

2023 Regional Transportation Plan



2023 Regional Transportation Plan

Chapter 6

Regional programs and projects to achieve our vision

November 30, 2023

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6.1 INTRODUCTION

The programs and projects described in this chapter support the RTP vision and goals for transportation in the region and will help achieve the six desired outcomes endorsed by the Metro Policy Advisory Committee (MPAC) and approved by the Metro Council in 2008:

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

Projects and programs come from adopted local, regional or state planning efforts that provided opportunities for public input. The vision and goals identified in Chapter 2 served as the foundation for updating and evaluating the plan’s project priorities.



Everyone in the greater Portland region will have safe, reliable, affordable, efficient, and climate-friendly travel options that allow people to choose to drive less and support equitable, resilient, healthy and economically vibrant communities and region.

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 directed and thoughtful, long-term investment. Within the current revenue forecast in Chapter 5, the region does not have the resources to invest at the levels needed to address all the challenges the region faces. Prioritizing where and how to invest limited transportation funding is a key part of developing and implementing this plan.

Prioritization starts with understanding the challenges we need to address. Regional trends and challenges were identified through the RTP update engagement process. The RTP investment strategy was developed to address these challenges and achieve the investment priorities discussed in the next section. See Chapter 4 for more information on each of the challenges listed below.

- Aging infrastructure
- Congestion and reliability
- Climate change and air quality
- 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 update of the RTP. The projects were submitted by jurisdictional partners, transportation agencies and a federally-recognized tribe to address the identified transportation needs and communities priorities, with a focus on adequately maintaining the existing transportation system, implementing the 2040 Growth Concept and advancing the RTP goals, particularly near-term regional priorities for improving safety, advancing equity, and reducing climate pollution.

6.3 RTP Constrained List of Projects and Programs: This section describes the RTP constrained project list. This list reflects the priority projects and programs identified by jurisdictions and transportation agencies that fit within the constrained budget of federal, state and local funds the greater Portland region can reasonably expect through 2045, as described in Chapter 5. These projects are referred to as the constrained list or constrained project list throughout this chapter. The projects are further prioritized in terms of timing - near-term priorities (2023-2030) and long-term priorities (2031-2045).

6.4 RTP Strategic List of Projects and Programs: This section identifies the cost of the Strategic list of capital projects and programs. The Strategic projects are additional projects the region would pursue in the 2031-2045 time period to address the region’s transportation needs, but for which funding has not been identified. For analysis purposes, these projects are assumed to be completed in the long-term time period (2031-2045) if new funding become available. Costs for road and transit maintenance and operations investments needed to support the additional capital investments are not fully accounted for in the strategic project list costs.

6.2 WHAT ARE THE REGION'S INVESTMENT PRIORITIES?

The RTP is a key tool for implementing the 2040 Growth Concept and Climate Smart Strategy and helps advance the greater Portland region's shared climate, safety, equity, economy and mobility goals.

During the update of the RTP, regional investment priorities were identified to address the challenges listed in the previous section and fit within the financially constrained revenue forecast identified in Chapter 5. These regional transportation investment priorities are described below and guided the development and refinement of the 2023 RTP investment strategy. In particular, the projects and programs in the RTP investment strategy focused on advancing near-term regional priorities for improving safety, advancing equity, and reducing climate pollution.

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 in the RTP seek to address these regional trends and challenges in ways that help achieve the region's six desired outcomes, RTP goals and make progress on near-term regional priorities for improving safety, advancing equity, and reducing climate pollution.

6.2.1 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 likely be occurring:

- Portland central city, regional centers and town centers
- Station communities
- Main streets and corridors

Defining terms

Financially Constrained

When a transportation plan includes sufficient information to show that proposed investments can be implemented using reasonably available revenue sources.



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

- Industrial and employment areas
- Urban growth boundary expansion 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 3 for more information on the 2040 Growth Concept.

6.2.2 Maintaining the existing transportation system

The RTP is an important tool to help maintain a state of good repair for the existing transportation system. The RTP recognizes the importance of system maintenance before building new infrastructure. Maintenance of the transportation system is the largest transportation cost and continues to grow. Maintaining and updating aging infrastructure, retrofitting to address earthquake vulnerability and be resilient to other hazards and extreme weather events, and providing for security and routes for efficient emergency services are growing concerns across the region.



6.2.3 Enhancing mobility options

The RTP is a key tool for enhancing the mobility options for all users across the region. Strategic investments ensure that people and businesses can reach the jobs, goods, services and opportunities they need by well-connected, low-carbon travel options that are safe, affordable, convenient, reliable, efficient, accessible, and welcoming.

6.2.4 Building a safe system

The RTP aims to support the Regional Transportation Safety Strategy and achieve the region’s Vision Zero target to eliminate traffic deaths and life changing injuries by 2035. The RTP prioritizes transportation investments that will move the region as quickly as possible towards Vision Zero, especially in communities of color and other marginalized communities that experience disparate impacts from traffic crashes.

6.2.5 Ensuring an equitable transportation system

The RTP prioritizes transportation investments that will move the region as quickly as possible towards Vision Zero, and enhance the amount of reliable, safe, and affordable transportation options for the communities who need it most. Data continues to show

that our current transportation unequally distributes disparities on Black, Indigenous and people of color and people with low incomes.

6.2.6 Supporting a thriving economy

The RTP aims to ensure that people who live and work in the region have safe, reliable, and affordable transportation options to meet their daily needs. The RTP also aims to ensure that the region's centers, ports, industrial areas, and employment areas are accessible through a variety of modes so that communities and businesses can thrive and prosper economically.

6.2.7 Investing in climate action and system resilience

The RTP is a key tool for implementing the region's adopted Climate Smart Strategy and achieving the region's state-mandated greenhouse gas emissions reduction targets for cars and small trucks and related per capita vehicle miles traveled. The RTP aims to make investments that ensure that people, communities and ecosystems are protected, healthier and more resilient and carbon emissions and other pollution are substantially reduced as more people travel by transit, walking and bicycling and people travel shorter distances to get where they need to go. The RTP prioritizes transportation investments that help reduce greenhouse gas emissions from cars and small trucks while making our transportation system safe, reliable, healthy and affordable.

Figure 6.1: 2023 RTP Projects and Programs



6.3 RTP PROJECTS AND PROGRAMS

Since the last update of the RTP in 2018, of the 1,123 projects listed in the RTP, 170 have been built or will be completed by 2024 – a total of nearly \$3 billion invested in the regional transportation system. These projects are shown in Figure 6.2.

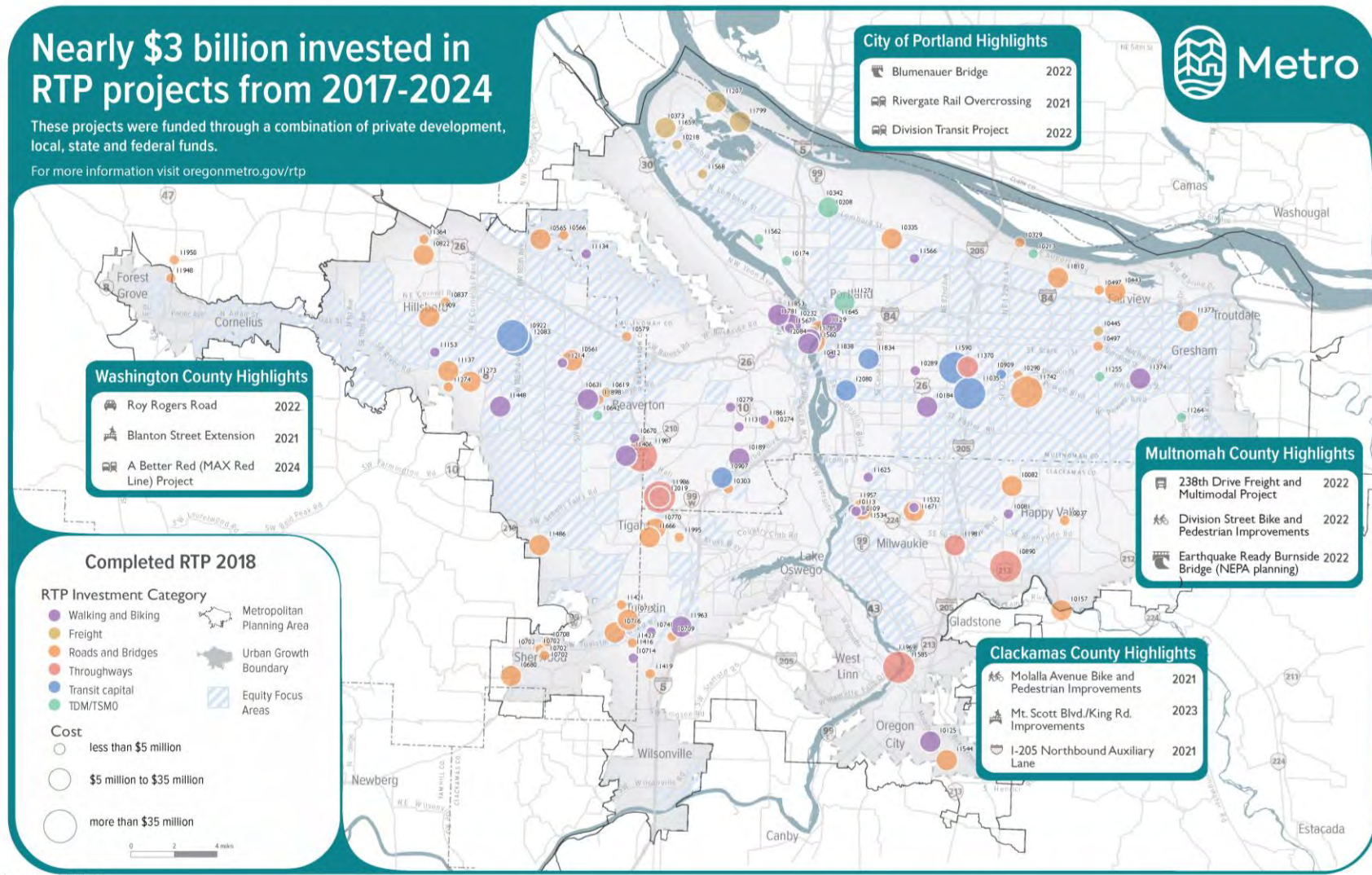
The projects, described in this chapter, and provided in Appendices A and B, are priority projects from local, regional or state planning efforts that provided opportunities for public input. The Financially Constrained projects fit within the plan’s budget (described in Chapter 5) and are prioritized into a near-term (2023-2030) and a long-term (2031-2045) investment time frame. These projects are eligible for federal and some state funding. The Strategic projects described at the end of the chapter are additional projects to pursue in the 2031-2045 time period if additional funding becomes available.

6.3.1 Developing the project lists

The update to the plan brings together the input of thousands of people who live, work and travel across the greater Portland region. Members of the public from across the region shared their transportation needs and priorities through a series of online surveys, forums, and events hosted by community-based organizations and Metro. Engagement activities centered historically underrepresented communities, including people of color, youth, and people who do not speak English or speak limited English. This input shaped the updated vision, goals and policies identified in Chapter 2 and Chapter 3 to serve as the foundation for updating and evaluating the plan’s project priorities. The needs and priorities are described in Chapter 4 and were also informed by community and partner input received during the update.

Metro staff also worked in cooperation with staff from cities, counties and transportation agencies to develop a forecast of revenues raised at the federal, state, regional and local levels for transportation projects and programs to be included or accounted for in the 2023 RTP. Described in Chapter 5, the revenue forecast provides an estimate of how much funding can be reasonably expected to be available during the life of the plan (for the period from FY 2024 to FY 2045) both for capital projects and for maintaining and operating the existing transportation system. Under federal and state requirements, the revenue forecast serves as a budget for the RTP financially constrained project list. This means the total cost of the RTP financially constrained project list must not exceed the revenues forecasted to be available through 2045.

Figure 6.2: RTP Projects Completed, 2017-2024



Call for Projects

The RTP brings city, county, regional and state priority transportation projects together to create a coordinated regional transportation priority list for the period from 2023 to 2045. It is a key step for these projects to qualify for potential state and federal funding. In January 2023, Metro issued a call for projects and coordinated with local, regional and state partners to begin updating the region’s transportation investment priorities into three separate project lists – the 2030 Project List, the 2045 Project List and the 2045 Strategic Project List, shown in Table 6.1. Together, the 2030 and 2045 project lists comprise the “financially constrained” projects, which refers to all the projects that can be built by 2045 within the constraints of expected funding availability.

Table 6.1: 2023 RTP Project Lists

Near-term 2030 Constrained List 2023-2030	The 2030 Constrained Project List identifies the highest priority projects and programs that fit within a constrained budget of federal, state and local funds the greater Portland region can reasonably expect to fund in the near-term (2023-2030).
Long-term 2045 Constrained List 2031-2045	The 2045 Constrained Project List includes projects and programs that fit within a constrained budget of federal, state and local funds the greater Portland region can reasonably expect to fund in the long-term (2031-2045).
Long-term 2045 Strategic List 2031-2045	The 2045 Strategic Project List includes additional priority investments (not constrained to the budget based on anticipated funding) that could be built with additional resources. These projects are not anticipated to be completed unless new, as of yet to be identified funding becomes available. For analysis purposes, these projects are assumed to be implemented in the 2031 to 2045 time period.

Partners were asked to consider the RTP policy framework in Chapters 2 and 3 and update their respective project lists to fit within the financially constrained revenue forecast in Chapter 5. All projects were required to have come from local, regional or state plans or studies adopted through a public process that provided opportunities for public input.

Clackamas, Multnomah and Washington counties and the 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 projects. The City of Portland recommended projects after reviewing priorities with its community advisory committees. Metro also consulted individually with the Confederated Tribes of Grand Ronde. The consultation process resulted in the Tribe nominating a complete streets project to the constrained project list.

Project list analysis and initial public review

These projects were submitted to Metro by jurisdictional partners in February 2023 for technical evaluation and public review in Spring 2023. Following the first round of technical analysis, Metro engaged the public, regional policymakers and agencies responsible for developing the project lists in review and discussion of technical evaluation described in Chapter 7 and requested public feedback on the draft list of projects.

Metro staff were intentional in developing and creating engagement strategies and tactics to reach and elevate the voices of communities that have been excluded and marginalized from transportation decisions and who have been disproportionately impacted and burdened by those decisions. In addition to engaging with local agency and jurisdictional partners, community partnerships were also built and nourished, aiming to strengthen public trust and be more inclusive of underrepresented communities, including communities of color, youth, older adults, people with disabilities, people with low incomes and people with limited English proficiency. As part of the process, Metro also partnered with seven community organizations, including:

- Centro Cultural
- Community Cycling Center
- OPAL
- Next Up
- Street Trust
- Unite Oregon
- Verde

Engagement included surveys that reached thousands of people across the region, community leaders' forums, business forums, tabling at community events in Clackamas, Multnomah and Washington Counties and in-language focus groups, among other activities. The people of the greater Portland region want safe, affordable and reliable transportation – no matter where they live, where they go each day or how they get there.

Common themes heard during the Spring 2023 engagement¹ and throughout the RTP update process included:

- Safety is the top concern.
- Climate action and resilience are important.
- Investing in transit service is a priority.
- Investment in safe and accessible places to walk and roll.
- Maintenance is a top community priority.
- Invest in communities.

Project list refinement

Considering analysis findings described in Chapter 7 and subsequent public and partner input, Metro staff identified opportunities for agencies to refine their respective draft list of projects to better meet safety, equity and climate goals in the near-term. Table 6.2 summarizes the opportunities identified by Metro staff to accelerate projects that improve safety, reduce climate emissions – particularly in equity focus areas and on the regional high injury corridors identified in Chapter 3.

Table 6.2: Opportunities for jurisdictional partners to further advance RTP goals in the near-term

1	Update descriptions to specify project features that will advance RTP goals, particularly the safety, climate and equity goals.
2	Re-prioritize or shift project timing to accelerate projects to the near-term list that: <ul style="list-style-type: none"> • invest in safety on and around transit • ensure all projects in high injury corridors address safety to reduce the likelihood and severity of crashes for all travelers • complete regional network gaps, particularly biking, walking and transit networks • fill gaps for biking and walking in high injury corridors or that provide connections to transit, schools, jobs and 2040 centers • invest in Equity Focus Areas
3	Accelerate transit service expansion. Increase transit service as much as possible, focusing new and enhanced transit service to connect transit to underserved communities to jobs and community places, in major travel corridors and in areas with more jobs and housing.
4	Specify locations of bundled safety and active transportation projects on urban arterials so they can be evaluated against regional goals. This includes projects that fill gaps for biking and walking in high injury corridors or that provide connections to transit, schools, jobs and 2040 centers.

¹Summary reports of all engagement activities are available at: <https://www.oregonmetro.gov/rtp>.

In Spring 2023, Metro staff presented these opportunities for consideration by cities, counties and transportation agencies. Several project list updates were submitted in May 2023 for inclusion in the public review draft plan. Additional refinements were identified by partners and regional advisory committees as part of finalizing the plan for adoption by JPACT and the Metro Council in Fall 2023 after further consideration of public feedback in Spring 2023 and during the final public comment period in Fall 2023.

See Appendix D for more information about the engagement and consultation process that informed development and refinement of the project lists adopted in the RTP. See Appendix Z for more information about the project list changes approved by JPACT and the Metro Council as part of the final RTP adoption.

