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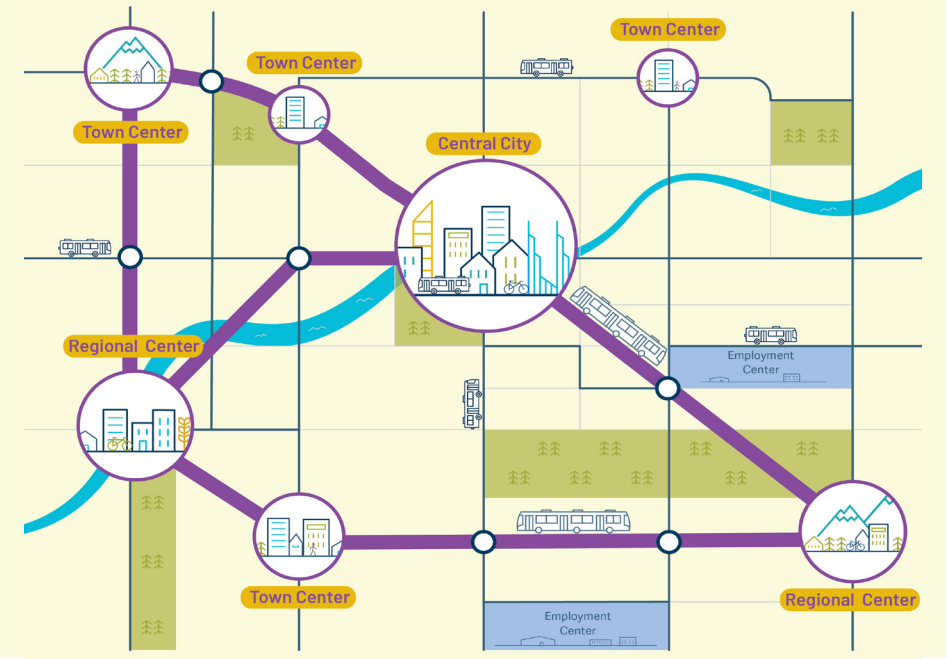

High Capacity Transit Vision & Policy Framework

The 2040 Growth Concept provides a blueprint for growing in a compact way that promotes efficient use of land and other resources, encourages safe and stable neighborhoods, sustains a healthy economy, and protects our health and environment. High capacity transit plays a key role in that vision by linking regional centers – supporting development in compact areas with a mix of housing and jobs and connecting people with hubs of commerce and essential destinations.

What is its role in regional transportation?

High capacity transit is the backbone of the regional transportation network – not just the transit system – because it can efficiently move the highest number of people along regional mobility corridors where the most people need to travel quickly, reliably, and comfortably.

A high capacity transit network must be well-connected and "people-focused" – providing high-quality service and convenient connections for essential trips to jobs, services, and commerce and equitably prioritizing those who depend on transit or lack travel options, particularly communities of color and other historically marginalized communities. HCT provides convenient connectivity both between regional centers (connections to each other) and with the Central City, prioritizing speed and reliability for transit along mobility corridors across the region. It expands and encourages connectivity between regional centers and major town centers, activity hubs and destinations (e.g., colleges, hospitals, affordable housing). High capacity transit investments take existing strong transit connections to the next level in accessibility and priority on the roadway and at the signal – while shining a light on the corridor in which it travels to improve safety, access and livability for current and future riders. Investments in high capacity transit are a cornerstone for success in achieving regional equity, safety, climate and mobility goals.

High capacity transit provides safe, fast, reliable, and convenient connections between the places where many people live and many people need to go. We've heard need for:

- *Supporting ridership recovery, equity, and climate with better alternatives to driving*
- *Adding and improving connections to jobs, essential services, and other major destinations*
- *Making connections more quick, convenient, comfortable, and reliable*
- *Reflecting regional community priorities*

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Making Transit Prioirty a Priority

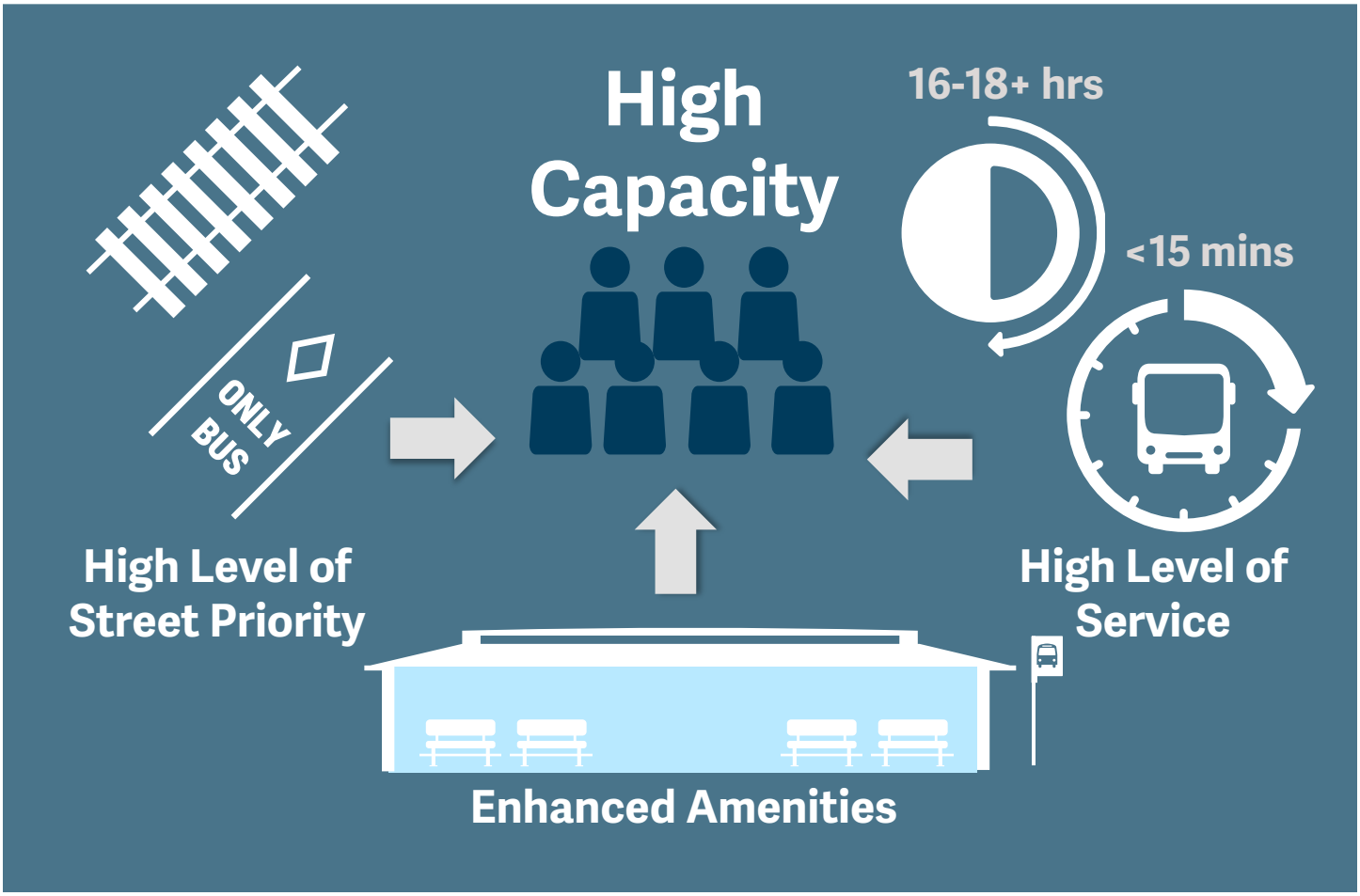
Applied at a smaller-scale, transit priority improvements applied as "spot treatments" to existing frequent bus or streetcar lines improve reliability and reduce time spent traveling by transit for people riding. These "better bus" features include transit priority on the roadway and /or at signals to avoid delay and/or bypass traffic – meaning trips on these routes stay on schedule and/or are faster. The frequent bus network is a regional workhorse responsible for many regional transit trips. Investments in transit priority improve transit speed and reliability and make transit a more competitive option for current and future riders.

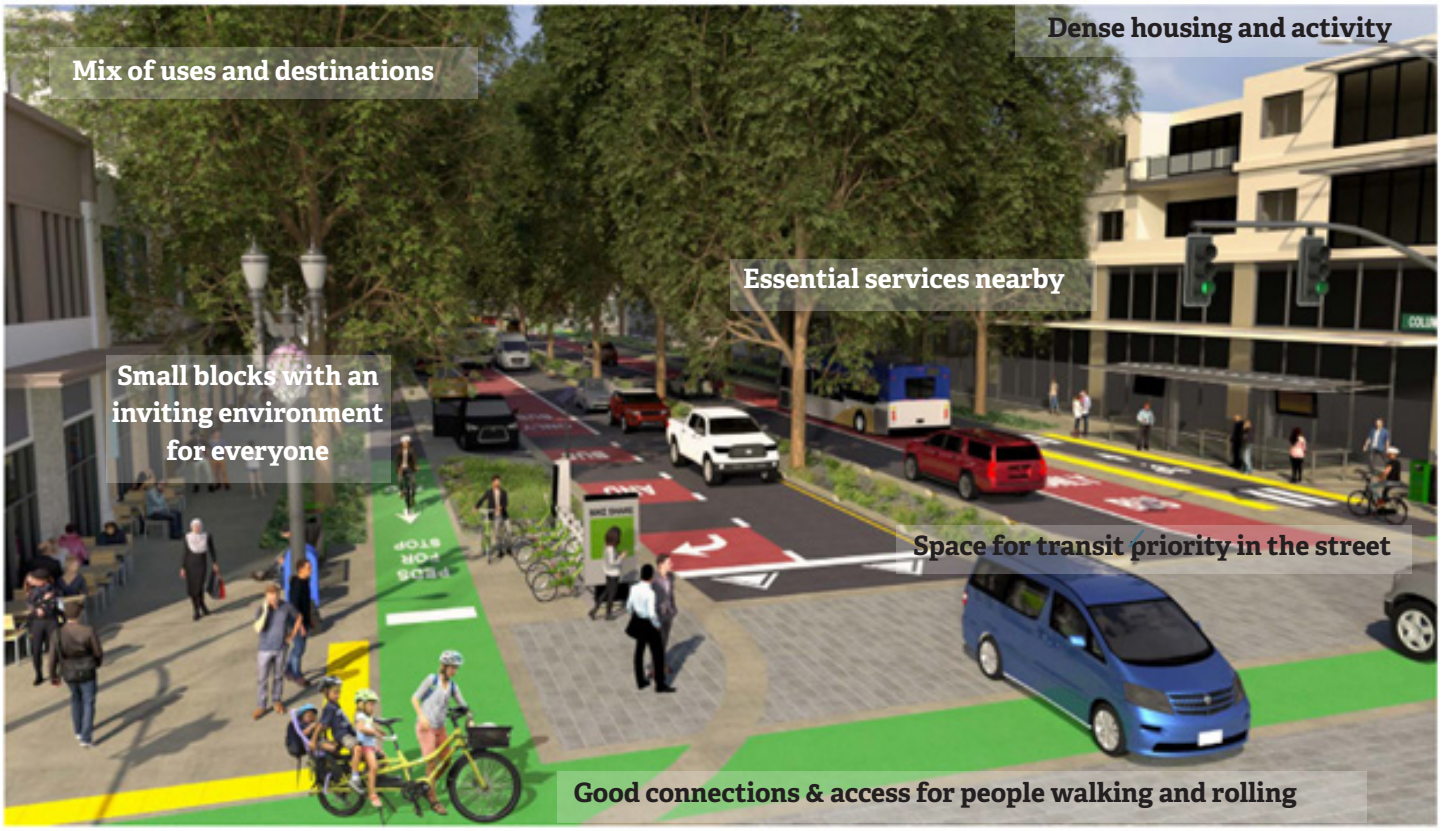
How does high capacity transit achieve this? What makes a transit investment "high capacity"?

High capacity transit has both a level of enhanced amenities and transit priority that work together to move more people, more comfortably than other types of regional or local transit, which are implemented as part of a corridor-level capital project. The type or "mode" varies, including light rail, commuter rail, rapid streetcar, bus rapid transit or corridor-based rapid bus.

Enhanced amenities refer to features that improve efficiency and enhance the user experience. These include vehicles that are larger and allow boarding from all doors, stations with near level boarding, and frequent service (15 minutes or better). It also refers to amenities like covered waiting areas, real-time bus or train arrival information, schedules, ticket machines, enhanced lighting, benches, bicycle parking, and even civic art and commercial services. Together, these features make high capacity transit more convenient and comfortable.

Enhanced priority investments refer to a package of physical features along much or most of a corridor that improve speed and/or reliability or getting people to destinations faster and on-time. These include dedicated transit space or lanes in the street or "exclusive guideway." In this region, MAX light rail vehicles operate on tracks with "exclusive guideway" while rapid buses operate in a mix of dedicated and shared street space. Rapid bus investments provide priority space for buses on the roadway and/or priority at traffic signals to achieve the transit speed and reliability characteristic of high capacity transit. These investments make transit more attractive for current and future riders.





Providing more convenient, faster and reliable transit connections between where people live and where they need to go means that people who rely on transit today will have better travel options and other people who drive today will be more likely to choose to use transit to travel instead.

What are key indicators that a corridor is "ready" for high capacity investment?

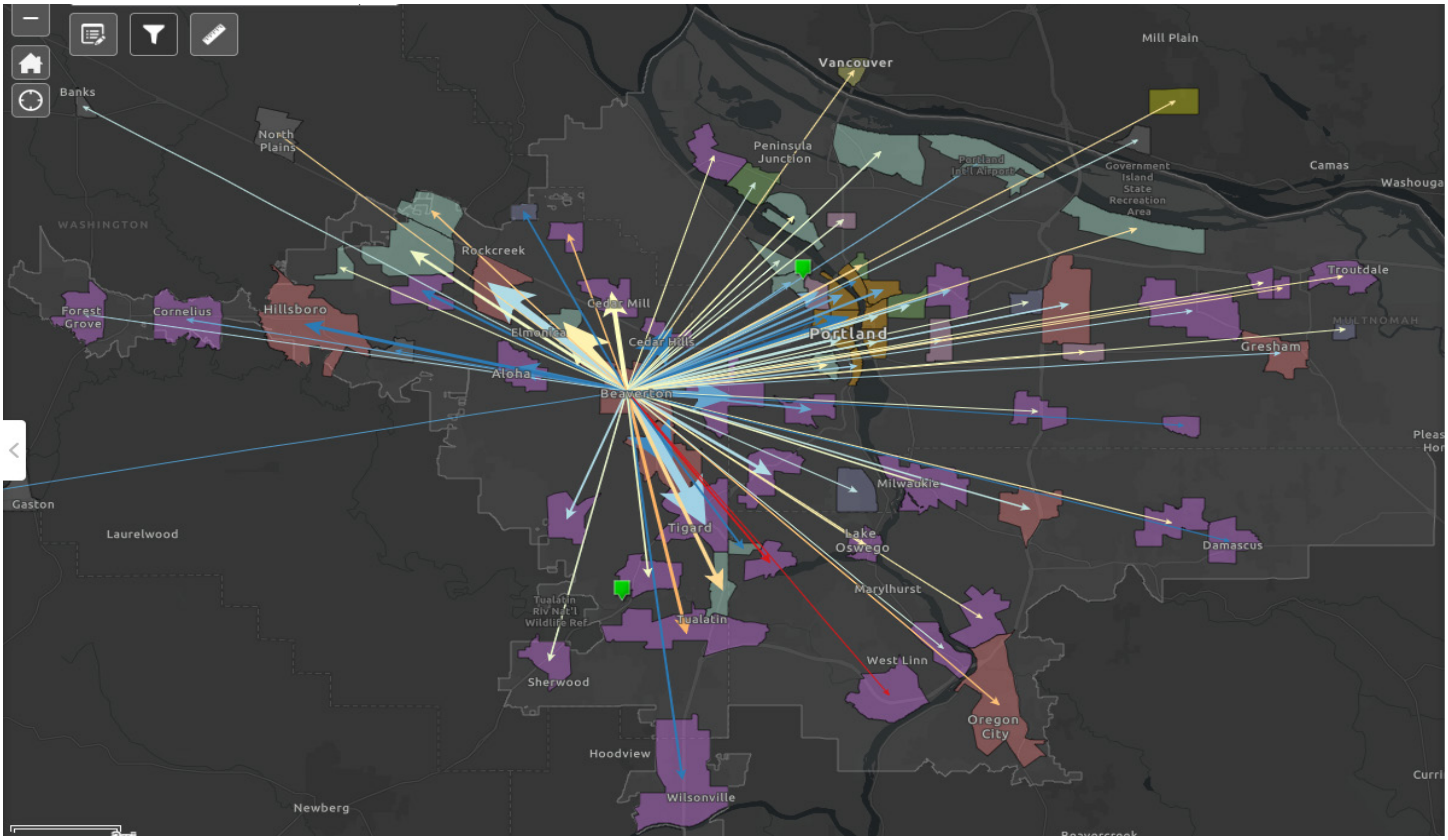
To be cost-effective and use resources consistent with regional mobility, equity and environmental priorities, high capacity transit is a tool for connecting centers of activity where a high number of people live, work, and visit. Indicators support readiness for investment include:

- A very compact urban form (e.g., grid, small blocks) that places destinations, transit oriented development and affordable housing options within short, walkable distance to transit (with limited parking).
- A very dense mix of uses, and a balance of jobs and housing (especially transit-oriented development), that creates a place where activity occurs at least 18 hours a day.
- A mix of many, diverse essential destinations and services near transit, including grocery stores, medical clinics, and educational institutions.
- Well-designed streets and buildings that encourage walking and rolling.
- Streets with space to accommodate larger buses or trains and designed to and/or could be adapted to include elements prioritizing transit.
- Good street design and connectivity with safe, direct and convenient access to walk and roll to, from, and beyond transit stops and stations.
- Plans, strategies, and partnerships supporting transit-supportive places and streets and community stability are in place.

