and short-term campaigns increase awareness of <i>DriveLess. Connect.</i>	TBD% of public reached  Additional resources promote new travel tools, regional efforts and safety education
Provisions of travel options support tools	2010 program funding levels allow for completion of several new wayfinding signage and bike rack projects plus public-	2015 program funding levels allow for completion of several new wayfinding signage and bike rack projects	Additional resources allow for public-private partnerships to create new online, print and on-street travel tools

Transportation demand management projects	Climate Smart Strategy 2010-2035	 2018–2027	 2018–2040
	private partnerships to create new online, print and on-street travel tools, and other support tools		
Estimated capital cost (\$2016)	\$197 million	\$51 million	\$127 million

### 6.3.10 Other projects and programs to leverage capital investments

The 2040 Constrained investment strategy includes \$105 million in investments to support Transit Oriented Development (\$67 million), regional planning activities and corridor investment area refinement and planning activities (\$38 million).

### 6.3.11 Transportation equity projects

The RTP reflects a regional commitment to plan and invest in the region's transportation system to reduce transportation-related disparities and barriers faced by communities of color and other historically marginalized communities, regardless of race, language proficiency, income, age or ability, while maintaining affordability and preventing displacement is necessary.

Out of the 814 projects in the 2040 Constrained investment strategy, 588 capital projects are within an Equity Focus Area. The 2040 Constrained investment strategy shows the combined investment of transit capital projects and active transportation projects in equity focus areas reaches over \$3.9 billion in 2027 and \$6.5 billion by 2040. These comprise around 44 percent of the RTP's investment by 2040. Refer to Chapter 7 and to Appendix E for information on how the investment strategies of the RTP impact historically marginalized communities in the greater Portland region.

#### *Defining terms*

##### **Equity Focus Area**

Census tracts with higher than regional average concentrations and double the density of one or more of the following: people of color, English language learners, and/or people with lower income. Most of these areas also include higher than regional average concentrations of other historically marginalized communities, including young people, older adults and people living with disabilities.

### 6.3.12 Safety projects and safety benefit projects

Eliminating traffic related deaths and life-changing injuries and increasing transportation safety is a priority of the RTP. To address safety and reduce serious crashes, the RTP project list identifies projects that provide an overall safety benefit, as well as projects that have the primary purpose of reducing fatal and severe injury crashes, or minor/non-injury crashes at a documented high injury or high risk location.

Safety projects and safety benefit projects are targeted towards the Regional High Injury Corridors and Intersections and in race and income marginalized communities (equity focus areas).

Of the 814 projects on the 2040 Constrained list:

- **Safety Projects:** 132 projects, or 16 percent of all 2040 Constrained projects, identify reducing fatal and severe injury crashes or reducing minor/non-injury crashes as the primary purpose of the project. Eighty-one percent of these primary purpose projects are located on a high injury corridor, and seventy-five percent are in an equity focus area. (See Projects with Primary Purpose of Reducing Crashes map below.)
- **Safety Benefit Projects:** 546 projects, or 67 percent of all 2040 Constrained projects, have been identified to provide a safety benefit. Forty-six percent of the Safety Benefit projects are on a high injury corridor, and 75percent are located in an equity focus area. (See Projects with a Safety Benefit map below.)
- **All projects on High Injury Corridors:** 507 projects or 62 percent of all projects intersect with a regional high injury corridor. Of these projects, 152 are not identified as Safety Benefit projects because some are roadway extensions, some are transit projects, some are ITS projects, etc. These projects provide other benefits that are critical to the transportation system.
- **Programs that impact safety:** In addition to capital projects, the Safe Routes to School, Transit Oriented Development and Transportation System Management and Operations programs provide safety benefits.

#### *Defining terms*



##### **Safety project**

A project which has the primary purpose reducing fatal and severe injury crashes or reducing minor/non-injury crashes by addressing a documented safety problem at a documented high injury or high risk location with one or more proven safety counter measures.

##### **Safety benefit project**

A project that includes design features that increase safety for one or more roadway user, but may not necessarily address an identified safety issue at an identified high injury or high risk location.

