Agenda

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

Meeting:	Metro Technical Advisory Committee (MTAC)
Date:	Wednesday, July 20, 2022
Time:	10:00 a.m. to 11:30 a.m.
Place:	Virtual meeting held via Zoom
	Connect with Zoom Passcode: 769097 Phone: 888-475-4499 (Toll Free)

10:00 a.m. **Call meeting to order, Declaration of Quorum and Introductions** — Chair Kloster

10:10 a.m. **Comments from the Chair and Committee Members**
- Updates from committee members around the Region (all)
- Fatal crashes update (Lake McTighe)
- Climate Expert Panel Report from June 22 (Kim Ellis)

10:20 a.m. **Public communications on agenda items**

10:25 a.m. **Consideration of MTAC minutes, May 18, 2022 (action item)** — Chair Kloster

10:30 a.m. **Title 11 Concept Planning project update: Sherwood West** — Kate Rogers, MIG; Joe Dills, MIG
Purpose: Provide an update on the concept planning process for the Sherwood West urban reserve area.

11:00 a.m. **Introduction to the High Capacity Transit Strategy update for the 2023 Regional Transportation Plan (RTP)** — Ally Holmqvist, Metro
Purpose: Provide an introduction on the work plan and how it fits in with past, current, and upcoming work by Metro and partners. Provide feedback on the developing engagement strategy, issues to address in the policy framework, and additional outcomes members would like to see from this work. Preview the core criteria for identifying and evaluating new high capacity transit corridors and next steps for updating the network vision.

11:30 a.m. **Adjournment** — Chair Kloster

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សេចក្តីជូនដំណឹងអំពីការមិនរើសអើងរបស់ Metro

ការគោរពសិទ្ធិពលរដ្ឋរបស់ ។ សំរាប់ព័ត៌មានអំពីកម្មវិធីសិទ្ធិពលរដ្ឋរបស់ Metro ឬដើម្បីទទួលពាក្យបណ្តឹងរើសអើងសូមចូលទស្សនាគេហទំព័រ www.oregonmetro.gov/civilrights។
បើលោកអ្នកត្រូវការអ្នកបកប្រែភាសានៅពេលអង្គប្រជុំសាធារណៈ សូមទូរស័ព្ទមកលេខ 503-797-1700 (ម៉ោង 8 ព្រឹកដល់ម៉ោង 5 ល្ងាច ថ្ងៃធ្វើការ) ប្រាំពីរថ្ងៃថ្ងៃធ្វើការ មុនថ្ងៃប្រជុំដើម្បីអាចឲ្យគេសម្រួលតាមសំណើរបស់លោកអ្នក ។

إشعار بعدم التمييز من Metro

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Notificación de no discriminación de Metro

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Metro txoj kev ntxub ntxaug daim ntawv ceeb toom

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2022 Metro Technical Advisory Committee (MTAC) Work Program
As of 7/12/2022

July 20, 2022 – 10 am – 11:30 am Comments from the Chair • Committee member updates around the region (Chairman Kloster and all) • Fatal Crashes Update (Lake McTighe) • Climate Expert Panel Report from June 22 (Kim Ellis) Agenda Items • Title 11 Concept Planning project update: Sherwood West (Kate Rogers and Joe Dills, MIG, 30 min) • Introduction to the High Capacity Transit Strategy Update for the 2023 RTP (Ally Holmqvist, Metro, 30 min)	**August 17, 2022 – MTAC/TPAC Workshop** **9:00 am – noon** Agenda Items • Regional Mobility Policy: Draft Recommendations (Kim Ellis, Metro/ Glen Bolen, ODOT/ Susie Wright, Kittelson & Associates; 3 hours)
September 21, 2022 – 10 am – noon Comments from the Chair • Committee member updates around the region (Chairman Kloster and all) • Fatal Crashes Update (Lake McTighe) Agenda Items • High Capacity Transit Strategy Update: Network Vision (Ally Holmqvist, Metro, 45 min) • Regional Mobility Policy: Draft Recommendations (Kim Ellis, Metro/ Glen Bolen, ODOT/ Susie Wright, Kittelson & Associates; 30 min) • RTP Congestion Pricing Policy Development (Metro) and Oregon Highway Plan Tolling Policy Amendment and Low Income Toll Report (ODOT) (Alex Oreschak, Metro/ Garet Prior, ODOT, 45 min) • Regional Transportation Needs Assessment Findings (Eliot Rose, Metro, 30 min)	**October 19, 2022 – MTAC/TPAC Workshop** **9:00 am – noon** Agenda Items • Climate Smart Strategy Update (Kim Ellis, Metro; 60 min.) • Regional Freight Delay & Commodities Movement Study (Tim Collins/Kyle Hauger, Metro; 60 min)
November 16, 2022 – 10 am – noon Comments from the Chair • Committee member updates around the region (Chairman Kloster and all) • Fatal Crashes Update (Lake McTighe) Agenda Items • RTP Call for Projects Approach (Kim Ellis, Metro; 30 min.) • *Climate Smart Strategy Update (Kim Ellis, Metro; 60 min.)*	**December 21, 2022 – MTAC/TPAC Workshop** **9:00 am – noon** Agenda Items • *2024 Growth Management Decision work program (Ted Reid, 60 min)*

Parking Lot/Bike Rack: Future Topics (These may be scheduled at either MTAC meetings or combined MTAC/TPAC workshops)

- DLCD Climate Friendly & Equitable Communities Rulemaking (Kim Ellis, Metro)
- SW Corridor Updates and Equity Coalition (Brian Harper, Metro and others?)
- Status report on equity goals for land use and transportation planning
- Regional city reports on community engagement work/grants
- Regional development changes reporting on employment/economic and housing as it relates to growth management
- Update report on Travel Behavior Survey
- Updates on grant funded projects such as Metro's 2040 grants and DLCD/ODOT's TGM grants. Recipients of grants.
- Transit-Oriented Development (TOD) annual report/project profiles report
- Reports from regional service providers affecting land use and transportation, future plans
- Best Practices and Data to Support Natural Resources Protection
- Employment & industrial lands (Jeff Raker?)
- 2040 grants highlights update
- Tigard's Washington Square Project (2040 Grant?)
- 2024 UGB cycle

For MTAC agenda and schedule information, e-mail marie.miller@oregonmetro.gov
In case of inclement weather or cancellations, call 503-797-1700 for building closure announcements.

Memo

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

Date: July 1, 2022

To: Transportation Policy Advisory Committee (TPAC), Metro Technical Advisory Committee (MTAC) and interested parties

From: Lake McTighe, Regional Planner

Subject: June 2022 Report - Traffic Deaths in the three counties

The purpose of this memo is to provide a monthly update to TPAC, MTAC and other interested parties on the number of people killed in traffic crashes in Clackamas, Multnomah and Washington Counties in 2022. [1]

In June, six people died in traffic crashes in in the region. Five in Multnomah County, one in Clackamas County and one in Washington County. So far this year, 57 people have been killed in traffic crashes, an average of 3 people every day. Nearly half of the traffic deaths (25) have been people walking or in a wheelchair.

There are typically several factors that contribute to the seriousness of crashes. These include speed, driver behavior, roadway design, visibility, and vehicle size; when crashes occur at higher speeds and/or when larger vehicles are involved there is a greater likelihood of the crash being serious.

Traffic crash deaths in Clackamas, Multnomah and Washington Counties
Source: ODOT preliminary crash report as of 6/29/22, and police and news reports

Fatalities	Name, age	Mode(s) of travel	Roadway	County	Date
57					
1	Robert Hunker, 57	motorcycling	NE Kerkman Rd	Washington	6/22
1	Unidentified woman	driving	NE Columbia Blvd & NE Alderwood Dr	Multnomah	6/16
1	James Sheehan, 57	motorcycling	Hwy 99E	Clackamas	6/15
1	Maksim Mishuk, 24	motorcycling	I-84/ NE Fairview Pkwy & 207th	Multnomah	6/13
1	Shana Keplinger, 32	wheelchair (pedestrian)	NE 162nd near NE Glisan St	Multnomah	6/11
1	Unidentified	walking	NE Glisan St & NE 100th Ave	Multnomah	6/7
1	Unidentified	walking	82nd Ave & Se Center St	Multnomah	6/6
1	Unidentified person	driving	NE102nd Ave just south of NE Prescott St., Portland	Multnomah	5/31
1	Unidentified woman	driving	US 30/NW Yeon Ave, Portland	Multnomah	5/27
1	Bianca Ceperich, 16	driving	New Era Rd	Clackamas	5/20
1	Gwendolyn E. Brake, 83	walking	Molalla Ave & Warner Milne Rd	Clackamas	5/6
1	Unidentified person	motorcycling	US 26 Mt Hood Hwy	Multnomah	5/14

[1] Metro develops this memo using fatal crash information from the Preliminary Fatal Crash report provided by the Oregon Department of Transportation (ODOT) Transportation Data Section/Crash Analysis and Reporting Unit, as well as news and police reports. See the Oregon Daily Traffic Toll for additional information on ODOT data.

Fatalities	Name, age	Mode(s) of travel	Roadway	County	Date
1	Unidentified person, 52	walking	I5-Ramp to Morrison Bridge, Portland	Multnomah	5/8
1	Shane Johnson, 43	motorcycling (e-dirt bike)	SE Powell/SE 50th, Portland	Multnomah	5/4
1	Tufa Shuka, 41	driving	Gaffney Ln & Berta Dr, Oregon City	Clackamas	5/4
1	David Carl Paulsen, 36	motorcycling	SE 208th Ave & SE Stark St, Portland	Multnomah	5/3
1	Joseph Dubois, 44	driving	Hwy 30, just south of St. John's Bridge, Portland	Multnomah	4/30
1	Andrew Michael Bachman, 21	driving	N Columbia Blvd & N Peninsular Ave, Portland	Multnomah	4/30
2	Matthew Amaya, 17 and Juan Pacheco Aguilera, 16	driving	SW Tualatin Valley Hwy and SW Murray Blvd	Washington	4/27
1	Wendy Falk, 52	driving	Hwy 211 near Eagle Creek	Clackamas	4/14
1	Luis Angel Sanchez-Gutierrez, 23	walking (skateboarding)	Tualatin Valley Hwy & SW 198th Ave	Washington	4/19
1	Michael Philip Frainey, 52	walking	SW Barrows Rd/ SW160th St	Washington	4/11
1	Angela C. Boyd, 47	walking	SE Powell Blvd/SE 47th Ave	Multnomah	4/4
1	Michael Scott Fields, 64	driving	Washington St & Agnes Ave	Clackamas	3/22
1	Catherine M Jarosz, 70	walking	SW Hall Blvd & SW Farmington Rd	Washington	3/15
1	Unidentified	bicycling	SW Rood Bridge Rd & SW Burkhalter Rd	Washington	3/15
1	Donald William Sharpe, 24	driving	S Springwater Rd Nnear S Spring Creek Rd	Clackamas	3/3
1	Unidentified man	walking	NE Marine Dr and NE 148th Ave	Multnomah	3/25
1	James Martin, 35	motorcycling	N Vancouver Ave & NE Columbia Blvd.	Multnomah	3/24
1	Raymond M. McWilliams, 58	wheelchair	NE Vancouver Way & NE Gertz Road	Multnomah	3/18
1	Karen R. Kain, 57	walking	SW Hall Blvd & SW Lucille Ct.	Washington	3/4
1	Laysea Mykal Liebenow, 22	driving	US 30 Lower Columbia River HWY	Multnomah	3/7
1	Unidentified	driving	Hillsboro-Silverton HWY & SW Farmington Rd	Washington	3/6
1	Patrick Heath Bishop, 46	walking	SE Division St	Multnomah	3/3
1	Catherine McGuire Webber, 89	walking	SW Highland Dr & SW 11th St	Multnomah	1/3
1	Anthony Dean Ward, 55	driving	Firwood Rd near Cornog Rd	Clackamas	2/6
1	Clayton Edward Briggs, 48	driving	SE Sunshine Valley Rd	Clackamas	2/12
1	Alexander Lee, 23	walking	I-84	Multnomah	2/17
1	Cedar C. Markey-Towler, 41	walking	SE Foster	Multnomah	2/25
2	Unidentified (Double), 11, 16	walking	SW Edy Rd & SW Trailblazer Pl	Washington	2/20
1	Jade Dominic Pruitt, 51	motorcycling	OR211 Eagle Creek-Sandy HWY & SE Eagle Creek Rd.	Clackamas	2/18

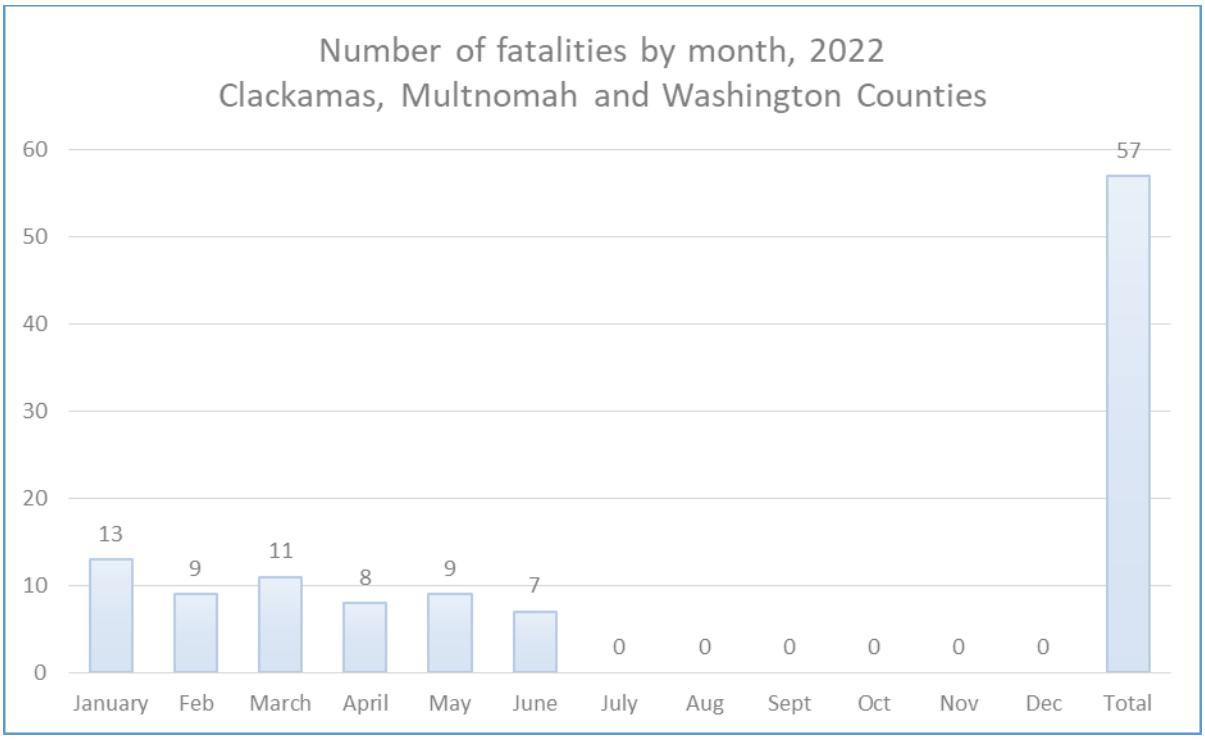
Fatalities	Name, age	Mode(s) of travel	Roadway	County	Date
1	David N Wickham, 43	motorcycling	NE Glisan St. & NE 87th Ave.	Multnomah	2/16
1	Unidentified	motorcycling	I-5	Multnomah	2/5
1	Liam David Ollila, 26	walking	I-5	Multnomah	1/31
1	Duane M Davidson, 56	walking	SE Divison St & SE 101st Ave	Multnomah	1/29
1	Norman Ray Sterach Jr., 34	motorcycling	OR99E	Clackamas	1/28
1	Awbrianna Rollings, 25	walking	US26 SE Powell	Multnomah	1/22
1	Douglas Joseph Kereczman, 40	driving	OR99E SE McLoughlin	Multnomah	1/20
1	Marcos Pinto Balam, 30	walking	OR99E	Clackamas	1/16
1	Unidentified	walking	I-205	Multnomah	1/13
1	Kyle M. Beck, 35	walking	I-5	Multnomah	1/12
1	Mark Wayne Barnette, 60	driving	OR213	Multnomah	1/9
1	Unidentified	walking	NE Alderwood Rd/ NE Cornfoot Rd	Multnomah	1/3
1	Levi S. Gilliland, 33	driving	NE Glisan St & NE 56th Ave	Multnomah	1/3
1	Salvador Rodriguez-Lopez, 34	driving	I-5	Multnomah	1/2

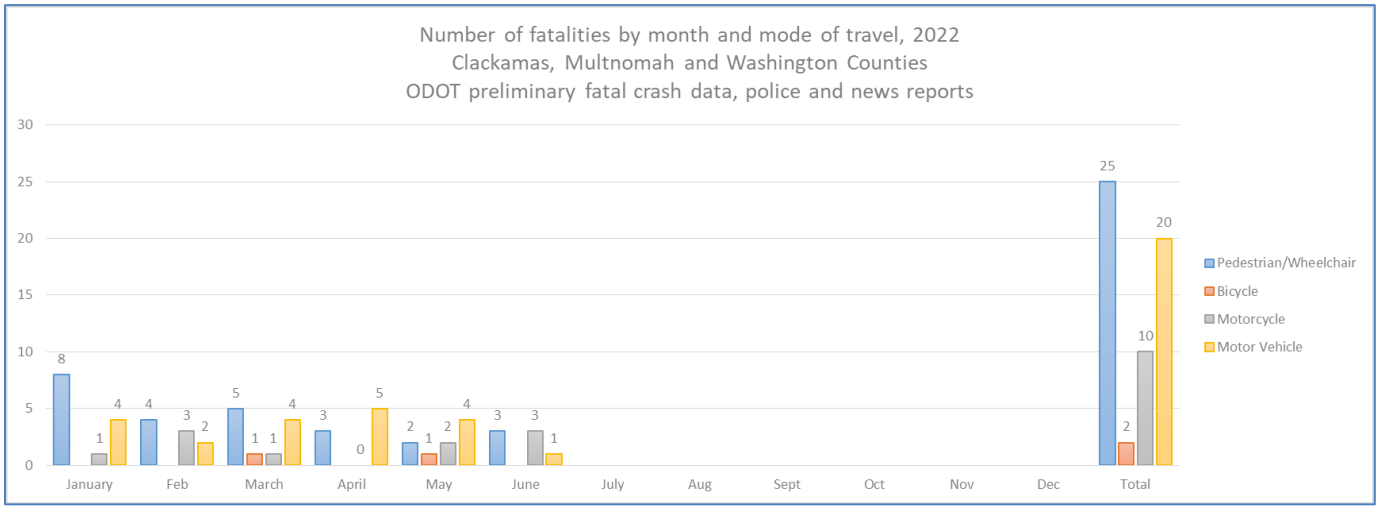
A note on crash data

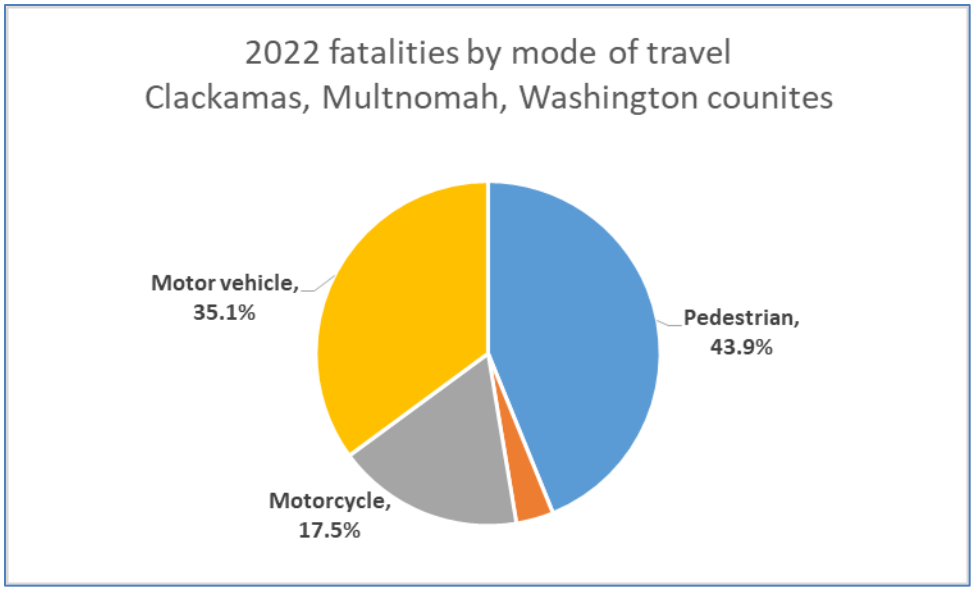
Metro includes the names of traffic crash victims included in this report based on the most recently available traffic crash data compiled by the Oregon Department of Transportation (ODOT), as well as police and news reports. ODOT compiles the official crash record for the state using traffic crash investigations and self-reported information. Metro follows national traffic crash reporting criteria, which the Portland Bureau of Transportation also uses. The criteria excludes people who die under the following circumstances:

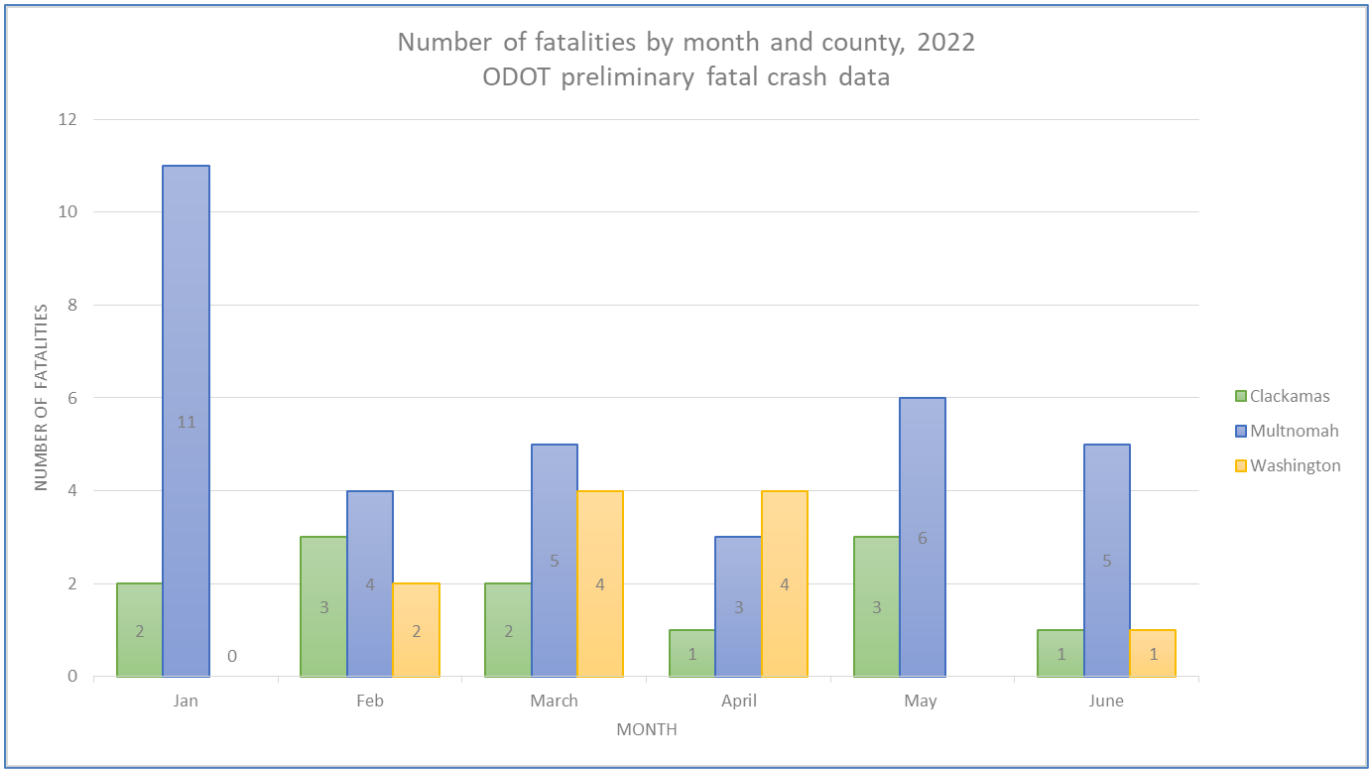
- More than 30 days after a crash,
- Intentionally (suicide),
- In an act of homicide (a person intentionally crashes into another person),
- In a crash not involving a motor vehicle,
- From a prior medical event (e.g. a heart attack or drug overdose), or
- In a crash in a parking lot

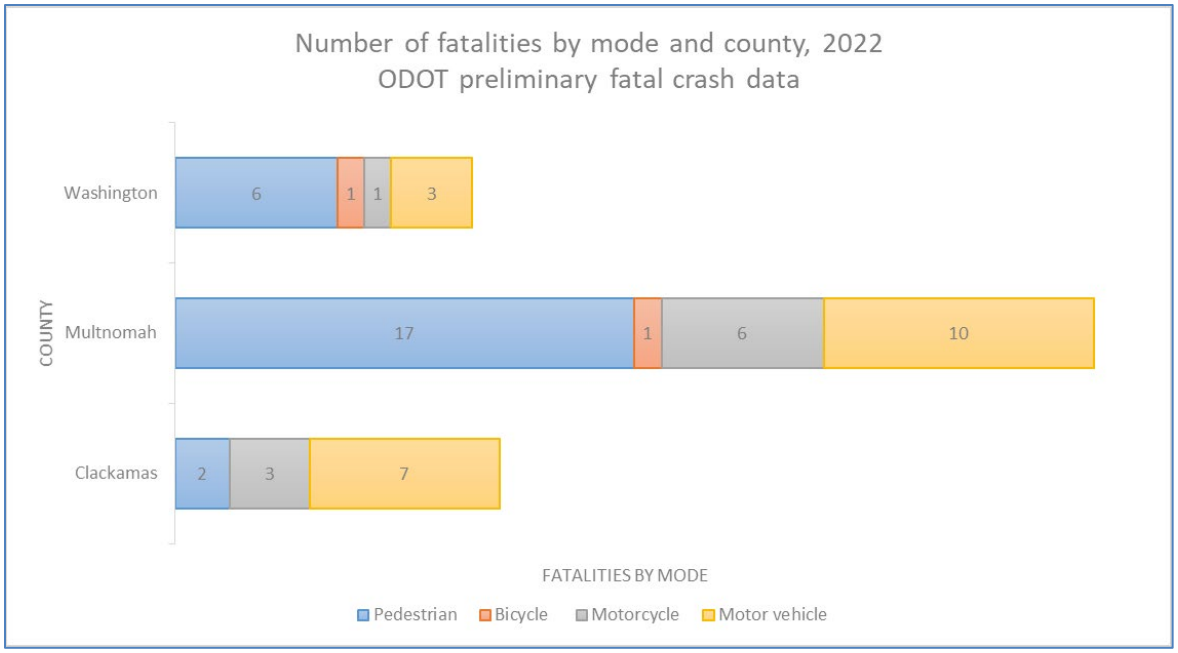
Source for all charts: ODOT preliminary crash report as of 6/29/22 and news and police reports

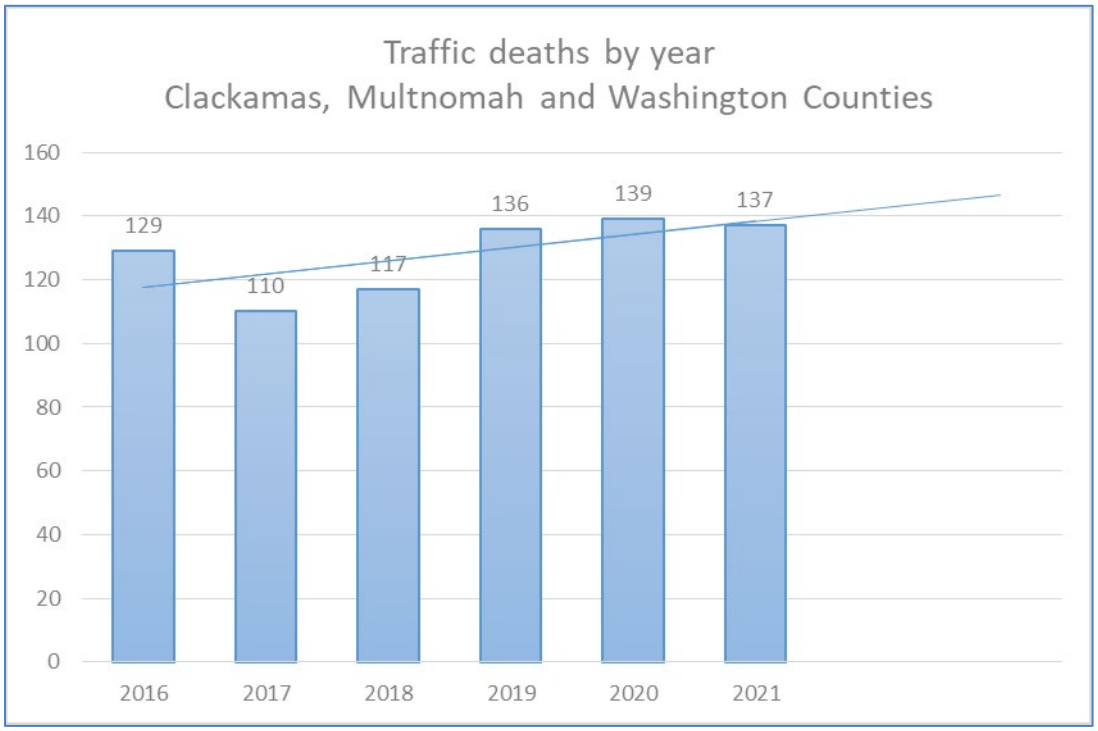

Number of fatalities by month, 2022
Clackamas, Multnomah and Washington Counties
60
50
40
30
20
10
0
13
9
11
8
9
7
0
0
0
0
0
0
57
January
Feb
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec
Total

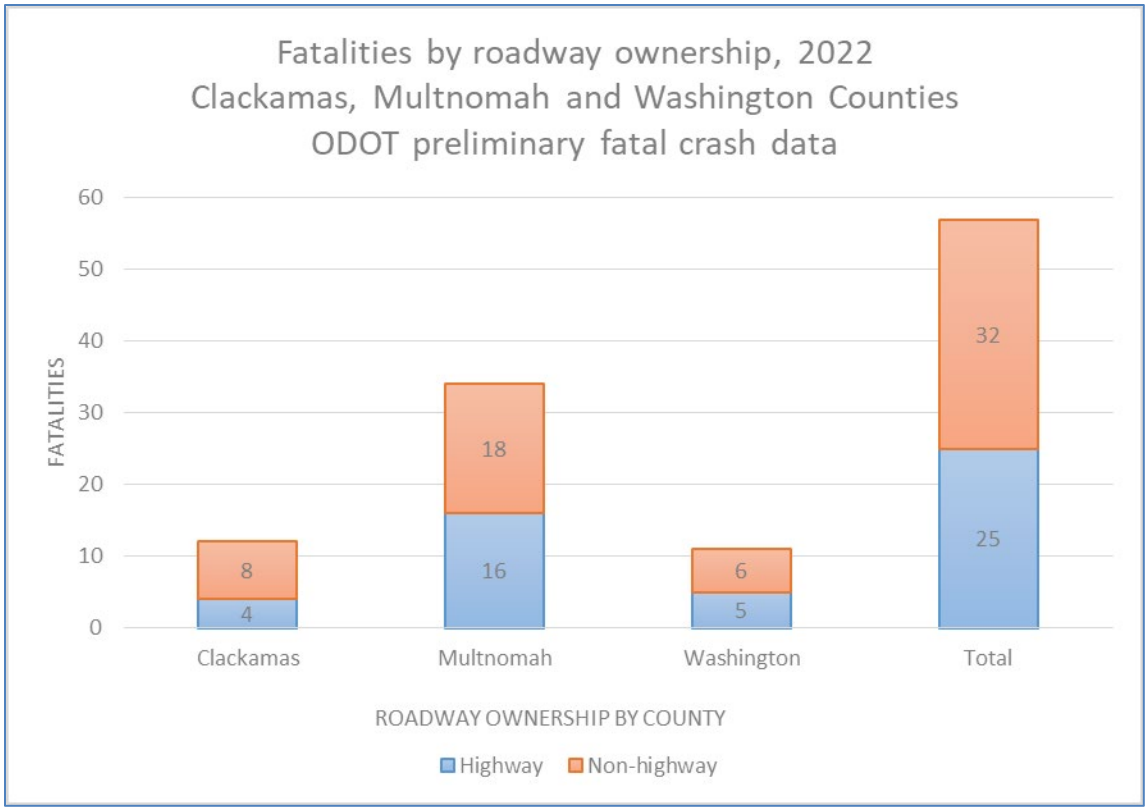

Number of fatalities by month and mode of travel, 2022
Clackamas, Multnomah and Washington Counties
ODOT preliminary fatal crash data, police and news reports
30
25
20
15
10
5
0
January
Feb
March
April
May
June
July
Aug
Sept
Oct
Nov
Dec
Total
Pedestrian/Wheelchair
Bicycle
Motorcycle
Motor Vehicle


2022 fatalities by mode of travel
Clackamas, Multnomah, Washington counites
Motor vehicle, 35.1%
Pedestrian, 43.9%
Motorcycle, 17.5%


Number of fatalities by month and county, 2022
ODOT preliminary fatal crash data
NUMBER OF FATALITIES
MONTH
Jan
Feb
March
April
May
June
Clackamas
Multnomah
Washington
2
11
0
3
4
2
2
5
4
1
3
4
3
6
1
5
1


Number of fatalities by mode and county, 2022
ODOT preliminary fatal crash data
COUNTY
Washington
Multnomah
Clackamas
6
1
1
3
17
1
6
10
2
3
7
FATALITIES BY MODE
Pedestrian
Bicycle
Motorcycle
Motor vehicle


Traffic deaths by year
Clackamas, Multnomah and Washington Counties
160
140
120
100
80
60
40
20
0
129
110
117
136
139
137
2016
2017
2018
2019
2020
2021


Fatalities by roadway ownership, 2022
Clackamas, Multnomah and Washington Counties
ODOT preliminary fatal crash data
FATALITIES
60
50
40
30
20
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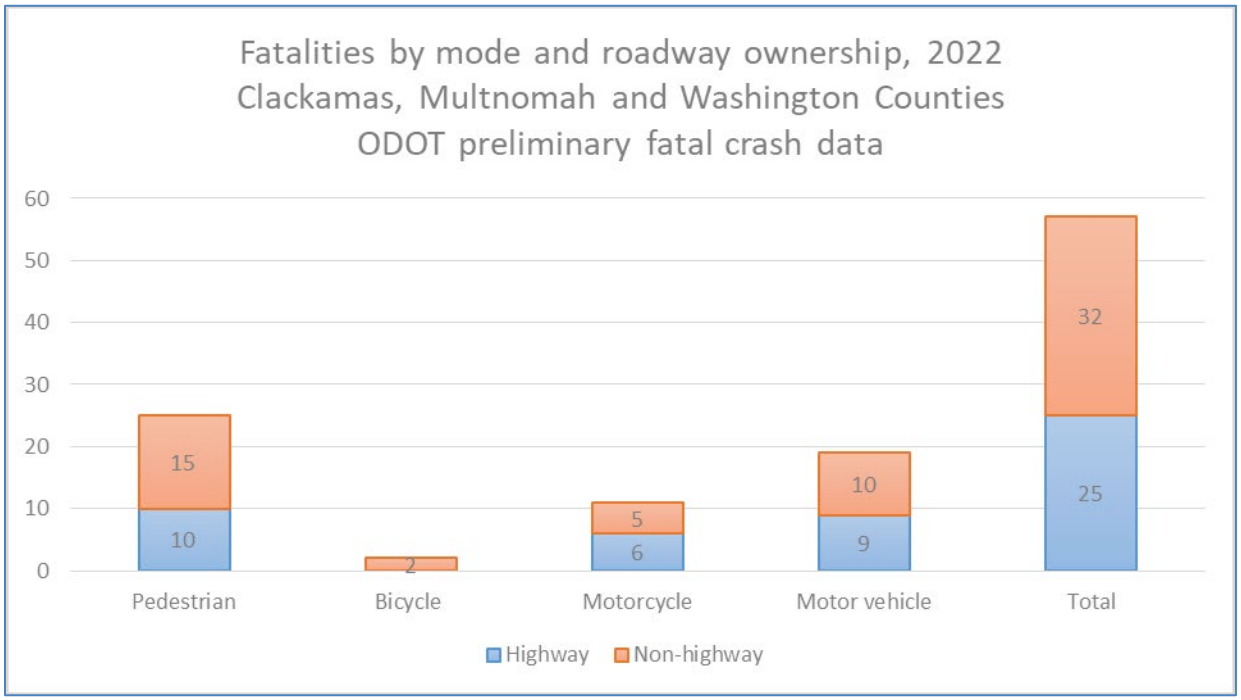
8
4
18
16
6
5
32
25
Clackamas
Multnomah
Washington
Total
ROADWAY OWNERSHIP BY COUNTY
Highway
Non-highway


Fatalities by mode and roadway ownership, 2022
Clackamas, Multnomah and Washington Counties
ODOT preliminary fatal crash data
60
50
40
30
20
10
0
15
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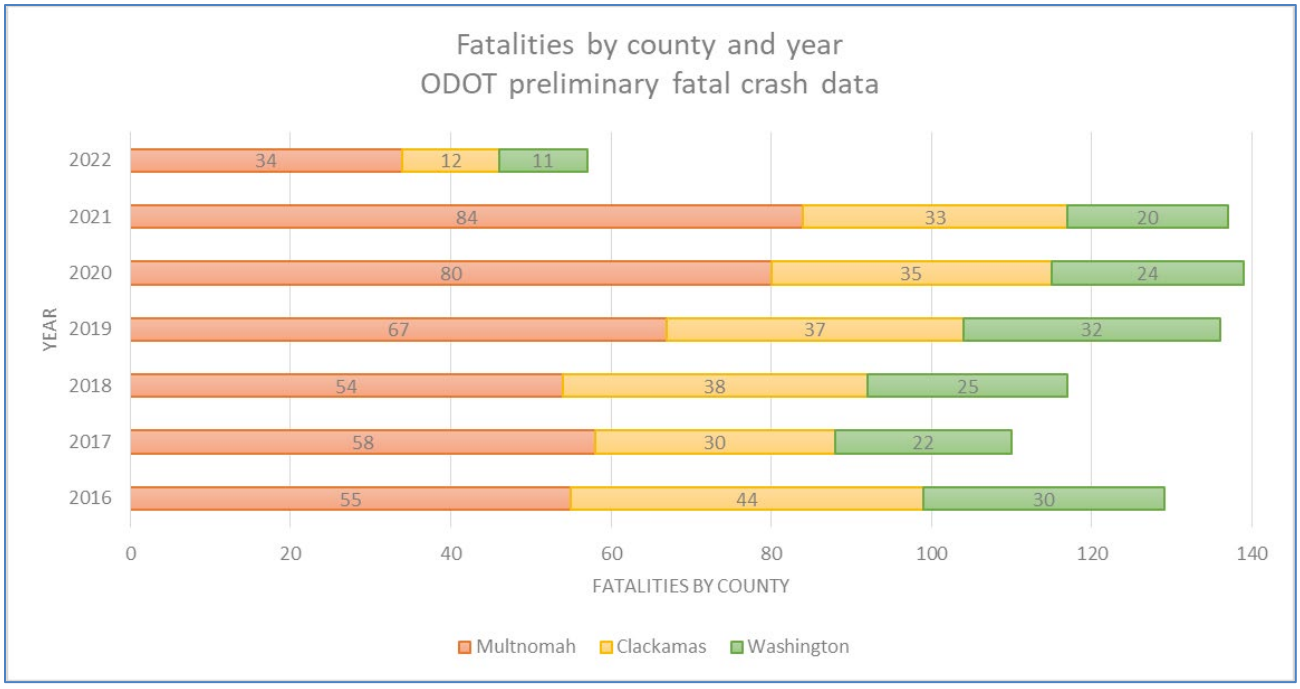
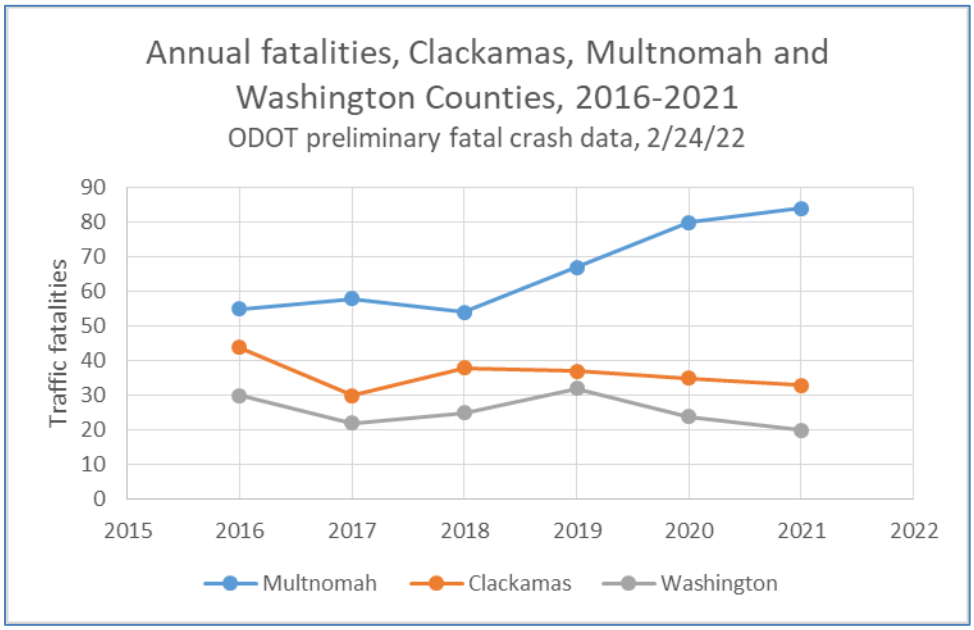
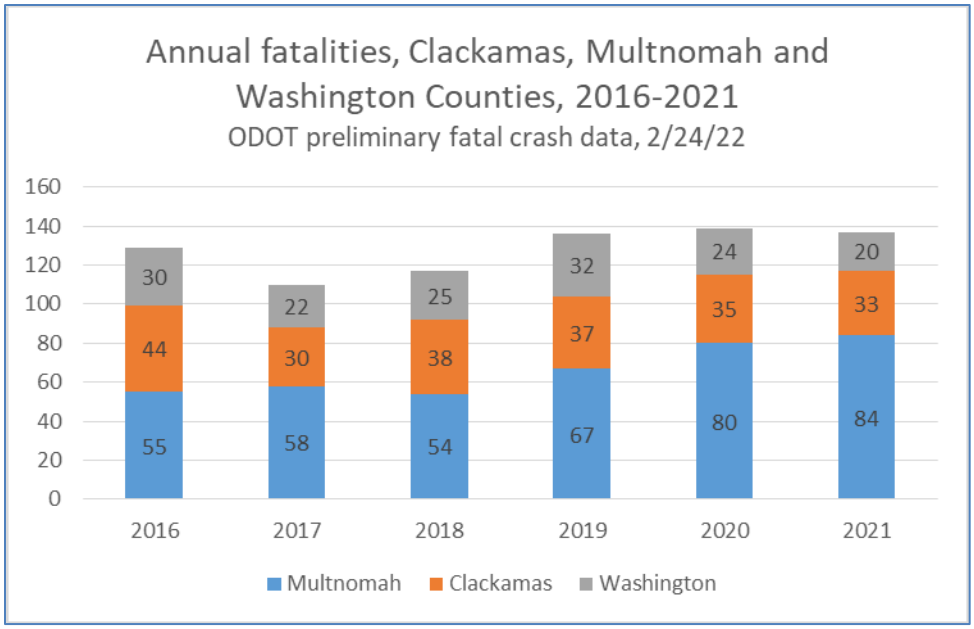
5
6
10
9
32
25
Pedestrian
Bicycle
Motorcycle
Motor vehicle
Total
Highway
Non-highway


Fatalities by county and year
ODOT preliminary fatal crash data
YEAR
2022
2021
2020
2019
2018
2017
2016
34
12
11
84
33
20
80
35
24
67
37
32
54
38
25
58
30
22
55
44
30
0
20
40
60
80
100
120
140
FATALITIES BY COUNTY
Multnomah
Clackamas
Washington


Annual fatalities, Clackamas, Multnomah and Washington Counties, 2016-2021
ODOT preliminary fatal crash data, 2/24/22
Traffic fatalities
90
80
70
60
50
40
30
20
10
0
2015
2016
2017
2018
2019
2020
2021
2022
Multnomah
Clackamas
Washington


Annual fatalities, Clackamas, Multnomah and Washington Counties, 2016-2021
ODOT preliminary fatal crash data, 2/24/22
160
140
120
100
80
60
40
20
0
2016
2017
2018
2019
2020
2021
30
44
55
22
30
58
25
38
54
32
37
67
24
35
80
20
33
84
Multnomah
Clackamas
Washington

Climate and transportation expert panel summary

On June 22, 2022 Metro hosted a panel to learn from national experts about the best practices and tools being used nationally to assess and monitor climate impacts of transportation.