Federal Funding

The Federal Transit Administration's discretionary Capital Investment Grant Program (including New Starts, Small Starts and Core Capacity) criteria has gone through multiple revisions since the region's first High Capacity Transit Plan was developed in 2009. The current program requires reporting on current ridership with an option to include future demand as well. This focus means that transit corridors that have robust existing ridership and can show travel time savings tend to rate better than those focused on the promise of future ridership based on land use changes.

The RTP identifies a set of criteria for measuring a corridor's readiness for high capacity transit to identify which corridors have the potential to best benefit regional transit needs and create a pipeline of projects competitive for the FTA Capital Investment Grant Program.



Core Evaluation Criteria

MOBILITY

Ridership & Travel Time

LAND USE & MARKET SUPPORT

Urban Form, Centers & Land Use

People & Job Density

COST EFFECTIVENESS

Operating & Project Cost/Rider

EQUITY BENEFIT

Access for/to Jobs & Services

ENVIRONMENTAL BENEFIT

Vehicle Miles Traveled

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How is this related to the network vision?

The role of high capacity transit in our region's transportation system and growth concept provide the foundation for the long-term network vision. We are reimagining a stronger, expanded system with faster and more reliable connections moving the most people between centers of activity in ways best serving growing and changing regional needs. It also considers optimal long-term network design (e.g., radial, grid, multi-hub) and character (e.g., coverage, spacing, intensity) while keeping in mind our region's history of success with the Federal Project Development process (advancing one corridor every three years) within and beyond 2045.

Developing this updated vision began by considering the corridors envisioned for frequent bus or high capacity transit service in the future in the 2018 Regional Transportation Plan (RTP) – a base level for enhancing quality and priority. A screening process then removed any corridors not connecting regional and town centers in line with the policy framework and applied initial mobility and equity measures to determine where the most people and members of historically marginalized communities live and travel to. The next step will be to compare these results to current and future major travel patterns to select higher performing corridors. Considerations to refine the vision and assess readiness include:

- connections linking the most people and historically marginalized communities to jobs, essential services, and other major destinations;
- how long a transit trip takes compared to other travel options;
- how many new riders could be created in support of our climate goals;
- what the cost would be per person riding; and
- level of demonstrated local commitment to and funding.

This fall, we're working with stakeholders, community organizations, and advisory committees on how to best refine the long-term network vision.

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HIGH CAPACITY TRANSIT STRATEGY UPDATE

Key Meeting Dates and Engagement Activities for Project Milestones

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
September 27	**HCT Working Group #3: Potential Investment Corridors, Network Vision, and Readiness Tiers Approach** • Policy Framework Review • Systems Analysis • Vision • Corridors/Readiness Approach and Preview
October 5	East Multnomah County Transportation Committee TAC
October 6	Washington County Coordinating Committee TAC
October 6	Clackamas County C-4 TAC (policy)
October 17	Washington County Coordinating Committee (policy)
October 17	East Multnomah County Transportation Committee (policy)
October 19	**Transportation Policy Alternatives Committee (TPAC)/Metro Technical Advisory Committee (MTAC)**
October 19	Clackamas County C-4 subcommittee (policy)
October 26	**Metro Policy Advisory Committee (MPAC)**
October 27	**Joint Policy Advisory Committee on Transportation (JPACT)/Metro Council Workshop**

September-October	• Project Website
	  ○ Booklet: Policy Framework & Vision
	  ○ RTP: TV Highway Snapshot (includes tie to HCT)
	• Stakeholder Meetings/Interviews (October): What corridors are most important to you? Does the vision meet your needs? What's missing? What should we be thinking about for readiness?
	  ○ RTP: Community Leader's Forum 10/13
	  ○ Tabling at TriMet Forward Together Open Houses (in partnership with APANO, Centro Cultural, and Slavic Family)
	  ▪ 10/18 at PCC Cascade
	  ▪ 10/19 at Rosewood Initiative
	  ▪ 10/20 at Shute Park Library
	  ▪ 10/26 at CCC Harmony
	  ○ *RTP: PBA Workshop Roundtable Presentation (TBD)*

November/December 2022

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

Date	Who
November 23	**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
	  ○ Policy Framework, Vision and Systems Memos
	  ○ Storymap: Vision and Community Investment Priorities
	• Fact Sheet #5: Where should we invest in HCT first?
	• Stakeholder Meetings/Interviews (November): What corridors are most important to you? Does the vision meet your needs? What's missing? What should we be thinking about for readiness?
	  ○ TriMet TEAC: November 8
	  ○ *TriMet CAT: November 23 (tentative)*
	  ○ *Division Transit and The Vine Lessons Learned Focus Groups (TBD)*

January 2023

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

Date	Who
December 13	**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 6	**Transportation Policy Alternatives Committee (TPAC)**
January 9 (tentative)	*East Multnomah County Transportation Committee (policy)*
January 9 (tentative)	*Washington County Coordinating Committee (policy)*
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
	  ○ Readiness Assessment Memo
	  ○ Survey: Readiness and Investment Priorities
	• Stakeholder Meetings/Interviews: Corridor Investment Tiers (December/January)
	  ○ How do you think these tiers look for investment priorities? What changes would you like to see? Why?

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 5	**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
	  ○ Send survey, follow-up documents and public review notice to engaged stakeholders
	  ○ Draft report documents
	• Fact Sheet #6: What is the region's strategy for HCT?
	• 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 and Regional Transportation Plan Transit Update

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HCT Policy Framework – Regional Transit Network Policy Review

September 2022 - **DRAFT**

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Table of Contents

Table of Figures

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METRO HCT POLICY FRAMEWORK - REGIONAL TRANSIT NETWORK POLICY REVIEW

INTRODUCTION

In 2009, Metro adopted the first 30-year Regional High Capacity Transit (HCT) System Plan that guided investments in light rail, commuter rail, bus rapid transit and rapid streetcar in the Portland metropolitan region. The 2009 HCT Plan identified and ranked 16 corridors into four priority tiers using a multi-phase evaluation process and created the System Expansion Policy (SEP) framework for prioritizing future system expansion. The SEP framework is a process agreed to by Metro and local jurisdictions to advance high capacity transit projects as a regional priority. The framework:

- Identifies which corridors should move into the federal project development process
- Establishes a process for other corridors to advance toward development
- Measures a corridor's readiness for investment using targets such as transit supportive land use policies, ridership development plans, community support and financial feasibility.

In 2018 as part of the Regional Transportation Plan (RTP) update, the Regional Transit Strategy (RTS) was also updated and provided the following definition of HCT:

> *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.*

The 2018 RTS also revised the SEP with a streamlined set of HCT Assessment and Readiness Criteria and updated the corridors included on the Regional Transit Network map. Finally, the 2018 RTS introduced the Enhanced Transit Concept (ETC), which improves transit speed and reliability on the

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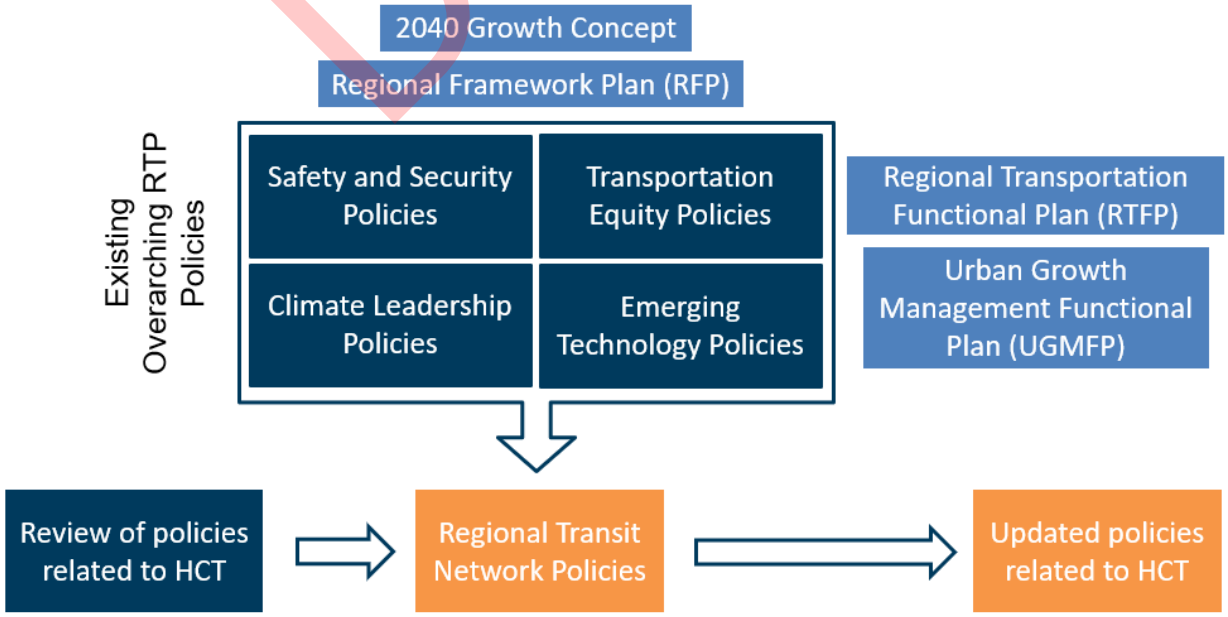
most congested existing and planned frequent service bus or streetcar lines. ETC is now known as "Better Bus".

As part of the 2023 Regional Transportation Plan update, **this HCT Policy Framework memo** provides an important first step in updating the Regional High Capacity Transit Strategy, a component of the Regional Transit Strategy. This memo focuses on a review of local, regional, state and federal policies as they relate to High Capacity Transit and suggests policy updates to reflect the region's current and future priorities and desired outcomes related to Equity, Safety, Climate and Mobility. To provide context and guidance as part of this policy review, this memo also identifies emerging trends impacting HCT and provides key takeaways from peer regions throughout the country. The suggested policy updates at the end of this memo will ultimately inform the evaluation criteria used to prioritize HCT corridors that will be included in the 2023 RTP update.

This memo focuses on reviewing and updating the existing transit-specific policies included in the Regional Transit Network, which will be an element of the 2023 Regional Transportation Plan. The 2023 RTP update continues to support the **2040 Growth Concept**, the region's long-range land use and transportation plan for managing growth, and the **Regional Framework Plan (RFP)** identifies regional policies to implement the 2040 Growth Concept. As part of Metro's code, two functional plans – the **Regional Transportation Functional Plan (RTFP)** and **Urban Growth Management Functional Plan (UGMFP)** – provide additional guidance to local jurisdictions to implement the policies in the RTP.

In addition to the transit-specific policies included as part of the Regional Transit Network, the RTP includes four overarching system policies related to **safety and security**, **transportation equity**, **climate leadership**, and **emerging technologies**. These policies will guide all other policies included in the RTP, including for High Capacity Transit. The relationship of each of the foundational plans that helped frame this policy review is summarized in **Figure 1** below.

Figure 1 Regional Transit Network Policies in Relation to the RTP and Other Metro Plans



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The HCT Policy Framework memo is organized into the following sections:

- Existing Regional Transit Network Policies
- Regional, State, and Federal plans and policy review
- Local plans and policies related to HCT
- Current issues and trends, identified through regional, state, or federal plans or initiatives
- Long-range plans and policies in peer regions
- Other key issues and trends impacting transit infrastructure and investments

This memo concludes with suggested updates to the definition of HCT and considerations for updating and expanding the eight existing Regional Transit Network policies as they relate to HCT.

PLAN AND POLICY REVIEW

Existing Regional Transit Network Policies

This section provides a brief assessment of the existing RTP Regional Transit Network policies. **Figure 2** identifies:

- **A proposed "Headline" for each policy** that succinctly communicates the theme addressed.
- **Each policy's relationship to 2023 RTP priority outcomes**, which include Equity, Safety, Climate, and Mobility.[1]
- **Each policy's relationship to HCT**. The relationships are identified in one of three ways:
  - **Foundational to Role** of HCT in the region and the definition of HCT (Policy 4).
  - **Directs Investments** by directly influencing key evaluation/readiness measure(s) used for HCT decision making.
  - **Influences Outcomes** of HCT system investments.

Examples for how the policies were determined to relate to HCT include:

- Policy 1 can direct HCT investments to address disparities such as travel time for equity priority communities, through the criteria used to prioritize potential HCT projects. Policy 1 can also influence the outcomes of HCT projects through assessing displacement risk and putting into place partnerships and policies to prevent displacement.
- Policy 6 is not identified as directing HCT investments – using existing quality of the pedestrian and bicycling environment to prioritize investments may exclude projects that could help advance improvements. However, Policy 6 can influence HCT outcomes through improvements to walking and biking access around HCT stations in advance of or as part of a project.

[1] Metro, 2023 Regional Transportation Plan Update Work Plan, May 2022

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Based on this assessment of existing Regional Transit Network policies, those that are most directly relevant to identifying and prioritizing HCT investments – and thus the focus of this memo – include:

- **Policy 1: System Quality and Equity**
- Policy 2: **Maintenance and Resiliency**
- Policy 3: **Coverage and Frequency**
- Policy 4: **High Capacity Transit**

The following two Regional Transit Network policies influence outcomes but are not foundational to the role of HCT nor direct investments:

- Policy 5: **Intercity and Inter-Regional Transit**
- Policy 6: **Access to Transit**

Finally, the last two policies are important to the overall transit network but are neither foundational to the role of HCT, direct investments, nor influence overall outcomes:

- Policy 7: **Mobility Technology**
- Policy 8: **Affordability**

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Figure 2 Existing Regional Transit Policies and Relationship to 2023 RTP Outcomes and to HCT

Existing Regional Transit Network Policy (2018 RTP)	*Proposed* Policy Headline(s)	2023 RTP Outcomes	Relationship to HCT
Policy 1: 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.	Service Quality and Equity	☒ Equity ☐ Safety ☒ Climate ☒ Mobility	☐ Foundational to Role ☒ Directs Investments ☒ Influences Outcomes
Policy 2: 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.	Maintenance and Resiliency	☐ Equity ☒ Safety ☒ Climate ☐ Mobility	☐ Foundational to Role ☒ Directs Investments ☐ Influences Outcomes
Policy 3: Make transit more reliable and frequent by expanding regional and local frequent service transit and improving local service transit options.	Coverage and Frequency*	☐ Equity ☐ Safety ☒ Climate ☒ Mobility	☐ Foundational to Role ☒ Directs Investments ☒ Influences Outcomes
Policy 4: Make transit more convenient by expanding high capacity transit; improving transit speed and reliability through the regional enhanced transit concept.	High Capacity Transit	☐ Equity ☐ Safety ☒ Climate ☒ Mobility	☒ Foundational to Role ☐ Directs Investments ☐ Influences Outcomes
Policy 5: Evaluate and support expanded commuter rail and intercity transit service to neighboring communities and other destinations outside the region.	Intercity / Inter-Regional Transit	☐ Equity ☐ Safety ☒ Climate ☒ Mobility	☐ Foundational to Role ☐ Directs Investments ☒ Influences Outcomes
Policy 6: 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.	Access to Transit	☐ Equity ☒ Safety ☒ Climate ☒ Mobility	☐ Foundational to Role ☐ Directs Investments ☒ Influences Outcomes
Policy 7: Use technology to provide better, more efficient transit service – focusing on meeting the needs of people for whom conventional transit is not an option.	Mobility Technology	☒ Equity ☐ Safety ☐ Climate ☒ Mobility	☐ Foundational to Role ☐ Directs Investments ☐ Influences Outcomes
Policy 8: Ensure that transit is affordable, especially for people who depend on transit.	Affordability	☒ Equity ☐ Safety ☐ Climate ☐ Mobility	☐ Foundational to Role ☐ Directs Investments ☐ Influences Outcomes

Note: * A proposed change in policies would create a new policy around reliability

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Regional, State, and Federal Plans and Policies Related to HCT

This section identifies regional and statewide plans relevant to the HCT Policy Framework for the region. Similar to the previous section, each applicable policy in these plans is categorized by the Metro RTP outcomes (Equity, Safety, Climate, and Mobility) and its relationship to high capacity transit (HCT).