6.3.2 RTP Constrained projects and programs

This section describes the RTP financially constrained list of projects and programs – the list of priority investments that the region can reasonably assume can be implemented with the revenues forecasted to be available during the plan period. Chapter 5 provides information about the revenue forecast for this RTP.

Figure 6.3 shows the general location of capital projects on the RTP constrained list of projects. The RTP Constrained project list can be found in Appendix A.

To access an interactive online map of the projects, visit www.oregonmetro.gov/rtp or click on the QR code in Figure 6.3 with a mobile device or pointer.

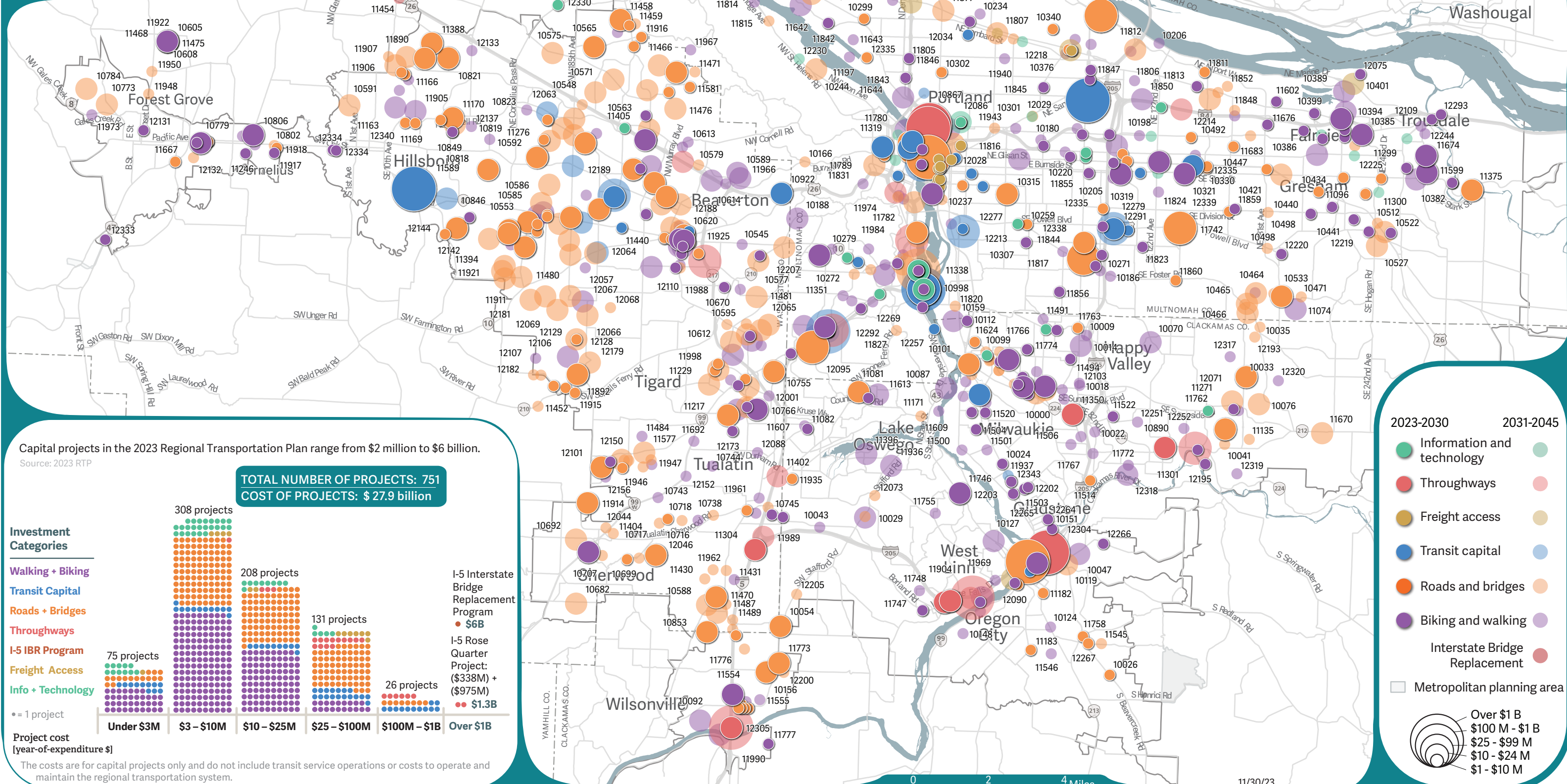
Figure 6.3: Map of RTP Financially Constrained Projects, 2023-2045

2023 Regional Transportation Plan

Financially constrained projects, 2023-2045

Recommended by transportation agencies, the financially constrained projects are the highest priority projects given limited transportation funding and qualify for regional, state and federal funding. This list of projects includes projects with dedicated funding and projects that can be implemented with the funds the region currently expects to have available through 2045.

These projects have been prioritized and classified into two investment time frames: 2023-2030 and 2031-2045 and are shown on this map with their unique RTP ID number. To access an interactive online map 'click' on the QR code with a mobile device or pointer.



Capital projects in the 2023 Regional Transportation Plan range from \$2 million to \$6 billion.
Source: 2023 RTP

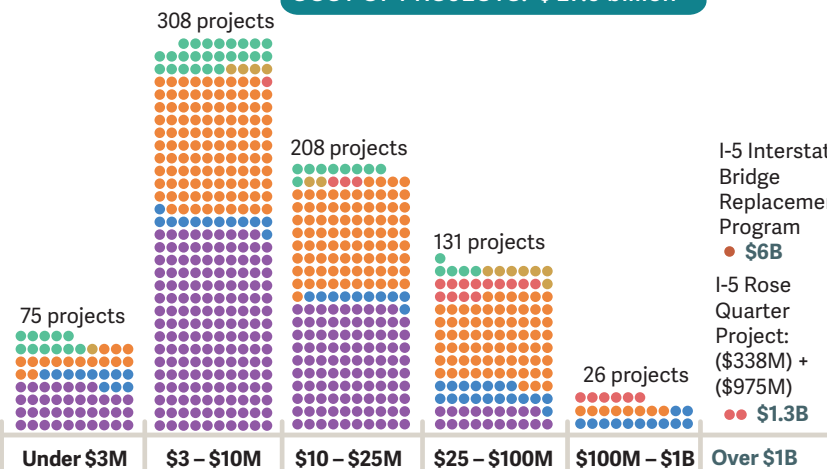
TOTAL NUMBER OF PROJECTS: 751
COST OF PROJECTS: \$ 27.9 billion

Investment Categories

- Walking + Biking
- Transit Capital
- Roads + Bridges
- Throughways
- I-5 IBR Program
- Freight Access
- Info + Technology

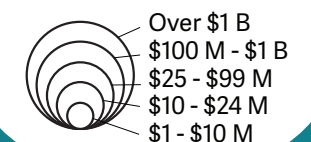
• = 1 project

Project cost [year-of-expenditure \$]



- I-5 Interstate Bridge Replacement Program • \$6B
- I-5 Rose Quarter Project: (\$338M) + (\$975M) • \$1.3B

- | 2023-2030 | 2031-2045 |
|--|--|
| ● Information and technology | ● Information and technology |
| ● Throughways | ● Throughways |
| ● Freight access | ● Freight access |
| ● Transit capital | ● Transit capital |
| ● Roads and bridges | ● Roads and bridges |
| ● Biking and walking | ● Biking and walking |
| ■ Interstate Bridge Replacement | ■ Interstate Bridge Replacement |
| Metropolitan planning area | Metropolitan planning area |



The costs are for capital projects only and do not include transit service operations or costs to operate and maintain the regional transportation system.

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Table 6.3 shows the breakdown of RTP projects in the constrained list by investment category and provides a quick reference for comparing the relative cost of the near-term and long-term financially constrained project lists. The total constrained list cost shown in Table 6.3 includes both the near-term and long-term RTP constrained list project costs.

Table 6.3: Estimated costs for Constrained RTP Project List

	RTP Constrained Project List Costs		
	Near Term 2023-2030	Long Term 2031-2045	Total 2023-2045
RTP Capital Projects and Programs (YOES)			
I-5 Interstate Bridge Replacement (IBR) Program	--	6.0 billion	6.0 billion
Transit capital	1.58 billion	3.07 billion	4.65 billion
Throughways capital (includes tolling)	2.58 billion	2.92 billion	5.50 billion
Roads and bridges capital	3.05 billion	4.37 billion	7.41 billion
Freight access	74 million	307 million	381 million
Walking and biking	1.05 billion	2.12 billion	3.18 billion
Information and technology	180 million	392million	571 million
Other Regional Activities	66 million	122 million	188 million
Total estimated RTP Capital Costs (YOES)	8.57 billion	19.30 billion	27.87 billion
RTP Operations and Maintenance (O&M) (YOES)			
Transit service and operations	5.32 billion	15.89 billion	21.21 billion
Transit maintenance	1.26 billion	3.70 billion	4.95 billion
Roads and throughways operations and maintenance	3.92 billion	11.37 billion	15.28 billion
Total estimated RTP O&M Costs (YOES)	10.50 billion	30.95 billion	41.45 billion
Total estimated RTP Costs (YOES)	19.07 billion	50.25 billion	69.3 billion

Source: 2023 RTP Constrained Project List (11/30/23). Costs are in year-of-expenditure dollars and total estimated costs have been rounded.

Why the constrained project list matters

To be eligible for federal or state transportation funding, a project must be included on the RTP Constrained project list. Projects in the plan must also be part of the planned regional transportation system defined in Chapter 3.

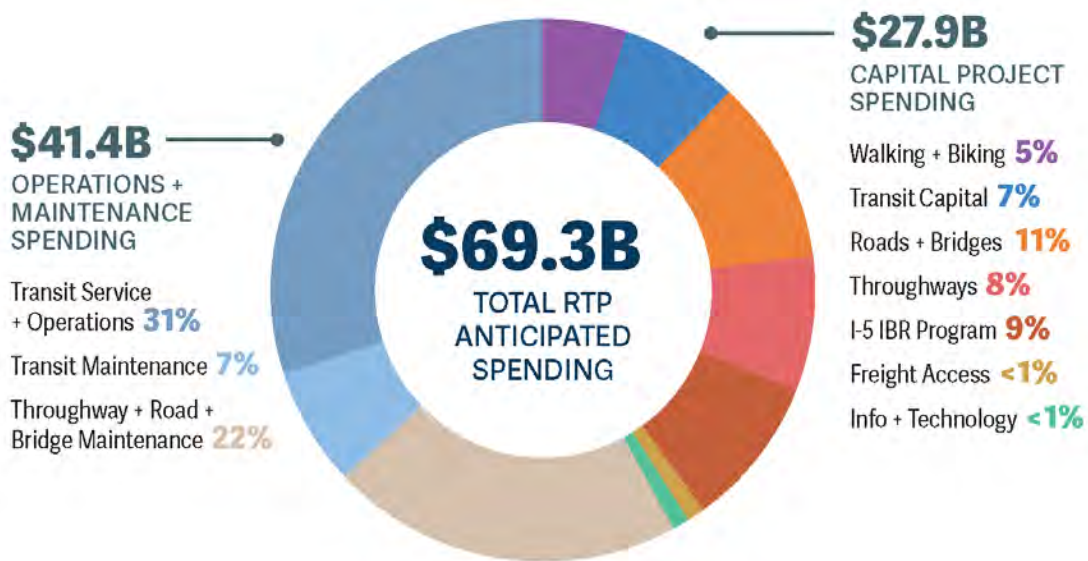
Federal and state regulations require long-range transportation plans, like the RTP, to be financially constrained. The RTP demonstrates fiscal constraint by including sufficient financial information to confirm that projects in the plan can be implemented using committed or available revenue sources, with reasonable assurance that the federally supported transportation system is being adequately operated and maintained.

The region’s operations and maintenance commitments are significant and consume most federal, state, and local revenues forecasted to be available to the greater Portland region

through 2045 – an estimated \$41.4 billion. The RTP Constrained list of capital projects represents another \$27.9 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 6.4 shows the total estimated cost of the RTP Constrained list of capital projects and estimated cost to adequately operate and maintain the transportation system by investment category for the plan period.

Figure 6.4: Total estimated investment by 2045 (YOE\$)



Source: 2023 RTP Financially Constrained Project List (November 30, 2023). Costs are in year-of-expenditure dollars and have been rounded.

Notes for Figure 6.4

1. Year of Expenditure \$ represent current year costs inflated to a projected cost for the year of expenditure.
2. Totals and percentages may not add up due to rounding.
3. Road and bridge projects include street reconstructions, new street connections and widening, and throughway overcrossings with designs that support walking and biking to provide mobility and access for all modes of travel.
4. Freight access projects improve access and mobility for national and international rail, air and marine freight to reach destinations within the region’s industrial areas and to the regional throughway system.
5. The I-5 Interstate Bridge Replacement (IBR) Program is reported separately due to the overall cost and mix of investments that would be constructed as part of the project. The project would replace I-5/Columbia River bridges, add auxiliary lanes and improve interchanges on I-5, extend light rail transit from Expo Center to Vancouver, WA, add walking and biking facilities and implement variable rate tolling.

Road and bridge projects often include “complete street” reconstructions, arterial street connectivity and widening, and highway overcrossings with designs that complete gaps in walking and biking connections to provide mobility and access for all modes of travel. A significant number of the projects include constructing curb ramps that meet the American with Disabilities Act (ADA) standards.

Some projects are also focused on improving access and mobility for national and international rail, air and marine freight to reach destinations within the region’s industrial areas and to the regional throughway system. These projects are categorized as freight access investments. Strategic throughway capacity was added to maintain statewide mobility and access to industrial areas and intermodal facilities.

Transit capital projects include high-capacity transit extensions and implementing regional, corridor or spot-specific projects to improve speed and reliability of bus and streetcar service. Walking and biking projects fill important gaps in sidewalks, bikeways and trails to make biking and walking safe, convenient and accessible for all ages and abilities. These projects often include constructing curb ramps and marked street crossings that meet ADA standards. Technology continues to play a critical role in transportation system improvements. More projects are focused entirely around implementing new technology or maximizing existing technology to improve system efficiency in the region’s major travel corridors.

The figures that follow show the breakdown of capital projects by cost and number for each investment category, for the region, for the City of Portland, for each of the three counties and cities within each county, transportation agencies and the Confederated Tribes of Grand Ronde. A series of maps that show the location of all RTP financially constrained capital projects is also provided for the City of Portland and each county.

Greater Portland region

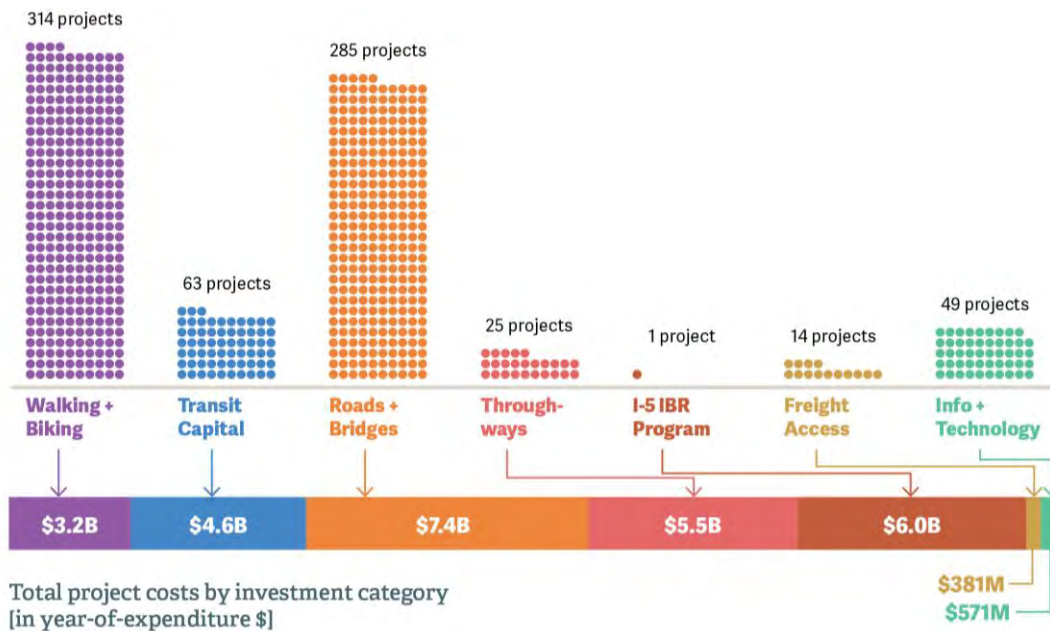
Figure 6.5 and Figure 6.6 show RTP investments broken down by investment category. Roads, bridges, and walking and biking connections comprise most projects in the Constrained RTP project list, though the cost of projects vary greatly.

Figure 6.5: Greater Portland region: Cost range of RTP constrained list projects by investment category, 2023-2045



Costs are in year of expenditure dollars and have been rounded. Road and transit operations and maintenance costs are not included in the information presented here.


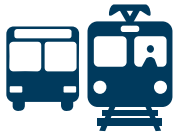
Figure 6.6: Greater Portland region: Cost and number of RTP constrained list projects by investment category, 2023-2045




Costs are in year of expenditure dollars and have been rounded to the nearest hundred million. Road and transit operations and maintenance costs are not included in the information presented here.

Table 6.4 identifies the major throughway and transit projects in the RTP with their corresponding unique RTP ID number in italics.