The attached materials capture the panel discussion and provide an easy guide for those interested in learning what was discussed. A full video recording of the panel discussion is available: https://vimeo.com/manage/videos/723107656/16bc305fea

1. Agenda
2. A discussion guide with timestamps from the video recording indicating when specific questions were asked of the panelists.
3. A summary of the panel discussion
4. Background materials:
    - Background on Climate Action in Oregon and the Greater Portland Region's Climate Smart Strategy
    - Background on Use of Vision Eval and Key Transportation Assumptions for Climate Smart Strategy Proxy
    - Metro Modeling Overview

Agenda

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

Meeting:	Climate and transportation expert panel
Date:	June 22, 2022
Time:	7:30 am – 10:00 a.m.
Place:	Zoom webinar. Register: https://us02web.zoom.us/webinar/register/WN_BYx9mF6gTWymXUr1Q-vqdA

Objectives:

- Learn from national experts about the best practices and tools they are using to assess and monitor climate impacts at the system, corridor and project levels, including the known strengths and limitations of the tools being used to inform VMT and GHG reduction strategies and monitor progress toward adopted VMT and GHG reduction targets.
- Ask for feedback and gain insight on modeling and monitoring practices currently being used and considered by Metro, including the opportunities to improve Metro's current approach.
- Build a shared understanding of what the 2023 RTP is expected to demonstrate in terms of VMT and GHG performance in response to Executive Order 20-04 and the statewide Climate-Friendly and Equitable Communities rulemaking.
- Set the foundation for a collaborative regional approach to reducing transportation's impact on climate change by convening agency and community partners to inform how Metro works with state, regional and local partners to meet adopted VMT and GHG reduction targets.

Panelists

- Kyung-Hwa Kim, Performance Analysis and Monitoring Manager at the Atlanta Regional Commission
- Eric Sundquist, Sustainability Advisor; SB 743 Program Manager, California Department of Transportation
- Shoshana M. Lew, Executive Director, Colorado Department of Transportation
- Rebecca White, Director, Division of Transportation Development, Colorado Department of Transportation
- Susan Handy, Professor of Environmental Science and Policy and Director of the National Center for Sustainable Transportation at the University of California, Davis
- Dan F.B. Flynn, Data Scientist, U.S. Department of Transportation Volpe Center

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over

AGENDA

7:30 – 8:10 a.m. **Welcome and introductions**

- Welcome (Margi Bradway, Moderator)
- Opening remarks (Metro Councilor Gonzalez)
- Presentation: Overview of state and regional climate policies and strategies and Metro's modeling and monitoring toolbox (Metro staff)
- Panelist introductions (Panelists)

8:10 – 9:05 a.m. **Expert panel discussion**

The moderator will facilitate a discussion with the expert Panel focused on using climate analysis tools for strategy development, evaluation and monitoring and assumptions for the future of electric vehicle technology.

9:05 – 9:10 a.m. **Break**

9:10 – 9:40 a.m. **Facilitated Q&A with Metro Council and JPACT members**

Metro Council and JPACT members will be promoted to "panelists" to ask the panelists questions.

9:40 – 10 a.m. **Expert Panel Final Thoughts & Closing**

Climate and transportation expert panel discussion guide

Date: June 22, 2022
Time: 7:30 – 10:00 a.m. PT
Place: Zoom webinar

Webinar link:
https://vimeo.com/manage/videos/723107656/16bc305fea
Numbers below indicate the time stamp from the webinar.

Panelists and presenters:
Director Shoshana Lew, Executive Director, Colorado Department of Transportation
Director Rebecca White, Division of Transportation Development Director, Colorado Department of Transportation
Erik Sabina, Colorado Department of Transportation
Eric Sundquist, Sustainability Advisor; SB 743 Program Manager, California Department of Transportation
Susan Handy, Professor of Environmental Science and Policy and Director of the National Center for Sustainable Transportation at the University of California Davis
Kyung-Hwa Kim, Performance Analysis and Monitoring Manager at the Atlanta Regional Commission
Dan F.B. Flynn, Data Scientist, U.S. Department of Transportation Volpe Center

Metro Council and JPACT members:
Councilor Juan Garcia Gonzalez
Councilor Christine Lewis
Councilor Shirley Craddick
Councilor Gerritt Rosenthal
Mayor Steve Calloway, City of Hillsboro
Councilor Kathy Hyzy, City of Milwaukie

Presenters and moderator:
Thaya Patton, Senior Researcher and Lead Climate Modeler
Kim Ellis, Principal Transportation Planner, Metro
Margi Bradway, Deputy Director, Planning, Research & Development, Metro; moderator

Expert panel discussion

Margi Bradway, Metro, facilitated a discussion with the panelists. The questions that were asked of panelists answered are noted below.

Timestamp 43.00 What are your processes for conducting the EMTR analysis? What are the tools you are using, and how are they accounting for different factors?
Timestamp 49.00 How does California measure GHG or VMT?
Timestamp 55.20 How does what California is doing contrast with the Colorado approach?
Timestamp 58.28 How does each model help with decision-making?

Timestamp 1.02.23 What are Atlanta's processes and tools and how do they help with decision-making?
Timestamp 1.12.21 How do fleet assumptions fit into analysis at region, state or project level? Where do fuels fit, or don't fit into induced demand analysis? In the study of induced demand, are fleet assumptions held solid or is focus solely on the VMT?
Timestamp 1:18:25 Do MPOs use different approaches and assumptions in modeling related to GHG emissions?
Timestamp 1.23.26 How do you monitor progress?

Metro Council/JPACT discussion

Timestamp 1.36.22 Councilor Hyzy said there is tension around induced demand – what is the best response? What does modelling show that induced demand will do in terms of addressing climate issues and reducing GHGs? How do we, as a region, most effectively think about it?
Timestamp 1.46.24 Margi asked Colorado panelists if they are taking into account induced demand.
Timestamp 1.49.00 Councilor Lewis asked about the effectiveness of modeling GHG at the project level. Are we diverting GHG emissions from a highway to a neighborhood street?
Timestamp 1.54.02 Councilor Lewis asked about getting a level of granularity in a project, or is it only possible once it has gone through NEPA?
Timestamp 1.57.10 Councilor Rosenthal asked if models have been used to identify the impacts of the increase of gas prices. How much GHG reduction could we get if gas prices continue to rise to European rates? Will the increase in gas prices be a significant factor in decreasing GHG?
Timestamp 2.04.57 Mayor Steve Calloway asked at what point is there benefit to adding an auxiliary lane or widening, to increase efficiency and decrease GHG?
Timestamp 2.11.00 Councilor Gonzalez asked if climate modeling is at point as a performance tool where it has done enough to change/alter projects across the country, or is it too new to really model for, so projects that were going to happen, happen anyway? As climate modeling is advancing across the country, how is it impacting, improving or stopping projects?

Summary Notes: Climate and transportation expert panel

Date: June 22, 2022
Time: 7:30 – 10:00 a.m. PT
Place: Zoom webinar

Webinar link:
https://vimeo.com/manage/videos/723107656/16bc305fea
Numbers below indicate the time stamp from the webinar.

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Councilor Juan Garcia Gonzalez
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Mayor Steve Calloway, City of Hillsboro
Councilor Kathy Hyzy, City of Milwaukie
Presenters and moderator:
Thaya Patton, Senior Researcher and Lead Climate Modeler
Kim Ellis, Principal Transportation Planner, Metro
Margi Bradway, Deputy Director, Planning, Research & Development, Metro; moderator

Welcome and Introductions
00.00: Metro Planning, Development and Research Deputy Director Margi Bradway welcomed panelists, guests and Councilor Juan Garcia Gonzalez. She said Metro is working on modeling and policy development for the 2023 Regional Transportation Plan. She began the event by referencing Oregon's state goals on climate and Governor Kate Brown's executive order directing agencies to reduce climate pollution even further. She reviewed the agenda and ground rules.

02.20: Councilor Gonzalez gave opening remarks, noting that over 110 people (this later increased to 156) are in the audience and expressing gratitude to the panelists. He noted that in Oregon, transportation is one of the largest contributors to greenhouse gas emissions. The Regional

Transportation Plan (RTP) outlines all transportation planning over the next 25 years. Metro's climate modeling work is a cornerstone, and the Metro region has a history of collaboration.

Margi invited the panelists to introduce themselves and give a short overview of their work.

05.24: Director Shoshana Lew, Executive Director, Colorado Department of Transportation, began with a history of their policy rulemaking as a requirement. Senate Bill 260 focused on combining traditional investment in roads and bridges while broadening the way they think about it. The bill specifically directs them to think about greenhouse gas emissions and vehicle miles travelled. She stressed the importance of having a big tent to include everyone in the conversation. They held 10 public meetings plus many small meetings, including technical meetings that included modelers. She recommended having regulators be very aware of policy making. They tried to create a rule - conformity policy framework for greenhouse gases related to infrastructure. There have a couple of opportunities to hit the target, and if that doesn't work, there are opportunities for mitigation. It includes all Colorado MPOs and the state. She talked about mitigations. All projects have built into them some form of VRT. Director Rebecca White and Erik Sabina are also in attendance.

14.24: Eric Sundquist, Sustainability Advisor; SB 743 Program Manager, California Department of Transportation said he focuses on implementing legislation as a result of Senate Bill 743,which forces them to look at induced demand in their projects. He showed a slide on induced demand, saying it is unintuitive. He listed three motivations. 1. It is bad for congestion. Studies that review road widenings show they become just as congested as before widening. 2. The impacts - environmental/emissions, safety, noise, equity 3. Widening roads puts a huge burden on maintaining and operating the system. Like other impacts, traffic congestion is measured under California Environmental Quality Act (CEQA). They have to assess project impact, then make changes to the project scope or provide mitigation. They try to avoid the latter as it is costly. Consider a benefit cost ratio.

18.47: Susan Handy, Professor of Environmental Science and Policy and Director of the National Center for Sustainable Transportation at the University of California, Davis works with the state and CalTran to implement its AB 32 policy which puts in place reduction of GHG and also a Senate Bill to reduce Vehicle Miles Traveled (VMT) in urban areas. Strategies include investments in transit, land use policies and bike/pedestrian policies. She mentioned their induced travel calculator and the benefits of active travel projects. She said key themes are to look at empirical evidence and extract from that. Most of work is project level.

21.44: Kyung-Hwa Kim, Performance Analysis and Monitoring Manager at the Atlanta Regional Commission talked about the role of planner and modeler. She uses facts and performance measures. Modelers can provide date to planners explaining if a project is achievable. Modeling describes how to get there but one model will not answer all questions and multiple scales are needed.

25.30: Dan F.B. Flynn, Data Scientist, U.S. Department of Transportation Volpe Center, said he supports the VisionEval tool which evaluates the impacts of potential policies and looks at performance metrics such as GHG from transportation. It can be used at a higher strategic level.

27.00: Margi introduced Metro's Kim Ellis, Principal Transportation Planner and Thaya Patton, Senior Researcher and Lead Climate Modeler. Kim presented on Metro's Climate Smart Strategy.

34.50: Thaya Patton presented on Metro's Climate Analysis Toolbox.

Expert Panel Discussion

43.00: Margi opened the discussion with two questions:
What are your processes for conducting the EMTR analysis?
What are the tools you are using, and how are they accounting for different factors?

Daniel Flynn said he develops and promotes the modeling tools at the Volpe Center, which is part of the US Department of Transportation. Volpe Center is a fee for service in-house consultancy that works with the Federal Highway Administration Office of Planning that developed the GreenSet model, which then was developed into VisionEval. He supports users of the model. It is in between more detailed models and has components that interact with land use at regional levels and has the features of a sketch model, for example determining the range of uncertainty given policy choices. It is good at estimating VMT at the regional level and at a more granular level, including within census tracks. It is not a project level analysis tool. He showed a slide illustrating VisionEval.

49.00: Margi turned to Eric Sundquist, asking how they measure GHG or VMT. He explained the GHG measurement comes out of the conformity setting. With VMT, they use other tools such as …He talked about VMT and where it departs from GHG. If demand models were great, it is laborious, project by project and for some, impossible. There are no transportation land use models. If area was big enough, he said you would still have to create a new no-build land use area. Doing project by project is very laborious. They have opted for a more targeted assessment that uses models to a lesser extent.

NCSD calculations take a big step up. More lane miles equals more VMT. It is straightforward, but does not cover everything, for example, a new interchange. Assessment of VMT is moving forward. The NCSD calculator allows interpolation of results with the demand model. It does not work with looking at transit or VMT reduction and mitigations. GHG goes through a conformity type process, though MOVES. They are looking at the fleet mix and emissions per mile from different vehicles. An example of a conflict: a road diet can look bad in GHG or conformity because the cars are going slower, while it looks great in VMT because cars are going slower or idling. Also, the BC model does not have feedback loop in terms of induced demand.

Margi commented that California has found a way to do both; use a VMT calculator and travel demand model.

55.20: Margi asked Colorado panelists to contrast what California is doing with the Colorado approach.

Erik Sabina said he heads the travel demand forecasting group at Colorado DOT and led the development of the activity based model project. He said that a couple of years ago they had the only fully desegregate activity based models at the state level in the U.S. After that, his focus switched to GHG. He agreed with Eric Sundquist, saying the activity based machines took a lot of crank turning to get an answer out and that small projects cannot be seen in that type of model. They worked with the FTA and now make use of two models: a large desegregate model, and EERPAT. They also mine studies around the country for elasticity and reasonable relationships around input and output.

58.28: Margi said Colorado has done great work on GHG goals. She asked the Colorado panelists how each model helps with decision-making.

Erik Sabina said when GHG rules were created, they developed a set of three scenarios, using the terms aggressive but feasible, using a combination of EERPAT and the statewide model. They came up with low, medium and high estimates with groups of measures that were attached to each. This way people could see what they did and how it related to each outcome.

Rebecca added that they used the model tools to develop the GHG standard. Colorado is now implementing the standard and using the tools to determine if they are meeting it. They use the travel model to look at their ten year long range plan. If they cannot meet the goals with the mix of projects, they will look at mitigation tools. They will use EERPAT. They have a spreadsheet of expected GHG reductions when looking at different options. This is based on a lot of literature review. To reiterate, it is an art and a science. We are dealing with the limitation of MOVES and complete streets. When you run a complete street through MOVES, it shows a worse outcome, yet complete streets meet our goals. Should we move away from MOVES and adopt more of a spreadsheet model? Colorado is right in the middle of this process now.

Margi said this is timely given the federal infrastructure bill and the focus on complete streets.

1.02.23: Margi invited Kyung-Hwa Kim to talk about their processes and tools and how they help with decision-making in the Atlanta region. Kyung-Hwa shared slides describing models and modelling. She made several points including that there are many factors that impact travel demand including economic, but what is measured are accessibility and mobility. Travel modelling cannot reflect the full reality. She reviewed MPO modeling history. She said we need separate models to understand. She said they use the activity based model and also the three-based model for the purpose of analyzing. She concluded saying TIP project evaluation and prioritization are important.

1.12.21: Margi noted that no one has talked about how fleet assumptions fit into their analysis, at region, state or project level. She asked Professor Handy to weigh in on where fuels fit, or don't fit into the induced demand analysis.

Susan Handy said the California Air Resources Board (CARB), in its efforts to meet targets to reduce GHG, concluded that even a very aggressive effort to convert to electric vehicles is not enough; it is also necessary to reduce vehicle miles traveled. They are coming out with a new scoping plan. Regardless of what happens to the fleet, we need to reduce how much people are driving. There is a life cycle of emissions attributed to driving. It is not just about what comes out of the tailpipe; it is also about manufacturing the car and tires, building the roads. [2022 Scoping Plan Documents | California Air Resources Board]

Margi asked, in their study of induced demand, do they hold fleet assumptions solid or do they focus solely on the VMT aspect?

Susan responded that she uses the term induced travel. Aside from inducing changes in land use or promoting growth in a region, shifts in travel will occur when there is change in the capacity of the highway system. They created the estimator for change in VMT and for change in highway capacity and it doesn't look at fleet mix.

1.16.18: Margi asked Erik Sabina about Colorado's inputs on fleet. He said that Colorado's energy office developed a target of 940,000 light duty EVs on the road by the year 2030, compared to about 5 million total vehicles on the road. It has been challenging with stakeholders to communicate that this number is more impactful now than it will be in the future. For example by 2050, they hope that 100% of light duty vehicles will be EV. They use these numbers in the background for other analysis.

1:18.25: Margi asked Daniel if MPOs use different approaches and assumptions in modeling related to GHG emissions. He replied that at Metro, they asked if they could isolate the assumptions about EV growth in households versus all other vehicles on the road. New York State has used the VisionEval model to look at impacts on the EV market and growth of GHG emissions.

1.20.35: Eric Sundquist said they are in VMT and less in fleet mix. We will not know the exact answer. Various uptakes of EVs usually leave us behind, rather than ahead of whatever the scenario is. He suggested estimating conservatively and go from there. On SB 375, they are not meeting their goals and Portland is not meeting their goals.

1.22.01: Kyung-Hwa said it is complicated. It is related to economics, the demand and consumption. A crucial question is, what is our uncertainty? Narrow the uncertainty through assumptions.

1.23.26: Margi asked if anyone was monitoring progress. How do you monitor progress? Rebecca replied that it is not as simple as putting up an air quality monitor. They have committed to doing annual reports and every three years, a comprehensive look. It is challenging to detect how much change is occurring when looking at issues like land use. Margi asked, is progress based on specific strategies to reduce GHG or is it actual numbers compared to planning goals? Rebecca replied they would generate a CO2 equivalent number for the light duty fleet and compare that to the goal. The rule for 2030 would reduce 1.5 million metric tons.

1.25.38: Eric Sundquist said they monitor at a gross level and that they are going in the wrong direction. They've legislatively required analysis. The SB 150 report, AB 285 talk about why they are getting bad results. There is the GHG, VMT, what are is being built and why, where is the money going, what are the financial/policy/legal/institutional/educational constraints that are pushing in the wrong direction? He mentioned there are two recent reports that could be helpful. Margi said Molly Cooney Mesker will send out these reports. Reports:

- California Transportation Assessment Report - Pursuant to AB 285
- DRAFT 2022 PROGRESS REPORT (ca.gov)

1.28.18 – 1.36.21: **Break**

Facilitated Q&A between panelist experts and Metro Council and JPACT members

1.36.22: Margi invited Metro Council and JPACT members to ask questions of the panel.
Councilor Hyzy thanked the panelists and noted how useful this context and modeling information is for her as an elected official. She said she wants to do the climate work right and well and not in a way that feels imposed, but that invites everyone in. There is tension around induced demand – what is the best response? What does modelling show that induced demand will do in terms of addressing climate issues and reducing GHGs? How do we, as a region, most effectively think about it? There are multiple mega projects coming up. She said she advocates for true solutions for problems, not the usual, not necessarily comprehensive solutions.

Susan said there are great resources that explain how induced travel works, including her lecture through the National Center for Transportation and videos on YouTube. She said it is a basic economic principle. If you expand highways, you reduce the price of driving. If you reduce the price, people will do or consume more of it. With driving, decisions revolve around destinations, mode and over the longer term, live/work locations and what kind of land development happens where. All impact VMT. Travel demand models do not do a good job of measuring these factors, hence the need for the induced travel calculator. If the goal is to reduce VMT, we should not expand the capacity of the highway or roadway system. All of the evidence shows this. We are overselling to the public that highway expansion is a solution to congestion. It may reduce congestion in the short run, but the highway capacity will fill up again.

1.43.50: Eric Sundquist added that there is a vicious cycle effect - as there is more auto-centric development, it undercuts work on other modes: transit, walking, biking. There is not enough money for transit to serve low density development and employment sites that occur alongside highways. Auto-centric development causes a mode shift away from transit, walking and biking.

1.45.11: Kyung-Hwa noted uncertainties include not knowing the future location of housing and types of land use. Autonomous vehicles are coming and people are teleworking. Despite people moving to the suburbs in Atlanta, there is still congestion. There are no good predictions, but scenario testing provides a glimpse of what might or might not happen.

1.46.24: Margi asked Colorado panelists if they are taking into account induced demand.
Erik Sabina said the virtue of their large activity-based model list is that it covers 6 elements of induced demand. The activity-based models covers 5 of them; they illuminate inter-relationships and effects. If driving is so dominant, it pushes other modes to the sidelines. A difficulty remains with the land use effect, which is very complex. Land use is one of the six elements. They do scenarios that include land use to illustrate a range of possibilities to policy makers.

1.49.00: Councilor Lewis asked about the effectiveness of modeling GHG at the project level. She mentioned diversionary impact – shifts of modality but also shifts of corridor. Are we diverting GHG emissions from a highway to a neighborhood street?

Kyung-Hwa said the Atlanta Regional Commission has a very detailed way of understanding and modeling the pollutants at a link level, using a tool consistent with the travel demand model to understand the impact the diversion will create. They also have a project level model, a simple spreadsheet to demonstrate air quality impact. She said sometimes they need to do a comprehensive model to get a result on the network fatalities but some can be dealt with at a smaller, project scale.

Eric Sundquist said with GHG it doesn't where it's emitted, but particulate emissions do matter. For example, a highway widening diverts traffic from a neighborhood, reducing safety and other impacts but raising GHG. Under the statute, they need to weigh impacts and mitigate. Models are really about distributing traffic on the network. To the extent that the model is granular enough to show neighborhood effects, they would look at that as well as countervailing effects. They can look at different project alternatives, scope the project, and decide if it can go forward or how to mitigate.

1.54.02: Councilor Lewis asked about getting a level of granularity in a project, or is it only possible once it has gone through NEPA? Eric Sundquist replied that it is possible to do it sooner but because NEPA kicks in after the alternatives have been selected, it is kind of backwards. They are trying to switch the order by redoing purpose and need statements to encompass the environmental outcomes.

Margi noted that in California, the California Environmental Quality Act (CEQA) is the state equivalent of NEPA.

Erik Sabina added that the tools are available to do project level analysis. It takes a multi set of tools including the larger models we've been discussing. Larger level models will measure the effects of diversion. Simulation models can look at things like road design elements.

1.57.10: Councilor Rosenthal said the price of gas is key factor in the choice to drive, yet there is also pent up demand due to the pandemic. Have models been used to identify the impacts of the increase of gas prices? How much GHG reduction could we get going forward if gas prices continue to rise to European rates? Will the increase in gas prices be a significant factor in decreasing GHG?

Kyung-Hwa replied that we can estimate people's propensity of how they will react to gas price increases before the prices go up. We observe their behaviors through household surveys or transit board surveys; they provide historical information and help us estimate their propensity for choice of travel mode and time of travel. The model will not predict correctly on this question, but if we change sensitivity to high prices, the result will change. No one knows if gas prices will stay up and if this will be a significant factor in decreasing GHGs.

Eric Sundquist added that this question is more along the lines what Susan shared on induced travel and short and long term elasticities. There has been research on travel outcomes based on gas prices. This can be added to the model, but it is a lot of work leading to a false outcomes. You might look at doing something literature or broad based.

Susan added that there is a lot of research that indicates that elasticity is smaller than you would think; people don't change their behaviors and often, because many don't have a choice. They have to drive so they adapt to the higher price. Research has been done on the range of price changes that have occurred in the American reality. We don't know what the impact of extreme changes will be.

2.04.00: Margi mentioned that Metro completed a congestion pricing study using scenarios which compared tolling to VMT tax to other tools.

2.04.57: Mayor Steve Calloway said we have hours of congestion that creates GHG. At what point is there benefit to adding an auxiliary lane or widening, to increase efficiency and decrease GHG?

Kyung-Hwa asked if this would be more an engineering level analysis, a micro-simulation.

Margi said that you could run into a conflict looking at the travel demand model versus NEPA analysis, which uses a more granular model. How do you reconcile these?

Susan said there is a tradeoff between traffic flow and the induced travel. Travel speed will increase immediately after construction, but do we account for the extra congestion and emissions caused by construction? Traffic flow will speed up but this will induce additional driving. There is a need to take into account both, but there is not a good net assessment of benefits.

Rebecca said she appreciated the question. Colorado is a rapidly growing state with a lot of people sitting in traffic. She said it depends on the corridor. They are working on lane balancing, where two lanes increase to three then drop back to two lanes. In other corridors, they widen the highway and the traffic levels initially improve, then come back to congested levels five years later. For this reason, in the metro areas they look at managed lanes or improving transit.

Margi recalled that Director Shoshana Lew, in her introduction, talked about bus rapid transit as a mitigation that is used by Colorado DOT.

2.11.00: Councilor Gonzalez said projects and mega projects take a life of their own because of legislative mandate or the DOT. Are we at a point where climate modeling as a performance tool has done enough to change/alter projects across the country, or is it too new to really model for, so projects that were going to happen, happen anyway? As climate modeling is advancing across the country, how is it impacting, improving or stopping projects?

Kyung-Hwa said that at the Regional Commission they adopted a regional evaluation performance measure that includes GHG. For every project, they look for a quantified GHG benefit. It is hard to move the needle but they try to account for or understand the impact of large and small projects.

Eric Sundquist added that the tools are there but that this group is the outlier. Most of country is not doing this, so there are no outcomes but where it is being done, there are some good outcomes. There is increasing counterweight to institutional pressure to widen highways. There are project examples. It is not for lack of technical tools; it is lack of political will.

2.15.54: Margi asked panelists for lessons learned, advice for Metro or takeaways.

Dan said that given the interest in induced demand, project level analysis and work at the regional level, there is a need more than one tool.

Erik Sabina said using better modeling tools will pay dividends. For policy, aim for clear discussions to help know what the limitations are. Do not be paralyzed by lack of perfect analysis. You can make a lot of progress with less than 100% perfect numbers. Rebecca added that they took the leap and are seeing results. Keep the tent broad and the stakeholder group diverse. They had a lot of people who were upset, they took a lot of time talking to them, and they have made progress as a state.

Eric Sundquist reiterated that a lack of precision exists in all older tools. Given the uncertainties and lack of precision, assume that any highway widening will be eaten up by new demand in 5-10 years with a net increase in VMT and GHG, plus bring back all congestion and include impacts on adjacent neighborhoods. Have people who advocate for capacity improvements tell you why it is not true. Have them prove; be more skeptical.

Susan said we do modeling for statutory requirements and to make decisions but the modeling tools are imperfect and have limitations. There has been much false precision historically. They don't tell us what to do. We should be deciding what kind of future we want and work towards that future.

Kyung-Hwa wrapped up, saying we are all facing the same challenges. There is a need to work together and not re-invent the wheel. Go forward to the future we want, knowing modeling cannot solve all issues. When we work together we make a better region and society.

Margi thanked the panel for their time and sharing of resources, and thanked the audience.

JUNE 2022

CLIMATE SMART STRATEGY

Metro

2023 Regional Transportation Plan Update

Background on Climate Action in Oregon and the Greater Portland Region's Climate Smart Strategy

Prepared for members of the Transportation and Climate Expert Panel

Introduction

Climate change is the defining global challenge of the 21st century. And as the recent increase in climate-induced wildfires and extreme weather events has demonstrated, it is likely to have significant impacts on the Portland region.

The transportation sector is the largest contributor to greenhouse gas emissions in Oregon.[1] It is therefore a key focus of the greenhouse gas reduction efforts statewide and in the greater Portland region. Metro and the Oregon Department of Transportation (ODOT) each have a history of climate planning and an established "carbon reduction strategy" to reduce greenhouse gas (GHG) emissions from the transportation sector.

In 2007, the Oregon Legislature first set statewide climate change goals to reduce emissions by at least 10 percent below 1990 levels by 2020 and at least 75 percent below 1990 levels by 2050.[2] The goals apply to all emissions sectors – energy production, buildings, solid waste and transportation. More recently, Executive Order 20-04 set new greenhouse gas emissions reduction goals that call for the State of Oregon to reduce its GHG emissions at least 45 percent below 1990 emissions levels by 2035 and at least 80 percent below 1990 levels by 2050.[3] These updated goals are consistent with the reductions that climate scientists now believe are necessary to avoid catastrophic climate change impacts.

In 2009, the Oregon Legislature enacted HB 2001 directing Metro to develop and adopt a climate plan to reduce GHG emissions from light duty vehicles. The Legislature further directed the Land Conservation and Development Commission (LCDC) to adopt GHG emissions reduction targets for light duty vehicles for all of Oregon's metropolitan areas, although the Portland region was the only region with a mandated GHG reduction target. In 2010, the Oregon Legislature directed the ODOT to work with Metro and other metropolitan planning organizations, other state agencies and local governments to adopt a statewide transportation strategy on GHG emissions aimed at achieving the goals adopted by the Legislature in 2007.

In 2014, the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council adopted the Climate Smart Strategy[4] with broad regional support from community, business and elected leaders. Approved by LCDC in 2015, the strategy was based on extensive stakeholder and public input, scenario planning and analysis. As part of the process, Metro conducted detailed modeling and analysis of various greenhouse gas scenarios and identified the types of transportation-related mitigation strategies that would have the greatest potential for reducing greenhouse gas emissions in the long term. This informed the Climate Smart Strategy that was ultimately adopted and continues to guide the region's response to the climate crisis today.

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[1] https://www.oregon.gov/deq/aq/programs/Pages/GHG-Oregon-Emissions.aspx

[2] House Bill 3543, enacted on August 7, 2007. https://www.oregonlegislature.gov/bills_laws/lawsstatutes/2007orLaw0907.html

[3] https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf

[4] https://www.oregonmetro.gov/climate-smart-strategy

Adopted in 2014, Metro's Climate Smart Strategy is grounded in Metro's land use goals and adopted 2040 Growth Plan. The Regional Transportation Plan is a key tool for the greater Portland region to implement the adopted Climate Smart Strategy and achieve the GHG reduction targets adopted for the region by the Land Conservation and Development Commission.

The strategy outlined how the Portland metropolitan region will reach targets to reduce transportation-related greenhouse gas emissions from light duty vehicles. The regional Climate Smart Strategy includes a set of policies, strategies and near-term actions to guide how the region moves forward to integrate reducing greenhouse gas emissions with ongoing efforts to create the future we want for our region. It is grounded in Metro's land use goals and adopted 2040 Growth Plan and implemented through the Regional Transportation Plan.

The Climate Smart Strategy includes a wide-range of strategies for reducing GHG emissions from light duty vehicles, many of which are not funded or are underfunded. The Climate Smart Strategy was updated in 2018 as part of the Regional Transportation Plan update and will be updated again in 2023 to ensure ongoing compliance with Oregon's GHG emissions reduction targets.

Targets for the year 2035 were first set by the LCDC for each of Oregon's metropolitan areas in 2011. LCDC set additional targets for each metropolitan area through the year 2050 in 2017, and recently adopted temporary rules to support achievement of these targets through the statewide Climate Friendly and Equitable Communities (CFEC) rulemaking. The targets adopted for the Portland region are to reduce greenhouse gas emissions from light vehicle travel (from 2005 levels) as follows:

- A 20 percent reduction for the year 2035
- A 25 percent reduction for the year 2040
- A 35 percent reduction for the year 2050
- Targets for the years 2041-2049 steadily increase from 26 to 34 percent in order to maintain progress toward the 2050 target.[5]

These targets reflect additional greenhouse gas emissions reductions needed beyond what was expected to be achieved through State-level policies and actions identified in the Statewide Transportation Strategy (STS) that aim to advance Oregon's transition to cleaner, low-carbon fuels and zero and low-carbon emissions vehicles. At the state level, the Oregon Transportation Commission formally adopted the STS into the Oregon Transportation Plan in 2018. The STS resulted from a state-level scenario planning effort that examined all aspects of the transportation system, including the movement of people and goods, and identified a combination of strategies to GHG emissions. The STS identified a variety of effective emissions reduction strategies at the statewide level in transportation systems, changes in vehicle and fuel technologies, and compact urban land use patterns served by transit, walking and biking connections in the state's eight metropolitan areas.

[5] Oregon Department of Land Conservation and Development, Climate-Friendly and Equitable Communities Proposed Amendments to OAR 660-044 (Division 44), May 5, 2022, p. 6. https://www.oregon.gov/lcd/Commission/Documents/2022-05_Item_3_CFEC_Attachment_E_Draft-Rules-for-Division-44.pdf

GHG Forecasting and Monitoring

Since 2010, ODOT and Metro have been developing, testing, and refining tools to measure and forecast transportation-related GHG emissions. Formally called GreenSTEP and Metropolitan GreenSTEP, the VisionEval Framework includes both a statewide (VE-State) and a metropolitan (VE-RSPM) version that is used in Oregon.[6] These are essentially the same suite of tools that the State of Oregon used to set the region's greenhouse gas reduction targets in 2012 and continues to be used to help monitor progress towards Oregon's legislatively mandated GHG reduction goals and implementation of the Statewide Transportation Strategy.

In 2018, ODOT reviewed and prepared a monitoring report on progress to date in implementing Oregon's STS, which sets a vision for meeting the State's transportation-related GHG reduction targets.[7] According to the report, "Oregon is on track to reduce GHG emissions by 15-20 percent below 1990 levels by 2050, which falls far short of the STS vision."[8] The report also evaluated the state's progress on different types of GHG reduction strategies and found that:

- implementation of all transportation options and land use strategies was on track or moving in the right direction.
- progress on intelligent transportation systems, pricing, and clean fuels strategies was mixed, with some strategies moving in the right direction and others making no progress or trending in a negative direction.
- vehicle technology strategies are "not making a lot of progress in the direction of the STS vision;"[9] the STS found that there has been slightly more negative change than progress in this category.

Metro conducted a similar review of the Climate Smart Strategy in 2018 as part of the update to the Regional Transportation Plan (RTP). Appendix J to the 2018 RTP showed that Metro is implementing the actions called for in the Climate Smart Strategy, as required by OAR 660 Division 44, and found that our region was making satisfactory progress implementing the Climate Smart Strategy and was on track to meet its targets for 2035 and 2040.[10] Greenhouse gas emissions analysis conducted for the 2018 RTP relied on use of the regional travel demand model (RTDM) and MOVES – the Environmental Protection Agency (EPA) approved model for forecasting on-road mobile source greenhouse gas emissions in the region. Significant methodological differences in how VisionEval and MOVES estimate on-road vehicle emissions do not allow for direct comparison of forecasted on-road vehicle emissions results. As a result, while the RTDM and MOVES analysis forecasted GHG emissions, the analysis could not be used to demonstrate progress toward the GHG reduction targets defined in OAR 660-044-0060. Finally, Metro's review found that more investment, actions and resources are needed to ensure the region achieves the mandated greenhouse gas emissions reductions. In particular, additional funding and prioritization of Climate Smart Strategy investments and policies that substantially reduce greenhouse gas emissions will be needed.

While ODOT analysis tools are focused at the state level, Metro is working with ODOT to build upon ODOT's VisionEval suite of tools to allow analysis at the regional level in support of the 2023 RTP update. The focus of this work is to allow a more detailed evaluation at the regional scale using transportation

[6] https://www.oregon.gov/odot/Planning/Pages/Technical-Tools.aspx#GreenSTEP
[7] ODOT, Oregon Statewide Transportation Strategy, 2018 Monitoring Report, April 19, 2018. https://www.oregon.gov/odot/Planning/Documents/STS-2018-Monitoring-Report.pdf
[8] ODOT 2018, p. 26.
[9] ODOT 2018, p. 22.
[10] Metro, Climate Smart Strategy implementation and monitoring, 2018 Regional Transportation Plan Appendix J, December 6, 2018. https://www.oregonmetro.gov/sites/default/files/2019/04/02/RTP-Appendix_J_Climate_Smart_Strategy_Monitoring181206.pdf

networks and behavioral models to better understand and manage the impacts of transportation policies and investments on GHG emissions and determine if the 2023 RTP is meeting GHG reduction targets. This work is intended to complement the state-level analysis tools currently available, and advance ongoing efforts to integrate GHG outcomes into the regional transportation planning process.

Looking Ahead

Much has changed since 2018. Metro is now beginning the 2023 RTP update amid increasing evidence of our changing climate and its impacts. Major climate studies have found that changes are stronger and are happening more rapidly than expected, and that emissions need to fall dramatically by 2030 to prevent irreversible global damage.[11] Oregon did not meet its 2020 goal to reduce emissions to 10 percent below 1990 levels; at last count emissions were roughly 10 percent above 1990 levels.[12] And though our region demonstrated it was on track to meet our greenhouse gas reduction targets in 2018, the global pandemic and other urgent challenges suggest we may now be falling behind implementing some of the policies and investments called for in the Climate Smart Strategy. In addition, the region is contemplating new and updated policies that should be considered for inclusion in an updated Climate Smart Strategy.

Since 2018, the State has adopted new policies and programs to support clean vehicles and fuels in response to Executive Order 20-04.[13] The Every Mile Counts Program and its coordinated STS Multi-Agency Implementation Work Plan are focused on reducing greenhouse gas emissions and implementing the STS. Recent actions include the formation of climate offices within ODOT and ODEQ and the statewide CFEC rulemaking by the LCDC and the Department of Land Conservation and Development (DLCD). In addition, several Oregon vehicles and fuels legislative actions and Environmental Quality Commission (EQC) rules are expected to be in place by the end of 2022 that will help greatly advance the STS goals to "clean up every mile" and associated air quality impacts:

1. Clean Car Standards Program (ZEV1) (EQC adopted in 2005)
2. Clean Fuels Program (CFP1) (HB2186, 2009)
3. Clean Electricity Standard (HB2021, 2021)
4. Advanced Clean Truck Rules (ACT) (EQC adopted in November 2021)
5. Climate Protection Program (CPP) (EQC adopted in December 2021)
6. Clean Fuels Program Expansion (CFP2) (EQC expected adoption in 2022)
7. Clean Car Standards Program Expansion (ZEV2) (EQC expected to initiate rulemaking mid-2022)

The first three are expected to achieve by 2026 a roughly 10 percent reduction in state GHG emissions. The Climate Protection Program is an overarching policy that will restrict sales of fossil fuel sales in the state across multiple sectors increasingly each year starting in 2022. The latter programs are critical to implementing that policy to ease the transition to a low carbon future for all vehicle groups. Some credit trading is allowed prior to 2030, which makes it hard to predict exact forecasts in the near term. The ZEV programs when fully implemented should roughly conform to the goals set out in SB1044.

Metro continues to explore opportunities to evolve and enhance its capabilities and approach to forecasting GHG emissions and monitoring progress implementing the Climate Smart Strategy. To further advance that work in support of the 2023 RTP update, Metro is hosting an Expert Review Panel on Transportation and Climate Planning and Modeling on June 22, 2022.

[11] Intergovernmental Panel on Climate Change (IPCC), Climate Change 2021: The Physical Science Basis, Summary for Policymakers, October 2021. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM_final.pdf

[12] Oregon Department of Environmental Quality, Oregon Greenhouse Gas Sector-Based Inventory Data. https://www.oregon.gov/deq/aq/programs/Pages/GHG-Inventory.aspx

[13] https://www.oregon.gov/gov/Documents/executive_orders/eo_20-04.pdf

JUNE 2022

CLIMATE SMART STRATEGY

Metro

2023 Regional Transportation Plan Update

Background on Use of VisionEval and Key Transportation Assumptions for Climate Smart Strategy Proxy

Prepared for members of the Transportation and Climate Expert Panel

Background on VisionEval

In order to ensure that the 2023 Regional Transportation Plan makes meaningful and measurable progress in reducing greenhouse gas emissions, Metro and the Oregon Department of Transportation (ODOT) Climate Office collaborated to adapt the state-level VisionEval to operate at a regional-level. Formally called GreenSTEP and Regional Strategic Planning Model (RSPM), VisionEval is the essentially the same suite of tools that the State of Oregon has used to set the region's greenhouse gas reduction targets in 2012 and 2017, and monitor progress implementing the Statewide Transportation Strategy since 2013.