Other state or federal plans or initiatives that are relevant to the region's HCT Policy Framework were reviewed but were not included in the plan and policy review table:

- **Regional High Capacity Transit System Plan (2009).** This is the previous HCT plan for the Portland region, which is being updated through this effort, and is assumed to be reflected in more recent documents such as the Regional Transit Strategy (RTS).
- **Climate-Friendly and Equitable Communities (CFEC) Rulemaking (Ongoing)**. Rulemaking by the Department of Land Conservation and Development (DLCD) to strengthen transportation and land use planning for regions including the Portland Metro area; key outcomes including equity, climate, and housing will be addressed in the issues/trends section.
- **USDOT Equity and Justice40 in Transportation Planning**. Federal initiative to address racial equity and climate priorities, including delivering 40% of federal investments to disadvantaged communities; will be addressed in the issues/trends section.

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Figure 3 Regional, State, Federal Plan Hierarchy and Policy Summary

Plan	2023 RTP Outcomes	Relationship to HCT	Considerations for Updating Regional Transit Network Policies (Foundational Considerations Bolded)
Portland Metro Transportation System Management and Operations Strategy	☒ Equity ☒ Safety ☒ Climate ☒ Mobility	☒ Foundational to Role ☒ Directs Investments ☒ Influences Outcomes	▪ Harm reduction ▪ Alleviating transportation system disparities ▪ **Connecting people to goods, services, and places** ▪ **Equitable transit reliability improvements** ▪ Transit system resiliency
Portland Metro and ODOT Regional Mobility Policy Update	☒ Equity ☒ Safety ☒ Climate ☒ Mobility	☒ Foundational to Role ☒ Directs Investments ☒ Influences Outcomes	▪ Land use and transit decision-making efficiency in movement of people and goods ▪ **Seamless, well-connected, low-carbon, convenient, and affordable mode share** ▪ **Transit system travel predictability and travel time reasonableness** ▪ Safe and comfortable mode share; equitable mobility experiences among Black, Indigenous, and People of Color (BIPOC) communities and people with low incomes, youth, older adults, and people living with disabilities
Portland Metro Regional Freight Strategy	☐ Equity ☒ Safety ☐ Climate ☒ Mobility	☐ Foundational to Role ☒ Directs Investments ☒ Influences Outcomes	▪ Coordinating for seamless movement and better access, with less conflict with transit ▪ Delay reduction, with increases in reliability and improvements in safety, for reliable transit planning ▪ Integrating issues with planning and communicating movement issues ▪ Eliminating traffic fatalities and serious injuries caused with other modes
Portland Metro Regional Transportation Safety Strategy	☒ Equity ☒ Safety ☐ Climate ☐ Mobility	☐ Foundational to Role ☒ Directs Investments ☐ Influences Outcomes	▪ Achieve Vision Zero goals using transit as a safety mechanism ▪ Safety investments to reduce speeds and speeding at high-risk areas, increase security, and reduce crime, with prioritization of vulnerable communities ▪ Equitable safety investments to benefit people with higher crash risk, such as vulnerable communities ▪ Safety increases across modes through planning, designing, constructing, operating, and maintaining the transit system with focus on speed reduction ▪ Avoidance of repeating and/or exacerbating safety issues ▪ Consideration of safety as an adequacy metric.
Portland Metro Emerging Technology Strategy	☒ Equity ☐ Safety ☐ Climate ☒ Mobility	☐ Foundational to Role ☒ Directs Investments ☒ Influences Outcomes	▪ Accessibility, availability, and affordability of new technologies to progress equity ▪ Usage of new technologies to improve transit, providing shared modes regionwide, and supporting transit, biking, and walking ▪ Empowering travelers with data for planning, decision-making, and managing transit ▪ Advancing public interest by preparing for, learning from, and adapting to new technological developments

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Plan	2023 RTP Outcomes	Relationship to HCT	Considerations for Updating Regional Transit Network Policies (Foundational Considerations Bolded)
Portland Metro Strategic Plan to Advance Racial Equity, Diversity and Inclusion (Racial Equity Framework)	☒ Equity ☒ Safety ☐ Climate ☐ Mobility	☐ Foundational to Role ☐ Directs Investments ☒ Influences Outcomes	▪ Engaging communities of color ▪ Hiring, training, and promoting a racially diverse workforce ▪ Creating safe, welcoming services, programs, and destinations ▪ Allocating resources to advance racial equity
Portland Metro Climate Smart Strategy	☐ Equity ☒ Safety ☒ Climate ☒ Mobility	☒ Foundational to Role ☒ Directs Investments ☐ Influences Outcomes	▪ **Making transit convenient, accessible, and affordable** ▪ Making walking and biking safe and convenient ▪ Making streets safe, reliable, and connected ▪ Using technology to manage transit ▪ Providing information and incentives to increase mode share ▪ Securing funding for transit
Portland Metro Regional Active Transportation Plan	☒ Equity ☒ Safety ☒ Climate ☒ Mobility	☐ Foundational to Role ☒ Directs Investments ☒ Influences Outcomes	▪ Making walking and biking the most convenient, safe, and preferrable choices for trips less than three miles ▪ Developing well-connected regional pedestrian and bicycle routes integrated with transit to prioritize safe, convenient, accessible, comfortable pedestrian and bicycle access for all ages and abilities ▪ Ensuring that regional transit and active transportation intersections equitably serve all people ▪ Complete the regional active pedestrian and bicycle networks where transit transfers are common ▪ Use data and analyses to guide transit and active transportation investments

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Plan	2023 RTP Outcomes	Relationship to HCT	Considerations for Updating Regional Transit Network Policies (Foundational Considerations Bolded)
ODOT Strategic Action Plan 2021-2023	☒ Equity ☒ Safety ☒ Climate ☒ Mobility	☐ Foundational to Role ☒ Directs Investments ☒ Influences Outcomes	▪ Supporting equitable operations and policies and establishing an informed and inclusive culture ▪ Promoting opportunities through transit investments, such as by working with BIPOC communities, women, and other historically and/or are currently marginalized communities ▪ Utilizing the perspectives of people who reside in communities served by Metro and who are likely to be affected by Metro decision-making ▪ Investing in the protection of vulnerable communities from environmental hazards ▪ Preserving, maintaining, and operating a multimodal transportation system and achieving a cleaner environment ▪ Ensuring the safety of transit riders and operators ▪ Providing greater transit access and broader range of mobility options while addressing climate change ▪ Investing in transit as a mechanism to manage and reduce congestion ▪ Enhancing multimodal options ▪ Implementing road usage charging to ensure revenue to maintain and improve the transit system and manage congestion
ODOT Climate Action Plan 2021-2026	☐ Equity ☒ Safety ☒ Climate ☒ Mobility	☐ Foundational to Role ☒ Directs Investments ☒ Influences Outcomes	▪ Integrating climate change and emissions reductions considerations in policy and investment frameworks ▪ Providing transit options to manage demand and reduce congestion ▪ Transitioning to an efficient transit fleet, supporting adoption of alternative fuels ▪ Maintaining and operating transit and recovering from climate impacts by using sustainable funding ▪ Increasing efficiency through investments in safety, and operations practices ▪ Utilizing sustainable products and fuels ▪ Reducing energy consumption, and reducing Metro's carbon footprint

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Local Plans and Policies Related to HCT

In addition to reviewing regional, state, and federal plans and policies, relevant plans from or related to Metro area cities and/or counties were reviewed at a high level to document any policies that should be considered as part of the HCT Policy Framework. As shown in **Figure 4**, these plans included local transportation system plans (TSPs), comprehensive plans, or transit development/master plans (TDPs/TMPs), or HCT-specific plans, including the Clark County/CTRAN High Capacity Transit System Plan.

Specific plans that have recently been completed (or are currently underway) that relate to HCT and/or ETC include:

- Clackamas County completed its TDP in 2021.
- Washington County is conducting a Transit Study (completion anticipated in 2023), which will integrate the County's recent TDPs and shuttle planning study.
- The City of Portland developed the Rose Lane Vision in 2020 and the Enhanced Transit Corridors Plan in 2018, which are advancing projects to provide bus and streetcar lines with additional transit priority and help achieve the City's climate and transportation justice goals.
- TriMet is conducting the Forward Together Comprehensive Service Analysis, which will recommend a revised bus network concept to reflect shifts in ridership and travel demand that have occurred since the COVID-19 pandemic. TriMet also completed an Express and Limited Stop Bus Study (2021) to identify where these services could improve ridership and access to jobs, including for equity priority populations. These studies will shape the agency's FY2023 Service Plan.
- TriMet is also completing its first FX (Frequent Express) line in the Division Street corridor; Metro, TriMet, and the City of Portland are working on planning for the 82nd Avenue corridor; and TriMet is leading the Tualatin Valley (TV) Highway BRT Study, connecting Beaverton, Hillsboro, and Forest Grove, where TriMet's Line 57 operates today.
- The Southwest Corridor project, connecting downtown Portland with SW Portland, Tigard and Tualatin, has a Locally Preferred Alternative and Record of Decision from the FTA.
- Metro and TriMet are continuing the ETC program, now known as Better Bus, to improve transit speed and reliability across the region. Where the previous implementation of this program focused on the most congested locations on the system with the highest ridership, the next phase will look at other locations across the region to improve bus operations.

Outside of the TriMet service district:

- The Interstate Bridge Replacement's Locally Preferred Alternative recommends a MAX Yellow Line extension from Expo Center across the Interstate Bridge to Evergreen in Vancouver, connecting to C-TRAN's Vine Bus Rapid Transit system.
- The City of Wilsonville (SMART) is updating its TMP (completion anticipated in 2023).

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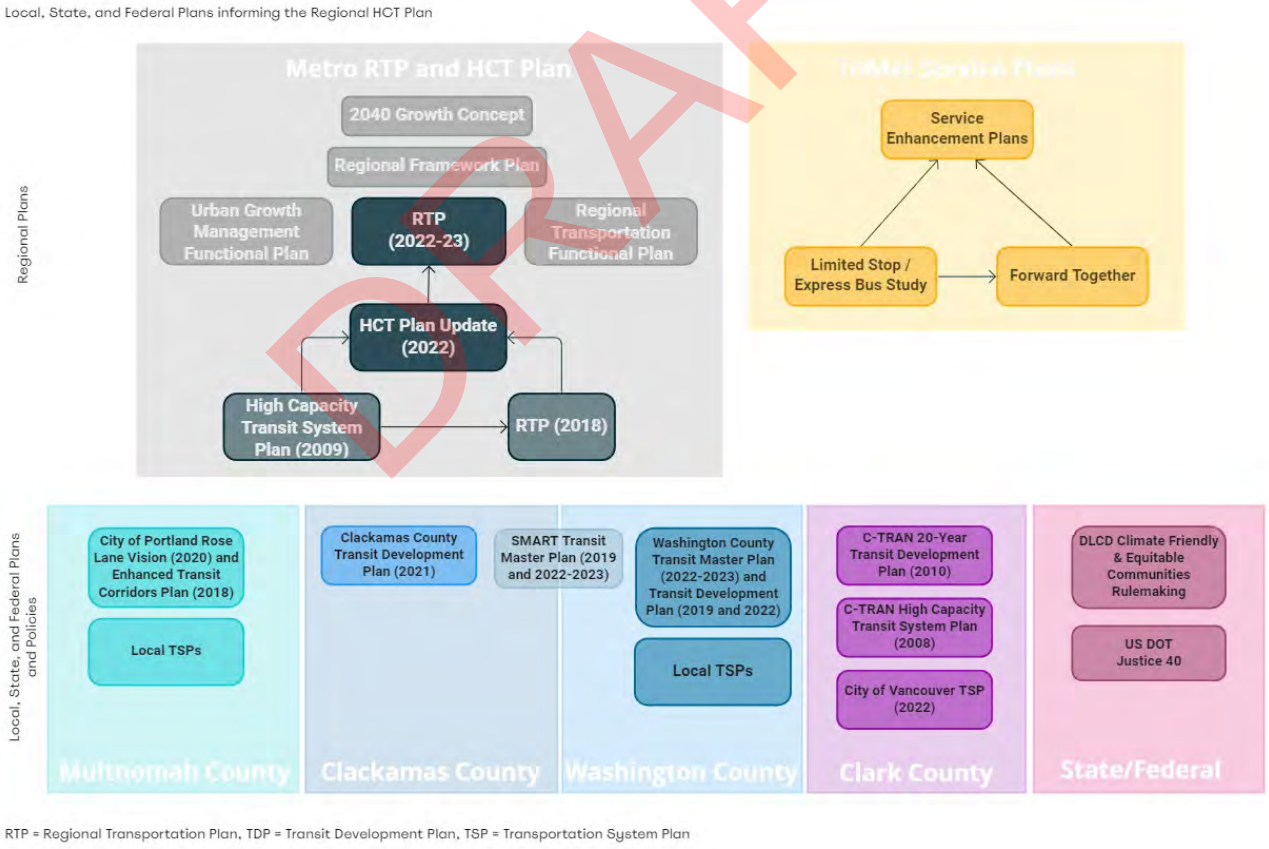
- The Clark County (C-TRAN) High Capacity Transit System Plan was completed in 2008; a TSP update for the City of Vancouver, which includes Enhanced Transit Corridors, is underway (completion anticipated in late 2022).
- C-TRAN has also completed development of several BRT corridors in recent years and others are in the planning stages.

As noted above, the Department of Land Conservation and Development (DLCD) has been conducting Climate-Friendly and Equitable Communities (CFEC) rulemaking, filed on August 22, 2022, to help local governments revise plans to reduce greenhouse gas emissions. Similarly, the US DOT has undertaken the Justice 40 initiative with a goal of delivering 40% of the overall benefits of federal investments in climate and clean energy, including sustainable transportation, to disadvantaged communities.

In addition to informing the HCT policy framework, these plans and studies can also be consulted to validate the universe of potential HCT projects considered in the HCT Plan update as well as inform criteria used in the evaluation.

Figure 4 Regional Plan Hierarchy and Policy Summary



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Review of Plans and Policies from Peer Regions or other Agencies

This section includes a high-level review of long-range planning documents from peer regions. The purpose of the peer review is to inform the HCT Policy Framework, but key findings from the peer review could also be utilized in other dimensions of the HCT Plan and/or RTP updates, such as the development of corridor evaluation criteria.

Peer Identification

Key criteria for selecting the peer regions or agencies included:

- Preference for plans/policies developed after 2020 that address current issues and trends such as recovery from the COVID-19 pandemic.
- Identify high capacity transit in their goals and policies.
- Include/address multiple HCT modes (e.g., rail and bus).
- Potential HCT lessons learned related to RTP investment priorities (safety, equity, climate and mobility).
- Geographic distribution.

Thirteen regions were identified in **Figure 5** below (See also **Figure A-1 in Appendix A** for more detail). These were narrowed to seven for high-level consideration and the project team then focused on four peers for more detailed review.

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Figure 5 Selected Peers

Region	Agency	Document	Year Published	HCT Modes
Seattle	Puget Sound Regional Council (PSRC), and/or Sound Transit (ST)	Regional Transportation Plan (2022-2050)	2021	Link and RapidRide
	King County Metro	Metro Connects Long-Range Plan		
San Francisco	Metropolitan Transportation Commission (MTC) and/or SFMTA/ConnectSF	Plan Bay Area 2050	2021	BART, LRT (e.g., Muni Metro), BRT and RapidBus (e.g., Muni Rapid)
Los Angeles	LA County MTA (Metro)	Long Range Transportation Plan	2020	BRT and LRT
Minneapolis-St. Paul	Metropolitan Council	Transportation Policy Plan	2020	LRT and BRT
Austin	Capital Area MPO (CAMPO)	2045 Transportation Plan (and Regional Transit Study)	2020	LRT MetroRail) and BRT (MetroRapid)
Boston	Metropolitan Area Planning Council (MAPC), Massachusetts Bay Transportation Authority (MBTA), The Greater Boston BRT Study Group	MetroCommon 2050 | Better Rapid Transit for Greater Boston | Focus40	2015-2021	BRT (Silver Line and additional prioritized corridors) and LRT and Heavy Rail (Commuter Rail, Blue, Green, Orange, and Red Lines)
Philadelphia	Delaware Valley Regional Planning Commission	Connections 2050 | StoryMap | Policy Manual | Process and Analysis Manual | Major Regional Projects	2021	BRT, Streetcar, LRT, Heavy Rail, High-Speed Rail
	City of Philadelphia, Southeastern Pennsylvania Transportation Authority	The Philadelphia Transit Plan		

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Summary of Common Themes and Key Takeaways

Common themes and notable examples from the peer review are summarized below, organized by the four RTP priority outcomes. Examples include cases where policy shifts had a clear impact of prioritization criteria and plan outcomes.