Table 6.4: Summary of major planned throughway and transit investments

	2030 Constrained	2045 Constrained (2030 Constrained, plus)	2045 Strategic (2045 Constrained, plus)
<p>Throughway</p> 	<ul style="list-style-type: none"> • I-5 IBR, pre-construction tolling (<i>10866</i>) • I-5/Rose Quarter Improvement Project (<i>10867, 11176</i>) • I-205/Abernethy Bridge (<i>11969, under construction</i>) • I-205 Toll Project (<i>12099, 12326</i>) • I-5 and I-205: Regional Mobility Pricing Project (<i>12304</i>) • OR 212/224 Sunrise Project Ph. 2 (PE, RW) (<i>10890</i>) • OR 224 WB widening (<i>11350</i>) • I-5 Boone Bridge and Seismic Improvement Project (PE, RW) (<i>12305</i>) 	<ul style="list-style-type: none"> • I-5/Interstate Bridge Replacement Program (<i>10866</i>) • I-205 widening and Tualatin River Bridge Toll Project (<i>11586, 11904</i>) • OR 212/224 Sunrise Project Ph. 2 (CON) (<i>11301</i>) • I-5 Boone Bridge and Seismic Improvement Project (CON) (<i>11990</i>) • I-5 NB braided ramps (<i>11989</i>) • I-5 NB auxiliary lane extension Ph. 2 (<i>11402</i>) • I-5 SB truck climbing lane (<i>11984</i>) • OR 217 SB braided ramps (<i>11988</i>) • US 26/185th Avenue on-ramp widening (<i>12148</i>) 	<ul style="list-style-type: none"> • Sunrise Project Ph. 3 (<i>12020</i>) • I-5 NB auxiliary lane extension Ph. 3 (<i>11583</i>) • I-5/OR 217 Interchange Ph. 2 (<i>11302</i>) • OR 217 capacity improvements (<i>11582</i>) • OR 217 NB auxiliary lane extension (<i>11976</i>) • US 26 widening (<i>11393</i>)
<p>High Capacity Transit</p> 	<ul style="list-style-type: none"> • MAX Red Line Improvements (<i>10922, under construction</i>) • Southwest Corridor (PD) (<i>12322, 12301</i>) • 82nd Avenue Transit Project (<i>12029</i>) • Tualatin Valley Highway Transit Project <i>11589</i>) • Montgomery Park Streetcar (<i>11319</i>) 	<ul style="list-style-type: none"> • I-5/Interstate Bridge Replacement Program (<i>10866</i>) • Southwest Corridor (PD, PE, RW) (<i>12292, 12300</i>) • Steel Bridge Transit Bottleneck (PD) and Interim Capital Improvements (<i>12050</i>) 	<ul style="list-style-type: none"> • Southwest Corridor (CON) (<i>11587</i>) • Steel Bridge Transit Bottleneck (CON) (<i>10921</i>) • Beaverton-Hillsdale Highway Corridor HCT (<i>12290</i>) • Burnside/Stark Corridor HCT (<i>12286</i>) • Lombard/Cesar Chavez Corridor HCT (<i>12288</i>) • Martin Luther King Jr. Corridor HCT (<i>12287</i>) • SW 185th Corridor HCT (<i>12289</i>) • Sunset Highway Corridor HCT (<i>11912</i>) • Forest Grove HCT (<i>10771</i>) • AmberGlen/N. Hillsboro Streetcar (<i>11278, 11573</i>) • Johns Landing Streetcar (<i>11639</i>)

	2030 Constrained	2045 Constrained (2030 Constrained, plus)	2045 Strategic (2045 Constrained, plus)
			<ul style="list-style-type: none"> WES expansion to Salem (11751)
<p>Better Bus</p> 	<ul style="list-style-type: none"> East Burnside/SE Stark Enhanced Transit Project (12030) Lombard/Cesar Chavez Enhanced Transit Project (12034) NE MLK Jr Blvd Enhanced Transit Project (12027) NE Sandy Blvd Enhanced Transit Project (12028) SE Belmont Enhanced Transit Project (12033) SE Hawthorne/Foster Ave Enhanced Transit Project (11834) Portland Central City Portals Enhanced Transit (11761) SE Powell Blvd Enhanced Transit Project (12035) SW Beaverton-Hillsdale Hwy Enhanced Transit Project (12032) 122nd Avenue Corridor Transit Improvements (11868) Additional transit supportive projects region-wide (including 10779 and 11440) 	<ul style="list-style-type: none"> Cornell/Barnes/ Line 48 Enhanced Transit Project (12063) 185th and Farmington/Line 52 Enhanced Transit Project (12064) Inner North Portland (Vancouver/Williams/ Mississippi/Albina) Enhanced Transit Project (11833) ETC/Rose Lanes Transit Improvement Fund (12232) Additional transit supportive projects region-wide (including 11441, 10805 and 10846) 	<ul style="list-style-type: none"> 99W Enhanced Transit Project (12176) Additional transit supportive projects region-wide

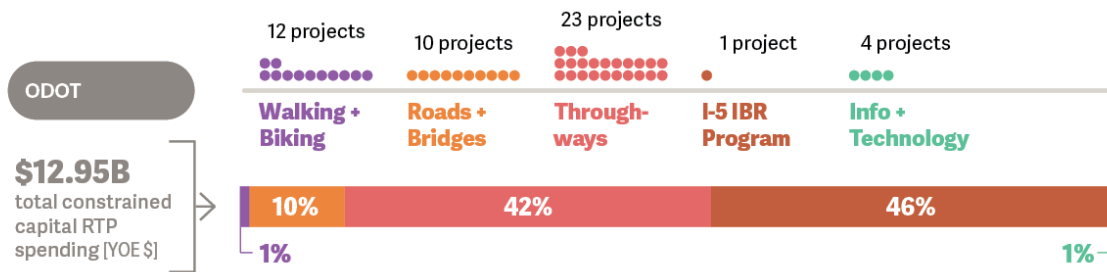
Note: Projects shown in *blue text* have completed NEPA work (or NEPA work is underway). RTP IDs are shown in italics. See Appendix W for a summary of current major project development activities in the region.

ODOT Capital Projects

Figure 6.7 shows the cost of RTP capital investments submitted by ODOT broken down by investment category. While ODOT's constrained list includes mostly roadway projects, these are often multi-modal in nature and incorporate active transportation features that are part of a complete multi-modal roadway system. In addition, over \$1.2 billion of ODOT's investments are in non-capacity safety and operations projects, many of which will provide active transportation improvements in priority locations: the 24-27 STIP includes \$165 million in ADA ramps and another \$24 million in active transportation specific projects within Region 1, plus additional active transportation investments on many other projects. Much of ODOT's \$12.61 billion constrained project list is comprised of the I-5 IBR Program, which includes an approximately \$2 billion investment in light rail

high-capacity transit element, express bus, and bike and pedestrian access improvements. See Section 6.3.14 for more information on region-wide road operations, maintenance and preservation cost. See Section 6.3.14 for more information on region-wide road operations, maintenance and preservation costs.

Figure 6.7: ODOT: Cost and number of RTP constrained list capital projects by investment category, 2023-2045

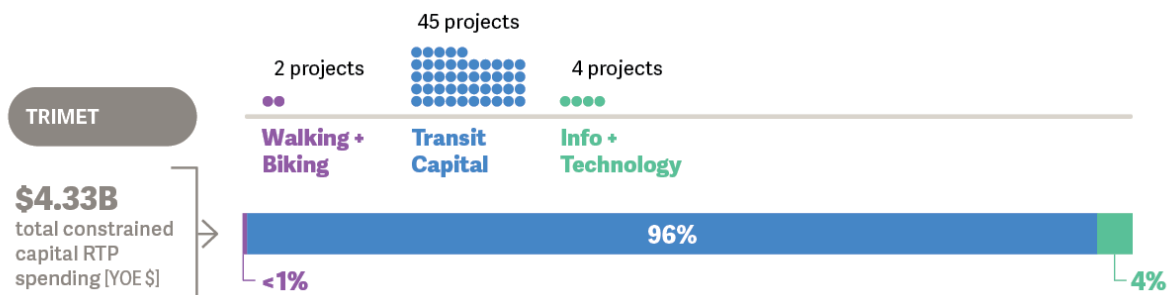


Source: 2023 RTP Financially Constrained Project List (November 30, 2023). Costs are in year-of-expenditure dollars and have been rounded. The information includes capital projects submitted by ODOT. Operations and maintenance costs are not included. Funding for the IBR program includes \$1 billion from the State of Oregon with the balance from multiple other sources. Approximately \$2 billion of the IBR program cost is allocated to transit, bicycle, and pedestrian improvement.

TriMet Capital Projects

Figure 6.8 shows the cost of RTP transit capital investments submitted by TriMet broken down by investment category. TriMet transit capital projects comprise the majority of transit capital project costs in the RTP constrained project list. See Section 6.3.13 for more information on region-wide transit operations and maintenance costs, which represents the majority of TriMet’s expenditures in the RTP.

Figure 6.8: TriMet: Cost and number of RTP constrained list capital projects by investment category, 2023-2045

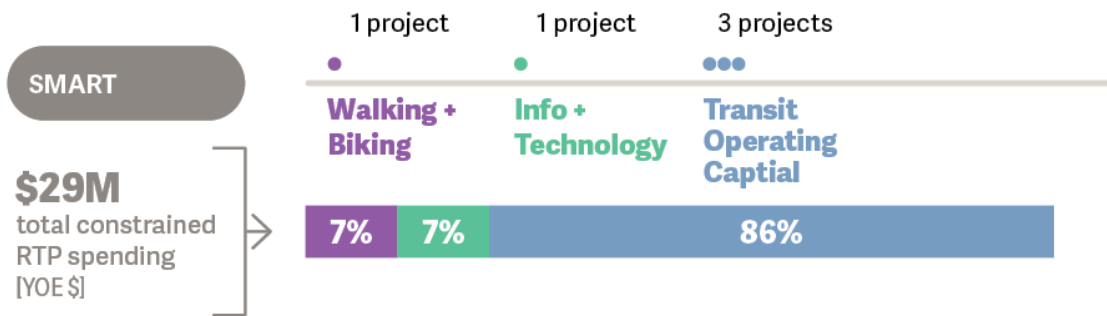


Source: 2023 RTP Financially Constrained Project List (November 30, 2023). Costs are in year-of-expenditure dollars and have been rounded. Costs are in year-of-expenditure dollars and have been rounded. The information includes capital projects submitted by TriMet. Transit capital projects submitted by cities and counties and transit operations and maintenance costs are not included.

SMART Capital Projects

Figure 6.9 shows the cost and number of RTP investments submitted by SMART broken down by investment category. SMART transit service and operations comprise the majority of SMART’s projects in the RTP constrained project list. See Section 6.3.13 for more information on region-wide transit operations and maintenance costs.

Figure 6.9: SMART: Cost and number of RTP constrained list capital projects by investment category, 2023-2045

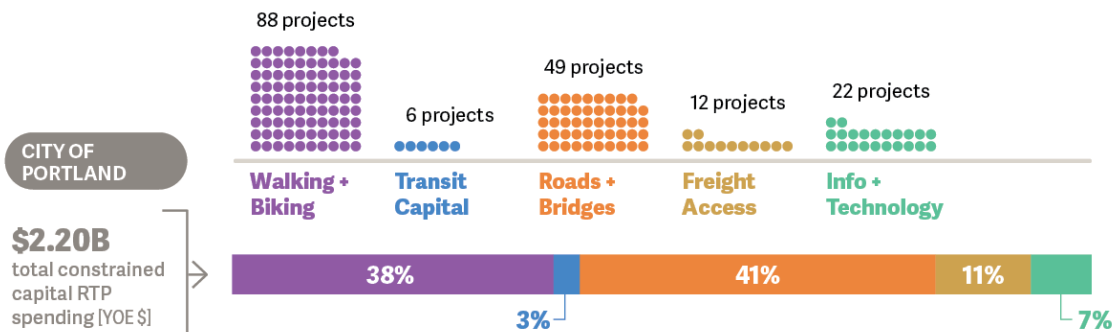


Source: 2023 RTP Financially Constrained Project List (November 30, 2023). Costs are in year-of-expenditure dollars and have been rounded. The information includes capital projects submitted by SMART. Transit operations and maintenance costs are not included.

City of Portland and Port of Portland Capital Projects

Figure 6.10 shows the cost and number of RTP investments submitted by the City of Portland and Port of Portland broken down by investment category. Roads, bridges, and walking and biking connections comprise the majority of projects in the Constrained RTP project list.

Figure 6.10: City of Portland and Port of Portland: Cost of RTP constrained list capital projects by investment category, 2023-2045



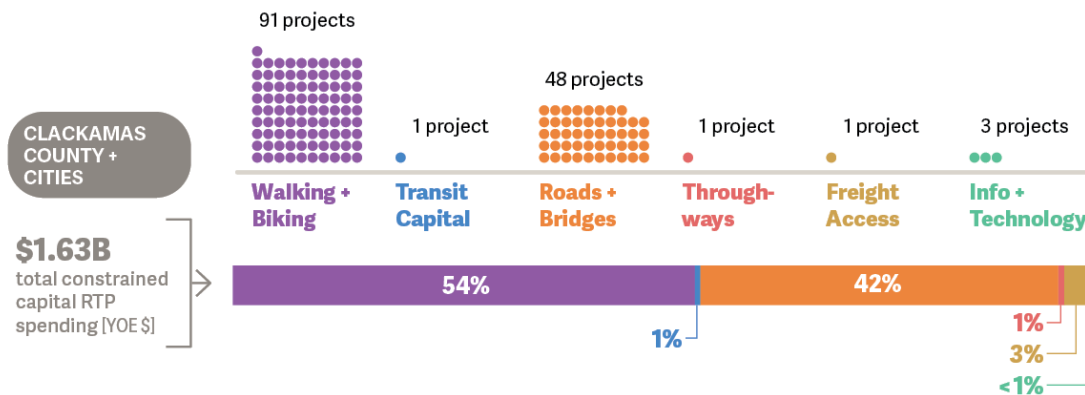
Source: 2023 RTP Financially Constrained Project List (November 30, 2023). Costs are in year-of-expenditure dollars and have been rounded. The information includes capital projects submitted by the City of Portland and the Port of Portland. Capital projects submitted by ODOT, TriMet and SMART as well as road and transit operations and maintenance costs are not included.

Figure 6.14 shows all capital projects that fall within Multnomah County, including the City of Portland, with their unique RTP ID number. The map includes projects submitted by other jurisdictions and agencies. To access an interactive online map of the projects, visit www.oregonmetro.gov/rtp or click on the QR code with a mobile device or pointer.

Urban Clackamas County and Cities of Clackamas County Capital Projects

Figure 6.11 shows the cost and number of RTP investments submitted by Clackamas County and its cities broken down by investment category. Roads, bridges, and walking and biking connections comprise the majority of projects in the Constrained RTP project list.

Figure 6.11: Clackamas County and Cities: Cost of RTP constrained list capital projects by investment category, 2023-2045

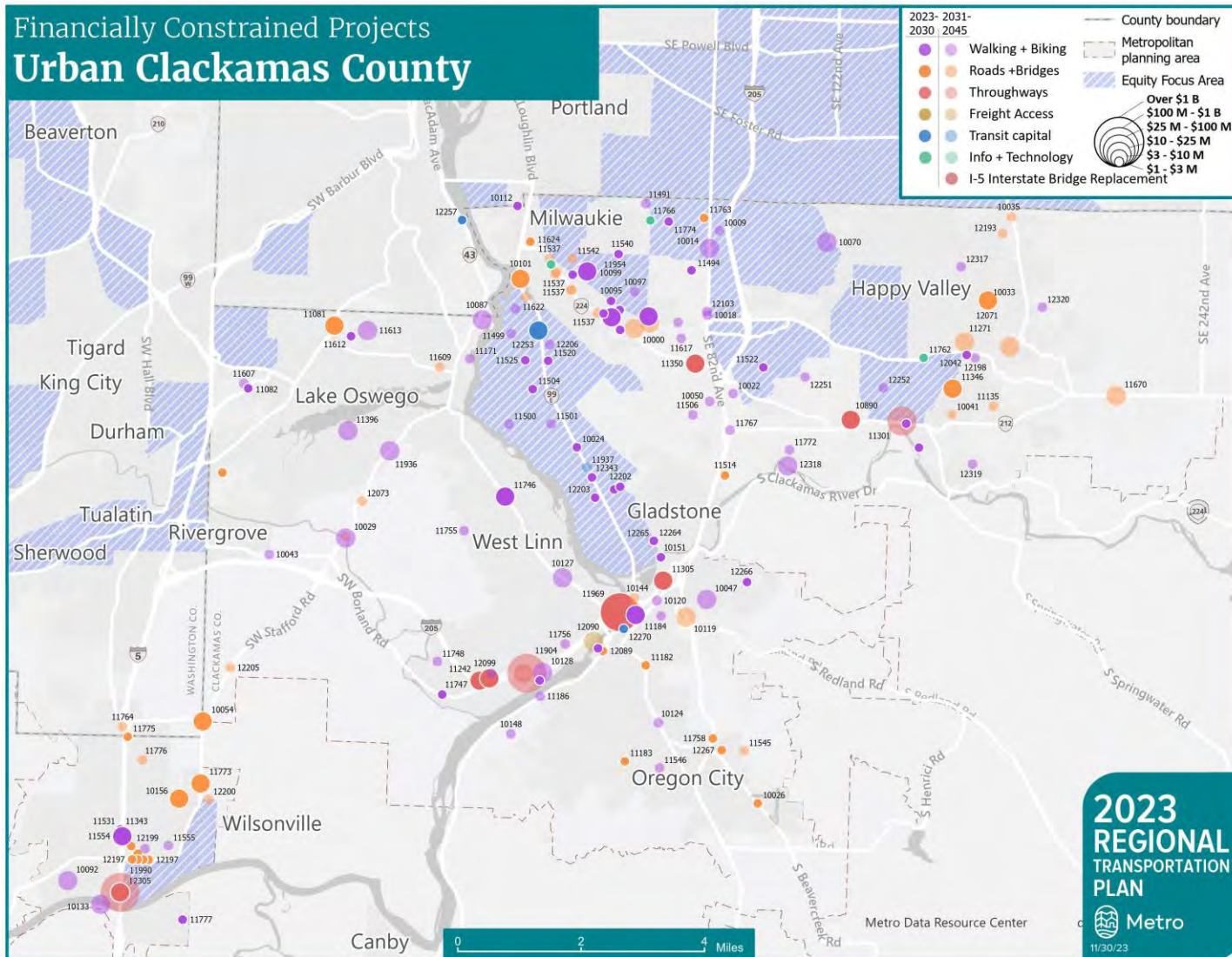


Costs are in year-of-expenditure dollars and have been rounded. The information includes capital projects submitted by Clackamas County and cities in Clackamas County. Capital projects submitted by ODOT, TriMet and SMART as well as road and transit operations and maintenance costs are not included.