Since 2013, ODOT has used a state-level version of VisionEval that uses county-level data as inputs. To support the 2023 RTP Update, the ODOT and Metro team developed a regional-scale version of VisionEval that uses regional, sub-regional, and census tract level data as inputs. The goals of this effort are to:

- Adapt the state-level version of VisionEval to create a regional-scale VisionEval to inform local and regional GHG planning efforts in the Portland region.
- Evaluate the potential effectiveness of new and emerging strategies to reduce GHG emissions that were not adopted in the 2014 Climate Smart Strategy or 2018 RTP – especially congestion pricing, a proven emissions reduction strategy that is moving forward in our region.
- Examine what reductions in vehicle miles traveled (VMT) per capita are necessary to meet our greenhouse gas emissions reduction targets, assuming different rates of transition to cleaner, low and zero carbon fuels and more fuel-efficient vehicles.
- Provide an updated reality check on the assumptions underlying in the Climate Smart Strategy by comparing them to ongoing developments in clean fuels, clean vehicles, and RTP implementation during the 8 years since the strategy was adopted, and particularly during the 4 years since ODOT and Metro last assessed the implementation of their respective climate strategies.
- Better understand how the tools used to analyze GHG emissions account for different policies and strategies to help ensure that emissions reductions that are forecast in the RTP actually occur.
- Inform how best to forecast GHG emissions in the 2023 RTP update, recognizing limitations in the various tools available.
- Frame a regional discussion on what changes to the Climate Smart Strategy may be needed to stay on track, and even accelerate achieving the region's greenhouse gas emissions reduction targets.

Climate Smart Strategy: review of key transportation assumptions

The first phase of this work focused on examining whether the region and state are making progress toward the many milestones that must be met for Climate Smart Strategy to be a success. Staff developed two scenarios in VisionEval – a proxy of the adopted Climate Smart Strategy, slightly updated to be consistent with the more detailed inputs in the new regional-scale version of VisionEval, and a scenario that extrapolates current trends, and compared these two scenarios order to analyze progress in implementing the Climate Smart Strategy as reflected in the 2018 Regional Transportation Plan.

Through the 2023 Regional Transportation Plan update, future tasks will assess whether the assumptions underlying the Climate Smart Strategy need to be updated based on more recent information, estimate the change in GHG reductions due to changing assumptions, and if needed, to explore additional actions that can help the region stay on track to meet its GHG reduction targets.

The two scenarios developed for the first task of the analysis are:

Reference Case Scenario which assumes that current trends in Oregon's transition to cleaner fuels, more fuel-efficient vehicles (as assumed in the 2013 Statewide Transportation Strategy), and transportation demand management continue into the future, and does not account for future actions to reduce GHG emissions. The Climate Smart Proxy Scenario (described below) will be compared to this scenario in order to assess whether the Climate Smart Strategy as adopted in the 2018 RTP is on track to meeting the region's GHG reduction targets.

A **Climate Smart Strategy Proxy Scenario** representing the 2014 Climate Smart Strategy as currently adopted in the 2018 RTP.[1] This scenario is based on adopted policies and plans, including:

- assumptions about Oregon's transition to cleaner, low carbon fuels and more fuel-efficient vehicles from the 2013 Statewide Transportation Strategy[2] and
- assumptions about implementation of VMT-reducing strategies in the 2018 RTP.

This scenario produces greater GHG reductions than the Reference Case because it assumes that policies and plans that have yet to be fully implemented will drive emissions downward in the future. We also analyzed each component of this strategy, estimating the potential GHG emissions reduction from each individual change in assumptions between the Climate Smart Strategy proxy scenario and the Reference Case. This analysis will allow an evaluation of whether the key assumptions underlying the Climate Smart Strategy (as reflected in the 2018 RTP) are still reasonable, and to better understand the impact

[1] The Climate Smart Strategy scenario is a "proxy" because the analysis used a different tool that draws on different assumptions and data to estimate GHG assumptions than were used when analyzing GHG emissions during development of the 2014 Climate Smart Strategy and subsequent analysis conducted during the 2018 RTP update. During development of the Climate Smart Strategy, Metro worked in partnership with ODOT to develop and use the Metropolitan GreenStep tool to forecast GHG emissions reductions from light duty vehicles. During the 2018 RTP update, Metro used a separate, more detailed set of network-based tools, including the regional travel demand model in conjunction with the federally-approved Environmental Protection Agency (EPA) tool, MOVES, to forecast greenhouse gas emissions reductions. Due to significant methodological differences in how GreenStep/VisionEval and MOVES estimate on-road vehicle emissions, the results of the 2018 RTP GHG analysis could not be compared directly with GHG analysis conducted during development of the Climate Smart Strategy. Though the assumptions used in creating this scenario mirror those used for the 2018 RTP (Climate Smart Proxy) as closely as possible, neither the assumptions nor the results are identical because of significant underlying differences between GreenStep, VisionEval and our travel model which do not allow for direct comparison of forecasted on-road vehicle emissions results from each GHG modeling tool.

[2] https://www.oregon.gov/odot/Planning/Pages/STS.aspx. In 2018, the Oregon Transportation Commission adopted an amendment to incorporate the STS as part of the Oregon Transportation Plan (https://www.oregon.gov/odot/Planning/Pages/Plans.aspx)

that changing individual policy assumptions would have on achieving the region's GHG reduction targets. **Table 1** describes how the key assumptions underlying state and regional climate plans vary between the reference case and the climate smart strategy proxy scenarios.

Table 1: Key transportation assumptions, by scenario

VisionEval Input	Reference case – 2035 assumptions	Climate Smart Strategy Proxy – 2035 assumptions	Notes on current assumptions
Gas Prices	Gas prices are $2.47 per gallon[3]	Gas prices are $6.75 per gallon	
Electricity Prices	Electricity prices are $0.14/kWh	Electricity prices are $0.23/kWh	
Commercial Fleet Age	The average lifetime of commercial vehicles is 9 years	The average lifetime of commercial vehicles is 7.6 years	Commercial vehicle lifetimes currently average 14.2 years and are increasing.[4]
Fleet Electrification	7% of commercial trucks are hybrid or electric	50% of commercial trucks are hybrid or electric	
Commercial Fleet Share	80% of light-duty commercial vehicles are trucks/SUVs and 20% are cars	20% of light-duty commercial vehicles are trucks/SUVs and 80% are cars	58% of light-duty commercial vehicles are trucks, and that percentage has been increasing.[5]
Household Fleet Share	42% of light-duty passenger vehicles are trucks/SUVs and 58% are cars	20% of light-duty passengers vehicles are trucks/SUVs and 80% are cars	80% of new U.S. vehicle sales are trucks, and that percentage has been increasing.[6]
Household Vehicle Fleet Age	The average lifetime of passenger cars is 10.7 years / 11.54 years for trucks/SUVs	The average lifetime of passenger cars is 7 years / 7.7 years for trucks/SUVs	Passenger vehicle lifetimes currently average 11.9 years and are increasing.[7]
Transit Service	Transit service hours continue to grow at current rates.	Transit service hours grow at the rate envisioned in the RTP, leading to ~20% more	Between 2010 and 2019, transit service hours grew at roughly half the rate of the

[3] Vision Eval uses 2010 dollars for price inputs.
[4] Brusseau, D., Aging Trucks Create More Service Opportunities, NTEA News, https://www.ntea.com/NTEA/Member_benefits/Industry_leading_news/NTEANewsarticles/Aging_trucks_create_more_service_opportunities.aspx?fbclid=IwAR3mkimdcKilEbdqwvYYSwODX5Hop5g6odQWuQdIt9cJ37I30kwxgv209PU
[5] Bureau of Transportation Statistics, U.S. Automobile and Truck Fleets by Use, https://www.bts.gov/content/us-automobile-and-truck-fleets-use-thousands
[6] FRED Blog, Long-term trends in car and light truck sales, March 15, 2021. https://fredblog.stlouisfed.org/2021/03/long-term-trends-in-car-and-light-truck-sales/
[7] Bureau of Transportation Statistics, Average Age of Automobiles and Trucks in Operation in the United States, https://www.bts.gov/content/average-age-automobiles-and-trucks-operation-united-states

VisionEval Input	Reference case – 2035 assumptions	Climate Smart Strategy Proxy – 2035 assumptions	Notes on current assumptions
		service than under the Reference case	population.[8] The region plans to increase transit service significantly,[9] but agencies have cut service during the COVID pandemic.
Pay-As-You-Drive Insurance	18% of the region uses pay-as-you-drive (PAYD) insurance	40% of the region uses PAYD insurance	Both scenarios assume that 6% of drivers use PAYD in 2020.
Employer-based Travel Options Programs	5.5% of workers receive regular travel options programming	40% of workers receive regular travel options programming	
Household-based Travel Options Programs	<1% of households receive regular travel options programming	45% of households receive regular travel options programming	

[8] TriMet, TriMet Service and Ridership Statistics, November 30, 2021. https://trimet.org/about/pdf/trimetridership.pdf.

[9] Metro, Regional Transit Strategy, 2018 Regional Transportation Plan, December 6, 2018.

TRANSPORTATION RESEARCH AND MODELING SERVICES

Metro transportation modeling

Transportation modeling is an essential component of planning for regional infrastructure improvements, such as highway and transit projects. The process of travel demand forecasting uses what we know about the existing world to predict what conditions will be like in the future. It is not a guess or an estimate, but a projection based on empirical data and foreseeable circumstances. The transportation modeling used in the Portland metro region is peer-reviewed and validated against observed data. Past model performance on project forecasts is another relevant indicator for model validation.

To understand how people will make trips, modelers look at the reasons why people travel. The model takes into consideration the real choices made by residents in our region. This information is collected from rigorous surveys. Metro's last survey--the Household Travel Behavior Study--tracked 6,000 households to understand how factors such as age, income, children, car ownership, and transportation infrastructure characteristics affect travel choices.

Data input into the transportation model includes population and employment, both existing conditions and forecast, in a way that is consistent with local comprehensive plans as well as roadway and transit routes.

In the model, our region is divided into over 2,000 discrete geographic areas called transportation analysis zones. Census data, land characteristics, economic factors and accessibility measurements feed into land use models that project the number of households and jobs located in each zone.

Metro uses a standard four-step modeling process for travel demand forecasting. This four-step process consists of the following parts:

1. Trip generation
2. Trip distribution
3. Mode choice
4. Trip assignment

Trip generation: Do I want or need to take a trip?

The first step in the modeling process forecasts the number and types of trips generated from each transportation analysis zone. The projection is based on the number and demographic profiles of households and employment in each zone.

Households are separated into 64 profiles stratified by size, income and age. Employment is categorized into nine types, ranging from service sector and retail, to finance and agriculture. Using behaviors identified in the Household Travel Behavior Study, the model forecasts the likelihood of households to make certain types of trips based on household type and employment mixes in each zone. Trip types are classified as work, shopping, recreation, college, school, and other.

Trip distribution: Where do I want to go?

Next, the model predicts where the trips produced in the first step are destined. Each zone's availability of attractions—work, shopping, recreation and other opportunities—and the accessibility (access to auto networks and transit) from the zones where trips are produced determines where trips are likely to go.

continued

For more information on transportation modeling in the Portland Metro region, contact the Metro Research Center at 503-797-1915.

Metro

Clean air and clean water do not stop at city limits or county lines. Neither does the need for jobs, a thriving economy and good transportation choices for people and businesses in our region. Voters have asked Metro to help with the challenges that cross those lines and affect the 25 cities and three counties in the Portland metropolitan area.

A regional approach simply makes sense when it comes to protecting open space, caring for parks, planning for the best use of land, managing garbage disposal and increasing recycling. Metro oversees world-class facilities such as the Oregon Zoo, which contributes to conservation and education, and the Oregon Convention Center, which benefits the region's economy

Mode choice: How will I get there?

As in the real world, travelers in the model have many transportation choices, including walking, biking, driving alone or with others, and walking or driving to transit. For the model to forecast travel demand with a reasonable degree of confidence, it must account for why people make those decisions.

The model considers the following factors when determining mode choice:

- Cost - What are the expenses of operating and maintaining a car? Are there parking expenses? How much does transit cost? Are there tolls?
- Travel time - Is it faster to drive, take transit, walk or bike?
- Auto availability - Do I have access to a car?
- Transit access - Can I get to transit easily?
- Urban design - Am I in a high-density, mixed-use area where I'm more likely to walk or bike?
- Socio-economic relationships - What is my household income? Are there as many cars as employed people in my household?

Trip assignment: What route should I take?

The model uses data from the previous three steps to simulate the way people will travel. For auto trips, the model assigns traffic to streets in specified time periods. The model assumes the availability of multiple routes between origins and destinations, accounting for congestion.

The base year assignment of vehicle trips is validated against actual traffic counts to ensure that the model is performing well. To forecast the transit trips route, the model considers the time segments of the journey, including walk time, wait time and time in vehicle. Again, the results of a model run are validated to actual transit boarding counts.

Model review

Transportation modeling plays a crucial role in funding and implementing transit projects. Therefore, the Federal Highway Administration and Federal Transit Administration require regular reviews of the travel demand model to ensure that it meets federal guidelines. Metro's transportation model and its outputs are regularly peer-reviewed by modeling professionals from academia, consulting firms, and metropolitan planning organizations, as well as the Federal Transit Administration.

For more information on transportation modeling, visit Metro's Transportation Research and Modeling Services program:

www.oregonmetro.gov/transportationmodeling

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

June 22, 2022 Climate Smart Expert Panel Registrant List

Adams	Steve	City of Milwaukie
Albrecht	Gary	Clark County Public Works
Alfred	Roger	Metro
Amiton	David	Oregon Department of Transportation
Andersen	Michael	Sightline Institute
Anderson	Jovi	Bend Metropolitan Planning Organization
Appanaitis	Garth	DKS Associates
Appenbrink	Nadine	
Armstrong	Tom	City of Portland
Ayers	Connor	Metro
Barker	Ken	volunteer
Barrett	Andrew	Wilsonville
Bassok	Alon	Washington State Department of Transportation
Bates	Jordan	Representative Maxine Dexter
Bayer	Maureen	Jordan Ramis
Bell	Katherine	Oregon DOT
Benoit	Emily	City of Vancouver
Berry	Jessica	Multnomah County
Bettinardi	Alex	Oregon DOT
Bezner	Mike	Clackamas County
Blackhorse	Summer	Metro
Bolen	Glen	ODOT
Bosa	Peter	Oregon Metro
Boyd	Allison	Multnomah County
Boylan	Kevin	City of Beaverton
Bradway	Margi	Oregon Metro
Breakstone	Aaron	Metro
Brey	Hailey	
Bruun	Scott	Oregon Business & Industry
Buchanan	Paul	
Buehrig	Karen	Clackamas County
Callaway	Steve	City of Hillsboro
Campos	Jennifer	RTC
Carlson	Suzanne	ODOT
Celentano	Andrea	Metro
Cheek	Maddie	City of Tualatin
Cho	Grace	Metro Planning and Development
Christopher	Basil	
Clarke	Kelly	Lane Council of Governments
Collins	Tim	Metro
Cooney-Mesker	Molly	Metro
Cooper	Colin	City of Hillsboro
Craddick	Shirley	Metro Council/JPACT Chair
Cunningham	William	City of Portland Bureau of Planning and Sustainability
Daleo	Sharon	City of Portland
Dartnell	Camilla	
David	Lynda	RTC

Dea	John	City of Gresham
Deffebach	Christina	Washington County
Degner	Andrew	Portland Metro Regional Water Consortium
Deke	Tyler	Bend MPO
DeMarco	Lyndsey	Air Sciences Inc
DePriest	Patrick	ODOT
DePriest	Patrick	ODOT
Dill	Jennifer	Portland State University
DiLoreto	Greg	
Dirks	Greg	City of Wood Village
Dobson	Cassandra	Parametrix
Dolata	Mat	WSP
Dorfman	Rachel	Lane Council of Governments
Drake	Markley	Happy Valley
Dyar	Ryan	City of Milwaukie
Edgar	Paul O.	Transportation Systems and Consulting Analyst
Elbel	Elizabeth	Oregon DEQ
Elias	Evan	Oregon Dept. of Energy
Ellis	Kim	Metro
Engelmann	Jessica	City of Beaverton
Farwell	Tracy	Better Energy LLC
Fenton	Kellie	
Flynn	Dan	U.S. Department of Transportation Volpe Center
Francis	Carley	WSDOT
Freels	Michael	Oregon Department of Energy
Frohning	Rebecca	
Fryer	Barbara	City of Cornelius
Garber	Sorin	Sorin Garber & Associates
Gonzalez	Juan Carlos	Metro Regional Government
Gregor	Brian	Oregon Systems Analytics LLC
Gudman	Jeff	
Hackett	Sarah	Oregon Department of Transportation
Hampton	Matthew	Metro
Handy	Susan	UC Davis
Hardesty	Jo Ann	Portland City Commissioner
Hesse	Eric	PBOT
Higgins	Jay	City of Gresham
Hogg	Mel	Portland Bureau of Transportation (PBOT)
Holmqvist	Ally	Metro
Holmstrom	Bill	State of Oregon
Holthoff	Michael	Oregon Department of Transportation
Hoover	Sylvan	Oregon Department of Transportation
Hunrichs	Lisa	Oregon Metro
Hurley	Peter	Portland Bureau of Transportation
Hyzy	Kathy	JPACT Clackamas Cities Rep
Hyzy	Kathy	JPACT
Iannarone	Sarah	The Street Trust

Ibrahim	Idris	
Isbell	Grayson	ODOT
Jackson	Raymond	MWVCOG
Jefferson	Dwight	City of Portland Oregon
John	Jennifer	Interstate Bridge Replacement Program - Parametrix
Johnson	Chris	Metro
Kaempff	Daniel	Metro
Kelley	Steve	Washington County
Kelly	Katherine	CITY OF VANCOUVER
Kennedy	Rebecca	City of Vancouver WA
Kim	Kyung-Hwa	Atlanta Regional Commission
Kloster	Tom	Metro
Knudson	Becky	Oregon DOT
Knudson	Anthony	Oregon DOT
Koper	Steve	City of Tualatin
Kransky	Gerik	Oregon Department of Environmental Quality
KRINKE	MARA	Parametrix
Krueger	Monica	Metro
KUBEJA	LUKAS	CJTN
Labbe	Ted	Urban Greenspaces Institute
Lacy	Cassie	City of Bend
Lalonde	Ginette	WSP USA
Lee	Tammy	PSU
Lem	Lewis	Port of Portland
LEPROWSE	RYAN	
Lew	Shoshana	Colorado Department of Transportation
Lewis	Christine	Metro
Lightsey-Walker	André	The Street Trust
Liljenwall	Sharon	Oregon DOT
Lorenzini	Jaimie	City of Happy Valley
Lyman	Kate	TriMet
Mai	Chi	Oregon Department of Transportation
Main	Eric	Oregon Health Authority
Mangle	Katie	Alta Planning + Design
Marchant	Bret	Greater Portland Inc
Martin	Shannon	City of Gresham
McTighe	Lake	Oregon Metro
Melson	Christopher	Louisiana Transportation Research Center
Mermin	John	Metro
Meyer	Cody	DLCD
Milam	Ronald	Fehr & Peers
Millar	Stephanie	ODOT
Moland	Abe	
Mooring	Jessica	Portland Bureau of Planning and Sustainability
Morgan	Brett	1000 Friends of Oregon
Morrison	Hannah	Portland Bureau of Transportation
Mros-O'Hara	Elizabeth	Metro

Murshed	Delwar	WSDOT
Nameny	Phil	City of Portland Bureau of Planning & Sustainability
Napoli	Andrea	Bend MPO
Neild	Pam	City of Portland
O'Brien	Tara	TriMet
Ocken	Julie	
Odermott	Don	City of Hillsboro
Olds	Jonathan	Washington State Department of Transportation
Orman	Michael	Oregon Department of Environmental Quality
Pagenstecher	Gary	City of Tigard
Patton	Thaya	Metro
Paykar	Victoria	Climate Solutions
Pederson	Cindy	Metro
Pepper	Amy	City of Wilsonville
Pepple	Karl	US EPA R10
Perrault	Ramona	Metro
Peters	Sarah	Fehr & Peers
Peters	Bill	Oregon DEQ
Prior	Garet	ODOT
Ramirez	Lucia	Oregon DOT
Ramos	Eduardo	Metro
Ransom	Matt	Southwest Washington Regional Transportation Cou
Rice	Carly	City of Gresham
Richardson	Carole	Plangineering LLC
Roberts	Stephen	Washington County
Roll	Josh	Oregon DOT
Rosenthal	Gerritt	Metro
Roth	Dave	City of Tigard
Routh	Steph	Sightline Institute
Royce	Francie	npGreenway
Ruen	Cameron	Clackamas County
Ruenjinda	Piyawee	
Sapunar	Kim	MWVCOG SKATS
Schlosshauer	Kari	City of Portland
Schuytema	Peter	Oregon DOT
Sherman	Brett	City of Happy Valley
Shoaf	Syd	Lane Council of Governments
Skiles	Michaela	Metro
Small	Rebecca	City of Vancouver
Smith	Chris	Portland Transport
Sosnovske	Julie	Washington County, OR
Stasny	Jamie	
Steckler	Becky	Urbanism Next Center at the University of Oregon
Stowers	Robyn	Metro
Sundquist	Eric	California Department of Transportation
Takushi	Theresa	State of Colorado - Department of Transportation
Thomasson	Catherine	Dpo

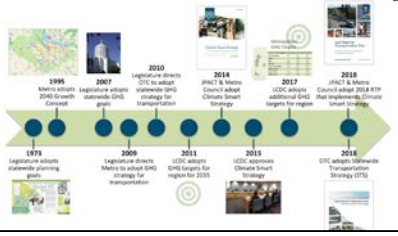
Todd	Kendra	
Tracy	Morgan	City of Portland-BPS
Tritsch	Emily	City of Tigard
Tsongas	Theodora	
TU	THUY	Thuy Tu Consulting, LLC
Turnoy	Scott	Oregon Department of Transportation
Valle	Shane	Portland Bureau of Transportation
Vissar	Vanessa	ODOT
Wardell	Erin	Washington County
Webb	Dayna	City of Oregon City
Weidner	Tara	Oregon DOT
White	Rebecca	Colorado Department of Transportation
Wilcox	Robin	ODOT, Public and Active Transportation Division
Wilhelmsen	Zoë	Colorado Department of Transportation
Williamson	Tonia	North Clackamas Parks & Recreation District
Wills	Heather	WSP
Wilson	Kate	LCOG
Winans	Kiara	DEQ
Wind	Cory-Ann	Oregon DEQ
Windsheimer	Rian	Oregon Dept. of Transportation
Winter	Caleb	Metro
Wolff	Emily	WSP
Wright	Sara	

2023 Regional Transportation Plan Update

Climate and Transportation Expert Panel

June 22, 2022

History of reducing climate pollution from transportation in Oregon



2

Regional Greenhouse Gas Targets

per capita light vehicle greenhouse gas emissions reduction below 2005 levels (in addition to reductions anticipated from changes to fleet and technology)

OAR 660-044 adopted by the Oregon Land Conservation and Development Commission in 2011 and amended in 2017

Metropolitan area	2035 Target	2040 Target	2050 Target
Portland Metro[1]	20%	25%	35%
Albany	--	20%	30%
Bend	18%	20%	30%
Corvallis	21%	20%	30%
Eugene-Springfield[2]	20%	20%	30%
Middle Rogue	--	20%	30%
Rogue Valley	19%	20%	30%
Salem-Keizer	17%	20%	30%

[1] Required scenario planning, adoption and implementation
[2] Required scenario planning

3

2040 Growth Concept is our platform for local and regional climate action

Adopted in 1995

Implemented through adopted community and regional plans

Building toward six desired outcomes

4

Climate Smart Strategy

Regional policies and strategies for reducing emissions

Adopted in 2014 and approved by LCDC in 2015

5

Extensive, inclusive engagement built the Climate Smart Strategy

6

How were we doing in 2018?

We were making satisfactory progress if we fully implement the 2018 RTP, but recognized more work and funding needed

We exceeded Climate Smart targets for:

- land use and growth in 2040 mixed-use centers
- transit service hours
- households served by frequent transit service

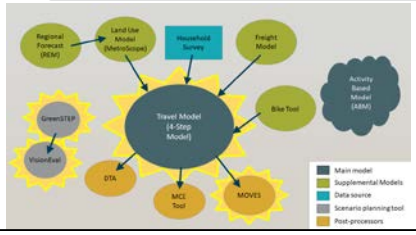
We fell short of RTP targets for:

- sidewalk and biking system completion
- tripling walking, biking and transit mode share
- reduced per capita vehicle miles traveled by 10 percent by 2040

oregonmetro.gov/rtp

7

Metro's Climate Analysis Toolbox



8

2040 Growth Concept (1995)

Region's first scenario planning effort

Travel Demand Model (early version)

MOBILE6 (air quality)

9

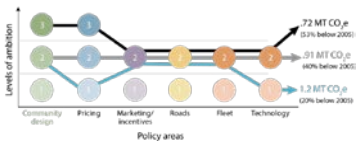
What is GreenSTEP?

A strategic planning tool that **estimates VMT and GHG emissions** based on demographic, roadway, fuel, and vehicle characteristics

10

Climate Smart Strategy Approach (2014)

Tested 144 combinations



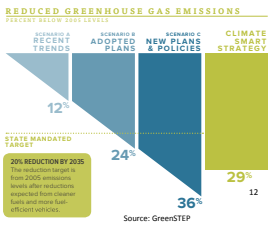
11

oregonmetro.gov/climatestrategy

Climate Smart Strategy Scenarios

144 scenarios narrowed to 3

3 scenarios narrowed to our preferred scenario



What is the travel model?

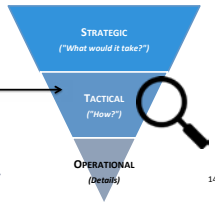
aka "the regional travel demand model"
aka "the 4-Step model"
aka "the trip based model"
aka "the federally mandated model"

- A network-based simulation of the ground transportation system
- A tool for testing future transportation alternatives
- A behavioral model based on observed choices
- The tool we must use for all regional transportation plans and NEPA activities

13

Emissions Modeling with MOVES

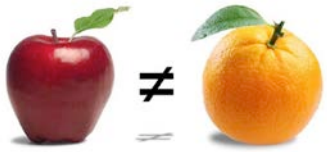
MOVES
+
Regional Travel Demand Model
=
Estimates emissions
(GHGs, criteria pollutants and air toxics)



14

Comparing apples and oranges

Results vary greatly depending on how you define the target and what you measure (e.g., year, household, on-road, per capita, vehicles, etc.)



15

What we learned from the 2018 Regional Transportation Plan

We can expect to meet our climate goals if:

- we fund and implement our plan
- funding of projects and programs in the plan are prioritized based on their potential carbon reduction

We should continue to improve our tools to measure and track carbon emissions

- 46 percent

expected reduction in per capita greenhouse gas emissions from passenger vehicles by 2040 (compared to 2015 levels)

Source: Metro regional travel demand model and Metro regional emissions model (MOVES)

16

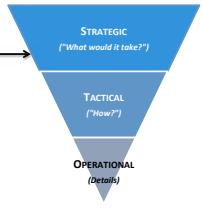
Evolution of VisionEval Suite of Tools

GreenSTEP->EERPAT->RSPM

VisionEval

VE-State

VE-RSPM
(Regional Strategic Planning Model)



17

What we've done since 2018

Developed regional VE-RSPM in partnership with ODOT and the City of Portland

Used by the City of Portland to support GHG planning

Can be used in 2023 RTP

Consistent with State level target setting tools

18

Where do we go from here?

19

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Kim Ellis, AICP
RTP Project Manager
kim.ellis@oregonmetro.gov

Thaya Patton
RTP Modeling Lead
Thaya.patton@oregonmetro.gov

Meeting minutes

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

Meeting: **Metro Technical Advisory Committee (MTAC) meeting**

Date/time: Wednesday May 18, 2022 | 10:00 a.m. to 12:00 p.m.

Place: Virtual video conference call meeting via Zoom

Members Attending	**Affiliate**
Tom Kloster, Chair	Metro
Carol Chesarek	Multnomah County Citizen Representative
Raymond Eck	Washington County Citizen Representative
Terra Wilcoxson	Largest City in Multnomah County: Gresham
Colin Cooper	Largest City in Washington County: Hillsboro
Aquilla Hurd-Ravich	Second Largest City in Clackamas County: Oregon City
Anna Slatinsky	Second Largest City in Washington County: Beaverton
Laura Terway	Clackamas County: Other Cities, City of Happy Valley
Chris Damgen	Multnomah County: Other Cities, City of Troutdale
Chris Deffebach	Washington County
Gary Albrecht	Clark County
Laura Kelly	Department Land Conservation and Development
Shelly Parini	Clackamas County Water Environmental Services
Cindy Detchon	North Clackamas School District
Nina Carlson	NW Natural
Tom Bouillion	Service Providers: Port of Portland
Tara O'Brien	TriMet
Brett Morgan	Land Use Advocacy Organization: 1000 Friends of OR
Sara Wright	Environ. Advocacy Org: OR Environmental Council
Ryan Makinster	Home Builders Association of Metropolitan Portland
Andrea Hamberg	Public Health & Urban Forum: Multnomah County

Alternate Members Attending	**Affiliate**
Jean Senechal Biggs	Second Largest City in Washington Co.: Beaverton
Martha Fritzie	Clackamas County
Jessica Berry	Multnomah County
Theresa Cherniak	Washington County
Seth Brumley	Oregon Department of Transportation
Manuel Contreas, Jr.	Clackamas Water Environmental Services
Heather Koch	North Clackamas Park & Recreation District
Aaron Golub	Environmental Advocacy Org: PSU

Guests Attending	**Affiliate**
Barbara Fryer	City of Cornelius
Schuyler Warren	City of Tigard
Dan Pauly	City of Wilsonville
Scott Eaton	
Todd Borkowitz	

Metro Staff Attending

Ally Holmqvist, Sr. Transportation Planner
Andrea Pastor, Sr. Regional Planner
Cindy Pederson, Research & Modeling Mgr.
Clint Chiavarini, Sr. GIS Specialist
Malu Wilkinson, Investment & Dev. Mgr.
Roger Alfred, Metro Legal Counsel
Tim O'Brien, Principal Transportation Planner
Matthew Hampton, Sr. Transportation Planner
Lake McTighe, Sr. Transportation Planner
Chris Johnson, Research & Modeling Mgr.
Eliot Rose, Sr. Transportation Planner
Patrick McLaughlin, Sr. Regional Planner
Ted Reid, Principal Transportation Planner
Marie Miller, TPAC & MTAC Recorder

Call to Order, Quorum Declaration and Introductions

Chair Tom Kloster called the meeting to order at 10:00 a.m. Introductions were made. A quorum was declared. Zoom logistics and meeting features were reviewed for online raised hands, renaming yourself, finding attendees and participants, and chat area for messaging and sharing links.

Comments from the Chair and Committee Members

- **Updates from committee members around the Region** (all)
  Tara O'Brien noted TriMet just had an in-person career fair day to hire new bus operators, which now have a $7,500 bonus attached to their offer. TriMet is hoping to get back soon to pre-pandemic service levels.

- **Fatal crashes update** (Lake McTighe)
  A link was shared in chat, https://www.transportation.gov/SS4A, on the new Safe Streets and Roads for All (SS4A) discretionary program with $5 billion in appropriated funds over the next 5 years. In fiscal year 2022 (FY22), up to $1 billion is available. The SS4A program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. The deadline for applications is 5:00 p.m. EDT on September 15, 2022.

  Before reading the names of those killed in traffic crashes in the last month, background information on the data and criteria of reporting was provided. Each month we read the names of people killed in traffic crashes in the prior month. We do this to acknowledge the immense emotional, social and economic toll that these serious crashes have in our communities, and to acknowledge that serious traffic crashes are preventable and that no death on our roadways is acceptable.

  Metro staff includes the names of traffic crash victims included in this report based on the most recently available fatal traffic crash data compiled by the Oregon Department of Transportation (ODOT), as well as reviewing police and news reports, as there is typically a week or so lag in the ODOT data that is reported.

  ODOT compiles the official crash record for the state using traffic crash investigations and self-reported information. Metro follows national traffic crash reporting criteria, which the Portland Bureau of Transportation also uses. The criteria excludes people who die under the following circumstances:

  More than 30 days after a crash,
  Intentionally (suicide),
  In an act of homicide (a person intentionally crashes into another person with the intent to harm or kill),
  In a crash not involving a motor vehicle,

From a prior medical event (e.g. a heart attack or drug overdose), or
In a crash in a parking lot

Beyond these criteria, Metro staff does not exclude any crash based on fault or circumstance. Behind each serious crash is a story in which everyone involved is tragically impacted.

In addition to the practice of reading the names of traffic crash victims each month, Metro tracks and analyzes serious crash data trends occurring in the region. Over 70% of serious crashes occur on arterial roadways in the region. Understanding where crashes are occurring, and the factors contributing to crashes, helps regional leaders make informed decisions to improve safety.

As of this report, there have been 51 fatalities in 2022 in the three regional counties. Carol Chesarek noted the importance of reader board signs providing reminders to slow down and be more careful. It was further noted that usually five times as many serious injuries go along with each fatality reported.

Public Communications on Agenda Items - none

Consideration of MTAC minutes March 16, 2022 meeting
MOTION: To approve minutes from March 16, 2022 meeting
Moved: Laura Terway Seconded: Andrea Hamberg
ACTION: Motion passed unanimously with two abstentions: Jessica Berry and Aaron Golub.

Transit-Oriented Development (TOD) Program Strategic and Work Plan update (Andrea Pastor and Patrick McLaughlin, Metro) Mr. McLaughlin began the presentation with an overview of the Transit-Oriented Development (TOD) program, which strategically invests to help more people live, work and shop in neighborhoods served by high-quality transit. Metro also acquires and owns properties in transit-served areas and solicits proposals from qualified developers to create transit-oriented communities in these places.

The core program activity is providing funding to stimulate private development of higher-density, affordable and mixed-use projects near transit. In addition, the program invests in "urban living infrastructure" like grocery stores and other amenities, and provides technical assistance to communities and developers.

Over the twenty-one years since its inception in 1998, the TOD program has invested or committed over $35 million in land and projects. Regional partners have allocated federal transportation funds to support the TOD program as part of the Metropolitan Transportation Improvement Program planning process. MTIP funds, currently $3.2 million annually, are then exchanged to provide local funding for project investments and program operations. Other funding sources included rental income from undeveloped TOD program holdings and interest on fund balances held to support future development.

Ms. Pastor presented information on the TOD Strategic Plan, created in 2011 and updated in 2016. Eligible areas for funding include ½ mile of MAX, ¼ mile frequent service bus, and 2040 Centers. Investments are guided by market strength and transit-orientation. Areas to explore with the TOD plan

update were described for implementing Metro's racial equity strategies and furthering Metro's climate mitigation and resilience goals. Stakeholder engagements planned and process timeline with this update were provided.

Comments from the committee:

- Tara O'Brien acknowledged that transit riders may not be the core of assumptions with TOD planning. However, TriMet plans to work in coordination with their strategic planning and with the TOD program and can share useful information on their Forward Together program, with analysis that shows where ridership remains strong in the region. Ridership data may be changing and as more is known with how it aligns with the High Capacity Transit and corridors they will share information with Metro. Mr. McLaughlin noted he would coordinate on this data with changes to ridership during and after the pandemic.
- Nina Carlson noted that utility stakeholders appeared to be missing when planning climate strategy. NW Natural would welcome that involvement. Regarding standards in affordable housing development in the TOD programs, and bringing these standards into new areas of the UGB, it was asked what Metro was naming as the authority for funding and code design, or if this was structured from the Legislature. Ms. Pastor noted Metro's role with housing affordability was making sure the building requirements were met and meeting strategy expectations. Utility agency involvement would be followed up for participation.
- Chris Deffebach suggested that when thinking about the strategic plan focus on not just frequent bus lines, which as mostly concentrated in east Portland on Metro maps, but look for opportunities in development in Washington Co. where there are few frequent bus lines stops currently. It was also suggested that look at TriMet's long term transit plans where increasing bus routes are planned but have not been funded yet. Look at corridors as well as town centers to extend the opportunities also. Asked with the push for affordable housing is Metro still doing market rates and adjusting for affordable housing, Ms. Pastor confirmed.
- Manuel Contreas asked if the land acquisitions were strictly on right of way or locations where residential property owners were involved. Mr. McLaughlin noted that when Metro purchased property it is not for transit purposes. The property on the market is by a willing seller.

Tigard's mid-cycle UGB proposal/COO recommendation (Ted Reid/ Tim O'Brien/ Roger Alfred, Metro and Schuyler Warren, City of Tigard) Ted Reid provided an overview of the City of Tigard/s proposal to a well-planned UGB expansion that includes middle housing under Metro's new mid-cycle UGB amendment process. The Metro Chief Operating Officer has recommended that the Council approve this expansion, but through a UGB exchange instead of the midcycle process.

The UGB exchange process, while already enabled under state law, has not been used in the Metro region. It would entail adding the River Terrace 2.0 area to the UGB and removing a comparable amount of buildable land elsewhere in the region. This approach is consistent with Metro's focus on city readiness in its growth management decisions. It recognizes that Tigard is ready for growth while some other areas that were added to the UGB in the past have not resulted in housing and may not for decades to come. Ultimately, adding land to the UGB can only help us address our housing shortage if it develops in a thoughtful, predictable way. Tigard has demonstrated that it is ready to develop River Terrace with a mix of middle housing types that makes efficient use of land.

This UGB exchange approach also holds us to the core principle of only adding to the overall size of the UGB when there is a regional need for additional 20-year land supply. This highlights an important distinction that guides our work: the difference between a present day housing shortage and long-term land shortages. State law requires us to focus on the latter when considering whether to add more land to the UGB. Given the trends of the last few years – most notably a slowing population growth rate and additional allowances for middle housing in existing neighborhoods – it is difficult to conclude that more land is needed now. What we need is to make more land inside the existing UGB ready for housing.

To ensure that we maintain an effective land supply inside the UGB, Metro's COO has recommended that Metro work with the City of Tigard and other jurisdictions to identify areas of approximately 500 acres that are inside and adjacent to the UGB that have not demonstrated readiness to accommodate population growth. Once we have identified appropriate locations, we would return to the Metro Council for consideration of the exchange, including the addition of River Terrace 2.0 to the UGB. The goal is to complete this process this year, which is within the timeframe required by Metro code for Council action on Tigard's UGB expansion proposal.

Schuyler Warren provided an overview of the City of Tigard's River Terrace 2.0. The project work is focused through two lenses that are centrally linked - equity and climate change. The project is noted for:
Housing: Full matrix of housing types intermixed throughout, 20 du/ac
Affordability: Policy options to incent and support affordable housing
Commerce: Walkable options for work, destinations
Transportation: Genuinely multi-modal, transit-supportive patterns
Parks: Focused on community gathering places distributed equitably
Natural areas: Ecological function, connectivity preserved and enhanced
Infrastructure: Cost-efficient and sustainable, serve housing goals

Tigard's housing policies and affordable housing plan, including funding, was reviewed.
Housing Options Project (2018)
Policy Changes

- Legalized middle housing in all residential zones
- Reduced parking requirements for housing
- Allowed up to 2 Accessory Dwelling Units per lot
- Clear and objective standards for housing
- Removed housing tenure and familial status from code
- Removed disparate treatment of group living

Subsequent Policies

- SDC exemptions for ADUs
- SDC reductions for middle housing (lowest rate)
- CET reduction for middle housing

HB2001+

- No land use for most housing other than apartments
- Improved standards based on experience

- Consolidated 1-3 unit housing types

The presentation concluded with noting the City of Tigard's Strategic Plan with top priorities:

- Set the standard for excellence in public service and customer experience.
- Create a well-connected, attractive and accessible pedestrian network.
- Ensure development and growth supports the vision.

Tim O'Brien noted the memo in the meeting packet that described the UGB exchange process, specifically OAR 660-024-0070 that provides the requirements for exchanging land inside the UGB for land outside the UGB. A local government may remove land from a UGB provided it determines:

a) The removal of land would not violate applicable statewide planning goals and rules;
b) The UGB would provide roughly the same supply of buildable land after the exchange;
c) Existing public facilities agreements do not provide for urban services in the area to be removed from the UGB, unless the public facilities provider agrees to removal and concurrent modification of the agreement;
d) Removal of the land does not preclude the efficient provision of urban services to any other buildable land that remains inside the UGB; and
e) The land removed from the UGB is planned and zoned for rural use consistent with all applicable laws.

Metro staff is suggesting the following two step process for determining areas to consider for the UGB exchange. As noted this is a first draft of the proposed process.

<u>GIS Mapping Exercise Competed by Metro Research Center/Planning Dept.</u>

- Identify lands within and adjacent to the UGB that are not developed to urban levels using aerial photos and 2018 buildable land inventory as a starting point
- Identify larger blocks of land using natural features, roadways, development patterns etc. to help define the areas
- Document when the land was added to the UGB and the level of planning (concept/comprehensive) that has been completed for the identified blocks of land

<u>Consultations with City/County Planning Staff/Service Providers</u>

- Confirm status of planning for the areas
- Document why the land has not been developed such as infrastructure deficiencies, lack of property owner interest, inability to annex, or other reasons
- Identify public facility agreements, planning area agreements and other conditions/moratoriums that are holding up or limiting development
- Identify any development proposals pending for the areas
- Identify local plans or programs intended to help accelerate the development process (CIP, funding of major infrastructure)
- Refine potential land areas if necessary based on conversations with local government and service provider staff

Report Products from this research:

• Series of maps for each potential exchange area that shows: general area, buildable land, natural resources, topography and other constraints, local zoning.