- **Equity considerations for vulnerable communities and transit riders**
  - All peer regions have goals or objectives regarding the transit needs of women, people of color, people with low incomes, or people experiencing houselessness.
  - Direct feedback from community groups representing vulnerable populations (such as the Equity Cabinet for King County Metro) was critical in identifying specific policy areas to address in plan updates.
  - Many regions are also addressing affordability, such as through implementation of a means-based fare for low-income transit riders in the Boston region, funded with legislative support for consistent funding for operations.
  - All regions address how equity can be achieved by transit investments for priority communities, such as how communities access transit and destinations via transit.
  - In the City of San Francisco's ConnectSF program, the pandemic refocused investment priorities on serving essential trips citywide, including through quick-build capital improvements to maximize scarce resources. Model-based criteria used to prioritize investments (including access to jobs and services, ridership, cost-effectiveness, and travel time) looked at both equity priority communities and at low-income households earning below 200% of the federal poverty level, in addition to overall performance citywide.
- **State of good repair and safety / HCT system maintenance and reliability**
  - All regions seek to achieve safety goals in terms of how people wait for, access, or experience transit, some with a focus on Vision Zero targets systemwide.
  - 6 of 7 regions emphasize the need for transit infrastructure maintenance, preservation, reliability, or lifecycle expansion.
  - Prioritizing equity outcomes in the greater Philadelphia region included universal design and user experience, such as implementation of full ADA access, all-door boarding, safer and cleaner services, and better amenities at stops and for passengers.
- **System-level climate goals or objectives**
  - All regions specify climate goals or objectives that are part of other climate-related goals, such as stewardship or safety. Five regions prioritize a net-zero emissions transit fleet, such as procuring battery-electric buses and implementation of associated charging infrastructure, with a policy goal to achieve procuring 100% renewable electricity.

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  - All regions prioritize VMT reduction goals, with Los Angeles and Philadelphia introducing concepts for VMT fees to generate revenue for transit investments and lower the dependence on the federal gas tax.
  - The urgency of addressing climate change was an impetus and key message around prioritizing transit improvements and related programs and initiatives, to attract additional trips to transit and other sustainable modes. For example, greater Boston has a goal to achieve a net-zero carbon region, which has an objective that all land travel is by carbon-free modes, such as walking, biking, and electrified public transit

- **Quality of service and mobility improvements for bus or rail**
  - All regions are pursuing bus or rail expansions or infrastructure improvements; for example, Seattle, Los Angeles, Boston, and greater Philadelphia have specific HCT and ETC enhancement goals, such as increasing the capacity of the transit fleet for new and existing services, expanding the HCT network to meet and respond to changing needs, or adding bus lanes and other features to speed up service and eliminate delay.
  - All regions emphasize the importance of transit and transportation system integration to expand travel choices and mode share; enhance local and regional transit connectivity; or improve transit frequencies, operations, or safety.

Peer Review Details

Please see **Appendix A** for additional peer review details.

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Additional Key Issues and Trends

In addition to exploring how peer regions have structured their long-range transportation plans focused on HCT, it is important to note that several recent issues and trends have emerged over the past five years that are directly impacting local, state, and federal transportation policies. Metro and TriMet have recently summarized some of these issues and trends in separate but related memos: Metro Emerging Trends and TriMet Forward Together Emerging Trends. In addition, very recent policies related to climate change and the economy continue to shape how regions will adapt their transportation policies in the coming years.

The following is a summary of these issues and trends that were considered when conducting the HCT Policy Framework analysis:

- Transit service and ridership declines, including the decrease in peak commute demand
- Inequities and social justice
- Sustained reliance or preference for remote work
- Continued expansion of e-commerce
- Continued advancements in vehicle electrification (EVs and e-bikes)
- Issues with personal safety, especially for BIPOC riders
- Increases in severe and fatal crashes
- Increases in recreational cycling
- Challenges associated with agency recovery and innovation
- Continued gentrification and affordability issues, including people experiencing houselessness
- Inflation and increases in fuel prices
- Staffing shortages across many industries, including transit

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HCT DEFINITION AND POLICY GAP ANALYSIS

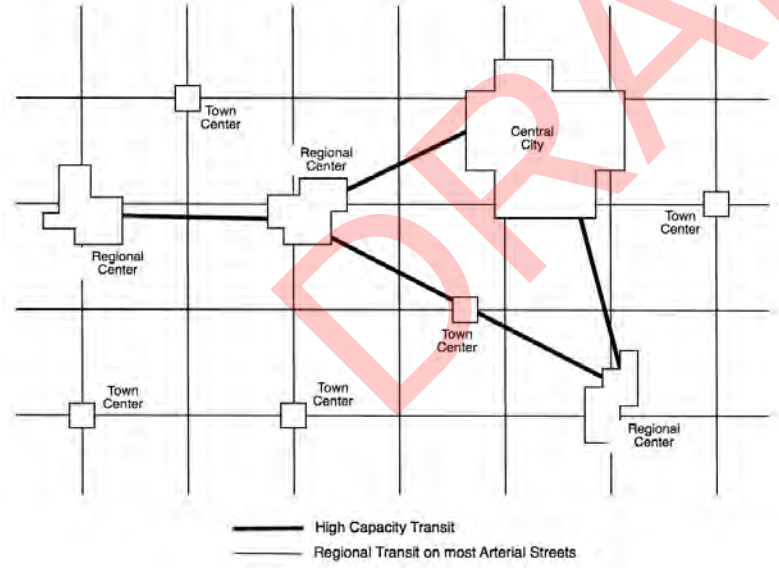
The HCT Policy Framework Analysis concludes with considerations for how High Capacity Transit is defined in our region as well as considerations for updating the eight Regional Transit Network policies. This analysis considers not only the review of local, regional, state, and federal policies, but also key findings from the peer regions, as discussed above.

High Capacity Transit Definition Considerations

The 2040 Growth Concept sets forth a vision for connecting the central city to regional centers like Gresham, Clackamas and Hillsboro with fast and reliable high capacity transit (HCT), helping the region concentrate development and growth in its centers and corridors. High capacity transit 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.

Figure 6 Regional Transit Network Concept

[Graphic to be revised]



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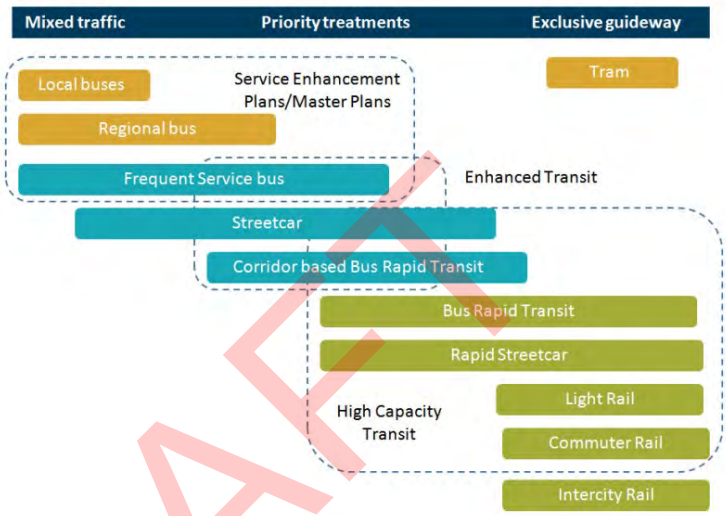
High capacity transit is defined in multiple places in the 2018 Regional Transportation Plan, including in the System Policies chapter (pages 3-77, 3-88), in Glossary of Terms (page G-4), and in the multiple sections of the separate Regional Transit Strategy. While there are minor differences in how HCT is defined, the following introductory paragraph is perhaps the most direct at defining HCT (from page 4-10 of the Regional Transit Strategy):

> **"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."**

As illustrated in the following graphic (from page 4-6 of the Regional Transit Strategy), there is also some overlap between Enhanced Transit and HCT, where some streetcar or corridor-based Bus Rapid Transit applications could be considered either High Capacity Transit or Enhanced Transit. Other modes, including Commuter Rail, Light Rail, Rapid Streetcar and Bus Rapid Transit are exclusively defined as HCT. It is important to note that the term "corridor-based Bus Rapid Transit" is not fully defined in the 2018 RTP.



To clarify how we define High Capacity Transit, the following considerations are offered for this update of the High Capacity Transit Strategy:

- Consider leading with the *purpose* of HCT in the regional transit network, and to integrate equity into the definition by emphasizing that it connects *people* to regional centers
- Consider stating that HCT is *high-quality transit* (i.e., fast, frequent, safe, and reliable) before its physical attributes (operating with the majority or all of the service in exclusive guideway)

The first half of the HCT definition in **blue** could be updated as follows:

> **"Transit is essential and the backbone of the transportation network. The high capacity transit system is meant to connect people to regional centers with high-quality service (fast, frequent, safe and reliable) and carry more transit riders more comfortably than the local, regional and frequent service transit lines. HCT operates with the majority or all of the service in exclusive guideway and could include light rail, commuter rail,**

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> **rapid streetcar, bus rapid transit, and corridor-based bus rapid transit"**

The last half of the definition in **green** emphasizes that HCT provides the needed capacity to serve the region's highest demand corridors with a variety of modes and levels of transit priority, ranging from light rail or BRT with "majority exclusive guideway" to corridor-based BRT or streetcar modes that have a mix of exclusive and shared right of way (such as the FX2-Division high capacity bus service).

Enhanced Transit Concept (ETC) / Better Bus

Another important part of defining High Capacity Transit and reviewing the Regional Transit Network policies related to HCT is clarifying the role of the Enhanced Transit Concept (ETC), now known as Better Bus. ETC was introduced in the 2018 Regional Transit Strategy and is defined as follows (from page 4-9 of the RTS):

> ***The purpose of ETC is to improve transit speed and reliability on our most congested existing and planned frequent service bus or streetcar lines.***

The RTP Glossary further clarifies that:

- "Enhanced transit is a set of street design, signal, and other improvements that improve transit capacity, reliability and travel time along major Frequent Service bus lines…" (RTS page G-9)
- "…Enhanced Transit encompasses a range of investments comprised of capital and operational treatments of moderate cost. It can be deployed relatively quickly in comparison to larger transit capital projects, such as building light rail." (RTS page G-9)

While no changes to how ETC is defined are suggested, several policy considerations are provided to strengthen and clarify the role of ETC in the Regional Transit System.

Transit Mode Characteristics and Relationships to Land Use

The graphic below identifies the transit modes that are part of the regional transit system, including their general service quality characteristics, and the land use density that is typically appropriate to warrant a capital investment in building a HCT project.

Figure 6 Characteristics of High-Capacity Transit

[NEW GRAPHIC THAT IDENTIFIES THE CHARACTERISTICS OF TRANSIT MODES (HCT AND OTHER) AND SHOWS WHICH MODES FALL INTO THE HIGH-CAPACITY TRANSIT CATEGORY.]

- **TRANSIT MODES:** *Commuter Rail, Light Rail, Rapid Streetcar, BRT, Corridor-Based BRT (e.g., RapidBus)*, Streetcar, Frequent Bus, Local Bus (and/or other modes to be considered in future Metro Access to Transit Study) (Italicized modes to be highlighted as HCT; Streetcar to be noted as HCT depending on context)

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- **CHARACTERISTICS:** Transit Priority (Speed & Reliability), Frequency, Vehicle Capacity, Passenger Capacity, Transit Access, Stop/Station Amenities, Capital Cost (per mile and per passenger), Operating Cost (total and per passenger), Service Span, Density & Demand, Market Demand Role

Person carrying capacity is a function of vehicle capacity and frequency. Fast and reliable services that are facilitated with transit priority treatments are also required for investments in high-frequency service to be effective; otherwise transit vehicles can be stuck in traffic and bunched together. To be cost-effective, HCT should provide priority along the majority of our highest-demand corridors, which connect centers of activity, essential jobs and services, and other major destinations (e.g., colleges, hospitals) and where there is sufficient density and demand to support the capital investment consistent with regional mobility, equity and environmental priorities. ETC can provide priority at high-delay locations along frequent bus or streetcar corridors.

Figure 7 Relationship between Service Frequency, Priority, and Passenger Capacity

[NEW GRAPHIC THAT SHOWS HOW SERVICE QUALITY AND PRIORITY WORK TOGETHER TO MOVE PEOPLE]

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Regional Transit Network Policy Considerations

Based on the review of local, regional, state, and federal plans and policies, as well as the peer review and overview of key issues and trends, several areas have emerged as a focus of the Regional Transit Network policy updates:

- **System Quality and Equity.** Equity has long been a priority in making transportation planning decisions in the region and was one of the overarching policies included in the 2018 RTP. The 2023 RTP includes equity as one of the four desired outcomes and all network policies will be updated to further strengthen equity as a regional priority. The importance of dignified, high-quality service should also be emphasized to make transit work for everyone. As such, **Policy 1: Service Quality** is updated and clarified; **Policy 2: Equity** is updated and separated into a new policy.
- **Climate change.** While climate leadership is one of the overarching policies from the 2018 RTP, and one of the desired outcomes for the 2023 RTP update, there are no specific Regional Transit Network policies focused exclusively on sustainability and the environment. A new policy (**Policy 3: Climate Change**) is proposed focusing on how the Regional Transit Network should address climate change.
- **Maintenance and Resiliency.** Reliability is integrated into **Policy 4: Maintenance and Resiliency** to better integrate it as a key outcome of a system that is preserved and maintained in a state of good repair.
- **HCT and ETC.** The current **Policy 4: High Capacity Transit** (renumbered to Policy 5) includes both HCT and ETC in a single policy. To strengthen and clarify the role of both HCT and ETC in the regional transit network, creating **Policy 7: Reliable and Enhanced Transit** addresses the separate role of ETC as a tool for increasing reliability of the transit system.
- **Clear policy headlines.** All of the suggested modifications to the Regional Transit Network policies focus on a primary theme, so simple headlines are offered for each.

Figure 8 below lists each of the 2018 Regional Transit Network policies and provides suggested updates to the policies most related to high capacity transit.

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Figure 8 Policy Framework Gap Analysis

Existing #	Revised #	Proposed Headline	Existing Policy Text	Gaps / Considerations Addressed	Updated Policy Text Considerations
1	1	**System Quality**	*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.*	▪ Separated existing Policy 1 into two policies ▪ Aligned with overarching Transportation Equity Policy 3 ▪ Integrated quality of service into policy language	Provide a high-quality, safe, and accessible system that makes transit a convenient and comfortable transportation choice for everyone to use.
	2	**Equity**			Ensure that the regional transit network equitably prioritizes service to those who depend on transit or lack travel options; makes service, amenities, and access safe and secure; and proactively supports stability of vulnerable communities, particularly communities of color and other historically marginalized communities.[2]
N/A	3	**Climate Change**	*N/A*	▪ Strengthen policies to focus on transit's role in addressing climate change	Prioritize our transit investments to create a transit system that encourages people to ride rather than drive alone and support transitioning to a clean fleet, enabling us to meet our state, regional, and local climate goals.
2	4	**Maintenance and Resiliency**	*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.*	▪ Incorporated reliability into State of Good Repair	Preserve and maintain the region's transit infrastructure in a manner that improves safety, reliability, and resiliency while minimizing life-cycle cost and impact on the environment.

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[2] Historically marginalized communities are areas with high concentrations (compared to regional average) of people of color, people with low-incomes, people with limited English proficiency, older adults and/or young people.