Figure 6.12 shows the general location of all RTP constrained projects located in Clackamas County with their unique RTP ID number. The map includes all capital projects submitted, including projects submitted by other jurisdictions and agencies.

To access an interactive online map of the projects, visit www.oregonmetro.gov/rtp or click on the QR code with a mobile device or pointer.

Figure 6.12: Map of RTP Constrained List Capital Projects in Urban Clackamas County, 2023-2045

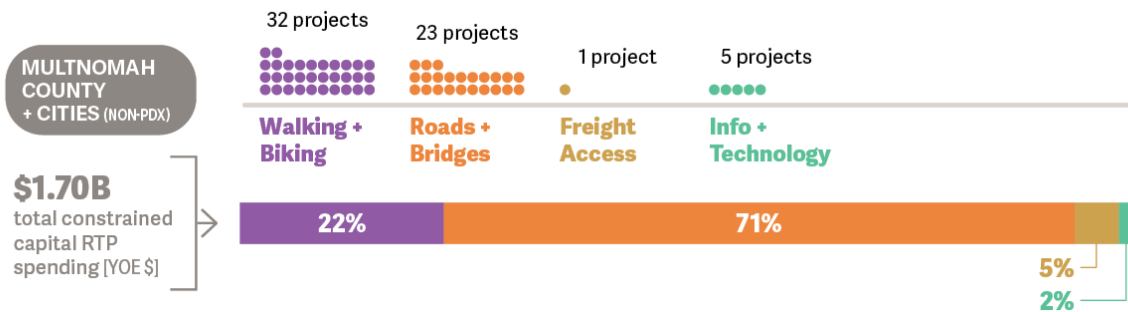


To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

Multnomah County and Cities in East Multnomah County Capital Projects

Figure 6.13 shows the cost and number of RTP investments submitted by Multnomah County and cities within Multnomah County (except Portland) broken down by investment category. Roads and bridges projects comprise a majority of costs due in large part to the capital costs associated with County’s six Willamette River bridges.

Figure 6.13: East Multnomah County and Cities: Cost of RTP constrained list capital projects by investment category, 2023-2045

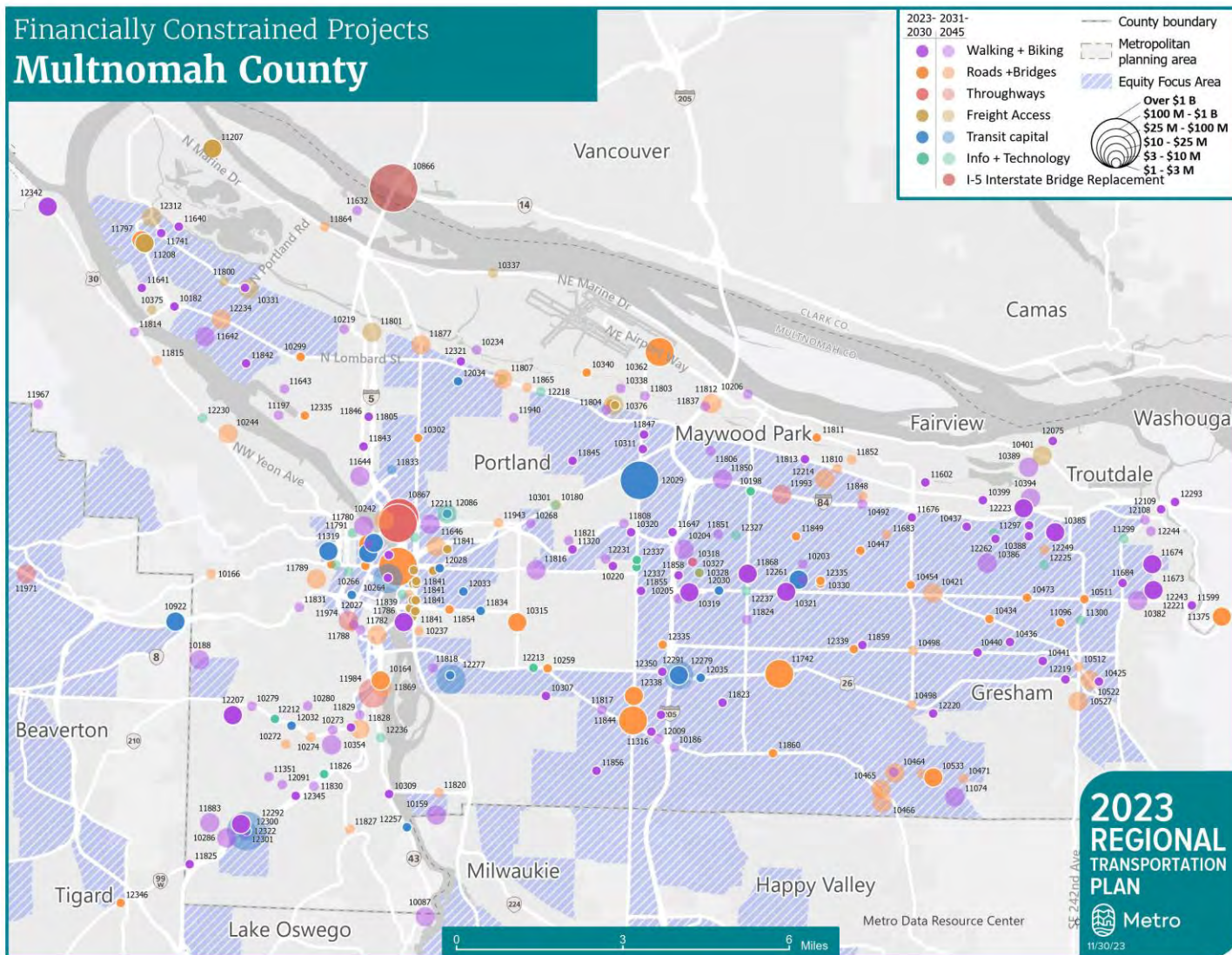


Source: 2023 RTP Financially Constrained Project List (November 30, 2023). Costs are in year-of-expenditure dollars and have been rounded. The information includes capital projects submitted by Multnomah County and cities in Multnomah County (except for the city of Portland). Capital projects submitted by ODOT, TriMet and SMART as well as road and transit operations and maintenance costs are not included.

Figure 6.14 shows the general location of RTP constrained list projects located in Multnomah County, including the City of Portland, with their unique RTP ID number. The map includes all capital projects submitted, including projects submitted by other jurisdictions and agencies.

To access an interactive online map of the projects, visit www.oregonmetro.gov/rtp or click on the QR code with a mobile device or pointer.

Figure 6.14: Map of RTP constrained list capital projects in Multnomah County, 2023-2045

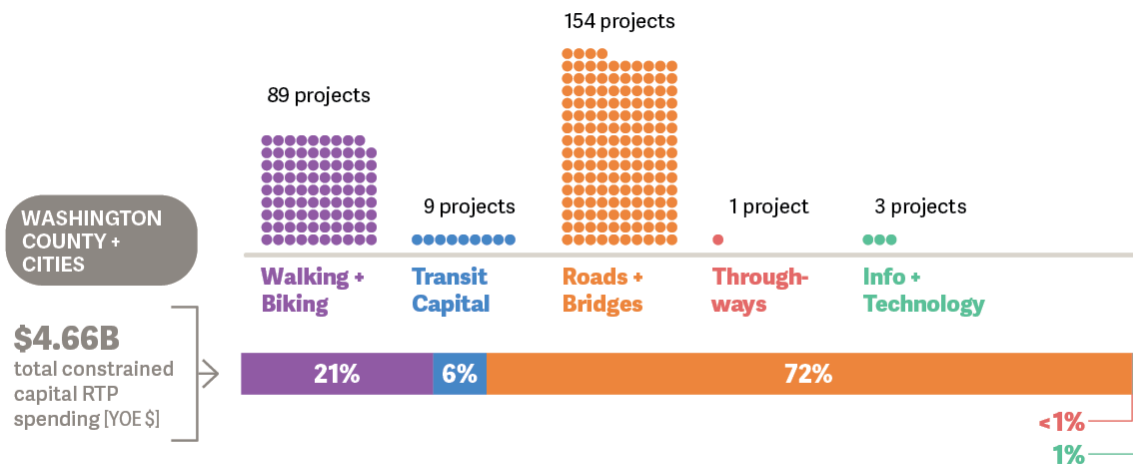


To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

Urban Washington County and Cities in Washington County Capital Projects

Figure 6.15 shows the cost and number of RTP investments submitted by Washington County and its cities broken down by investment category. Roads, bridges comprise the majority of projects in the RTP constrained project list, followed by walking and biking connections.

Figure 6.15: Urban Washington County and Cities: Cost of RTP constrained list capital projects by investment category, 2023-2045

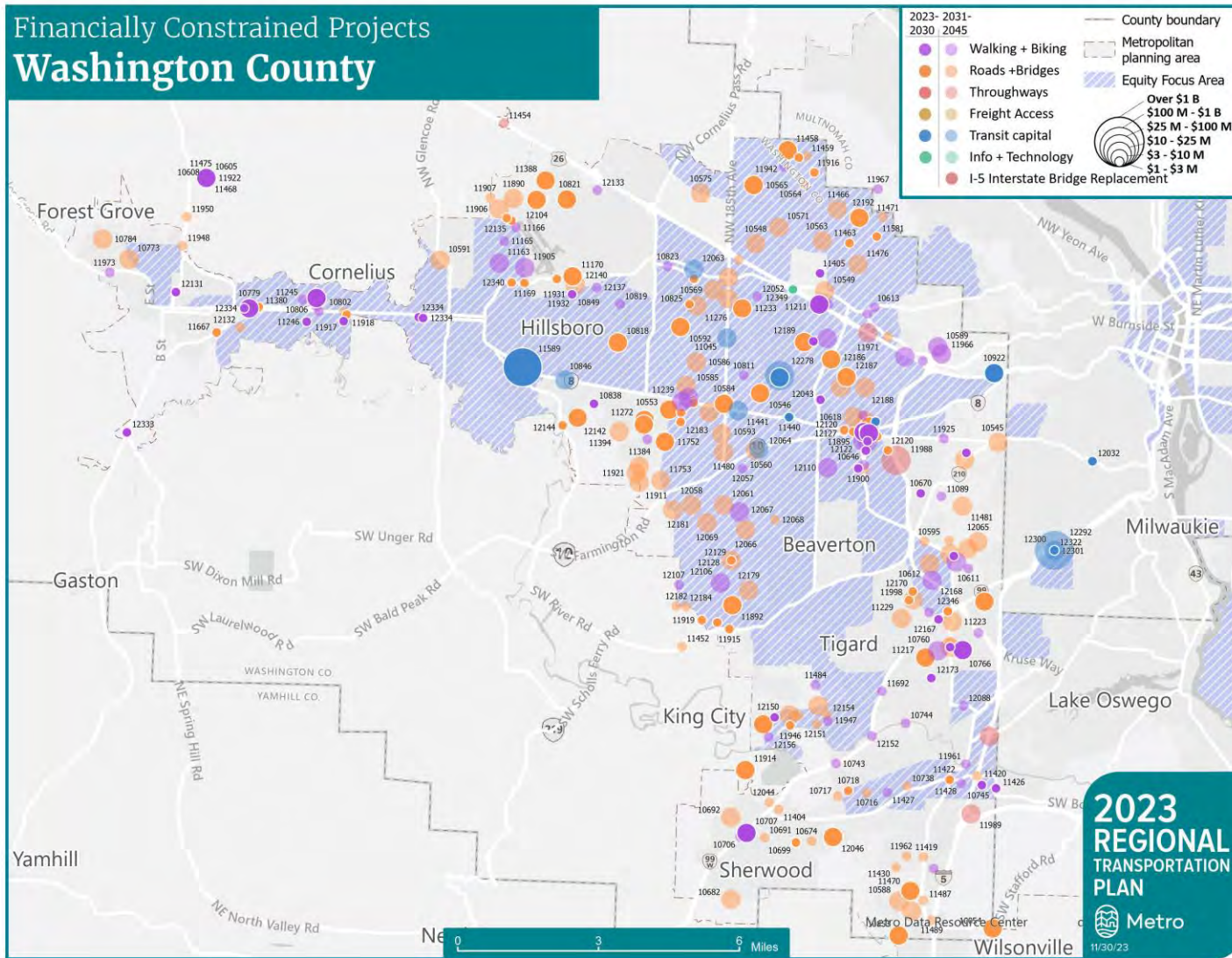


Source: 2023 RTP Financially Constrained Project List (November 30, 2023). Costs are in year-of-expenditure dollars and have been rounded. The information includes capital projects submitted by Washington County and cities in Washington County. Capital projects submitted by ODOT, TriMet and SMART as well as road and transit operations and maintenance costs are not included.

Figure 6.16 shows the general location of all RTP constrained list projects located in Washington County with their unique RTP ID number. The map includes all capital projects submitted, including projects submitted by other jurisdictions and agencies.

To access an interactive online map of the projects, visit www.oregonmetro.gov/rtp or click on the QR code with a mobile device or pointer.

Figure 6.16: Map of RTP constrained list projects in Urban Washington County, 2023-2045

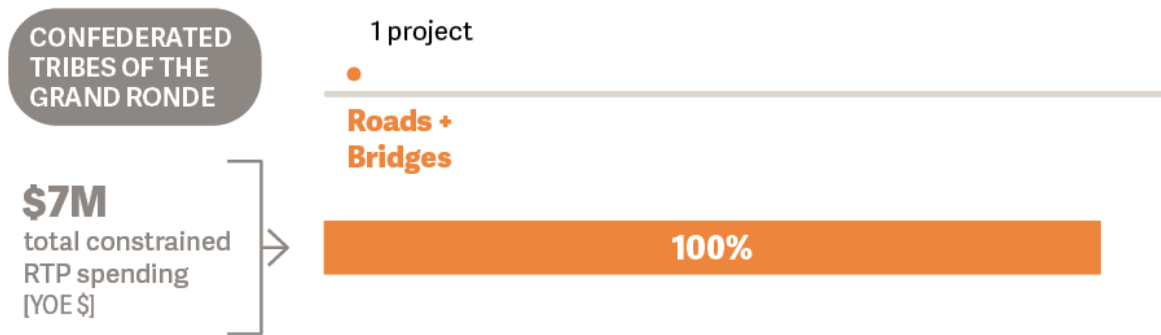


To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

Confederated Tribes of Grand Ronde Capital Project

Figure 6.17 shows the category and cost of the project submitted by the Confederated Tribes of Grand Ronde – the tumwata village complete streets project in the downtown Oregon City area. This project aims to construct new roadways with sidewalks and bikeways to serve the planned tumwata village. This project is the first project nominated by a tribe for inclusion in the RTP.

Figure 6.17: Confederated Tribes of Grand Ronde Capital Project



6.3.3 Transit capital projects and planned service

Transit investments make up nearly 40 percent of the total cost of the RTP constrained project list. As shown in Table 6.5, transit capital projects in the constrained project list include several enhanced transit corridors and high capacity transit projects. See Table 6.4 for a listing of major transit capital projects in the RTP.