• A matrix of readiness characteristics that could include the following: Total acreage, buildable land acreage and description of spatial distribution of buildable land, number of parcels and average size, status of local adopted plans for the area, infrastructure limitations – sanitary sewer, water, storm water and transportation, and risk of potential takings claim and other development barriers or considerations.

Comments from the committee:

- Martha Fritzie noted that as a technical standpoint there appeared to be no red flags in terms of the analysis presented. It was good to know there would be coordination with local jurisdictions and service providers, but curious what sort of involvement is planned with property owners with importance to this. Several questions were asked about size of lands including acreage to acreage, capacity analysis to what Tigard is proposing, type of capacity with other lands, and clarification on the last report that seemed to have UGB areas not to be developed. How was all this being factored in?

  Mr. O'Brien noted that staff is working with the communications tem and others to develop a plan for outreach, which will be taken the Metro Council in June. There are timing questions yet to be answered, including the initial process identifying larger areas, working with others, and taking information to property owners. Metro Councilors have offered to meet with organizations in communications.

  Regarding buildable land size, this is estimated at roughly the same size buildable land in the exchange. Capacity issues are more challenging since development is not planned in detail yet. Mr. Reid noted generally the first step in the process is identifying building land, then evaluating growth capacity on this land. Questions on redevelopment or vacant land, and buildable and what can be counted for capacity are ongoing.

  Roger Alfred noted that if we get to discussions with specific parcels of land we will absolutely have engagement with property owners. DLCD requires whatever amount is added needs to be roughly the same supply of buildable land, as comparable buildable acreage. It was agreed there are questions to be answered around what buildable land is and where comparable land can be used in exchanges.

- Laura Terway thanked staff for the opportunity to add input, and felt it was inspiring to see the City of Tigard propose such a well-designed concept plan. There are many challenges planning development on edges of urban areas. This concept plan makes a strong case for the region with specifics addressed and benefiting the region as a whole.

  Concerns raised include applying this judiciously and balancing near-term development with long-term development plans. Also, criteria of principles of identifying the locations that are

buildable in the UGB specific to be useful, but broad enough to apply through the region so that one portion is not disproportionate from another. It was noted the property owner engagement process be understandable of how their expectations of the future outlines with the whole process.

- Chris Deffebach asked about the precedent nature of the process, and if anything would prevent this happening again if other communities want to do the same with an exchange. Concerns were noted on the long-term implications. Were any guidelines for this known or just this specifically with Metro Council deciding if the correct process?

  Mr. Alfred noted state guidelines exist with smaller jurisdictions doing this similarly. DLCD also has rules and ultimately will need to approve this. Nothing in the rules say how often you can do this exchange. But from a practical perspective it wasn't felt the Council would want to start the process on a piecemeal basis. This particular plan aligned with the mid-cycle timing. The full UGB update would be the time for more common changes to be discussed. Mr. Reid added this process came up in the Urban Growth Readiness Task Force discussions, and noted concerns moving forward could be reviewed again as needed.

- Manuel Contreas noted this was a good tool in the Metro toolbox. It was asked what the amount of land used in the exchange was planned for outside the UBG? Because this is a new process, it was suggested as one of the criteria to include the need to be fluid as lessons are learned from different methods that come with it, and staying flexible. One of the missing criteria to avoid negative impact is not limiting property to just size of acreage but also to value of property. When developing building land there are several mitigation issues to be addressed, such as infrastructure, water, sewer, utilities and roads. Different values exist between in and outside the UGB which may create competitive advantages to some exchanges.
- Carol Chesarek appreciated the opportunity to have this planned during a mid-cycle planning process. It was suggested urban growth reserves was missing in the exchange process. A concern was raised if land outside the UGB be put into reserves or something decided later. Also, concern about property owners changing their minds or challenging decisions.

  Mr. Alfred noted these are components of what we are looking at in the analysis. Initial thoughts are being discussed regarding how best to avoid taking claims possibilities. Most likely it would be more a measure 49 claim. We now have statutory provisions that devalues and impacts value that could be arguably claimed this way. Regarding the reserve question, unlike most other cities in the state we have these reserve areas. If the land in exchange comes out of the UGB it is more likely to come from undesignated destination lands, not from reserve areas. More research on this will be done.

- Aquilla Hurd-Ravich asked if it was needed to have a willing jurisdiction that would agree to have their land taken out of the UGB. What happens if there are no takers, no land willing to do this and be removed from the UGB? Mr. Reid noted we would hope to avoid disagreements on exchanges, and doesn't believe there is anything in the rules that tell us we have to have a willing jurisdiction. Most would encourage sound development in the process.

- Shelly Parini-Runge thanked the staff for the opportunity to weigh in on the issues. It was noted in chat she shared Laura Terway's sentiments for the quality of the proposed project and recommendations for Metro to consider moving forward as well. Echoing the importance of public engagement with communities and property owners - especially longer-term if this becomes a new standard practice.

  One of the missing criteria in understanding the environmental constraints as you look at these properties involving infrastructure and other elements such as watersheds. It was also noted that regarding the value proposition compensations whether the property is ready for development or not be evaluated. Mr. O'Brien noted the natural resources functions will certainly be taken into consideration, with part of the evaluation helping to identify these areas.

  - Heather Koch noted the consideration to potential opportunities with future, comparable planning where parks and nature areas with trail systems can be developed with connections to development balancing land demands in the region.

Mr. Reid noted the timeline now goes to Metro Council to approve this initial step of the process. Initial results will be reported to MTAC later this summer or early fall.

Adjournment

There being no further business, meeting was adjourned by Chair Kloster at 11:48 a.m.
Respectfully submitted,
Marie Miller, MTAC Recorder

Attachments to the Public Record, MTAC meeting May 18, 2022

Item	Document Type	Document Date	Document Description	Document No.
1	Agenda	5/18/2022	5/18/2022 MTAC Meeting Agenda	051822M-01
2	MTAC Work Program	5/10/2022	MTAC Work Program as of 5/10/2022	051822M-02
3	Memo	4/29/2022	TO: MTAC members and interested parties From: Lake McTighe, Regional Planner RE: April 2022 Report - Traffic Deaths in the three counties	051822M-03
4	Slide	4/29/2022	May traffic deaths report for Clackamas, Multnomah and Washington counties	051822M-04
5	Meeting Minutes	3/16/2022	Meeting minutes from MTAC March 16, 2022	051822M-05
6	Presentation	May 18, 2022	Transit-Oriented Development Program Strategic & Work Plan Update	051822M-06
7	Memo	5/12/2022	TO: MTAC members and interested parties From: Tim O'Brien, Principal Regional Planner Ted Reid, Principal Regional Planner Roger Alfred, Senior Assistant Attorney RE: Tigard's mid-cycle UGB proposal/COO recommendation/exchange process	051822M-07
8	Report	N/A	River Terrace 2.0 Mid-Cycle Urban Growth Boundary Proposal from the City of Tigard: Metro Chief Operating Officer Recommendation to the Metro Council	051822M-08
9	Presentation	5/18/2022	City of Tigard: River Terrace 2.0	051822M-09

Memo

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

Date: Wednesday, July 6, 2022
To: Metro Technical Advisory Committee (MTAC)
From: Ally Holmqvist, Senior Transportation Planner
Subject: Introduction to the High Capacity Transit Strategy Update

Purpose

This memorandum provides an introduction to the High Capacity Transit Strategy Update to support discussion related to 1) the work plan approach and anticipated outcomes, 2) the developing engagement strategy and 3) key elements and policy considerations to address. Input will help shape development of the policy framework, vision and emerging strategies for high capacity transit, a key focus area for the 2023 Regional Transportation Plan.

Introduction

The 2023 Regional Transportation Plan (RTP) update recognizes that we are at a pivotal moment. The greater Portland region continues grow – steadily, diversely, and differently – in the face of challenges. Some of these challenges are enduring, such as climate change, systemic racism and inequity, job accessibility (e.g., jobs/housing balance, travel time and reliability), and affordability, while others are emerging such as the COVID-19 pandemic and the shift to more people working and shopping online.

As a result, transit in the Portland region looks different today than it did in 2018 when the last RTP was adopted. We know that transit service and ridership in our region, and nationally, have been severely impacted by an environment of increased pandemic-related costs, falling fare revenue, and operator shortages. This was especially true during commute hours and within the Central City as telework significantly increased for non-essential jobs. Metro's Emerging Trends Study and TriMet's Forward Together near-term service planning effort both indicate that transit ridership is expected to take several years longer than automobile traffic to return to pre-pandemic levels due to service cuts, changing travel patterns, lingering health and safety concerns, and other factors. We also know, even at pre-pandemic service levels, we need more and more frequent, faster, and more reliable service to more places to meet the needs of community members and to provide better alternatives to driving. Those needs include continuing to make the system safer and more equitable and accessible for people who rely on transit, including people with low incomes, people of color, people with disabilities, people who are older and single-parent families.

At the same time, change has also created new opportunities. Even within this new landscape we saw regional values at work as TriMet intentionally avoided cuts to routes serving equity areas where people are most likely to depend on transit and have the most pressing health and safety concerns. Because of that, Forward Together and the Emerging Trends Study have shown there were still many areas where transit ridership was more stable especially outside of typical commute times (such as mid-day), for industrial workers, and to centers and community places (such as schools, health care centers and commercial areas with grocery stores) outside the regional center. These trends reinforce why our shared vision to make transit more frequent, convenient, accessible and affordable for everyone is so important – something also reflected by new federal guidance (e.g., Federal Transit Administration Planning Emphasis Areas, Capital Investment Grant Program Policy Guidance).

We know we have a strong foundation to build from through our past work with partners and community to develop the 2018 Regional Transit Strategy and our previous work together to establish investment priorities for a regional transportation funding measure. We know there are still ways we can do better, but ultimately our vision has been leading us in the right direction.

We know that even during this challenging time, work is underway to make the transit system better – particularly "high capacity transit". High capacity transit is public transportation that moves a lot of people quickly and often such as MAX light rail, WES commuter rail or rapid bus. This type of transit makes fewer stops, travels at higher speeds, comes more frequently and carries more people more efficiently and often longer distances than a typical local bus line. It provides a higher quality of service with greater benefits to more people and is generally more similar driving in terms of convenience and travel time. Trains and/or rapid buses may run on a dedicated or a shared track or lane that includes improvements, such as a priority bus lanes that people driving cars can also use when turning, space at intersections and priority timing at traffic signals that allow buses to pass traffic. Routes also include enhanced features for riders - boarding via multiple doors and/or stations with covered waiting areas and information about when the next train or bus will arrive. Together, these features make high capacity transit more reliable, convenient and comfortable for people to use.

Division Transit – TriMet's first rapid bus line – will open this September (2022), while C-TRAN's The Vine on Fourth Plain in Vancouver, WA began service in 2017. Rapid bus planning efforts are also underway for Tualatin Valley Highway in Beaverton-Hillsboro, 82nd Avenue in Portland, and Mill Plain Boulevard in Vancouver. As the "missing middle" of transit, rapid bus offers great opportunities for cost-effectively expanding high quality service to support growing regional centers and educational and employment areas. Further, we know that new funding sources (e.g., Infrastructure Investment and Jobs Act) provide substantial opportunities for rapid bus in particular, while also supporting transit service recovery planned through Forward Together and other regional efforts (e.g., Washington County Countywide Transit Study, SMART Master Plan Update) more generally (within the RTP near-term horizon of 2030).

The future looks brighter long-term and increased transit service is a critical part of the overall solution to challenges facing the greater Portland region. We want to continue to plan in ways that support service recovery and ridership now, while also setting ourselves up to maximize opportunities for realizing our transit vision for the future in order to provide the greatest community benefit. If we want to become the region we envisioned in our 2040 Growth Concept, 2014 Climate Smart Strategy, and 2018 Regional Transit Strategy we must continue improving transit's accessibility, service, reliability, and reach. That means this is the right time to focus on transit yielding the highest outcomes for the most people in line with regional goals. The High Capacity Transit Strategy Update will bring together greater Portland partners and community members to expand and renew our shared vision for investing in a high capacity transit system that serves everyone (for more information see this fact sheet about the project).

Trains, buses, shuttles and other options are all important and work together as a larger system to help people get where they need to go. Different kinds of transit serve the diverse transportation needs of the Portland region. By updating our strategy for high capacity transit, we will envision a stronger backbone for the network that will set the stage for future work to look at potential solutions improving its connections (for more information see this Public Transit 101 fact sheet).

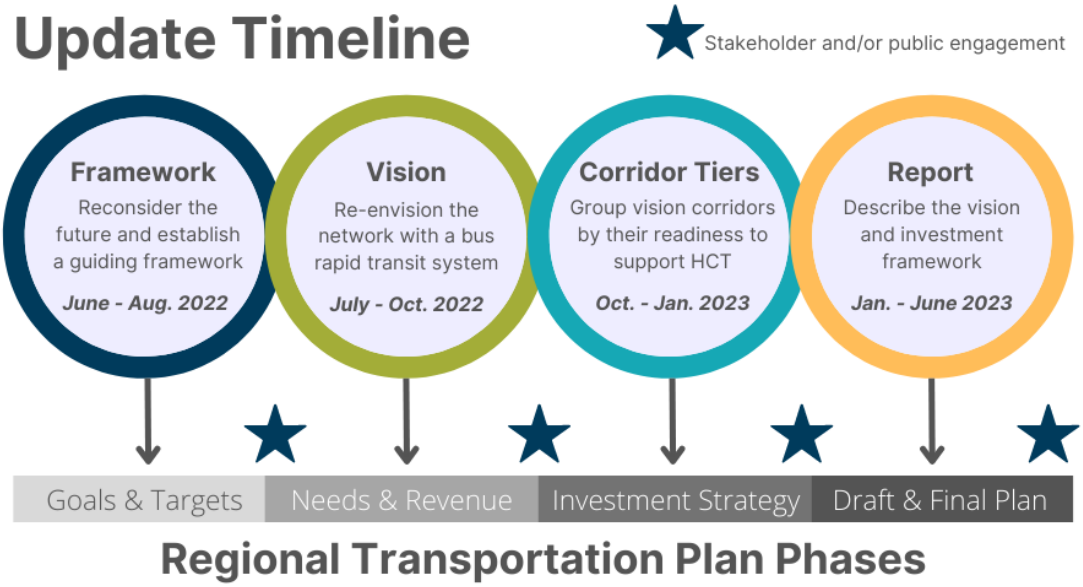
High Capacity Transit Strategy Update

The High Capacity Transit (HCT) Strategy, a component of the Regional Transportation Plan (RTP), is the framework for guiding regional high capacity transit system investments – categorizing corridors where a higher quality of service would most benefit the most people. The update will re-

assess and re-evaluate the region's high capacity transit system to address new policy questions around the future of high capacity transit in our region, re-envision the regional high capacity transit network with rapid bus, and build on the previous work done identifying community priorities to create a "pipeline" of corridor investments in the region competitive for federal funding. Work will include establishing policy recommendations, identifying additional corridors for consideration and refining the network vision, tiering corridor investments by readiness and identifying potential project opportunities (providing a framework for project prioritization within the 2023 RTP process), and developing a draft report including recommendations for implementation of the updated HCT Strategy. This work (described in greater detail in the work plan included as Attachment 2) will result in an updated strategy for achieving our goals and desired outcomes as we implement the high capacity transit network vision.

The update is led by a project management team including staff from Metro's Planning, Research and Development, Investment Areas and Land Use and Development Departments and TriMet's Mobility Planning and Policy and Major Projects Divisions. The team will meet regularly with a Transit Working Group that includes partner representatives from SMART, Portland Streetcar, City of Portland, Clackamas County, Multnomah County, Washington County, ODOT, C-TRAN and Southwest Washington Regional Transportation Council to share work and solicit feedback. The first of six meetings for the working group took place on June 30, 2022 (see Attachments 3 and 4 for the agenda and meeting minutes). Metro staff will also engage with other regional transit providers and interested organizations in engagement and formal consultation conducted as part of the 2023 RTP update.

The HCT Strategy will be updated in four key phases from June 2022 to November 2023 with staff returning to the working group, County coordinating committees, and Metro advisory committees and Council for input to inform each milestone (see Attachment 1 for a summary of these milestones and key touchpoints with stakeholders and decision-makers). This work plan and supporting public engagement approach were developed to align with the timeline, key milestones, and engagement efforts for and prepare final content for incorporation into the 2023 Regional Transportation Plan to be considered for adoption in November 2023.



Relationship to the 2023 Regional Transportation Plan Work Plan and Engagement

The 2023 Regional Transportation (RTP) Plan scoping phase process conducted with decision-makers, local, regional, state and community partners and members of the community identified the High Capacity Transit (HCT) Strategy Update as a focus area. The scope and funding for the update is reflected in the adopted Unified Planning Work Program for Fiscal Year 2022-2023.

Based on the policy context provided by the 2040 Growth Concept, Climate Smart Strategy, Regional Transit Strategy and 2018 Regional Transportation Plan, the scope of the High Capacity Transit Strategy Update includes considering how the regional high capacity transit network can:

- Advance RTP priorities for equity, climate, safety, and mobility and forward implementation of the region's 2040 Growth Plan and Climate Smart Strategy.
- Best recover from COVID-19 and recent operator shortages.
- Build from the "spoke and hub" light rail system to explore a complementary grid-based bus rapid transit system that leverages identified Enhanced Transit Corridors in support of the high capacity transit vision.
- Better serve transit-supportive equity focus areas and connect regional (and town) centers together.
- Be more people-focused, better responding to community needs and priorities related to how and where community members travel, particularly non-commute trips and be a safe, reliable, affordable, and convenient alternative to driving.
- Support mobility hubs and bus fleet electrification.
- Fit into a complete, integrated regional transportation system and statewide rail and inter-city transit system and integrate with a range of mobility services.
- Support affordable housing along corridors and in centers, preventing and/or limiting displacement through intentional actions supporting community development and stabilization, and improving quality of life for people of all incomes and backgrounds.

As a component of the 2023 RTP update, the HCT Strategy Update will be coordinated with the approach, engagement, formal consultation, and decision-making for that effort. JPACT and Metro Council approved a work plan, equity framework, and engagement plan for the 2023 RTP update informing work underway around goals, objectives, and targets. These documents serve as the guiding vision and goals for the updated HCT System Strategy and include additional information around the larger policy and strategic context for the RTP.

Key transit-related themes around feedback that we heard through the 2023 scoping process include:

- Transit is seen as essential for reducing congestion, improving transportation equity, and reducing greenhouse gas emissions. Investments and strategies that rebuild ridership will be an important near-term goal.
- Transit is critical to achieving the RTP Vision and will require greater focus to become a safer and more reliable transportation option.
- Transit is viewed as a consumer good instead of a public good.
- There is a need for increased transit access, frequency, routes connections and affordability.
- Transit doesn't feel like a welcome and safe space for people, especially: people with hidden disabilities and people of color.
- Focus on transit ridership and communities and how the pandemic has impacted access to transit or ridership. Transit dependent folks and frontline workers have been using transit during the entire pandemic. Rather than framing the discussion as how do we get ridership back, frame the discussion as: how do we support current riders?

Engagement for the HCT Strategy update will occur in each of the four major project phases: policy framework, network vision, corridor tiers, draft report. This engagement will be conducted in combination and/or close coordination with engagement for the 2023 RTP and through some engagement specifically focused on the HCT strategy, including the following activities:

- Online surveys, combined with 2023 RTP surveys as feasible, will offer opportunities for community members across the region to provide input on the HCT strategy. Online surveys will be supported with outreach conducted by community liaisons to reach under-represented communities. The first survey will launch in July 2022.
- Contracts with community based organizations (CBOs), coordinated with 2023 RTP CBO contracts, will support involving community members from communities of color, youth and people with disabilities, who have been historically underrepresented in decision making and are more likely to rely on transit. Up to four events and nine one-on-one, brief interviews with key organizations and other community stakeholders will inform major project milestones.
- Metro stories will amplify the voices and experiences of community members who have been historically left out of public decision-making processes and are affected by transportation policies and investment decisions. A Metro story focused on TV Highway will highlight an HCT corridor in the region and the community needs and ideas for that corridor.
- RTP engagement with businesses this in summer/fall 2022 will help to identify needs related to HCT.
- Input collected through 2023 RTP scoping process as well as recent transportation related engagement over the last five years will also inform development of the HCT policy framework.

Background

The first Regional High Capacity Transit (HCT) System Plan was developed in 2009 to guide future regional high capacity transit capital investments and support the goals and aspirations of the cities, counties, and regional partners that make up the Portland metropolitan area. The HCT Plan provided a framework on where to spend limited transportation dollars and where local jurisdictions have committed to supportive land uses, high quality pedestrian and bicycle access, management of parking resources and demonstrated broad based financial and political support. That work, conducted as part of the 2010 Regional Transportation Plan (RTP) update, identified and evaluated travel corridors for high-capacity transit potential and established tiers for investment priorities. The HCT Plan analyzed around 60 corridors, considering cost and ridership, transit markets, safety and security, land use, financial feasibility, traffic/freight impacts, and included a public and jurisdictional involvement process. A total of 18 potential high capacity transit corridors were prioritized and placed into tiers of near term regional priority corridors (Tier 1), next phase regional priority corridors (Tier 2), developing regional priority corridors (Tier 3) and regional vision corridors (Tier 4). The HCT System Plan network was reflected in the transit element of the 2010 RTP. Metro has updated the RTP twice, in 2014 and 2018, since the original HCT System Plan was adopted, which reflected the current priority outcomes of equity, climate, safety, and mobility and incorporated a number of other policies and studies.

The 2018 RTP and Regional Transit Strategy (RTS) incorporated the 2009 HCT Plan (2009) – identifying projects currently underway, upcoming, and to be completed in the future based on many factors including how "ready" they were to begin construction. Another major outcome of the RTS was classifying enhanced transit corridors where the region can invest in improvements to the street that result in "better bus". The approach centered improving transit speed and reliability on the most congested existing and planned frequent service bus or streetcar lines. Corridors that had the highest reliability issues (difference in travel times between free flow and peak period

conditions) and experiencing significant dwell and high ridership were identified as Enhanced Transit Concept (ETC) corridors. These corridors – prime for investments from better bus priority street improvements to corridor-based rapid bus to fixed guideway bus rapid transit – provide a starting point for exploring the regional rapid bus system. Already the ETC Pilot Program (Better Bus) is advancing nimble, low-cost improvements along congested blocks, intersections and bridges to make buses more reliable and convenient along ETC corridors.

The update to the High Capacity Transit Strategy will complement the RTS and revisit the corridor investment tier structure established in that plan. The 2018 Regional Transportation Plan includes a High Capacity Transit (HCT) component which includes the Regional Transit Network Vision (map and description of updates), HCT policies, List of 2027 and 2040 Fiscally Constrained and 2040 Strategic HCT Capital Projects, HCT Major Transit Projects and Project Development descriptions, and HCT Assessment and Readiness Criteria (see the background provided in Attachment 5).

Policy Context

2040 Growth Concept

The 2040 Growth Concept concentrates mixed-use and higher density development in urban centers, station communities, corridors and main streets that are well-served by transit. High capacity transit is a key element of the 2040 Growth Concept sets forth a vision for connecting the central city to regional centers like Gresham, Clackamas and Hillsboro with high capacity transit – connecting people with hubs of commerce and supporting development in dense areas with a mix of housing and jobs to support healthy, equitable communities and a strong economy. By moving people efficiently and comfortably over long distances, high capacity transit promotes the efficient use of land, public facilities and services and protects farms and forests.

Climate Smart Strategy

The Climate Smart Strategy affirmed the region's commitment to provide more transportation choices, keep our air clean, build healthy and equitable communities, and grow our economy – all while reducing greenhouse gas emissions. It provides clear direction to invest more in making our transit system more convenient, frequent, accessible and affordable in order to meet regional sustainability goals and objectives. Key focus areas include increasing service frequency, expanding the transit system to provide more access to jobs and community services, improving accessibility for people walking and rolling to transit stops, and making fares more affordable.

Fast, convenient and linked to the broader transit and transportation network – high capacity transit provides a viable, more affordable alternative to driving. This makes our transportation system more equitable for people who rely on transit, including people with low incomes, of color, with disabilities, who are older and single-parents. Fewer cars on the road leads to less air pollution, more physical activity, less time in traffic, fewer crashes and more reliability for moving people and goods – supporting the health, safety, mobility, economy and quality of life of our region. The Climate Smart Strategy identified the following near-term actions for Metro and partners to support high capacity transit:

- Implement plans and zoning that focus higher density, mixed-use zoning and development near transit.
- Expand partnerships with transit agencies to implement capital improvements in frequent bus corridors (including dedicated bus lanes, stop/shelter improvements, and intersection priority treatments) to increase service performance.
- Expand partnerships with cities, counties and ODOT to implement capital improvements in frequent bus corridors to increase service performance.

- Expand transit service to serve communities of concern, transit-supportive development and other potential high ridership locations.
- Seek and advocate for new, dedicated funding mechanism(s).
- Make funding for access to transit a priority.
- Research and develop best practices that support equitable growth and development near transit without displacement, including strategies that provide for the retention and creation of businesses and affordable housing near transit.

Regional Transportation Plan

The Regional Transportation Plan (RTP) sets regional transportation policy that guides local and regional planning and investment decisions to meet the transportation needs of the people who live, work and travel in greater Portland – today and in the future. It is a key tool for implementing the 2040 Growth Plan and Climate Smart Strategy. High capacity transit is critical to implementing the RTP investment priorities that support this blueprint for the future – equity, climate, safety and mobility. Expanding high capacity transit service provides people with transportation options and helps minimize congestion as our region continues to grow. The policy framework for high capacity transit focuses on creating strong connections between regional centers in line with these goals. Regional Transit Network Policy 4 also directs investment decisions to *"[m]ake transit more convenient by expanding high capacity transit; improving transit speed and reliability through the regional enhanced transit concept."*

In addition to over 30 other related policies (8 total for transit), the RTP includes additional direction for high capacity transit to:

- Provide a seamless, integrated, affordable, safe and accessible transit network that serves people equitably, particularly communities of color and other historically marginalized communities, and people who depend on transit or lack travel options.
- Preserve and maintain the region's transit infrastructure in a manner that improves safety, security and resiliency while minimizing life-cycle cost and impact on the environment.
- Make transit more accessible by improving pedestrian and bicycle access to and bicycle parking at transit stops and stations and using new mobility services to improve connections to high-frequency transit when walking, bicycling or local bus service is not an option.
- Use technology to provide better, more efficient transit service – focusing on meeting the needs of people for whom conventional transit is not an option.

Regional Transit Strategy

The 2018 Regional Transit Strategy (RTS) is an element of the 2018 RTP which supported the transit modal component of the plan. It was created to highlight the region's plans for meeting regional goals for transit as the region continues to grow steadily, as well as provide the region with a transit vision and policy framework for capital investments and operational improvements. Together, Metro and partners developed a regional shared vision to make transit more frequent, convenient, accessible and affordable for everyone. Key focus areas of the RTS vision include high capacity transit investments, such as light rail and bus rapid transit; and new transit enhancement strategies, such as transit signal priority, bus-only lanes and queue jumps. In addition to a number of recommendations related to affordability generally, it identified many actions for Metro and partners to take in supporting those focus areas, including:

- Invest in Enhanced Transit Concept improvements.
- Invest in High Capacity Transit corridors.
- Provide new community and regional transit connections to improve access to jobs and community services and make it easier to complete some trips without multiple transfers.

- Implement and coordinate with state, regional, neighboring cities and transit providers future service plans
- Design transit streets to prioritize curb access for transit vehicles and minimize conflicts with other modes.
- Provide programs and adopt policies that help increase transit usage and reduce drive alone trips, such as travel options information and support tools (e.g., trip planning services, wayfinding signage, bike racks at transit stops), individualized marketing, commuter programs (e.g., transit pass programs), and actively managing travel in downtowns and other mixed-use areas.
- Test and deploy connected vehicle technologies that help transit operate more efficiently, such as transit signal priority.
- Invest in repair and maintenance and critical transit bottleneck improvements to ensure the existing system functions effectively and efficiently.
- Facilitate service connections between transit modes and providers at transit hubs.
- Implement the TriMet Regional Transit Signal Priority Study recommendations, especially in congested corridors to improve on-time performance and reliability
- Coordinate and link transit-oriented development strategies with transit investments.
- Test and evaluate new mobility services like microtransit, ride hailing services and car/bike sharing to improve connections to high-frequency transit when walking, bicycling, or local bus service isn't an option.
- Coordinate transit investments with improvements to pedestrian and bicycling infrastructure that provide access to transit as service improvements are prioritized, in line with Regional Active Transportation Plan and TriMet's Coordinated Transportation Plan for Seniors and Persons with Disabilities.

Other Regional Planning Work by Metro

Consistent with the policy context, the HCT Strategy update will also be informed by, coordinated with and ultimately itself inform other recent regional study, planning efforts and/or work underway (summarized in Table 1 below).

Table 1. Regional Work Related to the HCT System Strategy Update

Informing Strategy Development	Coordinated with Strategy Development	To Be Informed by the Updated Strategy
• Mobility Corridors Atlas (2014) • Strategic Plan to Advance Racial Equity, Diversity and Inclusion and Equity Framework (2016) • Southwest Corridor Equitable Development Strategy (2017) and Locally Preferred Alternative (2018) • Division Transit Locally Preferred Alternative (2019) • Designing Livable Streets and Trails Guide (2019) • Regional Framework for Highway Jurisdictional Transfer (2021) • Regional Congestion Pricing Study (2021)	• Tualatin Valley Highway Corridor Study (2022-23) • 82nd Avenue Corridor Study (2023) • Transit-Oriented Development Strategic Plan Update (2022) • Emerging Transportation Trends Study (2022) • Climate Smart Strategy Update (2022) • 2020 MPO Boundary, Equity Focus Areas, and High Injury Corridor Designations 2023 RTP • Racial Equity Framework • Goals, Objectives, and Targets	2023 RTP Transit Strategy • Existing conditions • Regional Transit Policy Framework • Regional Transit System Needs • Regional Transit Network Concept and Functional Classifications • RTP Transportation Project and Program Priorities – RTP Call for Projects • Performance Measures

- Transportation System Management and Operations Strategy Update (2021)
- Regional Mobility Policy (2019-22)
- Regional Needs and Opportunities Analysis
- Safe and Healthy Urban Arterials Policies
- Affordability and Anti-Displacement Policies
- Equitable Finance Strategies
- Funding/Revenue Forecast
- Chapter 8 Scoping: Future Work Needed to Support Successful Implementation of the HCT System Strategy
- 2023 Climate Smart Strategy

Work by Regional Partners

Similarly, several local agencies and jurisdictions have completed or are currently working on transit development plans that are already expanding or will expand the transit network that will inform the HCT Strategy Update. Agency partners participating in the HCT Working Group will help ensure this recent work is reflected in the update. Additionally, the update will be coordinated with transit efforts currently underway (shown in bold on the list below):

- **Oregon Department of Transportation Oregon Transportation Plan** (anticipated 2023), **Oregon State Rail Implementation Plan** (underway 2022), and Oregon Passenger Rail Development Plan (2021) and Public Transportation Plan (2018)
- Clackamas County Clackamas to Columbia Corridor Plan (2020) and Transit Development Plan (2021);
- **Washington County Countywide Transit Study** (anticipated 2023) and **Transit Development Plan** (anticipated 2022);
- Southwest Washington Regional Transportation Council Clark County High Capacity Transit System Study (2008, Mill Plain rapid bus anticipated 2023);
- **TriMet Forward Together** (anticipated 2023), Reimagining Public Safety and Security Plan (2021), Better Bus/Enhanced Transit Concept Analysis (2020-21 with Metro), Coordinated Transportation Plan for Elderly and People with Disabilities (2020), Pedestrian Plan (2020), Unified Service Enhancement Plan (2018), Equity Lens/Index (2020), Red Line MAX Extension Transit-Oriented Development & Station Area Planning (2022) and Forward Together (FY2023 Annual Service Plan);
- City of Hillsboro Sunset Highway Corridor Study (underway 2022);
- City of Portland Enhanced Transit Corridors Plan (2018) and Transit and Equitable Development Assessment (2022); and
- **SMART Transit Master Plan Update** (anticipated in 2022) Bus on Shoulder Pilot (underway with ODOT)

ATTACHMENTS

1. High Capacity Transit (HCT) Strategy Update Major Milestones and Meetings Outline
2. HCT Strategy Update Work Plan
3. HCT Strategy Update Working Group Meeting #1: Agenda
4. HCT Strategy Update Working Group Meeting #1: Minutes
5. 2018 Regional Transit Strategy HCT Background Information

cc: Tom Kloster, Metro Regional Planning Manager
Kim Ellis, Metro Principal Planner, Regional Transportation Planning
Matt Bihn, Metro Principal Planner, Investment Areas
Andrea Pastor, Metro Senior Development Project Manager, Housing & TOD
Grant O'Connell, TriMet Senior Planner, Mobility Planning & Policy
Jaime Snook, TriMet Director, Major Projects

HIGH CAPACITY TRANSIT STRATEGY UPDATE

Key Meeting Dates and Engagement Activities for Project Milestones

June/July 2022

Outcome: Introduction and feedback on work and engagement program and goals and policy considerations.

Date	Who
June 30	**HCT Working Group #1: Introduction, Goals, and Policy Considerations** • Work Plan • Engagement Plan Preview • Policy and Core Criteria Preview
July 6	East Multnomah County Transportation Committee TAC
July 7	Washington County Coordinating Committee TAC
July 13	**Transportation Policy Alternatives Committee (TPAC)**
July 18	Washington County Coordinating Committee (policy)
July 18	East Multnomah County Transportation Committee (policy)
July 20	**Metro Technical Advisory Committee (MTAC)**
July 26	**Metro Council (Work Session)**

May-July	• Project webpage tab launched (June)
	  ○ MetroQuest Survey: Needs (added mid- July to mid-August)
	• Fact Sheets:
	  ○ #0: Transit 101 (June)
	  ○ #1: About the HCT Strategy Update (June)
	  ○ *#2: Regional Transit Activities*

August 2022

Outcome: Feedback on policies and targets for 2023 RTP and corridor evaluation approach.

Date	Who
August 4	Clackamas County Coordinating Committee TAC
August 16	**HCT Working Group #2: Policy Framework and Corridor Evaluation Approach** • Policy Gap Analysis/Framework • Corridor Evaluation Framework • Systems Analysis Preview
August 18	**Joint Policy Advisory Committee on Transportation (JPACT)**
August 24	**Metro Policy Advisory Committee (MPAC)**

Late August/Early September	• Project webpage tab
	  ○ Policy Framework Memo
	• Fact Sheet #3: Policy Framework
	• Engagement Round 1: Policy Framework (August)
	  ○ What are the policy gaps to explore? Where are new areas of consideration since 2018?
	• RTP: TV Highway Snapshot (includes tie to HCT)
	• RTP Community Listening Session
	• RTP Info Session

September/October 2022

Outcomes: Review policy framework and systems analysis. Feedback on potential HCT investment corridors for refined vision and readiness assessment approach.

Date	Who
Early September TBD	**HCT Working Group #3: Potential Investment Corridors, Network Vision, and Readiness Tiers Approach** • Policy Framework Review • Systems Analysis • Vision • Corridors/Readiness Approach and Preview
September TBD	Washington County Countywide Transit Study TAC (alternative for WCCC TAC)
September 14	**Transportation Policy Alternatives Committee (TPAC)**
September 19	Washington County Coordinating Committee (policy)
September 21	**Metro Technical Advisory Committee (MTAC)**
September 23	WCCC TAC Workshop
September 28	**Metro Policy Advisory Committee (MPAC)**
September 29	**JPACT/Metro Council Workshop**
October 5	East Multnomah County Transportation Committee TAC
October 6 (tentative)	Clackamas County C-4 TAC (policy)
October 17	East Multnomah County Transportation Committee (policy)
October 19 (tentative)	Clackamas County C-4 subcommittee (policy)

September-October	• Project webpage
	  ○ MetroQuest Survey: Network Vision Review
	  ○ Vision/Systems Memos
	• Fact Sheet #4: What is the regional vision for HCT?
	• Stakeholder Meetings/Interviews Round 2 (September)
	  ○ What is the vision missing? Did we miss anything in thinking about how to evaluate readiness?
	  ○ RTP: PBA Workshop Roundtable Presentation

November/December 2022

Outcome: Review refined vision. Discuss 2023 RTP Needs and Revenue Forecast. Feedback on corridor readiness assessment and tiers.

Date	Who
Mid-November TBD	**HCT Working Group #4: Vision, Readiness Assessment, Needs and Revenue Forecast** • Vision Review • Corridor Readiness Assessment • Costs/RTP Revenue Forecast • RTP Investment and Future Priorities

November- December	• Project webpage
	  ○ MetroQuest Survey: Corridor Investment Tiers
	  ○ Evaluation/Assessment Memos
	• Fact Sheet #5: Where will we invest in HCT first?
	• Stakeholder Meetings/Interviews Round 3: Corridor Investment Tiers (November)
	  ○ How do you think these tiers look for investment priorities? What changes would you like to see? Why?

January 2023

Outcome: Review corridor investment tiers. Continue revenue discussion. Feedback on HCT report outline.

Date	Who
Mid-December TBD	**HCT Working Group #5: Corridor Investment Tiers, Future Priorities, and HCT Report** • Corridor Investment Tiers Review • RTP Investment and Future Priorities • HCT Report Outline and Preview
January 4 (tentative)	*East Multnomah County Transportation Committee TAC*
January 5 (tentative)	*Clackamas County Coordinating Committee TAC*
January 5 (tentative)	*Washington County Coordinating Committee TAC*
January 9 (tentative)	*East Multnomah County Transportation Committee (policy)*
January 9 (tentative)	*Washington County Coordinating Committee (policy)*
January 13	**Transportation Policy Alternatives Committee (TPAC)**
January 18 (tentative)	*Clackamas County C-4 subcommittee (policy)*
January 18	**Metro Technical Advisory Committee (MTAC)**
January 19	**Joint Policy Advisory Committee on Transportation (JPACT)**
January 24	**Metro Council (work session)**
January 25	**Metro Policy Advisory Committee (MPAC)**
December-January	• Project webpage updates

April/May 2023

Outcome: Feedback on the draft report. Discuss 2023 RTP investment strategy. Preview public review process.

Date	Who
Mid-April TBD	**HCT Working Group #6: Draft Strategy Report and RTP Investment Strategy** • HCT Report • RTP Investment Strategy • RTP Public Review Preview
May 3 (tentative)	*East Multnomah County Transportation Committee TAC*
May 4 (tentative)	*Clackamas County C-4 TAC*
May 4 (tentative)	*Washington County Coordinating Committee TAC*
May 12	**Transportation Policy Alternatives Committee (TPAC)**
May 15 (tentative)	*East Multnomah County Transportation Committee (policy)*
May 15 (tentative)	*Washington County Coordinating Committee (policy)*
May 17 (tentative)	*Clackamas County C-4 subcommittee (policy)*
May 17	**Metro Technical Advisory Committee (MTAC)**
May 18	**Joint Policy Advisory Committee on Transportation (JPACT)**
May 24	**Metro Policy Advisory Committee (MPAC)**
May 30	**Metro Council (work session)**

April-May	• Project webpage
	  ○ MetroQuest Survey: HCT Strategy
	  ○ Draft report documents
	• Fact Sheet #6: What is the region's strategy for HCT?
	• Stakeholder Meetings/Interviews Round 4: HCT Strategy
	  ○ Issues, Opportunities and Concerns

	• RTP: Snapshot Story on Transit (importance of HCT- queue project list)

June/July 2023

Outcome: RTP Priorities and Public Review (including HCT).

Date	Who
TBD	TPAC
TBD	MTAC
TBD	JPACT
TBD	MPAC
TBD	Metro Council
June-July	• RTP Project webpage: Public review draft documents • RTP Public Review Period

November 2023

Outcome: RTP adoption.

Date	Who
TBD	Metro Council Work Session discussion
TBD	TPAC/MTAC workshop discussion
TBD	JPACT discussion
TBD	MPAC discussion
TBD	TPAC recommendation to JPACT
TBD	MTAC recommendation to MPAC
TBD	JPACT recommendation to Metro Council
TBD	MPAC recommendation to Metro Council
TBD	Metro Council considers action on MPAC and JPACT recommendations
October-December	• RTP Public Hearings • RTP Project webpage: Final documents

Metro

High Capacity Transit Strategy Update

Work Plan

June 2022

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

The Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and to make recommendations to the Metro Council. The established decision-making process strives for a well-balanced regional transportation system and involves local elected officials directly in decisions that help the Metro Council develop regional transportation policies, including allocating transportation funds. Together, JPACT and the Metro Council serve as the MPO board for the region in a unique partnership that requires joint action on all MPO decisions. This means JPACT approves MPO decisions and submits them to the Metro Council for adoption. The Metro Council will adopt the recommended action or refer it back to JPACT with a recommendation for amendment.

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

TABLE OF CONTENTS

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PURPOSE AND BACKGROUND

The purpose of this document is to outline the work plan, including the planning process and engagement approach, for updating the High Capacity Transit (HCT) component of the Regional Transportation Plan (RTP).

Background

Different kinds of transit serve the diverse transportation needs of the Portland region. High capacity transit is public transportation that moves a lot of people quickly and often – think light or commuter rail or bus rapid transit. This type of transit makes fewer stops, travels at higher speeds, comes more frequently and uses larger vehicles to carry more people more efficiently than a typical local bus line.[1] Dedicated right of way or street priority improvements coupled with enhanced features for riders make high capacity transit more reliable, convenient and comfortable for people to use. The High Capacity Transit (HCT) Strategy is the framework for guiding regional high capacity transit system investments – categorizing corridors where a higher quality of service would most benefit the most people.