Existing #	Revised #	Proposed Headline	Existing Policy Text	Gaps / Considerations Addressed	Updated Policy Text Considerations
4	5	**High Capacity Transit**	*Make transit more convenient by expanding high capacity transit; improving transit speed and reliability through the regional enhanced transit concept.*	▪ Align with equity and climate outcomes and HCT definition ▪ Reframe "convenient" around equity ▪ Revise description of capacity	Complete and strengthen a well-connected network of high capacity transit along mobility corridors with the highest travel demand. High capacity transit prioritizes transit speed to connect regional centers with the Central City, link regional centers with each other and link regional centers to major town centers to provide people with high-quality service and convenient connections.
3	6	**Coverage and Frequency**	*Make transit more reliable and frequent by expanding regional and local frequent service transit and improving local service transit options.*	▪ Moved reliability and the Enhanced Transit Concept to a new policy (see Policy 7)	Complete a well-connected network of local and regional transit on most arterial streets – prioritizing frequency along mobility corridors and main streets linking town centers to each other and neighborhoods to centers.
3 and 4	7	**Reliability**	*See Policy #4*	▪ Created a separate policy focused on reliability that clarifies the role of ETC in the regional transit network	Through the Better Bus program, prioritize capital and traffic operational treatments identified in the Enhanced Transit Toolbox in key locations or corridors to improve transit speed and reliability.
5	8	**Intercity / Inter-Regional Transit**	*Evaluate and support expanded commuter rail and intercity transit service to neighboring communities and other destinations outside the region.*	▪ No proposed changes	

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Existing #	Revised #	Proposed Headline	Existing Policy Text	Gaps / Considerations Addressed	Updated Policy Text Considerations
6	9	**Access to Transit**	*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.*	▪ No proposed changes	
7	10	**Mobility Technology**	*Use technology to provide better, more efficient transit service – focusing on meeting the needs of people for whom conventional transit is not an option.*	▪ No proposed changes	
8	11	**Affordability**	*Ensure that transit is affordable, especially for people who depend on transit.*	▪ No proposed changes	

Notes: Green – proposed update or addition

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APPENDIX A. REVIEW OF PEER REGION RELATED TRANSPORTATION PLANS AND POLICIES

The review of HCT policies included plans from other regions. The purpose of the peer review is to inform the HCT policy analysis, but the peers could be utilized in other dimensions of the HCT Plan and/or RTP update.

Peer Identification

Key criteria for selecting the peer regions or agencies include:

- Preference for plans/policies developed after 2020 that address current issues and trends including recovery from the COVID-19 pandemic.
- Identify high-capacity transit in their goals and policies.
- Include/address multiple HCT modes (e.g., rail and bus).
- Potential HCT lessons learned related to RTP investment priorities (safety, equity, climate, and mobility).
- Geographic distribution.

Thirteen regions were identified in the table below (**Figure A-1**). These were narrowed to seven for high-level consideration and the project team focused on four peers for more detailed review.

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Figure A-1 Potential Peer Regions and Planning Documents

Region	Agency	Document	Selection Criteria: Addresses Current Issues? (Year Published)	Selection Criteria: Includes Policy or Goal with Relation to HCT?	Selection Criteria: Region has Multiple HCT Modes (Rail and Bus)?	Preliminary Recommendation to Include in Policy Review	Recommendation Notes	Key pages/elements related to HCT or issues/trends of interest
Seattle	Puget Sound Regional Council (PSRC), and/or Sound Transit (ST)	Regional Transportation Plan (2022-2050)	2021	Yes	Yes – Link and RapidRide	Yes	▪ Included PSRC, Sound Transit, City of Seattle in 2018 RTP best practices review (focused on criteria) ▪ Focus on King County; strong equity focus in Metro Connects plan	▪ Chapter 2 Performing for People, Environment, and Mobility: p. 118-170 includes engagement, equity, climate and environment, and mobility goals.
	King County Metro	Metro Connects Long-Range Plan						▪ Metro Connects: See p. 105 of PDF for RapidRide prioritization framework
San Francisco	Metropolitan Transportation Commission (MTC) and/or SFMTA/ConnectSF	Plan Bay Area 2050	2021	Yes	Yes – BART, LRT (e.g., Muni Metro), BRT and RapidBus (e.g., Muni Rapid)	Yes	▪ Included BART in 2018 best practices review (focused on criteria) ▪ Equity approach in ConnectSF evaluation (SF focused)	▪ p. vi-x, 5 Guiding Principles, ▪ Notably Transportation Strategies, specifically T10, on p. ix & 81.
Salt Lake City	Wasatch Front Regional Council (WFRC)	Regional Transportation Plan (2019-2050)	2019	Yes	Yes -- LRT (TRAX) and MAX BRT (1 line)		▪ Included WFRC and Salt Lake City in 2018 best practices review (focused on criteria) ▪ Limited existing BRT lines	▪ p. 37, origin to destination travel mode share as regional goal. ▪ p. 40-44, high-capacity and -frequency transit mentioned multiple times in relation to outcomes of scenarios of goals. ▪ p. 49, high-capacity transit mentioned as performance measure for scenarios of quality transportation choices.
Los Angeles	LA County MTA (Metro)	Long Range Transportation Plan	2020	Yes	Yes – BRT and LRT	Yes	▪ Clear transit investment allocations, with implementation timetables ▪ A couple transit strategies, each with multiple sub-strategies to glean from. ▪ Bond measure (confirm).	▪ p. 4, better transit mentioned as priority. ▪ p. 18, expansions of transit operations and implementation of fixed-guideway transit mentioned, including I-5 North Capacity Enhancements project. ▪ p. 20, expanded programs via LRTP mentioned, including Express Lanes, off-peak transit services. ▪ p. 22, BRT mentioned. ▪ p. 29, BRT mentioned again, w/ BRT investment allocations on p. 30 Figure 8. ▪ p. 32, note Strategy 1.2: Improve the frequency, speed and reliability… ▪ p. 33, note capacity-enhancing transit projects.
Minneapolis-St. Paul	Metropolitan Council	Transportation Policy Plan	2020	Yes	Yes -- LRT and BRT	Yes	▪ Included in 2018 best practices review (focused on criteria)	▪ p. 10, 2020 TPP Principle, Bullet 3 Implement increased transit service ▪ p. 16, frequent transit mentioned as method for congestion relief. ▪ p. 17-19, BRT mentioned under The Regional Transit System and again under Overview and after Benefits of Transit before Strategies to Encourage Alternatives.

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Region	Agency	Document	Selection Criteria: Addresses Current Issues? (Year Published)	Selection Criteria: Includes Policy or Goal with Relation to HCT?	Selection Criteria: Region has Multiple HCT Modes (Rail and Bus)?	Preliminary Recommendation to Include in Policy Review	Recommendation Notes	Key pages/elements related to HCT or issues/trends of interest
San Antonio	Alamo Area MPO (AAMPO)	Metropolitan Transportation Plan (Mobility 2045)	2019	Yes	No – Main focus on BRT, rapid bus, shuttles, demand response		▪ HCT service (Primo) launched in 2012 ▪ HCT corridors identified by VISION 2040 for implementation that year	▪ p. 1.5-1.6, Goals
Austin	Capital Area MPO (CAMPO)	2045 Transportation Plan (and Regional Transit Study)	2020	Yes	Yes -- LRT MetroRail) and BRT (MetroRapid)	Yes	▪ Extensive expansion planned, bus and rail ▪ Project Connect funding measure passed by voters	▪ p. 8-9 Vision, Goals, and Objectives
Nashville	Greater Nashville Regional Council (GNRC)	Regional Transportation Plan	2021	Yes	No – Main focus on bus and BRT		▪ Expanded and Modernized Transit Options part of Long-Term Vision ▪ New Technologies to Improve Safety, Traffic Operations, and Traveler Information part of Core Strategies	▪ p. 16-17, Plan Recommendations: Long-Term Vision and Goals and Objectives
Sacramento	SACOG	Next Generation Transit Strategy	2021	Yes	Yes – bus and LRT		▪ Extensive Recommended Transit Strategies, with sensible vision, goals and KPIs, and trends in common with Metro/TriMet	▪ p. 10-11, Vision, Goals, and Key Performance Indicators ▪ p. 20-54, Recommended Strategies
Vancouver, BC	TransLink	Transport 2050	2022	Yes	Yes – SkyTrain and RapidBus		▪ Implementing and prioritizing frequent, fast, reliable transit and TOD/TAD listed as transformative actions ▪ Universal basic mobility transformative action directive of HCT	▪ p. 7, How We'll Act: Creating the Transportation Future We Want – Strategies
Denver	City and County of Denver (CCD)	Denver Moves	2019	Yes	Yes – LRT and BRT [1 line]		▪ City Denverright / DenverMoves process had extensive equity component ▪ Extensive study of BRT by the regional provider (RTD) as well as CCD	▪ p. 1-9, Denver Moves: Transit Goals ▪ p. 3-3, Denver's Big Moves and Strategies
Boston	Metropolitan Area Planning Council (MAPC), The Greater Boston BRT Study Group	MetroCommon 2050 | Better Rapid Transit for Greater Boston | Focus40	2015-2021	Yes	Yes – BRT (12 potential corridors) and LRT (for comparison with BRT)	Yes	▪ Recent regional plan, east coast ▪ Strong data-driven, equity-focused approach to BRT implementation in applicable corridors, with QOS/LOS comparisons across modes and places. ▪ MBTA Better Bus Project and bus network redesign and concurrent rail expansion.	▪ p. 11, BRT's Potential in Boston – Under Methodology and within the last two paragraphs before Travel Time Analysis and Routing, corridor prioritization criteria are defined. ▪ p. 38, Under Conclusion, HCT-related, BRT-specific Recommendations are given
Philadelphia	Delaware Valley Regional Planning Commission	Connections 2050 | StoryMap | Policy Manual | Process and Analysis Manual | Major Regional Projects	2021	Yes	Yes –	Yes	▪ Recent regional plan, east coast ▪ Relevant thinking on current trends and issues ▪ SEPTA bus/rail redesigns underway along with expansion projects	▪ p. 26-33, long range planning goals, their definitions, and their objectives. ▪ Major Regional Projects Table, filterable by transit to include 84 out of 255 entries for proposed projects, viewable also as a map
	City of Philadelphia	The Philadelphia Transit Plan						▪ p. 7, Goals & Strategies; p. 92-98, Bus Corridors; p. 110-132, High Capacity Transit

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Peer Review Findings

The following slides summarize the following information for each peer:

- Plan(s) reviewed, geographic focus, purpose
- Related plans (if applicable) – in several cases, a local plan was reviewed in addition to the regional plan
- Policy priorities within each RTP priority area (Climate, Equity, Safety, Mobility)
- Key highlights related to the four outcomes for the Portland Metro RTP update (Equity, Safety, Climate, and Mobility)
- Additional examples highlighted from selected peers

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HCT PLAN UPDATE
PEER REVIEW
REFERENCE SLIDES

September 20, 2022

DRAFT

Peer Regions Policy Review

- Seattle
- San Francisco
- Los Angeles
- Twin Cities
- Austin
- Boston
- Philadelphia

RTP Priorities

- Equity
- Safety
- Climate
- Mobility

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Peer Review Common Themes Related to RTP Outcomes

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- **Equity** considerations for vulnerable communities and transit riders
  - All peer regions have goals or objectives regarding the transit needs of women, people of color, people with low incomes, and/or people experiencing houselessness
  - Direct feedback from community groups representing vulnerable populations (such as the Equity Cabinet for King County Metro) was critical in identifying specific policy areas to address in plan updates.

- State of good repair and **safety** / HCT system maintenance and reliability
  - 6 of 7 regions emphasize the need for transit infrastructure maintenance, preservation, reliability, or lifecycle expansion.

- System-level **climate** goals or objectives
  - All plans specify climate goals or objectives that are a part of other climate-related goals (such as stewardship or safety).
  - For example, 5 of 7 regions prioritize a net-zero emissions transit fleet.

- Quality of service and **mobility** improvements for bus or rail
  - All plans pursue bus or rail expansions or infrastructure improvements, with Seattle, LA, Boston, and greater Philadelphia having specific HTC and ETC enhancement goals.

Initial Peer Review

- Name of plan reviewed; date, horizon year, geographic focus, purpose
- Related plans (if applicable) – in several cases, a local plan was reviewed in addition to the regional plan
- Policy priorities
- Key highlights related to the four outcomes for the Metro RTP update (Equity, Safety, Climate, and Mobility)

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Peer Review Additional Topics Being Explored

- Highlight how equity and/or climate-specific policies affected the peer region's priorities from the previous plan
- Identify specific equity and climate-focused policy language related to HCT and/or corridor-level evaluation criteria used to prioritize investments
- Assess alignment with RTP definitions of HCT and ETC

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Seattle

Central Puget Sound Region

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

Plan: Regional Transportation Plan – 2050

- Designed to implement region's growth plan, VISION 2050

Geographic focus: King, Pierce, Snohomish, and Kitsap counties

Purpose: Regional transportation investment strategy

Related Plan: King County Metro Long-Range Transit Plan (Metro Connects) – 2050

Policy Priorities:

- Greenhouse gas reductions; safety improvements; community growth investments; maintenance and promotion of economic vitality; and transit and travel choice expansion

Building on VISION 2050

GOAL: The region has a sustainable, equitable, affordable, safe, and efficient multimodal transportation system, with specific emphasis on an integrated regional transit network that supports the Regional Growth Strategy and promotes vitality of the economy, environment, and health.

- VISION 2050 (PSRC 2020)

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Seattle

Central Puget Sound Region

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

Alignment with RTP Priorities (highlights):

Equity:

- Prioritizes HCT access for people of color and with low incomes compared to the regional average.
- Pursues services with less delay and shorter travel time for people of color and with low incomes.

Safety:

- Promises a state of good repair and safe systems approach.
- Considers timely replacement of bridges and ferries.

Climate:

- Incorporates a Four-Part Greenhouse Gas Strategy aligning with VISION 2050.
- Sets GHG reduction targets for 2030 (50% below 1990 levels) and 2050 (83% below 1990 levels).

Mobility:

- Seeks to triple transit boardings by 2050.
- Pushes for more than half of households to live within a half-mile of HCT.

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Seattle

Central Puget Sound Region - Highlights

- Seattle – 2050 Regional Transportation Plan
  - Inter-regional high-speed rail to be implemented, connecting the Vancouver, BC; Seattle; and Portland areas.
  - 41 BRT, 9 LRT, 2 commuter rail, and 84 frequent bus HCT services planned for implementation in 2050.

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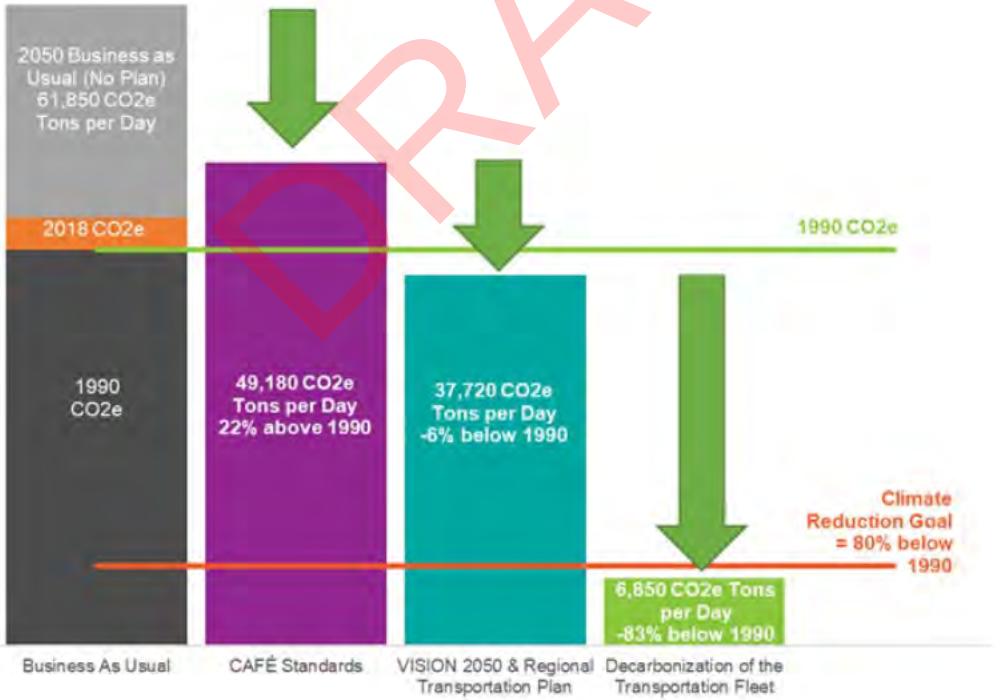
Seattle

Central Puget Sound Region - Highlights

Four-Step GHG Reduction Model

Figure 36 - Steps to Meet Greenhouse Gas Reduction Goals



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Seattle
King County

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

Plan: King County Metro Long-Range Transit Plan (Metro Connects) – 2050

- Influences 2050 RTP for Puget Sound

Geographic focus: King County (includes City of Seattle)

Purpose: Frequent, reliable, fast, safe, equitable, and sustainable 24-hour bus service running all days throughout an innovative and regionally integrated network

Policy Priorities:

- Service increases, HCT-connecting services increases, QOS improvements, and fleet and operations growth

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Seattle
King County

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

Alignment with RTP Priorities (highlights):

Equity:

- Provides service in areas with unmet need.
- Implements target approach to fare discounts to balance fare subsidies and revenues.