**Table 6.11 Summary of Safety Projects in Constrained RTP**

	Climate Smart Strategy 2010-2035	 2018-2027	 2018-2040
<b>Safety projects</b>			
Number of <b>safety projects</b> with the primary purpose of reducing crashes	n/a	82	132
Number of <b>safety projects</b> on a High Injury Corridor	n/a	72	107
Number of <b>safety projects</b> in Equity Focus Areas	n/a	68	99
Estimated investment in <b>safety projects</b> (\$2016) <i>includes I-5 Rose Quarter Improvement project in first ten years for \$390 million</i>	n/a	\$650 million	\$ 1 billion
<b>Safety benefit projects</b>			
Number of <b>safety benefit</b> projects	n/a	272	546
Number of <b>safety benefit projects</b> on a High Injury Corridor	n/a	196	256
Number of <b>safety benefit projects</b> in Equity Focus Areas	n/a	219	409
Estimated investment in <b>safety benefit projects</b> (\$2016) <i>includes I-5 Rose Quarter project in first ten years, and I-5 Columbia River and OR 212/224 in 2028-2040 for a total of \$3.6 billion</i>	n/a	\$2.1 billion	\$7.6 billion

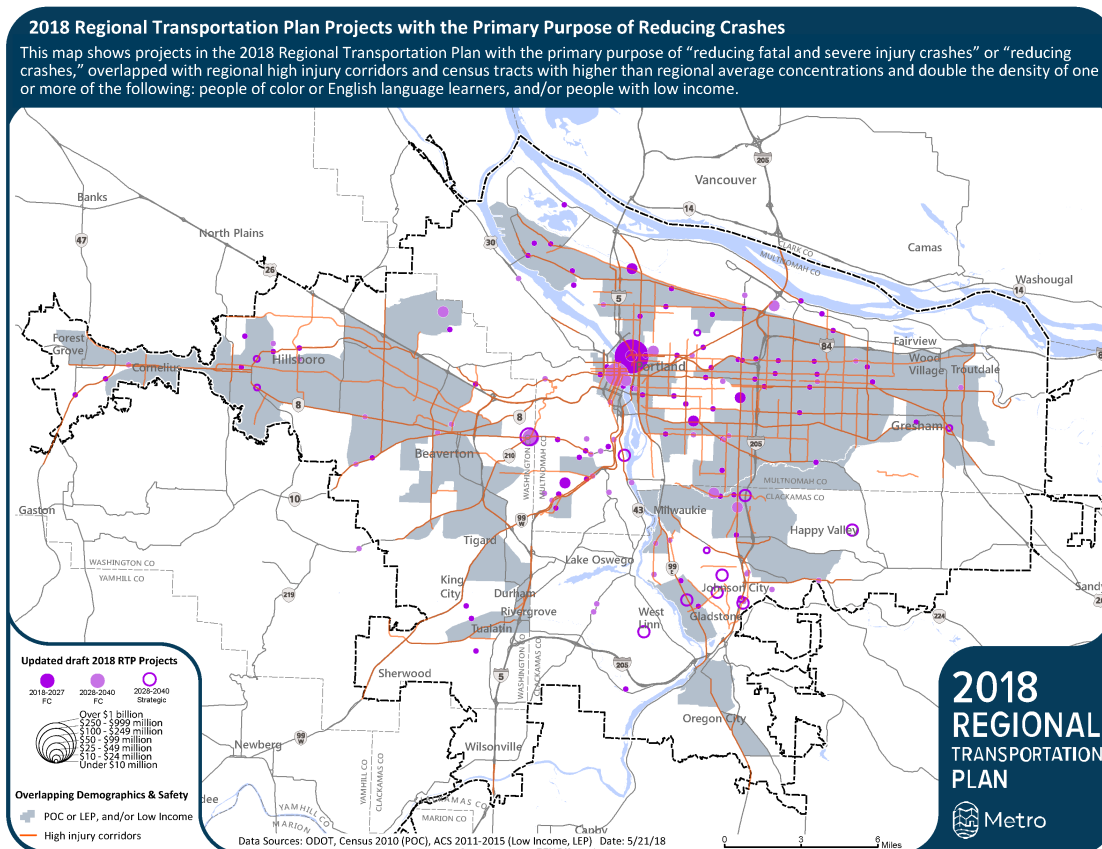
*Note: for this analysis any project that crossed boundaries between subareas is counted in all subareas. Investment levels are also counted multiple times.*

The following maps show the location of safety projects and safety benefit projects.