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[1] *The 2018 Regional Transit Strategy defines high capacity transit as: "public transit that can have exclusive right of way, non-exclusive right of way, or a combination of both. Vehicles make fewer stops, travel at higher speeds, have more frequent service and carry more people than local service transit such as typical bus lines:*

- *Light rail uses high capacity trains (68 seats with room and design for several passengers to stand) and focuses on regional mobility with stops typically one-half to 1 mile apart, connecting concentrated housing or local bus hubs and employment areas. The service has its own right of way. Cars can be doubled, and service frequency increased, during peak hours.*
- *Commuter rail uses high capacity heavy rail trains (74 seats in a single car, 154 in doubled cars), typically sharing right of way with freight or other train service (though out of roadway). The service focuses on connecting major housing or local bus hubs and employment areas with few stops and higher speeds. The service may have limited or no non-peak service.*
- *Bus rapid transit uses coach-style or high capacity busses (40-60 seats with room and design for several passengers to stand). The service may be in the roadway with turnouts and signal priority for stops, have an exclusive right of way, or be some combination of the two. The service focuses on regional mobility, with higher speeds, fewer stops, higher frequency and more substantial stations than local bus, connecting concentrated housing or local bus hubs and employment areas. Service frequency can be increased during peak hours.*
- *Using the same technology as local streetcar, rapid streetcar focuses on regional mobility, offering fewer stops through less populated areas to connect housing areas to jobs or other destinations. Cars can be doubled, and service frequency increased, during peak hours. The service operates in mixed traffic, in exclusive right of way or a combination of the two."*

The first Regional High Capacity Transit (HCT) System Plan was developed in 2009 to guide future regional high capacity transit capital investments and support the goals and aspirations of the cities, counties, and regional partners that make up the Portland metropolitan area. The HCT Plan provided a framework on where to spend limited transportation dollars and where local jurisdictions have committed to supportive land uses, high quality pedestrian and bicycle access, management of parking resources and demonstrated broad based financial and political support. That work, conducted as part of the 2010 Regional Transportation Plan (RTP) update, identified and evaluated travel corridors for high-capacity transit potential and established tiers for investment priorities. The HCT Plan analyzed around 60 corridors, considering cost and ridership, transit markets, safety and security, land use, financial feasibility, traffic/freight impacts, and included a public and jurisdictional involvement process. A total of 18 potential high capacity transit corridors were prioritized and placed into tiers of near term regional priority corridors (Tier 1), next phase regional priority corridors (Tier 2), developing regional priority corridors (Tier 3) and regional vision corridors (Tier 4). The HCT System Plan network was reflected in the transit element of the 2010 RTP.

Metro has updated the RTP twice, in 2014 and 2018, since the original HCT System Plan was adopted. These updates introduced the current priority outcomes of equity, climate, safety, and mobility and incorporated a number of other policies and studies. More broadly, the transit planning environment looks different than it did in 2018. Some projects identified in the HCT System Strategy have been constructed, some were planned but not implemented, and others are currently in the planning process. Beyond other typical route and service adjustments to the system, transit in our region looks different within an environment of increased pandemic-related costs, falling fare revenue, and operator shortages. Metro's current Emerging Trends work for the 2023 Regional Transportation Plan and TriMet's Forward Together service planning effort both indicate that transit ridership is expected to take several years longer than automobile traffic to return to pre-pandemic levels due to service cuts, changing travel patterns, lingering health concerns, and other factors. Yet even this new landscape reflected regional values as TriMet intentionally avoided cuts to routes serving equity areas (identified using their Equity Index) for low-income people and people of color most likely to depend on transit and also with the most pressing health and safety concerns.

Increased transit frequency service, routes, connections, and accessibility are key partner and community priorities – reiterated in recent outreach conducted by Metro including in scoping the Regional Transportation Plan update. Several local agencies and jurisdictions have completed or are currently working on transit development plans that are already expanding or

will expand the transit network.[2] In particular, Division Transit –TriMet's first rapid bus line – will open this September (2022), while C-TRAN's The Vine on Fourth Plain began service in 2017. Bus rapid transit planning efforts are also underway for Tualatin Valley Highway in Beaverton-Hillsboro, 82nd Avenue in Portland, and Mill Plain in Vancouver. As the "missing middle" of transit, this type of high capacity transit offers great opportunities for expanding high quality service to support growing regional centers and educational and employment areas. New federal guidance (e.g., FTA Emphasis Areas, Capital Investment Grant Program Policy Guidance) and funding sources (e.g., Infrastructure Investment and Jobs Act) further support and maximize opportunities for bus rapid transit.

As a result, this is the right time to re-assess the region's high capacity transit system and re-evaluate the high capacity transit component of the Regional Transportation Plan, particularly with bus rapid transit in mind. Trains, buses, shuttles and other options are all important and work together as a larger system–like a skeleton–to help people get where they need to go. Our work to update the High Capacity Transit Strategy will envision a stronger backbone for the network, while also setting the stage for future work to look at potential solutions improving connections to it.

INTRODUCTION

This project will address new policy questions around the future of high capacity transit in our region, re-envision the regional high capacity transit vision, and build on the previous work done identifying community priorities to create a "pipeline" of corridor investments in the region competitive for federal Infrastructure Investment and Jobs Act funding as it becomes available. Work will involve re-evaluating future major regional high capacity transit investments including: potential new corridors; capacity, reliability and speed improvements to existing service; extensions to existing lines; and potential new system connections. The High Capacity Transit Strategy Update will inform the 2023 RTP (and will include memos documenting recommendations for content), considering how the regional HCT system can:

[2] *Including the Oregon Department of Transportation Oregon Transportation Plan (anticipated 2023), Oregon State Rail Implementation Plan (underway 2022), Oregon Passenger Rail Development Plan (2021), and Public Transportation Plan (2018); Clackamas County Transit Development Plan (2021); Washington County Countywide Transit Study (anticipated 2023) and Transit Development Plan (anticipated 2022); TriMet Coordinated Transportation Plan for Elderly and People with Disabilities (2020), Unified Service Enhancement Plan (2018), Equity Lens/Index (2020), Red Line MAX Extension Transit-Oriented Development & Station Area Planning (2022) and Forward Together (FY2023 Annual Service Plan); and City of Portland Enhanced Transit Corridors Plan (2018) and Transit and Equitable Development Assessment (2022); and Wilsonville Transit Master Plan Update (anticipated in 2023).*

- Advance RTP priorities for equity, climate, safety, and mobility and forward implementation of the region's 2040 Growth Plan and Climate Smart Strategy.
- Best recover from COVID-19 and recent operator shortages (e.g., ridership/demand, service).
- Build from the "spoke and hub" light rail system to explore a complementary grid-based bus rapid transit system that leverages identified Enhanced Transit Corridors in support of the high capacity transit vision.
- Better serve transit-supportive equity focus areas and connect regional (and town) centers together.
- Be more people-focused, better responding to community needs and priorities related to how and where community members travel, particularly non-commute trips (e.g., destinations, reliability, travel time, user experience) and be a safe, reliable, affordable, and convenient alternative to driving.
- Support mobility hubs and bus fleet electrification.
- Fit into a complete, integrated regional transportation system (e.g., high travel corridors) and statewide rail and inter-city transit system and integrate with a range of mobility services.
- Support affordable housing along corridors and in centers, preventing and/or limiting displacement through intentional actions supporting community development and stabilization, and improving quality of life for people of all incomes and backgrounds.

As a component of the 2023 RTP update, the HCT System Strategy will be coordinated with the approach, engagement, formal consultation, and decision-making for that effort. Metro Advisory Committees and Metro Council approved a work plan, equity framework, and engagement plan for the 2023 RTP update is informing work underway around goals, objectives, and targets. These documents will serve as the guiding vision and goals for the updated HCT System Strategy.

PROJECT TIMELINE AND DECISION MILESTONES

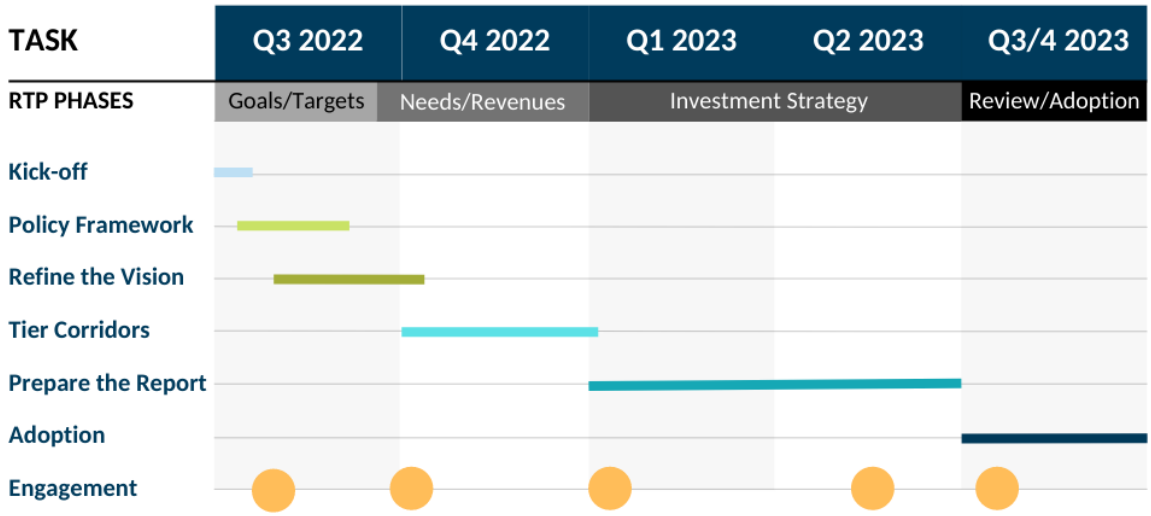
High Capacity Transit Strategy Timeline

The HCT Strategy will be updated in four key phases from June 2022 to November 2023. This work plan and supporting public engagement approach were developed to align with the timeline, key milestones, and engagement efforts for the 2023 Regional Transportation Plan.

Work will include establishing policy recommendations by summer 2022, identifying additional corridors for consideration and refine the network

vision by fall 2022, tiering corridor investments by readiness and identifying potential project opportunities providing the framework for project prioritization within the RTP process by early 2023, develop a draft report including recommendations for implementation of the updated High Capacity Transit Strategy by summer 2023, and prepare final content for incorporation into the 2023 RTP for adoption by November 2023.

Figure 1. Timeline for the High Capacity Transit Strategy Update



POLICY FOUNDATION AND GUIDANCE

2040 Growth Concept, Regional Transportation Plan and Climate Smart Strategy

The 2040 Growth Concept concentrates mixed-use and higher density development in urban centers, station communities, corridors and main streets that are well-served by transit. High capacity transit is a key element of the 2040 Growth Concept – connecting people with hubs of commerce and supporting development in dense areas with a mix of housing and jobs to support healthy, equitable communities and a strong economy. By moving people efficiently and comfortably over long distances, it promotes the efficient use of land, public facilities and services and protects farms and forests.

High capacity transit is also critical to implementing the RTP investment priorities that support this blueprint for the future – equity, climate, safety and mobility. Expanding high capacity transit service provides people with transportation options and helps minimize congestion as our region continues to grow. The policy framework for high capacity transit focuses on creating strong connections between regional centers. The 2018 Regional Transportation Plan includes a High

Capacity Transit (HCT) component which includes the Regional Transit Network Vision (map and description of updates), HCT policies, List of 2027 and 2040 Fiscally Constrained and 2040 Strategic HCT Capital Projects, HCT Major Transit Projects and Project Development descriptions, and HCT Assessment and Readiness Criteria.

The 2018 RTP incorporated the 2009 HCT Plan (2009) – identifying projects currently underway, upcoming, and to be completed in the future based on many factors including how "ready" they were to begin construction. The HCT Strategy update will revisit the corridor investment tier structure established in that plan. The 2018 RTP included building the Division Transit Project and the Southwest Corridor Transit Project, investing in the Red Line extension to Hillsboro, and analyzing Central City transit capacity in the 2027 Financially Constrained Project list. The 2040 Financially Constrained list also included investments in high capacity transit from the Expo Center to Vancouver, WA and improvements for the Steel Bridge Transit Bottleneck.

Table 1. Transit Capital Improvements by RTP Investment Strategy: High Capacity Transit

2027 RTP Financially Constrained	2040 RTP Financially Constrained *(2027 Constrained investments, plus)*	2040 RTP Strategic *(2040 Constrained investments, plus)*
High Capacity Transit	**High Capacity Transit**	**High Capacity Transit**
• Southwest Corridor Project • Division Transit Project • MAX Red Line Improvements Project • Central City Transit Capacity Analysis (*combined with Steel Bridge Transit Bottleneck*)	• Portland to Vancouver HCT • Steel Bridge Transit Bottleneck *(combined with Central City Transit Capacity Analysis)*	• HCT extension to Oregon City via McLoughlin Blvd. • HCT on I-205 (Clackamas to Bridgeport) • WES all-day service • WES extension to Salem • Sunset Highway HCT (Sunset transit center to Hillsboro Fairplex • HCT extension to Forest Grove

These projects did not complete the transit system as envisioned by the RTP to fully incorporate the HCT Plan and high speed rail – the following projects were not in the 2018 list, but are still included in the regional transit vision:

- **Transit needs on Powell Boulevard** – The Powell ETC project is identified for the first 10 years of the RTP to address near term reliability issues on Powell Blvd between the Willamette River and I-205. Further study is needed to define the alignment, transit mode terminus. This should be done through a multi-modal transportation study of the corridor.
- **Portland to Lake Oswego Transit Project** – A Locally Preferred Alternative (LPA) has been adopted for this corridor. However, the project was placed on hold and has not been identified in this current RTP.

- **HCT connection to Sherwood** – The original project boundaries identified in the HCT System Plan was Portland to Sherwood in the vicinity of Barbur/Highway 99E. Through the
- **Southwest Corridor Plan** – it was concluded that the light rail project would extend to Tualatin. The connection to Sherwood is a future consideration.
- **Connection between CTC and Washington Square, connecting Milwaukie and Lake Oswego** – An HCT connection on I-205 between Clackamas Town Center and Bridgeport is identified in the RTP Strategic Investment Scenario, which may provide a similar travel market. Further study is needed to identify the right alignment, transit mode and terminus is needed.
- **Tanasborne HCT extension** – This future HCT extension would provide an HCT connection between the existing Blue Line and the future Sunset Highway HCT through Tanasborne.

The Climate Smart Strategy, adopted by Metro in 2014, affirmed the region's commitment to provide more transportation choices, keep our air clean, build healthy and equitable communities, and grow our economy – all while reducing greenhouse gas emissions. It provides clear direction to invest more in our transit system in order to meet regional sustainability goals and objectives. Fast, convenient and linked to the broader transit and transportation network – high capacity transit provides a viable, more affordable alternative to driving. This makes our transportation system more equitable for people who rely on transit, including people with low incomes, of color, with disabilities, who are older and single-parents. Fewer cars on the road leads to less air pollution, more physical activity, less time in traffic, fewer crashes and more reliability for moving people and goods – supporting the health, safety, mobility, economy and quality of life of our region.

For a description of the 2040 Growth Concept and Climate Smart Strategy and more information about the Regional Transportation Plan, see the Regional Transportation Work Plan. Other recent regional work that will inform or be informed by the High Capacity Transit Strategy Update includes the following:

Table 1. Regional Work Related to the HCT System Strategy Update		
Informing Strategy Development	**Coordinated with Strategy Development**	**To Be Informed by the Updated Strategy**
• Climate Smart Strategy (2014) • Mobility Corridors Atlas (2014) • Strategic Plan to Advance Racial Equity, Diversity and Inclusion and Equity Framework (2016) • Transit-Oriented Development Strategic Plan (2016) • Coordinated Transportation Plan for Seniors and Persons with Disabilities (2020) • Southwest Corridor Equitable Development Strategy (2017) and Locally Preferred Alternative (2018) • Enhanced Transit Concept Corridors (2018) • Division Transit Locally Preferred Alternative (2019) • Regional Framework for Highway Jurisdictional Transfer (2021) • Regional Congestion Pricing Study (2021) • Regional Mobility Policy (2019-22)	• Emerging Transportation Trends Study (2022) • Climate Smart Strategy Update (2022) • 2020 MPO Boundary, Equity Focus Areas, and High Injury Corridor Designations • Affordability and Anti-Displacement Policies • RTP Values and Outcomes • RTP Goals, Objectives, and Targets • RTP Regional Needs and Opportunities Analysis: Equity, Climate, Safety, Mobility • RTP Racial Equity Framework • RTP Safe and Healthy Urban Arterials Policies/Actions • Transit Strategies/ Actions • RTP Equitable Finance Strategies • RTP Funding/Revenue Forecast • Sunset Highway Corridor Study • Tualatin Valley Highway Corridor Study (2022-23) • Transit-Oriented Development Strategic Plan Update (2022)	2023 RTP Transit Strategy • Existing conditions • Regional Transit Policy Framework • Regional Transit System Needs • Regional Transit Network Concept and Functional Classifications • RTP Transportation Project and Program Priorities – RTP Call for Projects • Performance Measures • Chapter 8 Scoping: Future Work Needed to Support Successful Implementation of the HCT System Strategy • 2023 Climate Smart Strategy

Regional Transit Strategy

Our robust transit system plays a critical role in the effectiveness of our transportation system and also serves as a key component to the high quality of living residents of our region experience. The Regional Transit Strategy (RTS) was created to highlight the region's plans for meeting regional goals for transit as the region continues to grow steadily, as well as provide the region with a transit vision and policy framework for capital investments and operational improvements. Significant and coordinated investment is needed to continue to provide equivalent service as our region grows and increasing service and access will require dedicated funding, policies, and coordination from all jurisdictions. Investments in transit should increase access, provide more transportation

options for residents and workers, improve air quality, and reduce peak hour congestion.

The RTS was produced in conjunction with input from various workgroups, community feedback, and regional partnerships to create a regional framework for integrating service plans, regional plans and commitments, local priorities, and regional funding capacity. Together, Metro and partners developed a regional shared vision to make transit, for everyone, more:

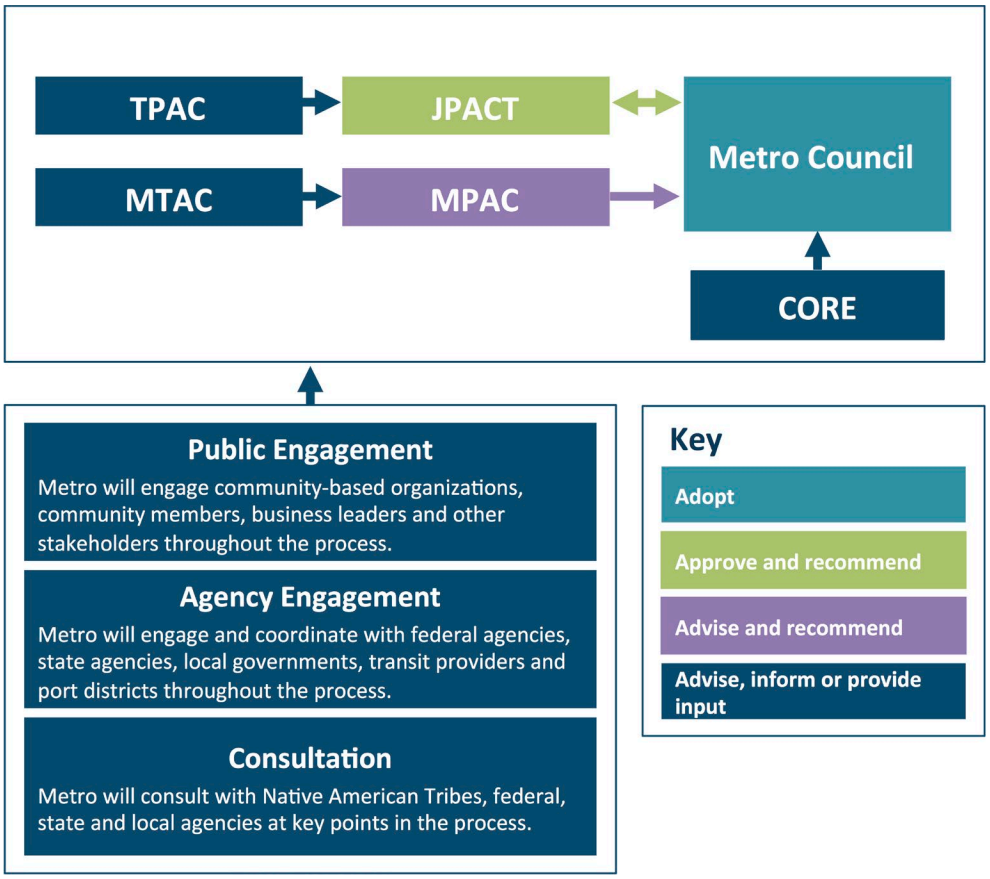
- **Frequent:** Align frequency and type of transit service to meet existing and projected demand in support of adopted local and regional land use and transportation plans.
- **Convenient:** Make transit more convenient and competitive with driving by improving transit speed and reliability through priority treatments and other strategies. Improve customer experience by ensuring seamless connections between various transit providers, including transfers, route and schedule information and payment options.
- **Accessible:** Provide safe and direct biking and walking routes and crossings that connect to transit stops to ensure transit services are fully accessible to people of all ages and abilities. Expand community and regional transit service across the region to improve access to jobs and community places.
- **Affordable:** Ensure transit remains affordable, especially for those who depend on it the most.

The 2018 Regional Transit Strategy (RTS) is an element of the 2018 Regional transportation Plan – the update to the High Capacity Transit Strategy will complement the RTS. A major focus in developing the strategy was to classify enhanced transit corridors where the region can invest in improvements to the street that result in “better bus”. The approach centered improving transit speed and reliability on the most congested existing and planned frequent service bus or streetcar lines. Corridors that had the highest reliability issues (difference in travel times between free flow and peak period conditions) and experiencing significant dwell and high ridership were identified as Enhanced Transit Concept (ETC) corridors. These corridors – prime for investments from better bus priority street improvements to corridor-based rapid bus to fixed guideway bus rapid transit – provide a starting point for exploring the regional bus rapid transit system. Already the ETC Pilot Program (Better Bus) is advancing nimble, low-cost improvements along congested blocks, intersections and bridges to make buses more reliable and convenient along ETC corridors including: bus-only lanes, bus priority signals, curb extensions at bus stops, and more.

REGIONAL TRANSPORTATION DECISION-MAKING FRAMEWORK

The 2023 RTP, of which the High Capacity Transit System update is a component, will rely on Metro's role as the federally mandated Metropolitan Planning Organization (MPO) designated by the governor for the Portland metropolitan region and its existing decision-making framework.

Figure 2. Regional Transportation Decision-Making Framework



For more information on the regional transportation decision-making framework, see the Regional Transportation Work Plan.

PROJECT OVERVIEW

To update the High Capacity Transit (HCT) component of the Regional Transportation Plan (RTP) we will build from prior work to reenvision the regional high capacity transit system with bus rapid transit in a way that advances RTP goals and supports the transportation system. This work will include reevaluating the broader high capacity transit vision to consider potential new corridors and system connections. It will also assess readiness to identify corridor investments competitive for federal funding that will provide guidance for decisions regarding high capacity transit projects for the 2023 RTP update.

The High Capacity Transit Strategy Update will involve a wide range of individuals, regional advisory committees, community-based organizations, business groups and other stakeholders. Metro, working in close partnership with TriMet, is ultimately responsible for coordinating development of the plan, public engagement and adoption of the final plan. A working group made up of agency partners including representatives from TriMet, SMART, Portland Streetcar, City of Portland, Clackamas County, Multnomah County, Washington County, C-TRAN, SW WA RTC, and ODOT will provide input throughout the process.

TASK 1 | KICK-OFF | JUNE TO JULY 2022

Desired outcome: Kick-off the project, introduce the work plan, and develop the engagement strategy.

The first task will involve engaging decision-makers, local, regional, state and community partners and members of the community to understand key trends and challenges for high capacity transit in the region and begin identifying outcomes for the update. Work will begin to develop tools and background data that will be used to document how the region is growing and changing and assess corridor opportunities for high capacity transit.

Opportunities for input will be provided in identifying additional considerations to be addressed by the work plan and in developing the engagement strategy.

Task 1 Key Tasks and Activities	
Planning	• Review work plan • Develop and review public engagement plan • Assess baseline and future conditions • Collect and develop data and methods to respond to identified needs and prepare for corridor evaluation and readiness assessment • Report on key trends shaping the region's future, highlighting where we have been, where we are now, and opportunities and challenges looking forward.
Engagement	• Begin engaging public, partners and regional advisory committees to identify needs and policy considerations. • Needs and policy considerations survey • HCT Working Group #1: Introduction, Goals, and Policy Considerations
Outcome	• Build a shared understanding of what is important for the update to address and define the planning and engagement process to better meet regional and community needs and priorities. • Inform the 2023 RTP Data Analysis.

Task 1 Key Tasks and Activities	
Key Products	• Work Plan • Data Needs List • Engagement Strategy • Transit 101 Fact Sheet • Fact Sheet #1: About the HCT Strategy Update (June) • Fact Sheet #2: Regional Transit Activities

TASK 2 | ESTABLISH THE POLICY FRAMEWORK | JUNE TO AUGUST 2022

Desired outcome: Identify policy gaps in the RTP and create a framework of policy considerations to inform future work. This task is aligned with RTP Phase 2: Data and Policy Analysis.

This task will establish the policy framework for the update that will guide development of the vision for regional high capacity transit, identifying existing challenges and opportunities and how investments in high capacity transit could best further regional goals for climate, equity, safety and mobility. A draft memo will document the policy framework, including current policies, relevant work, policy considerations, and recommended policy revisions.

Opportunities for input will be provided in identifying policy gaps and considerations, shaping the policy framework and developing updated policy language for JPACT and Metro Council consideration.

Task 2 Key Tasks and Activities	
Planning	• Review recent regional work and policy updates. • Identify recent changes in state and federal policies and programs. • Consider community priorities and recent trends and developments influencing future HCT project planning. • Conduct a policy gap analysis and propose HCT policy updates.
Engagement	• Engage public, partners and regional advisory committees to develop the policy framework. • HCT Working Group #1: Introduction, Goals, and Policy Considerations • HCT Working Group #2: Policy Framework and Corridor Evaluation Approach
Outcome	• A guiding framework for addressing policy gaps and providing a clear vision for how high capacity transit policy will drive investment and operation practices that move the region toward key goals. • Updated policy language for JPACT and Metro Council consideration. • Inform the 2023 RTP Policy and Needs Analysis.

Task 2 Key Tasks and Activities	
Key Products	• Fact Sheet #3: Policy Framework • A memo documenting the policy framework for the HCT System Strategy update, including an analysis of 2018 RTP HCT policy gaps and recommendations for revisions. • Public engagement summary

TASK 3 | UPDATE THE NETWORK VISION | JULY TO OCTOBER 2022

Desired outcome: Identify potential corridors for high capacity transit investment and refine the network vision. This task is aligned with RTP Phase 3: Revenue and Needs Analysis.

This task will develop an updated regional vision for high capacity transit that addresses identified needs and gaps and leverages opportunities to create a network that supports how people need to travel. Work will develop and implement approaches for evaluating new corridors and re-evaluating the future system, particularly how the updated vision fits within the broader regional transit and transportation systems. Work will primarily build from the enhanced transit concept corridors established in the 2018 RTP and through recent collaboration with partners to identify corridor opportunities. This vision will provide a blueprint for future transit investment that will allow us to realize regional goals.

Technical memos will identify high capacity transit corridor opportunities and describe the evaluation methodology and results and describes the network vision – how the elements work together as a system and fit within the broader regional transportation network.

Opportunities for input will be provided in refining the corridor core criteria evaluation methodology, the approach to analyzing the system, and developing and refining the network vision.

Task 3 Key Tasks and Activities	

Planning	• Examine the existing and future transit system to determine current constraints, possibilities, and needs.
	• Consider past lessons learned, the current system environment, and feedback from partners and community stakeholders.
	• Identify corridor high capacity transit corridor opportunities.
	  ○ Consider 2040 Growth Concept designations and land use, transit-supportive markets, equity areas and focus areas based on findings from TriMet's Forward Together work.
	  ○ Identify gaps in the regional high capacity transit network between centers, employment areas and community

Task 3 Key Tasks and Activities	
	destinations; for transit-supportive markets; in connections within the broader transit and transportation system; and due to growth, development and changes in travel markets. ○ Identify additional operational and capacity concerns. • Develop an approach for and evaluate new potential corridor opportunities. ○ Identify minor refinements to the core criteria in the 2018 RTP HCT Assessment and Readiness Criteria (e.g., equity) and assessment approach. ○ Develop and execute an approach assessing performance of key corridors and outputs. ○ Make adjustments to improve performance in mobility and ridership, equity benefit, and environmental benefit and other factors. • Analyze and document how all of the identified corridors work together as a system to make additional refinements. ○ Assess whether any operational/service adjustments would improve connections between corridors. ○ Evaluate the combined effects of implementing the full vision. ○ Identify key elements that will make the HCT system vision work (e.g., major stop locations, O&M needs, termini) as well as access and user experience factors (e.g., major transfer nodes, potential park and ride locations, intersection with the cycling and walking networks). • Refine the 2023 RTP Transit Network Map.
Engagement	• Vision survey • Stakeholder Meetings/Interviews Round 2: What is the vision missing? Did we miss anything in thinking about how to evaluate readiness? • HCT Working Group #2: Policy Framework and Corridor Evaluation Approach • HCT Working Group #3: Potential Investment Corridors, Network Vision, and Readiness Tiers Approach • Engage public, partners and regional advisory committees to shape the network vision.
Outcome	• An updated High Capacity Transit network vision that illustrates and describes how the corridors work together as a system and how that system fits within the broader transit and transportation network and forwards regional goals in line with the policy framework. • Inform the 2023 RTP Needs Analysis.

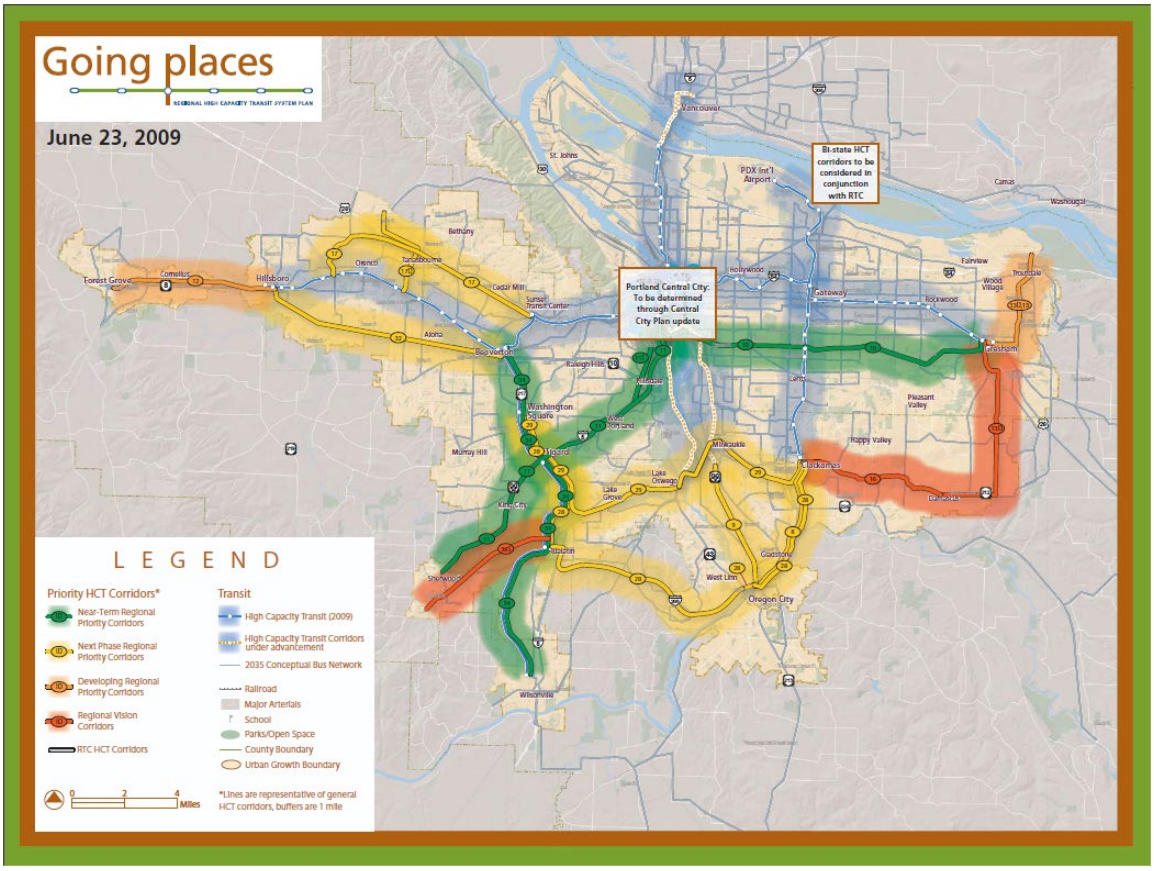
Task 3 Key Tasks and Activities	
Key Products	• Fact Sheet #4: What is the regional vision for HCT? • Technical memos describing the corridor HCT assessment methodology and results. • Technical memo describing the approach and results of the system analysis. • An HCT network vision map. • A memo describing the HCT network vision. • Public engagement summaries

TASK 4 | TIER CORRIDOR OPPORTUNITIES BY READINESS | OCTOBER 2022 TO JANUARY 2023

Desired outcome: Tier corridor investments by readiness, identifying likely mode and potential project type. This task is aligned with RTP Phases 3 and 4: Revenue and Needs Analysis and Shared Investment Strategy.

This task will identify potential modes and assess project opportunities to create readiness tiers that identify regional investments necessary to implement the HCT vision in the near-, mid- and longer terms and that best position the region for federal funding. Work will build from the priorities established in the 2018 RTP and through recent collaboration with partners to identify corridor opportunities. The result will identify corridor investments that are most likely to be implemented, particularly in the near and mid-term to provide a framework for regional decision-makers when considering decisions regarding high capacity transit projects for the 2023 RTP update.

Figure 3. 2009 High Capacity Transit Plan Priority Corridors



Similar to the 2009 HCT Plan, this milestone includes grouping and tiering corridors by investment readiness.

Technical memos will describe the HCT potential mode identification methodology and results, including an updated list of HCT System Corridors by potential range of modes and the tier structure (e.g., number, definitions) and the methodology for assigning tiers.

Opportunities for input will be provided in both the process for developing the approach for assessing and grouping corridors for readiness and in refining the resulting tiered corridor matrix.

Task 4 Key Tasks and Activities	
Planning	• Define potential corridor modes. • Consider past lessons learned, the current system environment and funding dynamic, and feedback from partners and community stakeholders. • Develop an approach to tiering corridors for readiness, including the tier structure (e.g., number, definitions) and the methodology for assigning tiers.

Task 4 Key Tasks and Activities	
	○ Consider political and public support, readiness for NEPA, and federal funding eligibility and competitiveness with a refined set of criteria that includes local support, commitment and partnership; capital cost, support for regional land use vision, level of design and complexity, environmental considerations; equity, GHG reduction, ridership, and other benefits; and alignment with Section 5309 CIG program criteria. • Assess corridors for readiness, including identifying a range of potential project types (e.g., New Starts, Small Starts) particularly for nearer-term, more ready corridors. • Document what would need to be in place for later-term, vision corridors to demonstrate HCT readiness and advance.
Engagement	• Corridor Investment Tiers Survey • Stakeholder Meetings/Interviews Round 3: How do you think these tiers look for investment priorities? What changes would you like to see? Why? • HCT Working Group #4: Vision, Readiness Assessment, Needs and Revenue Forecast • HCT Working Group #5: Corridor Investment Tiers, Future Priorities, and HCT Report • Engage public, partners and regional advisory committees to shape corridor investment tiers.
Outcome	• Tiered corridors, with potential modes and project types identified and grouped by investment readiness, providing a clear roadmap for the advancement of corridors into funding and design. • Inform the 2023 RTP Revenue Forecast and Shared Investment Strategy.
Key Products	• Fact Sheet #5: Where will we invest in HCT first? • Technical memos describing the readiness assessment methodology and results. • A draft corridor matrix with identified potential modes and project types grouped by readiness. • Cost estimates for HCT corridors. • Public engagement summaries

TASK 5 | PREPARE THE STRATEGY REPORT | JANUARY TO NOVEMBER 2023

Desired outcome: Draft High Capacity Transit Strategy Report and content for the 2023 Regional Transportation Plan. This task is aligned with RTP Phase 4 and 5: Shared Investment Strategy and Adoption Process and is intended to develop the HCT

Strategy and components of the RTP to be vetted as part of public review for the 2023 RTP update.

The final task of the update will provide the opportunity for review and input on the draft High Capacity Transit Strategy Report and related 2023 Regional Transportation Plan content prior to consideration by the MPAC, JPACT and the Metro Council (e.g., Chapter 8 future actions). This includes an intial draft for discussion and refinement before components are incorporated into the 2023 RTP released for public review in July.

A memo will document recommendations for the high capacity transit components of the 2023 Regional Transportation Plan, including considerations for the Finance Strategy and Action Plan.

A reader-friendly draft report will include infographics that make it easier to understand both the content and the process that has unfolded during the development of the High Capacity Transit System Strategy Update. The report will summarize the policy framework, vision development and outcomes, corridor investment prioritization, and opportunities, challenges and other considerations (e.g., infrastructure, land use and development, governance) for implementing the vision – including what actions we will need to take and best practices we should consider to realize the regional high capacity transit vision.

Task 5 Key Tasks and Activities	

Planning	• Compile technical information, prepare HCT Strategy Report and related RTP content for public review as part of the 2023 Regional Transportation Plan update process
	  ○ Describe the current system, environment and challenges and opportunities
	  ○ Communicate the policy framework and desired outcomes
	  ○ Describe the network vision and how it was developed
	  ○ Discuss what is needed to support and implement the vision
	  ○ Articulate corridor investment opportunities and roadmap for investment
	  ○ Present areas for future study and other strategies for implementation

Engagement	• HCT Strategy Survey • Stakeholder Meetings/Interviews Round 4: Issues, Opportunities and Concerns • HCT Working Group #6: Draft Strategy Report and RTP Investment Strategy • Engage public, partners and regional advisory committees to provide feedback on the draft High Capacity Transit Strategy

Task 5 Key Tasks and Activities	
	• Public review draft 2023 RTP for 45-day public comment period (including public hearings and consultation) • Engage regional advisory committees to finalize recommendations to the Metro Council on adoption of 2023 RTP
Outcomes	• HCT Strategy Report and HTC 2023 RTP content • MPAC makes recommendation to the Metro Council • JPACT considers adoption of 2023 RTP • Metro Council considers adoption of 2023 RTP
Key Products	• Fact Sheet #6: What is the region's strategy for HCT? • Draft and final HCT Strategy Report • Memo with recommendations for HCT content for the 2023 RTP, including the Finance Strategy and Action Plan (Chapter 8) • Comment log and compiled engagement appendix • Adoption legislation, including findings of compliance with Statewide Planning Goals and Federal mandates

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

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June 2022

Attachment 3

Agenda

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

Meeting:	High Capacity Transit Strategy Update: Working Group #1
Date:	Thursday, June 30, 2022
Time:	10:00 to 11:30 a.m.
Place:	Zoom
Purpose:	Kick-off! Discuss work and engagement plan and policy considerations.
Outcome(s):	Shared understanding of the work and engagement plans and working group charge, list of stakeholders for outreach, and updated list of policy considerations to inform the framework.

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10 a.m. Welcome! Meet the Project Management Team (Tom/Ally)

10:05 a.m. Group Introductions and Icebreaker (Tom/All)
- Name, Preferred Pronouns, Agency
- Briefly tell us about how you first started riding or working in transit!

10:20 a.m. Overview of the HCT Strategy and Update Work Plan (Ally)
- Questions, thoughts, and other ideas
- What stakeholders would you like to see engaged as part of the process?

10:50 a.m. HCT Working Group Charge, Roles, and Responsibilities (Ally)
- Questions, thoughts, and other ideas

11:00 a.m. HCT Challenges, Opportunities and Policy Considerations (Tom/All)
- What do you hope to get out of this process?
- What else should be considered or explored in this update?
- What have you been hearing from the public or learning through your work that is important for us to know?

11:20 a.m. Other items?

11:25 a.m. Next Steps: Policy Framework and Gap Analysis
- Anything we didn't cover?
- Working Group Meeting #2: August 16

Thank you!!

Meeting minutes

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

Meeting:	High Capacity Transit Strategy Update Working Group #1
Date/time:	Thursday, June 30, 2022 10-11:30 am
Place:	Zoom – Virtual meeting
Purpose:	Introductions and initial feedback on process/focus of work

Attendees
Ally Holmqvist – Metro PM
Andrea Pastor – Metro
Andrew Plambeck – Portland Streetcar
Brett Setterfield – Clackamas County
Dyami Valentine – Washington County
Eve Nilenders – Multnomah County
Eric Hesse – PBOT
Grant O'Connell – TriMet
Jackie Donovan – Metro
Jamie Snook – TriMet
Kelly Betteridge - Parametrix
Kelsey Lewis - SMART
Lynda David – SW RTC
Matt Bihn – Metro
Naomi Doerner –Nelson/Nygaard
Ryan Farncomb – Parametrix
Paul Lutey – Nelson/Nygaard
Tara O'Brien - TriMet
Taylor Eidt – C-TRAN
Tom Brennan - Nelson/Nygaard
Tom Kloster - Metro
Valerie Egon - ODOT Region 1

Absent
April Bertelson, PBOT

Topics
Group introductions
Overview of the HCT strategy and update work plan
HCT working group charge, roles, and responsibilities
HCT Challenges, opportunities, and policy considerations

Decisions
None

Actions agreed upon
- Clarity needed on defining project mode during this process and the nexus to the NEPA process
- Partner request - summary of feedback received about HCT and/or prioritizing projects

- Coordination with concurrent work is important. Consider providing updates on nexus to efforts like Climate Smart Communities, Westside multimodal project, etc. so all are on the same page about coordination of data, comments and timing of decisions.
- Encouraged to be focused and targeted while keeping coordinated with concurrent activities.
- All feedback will be tracked and is encouraged within the working group as well as the TACs, CCCs and Metro meetings

Next meeting

August 16, 2022 10:30-12:00 pm
Zoom

Purpose: Talk about identified policy gaps and provide feedback to inform the policy framework, discuss the core criteria and corridor evaluation framework for characterizing corridors, preview approach to systems analysis, and review next steps.

4.3.4 Policy 4 - Make transit more convenient by expanding high capacity transit and improving transit speed and reliability through the regional enhanced transit concept.