Safety:

- Builds safe and well-designed transit stops, stations, and centers.
- Prioritizes safety and security on agency vehicles and at shared stops, stations, and centers

Climate:

- Makes transit more competitive to driving alone.
- Procures zero-emissions vehicles and supporting infrastructure.

Mobility:

- Meets current and future transit needs and move toward an all-day service network.
- Adds flexible services to connect to key locations and fixed-route networks, such as Sound Transit.

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San Francisco
Bay Area Region

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

Plan: Plan Bay Area – 2050

- Outlines $1.4 trillion spending plan across 30 years

Geographic focus: Bay Area region

Purpose: Improve housing, transportation, the economy, and the environment in the Bay Area

Policy Priorities:

- A collection of goals and associated strategies for housing, transportation, the economy, and the environment

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San Francisco

Bay Area Region

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

Alignment with RTP Priorities (highlights):

Equity:

- Implements a statewide universal basic income program.
- Expands job training, incubator programs, and internet access in underserved communities.

Safety:

- Builds a Complete Streets network to promote mode share.
- Advances regional Vision Zero policy with better street design and reduced speeds.

Climate:

- Shifts commuters to telecommuting, transit, walking and/or biking.
- Grows transportation demand management programs, such as vanpool and bikeshare.

Mobility:

- Enhances transit frequency, capacity, and reliability, and expand the regional rail network.
- Integrates new regional express lanes and an express bus network.

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San Francisco

City of San Francisco

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☐ Safety
- ☑ Mobility

Plan: ConnectSF Transit Strategy – 2050

Geographic focus: City of San Francisco

Purpose: Identify local HCT investment priorities (LRT and BRT) and priority regional rail investments from City perspective

Related Plan: Informs SF Transportation Plan Update (in progress)

Policy Priorities:

- Meet six key transit challenges
- Link transit to meeting housing challenges and climate/air quality goals
- Mix of major capital projects and lower cost citywide bus/rail reliability investments to maximize funding

What Are Our Transit Challenges?

The Transit Strategy addresses the challenges that separate you from the rapid, reliable, and safe transit experience you need.

DELAYS AND BREAKDOWNS DISRUPT TRAVEL

When our system is down, it can have a big impact on your day. We need to upgrade our infrastructure and vehicles to make transit a reliable option you can count on.

TRAINS AND BUSES ARE CROWDED

This makes your travel less comfortable, with longer waits on the platform and more time in transit. Making room for more passengers is critical to serving the needs of our growing city.

CONNECTIONS ARE TIME-CONSUMING

Getting where you need to go can require changing transit lines. We need to make these connections fast and convenient, and the places you transfer safe and easy to use.

TRANSIT NEEDS TO WORK BETTER FOR PEOPLE WHO RELY ON IT

It's more important than ever that we serve essential workers and others who depend on transit. We need to focus investments to address racial and social inequities and provide access to jobs, housing, and other opportunities.

TRANSPORTATION EMISSIONS CONTRIBUTE TO CLIMATE CHANGE AND POOR AIR QUALITY

Across the city, especially in marginalized communities, we need to reduce emissions from car travel to meet our climate targets and improve quality of life for all San Franciscans.

EXISTING TRANSIT FUNDING ISN'T SUSTAINABLE

The Transit Strategy is a bold program of solutions to make our bus and rail transit system work for you. We need stable funding to deliver on the strategy.

TRANSIT CHALLENGES MAKE THE HOUSING CRISIS WORSE

San Francisco is working to preserve affordable housing and build more housing to meet recent and projected growth, as outlined in the City's Draft 2022 Housing Element. An effective transit system is critical to providing access between neighborhoods and to good, living-wage jobs and other economic opportunities. When transit is not working well, it compounds tough choices people have to make about where to live and work.

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San Francisco

City of San Francisco

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☐ Safety
- ☑ Mobility

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Alignment with RTP Priorities (highlights):

Equity:

- Prioritization measures: citywide, 200% low-income, and Equity Priority Community trips
- Focused bus service recovery on essential, non-traditional commute trips
- Citywide bus network improvements through MuniForward quick-build program

Safety:

- Emphasis on State of Good Repair and reliability
- Within transit context, deliver safety improvements alongside transit priority projects
- Support Vision Zero and Slow Streets and Safe Spaces programs

Climate: Shifting trips to transit to meet 2040 goal of zero emission transportation system

Mobility:

- Key local LRT (Central Subway Extension) and regional rail priorities (Geary/19th Rail via Link21 program)
- New Caltrain regional rail station in equity priority neighborhood
- Bus and rail system reliability

Los Angeles
LA County MTA

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

Plan: Our Next LA (LRTP) – 2050

- Informs LA Metro's SRTP (forthcoming)

Geographic focus: LA County and MTA/Metro Area

Purpose: Identify HCT investment priorities, strategies and actions (LRT and BRT) and priority regional rail investments and associated timelines

Related Plans: Metro Strategic Plan (Vision 2028) & NextGen Bus Plan – 2028

Policy Priorities:

- Achieve four priority areas
- Expand public/active transportation programs and related partnerships, progress freight partnerships, implement transit-supportive/SOV-trip-reducing policies
- Transit and highway projects (Measure M & R)

DRAFT

Los Angeles
LA County MTA

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

Alignment with RTP Priorities (highlights):

Equity:

- Integrates Gender Action Plan and Transit Homelessness Action Plan.
- Supports transit-oriented communities on Metro-owned lands to facilitate access to land uses.

Safety:

- Optimizes station safety/security, including lighting, monitoring, space.
- Integrates safety/security plans/policies, including for emergencies.

Climate:

- Operationalizes system-level transition to zero-emission buses by setting present targets.
- Considers conservation, life-cycle, efficiency in operations policies.

Mobility:

- Prioritizes the expansion of rail countywide.
- Emphasizes improving frequency, speed, reliability of bus and rail.

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Los Angeles

LA County MTA - Highlights

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- Los Angeles – 2050 Long Range Transportation Plan
  - NextGen Bus Plan to implement all-day service with 15-minute or better headways for 80% of all bus services, with a bus stop within a quarter-mile of current riders.
  - A Transit First approach to speed up buses with capital improvements, such as bus lanes and signal priority.

Figure 4
Elements of the 2020 LRTP

Minneapolis-St. Paul

Twin Cities Region

Alignment w/ RTP Priorities

- ☑ Equity
- ☐ Climate
- ☑ Safety
- ☑ Mobility

Plan: Transportation Policy Plan - 2040

- Progresses Thrive MSP 2040, 30-year regional plan

Geographic focus: Twin Cities Metro Area

Purpose: Maintain a safe, effective, reliable, equitable, affordable, environmentally-conscious, and prosperous transportation system

2040 TRANSPORTATION POLICY PLAN (2020 UPDATE) PRINCIPLES

- Support the needs of the region's mature highway system, including dedicating significant resources to maintaining and rebuilding the existing system and using preservation projects to rethink major regional corridors
- Manage congestion in an innovative, cost-efficient manner and provide reliable alternatives to travel in congested corridors
- Implement increased transit service and an expanded transitway system; support higher demand for development (housing, shops, jobs) along transit lines and around stations
- Support more opportunities for other travel modes; include bicycle and pedestrian elements in comprehensive transportation and land development plans; provide tools needed to implement them
- Plan for the long-term needs of freight modes such as trucks, barges, and railroads
- Balance the needs of the aviation system with local land use decisions

Related Plan: 2040 Transportation Policy Plan (originally adopted 2015)

Policy Priorities:

- Align with six principles
- System stewardship, safety/security, access, economic growth, health equity, and transportation-land use guidance and balance

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Minneapolis-St. Paul

Twin Cities Region

Alignment w/ RTP Priorities	
☑ Equity	☐ Climate
☑ Safety	☑ Mobility

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Alignment with RTP Priorities (highlights):

Equity:

- Pursues a transportation system that promotes community cohesion.
- Reduces construction and operations impacts on natural, human, and built environments.

Safety:

- Prioritizes state of good repair of the transportation system.
- Focuses on achieving Vision Zero targets across modes, including freight.
- Considers transportation system's vulnerability to natural and human-caused threats.

Climate:

- Does not explicitly define climate goals but conveys it as a safety/security issue.

Mobility:

- Ensures reliability of travel by freight, highway and transit, and availability of multimodal options.
- Seeks to increase mode share by setting associated measures.

Austin
Central Texas

Alignment w/ RTP Priorities

- ☑ Equity
- ☐ Climate
- ☑ Safety
- ☑ Mobility

Plan: Regional Transportation Plan – 2045

- A collation of transportation plans, studies and infrastructure inventories
- Amended every five years

Geographic focus: Greater Austin area

Purpose: A multimodal approach to alleviate congestion, address transportation needs, coordinate activities, prioritize projects and programs, and identify financial constraints

Related Plan: 2045 Regional Transit Study

Policy Priorities:

- Safety, mobility, stewardship, economy, equity, innovation

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Austin
Central Texas

Alignment w/ RTP Priorities

- ☑ Equity
- ☐ Climate
- ☑ Safety
- ☑ Mobility

DRAFT

Alignment with RTP Priorities (highlights):

Equity:

- Pursues mitigation of negative impacts on vulnerable populations
- Considers vulnerable populations' multimodal access opportunities

Safety:

- Focuses on reducing the number and severity of crashes.
- Prioritizes Vision Zero metrics collaboratively with local government and transit agencies.

Climate:

- Seeks to avoid, minimize, and mitigate negative impacts to water, air, and habitat quality
- Does not explicitly define climate goals but makes climate objectives a part of stewardship goal.

Mobility:

- Made up of connectivity, reliability, choice, implementation, and regional coordination objectives.
- Enhances reliability by improving incident management, ITS, and TDM

Boston

Boston Metro Area

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

Plan: MetroCommon – 2050

- Land-use and policy plan, with interactive website in progress

Geographic focus: Greater Boston area

Purpose: Long-range regional plan to address cost of housing, racial inequity, and climate change

Related Plan: Focus40 (MBTA long range investment plan)

Policy Priorities:

- Achieve five action areas
- Values of the plan are equity, stewardship, resiliency, and prosperity

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Boston

Boston Metro Area

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

Alignment with RTP Priorities (highlights):

Equity:

- Focuses on neighborhoods historically underserved by high quality transit.
- Seeks to make public and active transportation affordable among people least able to pay.

Safety:

- Proposes to achieve zero transportation-related fatalities per year across all modes.
- Ensures that people can travel without risk of violence, discrimination, or crime.

Climate:

- Emphasizes that transportation systems are designed to function during, or rebound after, climate events.
- Pursues net-zero carbon emissions across all regional transportation options.

Mobility:

- Prioritizes transit infrastructure maintenance, funding, and capacity as a top-line objective.
- Concentrates growth around transit and services on demand.

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Boston

Boston Metro Area - Highlights

Example

Goal A: Getting Around the Region

Traveling around Metro Boston is safe, affordable, convenient, and enjoyable.

In 2050, the ways we get around are reliable, adequately-funded, and well maintained. Travel is safe, efficient, pleasant, and affordable to all households regardless of income. New transportation technologies and services operate on our roads, underground, and on the water. These new travel options help alleviate congestion and pollution, rather than adding to it. Public transit and shared trips are often more convenient and affordable than solo trips. Auto congestion still exists, but it is predictable and avoidable.

People with mobility limitations and those without a car can get around easily, and can afford to do so. Low-income residents and residents of color enjoy high quality transit to more parts of the region, improving access to opportunity. People of all ages walk or bike more frequently for short trips because conditions make that option safe and enjoyable. The transportation system has a minimal impact on the local and global environment, with reduced pollution and runoff, drastically reduced GHG, and less land set aside for roadways and parking.

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1. Transit infrastructure is well-maintained and funded, and its capacity is greatly expanded through the improvement of existing service and the strategic addition of new service so that daily travel is convenient, pleasant, and reliable. The transit system provides more opportunity for circumferential travel throughout the region and reverse commutes between the inner core and suburbs.
2. The transportation system is designed and operated to ensure access to opportunity for everyone, with a particular emphasis on neighborhoods historically underserved by high quality transit.
3. Local land use policies and new development support increased mobility by encouraging concentrated growth around transit and the services people need.
4. Bicycle, pedestrian, and other personal mobility infrastructure is safe, extensive, high quality, and linked to other modes, so that people frequently use active transportation as a preferred mode of travel.
5. Transportation options in the region are net zero for carbon emissions, contributing to improved air quality and reducing negative climate impacts.
6. Public and active transportation options are affordable for those least able to pay.
7. All modes of transportation, including innovative technologies, are safely integrated resulting in few transportation-related injuries and zero fatalities annually.
8. State and local governments work together with businesses and property owners and advocates to create seamless travel throughout the region, including "first mile, last mile" connections.

https://www.mapc.org/wp-content/uploads/2021/12/12.-MC2050-Goals.pdf

Boston

Boston Metro Area - Highlights

Example

Goal C: A Climate-Resilient Region

Metro Boston is prepared for — and resilient to – the impacts of climate change.

In 2050, the Metro Boston region is prepared for the extremes of a changing climate. We are prepared for more high-heat and extreme-cold days, increased rainfall, extended periods of drought, stronger storms, and a rising sea. Homes, schools, workplaces, facilities storing or producing hazardous materials, and infrastructure are located away from serious threats or are designed to withstand them. When major climate events interrupt critical services, the response is managed to minimize disruption and speed recovery. People have the resources, networks, and supports to withstand climate emergencies and to recover when disaster strikes. Older adults, children, residents with lower incomes, Environmental Justice communities, and other vulnerable populations can live safely and fully enjoy outdoor activities. Neighborhoods are designed and improved to protect the health of residents, with ample shade, drainage, and green space. Wetlands, water bodies, forests, and plant and animal communities are restored and protected, and are able to adapt to climate change impacts.

DRAFT

1. Residents and workers, especially those most vulnerable to climate impacts, live and work in neighborhoods designed to minimize climate-related health effects such as asthma, heat-related illness, and other diseases.
2. All neighborhoods and municipalities have updated emergency response and communication plans in anticipation of climate-related emergencies. Communities have adequate supplies, trained professionals, and volunteers ready to respond in a coordinated and effective manner.
3. Critical systems, including energy supply and distribution, communications, water, and transportation are designed to continue functioning during, or quickly rebound after, severe storm events.
4. New homes, institutions, businesses, and hazardous facilities are built away from ecologically sensitive areas or areas vulnerable to climate impacts, or they are built in such a way as to withstand those impacts. Existing homes, institutions, businesses, and hazardous facilities in the most vulnerable locations are relocated or modified to absorb impacts.
5. Green infrastructure beautifies neighborhoods. It is included in all developments, providing multiple co-benefits, such as stormwater filtration, shade, cleaner air, carbon storage, and cooling.
6. Vulnerable populations affected by climate-related events like storms, floods, or droughts are able to avoid major financial, educational, and social disruptions, and are supported in their decisions to move out of harm's way or to make their properties more resilient.

https://www.mapc.org/wp-content/uploads/2021/12/12.-MC2050-Goals.pdf

Boston

Boston Metro Area - Highlights

Example

Goal D: A Net Zero Carbon Region

The Metro Boston region is highly energy efficient and has reduced its greenhouse gas (GHG) emissions to net zero.

In 2050, Metro Boston is deeply energy efficient and climate-smart. We power our communities, buildings, and vehicles with renewable energy. The region benefits from having made deep cuts in GHG before 2030, and reaching net zero emission by 2050, as part of the state and global effort to avoid the worst impacts of the climate crisis. Making zero-emissions choices for food, clothing, and other goods is easy, affordable, and convenient for everyone. The public health, resiliency, and other benefits of a net-zero carbon future are distributed equitably, lifting up all communities, particularly those who had historically borne greater burdens. The new energy economy is affordable, even for those with limited incomes or other economic burdens.

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1. Energy demand is significantly reduced and energy efficiency is maximized across the region.
2. Affordable carbon-free energy powers our modernized and smarter electricity grid, and heating and cooling are fully decarbonized.
3. Renewable energy, including centralized, district-scale, and distributed generation and storage composes the region's primary sources of energy.
4. All new construction and major renovation projects meet net zero emissions standards for heating, cooling, and electricity needs by 2030. Existing buildings meet this standard by 2050.
5. All land travel in the region is by carbon-free modes including walking, biking, electrified public transit, and electrified passenger vehicles. Air, heavy-duty freight, and marine transportation have significantly reduced carbon emissions, and are providing carbon offsets.
6. The "Green Economy" supports local workforce development, entrepreneurs, and living wage jobs that foster more widespread economic opportunity.
7. The benefits and impacts of new energy infrastructure are distributed equitably across the region, with all groups benefiting and no location or population bearing a disproportionate burden.

https://www.mapc.org/wp-content/uploads/2021/12/12.-MC2050-Goals.pdf

Boston

Boston Metro Area - Highlights

Example

Goal F: A Healthy Environment

Greater Boston's air, water, land, and other natural resources are clean and protected – for us and for the rest of the ecosystem.