Table 6.5: Summary of RTP constrained list transit capital projects and planned service

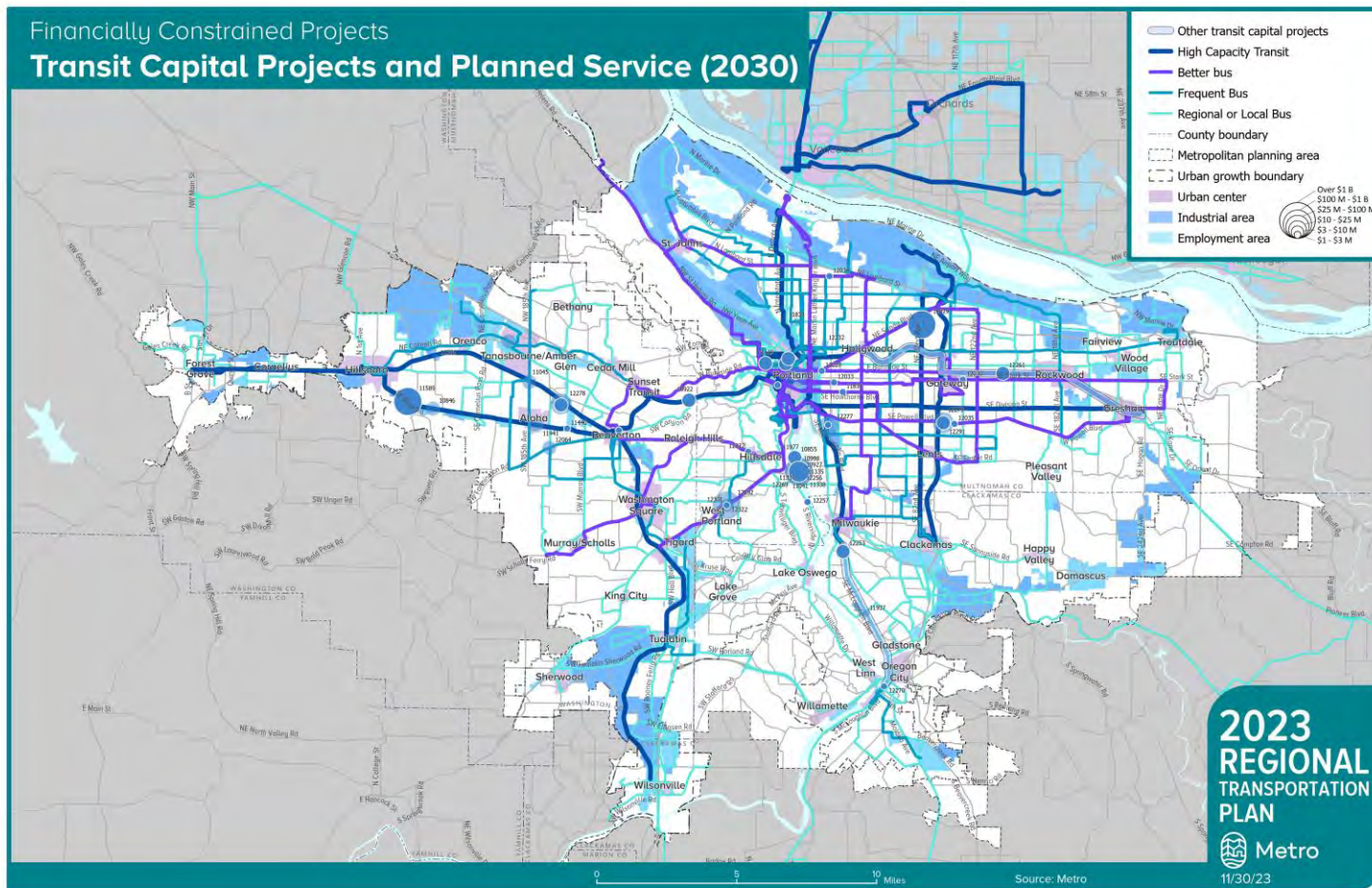
Transit Capital Projects	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
Number of transit capital projects	37	26
Number of transit capital projects on a high injury corridor	17	10
Daily revenue hours (TriMet, SMART, and shuttles operating in Clackamas, Multnomah and Washington counties only; excludes C-TRAN)	8,000	9,100
Service Expansion	18% increase from 2020	34% increase from 2020

Transit Capital Projects	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
New High Capacity Transit Connections	4 HCT projects, including MAX Red Line Improvements (under construction), 82nd Avenue Transit Project, Tualatin Valley Highway Transit Project and Montgomery Park streetcar extension and additional station improvements supporting operating reliability	3 additional HCT projects (from 2030 Constrained): Interstate Bridge Replacement Program HCT, Southwest Corridor, and project development and interim capital improvements for the Steel Bridge Transit Bottleneck project, plus additional station improvements supporting operating reliability
Other service enhancements	8 Better Bus projects and, additional transit supportive projects region-wide, new and improved facilities to support service expansion and electrification	4 additional Better Bus projects (from 2030 Constrained) and an ETC/Rose Lanes Transit Improvement Fund, plus additional transit supportive projects region-wide, new and improved facilities to support service expansion and electrification
Public and private shuttles	More local jurisdictions operate shuttles and some major employers and/or community-based organizations work with transportation service providers to operate shuttles	More local jurisdictions operate shuttles and some major employers and/or community-based organizations work with transportation service providers to operate shuttles
Stations and station access	More enhancements at and near transit stops and stations, including sidewalk, bicycle, crossing, and ADA improvements	More enhancements at and near transit stops and stations, including sidewalk, bicycle crossing, and ADA improvements
Safety	More enhancements to safety and security for transit users	More enhancements to safety and security for transit users
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
<i>Estimated capital cost in YOE dollars</i>	\$1.58 billion	\$3.07 billion

Figure 6.18 shows the general location of RTP constrained list transit capital projects with their unique RTP ID number and planned service by the year 2030.

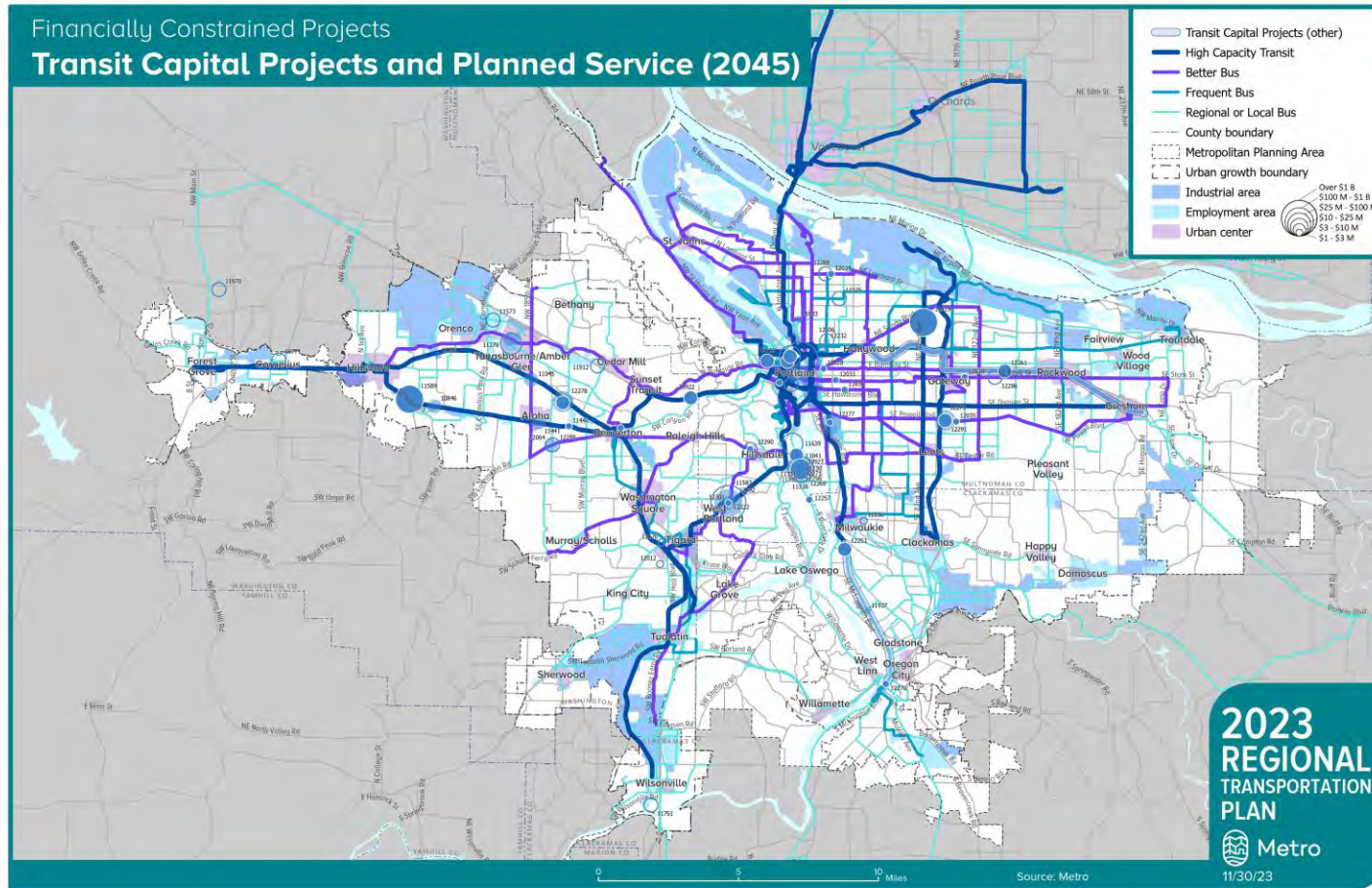
Figure 6.19 shows the general location of RTP constrained list transit capital projects with their unique RTP ID number and planned service by the year 2045.

Figure 6.18: Greater Portland region: Map of RTP constrained list transit capital projects and planned service, 2030



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

Figure 6.19: Greater Portland region: Map of RTP constrained list transit capital projects and planned service, 2045



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

Note: The 2045 Transit Capital Project Map includes all the transit capital that is assumed in 2030 plus additional capital investments added through 2045.

6.3.4 Interstate Bridge Replacement Program and Throughway projects

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. Strategic throughway capacity seeks to maintain regional mobility and improve access to industrial areas and intermodal facilities where goods move from one transportation mode to another.

Throughway projects comprise about 3 percent of the total number of capital projects in the Constrained RTP list of projects, and about 20 percent of capital spending in the constrained plan. The I-5 Interstate Bridge Replacement Project is the single largest project in the plan and represents nearly 22 percent of capital spending in the plan. The I-5 IBR Program includes throughway auxiliary lanes and interchange elements and an approximately \$2 billion investment in light rail high-capacity transit element, express bus, and freight, bike and pedestrian access improvements. Table 6.6 lists some of the major throughway capital projects in the 2030 and 2045 constrained lists.

Table 6.6: Summary of RTP constrained list throughway projects, including the Interstate Bridge Replacement Program

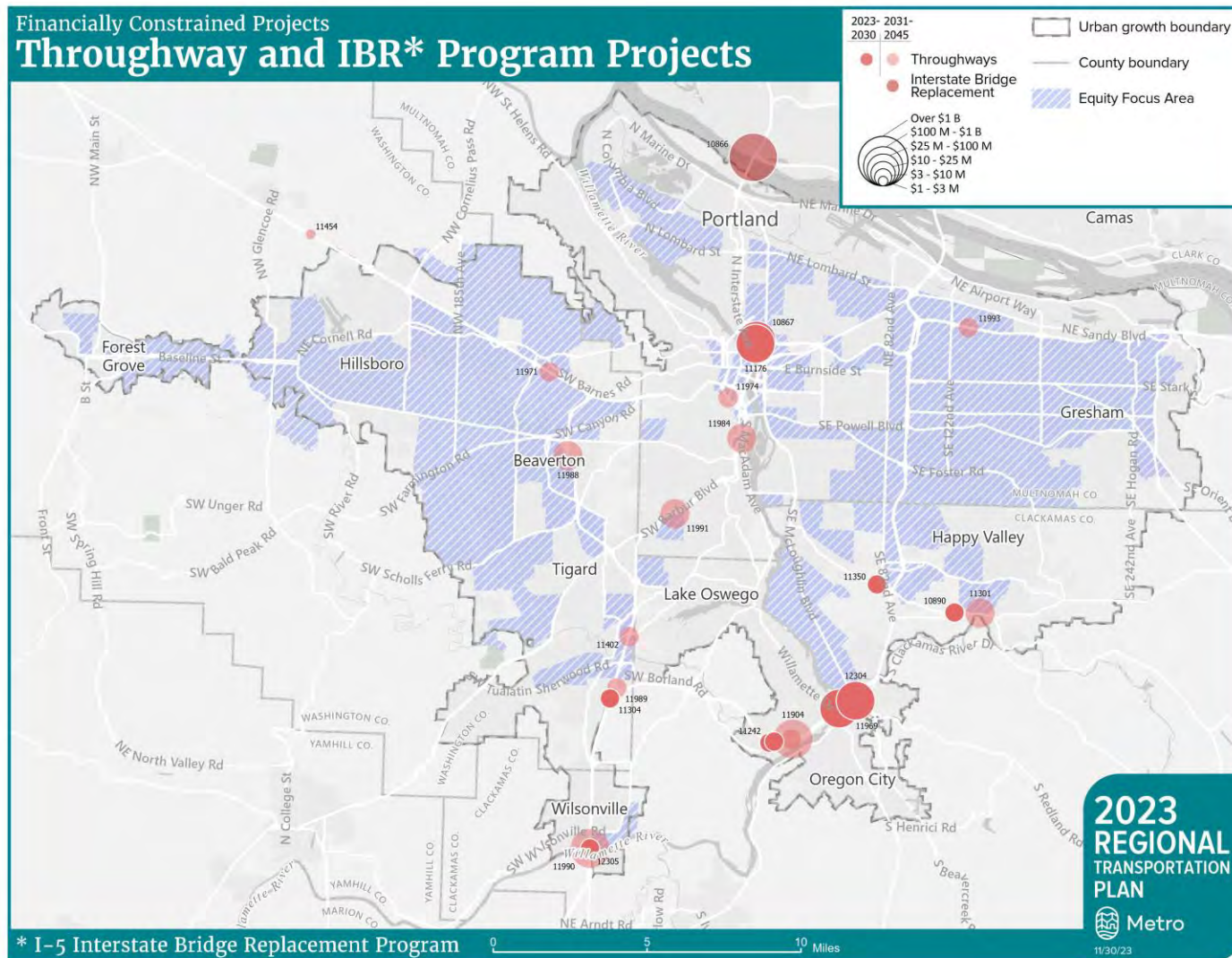
Throughway Projects and Interstate Bridge Replacement Program	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
Number of throughway projects*	8	13
Number of throughway projects with safety benefit*	2	3
Number of throughway projects on high injury corridor*	4	5
Throughway capacity (including new auxiliary lanes), change from 2020 base network	5 new lane miles	31 new lane miles
Throughway Tolling Programs	I-5 Interstate Bridge Replacement pre-construction tolling, I-205 Toll Project on Abernethy Bridge, Regional Mobility Pricing Project	I-5 Interstate Bridge Replacement Program

Throughway Projects and Interstate Bridge Replacement Program	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
New throughway capacity, (including new auxiliary lanes)	I-5/Rose Quarter, I-205/Abernethy Bridge, OR 224	I-5 Interstate Bridge Replacement Program, I-205 widening and Tualatin River Bridge Toll Project, OR 212/224 Sunrise Project Phase 2, I-5 Boone Bridge and seismic improvement project, auxiliary lanes and braided ramps on I-5 northbound and southbound and on OR 217
Throughway Projects <i>Estimated capital cost in YOE dollars</i>	\$2.58 billion	\$2.92 billion
Interstate Bridge Replacement Program <i>Estimated capital cost in YOE dollars</i>	-	\$6.0 billion
Total <i>Estimated capital cost in YOE dollars</i>	\$2.58 billion	\$8.92 billion

*Note: Includes I-5 Interstate Bridge Replacement Program.

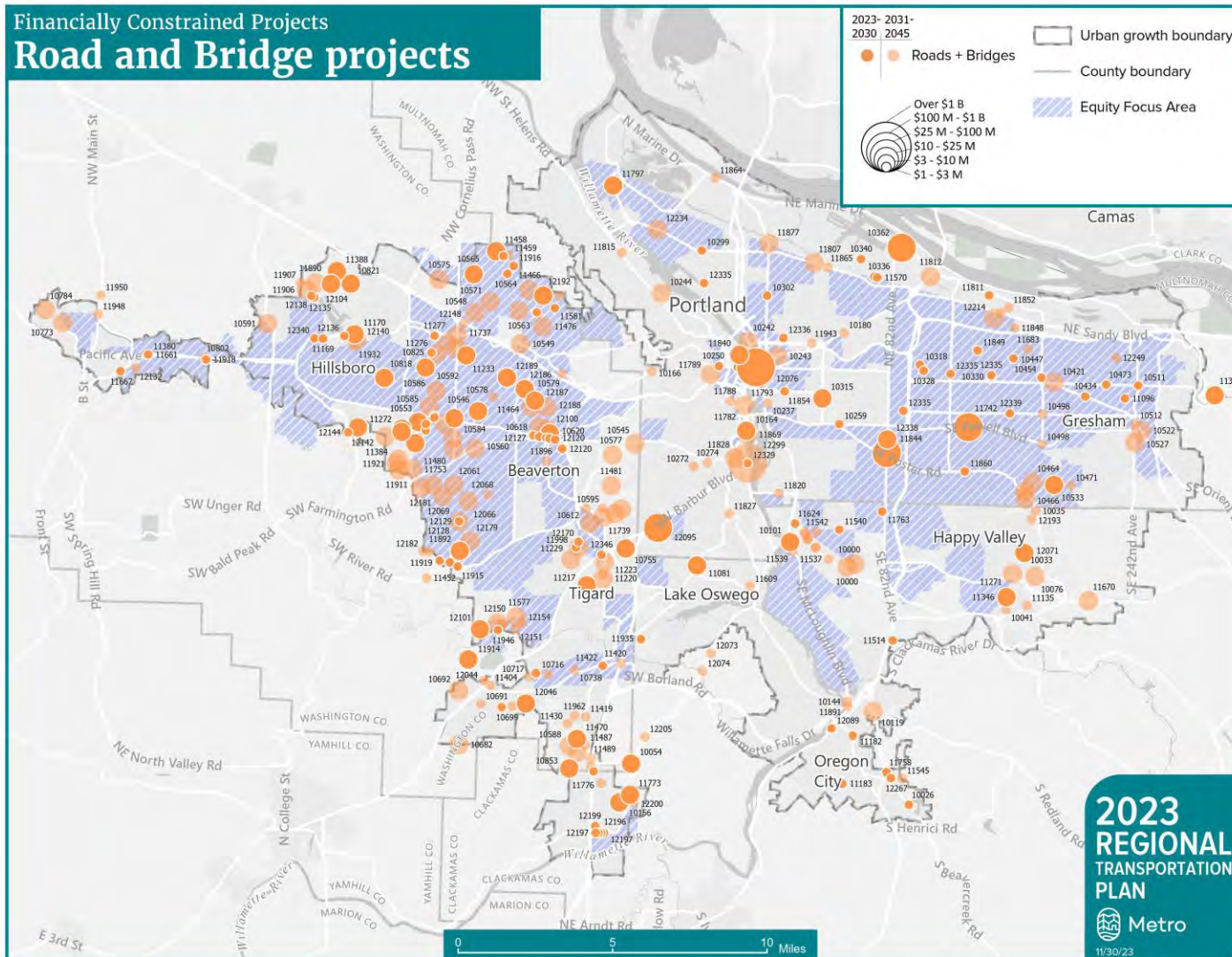
See Appendix A and Appendix M for more information about these projects. Figure 6.20 shows the general location of RTP constrained list throughway projects.