**Figure 6. 21** 2018 Regional Transportation Plan Projects with the Primary Purpose of Reducing Crashes shows the location of projects that identified the primary project purpose as either “reduces fatal and severe injury crashes” or “reduces crashes,” overlapped with regional high injury corridors and census tracts with higher than regional average concentrations and double the density of one or more of the following: people of color or English language learners, and/or people with low income.

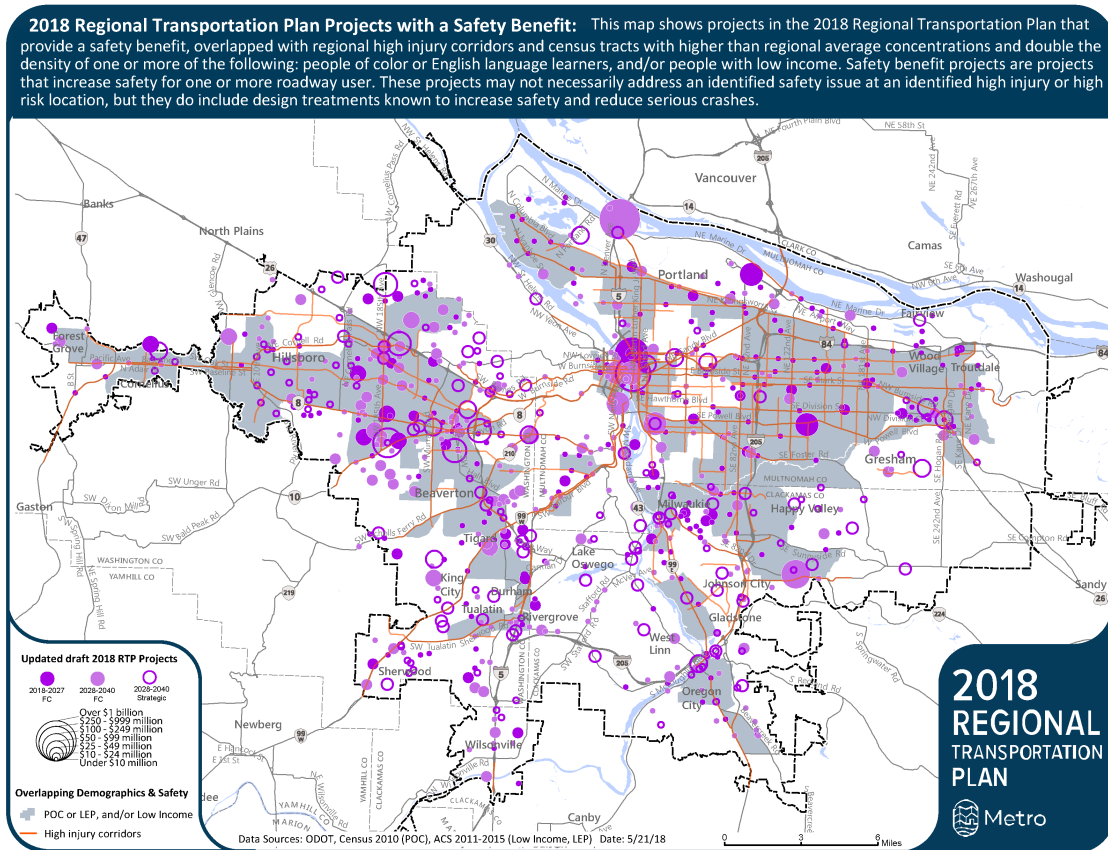
**Figure 6.21 2040 Constrained with the primary purpose of reducing crashes**



**Figure 6.22** 2018 Regional Transportation Plan Projects with a Safety Benefit” shows the general location of projects in the 2018 Regional Transportation Plan that provide a safety benefit, overlapped with regional high injury corridors and census tracts with higher than regional average concentrations and double the density of one or more of the following: people of color or English language learners, and/or people with low income.