In 2050, our air is pure, indoors and out. Our cities and towns are healthy, with beautiful parks and natural areas accessible to all. And our cities and neighborhoods are quieter, with less polluting and more efficient transportation technologies. Contaminated sites are cleaned up and turned to new uses. There is less waste overall, but unavoidable waste produces energy, fertilizes soil, or is reprocessed. We have enough fresh water from our wells, streams, and reservoirs to meet the needs of people and wildlife. Our farms and fisheries produce plentiful and healthy yields, and are sustainable. Habitats, forests, wetlands, and other natural resources are protected and enhanced.

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1. Water is clean and sustainably managed. Waterways exceed Clean Water Act standards and meet the appropriate needs of residents, industry, forests, farms, and wildlife.
2. A robust network of protected open space, waterways, farms, parks, and greenways provide wildlife habitat, ecological benefits, recreational opportunities, and scenic beauty.
3. Farms, fisheries, community gardens, and natural landscapes are prevalent, and able to adapt and thrive in the face of the changing climate. They offer residents access to fresh, affordable, healthy, and local food.
4. Populations who experienced historic environmental injustices enjoy air, energy, and water as clean as any other residents enjoy.
5. The region produces very little solid waste. What it does create is reused, composted, recycled, or turned into energy within the region.
6. Few contaminated sites exist. Former contaminated sites have been redeveloped to create jobs or homes, or restored to support green infrastructure and habitat, and to mitigate climate impacts.
7. The use and exposure to toxic chemicals have been greatly reduced in manufacturing, products, and throughout the environment.

https://www.mapc.org/wp-content/uploads/2021/12/12.-MC2050-Goals.pdf

Boston

Example

Boston Metro Area - Highlights

FOCUS40 PROGRAMS

Service	We're Doing (Commitments through 2023)	We're Planning (Next Priorities through 2040)	We're Imagining (Big Ideas)
Bus 2040	• Better Bus Project: Current Route Network Improvements • Bus Network Redesign Process • Partnerships for Bus Priority • Accessible Bus Stops • Modern Bus Stops and Amenities • Bus Fleet Replacement and Expansion (Procurement and Maintenance Facility Reconfiguration) • Zero-Emission Bus In-Service Testing ***Total Programmed Commitment through 2023: $650 million***	• Phased Conversion to Zero-Emissions Fleet and Facilities (Maintenance Facilities and Fleet Procurement) • Implementation of Bus Network Redesign (New or Enhanced Services and Expanded Fleet) • Priority Bus Rapid Transit Corridors	• Autonomous Bus Shuttles
Silver Line 2040	• Silver Line Fleet Replacement (Procurement and Maintenance Facility Reconfiguration) • Silver Line Washington Street Improvements • Transit Priority Infrastructure in the Seaport ***Total Programmed Commitment through 2023: $150 million***	• Expanded Silver Line Fleet • Bus Rapid Transit through Everett • Infrastructure Upgrades in Silver Line Tunnel	• Silver Line Tunnel Extension Under D Street in the Seaport
Blue Line 2040	• Resiliency: Planning and Early Actions • Reliability Centered Vehicle Maintenance Program ***Total Programmed Commitment through 2023: $47 million***	• Blue Line Capacity and Reliability Improvements • Resiliency: Further Implementation • Red–Blue Connector	• Blue Line Connection to Red Line and Beyond • Blue Line Extension to Lynn
Green Line 2040	• Green Line Transformation: State of Good Repair (SGR) Projects • Green Line Transformation: Fleet Planning • Green Line Extension to Somerville and Medford • Surface Green Line Stop Consolidation • Surface Green Line Transit Signal Priority • Green Line Train Protection • Accessibility Upgrades at Hynes and Symphony Stations • Green Line Extension to Mystic Valley Parkway Final Environmental Impact Report ***Total Programmed Commitment through 2023: $1.9 billion***	• Green Line Transformation Phase 2: New Fleet, Upgraded Infrastructure and Maintenance Facilities • Green Line Transformation Phase 3: Expanded Capacity on D and E Branches (2-Car Trains) • Surface Green Line Optimization	• Green Line Transformation Phase 4: Expanded Capacity on B and C Branches (2-Car Trains) • Green Line Extension to Hyde Square • Downtown Superstation • Green Line Extension to Mystic Valley Parkway, Somerville/Medford
Orange Line 2040	• Orange Line Systemwide Improvement Program: Fleet Replacement and Maintenance Facility Upgrades • Orange Line Systemwide Improvement Program: Capacity and Reliability Improvements (4.5-Minute Headways) ***Total Programmed Commitment through 2023: $613 million***	• Additional Capacity Improvements (3-Minute Headways)	• Sullivan Square Superstation (Commuter Rail/ Orange Line/Silver Line) • Orange Line Extensions (Everett, Roslindale) • Downtown Superstation
Red Line 2040	• Red Line Systemwide Improvement Program: Fleet Replacement and Maintenance Facility Upgrades • Red Line Systemwide Improvement Program: Capacity and Reliability Improvements (3-Minute Headways) • Red Line South Improvements: Wollaston Station, Transit-Oriented Development, Parking Garages • Mattapan High-Speed Line: Reimagining and Short-Term Improvements ***Total Programmed Commitment through 2023: $998 million***	• Strategic Improvements to Support Future Capacity Increases • Mattapan High-Speed Line: Implementation of Reimagining • Red–Blue Connector	• Blue Line Connection to Red Line and Beyond • Downtown Superstation
Commuter Rail 2040	• *Rail Vision* (Study and Decision on Service Alternatives) • South Coast Rail Phase 1 • North Station Drawbridge • Bi-Level Coach Procurement • Locomotive Upgrade and Replacement • Ruggles Station Upgrades • Positive Train Control ***Total Programmed Commitment through 2023: $1.9 billion***	• Tower 1 Upgrade • Exploration of Commuter Rail Electrification Pilot Programs • Station Investments (Infill Stations, Connections to Rapid Transit) • Regional Multi-Modal West Station and Midday Train Layover • Double and Triple Tracking to Add Capacity	• Full Electrification of Commuter Rail
Water Transportation 2040	• Hingham Infrastructure Improvements • New Ferry Service Pilot Programs • Fleet Expansion to Four Ferries ***Total Programmed Commitment through 2023: $30 million***	• Expanded and Better Integrated Multi-Provider Water Transportation Network	• Full Implementation of an Expanded, Comprehensive, Multi-Provider Ferry Network

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Boston

Boston Metro Area - Highlights

Example

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FOCUS40 PROGRAMS

Systemwide	We're Doing (Commitments through 2023)	We're Planning (Next Priorities through 2040)	We're Imagining (Big Ideas)
Accessibility and Paratransit	• *Plan for Accessible Transit Infrastructure* (PATI) Completion • PATI Early Action Bus Improvements • PATI Early Action Rapid Transit and Commuter Rail Improvements ***Total Programmed Commitment through 2023: $384 million***	• PATI Improvements at Surface Green Line Stops • PATI Accessibility Improvements for Commuter Rail • Vertical Transportation Program	• Leveraging Emerging Technologies
Resiliency	• Systemwide *Climate Change Vulnerability Assessments* • Blue Line Resiliency and Adaptation • Green Line Portal Protection at Fenway • Charlestown Seawall • Adaptation Strategies for Priority Infrastructure, in Collaboration with Municipalities ***Total Programmed Commitment through 2023: $58 million***	• Resilient Power Supply • Incremental Implementation of the Systemwide *Climate Change Vulnerability Assessments*	• Full Systemwide Climate Resilience
Customer Experience	• Automated Fare Collection (AFC 2.0) • Stop and Station Improvements (Wayfinding, Communications, and Lighting) Phase 1 • Digital MBTA (Travel Planning and Performance Enhancements) Phase 1 • Partnerships for Improved First-Mile/Last-Mile Connections ***Total Programmed Commitment through 2023: $250 million***	• Digital MBTA (Travel Planning and Performance Improvements) Phase 2 • Stop and Station Improvements (Wayfinding, Communications, and Lighting) Phase 2 • Platform Barriers and Doors Pilot Program • Multi-Modal System Access and Parking Improvements	• Comprehensive and Cutting Edge Digital MBTA
Place-Based Service Additions	• Studies: Transit Action Plans for Priority Places (Seaport, Allston, Lynn) • Service Pilot Programs • Green Line Extension to Somerville/Medford • South Coast Rail Phase 1 ***Total Programmed Commitment through 2023: $1.2 billion***	• Place-Based Service Expansions Based on Pilot Programs and Transit Action Plans • Implementation of Bus Network Redesign • Commuter Rail Station Investments • Regional Multi-Modal West Station • Bus Rapid Transit through Everett • South Coast Rail Full Build • Red-Blue Connector	• Full Implementation of Place-Based Transit Expansion Programs • Green Line Extension to Mystic Valley Parkway • Green Line Extension to Hyde Square • Orange Line Extension to Roslindale • Orange Line Spur to Everett • Blue Line Extension to Lynn • Blue Line Connection to Red Line and Beyond

Boston

Boston Metro Area - Highlights

Boston's Transit Action Plans and Place-Based Service Additions

MassDOT and MBTA launched Transit Action Plans to identify and expedite the implementation of transit improvements in targeted communities, such as the city of Lynn and the Seaport and Allston neighborhoods, that can benefit from extra transit capacity. The plans seek to inform short-term improvements and service pilot programs, providing guidance on longer-term projects and investments in such communities recognized as Priority Places.

The objective of Place-Based Service Expansions is to prioritize new services and expansion projects on providing high frequency, reliable service to better achieve the needs of people who live and work in and travel to Priority Places that can support high quality transit.

Place-Based Service Expansions were determined by the Transit Action Plans and related programs, where transit improvements will be slowly introduced. Low-cost interventions will be initially implemented to realize the expected benefits, and higher-cost actions will follow thereafter if the demand for transit service is apparent. In real time, this will begin with bus improvements, with incrementally complex supportive roadway infrastructure to match successful services, making a future network of bus rapid transit service attainable.

Source: Allston Brighton Health Collaborative

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Philadelphia

Philadelphia Metro Area

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

Plan: Connections – 2050

- Includes a Municipal Implementation Toolbox to guide implementation of goals

Geographic focus: Greater Philadelphia area

Purpose: Seeks to achieve a more equitable, resilient, and sustainable region for Greater Philadelphia

Related Plan: The Philadelphia Transit Plan – 2045

Policy Priorities:

- Achieve four focus areas (see graphic at right)
- Reduce barriers and protect civil rights
- Reduce GHGs
- Strengthen communities' infrastructures or move them away from harm

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Philadelphia

Philadelphia Metro Area

Alignment w/ RTP Priorities

- ☑ Equity
- ☑ Climate
- ☑ Safety
- ☑ Mobility

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Alignment with RTP Priorities (highlights):

Equity:

- Fosters racially and socioeconomically integrated neighborhoods.
- Advance environmental justice for everyone in the region.
- Implement fare-capping structure like Portland region's (Philadelphia Transit Plan).

Safety:

- Sets Vision Zero goal of zero fatalities and serious injuries by 2050.
- Strengthens transportation network security and cybersecurity.

Climate:

- Protects one million acres of open space by 2040.
- Attains net-zero GHG emissions by 2050 and prepares communities for climate change impacts.

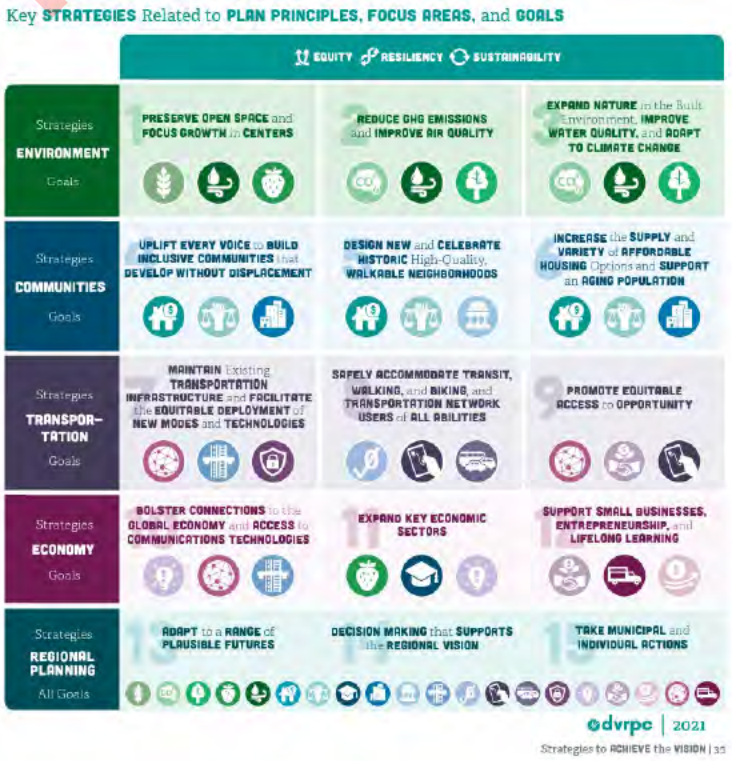
Mobility:

- Prioritizes state of good repair explicitly, including comprehensive ADA accessibility.
- Directly links transit mobility and reliability with reducing congestion and VMT.

Philadelphia

Philadelphia Metro Area - Highlights

- Philadelphia – 2050 Long Range Plan
  - US 1 BRT; South Jersey BRT; bus priority corridors; fixed-guideway shuttle service; zero-emission fleet infrastructure procurement
  - High-speed rail, heavy rail, light rail, and street -car service expansions and improvements



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Peer Relevance to Region

Peer Region	Alignment w/ RTP Desired Outcomes			
	Equity	Safety	Climate	Mobility
Seattle	✓	✓	✓	✓
San Francisco	✓	✓	✓	✓
Los Angeles	✓	✓	✓	✓
Twin Cities	✓	✓	✓	✓
Austin	✓	✓	✓	✓
Boston	✓	✓	✓	✓
Philadelphia	✓	✓	✓	✓

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Additional Focused Review

(In Progress)

- How do peer HCT and ETC definitions align with our region?
- For a selection of peers (e.g., San Francisco, Seattle, Boston), did equity and/or climate policy shifts change direction from previous plan, and if so, in what way?

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San Francisco

City and County of San Francisco and/or Bay Area Region

HCT Definition/Modes: Regional Rail (BART, Caltrain, Capitol Corridor), Light Rail (Muni Metro), BRT (Van Ness BRT, AC Transit Tempo)

ETC Definition/Modes: Rapid Bus (Muni Rapid) limited stop service; Muni Forward program includes smaller-scale bus and light rail speed & reliability projects citywide

Equity Policy Shift: Pandemic refocused priorities on serving essential trips citywide

Climate Policy Shift: Prioritization of transit to help address climate change; expansion of programs and initiatives to reduce emissions

Shift in priorities: Mix of major capital projects and lower cost citywide bus/rail reliability investments to maximize limited funding resources

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Seattle

Central Puget Sound Region / King County

HCT Definition/Modes: Commuter Rail (Sounder), Light Rail (Link), BRT (Stride), Arterial BRT (RapidRide)

ETC Definition/Modes: Ranges from RapidRide arterial BRT (no specific exclusive right-of-way requirement) to coordinating capital improvements on the frequent service network

Equity Policy Shift: Change in future stop locations from 80% in Seattle to 60% to allow City to buy-up service for routes serving areas to the south, where residents had been displaced

Climate Policy Shift: GHG reductions modeled by land use, mode choice, pricing, or decarbonization technology, with respective future targets and capital/infrastructure goals

Shift in priorities: Bus service expansions, inter- and intra-regional rail infrastructure, regional high-capacity transit

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Boston

Boston Metro Area

HCT Definition/Modes: Commuter Rail (Purple Line Commuter Rail), Light and Heavy Rail (Blue, Green, Orange, and Red Lines), BRT (Silver Line) - additional corridors prioritized in Bus 2040 vision

ETC Definition/Modes: Bus network improvements, priority treatments, stop accessibility, and service enhancements and expansions, along designated corridors

Equity Policy Shift: Means-based fare for low-income transit riders, with legislative support for operating funds

Climate Policy Shift: Induced demand and VMT analyses integrated into MEPA

Shift in priorities: Higher cost investments in capital for rail, and lower cost investments in capital, accessibility, and reliability for bus

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Philadelphia

Philadelphia Metro Area

HCT Definition/Modes: Commuter Trolley, BRT, People Mover, Frequent Regional Rail, Heavy Rail (Subways/Elevated Lines)

ETC Definition/Modes: Quantitative metrics include riders per mile, low-income riders per mile, service hours per mile, average speed, and coefficient of variance of average speed, among qualitative metrics

Equity Policy Shift: Universal design and user experience, such as implementation of full ADA access

Climate Policy Shift: Procurement of battery-electric buses and implementation of associated charging infrastructure

Shift in priorities: Specific focus on implementing high capacity transit and realizing its transit system benefits

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Additional Peer Investigation

This section provides tables with additional informational on the peer regions, which has also been incorporated into the presentation slides included above.