Figure 6.20: Greater Portland region: Map of RTP constrained list thruway projects and the I-5 Interstate Bridge Replacement Program, 2023-2045



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

Figure 6.21: Greater Portland region: Map of RTP constrained list road and bridge projects, 2023-2045



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

6.3.5 Roads and bridges projects

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:

1. **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. Seismic retrofit projects, shown in Figure 6.21, are critical to reduce vulnerability of the transportation system to earthquakes.
2. **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, including ADA-compliant curb ramps and marked crossings, and, in some areas, provide critical freight access between industrial areas, intermodal facilities and the interstate highway system.
3. **Network expansion.** Adding lane miles to relieve congestion is an expensive approach and will not address growing 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 in growing areas and across the region.

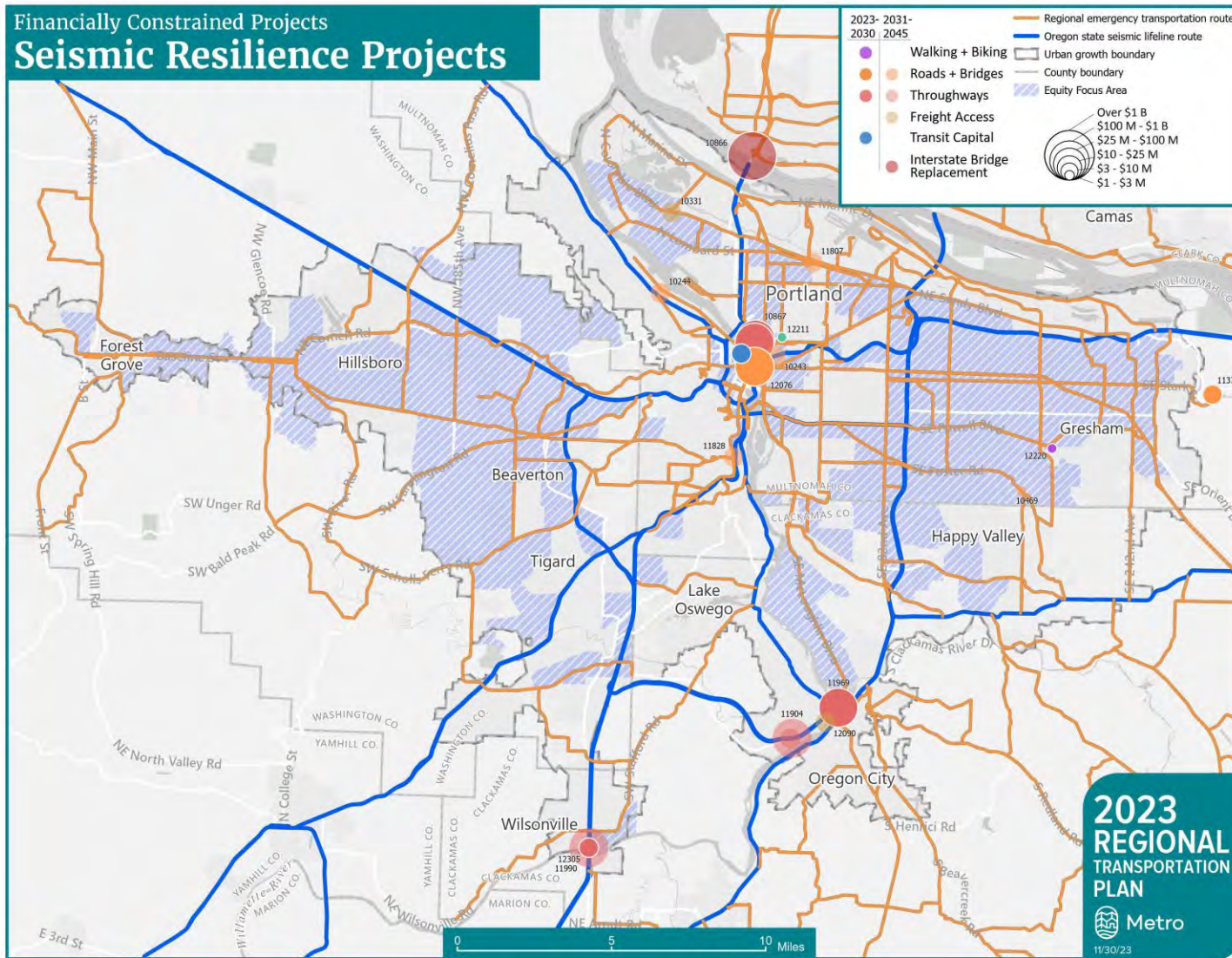
As shown in Table 6.7, road and bridges projects comprise about 38 percent of the total number of capital projects in the RTP constrained list of projects, and about 27 percent of the total constrained list capital spending. The road and bridge capital projects shown in Figure 6.21 include arterial street expansions, “complete street” reconstructions that are complemented by new arterial connections, seismic retrofits and highway overcrossings to provide mobility and access for all modes of travel.

Table 6.7: Summary of RTP constrained list roads and bridges projects

Roads and bridges capital projects	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
Number of roads and bridges capital projects	125	160
Number of roads and bridges projects with a safety benefit	68	81
Number of roads and bridges projects on a high injury corridor	59	67
Number of roads and bridges projects that increase arterial roadway capacity	82	112
Examples of bridge and new major arterial capacity projects	Earthquake Ready Burnside Bridge (Phases 2 and 3), 82nd Avenue Corridor Improvements, Outer Powell Multimodal Project, 82nd Avenue/Airport Way grade separation, Basalt Creek Parkway, 172nd Avenue (Phase 2)	Farmington Road Multimodal Improvements, Century Boulevard Improvements, Sunnyside Road Extension, seismic retrofitting of bridges throughout region
<i>Estimated capital cost in YOE dollars</i>	\$3.05 billion	\$4.36 billion

Shown in Figure 6.22 several projects in the RTP are planned to improve the region's readiness for major natural disasters, including earthquake-ready bridges across the Willamette River (Abernethy Bridge and Earthquake Ready Burnside Bridge) and the Columbia River (I-5 Interstate Bridge Replacement Program), and improvements along Regional Emergency Transportation Routes and Statewide Seismic Lifeline Routes. These investments will help ensure that essential infrastructure will be here to serve us for generations. Future work is needed to identify and address the vulnerability of critical transportation infrastructure to other hazards, including extreme heat, flooding, and landslides.

Figure 6.22: Greater Portland region: Map of RTP constrained list seismic resilience projects, 2023-2045



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

6.3.6 Freight access projects

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 access projects in the RTP constrained project list are focused on:

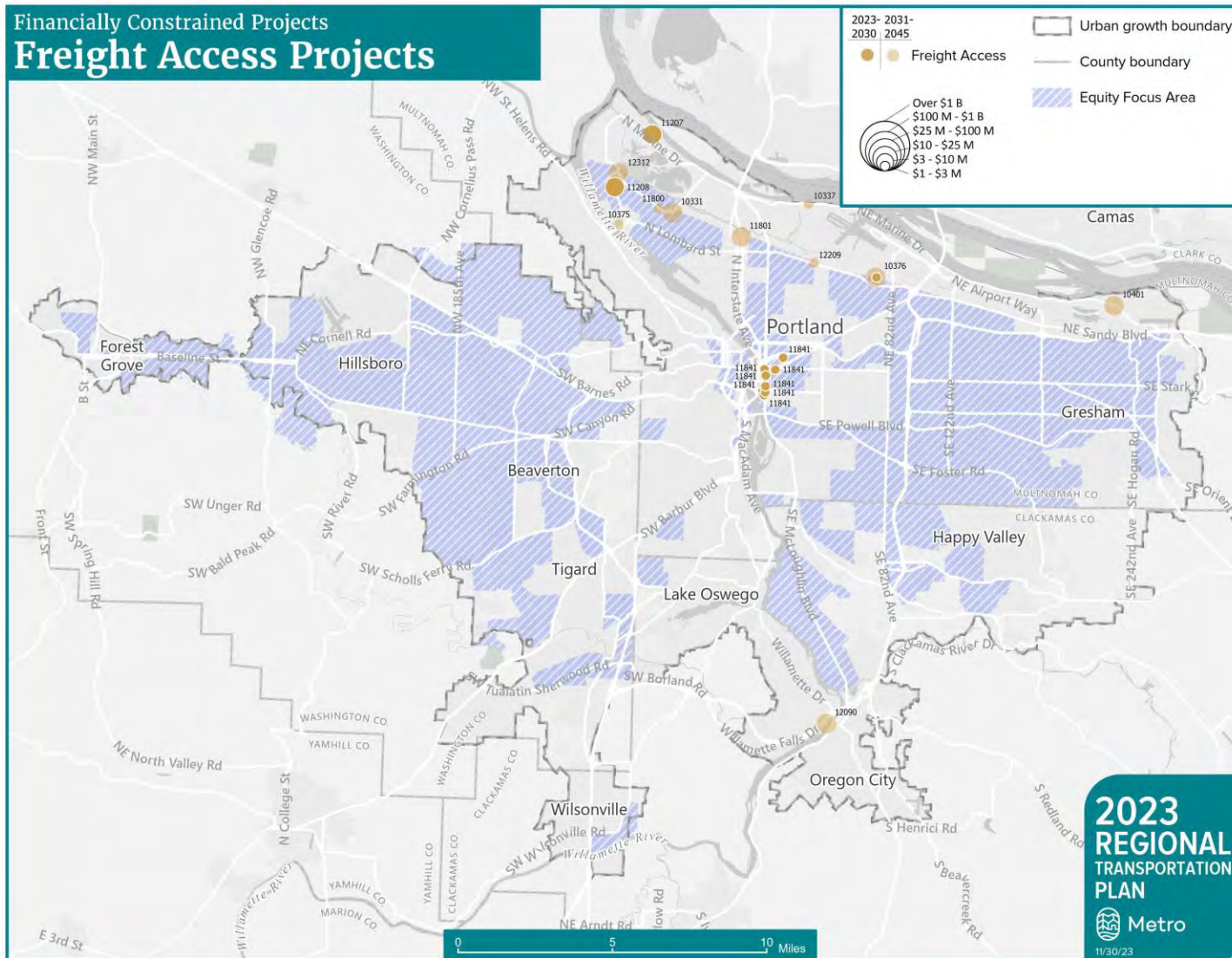
- **Freight reliability and safety.** Facilitate the safe, reliable and efficient movement of goods by better utilizing existing road and freight rail infrastructure and capacity, separating freight traffic from other modes to increase safety and minimize conflicts, and strategically investing in the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

As shown in Table 6.8 freight access projects comprise less than 2 percent of the total number of capital projects in the RTP constrained list of projects.

Table 6.8: Summary of RTP constrained list freight access projects

Freight access capital projects	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
Number of freight access projects	4	10
Number of freight access projects with a safety benefit	0	5
Number of freight access projects on a high injury corridor	2	4
New major freight access capacity projects	Airport Way and 82nd Avenue grade separation, Rivergate Blvd. overcrossing, T6 modernization, Marine Drive Improvement Phase 2	Cully Blvd. Grade separation, Columbia Blvd Rail Bridge, Going/Greeley Interchange
<i>Estimated capital cost in YOE dollars</i>	\$74 million	\$307 million

Figure 6.23: Greater Portland region: Map of RTP constrained list freight access projects, 2023-2045



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

In addition to the RTP freight access projects identified in Figure 6.23, the I-5 IBR Program shown in Figure 6.20 and described in Section 6.3.4 includes improvements for freight safety, mobility and reliability in the program area. The I-5 IBR Program freight access related investments include providing standard shoulder widths on the interstate, adequate ramp lengths to access and exit the interstate, and a new configuration at the Marine Drive interchange, which provides critical access to and from the Port of Portland.

6.3.7 Active transportation projects

Active transportation investments have become a growing focus around the region. 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, household pocketbooks, clean air and water, public health and safe 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.

RTP active transportation projects focus on four key ways to make biking and walking safe and convenient for people of all ages and abilities in our region:

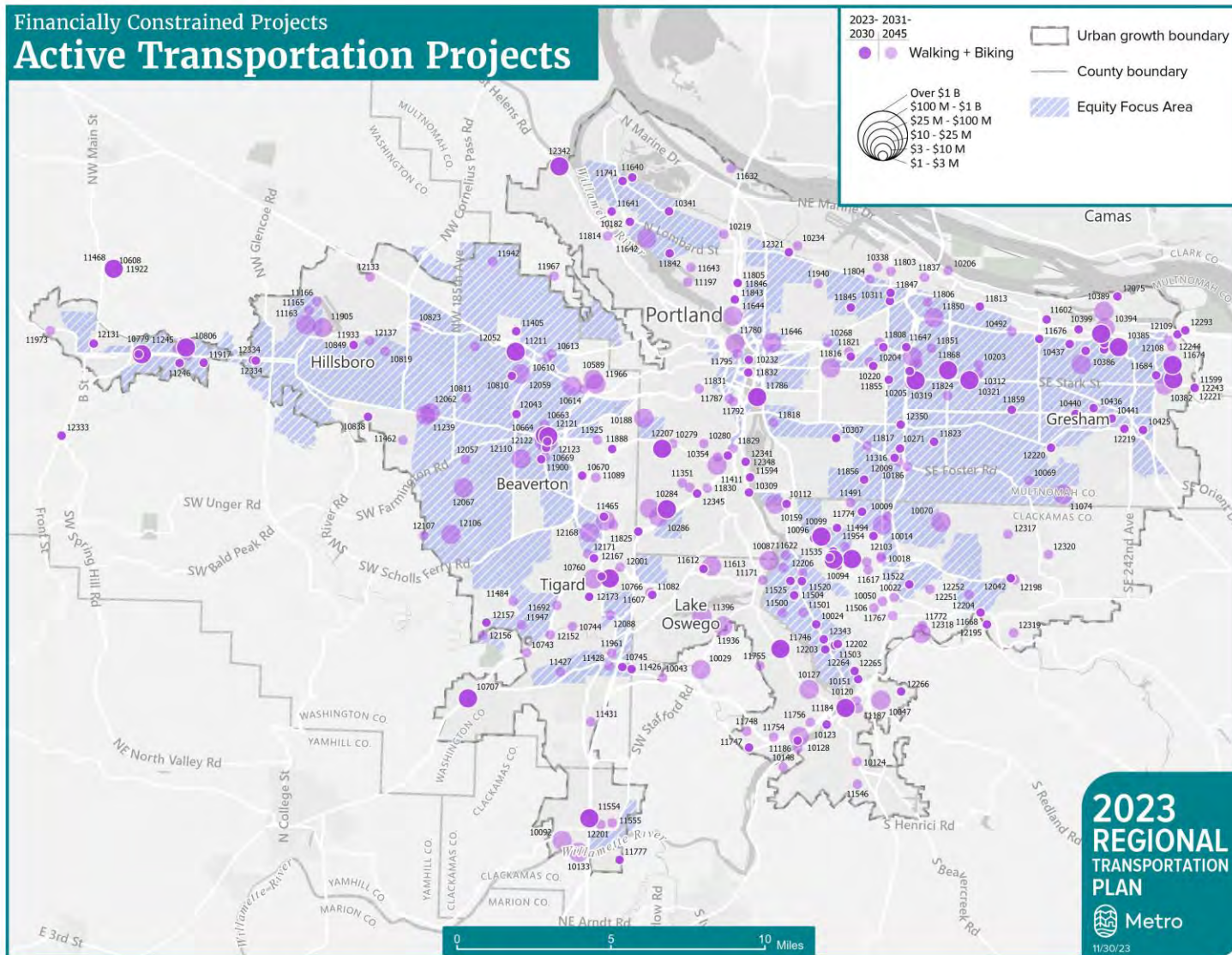
1. **Fill the gaps.** Completing missing sidewalks, pedestrian crossings, bikeways and multi-use paths creates complete streets and better connectivity; improves access to transit; removes barriers; adds routes across highways, railroads and waterways; makes high injury locations safer; and shortens trip distances and travel time.
2. **Design for safety.** Designing bikeways and walking routes with greater separation and buffers from traffic increases safety and reduces the risk of traffic deaths. Making it safer for people walking and biking makes travel safer for all modes.
3. **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.
4. **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.