**Figure 6.22 2040 Constrained safety benefit projects**



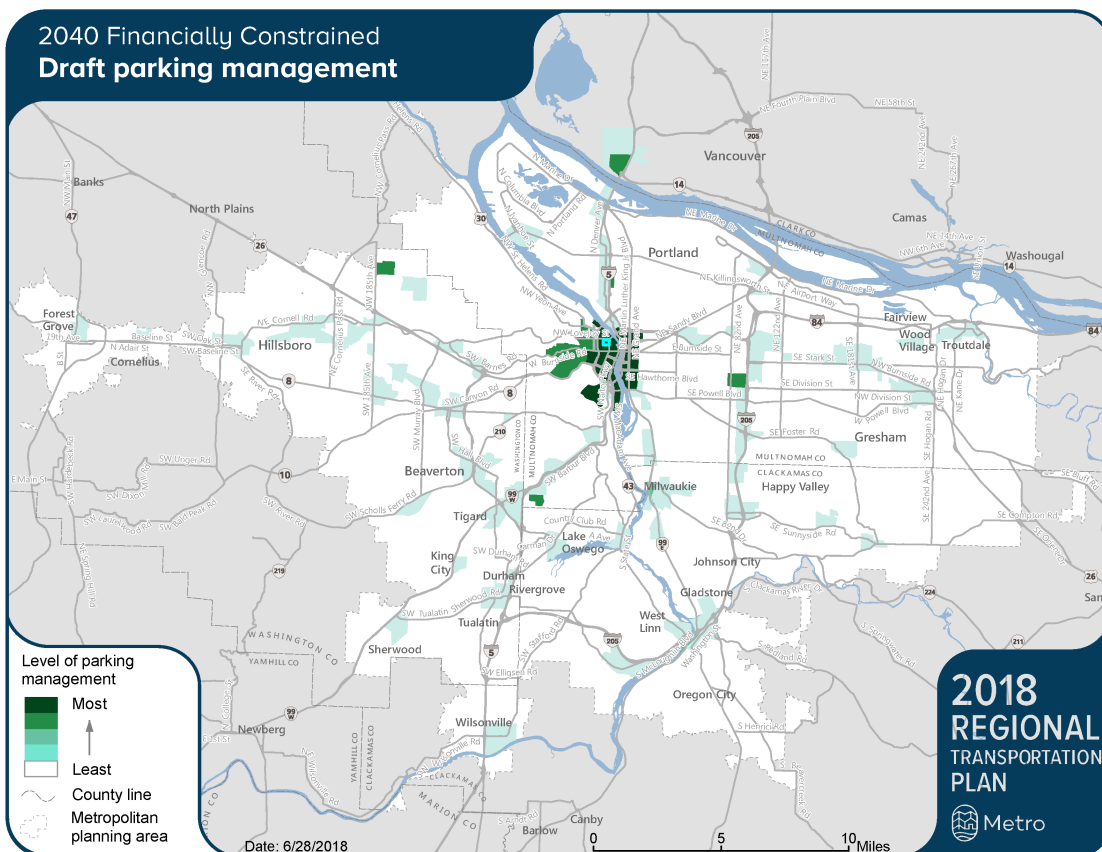
### 6.3.13 Parking management

**Table 6.12 Summary of Parking Management in Constrained RTP**



Parking management	Climate Smart Strategy 2010-2035	C10 2018-2027	C 2040 2018-2040
Local parking management	Communities expand the flexibility of development codes and develop parking plans for all downtowns and centers served by high capacity transit  Parking facilities are sized and managed so spaces are	Existing locally-adopted development codes remain the same as 2015  Free parking is available in most areas	Communities expand the flexibility of development codes and develop parking plans for all downtowns and centers served by high capacity transit  Parking facilities are sized and managed so spaces are frequently occupied, travelers

	frequently occupied, travelers have information on parking and travel options, and some businesses share parking. Free and timed parking is available in many areas.		have information on parking and travel options, and some businesses share parking  Free and timed parking is available in many areas
Share of trips to areas with actively managed parking	30% work trips 30% other auto trips	33% work trips 24% other auto trips	32% work trips 23% other auto trips