4.3.4.1 Expand high capacity transit, to serve transit dependent populations and improve system performance between key destinations

High Capacity Transit (HCT) investments help the region concentrate development and growth in its centers and corridors. The regional transit network concept calls for fast and reliable HCT service between the central city and regional centers. HCT service carries high volumes of passengers quickly and efficiently, and serves a regional travel market with relatively long trip lengths to provide a viable alternative to the automobile in terms of convenience and travel time.

High capacity transit provides greater connections between the Portland Central City, regional centers, and passenger intermodal facilities. It operates on a fixed guideway or within an exclusive right-of-way, to the extent possible. High capacity transit strives for frequencies of 10 minutes or better during the peak hours and 15 minutes during off peak hours. Passenger infrastructure at HCT stations and within station communities often include enhanced amenities, such as real-time schedule information, ticket machines, special lighting, benches, shelters, bicycle parking, civic art and commercial services.

To optimize and leverage transit supportive land uses, alignments and station locations should be oriented towards existing and future high density, mixed-use development. To this end, urban form and connectivity, redevelopment potential, market readiness, public incentives and infrastructure financing should all be considered during the corridor refinement and alternatives analysis phases of project development. High capacity transit investments are informed by the HCT assessment and readiness criteria (see performance measures chapter of this strategy).

Types of high capacity transit types, facilities and services include:

- Light Rail Transit (MAX)
- Rapid Streetcar (Streetcars running in mostly exclusive right-of-way so that they are able to travel faster safely)
- Bus Rapid Transit (majority of service operates in separate and dedicated right of way, defined stations, transit signal priority, short headways).
- On-Street Bus Rapid Transit (substantial transit investment, some separate or dedicated right of way, defined stations, transit signal priority, short headways).
- Commuter Rail (WES)
- Interurban Passenger Rail (e.g., Amtrak or regional rail systems in other regions)
- Intermodal Passenger Facilities (e.g., Union Station and Greyhound)
- Secure bicycle parking (Bicycle stations or Bike & Rides
- Park & Ride lots

- Transit Centers
- Transit Stations

Major infrastructure investments have implications within the communities they are located. Historic data shows that a major HCT investment contributes to both positive and negative outcomes for the communities they serve. It is critical that during the planning for a new HCT investment, a strategy should be developed that considers both the positive and negative impacts of the investment, particularly as it applies to the most at-risk populations. These tend to be people of color, low income, low English proficiency, seniors and youth. Additionally, these populations tend to be our most transit dependent. What this means is that their potential displacement from the economic pressures that the investment brings, ultimately leads to undermining the long-term effectiveness of the investment. By planning all new HCT lines through an equitable development framework, we can attempt to lessen the negative impacts of the investment, while enhancing the opportunity that these transit-dependent populations benefit from it, by limiting residential and business displacements and gentrification. The framework will vary for each project and should be developed at the time an HCT project is being considered through planning, engineering and construction.

Any HCT planning effort should directly incorporate community in the decision-making process. The process should also be informed and include an assessment of data with an equity lens. Where possible HCT projects should also enhance the contracting and job training benefits and opportunities for displaced and historically marginalized populations.

4.3.4.2 Improve transit speed and reliability through the regional enhanced transit concept

In order to meet the Portland Metro region's environmental, economic, livability and equity goals as we grow over the next several decades, we need to invest more in our transit system, particularly the frequent service bus network. There are many ways to increase transit speed and reliability throughout our system. The region should pursue opportunities as they arise to improve the efficiency of our system to support our transit riders.

The Enhanced Transit Concept (ETC) program, is one way to do this, which employs new public partnerships to service treatments that increase capacity and reliability, yet are relatively low-cost to construct, context-sensitive, and able to be deployed quickly throughout the region where needed.

ETC can be implemented through the coordinated investment of multiple partners and has the potential to provide major improvement over existing service or even our region's best frequent service, but less capital-intensive and more quickly implemented than large scale high capacity transit. Investments would serve our many growing mixed-use centers, corridors, and employment areas that demand a higher level of transit service but are not seen as short-term candidates for light-rail, or bus rapid transit.

ETC partnerships could also create more reliable, higher quality transit connections to connect low-income and transit-dependent riders to jobs, school and services. It would allow for a more

between free flow and peak period conditions) in addition to areas experiencing significant dwell and have high ridership were identified as ETC corridors.

4.2.1.3 High capacity transit

Our high capacity transit (HCT) system operates with the majority or all of the service in exclusive guideway. The high capacity transit system is meant to connect to regional centers and carry more transit riders than the local, regional and frequent service transit lines. HCT could include rapid streetcar, corridor-based bus rapid transit, bus rapid transit, light rail or commuter rail. Future planning studies are required to determine the specific mode. The Regional Transit Network map has been updated to include the 2009 HCT lines, with updates. These updates include:

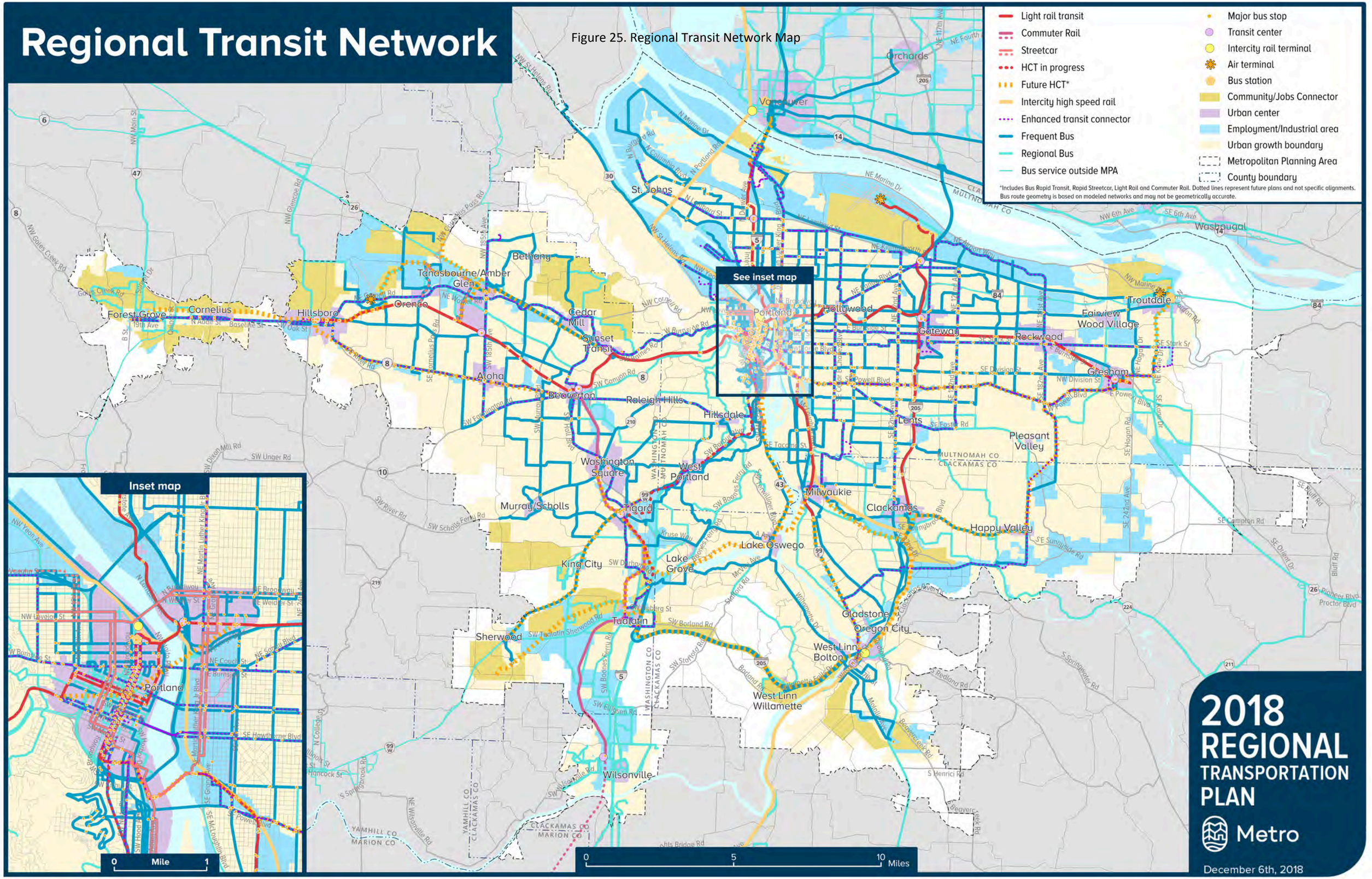
- moving the I-5 HCT corridor from under development to a future HCT project
- moving the Portland to Lake Oswego Streetcar project from under development to a future HCT project
- Portland to Gresham in the vicinity of Powell Corridor remains a future HCT project, while the Portland to Gresham in the vicinity on SE Division St is an HCT project under development
- moved Portland to Sherwood in the vicinity of Barbur/Highway 99 Corridor from a future HCT to project under development
- modified the Clackamas Town Center to Damascus to connect to Happy Valley via the Columbia to Clackamas Corridor as a future HCT project

4.2.1.4 Intercity rail

Intercity passenger rail provides high quality rail service to communities outside of the region provides an important connection to our region. Intercity rail can connect regions and even states. This type of service goes beyond our regional boundaries and serves people traveling to destination in and out of our region.

Regional Transit Network

Figure 25. Regional Transit Network Map



2018 REGIONAL TRANSPORTATION PLAN

Metro

December 6th, 2018

Table 16. Comparison of Climate Smart monitoring targets by investment strategy

Measure	2015 Baseline	2035 Monitoring target	2027 Constrained	2040 Constrained	2040 Strategic
Daily transit service revenue hours	5,900	**9,400**	8,100	9,500	11,700
Share of households within ¼ mile all day frequent service*	38%	**37%**	53%	58%	65%
Share of low-income households with ¼ mile of all day frequent transit *	46%	**49%**	63%	69%	74%
Share of employment within ¼ mile of all day frequent service*	68%	**52%**	67%	72%	78%

*Climate Smart Strategy calculated the access to transit as a ¼ mile from any transit stop or station, the RTP analysis was more tailored and calculated the access for a ¼ mile from bus stop, 1/3 mile from streetcar station and ½ mile from light rail station. Revenue hours does not include C-TRAN revenue hours and have been rounded.

Source: Metro Travel Demand Model

Investment in transit projects can also support higher density land development which reduces the distance and time people need to travel from place to place. Less distance means fewer emissions and cleaner air. Transit-oriented development also preserves land for other uses like parks, wildlife preserves, or agriculture.

If preserving the region's natural beauty for generations to come is a shared objective, reducing negative environmental impacts must be collaborative effort. Transit use is a tool proven to work. There is still a lot of work to do if we want to reach our goals, but a region wide effort makes the task less daunting.

7.4 High Capacity Transit (HCT) Assessment and Readiness Criteria

The HCT Assessment and Readiness Criteria is an update to the Transit System Expansion Policy, adopted in 2009, as part of the Regional High Capacity Transit Plan. The HCT assessment and readiness criteria f provides a framework for the region to screen and prioritize major capital investments in transit. This concept was originally developed in 2009 as part of the Regional High Capacity Transit System Plan.

This framework aims to identify transit corridor capital projects that best meet regional outcomes and position projects for potential federal and other funding opportunities. The outputs of this assessment can help illustrate the strengths and weaknesses of each project and will allow project sponsors to understand opportunities to enhance how a given project will score in future evaluations.

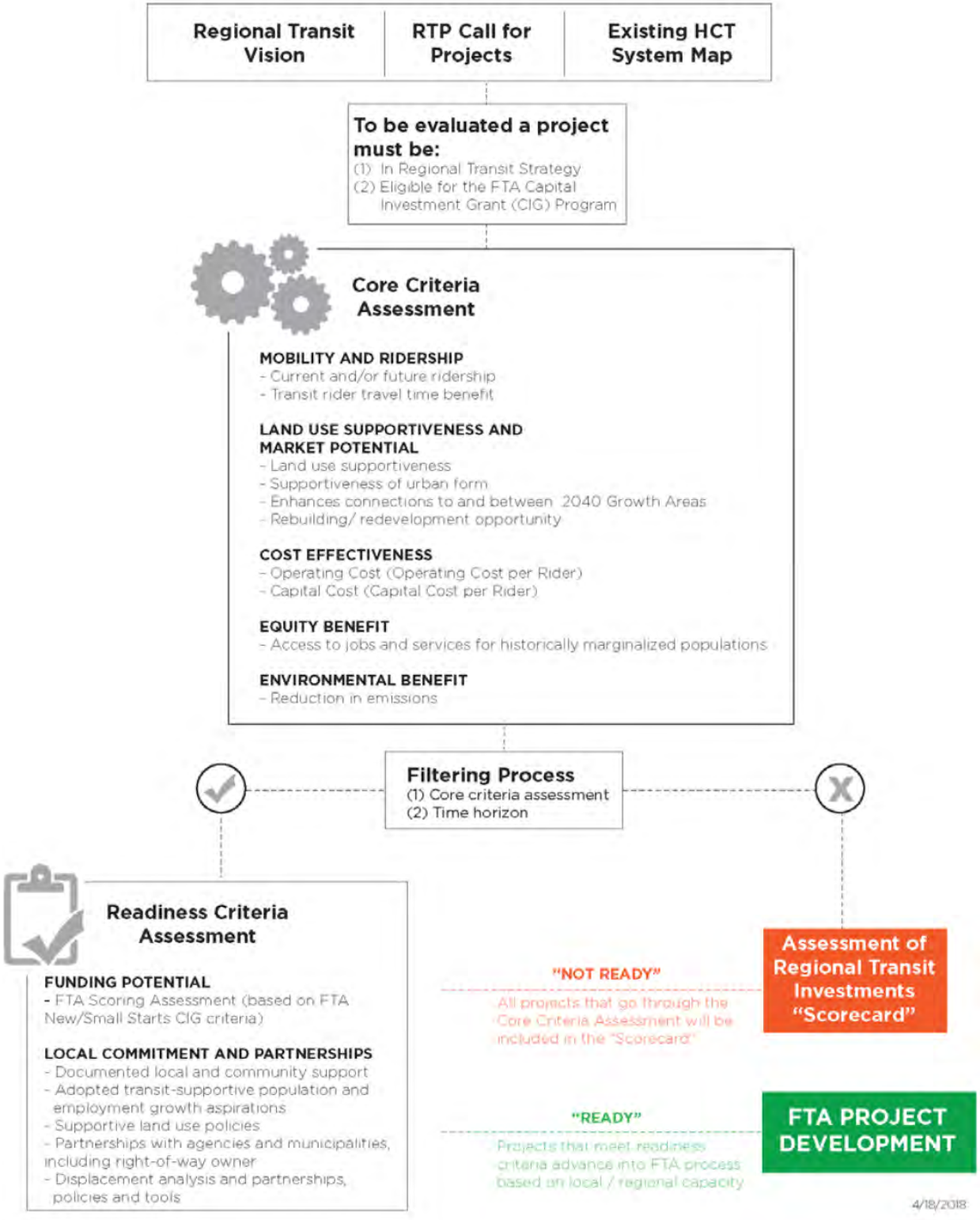
The HCT assessment and readiness criteria includes a multi-phased evaluation that includes core criteria as well as readiness criteria. The Core Criteria is comprised of measures that describe the benefit of the projects consistent with regional values, as well as assess the competitiveness of projects for funding through the FTA CIG program. The Readiness Criteria is the second filter and is evaluated separately from the core criteria when a project is better positioned for implementation. Project readiness factors include funding potential (a simulated scoring based on the FTA CIG program criteria) and local aspirations (measure of local commitment and established agency partnerships to ensure successful project delivery).

The HCT assessment and evaluation criteria align with recent regional priorities including the six desired outcomes for the Portland metropolitan region, the Climate Smart Strategy outcomes related to transit and the RTP System Performance Measures. It also aligns with the FTA Capital Investment Grant (CIG) program, which provides capital funding for high-capacity transit projects.

This process applies to any projects that are seeking Federal funding through the FTA Capital Investment Grant Program. This information along with local support is meant to help guide the regional decision making process to advance HCT investments. This additional assessment would only apply to those investments seeking FTA Capital Investment Grant (CIG) program funding (e.g. New Starts, Small Starts or Core Capacity).

Figure 77 below identifies the process, including how projects are defined (e.g., which projects are run through this process), the criteria, and the outcomes of the process.

Figure 77. HCT Assessment and Readiness Criteria Process



Source: Nelson\Nygaard Consulting Associates, Inc.

Regional transit investments assessment and readiness criteria

Table 17 describes the proposed evaluation criteria and identifies the rationale and other notes related to the proposed analytical methods.

Table 17 High Capacity Transit (HCT) assessment and readiness criteria

Criteria	Measures
Mobility and Ridership	▪ Current and/or future ridership ▪ Transit rider travel time benefit
Land Use Supportiveness and Market Potential	▪ Land use supportiveness ▪ Supportiveness of urban form ▪ Enhances connections to, within, and between 2040 Growth Areas ▪ Rebuilding/ redevelopment opportunity
Cost Effectiveness	▪ Operating Cost (Operating Cost per Rider) ▪ Capital Cost (Capital Cost per Rider)
Equity Benefit	▪ Access to jobs and services for historically marginalized populations ▪ Reduction in emissions
Funding Commitment/ Partnerships/Local Support (Readiness Phase)	▪ Local Commitment and Partnerships ▪ Funding Potential

Source: Nelson\Nygaard Consulting Associates, Inc

This analysis helps inform the conversations regarding advancing a project forward towards implementation. This process is not meant to represent a detailed corridor analysis, but rather a high level assessment of the project based on benefits and readiness. Individual corridor modeling and analysis typically happens when a corridor is defined and there is a planning process for that specific corridor. During the project planning phase, the regional travel demand model, as well as other planning tools, can be utilized at a corridor level to identify specific benefits and tradeoffs.

The following table describes the high capacity transit and enhanced transit projects identified in the RTP. In the first 10 years of the RTP, the region is following through on the commitments to build the Division Transit Project and the Southwest Corridor Transit Project. The Red Line extension to Hillsboro is another HCT investment proposed for the first 10 year period of the plan. The first 10 years also includes several ETC improvements and two streetcar extensions.

Table 6. Transit capital improvements by RTP investment strategy

2027 RTP Financially Constrained	2040 RTP Financially Constrained *(2027 Constrained investments, plus)*	2040 RTP Strategic *(2040 Constrained investments, plus)*
High Capacity Transit	**High Capacity Transit**	**High Capacity Transit**
• Southwest Corridor Project • Division Transit Project • MAX Red Line Improvements Project • Central City Transit Capacity Analysis (*combined with Steel Bridge Transit Bottleneck*)	• Portland to Vancouver HCT • Steel Bridge Transit Bottleneck *(combined with Central City Transit Capacity Analysis)*	• HCT extension to Oregon City via McLoughlin Blvd. • HCT on I-205 (Clackamas to Bridgeport) • WES all-day service • WES extension to Salem • Sunset Highway HCT (Sunset transit center to Hillsboro Fairplex • HCT extension to Forest Grove
Enhanced transit concept	**Enhanced transit concept**	**Enhanced transit concept**
• Streetcar upgrades on Grand Avenue in Portland • Central City Portals (downtown Portland bridges) • 82nd Avenue ETC (NE Killingsworth Street to SE Clatsop Street) • Powell Boulevard ETC (SE Portland to I-205) • 122nd Avenue ETC (Lents to Parkrose transit center) • Martin Luther King Jr. Boulevard ETC (Portland Central City to N Vancouver Boulevard) • Sandy Boulevard ETC (Portland Central City to Parkrose TC) • 82nd Avenue ETC (Swan Island to Clackamas town center) • Hawthorne Boulevard/Foster Road ETC (downtown Portland to Lents town center) • Streetcar to Montgomery Park in NW Portland	• Inner North Portland ETC (Portland Central City to N Lombard Street) • Caesar Chavez ETC (Sandy to Powell) • Lombard Street ETC (St. Johns to MLK Jr. Boulevard) • SE Hawthorne/50th Avenue ETC (Willamette River to SE Powell) • Tualatin Valley Highway multimodal project (Maple Street to 160th Avenue) • E. Burnside/SE Stark Street ETC (Portland to Gresham) • Tualatin Valley Highway ETC from Beaverton to Forest Grove • Beaverton-Hillsdale Highway ETC from Portland to Washington Square • Cornell/Barnes ETC (Sunset transit center to Hillsboro TC) • 185th/Farmington Road ETC (PCC Rock Creek to Beaverton transit center) • Streetcar on NE Broadway to Hollywood town center	• SE Powell Boulevard ETC (Portland to extent TBD) • Lombard/Caesar Chavez ETC (St. Johns to Milwaukie town center) • Belmont Street ETC (Portland to Gateway transit center) • Streetcar on Martin Luther King Jr. Boulevard in NE Portland • Streetcar in AmberGlen in Hillsboro • Streetcar to Johns Landing in SW Portland

planning projects that have been initiated locally (e.g., Pleasant Valley TSP Refinement Project, Happy Valley Pleasant Valley/North Carver Comprehensive Plan, 172nd Avenue/190th Drive Corridor Management Plan and the Clackamas County TSP Update), and evaluate packages of multimodal improvements that will improve mobility and access along the corridor to jobs, housing and key commercial and industrial areas. This effort will identify a preferred package of transportation improvements and detail how they can be phased for implementation. This effort will also provide recommendations on urban street design as well as recommend amendments to local TSPs and the Regional Transportation Plan to implement the preferred multimodal package.

Potential Solutions

This effort will recommend a shared mobility corridor investment strategy, including long-term needs and improvements for auto, bicycle, freight, pedestrian, and transit mobility and connectivity. This effort will expand on already adopted planning efforts in the corridor to create a multi-jurisdictional implementation strategy that provides a clear path from existing conditions to desired transportation improvements that support community and regional goals for equity, housing, economic development, environmental protection and access to nature. The planning process will include extensive public involvement and identify a set of potential improvements that would be subsequently advanced for further study and potential project development and funding.

The study will include a needs assessment for auto, freight, transit, bicycle and pedestrian modes within the corridor to identify existing gaps and system deficiencies. The assessment and solutions will address completing regional trails gaps, including the Troutdale to Springwater Trail, the Sunrise Corridor Trail and the Butler Buttes Trail - to provide a continuous off-street active transportation route through the length of the mobility corridor. A full list of recommended projects from other related transportation planning efforts will be developed. Data for key performance metrics will be collected from the related transportation plans and analyzed. If necessary, additional projects will be identified and proposed if unmet needs are found. The projects will then be evaluated, and recommended projects will be grouped into investment packages and grouped geographically. The preferred investment packages for all modes will then be fully documented in the final plan along with implementation strategies focusing on timelines and funding strategies.

More information is available at: https://greshamoregon.gov/Clackamas-to-Columbia-Corridor.

8.3 Transit Projects and Project Development

Major transit projects have been identified through the 2009 HCT Plan and local and regional planning efforts. Major transit projects, refers to project that may go through the FTA CIG Program for funding. Project planning and project development is completed jointly by Metro, the transit agency and the local governing jurisdictions. Major projects typically have a high level of public and require an environmental analysis through the National Environmental Protection Act (NEPA).

8.3.1 Transit Projects underway

The HCT Plan identified the near term HCT priorities to move forward, including the Division Transit Project and the Southwest Corridor Project. The region is committed to advancing and continues to implement these two regionally significant transit projects. Another project that is currently underway is the MAX Red Line Improvement Project, to improve the capacity and reliability of the light rail system through the Gateway Transit Center as well as extending the Red Line to Hillsboro.

8.3.1.1 Division Transit Project

The Division Transit Project will improve travel between Downtown Portland, Southeast and East Portland and Gresham with easier, faster and more reliable bus service. The Steering Committee recommended a Locally Preferred Alternative (LPA) in November and was adopted by the local jurisdictions in December 2016. The LPA for the transit project includes the transit mode (bus rapid transit), the route (from downtown Portland on the transit mall to Southeast Division Street to the Gresham Transit Center), and the general stop locations (approximately 1/3 mile apart). The project began the NEPA process by documenting potential impacts and benefits in accordance with federal requirements. With local adoption of the LPA, TriMet is leading the design, traffic analysis, and outreach with support from Metro and other project partners. In June 2017, the Metro Council adopted the LPA by Resolution No. 17-4776 at the same time the Council amended the 2014 RTP by Ordinance No. 17-1396 to include the LPA in the plan.

TriMet is working with partners to finalize the project's design, and Metro is leading the NEPA process by conducting a Documented Categorical Exclusion. The land use investment strategy is being led by Portland and Gresham, moving forward on their locally adopted Local Action Plans. The Local Actions Plans outline their vision for implementing land use and economic development that complements the transit investment. Construction is anticipated to begin in 2019 with a targeted opening date of fall 2022.

Additional project information is available at: www.trimet.org/division.

8.3.1.2 Southwest Corridor Transit Project

The Southwest Corridor Plan is a comprehensive effort focused on supporting community-based development and placemaking that targets, coordinates and leverages public investments to make efficient use of public and private resources. In August 2011, the Metro Council adopted Resolution 11-4278 that appointed the Southwest Corridor Steering Committee, and a charter defining how the partners will work together was adopted by the Steering Committee in December 2011.This work has been guided by a Steering Committee comprised of representatives from the cities of Beaverton, Durham, King City, Portland, Sherwood, Tigard and Tualatin, Multnomah and Washington County; ,TriMet, ODOT and Metro. Steering Committee members agreed to use a collaborative approach to develop the Southwest Corridor Plan and a Shared Implementation Strategy to align local, regional, and state policies and investments in the corridor.

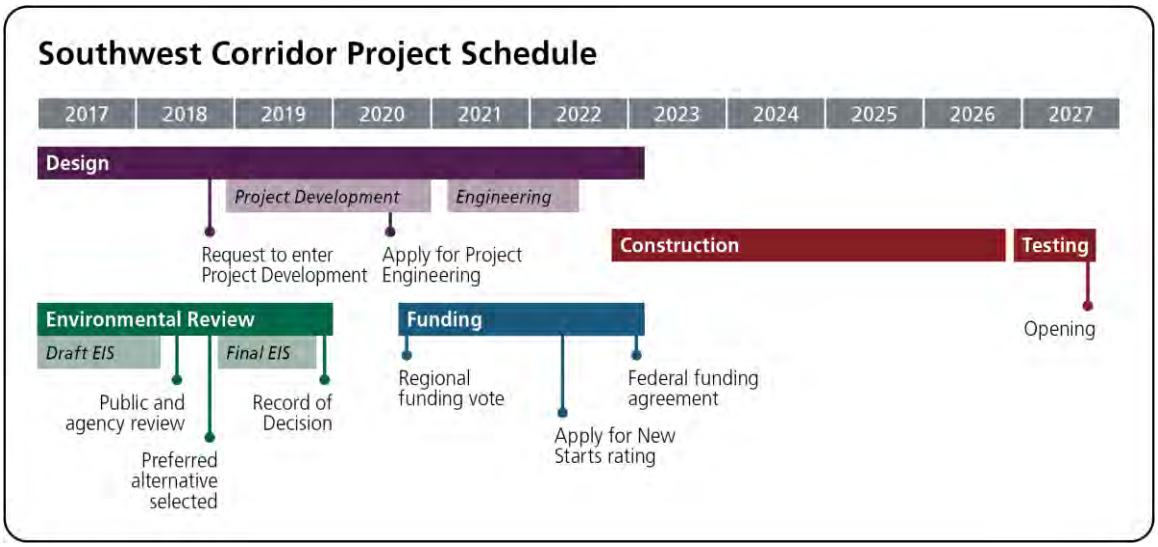
In October 2013, the Metro Council adopted Resolution No. 13-4468A, endorsing the Southwest Corridor Shared Investment Strategy and directing staff to coordinate and collaborate with project partners on refinement and analysis of HCT alternatives and local connections in the Southwest Corridor, along with associated roadway, active transportation and parks/natural resource projects that support the land use vision for the corridor. This resolution also directed staff to work with project partners to involve stakeholders at key points in the process and seek input from the public.

In June 2014, the Metro Council adopted Resolution No. 14-4540, which included direction to staff to study the Southwest Corridor Transit Design Options under NEPAin collaboration with the Southwest Corridor Plan project partners and with the involvement of stakeholders and public, pending Steering Committee direction on the results of the focused refinement analysis

The Southwest Corridor Light Rail Project has emerged as the preferred high capacity transit investment of the Southwest Corridor Shared Investment Strategy. The project is a proposed 12-mile MAX light rail line serving SW Portland, Tigard, Tualatin and the surrounding communities. The proposed project also includes bicycle, pedestrian and roadway projects to improve access to light rail stations. In compliance with NEPA, and at the direction of the Metro Council, an Environmental Impact Statement (EIS) will be prepared by Metro, TriMet and the FTA to identify the significant positive and negative impacts the project could have on the built and natural environment, and to determine options to avoid, minimize or mitigate those impacts. The Draft EIS released in summer 2018, assessed the project alternatives remaining from over three years of analysis refinement and suggested ways to avoid, minimize or mitigate significant adverse impacts. The information disclosed in the Draft EIS and public and agency comments on the Draft EIS, informed the Southwest Corridor Steering Committee in its recommendation of a Locally Preferred Alternative (LPA).

TriMet anticipates requesting entry in Project Development with FTA late in 2018. TriMet will be furthering the transit project design while Metro completes the final EIS. The final EIS will analyze and disclose the benefits and the adverse impacts of the preferred alternative, including the effects of mitigation measures identified in the Draft EIS and selected for inclusion in the project. Upon completion of the final EIS, TriMet will request a Record of Decision (ROD) from FTA, which authorizes lead agencies to proceed with design, land acquisition, and construction based on the availability of funds. The general schedule for the Southwest Corridor Light Rail Project is shown below, with anticipated opening in fall 2027.

Figure 82. Southwest Corridor Project schedule



More information is available at www.oregonmetro.gov/public-projects/southwest-corridor-plan.

8.3.1.3 MAX Red Line Improvement Project

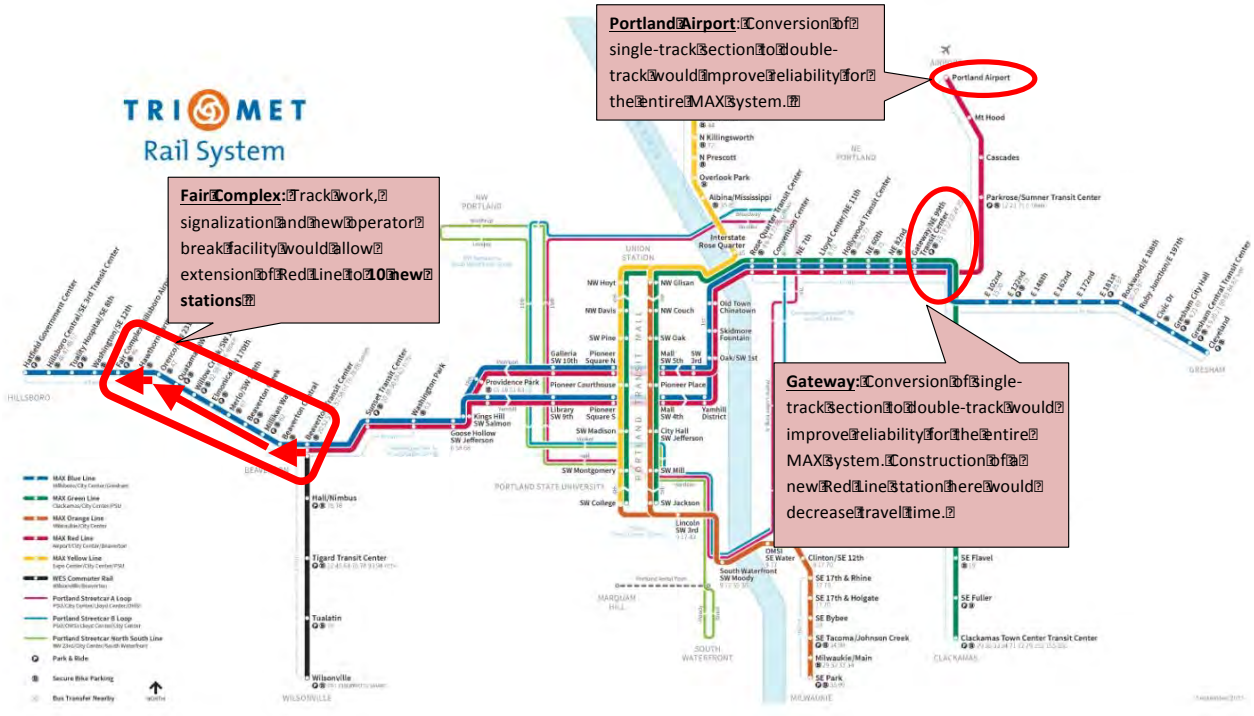
The MAX light rail system provides high capacity transit connecting the major centers of our region. The MAX Red Line has connected the City of Beaverton, downtown Portland, Gateway Regional Center, and Portland International Airport since 2001. Since its opening, there has been substantial growth in the corridor and more demand for reliable transit connecting these important centers. Currently, the Red Line has two single-track sections near Gateway/99th Ave and Portland International Airport, which result in inbound and outbound trains having to wait for each other. If a train is off schedule, these wait times can impact the entire MAX System as trains rely on the same tracks to serve different parts of the region. Adding a second set of tracks in these areas will reduce delays for riders on all five lines. In addition, MAX riders west of Beaverton Transit Center have been requesting Red Line service to better connect this growing part of the region.

The Red Line improvements west of the Beaverton Transit Center include improving track and switches, adding signals and a new operator break facility at the Fair complex/ Hillsboro Airport MAX Station, allowing Red Line trains to serve ten more west side stations. These stations are currently served by the Blue Line, which is often overcrowded.

This project will complete a 2-year design process for the MAX Red Line double tracking and other improvements to increase light rail reliability on all five MAX lines and to improve carrying capacity to meet transit demand west of the Beaverton Transit Center. TriMet and Metro will work with the local jurisdictions and the Port of Portland to scope the project to improve access to major transit origins and destinations, improve reliability of the entire MAX system. TriMet and Metro will also consult with the federal agencies during the scoping phase. TriMet is coordinating with local jurisdictions to avoid and minimize any potential impacts associated with improving

the Red Line. NEPA is expected to be complete in 2019 with construction of improvements in the 2021-2023 timeframe. Completion is targeted for 2023. This work will improve mobility and transit performance throughout the region.

Figure 83. MAX Red Line improvement project area map



More information is available at: www.trimet.org/redlineimprovements.

8.3.2 Other major project development underway

The 2018 RTP identifies other major project development projects underway. These projects are not transit specific but may have an important transit component or consideration. For more information about this project, see the *2018 Regional Transportation Plan Update, Chapter 8 Implementation.*

8.3.2.1 I-5/Rose Quarter Project

ODOT and the City of Portland are ongoing partners on the I-5 Rose Quarter Improvement Project, which implements the recommendations of the I-5 Broadway-Weidler Facility Plan and the N/NE Quadrant Plan. The purpose of the I-5 Rose Quarter Improvement Project is to improve the safety and operations on I-5 between I-84 and I-405, the Broadway/Weidler interchanges, and adjacent surface streets in the vicinity of the interchange. In achieving the purpose, the Project also supports improved connectivity and multimodal access in the vicinity of the interchange.

Figure 84. I-5/Rose Quarter project area

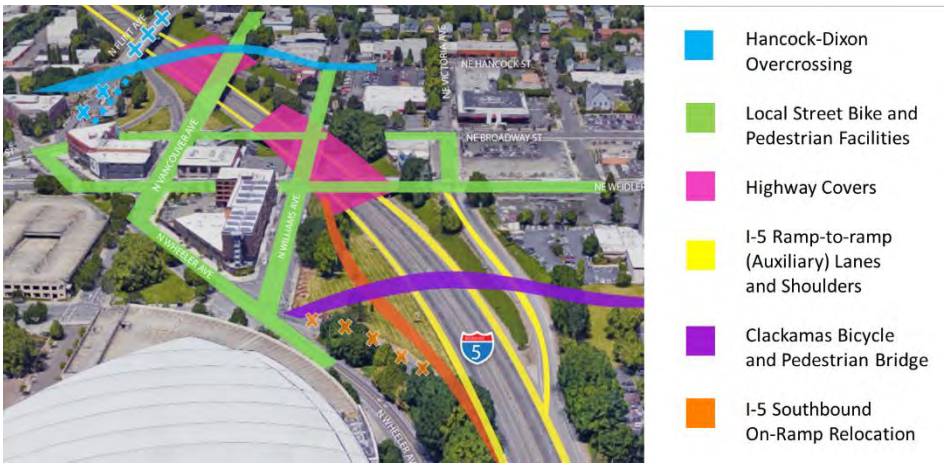
Figure 84 shows the project location and **Figure 85** illustrates the project features.

The I-5 Rose Quarter Improvement Project is intended to make travel more convenient, reliable, and safe for people driving on I-5, or biking, walking, or taking public transit in the Rose Quarter area. The Project will add:

- one new auxiliary lane in each direction on I-5 between I-84 and I-405 to improve traffic weaves and reduce frequent crashes
- full shoulders in each direction on I-5 between I-84 and I-405 to create space for disabled vehicles to move out of through traffic and allow emergency vehicles access
- relocating the I-5 southbound on-ramp from NE Wheeler to NE Weidler
- highway covers over I-5 at Broadway/Weidler and Vancouver/Hancock to provide space for wide sidewalks, separated bike lanes, roads, and new community spaces
- a bicycle- and pedestrian-only bridge over I-5 from NE Clackamas Street to the Rose Quarter
- new, direct road connection over I-5 between N Hancock Street and N Dixon Street
- new, upgraded pedestrian and bicycle paths in the area of the Broadway/Weidler interchange
- improved pedestrian and bicycle access to transit, including Portland Streetcar and TriMet bus and MAX lines

More information is available at www.i5rosequarter.org.

Figure 85. I-5/Rose Quarter Project features



ODOT initiated the federal environmental review process for the I-5 Rose Quarter Improvement Project in December 2016, with expected publication of an Environmental Assessment by the end of 2018. Project design is scheduled to begin in 2019, with construction beginning as early as 2023.

The I-5 Rose Quarter Improvement Project is one of the projects of statewide significance included in House Bill 2017, with the majority of Project funding provided by this Bill. Per House Bill 2017, ODOT will present a Cost to Complete Report to the State Legislature prior to the programming of State funding.

8.3.2.2 I-205 South Widening and Seismic Improvements Project

Preliminary design work is underway to widen I-205 between OR 213 and Stafford Road and improve the I-205/Abernethy Bridge to ensure it remains functional after a catastrophic earthquake. The design work was funded through HB 2017. However, construction funding for this project has not been identified.

The I-205 South project widens I-205 to add a third lane in each direction between Stafford Road and OR 213 and an auxiliary lane across the Abernethy Bridge in each direction. The I-205/Abernethy Bridge project provides for seismic upgrades of the Abernethy Bridge and includes seismic retrofit or replacement of eight additional bridges in the corridor. The project also adds Active Traffic Management System improvements, such as Traveler Information Signs, throughout the corridor.

The OTC approved a Cost to Complete Report for the project that was shared with the Oregon Legislature in January 2018, as mandated by HB 2017. The Cost to Complete Report defines the project scope and recommends a project delivery method and phasing plan to complete the project by 2025. Read the report and find more project information at www.i205corridor.org.

Figure 86. I-205 South Widening and Seismic Improvements Project Area Map

8.3.3 Other Transit needs

In addition to the projects that are underway, there are other transit needs and projects that are under consideration in the RTP. The following describes the transit project identified under the 2040 Financially Constrained Investment Scenario.

8.3.3.1 Portland to Vancouver project

This heavily traveled route is the main connection between Portland and Vancouver and identified as a need to address. In July 2008, the Metro Council approved a Locally Preferred Alternative for the Columbia River Crossing Project (CRC). It creates a multi-modal solution for the Interstate 5 corridor between Oregon and Washington to address the movement of people and freight across the Columbia River. The LPA includes a replacement bridge with three through lanes in each direction, reconstructed interchanges and, tolls priced to manage travel demand. It would also provide financing of project construction, operation and maintenance, light rail transit to Vancouver, and bicycle and pedestrian investments for this corridor.

More generally in the I-5 corridor, the Portland Metro region should:

- consider the potential adverse human health impacts related to the project and existing human health impacts in the project area, including community enhancement projects to address environmental justice
- consider managed lanes or pricing systems to help manage congestion
- maintain an acceptable level of access to the central city from Portland neighborhoods and Clark County
- maintain off-peak freight mobility, especially to numerous marine, rail and truck terminals in the area
- ensure that there is safe, reliable, affordable, and efficient transit connections between the growing downtown of Vancouver and key job sites in the Portland metropolitan region, including downtown Portland and Washington County

- consider new arterial connections for freight access between Highway 30, port terminals in Portland and port facilities in Vancouver, Washington
- maintain an acceptable level of access to freight intermodal facilities and to the Northeast Portland Highway
- address freight rail network needs.
- develop actions to reduce through-traffic on MLK and Interstate to allow main street redevelopment
- explore opportunities to support economic and land use goals with the Columbia Connections Strategy
- inform and coordinate with the Regional Transportation Council (RTC) and the Bi-State Coordination Committee prior to JPACT and Metro Council consideration of projects that have bi-state significance

8.3.3.2 Strategic needs

We have more transit needs than we can afford. The financially constrained investment scenario helps us achieve our Climate Smart Strategy goals. However, we are still able to implement our regional vision and meet all of our needs. The Strategic investment scenario include the largest number of HCT projects. **Table 19** highlights the transit projects that are identified in the RTP Strategic investment scenario.