Shown in Figure 6.24 and described in Table 6.9, active transportation investments comprise about 42 percent of the total number of capital projects in the RTP constrained project list, and about 11 percent of the total constrained list capital spending.

Table 6.9: Summary of RTP constrained list active transportation projects

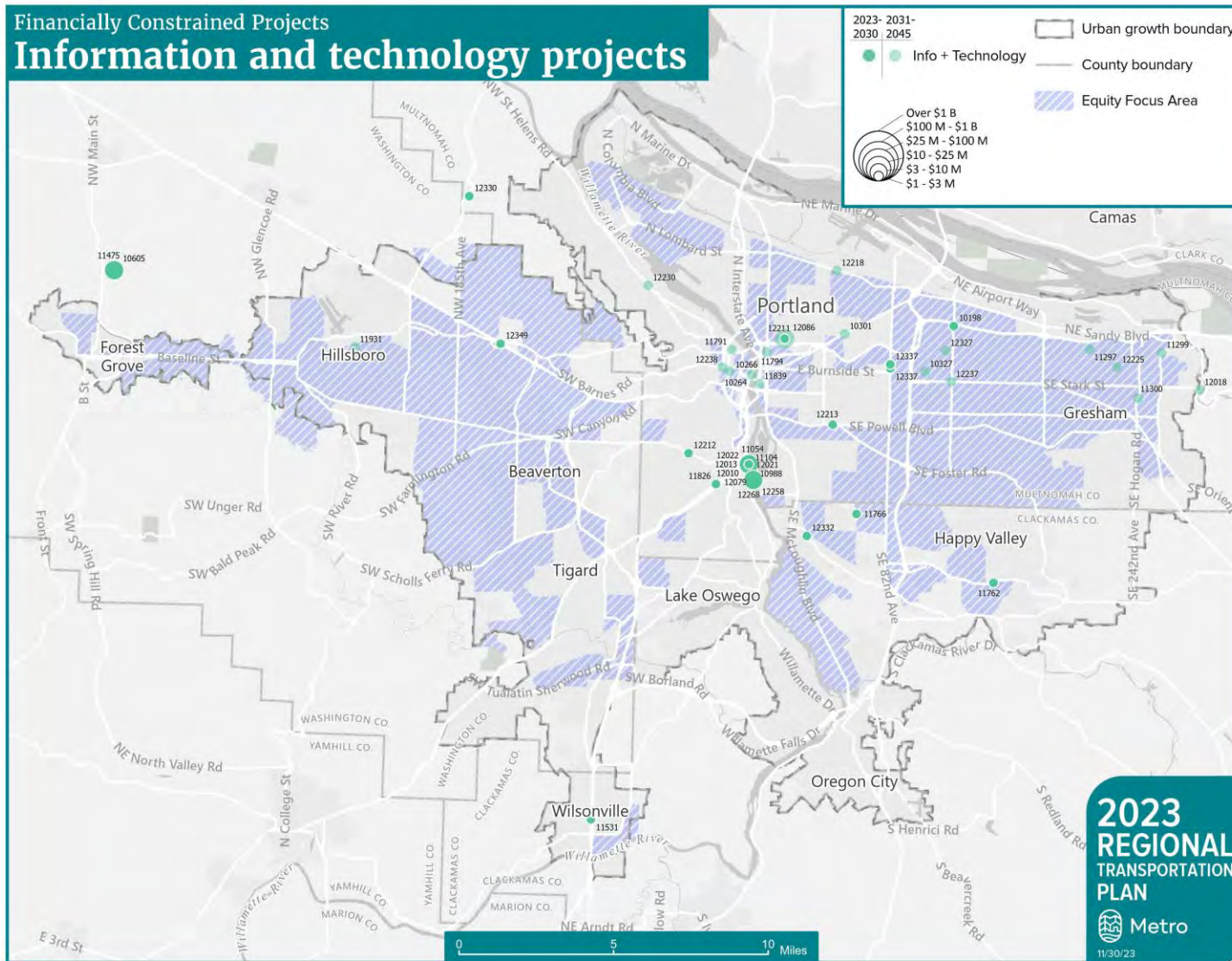
Active transportation capital projects	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
Number of active transportation projects	137	177
Number of active transportation projects with a safety benefit	126	156
Number of active transportation projects on a high injury corridor	57	64
Active transportation miles added along planned regional networks by sidewalk, bikeway and trail projects*	57 sidewalk miles added 66 bikeway miles added 26 trail miles added	74 sidewalk miles added 66 bikeway miles added 56 trail miles added
Examples of active transportation projects	Aloha-Reedville pedestrian Improvements, Cross-Levee Trail, Council Creek Regional Trail, Division-Midway Connected Centers project, Westside Trail US 26 bridge crossing, Milwaukie Monroe Street Neighborhood Greenway	Lake Oswego to Portland Trail, Reedway bike/pedestrian overcrossing, Washington County pedestrian arterial crossings, East-Buttes Loop Trail
<i>Estimated capital cost</i> in YOE dollars	\$1.05 billion	\$2.12 billion

Figure 6.24: Greater Portland region: Map of RTP constrained list active transportation projects, 2023-2045



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

Figure 6.25: Greater Portland region: Map of RTP constrained list information and technology projects, 2023-2045



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

6.3.8 Transportation system management and operations projects

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, freight and other motor vehicle travel. 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. RTP transportation system management and operations projects are focused on:

- **Arterial corridor management.** Advanced technology at each intersection actively manages traffic flow. This includes coordinated or adaptive signal timing; advanced signal operations such as cameras, flashing yellow arrows, bike signals and pedestrian countdown signals; 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.

Table 6.10: Summary of RTP constrained list transportation system management and operations (TSMO) projects

Technology/TSMO Projects and Programs	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
Transportation System Management and Operations Projects	14	22
Provide for real-time and forecasted traveler information	Information on current travel conditions and alerts are available to the public and third party developers	Current travel conditions data is used by operators to forecast changing travel conditions
Multimodal integrated corridor management	Agencies integrate operations strategies in a few of the region’s major travel corridors	Agencies integrate operations strategies in more of the region’s major travel corridors

Technology/TSMO Projects and Programs	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
Advanced traffic signal operations	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	Some frequent bus routes	Most frequent bus routes
Freeway ramp meters	All urban interchanges	All urban interchanges
Freeway variable speed signs	Some high incident locations	Most freeways
Incident response vehicles	Incident response vehicles monitor some high incident locations	Incident response vehicles monitor all area freeways
<i>Estimated capital cost in YOE dollars</i>	\$78 million	\$197 million

6.3.9 Transportation demand management projects

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. RTP Transportation demand management (TDM) projects are focused on:

- **Regional coordination and local policy, program, and project development:** Metro’s Regional Travel Options Program leads regionally significant TDM efforts, including policy development, public outreach and education, provision of direct services and resources, partner collaboration, research, and evaluation. These efforts aim to increase resources and capacity at the local level for policy, program, and project development.
- **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.
- **Safe Routes to School Program:** School districts, local jurisdictions and other regional and state partners provide programming that supports vehicle trip reduction for K-12 school-based trips. Metro provides grant funding, technical support and regional coordination for these programs.
- **Community programs:** Outreach and engagement programs that meet community travel options needs outside of the trip to school or work, which can include health, recreation, food access, and more. These programs are designed in collaboration

directly with community members across the region. Metro supports these efforts through a variety of grant programs.

As shown in Table 6.11, Transportation demand management (TDM) projects comprise less than 2 percent of the total number of capital projects in the RTP constrained project list.

Table 6.11: Summary of RTP constrained list transportation demand management projects

Information/TDM Projects and Programs	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
TDM projects	6	7
Individualized marketing participation	No forecast data is available; Current program reaches about 3% of households	No forecast data is available
Commuter program participation	No forecast data is available; Oregon Employee Commute Options Rule requires work sites with more than 100 employees to have workplace programs	No forecast data is available
Public awareness marketing campaign	Existing ongoing and short-term campaigns increase awareness of <i>Get There Oregon</i>	Additional resources promote new travel tools, regional efforts and safety education
Provisions of travel options support tools	2020 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
<i>Estimated capital cost in YOE dollars</i>	\$102 million	\$195 million

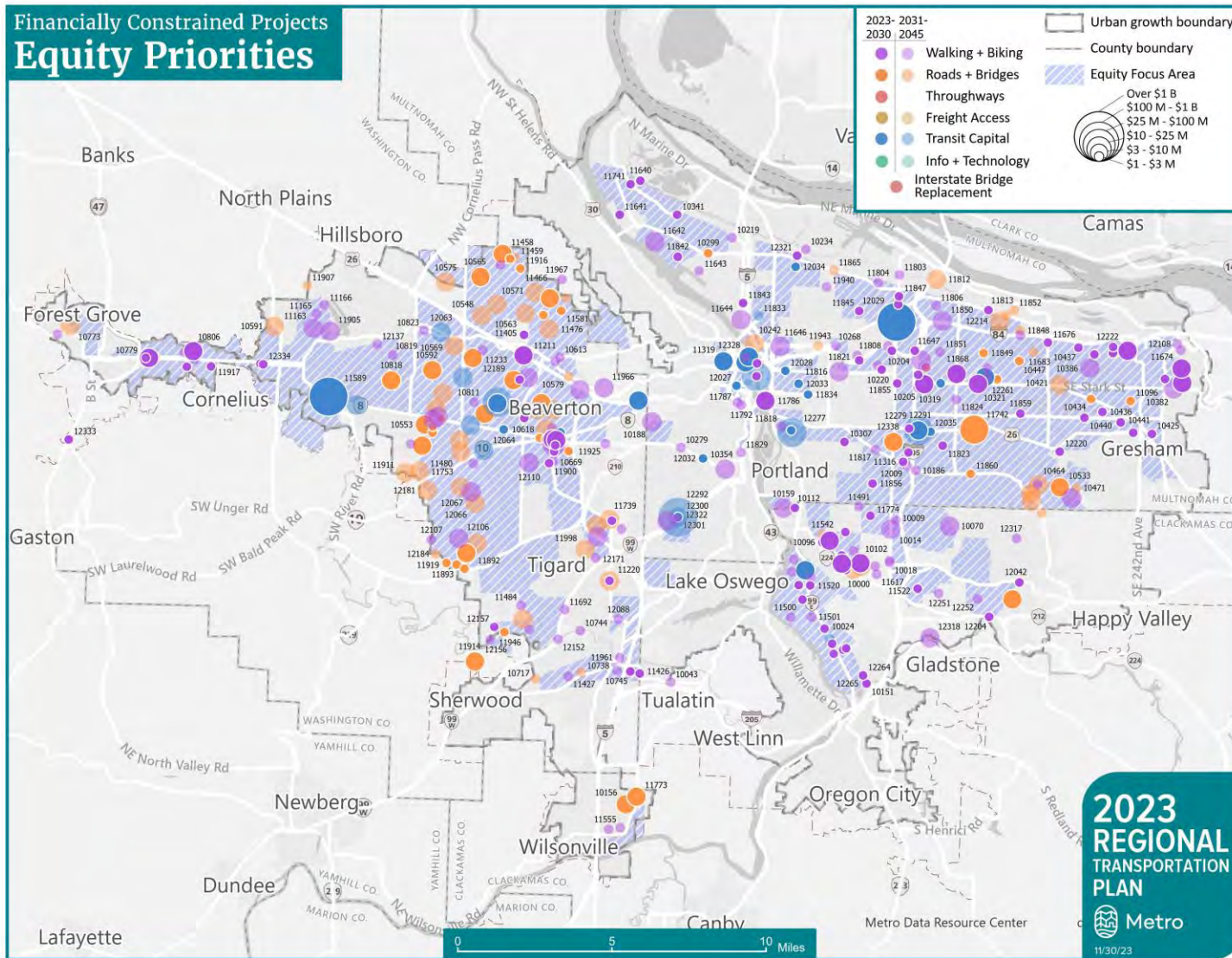
6.3.10 Other projects and programs to leverage capital investments

The RTP constrained project list includes regional planning activities and corridor investment area refinement and planning activities (\$188 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 marginalized communities, regardless of race, language proficiency, income, age or ability, while maintaining affordability and preventing displacement is necessary. Of the capital projects evaluated in the RTP constrained project list, 474 capital projects are within an Equity Focus Area (63%). Shown in Figure 6.26, 337 capital projects are located in an EFA and complete a gap in the bicycle, pedestrian or transit network. (45%).

Figure 6.26: Greater Portland region: Map of RTP constrained project list equity priorities, 2023-2045



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

Shown in Figure 6.26, the RTP constrained project list includes the combined investment of transit capital projects and active transportation projects in equity focus areas reaches nearly \$1.7 billion by 2030 with another nearly \$3.3 billion of additional investment planned by 2045. These types of investments are projects that marginalized and underserved people have identified as a priority through regional community engagement.

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. Projects that have a safety benefit and that are located on or intersect a Regional High-Injury Corridor or Intersection are shown in Figure 6.27.

Safety projects and safety benefit projects are targeted towards the Regional High Injury Corridors and Intersections and in equity focus areas. As shown in Table 6.12, of the 751 capital projects on the RTP constrained list:

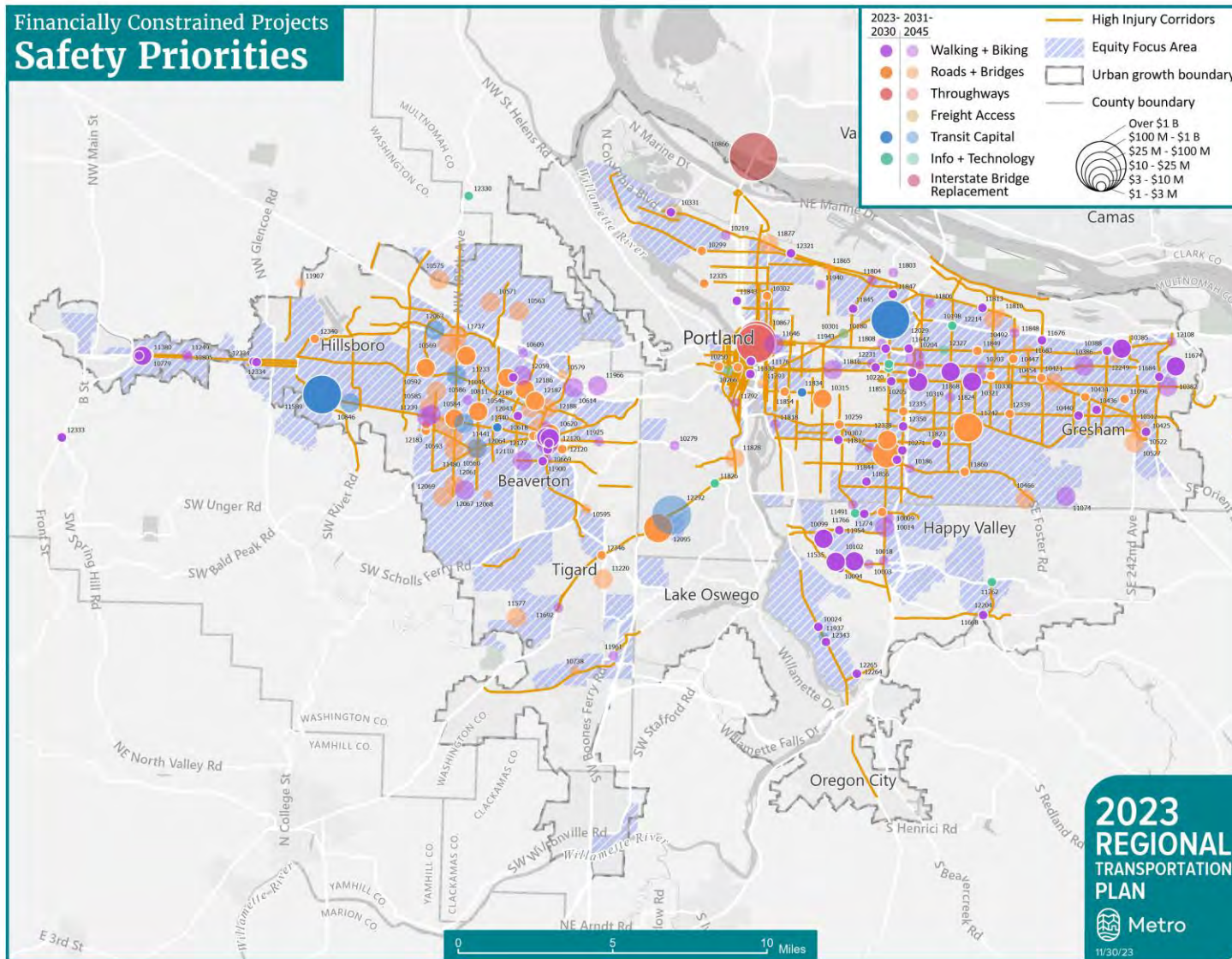
- **Safety Projects.** Across the short-term and long-term constrained project lists, 478 projects are identified as safety or safety benefit projects. Those projects identify reducing fatal and severe injury crashes or reducing minor/non-injury crashes as the primary purpose of the project. Nearly 50 percent of these safety benefit projects are located on a high injury corridor or intersection.
- **Programs that impact safety.** In addition to capital projects, the regional Safe Routes to School, Transit Oriented Development and Transportation System Management and Operations programs provide safety benefits.