**Figure 6.23 2040 Constrained Parking Management**





### 6.3.14 Transit operations and maintenance

Transit operations and maintenance	Climate Smart Strategy 2010-2035	 C <sup>10</sup> 2018–2027	 C 2040 2018–2040
Examples of operating services	<i>Not evaluated</i>	SMART Service to Clackamas Town Center and Oregon City	New bus service Columbia to Clackamas
Examples of maintenance projects	<i>Not evaluated</i>	Preventative maintenance for fleet and vehicles, bus replacements, etc. to keep system in good repair	Preventative maintenance for fleet and vehicles, bus replacements, etc. to keep system in good repair
Estimated service operating costs (\$2016)*	\$8.5 billion	\$5.7 billion	\$13.7 billion

\*Operations and maintenance costs are preliminary and will be further updated as the plan is finalized. Operating costs for TriMet service were calculated by annualizing the daily revenue hours proposed for each scenario and applying TriMet's average operating cost per revenue hour, with cost by mode weighted by the proportion of service provided on each mode. SMART and Portland Streetcar operating costs were calculated by applying each agency's FY17 annual operating costs.







### 6.3.15 Throughway, roads and bridges operations and maintenance

Throughway, roads and bridges maintenance	Climate Smart Strategy 2010-2035	 C <sup>10</sup> 2018–2027	 C 2040 2018–2040
Level of maintenance	Adequately meet maintenance and preservation needs	Some maintenance backlogs grow	Adequately meet maintenance and preservation needs
Types of maintenance projects	n/a	Bridge and road pavement resurfacing, preventative maintenance, preservation and rehabilitation	Bridge and road pavement resurfacing, preventative maintenance, preservation and rehabilitation
Estimated maintenance cost (\$2016)	\$12.8 billion	\$6 billion	\$13 billion

## 6.4 THE 2040 STRATEGIC PROJECT LIST

The strategic list of projects reflects additional policy-driven needs and project priorities that exceed our projected funding that could be addressed with additional resources.

**Table 6.13 Estimated costs for investment strategies, including 2040 Strategic**

<b>RTP Capital Projects Costs</b>	<b>Climate Smart Strategy 2010-2035</b>	 <b>2018–2027</b>	 <b>2018–2040</b>	 <b>2018–2040</b>
<b>Transit capital</b>	\$4.7 billion	\$3.2 billion	\$5.1 billion	\$6.2 billion
<b>Throughways capital</b>	\$4.1 billion	\$1.1 billion	\$4.6 billion	\$6.1 billion
<b>Roads and bridges capital</b>	\$5.2 billion	\$1.5 billion	\$3.3 billion	\$5.6 billion
<b>Freight access</b>	<i>Not evaluated</i>	\$156 million	\$248 million	\$448 million
<b>Active transportation</b>	\$2.1 billion	\$770 million	\$1.8 billion	\$3 billion
<b>Technology – system management</b>	\$219 million	\$71 million	\$189 million	\$308 million
<b>Information – travel options</b>	\$197 million	\$51 million	\$127 million	\$216 million
<b>RTP Operations and Maintenance Costs</b>	<b>Climate Smart Strategy 2010-2035</b>	 <b>2018–2027</b>	 <b>2018–2040</b>	 <b>2018–2040</b>
<b>Transit operations and maintenance</b>	\$8.5 billion	\$5.7 billion	\$13.7 billion	\$16.7 billion
<b>Roads and throughways operations and maintenance</b>	\$12.8 billion	\$6 billion	\$13 billion	\$13 billion
<b>Total estimated cost (2016\$)</b>	<b>\$38 billion</b>	<b>\$19 billion</b>	<b>\$42 billion</b>	<b>\$52 billion</b>