Table 19. Transit projects in the RTP Strategic Investment Scenario

Safety and access improvements	Operating Capital Improvements	Enhanced transit concept	High Capacity Transit
• Downtown Milwaukie Transit Center improvements • Gresham Transit Center access & design enhancements • TriMet bike and ride facilities, Phase II • TriMet bus stop amenities, Phase II • TriMet pedestrian access improvements, Phase II • Union Station, Phase III	• HCT optimization, operations and reliability improvements • Merlo bus garage expansion • PDX light rail station/track realignment • SMART Central Informational Center at Wilsonville Station • SMART property acquisition • Transit priority on frequent service routes (Washington County) • TriMet electrification of bus fleet Phase II • TriMet Park& Ride facilities, Phase II	• SE Powell Boulevard ETC (Portland to extent TBD) • Lombard/Caesar Chavez ETC (St. Johns to Milwaukie town center) • Belmont Street ETC (Portland to Gateway transit center) • Streetcar on Martin Luther King Jr. Boulevard in NE Portland • Streetcar in AmberGlen in Hillsboro • Streetcar to Johns Landing in SW Portland	• HCT extension to Oregon City via McLoughlin • HCT on I-205 (Clackamas to Bridgeport) • Expansion of WES to all-day service • WES extension to Salem • Sunset Highway HCT (Sunset transit center to Hillsboro Fairplex • HCT extension to Forest Grove

8.3.3.3 HCT needs not addressed

The projects in the RTP do not complete the transit system as envisioned by the 2027 constrained, 2040 constrained and 2040 strategic project lists in the RTP. The project list does not complete the adopted HCT Plan and does not include high speed rail. The Regional HCT System Plan was an extensive effort throughout the region to identify the HCT vision and we are continuing to implement the regional vision. The following projects are not in the RTP, but are still included in our transit vision:

- Transit needs on Powell Boulevard – The Powell ETC project is identified for the first 10 years of the RTP to address near term reliability issues on Powell Blvd between the Willamette River and I-205. Further study is needed to define the alignment, transit mode terminus. This should be done through a multi-modal transportation study of the corridor.
- Portland to Lake Oswego Transit Project – A Locally Preferred Alternative (LPA) has been adopted for this corridor. However, the project was placed on hold and has not been identified in this current RTP.
- HCT connection to Sherwood – The original project boundaries identified in the HCT System Plan was Portland to Sherwood in the vicinity of Barbur/Highway 99E. Through the Southwest Corridor Plan, it was concluded that the light rail project would extend to Tualatin. The connection to Sherwood is a future consideration.
- Connection between CTC and Washington Square, connecting Milwaukie and Lake Oswego – An HCT connection on I-205 between Clackamas Town Center and Bridgeport is identified in the RTP Strategic Investment Scenario, which may provide a similar travel market. Further study is needed to identify the right alignment, transit mode and terminus is needed.
- Tanasborne HCT extension - This future HCT extension would provide an HCT connection between the existing Blue Line and the future Sunset Highway HCT through Tanasborne.

8.4 Next Steps

While our region continues to be leader in the world of transit planning, there are always opportunities to grow, improve, and innovate. If our objective is to continuously improve the quality of life for communities that call this region home, thoughtful consideration must be placed on our transit system. Exceptional transit planning and investment are critical to a safer, healthier, and happier future.

Successful regional planning requires dedicated effort from a wide range of actors. The region, as a whole needs to come together, from community members to elected officials and cyclist to freight truck drivers, a holistic approach must be taken in an effort to see real change.

This strategy offers a significant starting point and highlights where the region is doing well and highlights opportunities for improvement. As a region we have continuously proved our dedication to positive change, through a united regional effort toward the continued growth of our transit system and services. This is an opportunity to continue our legacy of leadership and ingenuity.

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Materials following this page were distributed at the meeting.

May-June traffic deaths in Clackamas, Multnomah and Washington counties *

**ODOT preliminary fatal crash report as of 6/29/22, police and news reports*

James Robert Sheehan, 57, motorcycling, Hwy 99E/ SE Jennings Lodge, Milwaukie, Clackamas County, 6/26

Robert Julian Hunker, 57, motorcycling, NE Kerkman Rd, Washington County, 6/22

Unidentified person, driving, NE Columbia Blvd & NE Alderwood Dr., Portland, Multnomah County, 6/16

Maksim Mishuk, 24, motorcycling, I-84/ NE Fairview Pkwy & 207th, Fairview, Multnomah County, 6/13

Shana Keplinger, 32, wheelchair (pedestrian), NE 162nd near NE Glisan St, Portland, Multnomah County, 6/11

Michael Eugene Sprague, 71, e-bicycle, NE Glisan St & NE 100th Ave., Portland, Multnomah County, 6/7

Unidentified person, walking, 82nd Ave & SE Center St., Portland, Multnomah County, 6/6 (may be ruled as homicide)

Unidentified person, driving, NE102nd Ave just south of NE Prescott St., Portland, Multnomah 5/31

Unidentified woman, driving, NW Yeon Ave, Portland, Multnomah 5/27

Bianca Ceperich, 16, driving, New Era Rd, Clackamas, 5/20

Gwendolyn E. Brake, 83, walking, Molalla Ave & Warner Milne Rd, Clackamas, 5/6

Unidentified person, motorcycling, US 26 Mt Hood Hwy, Multnomah 5/14

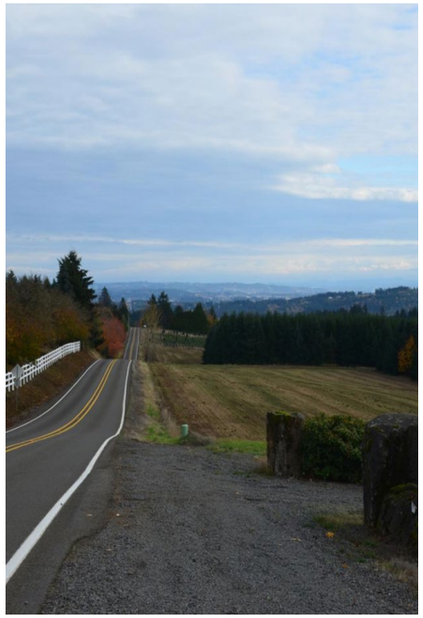
Unidentified person, 52, walking, I5-Ramp to Morrison Bridge, Portland, Multnomah, 5/8

Shane Johnson, 43, motorcycling (e-dirt bike), SE Powell/SE 50th, Portland, Multnomah 5/4

Tufa Shuka, 41, driving, Gaffney Ln & Berta Dr, Oregon City, Clackamas 5/4

David Carl Paulsen, 36, motorcycling, SE 208th Ave & SE Stark St, Portland, Multnomah 5/3

Metro



Sherwood West Preliminary Concept Plan Re-look Project

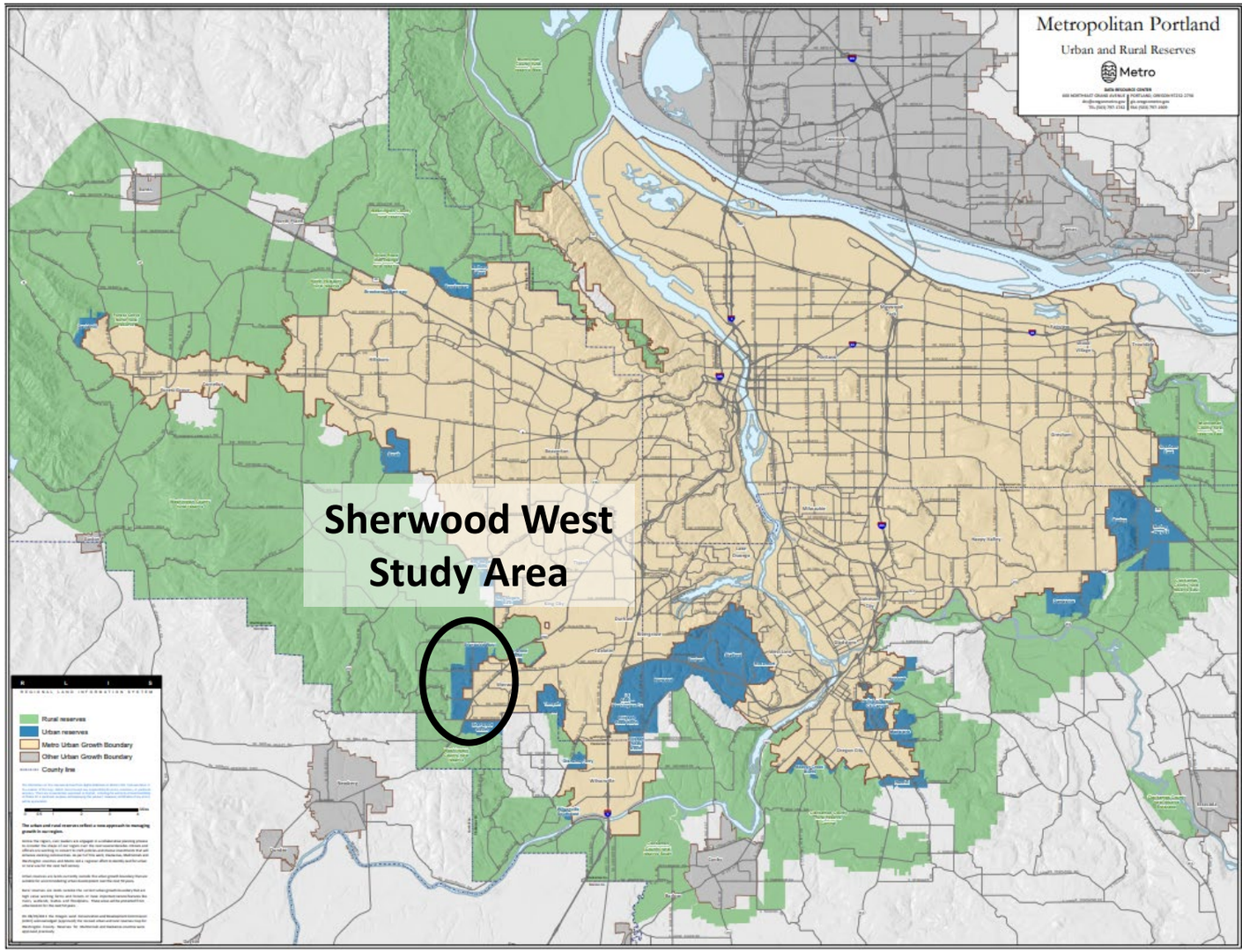
MTAC

July 20, 2022

Meeting Purpose

Provide MTAC an update on the concept planning process for the Sherwood West urban reserve area

- Why the re-look project?
- Tasks completed to date
- Next steps and project timeline



Urban Reserve: Sherwood West

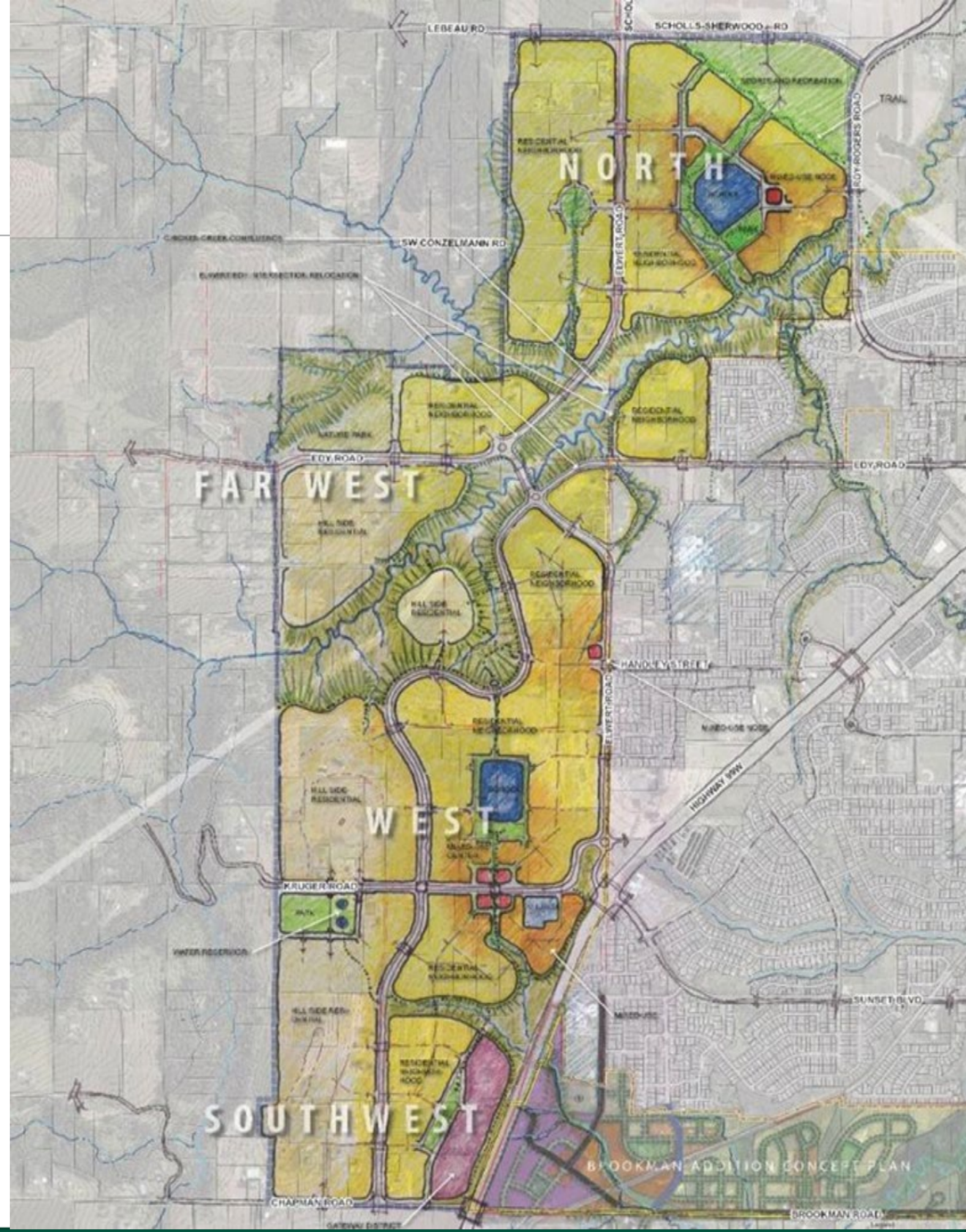
2016 Sherwood West Preliminary Concept Plan

- Drafted in 2015. Accepted by Council in 2016
- The preliminary concept plan was drafted prior to the comprehensive plan update
    - Primarily focused on housing – not a balance of land uses
- Was intended to inform future decision-making but did not provide enough specificity
- Does not fully meet all Metro Title 11 concept plan requirements

Purpose of Re-look Project

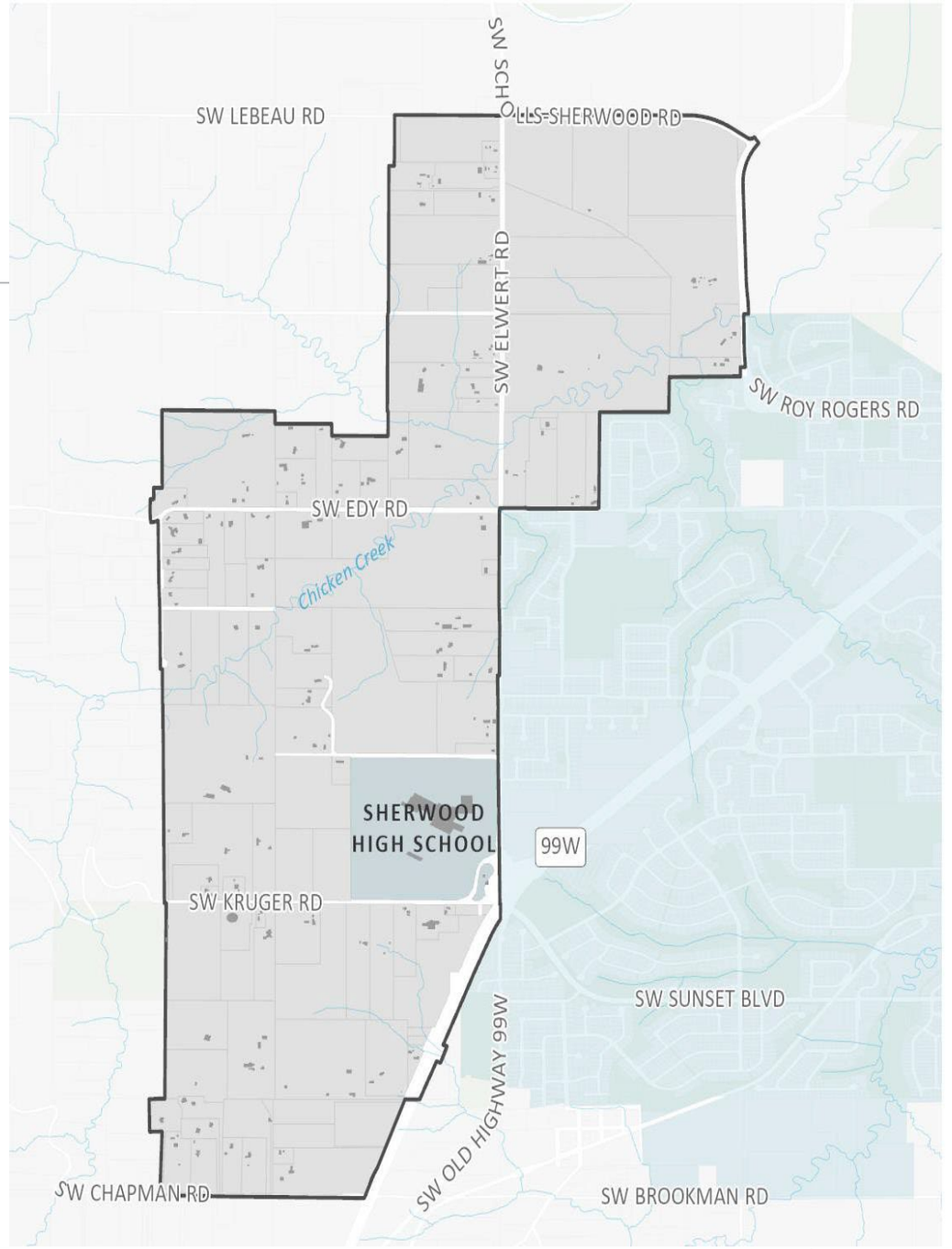
This project will take another look at the Sherwood West area to address the following:

- New opportunities for employment and economic growth
- New land use and growth patterns
- New and updated transportation plans
- New state rules related to housing
- Roadmap to inform possible future UGB expansion decision



About Sherwood West

- **Total area:** 1,291 acres
- **Properties:** 126
- **Property owners:** 110
- **Average property size:** 9.8 acres



Where we are at in the process?

- In 2021, received Metro grant to re-look at Preliminary Concept Plan
- Formed Technical and Community Advisory Committees
- Just had our 9th meeting with the CAC and are developing land use scenario map with implementation tools to take out to the community for feedback and input in late summer.
- Anticipate an updated Concept Plan to be complete by end of 2022 early 2023

Public Engagement

- Formed a Community Advisory and Technical Advisory Committee – all meetings open to the public
- Informed all property owners in Sherwood West about this project through postcard mailings
- Have an interested parties email list that receives regular updates about the project (over 160+ emails)
- Holding coffee klatches with interested groups (have met with surrounding HOA groups)
- Online surveys including outreach to High School Students
- Regular updates on project in City newsletter
- Have project webpage on the city's website
- Online Open House scheduled
- Tabeling at community events

Sherwood West Vision

Sherwood West is a walkable community with a balanced mix of employment, residential, commercial, and greenspace land uses—it is a place where families can ***safely live, work, shop, and play****. Sherwood West is home to a variety of businesses that offer stable, high-paying jobs and those employment opportunities have helped satisfy the City's need for an* ***expanded tax base*** *to protect and maintain Sherwood's great quality of life. Sherwood West is attractive to employers and residents because of its* ***well-planned infrastructure, well-connected streets, walkable neighborhoods, and variety of well-designed housing choices****. The area* ***feels like a natural extension of Sherwood's existing neighborhoods****, and it is* ***integrated with other nearby urbanizing areas and regional destinations such as the Tualatin River National Wildlife Refuge.*** *Sherwood West's natural landscape is anchored by the Chicken Creek Greenway, which protects the creek corridor and connects the area's neighborhoods through a* ***network of natural areas, parks, and trails****.*

Theme Concepts

1. Mixed-Employment Areas
2. Great Neighborhoods
3. Livable and Connected Streets
4. SE Elwert Road Design Concepts
5. Active Transportation
6. Chicken Creek Greenway

Mixed-Employment Areas

Mixed Employment is where there is a mix of office, light industrial, and flex space uses in the same development or area of the city. This type of development typically requires large sites (at least 40-50 acres), flat topography, and larger ownerships.

The right kind of jobs in the right places -- will provide opportunities for light industrial and commercial development with higher wage jobs; help diversify and balance the City's tax base; and build a self-sustaining and vibrant local economy.

Mixed-Employment Areas

***Note: These are general areas for mixed-employment that are being refined during this planning process**

Approximate Acres: 263

Characteristics: large area, mostly flat, large parcels, good transportation access to Roy Rogers

Opportunities: large employment or business park; multi-tenant flex space; tech park

Approximate Acres: 6 ***Note: This small node wasn't fully supported by the CAC**

Characteristics: high visibility along Highway 99, mostly flat, proximity to High School and existing

Opportunities: mixed-use node with retail

Approximate Acres: 55

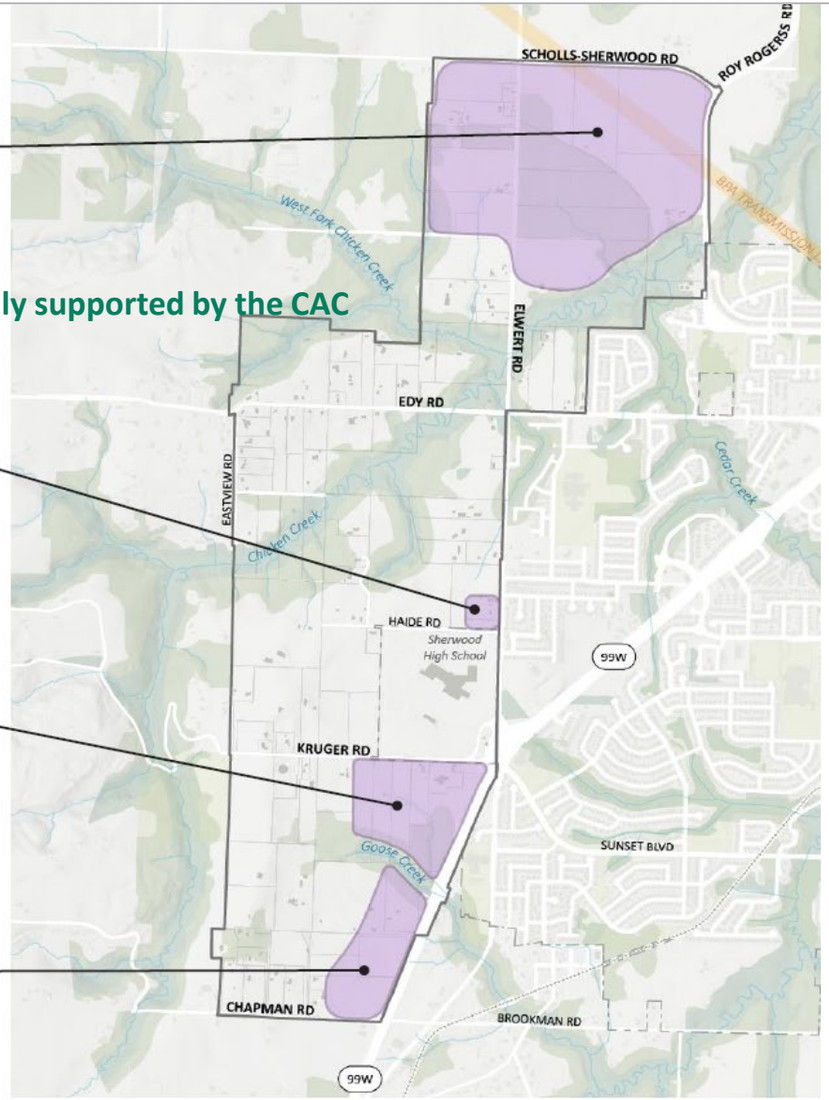
Characteristics: high visibility, good transportation access to Highway 99 at Kruger, some slopes and natural resource areas

Opportunities: multi-tenant flex space; healthcare or clinic; some retail or commercial; light industrial or manufacturing

Approximate Acres: 43

Characteristics: high visibility, good transportation access to Highway 99 at Chapman, mostly flat

Opportunities: multi-tenant flex space; possible warehousing or distribution, particularly for wine-related uses

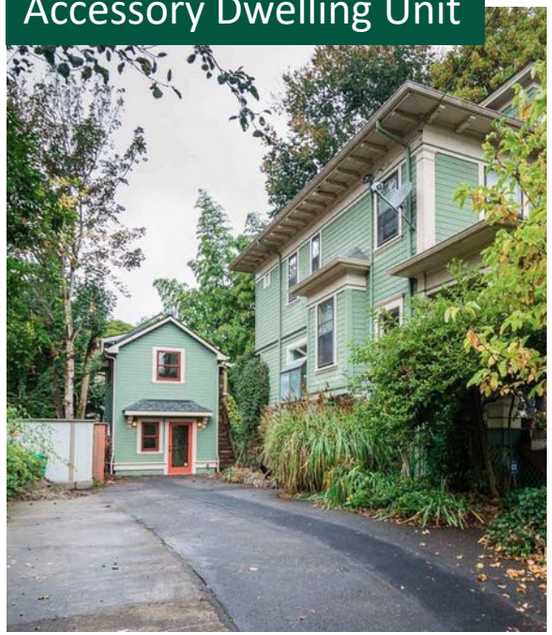


Great Neighborhoods

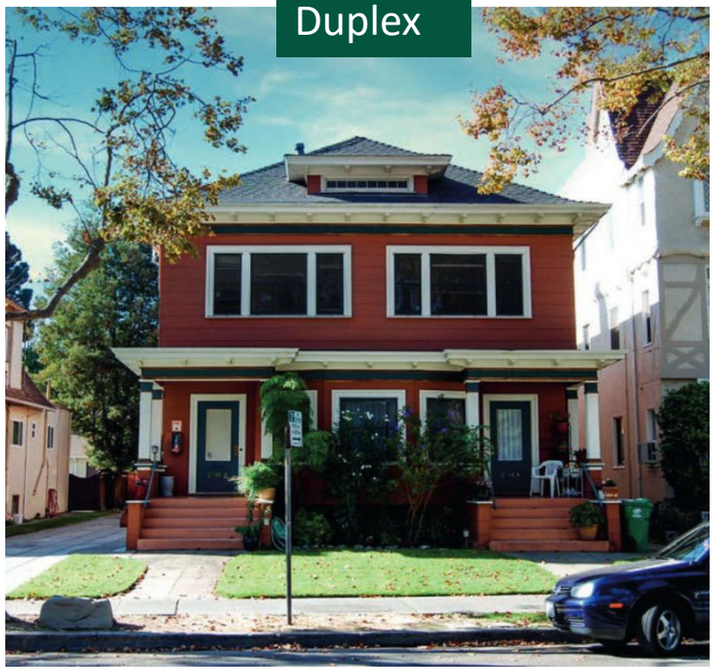
Principles

- Plan for Walkability
- Provide for a variety of housing
- Integrate new and existing neighborhoods
- Plan for schools and parks as destinations
- Connect greenspaces
- Integrate nature into neighborhoods

Accessory Dwelling Unit



Duplex



Townhomes/Plexes

Cottage Clusters

Small Single-Family Detached

Standard Single-Family Detached

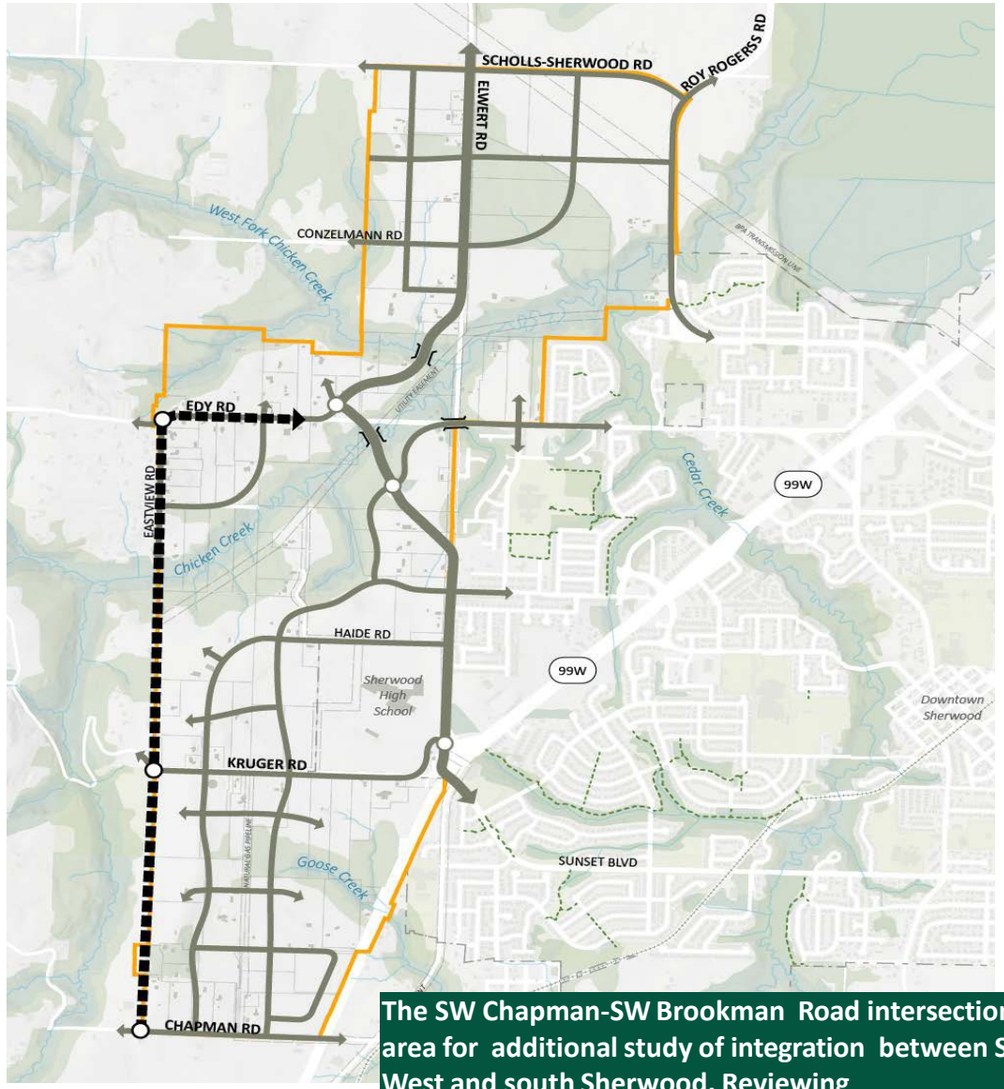
Livable and Connected Streets

Principles

- Design for Safety
- Integrate with existing Sherwood
- Connect all areas of Sherwood West
- Streets are places for people of all ages and abilities
- Provide for all modes of travel

We've heard from the CAC and community that the re-routing of Elwert is the preferred alignment

We've heard from the CAC that another north/south road connection between Chapman/Edy should be considered somewhere



The SW Chapman-SW Brookman Road intersection is an area for additional study of integration between Sherwood West and south Sherwood. Reviewing

SE Elwert Road Design Concepts

Principles

- Connect west and east sides of the Sherwood Community
- Tame the traffic
- Plan for safety
- Promote safe and comfortable walking and biking
- Create a green, landscaped corridor
- Provide for future transit

Buffered sidewalks, safe crossings, bike lanes

Trees Create a Canopy

Consistent Fenceline

Planted Median

Distinctive, Context-Sensitive Design

Employment Area Parkway

- Distinct street tree character
- Sherwood 'visual corridor' design
- Fewer curb cuts, continuous white fence
- Truck-turning considerations
- Large parcels with space for pathways linked to trails

Residential Boulevard

- Consistent street tree canopy, median
- Consistent white fence
- Safe crosswalks
- Protected bike lanes
- Access paths to residential areas
- Adjacent homes with side 'frontage'

Green Crossings

- Street tree choices informed by natural area proximity
- Narrower ROW to reduce footprint in ecologically-sensitive areas
- Trails and wildlife passage underneath
- Bridges as public view points, with art, educational signage

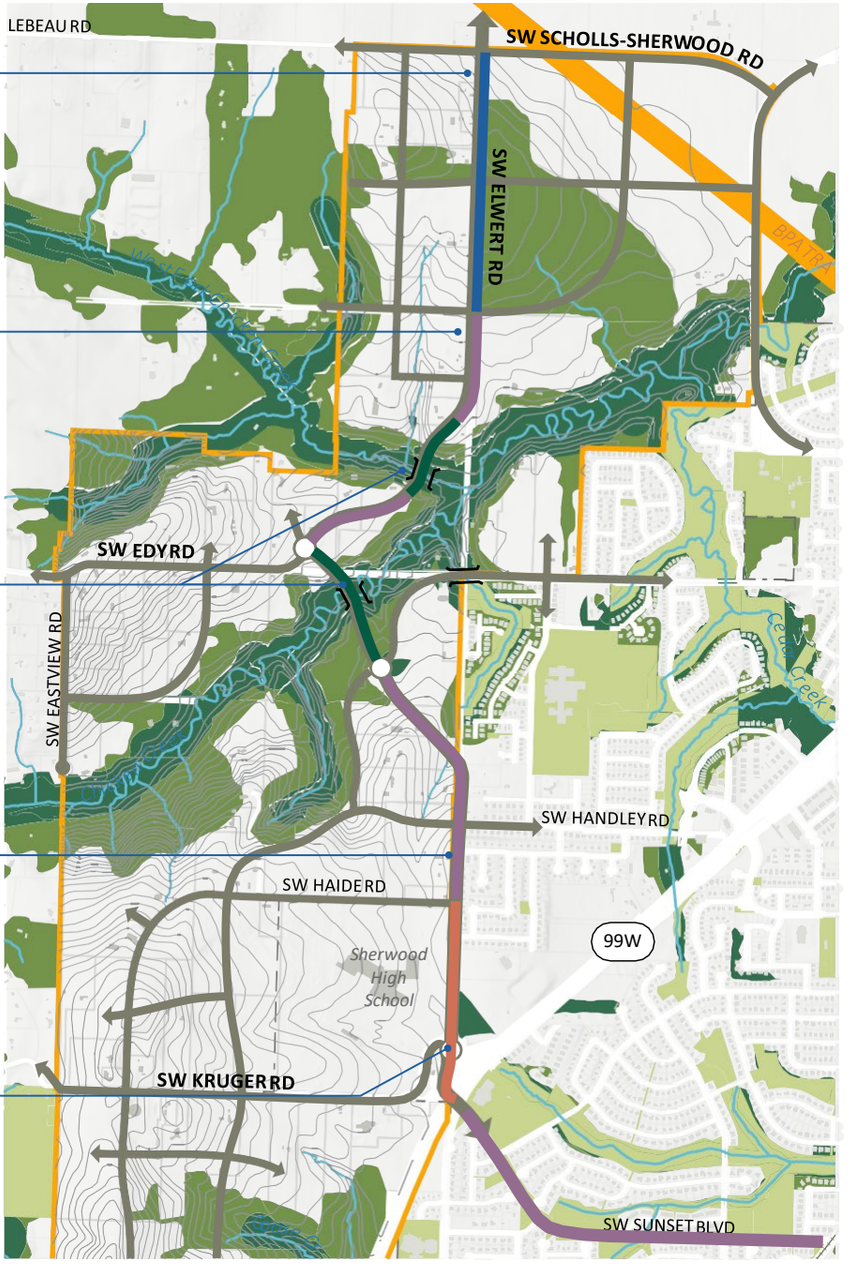
Residential Boulevard

See above, and...

- Between Haide and Handley, consider existing neighborhoods to east in design and ROW availability
- Continue multi-use path from High School
- Consider matching white fence on Sunset

High School Edge/Gateway

- Recently-rebuilt
- Generous multi-use path on west edge should extend north



Active Transportation

Connected Neighborhoods, Parks, Schools, Employment and Greenspaces

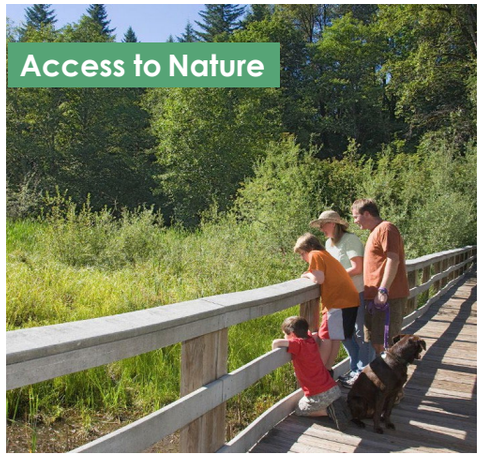
Parks, schools, employment areas and other local destinations should be well connected by trails or wide sidwalks and bike lanes through neighborhoods in order to create a healthy and walkable environment for all ages.

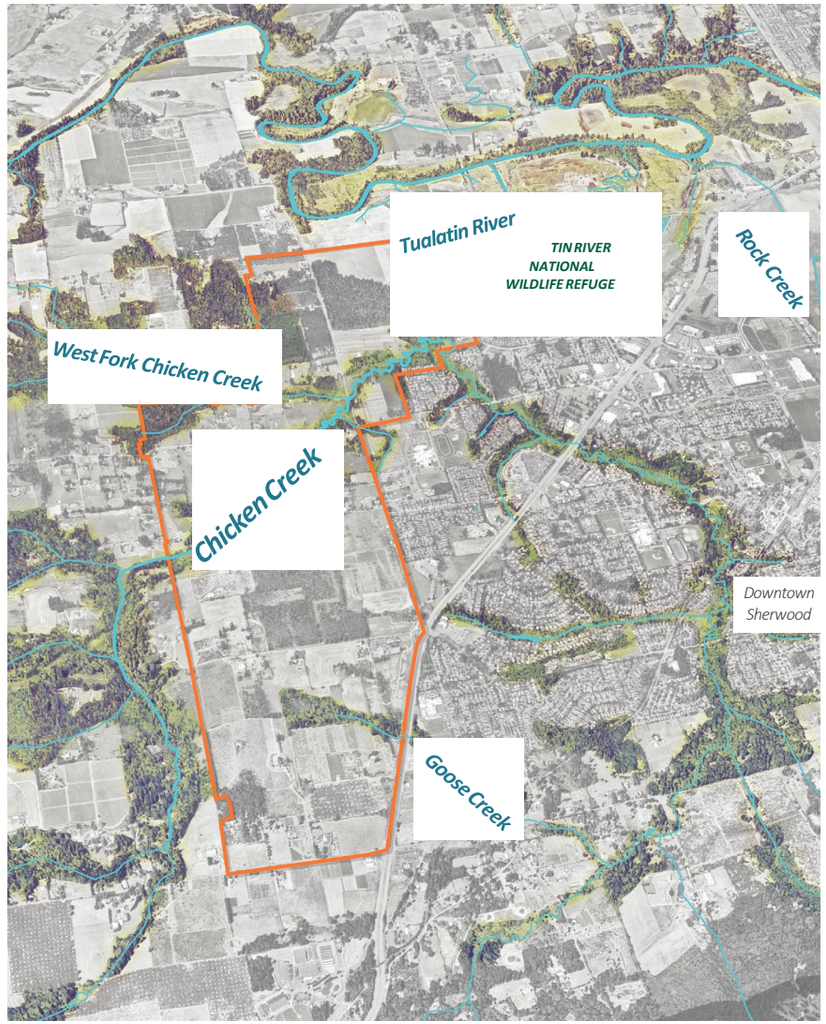
A new chicken creek Greenway could take advantage of the of the existing natural creek corridor to connect to the Cedar Creel Trail and other regional trail networks.

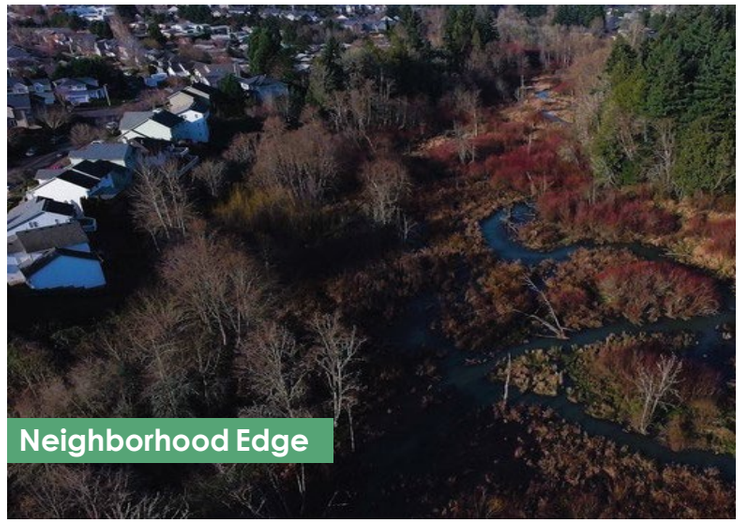
Key connections to existing or planned trails should be prioritized, such as future connections to the Reedville Trail, the Tualatin River National Wildlife Refuge trails, Ice Age Tonquin Trail/Cedar Creek Trail, and the future Highway 99 pedestrian overcrossing.

A new Highway 99 pedestrian overcrossing is planned in the vicinity of the new Sherwood High School. The new overcrossing will address the major barrier that the highway presents for pedestrians today. It would also help connect the high school, the YMCA, and the greater Sherwood West area with existing trails and destinations on the east side of the highway.