Table 6.12: Summary of RTP constrained list safety benefit projects

Safety benefit Projects and Programs	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
Projects that help reduce serious traffic crashes or address other safety issues	214	264
Number of safety benefit projects on a High Injury Corridor*	114	125
Number of safety benefit projects in Equity Focus Areas*	114	125
<i>Estimated capital cost</i> in YOE dollars	\$3.4 billion	\$9.3 billion

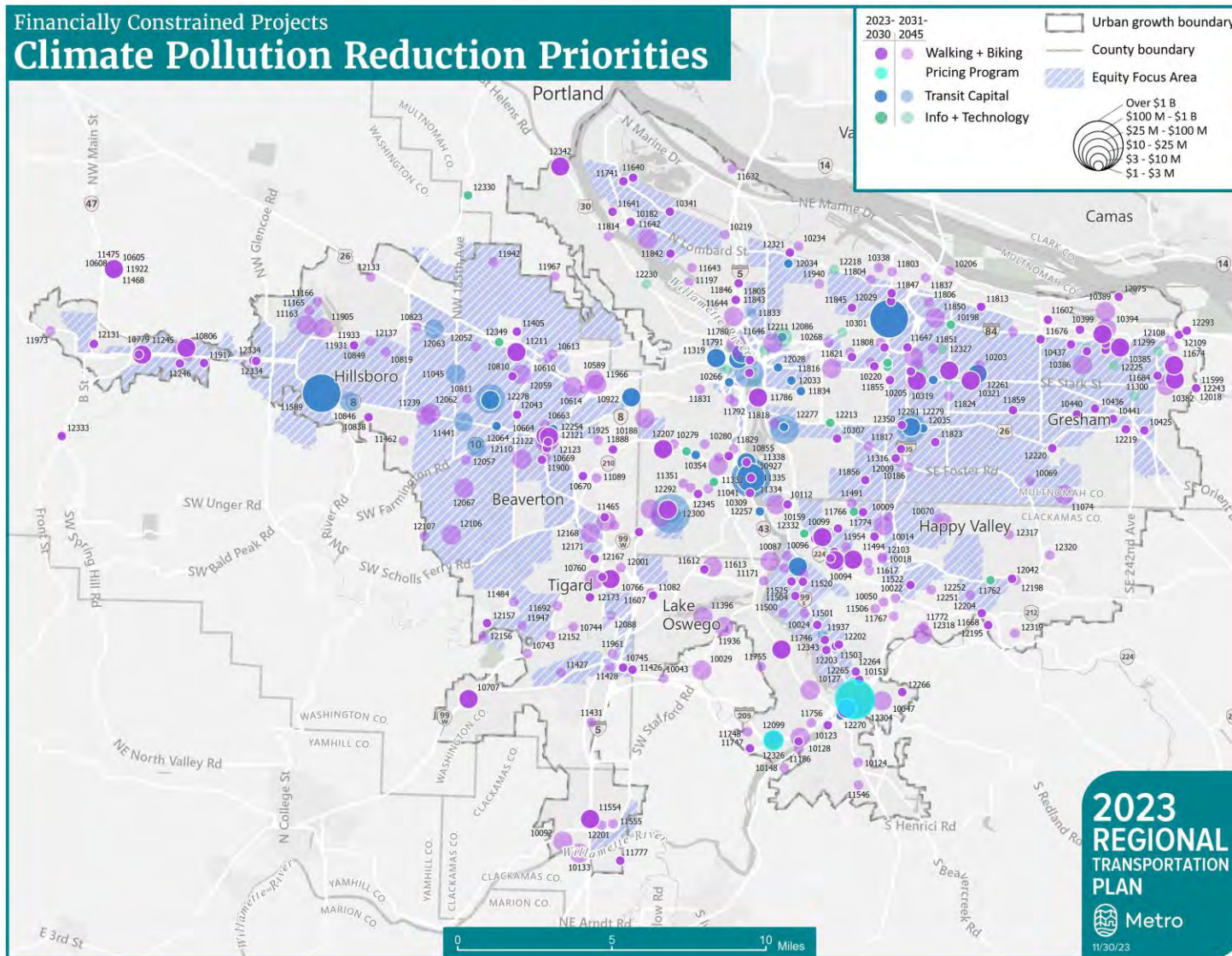
*Does not include projects that are programmatic or are not geographically specific.

Figure 6.27: Greater Portland region: Map of RTP constrained project list safety priorities, 2023-2045



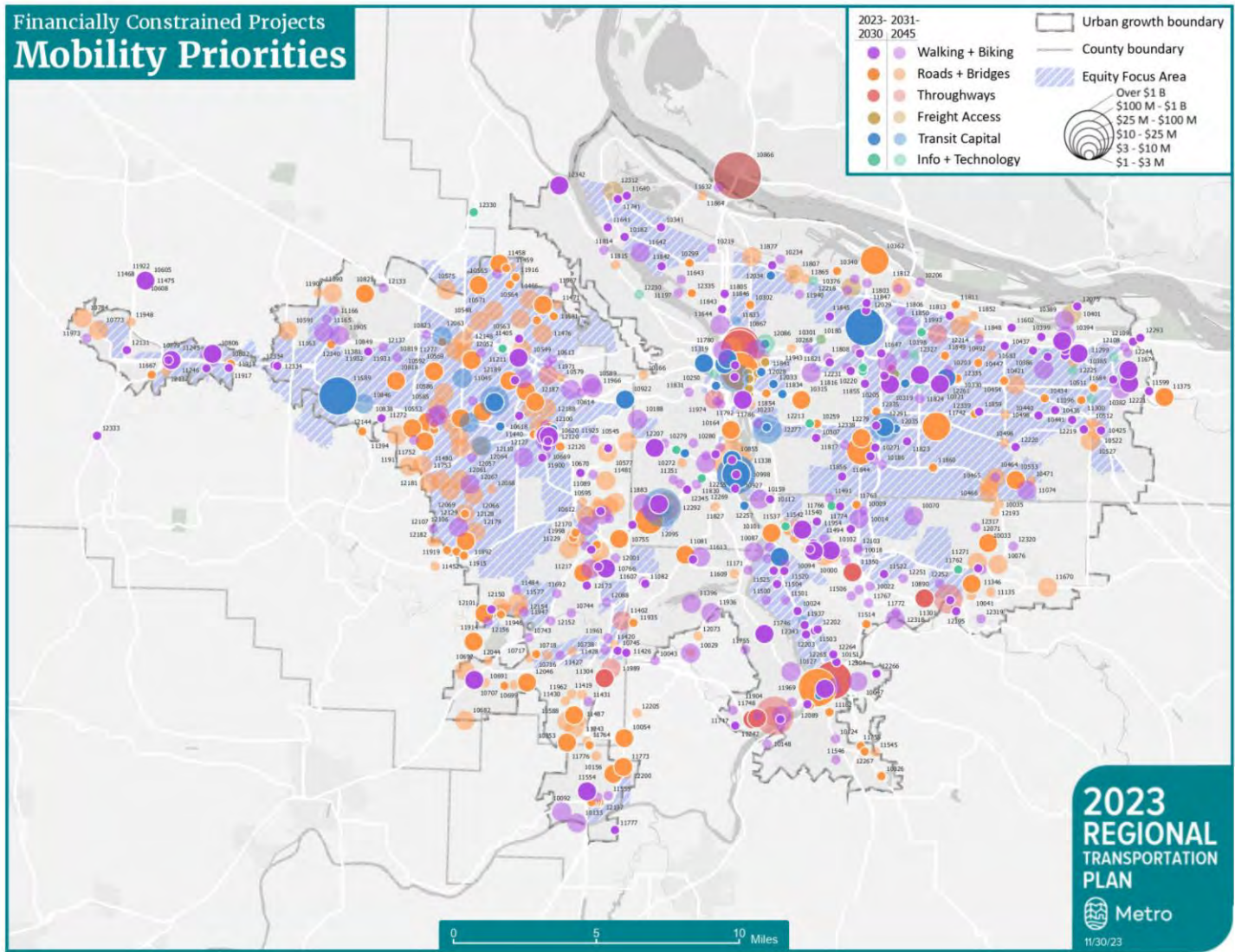
To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

Figure 6.28: Greater Portland region: Map of RTP constrained project list climate pollution reduction priorities, 2023-2045



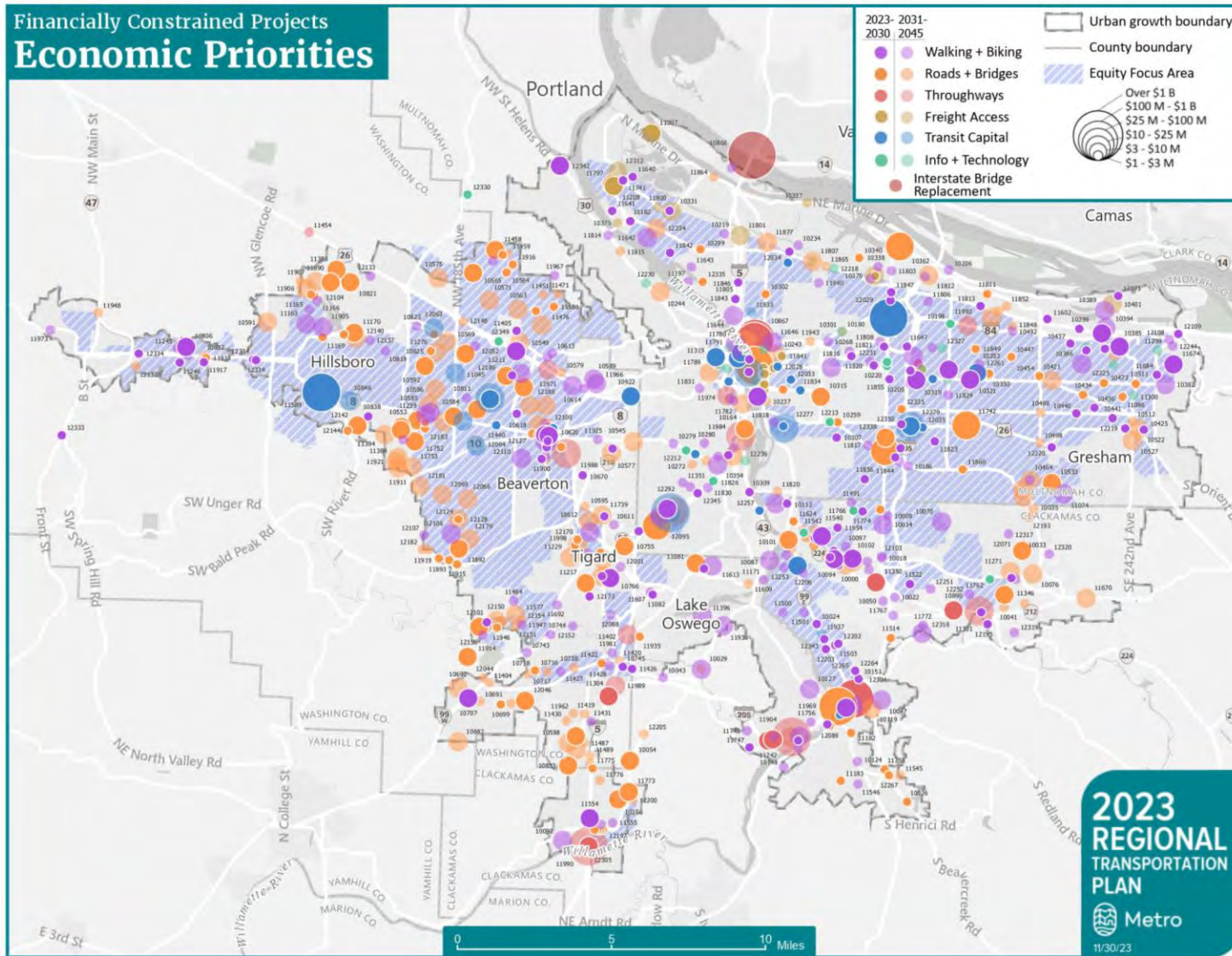
To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

Figure 6.29: Greater Portland region: Map of RTP constrained project list mobility priorities, 2023-2045



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

Figure 6.30: Greater Portland region: Map of RTP constrained project list economic development priorities, 2023-2045



To access an interactive online map of the RTP projects, visit oregonmetro.gov/rtp or click on the QR code above.

6.3.13 Climate pollution reduction priorities

The RTP reflects a regional commitment to meet state mandated greenhouse gas emissions reduction targets that ensure the region helps Oregon reach ambitious goals to cut transportation emissions. The capital projects identified in Figure 6.27 implement high- or medium-impact climate pollution reduction strategies adopted in the region’s Climate Smart Strategy, including improving transit and active transportation connections to destinations and investing in transportation system management and operations (TSMO) and transportation demand management (TDM) programs described earlier. The 2023 RTP is first to include roadway pricing, a state-led action identified in the Oregon Statewide Transportation Strategy for reducing greenhouse gas emissions. The pricing projects in the RTP aim to manage demand, reduce greenhouse gas emissions and help finance new transportation projects.



Source: Climate Smart Strategy Phase 1 Findings Report (2012)

6.3.14 Mobility priorities

The RTP aims to provide people and businesses with affordable, convenient, sustainable, and safe connections to destinations. This includes completing gaps in regional walking, biking, transit, motor vehicle and TSMO networks and project designs that include TSMO elements or ADA- pedestrian-, bicycle-, or transit-supportive design elements. Projects that complete regional network gaps described earlier and include priority multimodal design elements are shown in Figure 6.29.

6.3.15 Economic development priorities

The RTP supports the economy by connecting workers to jobs, connecting employers to the talent that they need and moving goods around the region. Projects that are located in areas planned for future growth, including the region’s 2040 centers, station communities, industrial areas, employment areas and urban growth boundary expansion areas and that have higher than average job activity are shown in Figure 6.30.

6.3.16 Transit operations and maintenance costs

Table 6.13: Summary of RTP constrained list transit operations and maintenance projects

Transit operations and maintenance	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
Examples of operating services	SMART Service to Clackamas Town Center and Oregon City	New bus service Columbia to Clackamas
Examples of maintenance and operations projects	Preventative maintenance and rehabilitation for fleet vehicles, equipment and facilities, bus replacements and other services to keep system in good repair and support bus and rail growth.	Preventative maintenance and rehabilitation for fleet vehicles, equipment and facilities, bus replacements and other services to keep system in good repair and support bus and rail growth.
<i>Estimated cost</i> in YOE dollars	\$6.58 billion	\$19.59 billion

Note: See Appendix A for the list of programmatic buckets in the RTP constrained project list.

See Figure 6.18 and Figure 6.19 to view maps of near-term and long-term planned transit service.

6.3.17 Throughway, roads and bridges operations and maintenance costs

Table 6.14: Summary of RTP constrained list throughway, roads and bridges operations and maintenance projects

Throughway, roads and bridges maintenance	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)
Level of maintenance	Some maintenance backlogs grow	Adequately meet maintenance and preservation needs
Types of maintenance projects	Bridge and road pavement resurfacing, preventative maintenance, preservation and rehabilitation that do not add motor vehicle capacity	Bridge and road pavement resurfacing, preventative maintenance, preservation and rehabilitation that do not add motor vehicle capacity
<i>Estimated cost</i> in YOE dollars	\$3.92 billion	\$11.37 billion

Note: See Appendix A for the list of programmatic buckets in the RTP constrained project list.

6.4 STRATEGIC PROJECT LIST

The RTP Strategic Project List costs shown in Table 6.15 provide additional context about magnitude of the region’s transportation needs. The RTP Strategic project list reflects additional policy-driven needs and project priorities that exceed the region’s projected funding – reflecting more than \$22 billion in additional investment capital projects and programs.

Table 6.15: Estimated costs for RTP Constrained and Strategic Project Lists (in YOES)

RTP Capital Costs	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)	Long-term Strategic List (2031-2045)
I-5 Interstate Bridge Replacement Program	--	\$6 billion	--
Transit capital	\$1.58 billion	\$3.07 billion	\$11.76 billion
Throughways (includes tolling)	\$2.58 billion	\$2.92 billion	\$2.32 billion
Roads and bridges	\$3.05 billion	\$4.36 billion	\$4.13 billion
Freight access	\$74 million	\$307 million	\$155 million
Walking + Biking	\$1.05 billion	\$2.12 billion	\$3.16 billion
Information and Technology	\$180 million	\$392 million	\$132 million
Total estimated cost in YOE dollars	\$8.57 billion	\$19.30 billion	\$22.03 billion
RTP Operations and Maintenance Costs	Near-term Constrained List (2023-2030)	Long-term Constrained List (2031-2045)	Long-term Strategic List (2031-2045)
Transit operations and maintenance	\$6.58 billion	\$19.58 billion	not available
Roads and throughways operations and maintenance	\$3.92 billion	\$11.37 billion	not available
Total estimated cost in YOE dollars	\$19.07 billion	\$50.25 billion	not available

Costs have been rounded and are in year-of-expenditure dollars. Estimated operations and maintenance costs for the strategic project list could not be fully accounted for.

Capital projects and programs identified in the RTP Strategic list are not described in this chapter because funding has not yet been identified. Information about the costs to adequately operate and maintain the transportation system that would result from implementation of the strategic projects and programs was also not available.

As noted previously, the RTP constrained list of projects can be found in Appendix A. The RTP Strategic list of projects can be found in Appendix B. An interactive online map of all projects can be viewed at www.oregonmetro.gov/rtp or by clicking on the QR code in with a mobile device or pointer.

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