Chicken Creek Greenway & Greenspaces





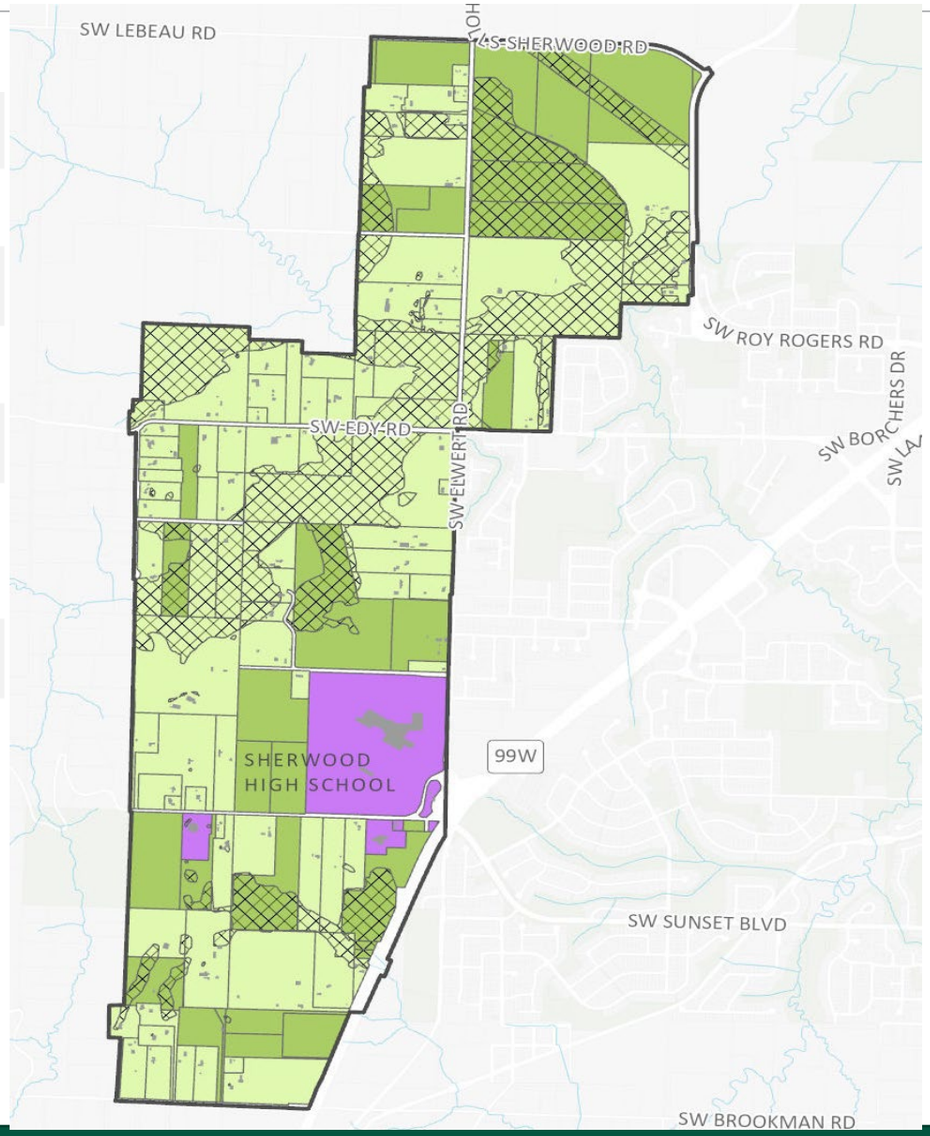


Assumptions & Scenario Planning

Buildable Land Inventory (BLI)

TOTAL GROSS ACRES	**1,291**
TOTAL NET BUILDABLE ACRES*	**641**
Less Mixed Employment Acres	*254*
Less Future Neighborhood Park Acres	*18*
Less Future Community Park Acres	*20*
Less Future New Elementary-Middle School Site Acres	*40*
Net Buildable Residential Land Supply (Acres)	**310**

*Net buildable land calculations includes removal of constrained land, deduction of 0.25-acre from lots greater than 0.5-acre with a dwelling unit, and a percent deduction for future street right-of-way



Open Space Estimates

Open Space Type	Acres	Percent of Total Area
Baseline Open Space*		
Title 13 resource lands (Riparian Class I and II, Upland Class A, 30% of Upland Class B in Emp. Areas) and Steep Slopes	305	23.6%
Community Park (minus Title 13 areas)	20	1.5%
Neighborhood Parks	18	1.4%
Natural gas line easement outside of other open space	15	1.2%
SUBTOTAL – BASELINE OPEN SPACE	358	27.7%
Open space established during development review (assumed at 15%)	47	3.6%
TOTAL ESTIMATED OPEN SPACE	***405***	***31.4%***

Housing Metric Assumptions

Apply Sherwood Development Code zoning:
Multi-Family Zone (High Density Residential), Neighborhood Medium/High, Neighborhood Medium, Neighborhood Low

Apply New Residential Zones:
Middle Housing Zone (duplex, townhomes, and cottage clusters)
Cottage Cluster Zone

Assume build-out to maximum densities for each zone, reflecting recent developments in Sherwood

Assume a percentage of middle housing in Neighborhood Zones

Housing Estimates

	Density Range (Net)	Total Acres (Net)	*% of Acres*	Total Housing Units (with Percentage of Middle Housing in Neighborhood Zones) 0%	10%	20%	50%
Multi-Family (HDR)	16.8 to 24	28	11%	672	672	672	672
Middle Housing Zone	5.5 to 11	14	5%	154	154	154	154
Cottage Zone	12.8 to 16	28	11%	448	448	448	448
Neighborhood-Med/High (MDRH)	5.5 to 11	14	5%	154	174	193	252
Neighborhood-Medium (MDRL)	5.6 to 8	90	34%	720	873	1,026	1,485
Neighborhood-Low (LDR)	3.5 to 5	90	34%	448	627	806	1,343
TOTAL		**264**	**100%**	**2,596**	**2,947**	**3,299**	**4,354**
Total Average Density				9.9	11.2	12.5	16.5
*Total Average Density with Open Space**				*8.4*	8.4	9.5	14.0

Developing Land Use Growth Maps

Next Steps to complete Concept Plan

- After ***draft*** land use scenarios are complete a community open-house is planned. In-person, online engagement, and input from the High School community is being planned for.

- After community feedback, a preferred land use scenario will be selected and additional analysis will be reviewed (**transportation, infrastructure funding**)

- Community engagement is at every step of the way. Staff has met with neighborhood groups and will be at summer events (Eastview Neighborhood, Mandel Farms, Movies in the Park)

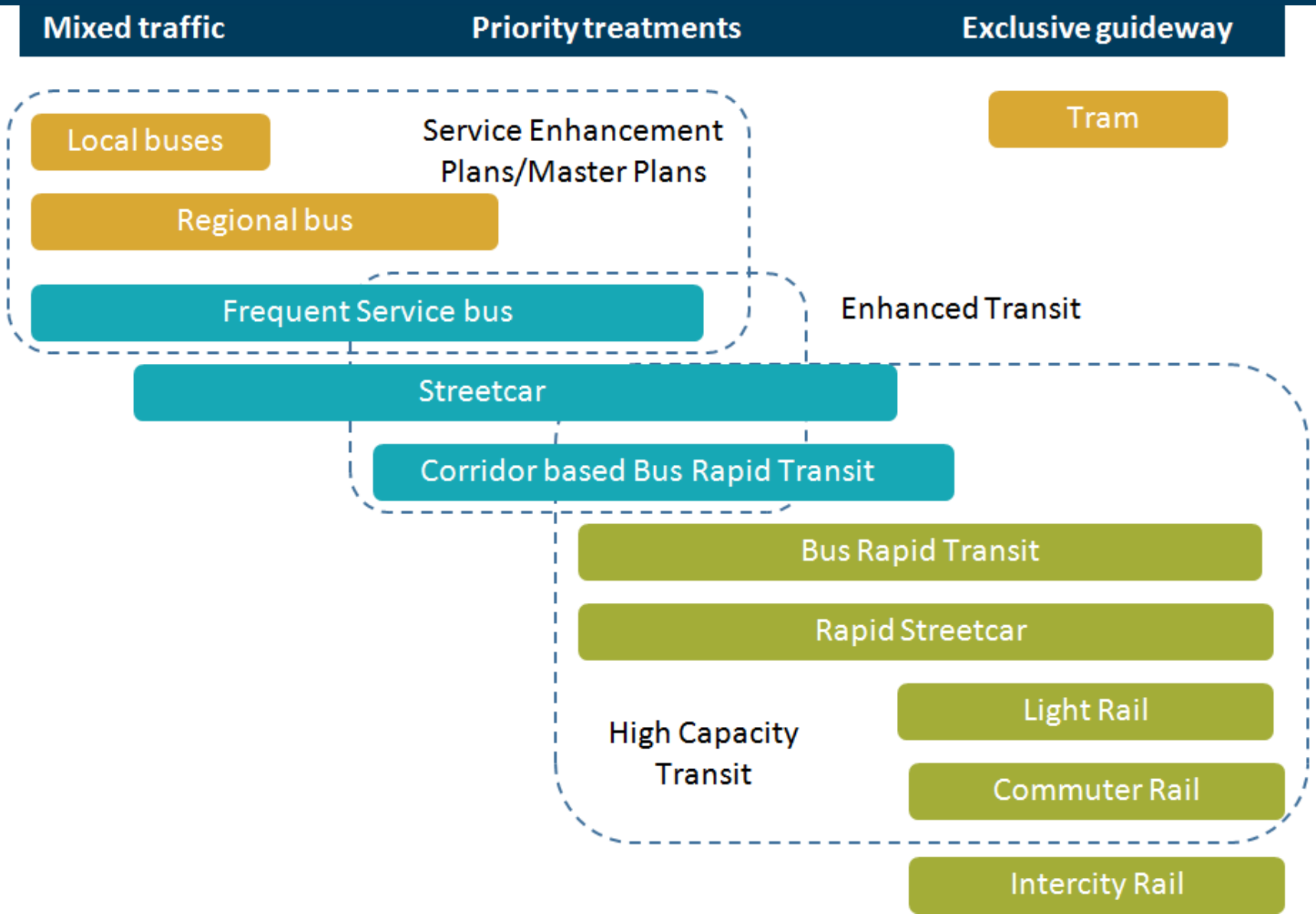
- A Sherwood West Concept Plan complete by fall and accepted by Council in Winter 2022/2023.

Questions?

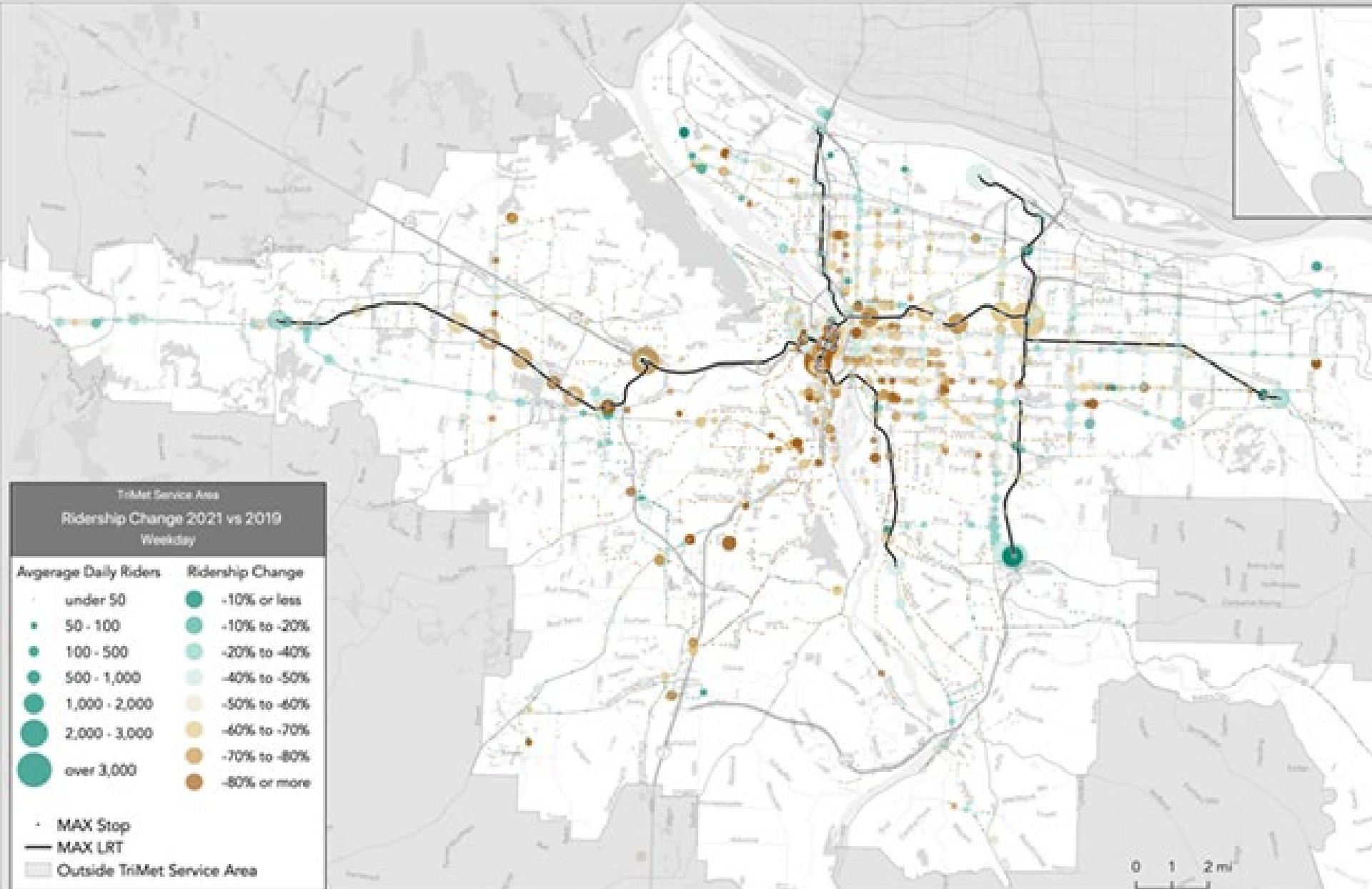
Metro

HCT Strategy Update: Introduction

What we are starting from…



Where we are today…



What we want to do…

- address new policy questions around the future – bus rapid transit
- re-envision regional high capacity transit
- create a “pipeline” of corridor investments

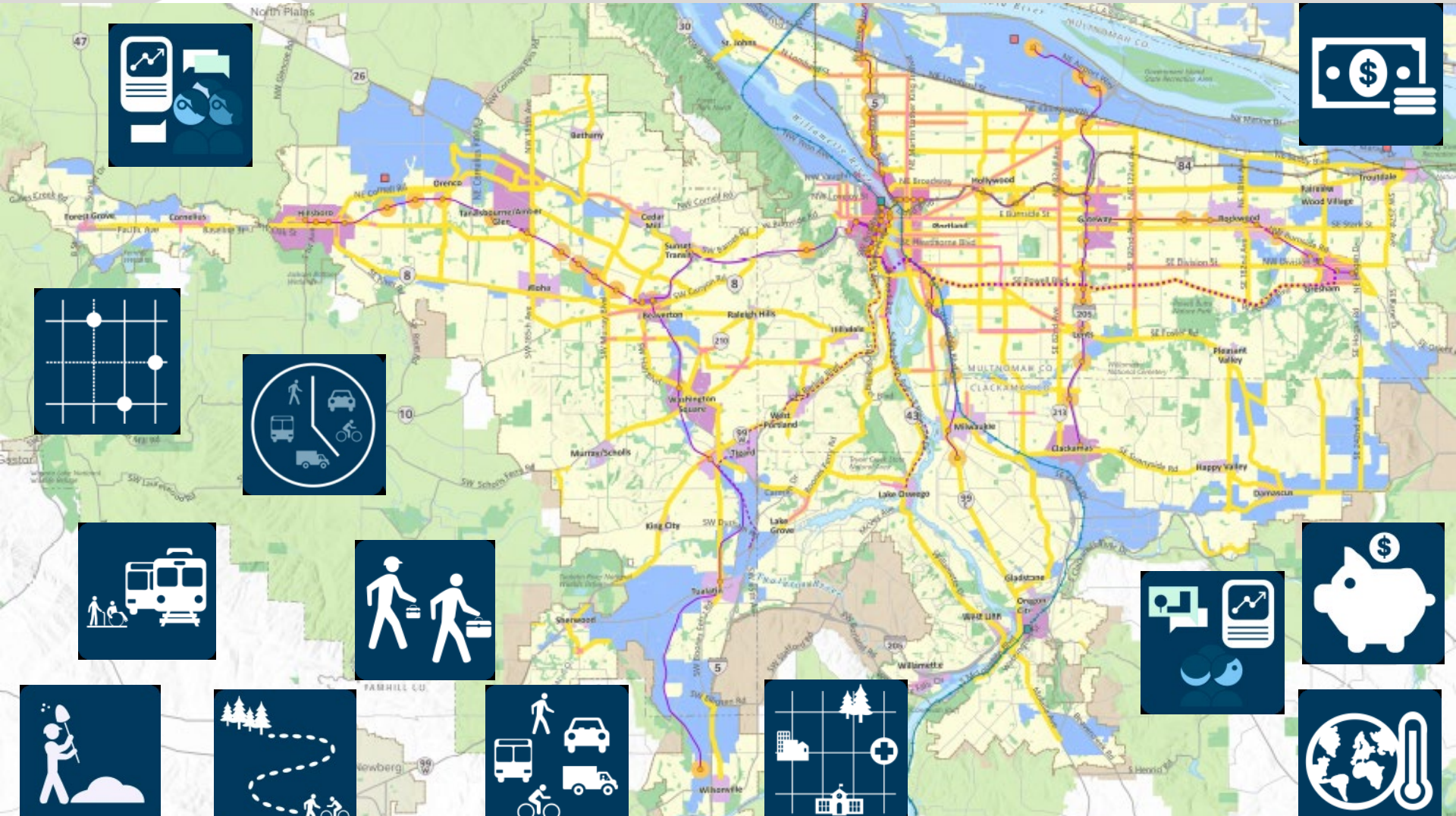
Who we're working with…

How it fits in with regional work…

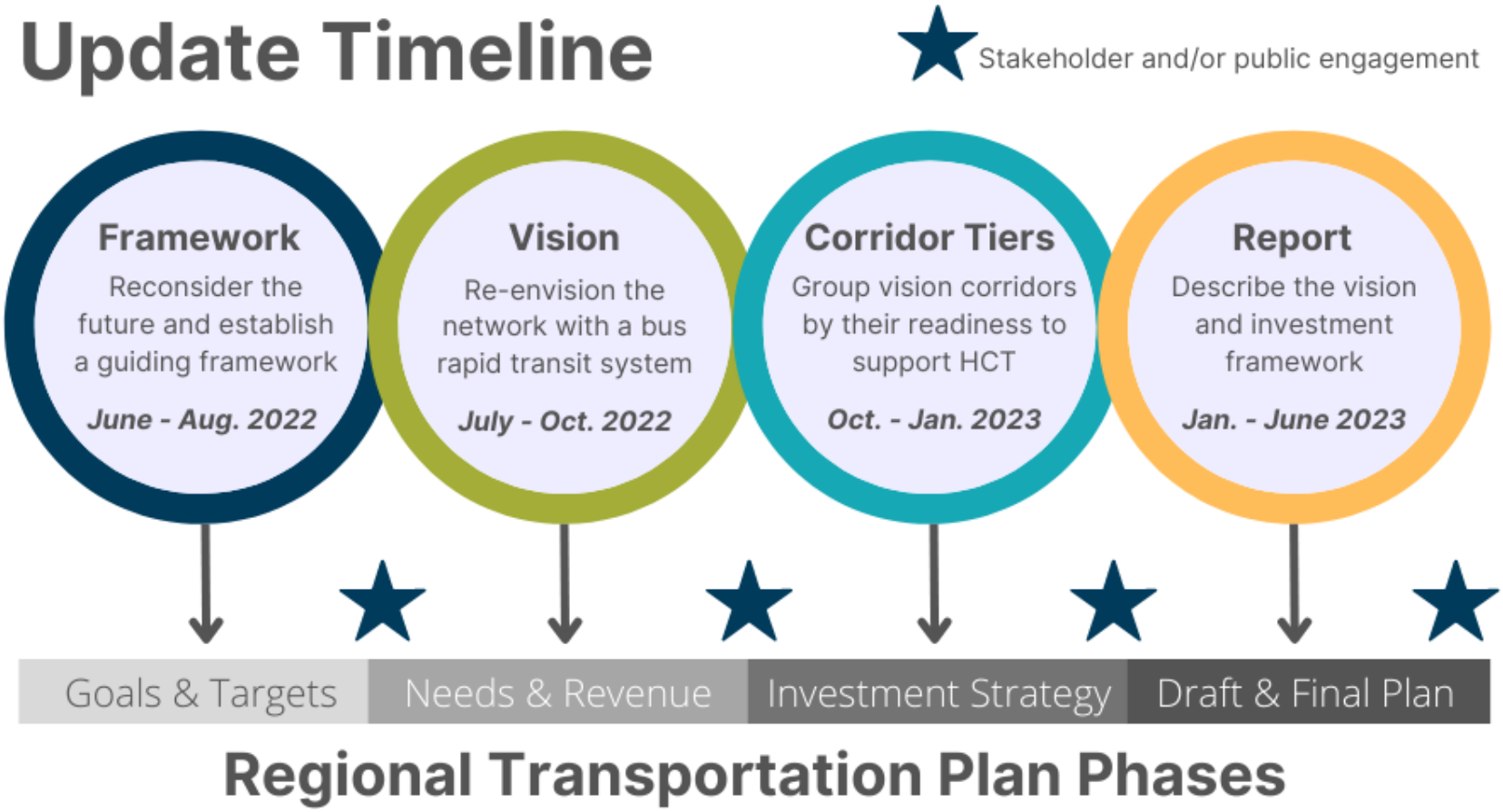
- 2040 Growth Concept
- Regional Transportation Plan
- Regional Transit Strategy
- Climate Smart Strategy

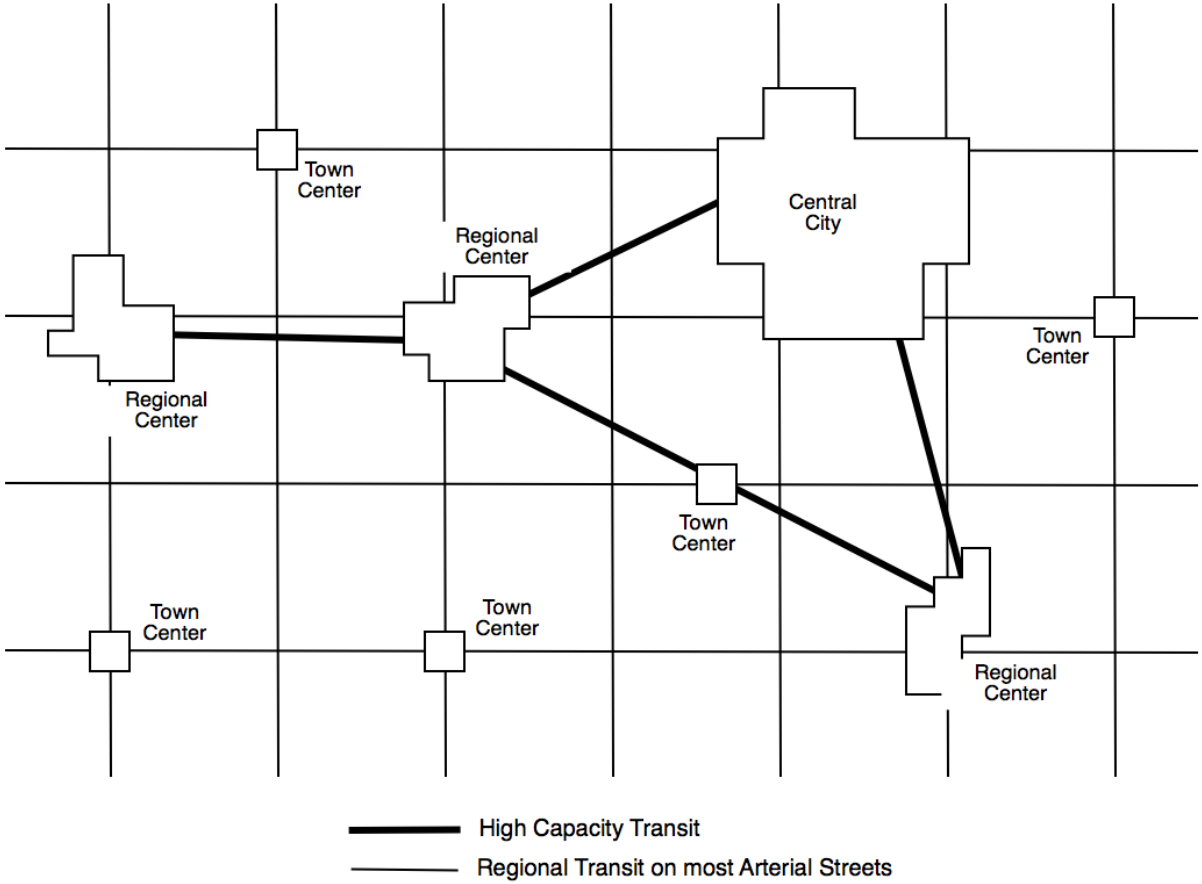
Transit should be safe, reliable, affordable, and convenient

What we are considering…



How the work is organized…



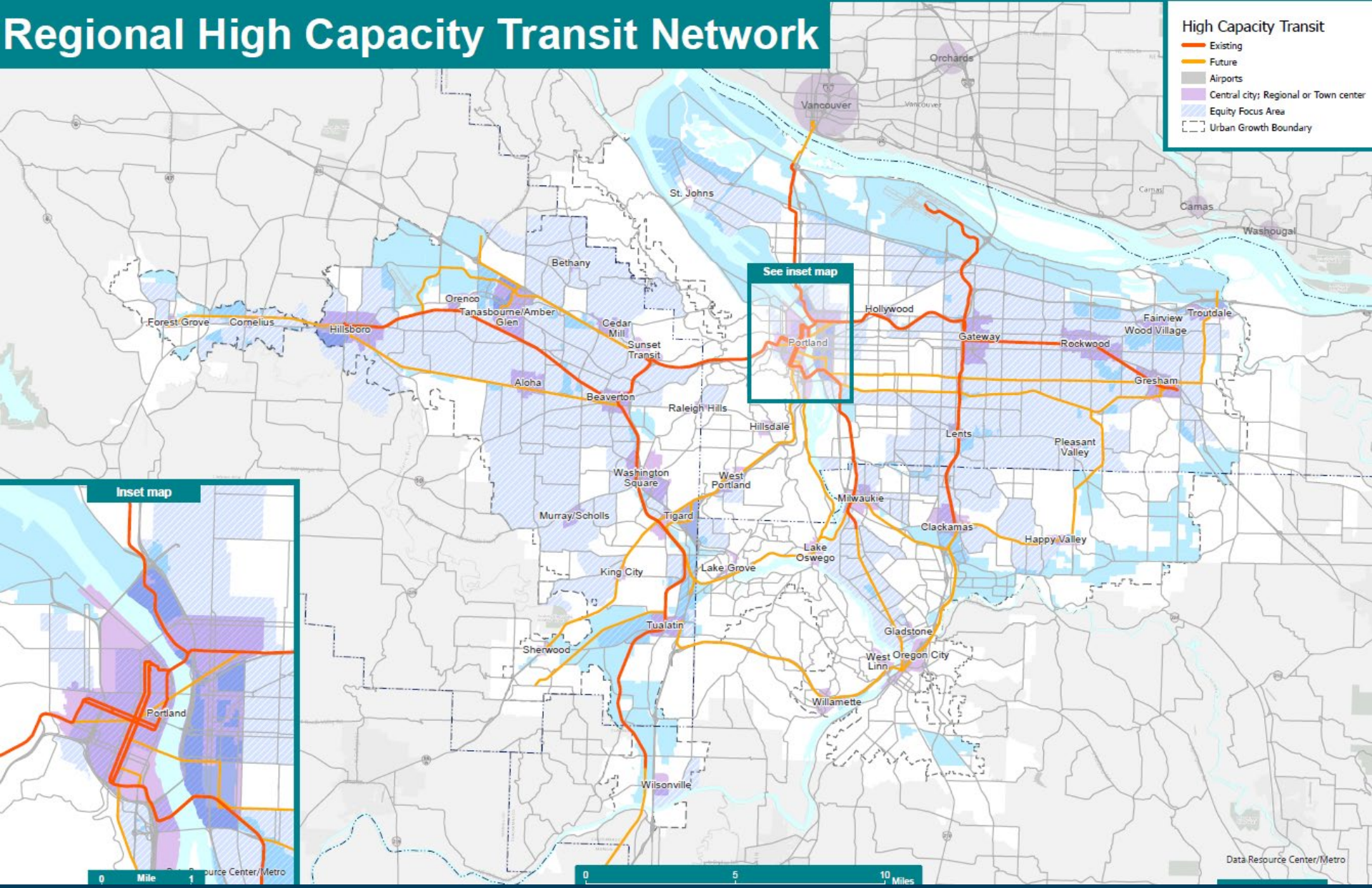


***Regional Transit Network Policy 4**: Make transit more convenient by expanding high capacity transit; improving transit speed and reliability through the regional enhanced transit concept.*

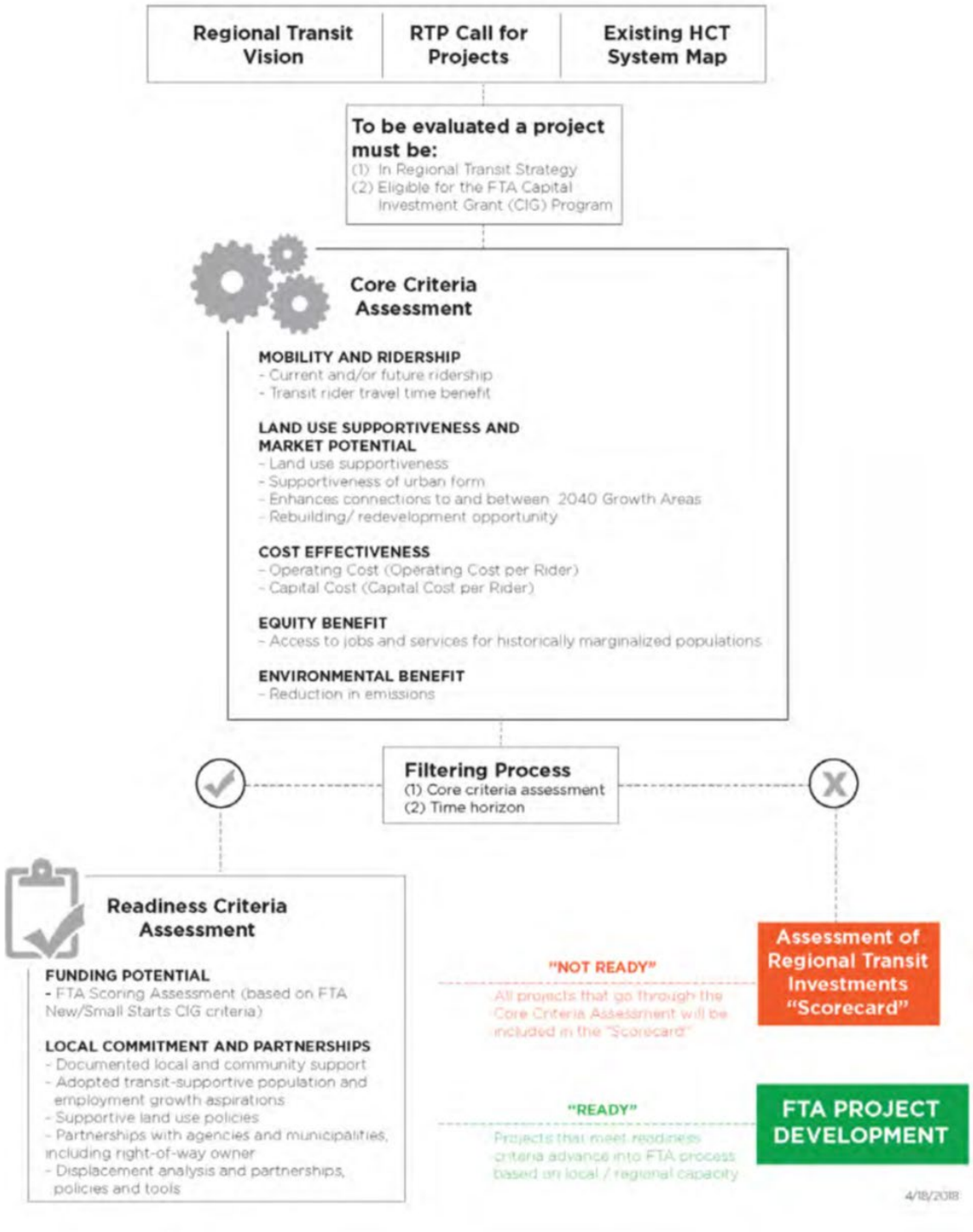
HCT Policy Framework

What we've heard…

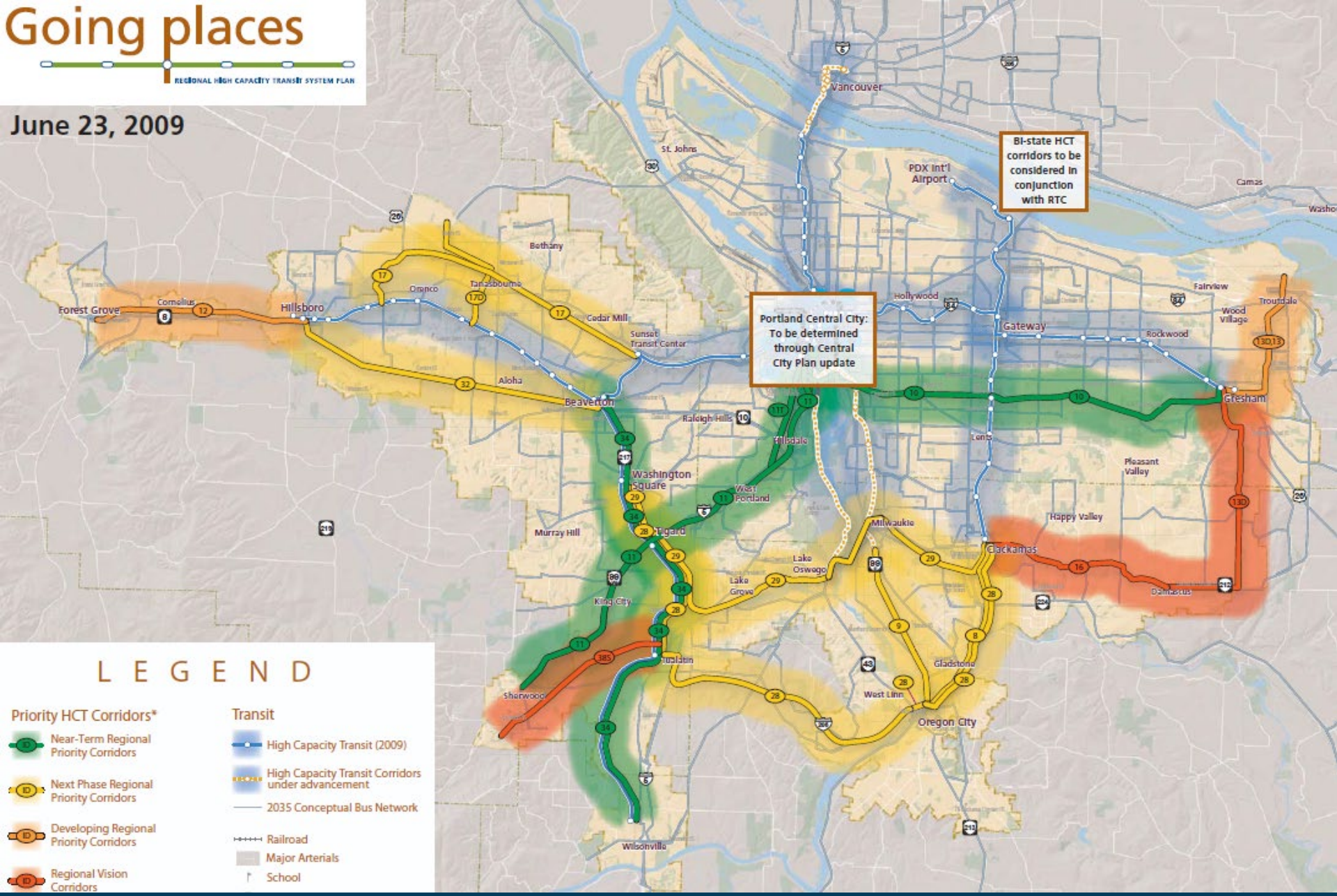
Regional High Capacity Transit Network



HCT Vision

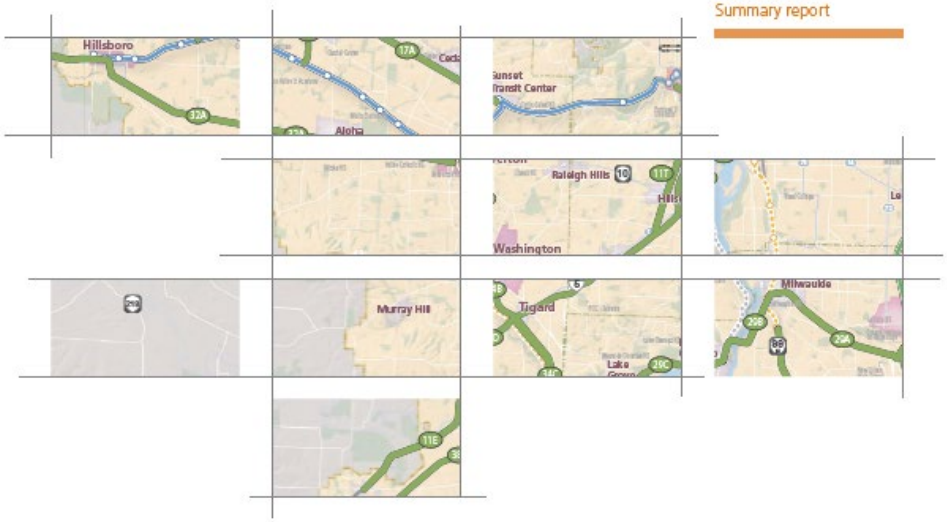


What guidance the RTP provides for criteria…



HCT Tiered Corridors

June 2010
Summary report



REGIONAL HIGH CAPACITY TRANSIT SYSTEM PLAN

2035

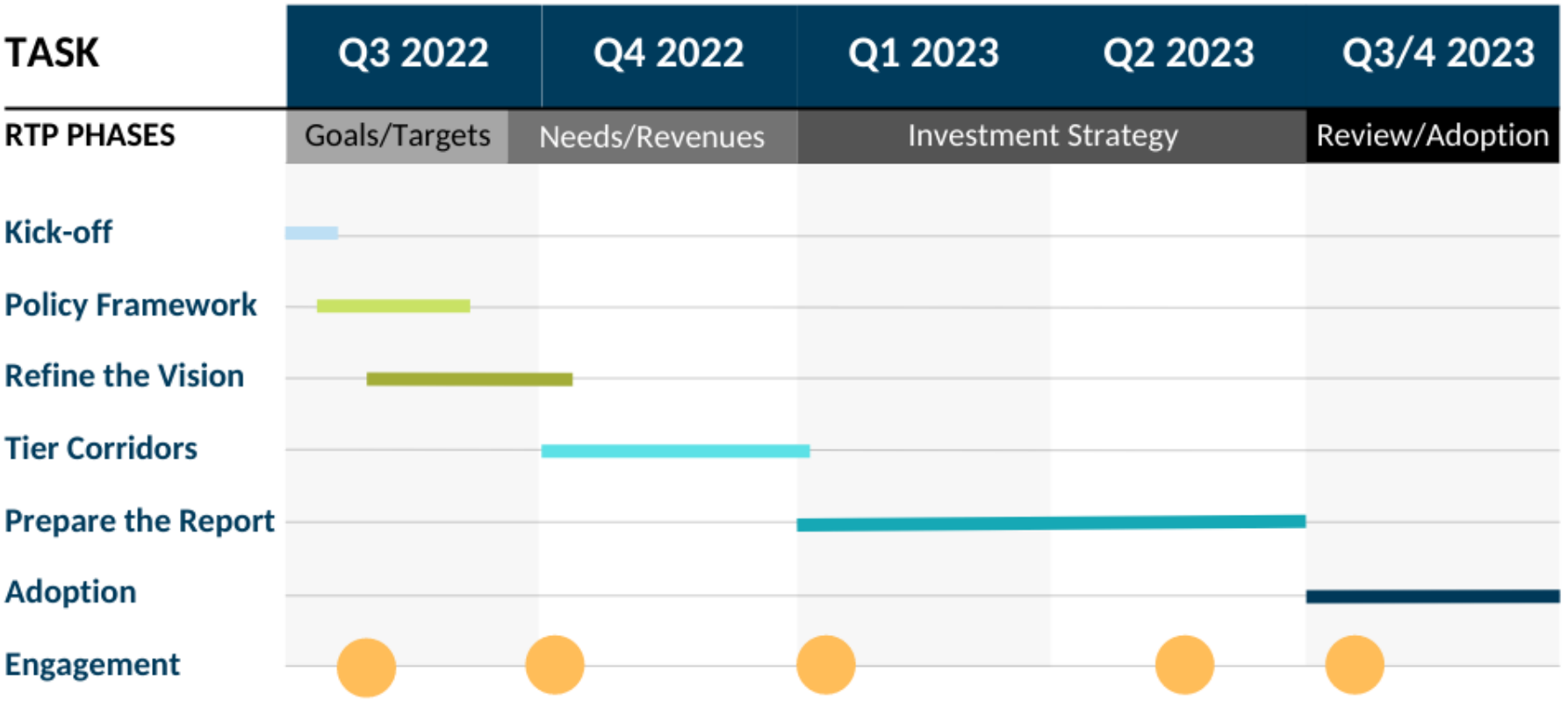
Summary report

June 2010

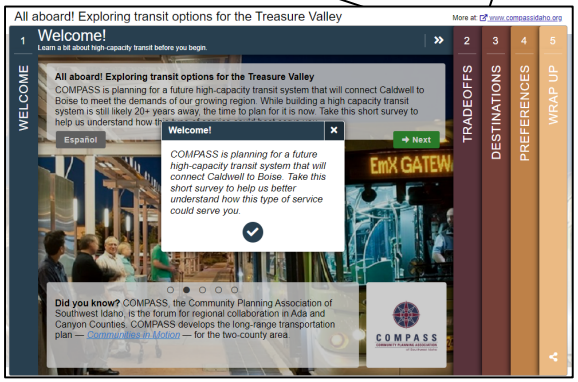
Metro | *Joint Policy Advisory Committee on Transportation*

HCT Strategy Report

What the schedule looks like…



What's coming up…



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