Examples of HCT or ETC-Related Policies

The table below provides examples of HCT or ETC-Related Policies or Mode Definitions in the Portland Region.

Figure A-2 Examples of Local Jurisdictions with HCT or ETC-Related Policies or Definitions

Jurisdictions	HCT or ETC Related Policies	HCT Definition and/or Modes	ETC Definition
City of Portland	ETC: See City of Portland Enhanced Transit Corridors Plan	N/A	▪ Increased capacity, reliability and transit travel speed ▪ Moderate capital and operational investments ▪ Context sensitive ▪ Deployed relatively quickly ▪ Can include buses and streetcar
City of Hillsboro	POLICY T 2.6 High-Capacity Transit. Coordinate with local and regional partners to expand high-capacity transit service where consistent with the City's needs and interests, to enhance mobility options, increase overall transit use, and better connect local and regional employment, commercial, and residential areas.	Not defined specifically	▪ Not defined specifically

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Jurisdictions	HCT or ETC Related Policies	HCT Definition and/or Modes	ETC Definition
CTRAN		HCT Modes: ▪ BRT-Lite (bus rapid transit in mixed traffic) ▪ BRT-Hybrid: BRT full concepts, but could maintain the ability to save significant bus travel time ▪ BRT-Full (bus rapid transit in exclusive guideway) ▪ Streetcar ▪ Light Rail ▪ Commuter Rail	None, but City of Vancouver TSP will include Enhanced Transit Corridors.

The table below provides examples of HCT or ETC-Related Policies or Mode Definitions for Peer Regions.

Figure A-3 Peer Region Policy Examples and HCT and ETC Definitions

Peer Region	HCT or ETC Related Policies	HCT Definition and/or Modes	ETC Definition
Seattle Region (Puget Sound Regional Council, Sound Transit, and King County Metro)		BRT: ▪ Bus service that operates as part of the region's high-capacity transit system, with frequent service most of the day; articulated buses; stops at half-mile intervals; operation in improved roadways, bus lanes, or segregated right of way; shelters with real-time arrival signs; and offboard fare payment. ▪ Includes RapidRide Arterial BRT and Stride BRT (two highway corridor lines opening starting in 2026)	No specific definition, but frequent service definition includes: ▪ Coordinate service, capital, and customer information investments. Develop an investment framework to align capital improvements with service growth and needs as frequent transit expands. Frequent routes and stops will be easy for customers to identify, and information will be consistent and accessible at the stop, online, and other avenues. ▪ Work with city partners to invest in capital improvements and ensure transit-supportive policies. Prioritize transit over other modes, construct features that improve speed, reliability, and access to transit, and address

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Peer Region	HCT or ETC Related Policies	HCT Definition and/or Modes	ETC Definition
			existing needs and gaps. The level of investments will vary depending on the need and right-of-way conditions. Metro will work with cities to adopt transit-supportive land use policies, such as appropriate zoning, reduced parking requirements, and affordable housing incentives, along corridors with frequent service.
San Francisco Bay Area		▪ Regional Rail (BART, Caltrain, Capitol Corridor), Light Rail (Muni Metro), BRT (Van Ness BRT, AC Transit Tempo)	▪ Rapid Bus (Muni Rapid) limited stop service; Muni Forward program includes smaller-scale bus and light rail speed & reliability projects citywide
Boston	MetroCommon 2050 Strategy 2: Reimagine roadway corridors that connect into downtown Boston to encourage higher-occupancy modes to discourage single-occupancy vehicle travel. Action 2.1: The Legislature should require MassDOT to implement a congestion pricing pilot and use the revenue to expand complementary transit services. Action 2.2: MassDOT should incentivize cities and towns to dedicate more roadway space exclusively for buses and cyclists through competitive grant programs funded in the state's Capital Investment Plan. Action 2.3: Update Massachusetts Environmental Policy Act (MEPA) regulations to include an analysis of induced demand and vehicle miles traveled (VMT) generated by new roadway capacity expansion projects.	HCT Modes, with specific lines from MBTA Focus40 Plan ▪ BRT: Silver Line, with additional bus to BRT conversions – faster, more convenient, more comfortable service through higher-capacity vehicles, higher frequencies, exclusive bus lanes, transit signal priority, amenity-rich stations with level all-door boarding and station spacing up to a half-mile apart. ▪ LRT/Heavy Rail: Blue, Green, Orange, and Red Lines ▪ Commuter Rail: Purple Line Commuter Rail	Bus Corridors: ▪ Bus priority treatments in high-demand, high-delay corridors ▪ New buses for new routes and higher capacity for existing services ▪ Expansion of the proportion of the available per-day fleet. Place-Based Transit and Service Expansion Plans and Programs (overlapping with HCT modes)
Philadelphia	Connections 2050 GOAL: Maintain a safe, multimodal transportation system that serves	HCT Modes, specifically called out in Philly 2045 Transit Plan High Capacity Transit section	Bus corridors ranked based on: 1. Quantitative Metrics

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Peer Region	HCT or ETC Related Policies	HCT Definition and/or Modes	ETC Definition
	everyone. Notable sub-goal: Increase MOBILITY AND RELIABILITY, while reducing congestion and VMT. Philly Transit Plan Policy 3: Frequent and connected service The City of Philadelphia has identified expanded access to frequent service, particularly frequent weekend bus service, as critical to achieve the vision and goals of this plan.	▪ Trolley: faster, safer, more reliable service with larger vehicles, better ADA accessibility, updated signals, transit priority treatments ▪ BRT (Lite, Hybrid, and Full) ▪ People Mover: To and from airport ▪ Frequent regional rail: planned for two-car trains every 15 minutes, carrying 856 passengers per hour, with at-level boarding for high-level ADA accessibility ▪ Subways/elevated lines/heavy rail	▪ Riders per Mile ▪ Low Income Riders per Mile ▪ Service Hours per Mile ▪ Average Speed ▪ Coefficient of Variance of Average Speed 2. Qualitative Metrics ▪ Ability to leverage other investments ▪ Geographic equity ▪ Connections to high capacity transit stations (Market-Frankford Line and Broad Street Line stations), and propensity for corridor to remain or become more important through Comprehensive Bus Network Redesigns ▪ Ability for near-term collaboration with another agency's capital project
Minneapolis	Transportation Policy Plan GOAL: Access to destinations. A reliable, affordable, and efficient multimodal transportation system supports the prosperity of people and businesses by connecting them to destinations throughout the region and beyond.	HCT Modes ▪ Commuter rail: wider stop spacing with fewer stops, longer travel distances, and faster travel time, in comparison to LRT ▪ LRT: fast, reliable, and frequent fixed-guideway service ▪ BRT (Lite, Hybrid, and Full), including Arterial BRT: faster trip, more frequent and convenient service, signal priority, and specialized train-like vehicles, in comparison to other bus services ▪ Commuter bus: Usually similar to commuter rail but with lower capital costs and carrying capacity	ETC elements include: ▪ Context-sensitive design ▪ Targeted investments ▪ Technological advancement areas ▪ VMT reduction areas ▪ Congested areas ▪ Areas with mix of land uses Examples include: Riverview Corridor, Rush Line Corridor, West Broadway Transit Corridor, Snelling Ave, and Penn Ave

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Peer Region	HCT or ETC Related Policies	HCT Definition and/or Modes	ETC Definition
		▪ Express bus: Limited-stop service between downtown and suburban park-and-rides	

Examples of Equity and/or Climate-Related Policies, Criteria, or Outcomes

Policy Highlights from Peer Regions

Most of the peer agencies have policies/strategies to reduce emissions from transit vehicles. Several of the peer regions have specific policies to integrate climate change into their policies in other dimensions, either explicitly or implicitly. Three with the strongest climate-related policies are listed below along with selections from policy language:

King County Metro integrates climate and equity throughout their long-range plan, Metro Connects.

- Metro will strive to support and strengthen the communities it serves with transit. It recognizes the importance of integrating land use and transit service to advance equity and address climate change. Evidence shows that it is the combination of increased transit service, increased land use density, and equitable pricing of vehicle usage together that drives down car travel, no one strategy alone will get there.[21]
- Advance equity and address climate change by providing additional service in areas with unmet need[11] and making transit a more competitive option to driving alone.
  - [11] Per the adopted Mobility Framework, unmet need is defined as areas with high-density, a high proportion of priority populations, and limited midday and evening service.

Plan Bay Area also integrates climate and equity, focusing strategies on mode shift from employers through trip reduction and TDM, while noting synergies with other strategies including transit that are required to enable these changes.

- Bold strategies that go beyond prior regional planning efforts to reduce climate emissions by higher margins and advance equity at the same time can demonstrate that climate and equity goals can go hand-in-hand.
- The plan seeks to mitigate emissions and reduce future climate impacts at the employer level by expanding commute trip reduction programs at major employers. On an individual level, the plan encourages Bay Area residents to drive less through transportation demand management initiatives. When people do choose to drive, Plan Bay Area 2050's strategy to expand clean vehicle initiatives could help them purchase and power their cars with the most environmentally friendly options.

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- The following environmental strategies work in concert with other strategies described in the housing, transportation and economy chapters of Plan Bay Area 2050 to reduce climate emissions. When implemented together as one package of policies and investments, the 35 plan strategies reduce GHG emissions by focusing housing and commercial construction in walkable, transit-accessible places; investing in transit and active transportation; and shifting the location of jobs to encourage shorter commutes.

Boston has strong policy language related to transit. It recognizes transit's role more implicitly compared to the Seattle example in particular, but the language emphasizes the role of land use policies and development.

- The Metro Boston region is highly energy efficient and has reduced its greenhouse gas (GHG) emissions to net zero. All land travel in the region is by carbon-free modes including walking, biking, electrified public transit, and electrified passenger vehicles.

Local land use policies and new development support increased mobility by encouraging concentrated growth around transit and the services people need.

Examples of Policy Shifts and Outcomes and Evaluation Criteria or Performance Measures

The table below provides examples of peer region equity and climate policy shifts and outcomes.

Figure A-4 Examples of Peer Region Equity and Climate Policy Shifts and Outcomes

Peer	Equity Policy Shift?	Climate Policy Shift?
Seattle Region (Puget Sound Regional Council, Sound Transit, and King County Metro)	▪ Change in policy to look beyond ridership to who is served (previously 80% of stops on a route needed to be in Seattle in order for the City to buy-up service, but didn't cover majority of ridership – changed to 60% threshold to allow Seattle to invest.)	▪ Procurement of zero-emission vehicles and infrastructure. ▪ Prioritization of mode share away from SOV travel. ▪ GHG reduction targets for 2030 and 2050, respectively. ▪ GHG reductions model disaggregated by land use, transportation choice, pricing, and technology and decarbonization categories
San Francisco Region	▪ Equity Priority Communities, where people are disproportionately underserved, are the focus of how and where the benefits of transit investments are realized.	▪ Prioritization of transit to mitigate climate change effects by increasing mode share and decreasing emissions. ▪ Expansion of commute SOV trip reduction program, clean vehicle initiatives, and transportation demand management initiatives.

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Boston Region	▪ Means-based fare for low-income households, aligning with peer regions such as MTC (San Francisco), MTA (New York), and Metro (D.C.), reducing up to 100% of transit trip costs for people making up to 200% of the federal poverty level.	▪ Reductions in SOV travel and VMT by increasing TODs, walkable centers, and related areas. ▪ Reductions in emissions by decarbonizing the building and transportation sectors.

The table below provides examples of peer region equity and climate-related evaluation criteria or performance measures.

Figure A-5 Equity or Climate Focused Evaluation Criteria or Performance Measure Definitions

Peer	Equity	Safety	Climate	Mobility (including Access)
Seattle (Region)	▪ People of color and people with low incomes will experience less delay and shorter travel times than the regional average ▪ Areas with higher concentrations of people of color and people with low incomes in 2050 will have higher rates of access to HCT (82% and 79% respectively) compared to the regional average		▪ Greenhouse gases will be reduced by 50% below 1990 levels by 2030 and by over 83% from 1990 levels by 2050	▪ Households on average will experience a 15% reduction in delay from current conditions ▪ Average household VMT are reduced by 23% ▪ 59% of households will be within a half-mile of HCT ▪ Percentage of existing population near high-frequency transit service
San Francisco (City)	For people with low-incomes and people in Equity Priority Communities: ▪ Number of people who live within a ¼-mile of very frequent and frequent service bus routes, and within ½-mile of rail investments. ▪ Number of total jobs reachable by transit in 45 minutes of less (30 minutes also evaluated, and 75 minutes for regional transit trips).	▪ Share of project corridor overlapping with high-injury network (informational only)	▪ Change in share of residents who are live within ½-mile of high-capacity transit with a project compared to the baseline (screening measure) ▪ VMT and GhG reduced, and change in transit mode share	▪ Daily transit trips using a project ▪ Reduction in crowding ▪ Change in travel time ▪ Change in access to jobs and activity centers

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Peer	Equity	Safety	Climate	Mobility (including Access)
	Utilized City travel demand model to analyze metrics for all trips, trips by low-income persons (200% of poverty), and equity priority populations ▪ Change in access to jobs within 45 minutes ▪ Change in access to activity centers and services within 45 minutes ▪ Change in ridership ▪ Cost-effectiveness (change in low-income or equity priority population ridership divided by capital cost) ▪ Change in travel time			
Minneapolis	▪ Miles traveled by biking and walking ▪ VMT per person	▪ Condition of transit infrastructure (state of good repair)	▪ Air emissions from on-road vehicles	▪ Percentage of existing population near high-frequency transit service ▪ Access to jobs ▪ Percentage of projected population and job growth near high-frequency transit service ▪ Non-SOV mode share percentages ▪ Peak hour excessive delay[1]

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[1] Peak delay: Travel time at 20 MPH or 60% of the posted speed limit travel time, whichever is greater, measured in 15-minute intervals during peak hours. https://rosap.ntl.bts.gov/view/dot/53718

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DRAFT TECHNICAL MEMORANDUM

DATE:	August 23, 2022; Revised August 31, 2022
TO:	Ally Holmqvist, Metro
FROM:	Eddie Montejo, Parametrix Ryan Farncomb, Parametrix Kelly Betteridge, Parametrix Sam Erickson, Parametrix Oren Eshel, Nelson/Nygaard
SUBJECT:	Revised Corridor Evaluation Criteria and Level 1 Corridor Screening Results
CC:	Project file
PROJECT NAME:	Metro High Capacity Transit (HCT) Strategy Update

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1 INTRODUCTION

The High Capacity Transit (HCT) System Strategy Update (HCT Update) project is reviewing and updating the region's HCT network vision. The original HCT Plan was developed in 2009 and has been updated several times since then, with the most recent review of HCT corridors occurring in 2018 as part of the Regional Transit Strategy. This memorandum documents the existing regional HCT corridor vision and proposes potential additional corridors for inclusion. The project team proposes evaluation criteria for screening candidate HCT corridors for inclusion in the regional HCT system vision as well as results of the initial screening.

1.1 Defining High Capacity Transit

For purposes of this project, "high capacity transit (HCT)" refers to the following modes and/or services:

- Bus Rapid Transit (BRT)
- Rapid Streetcar
- Light Rail Transit (LRT)
- Commuter Rail/Heavy Rail

Additionally, the HCT Update encompasses other high capacity or enhanced system elements including:

- Enhanced Transit Corridor (ETC) and "better bus" enhancements that enhance bus speed and reliability
- Frequent Service fixed route bus investments
- LRT operating improvements
- Other existing HCT corridor "state of good repair" investments

2 HCT CORRIDOR NETWORK UPDATE

Potential corridors are derived from the existing HCT vision, as created in 2009 and last updated in 2018, as well as additional corridors proposed as part of the 2020 regional transportation ballot measure process (T2020). Potential corridors also include those proposed for future frequent bus service in the 2018 Regional Transit Strategy Vision. Frequent Service corridors operate at service levels of "15 minutes of better" much of the day and experience high transit travel demand. Frequent Service corridors represent natural corridors for considering HCT investments. Figure 1 shows TriMet's current Frequent Service network.

Figure 1. TriMet Frequent Service Network

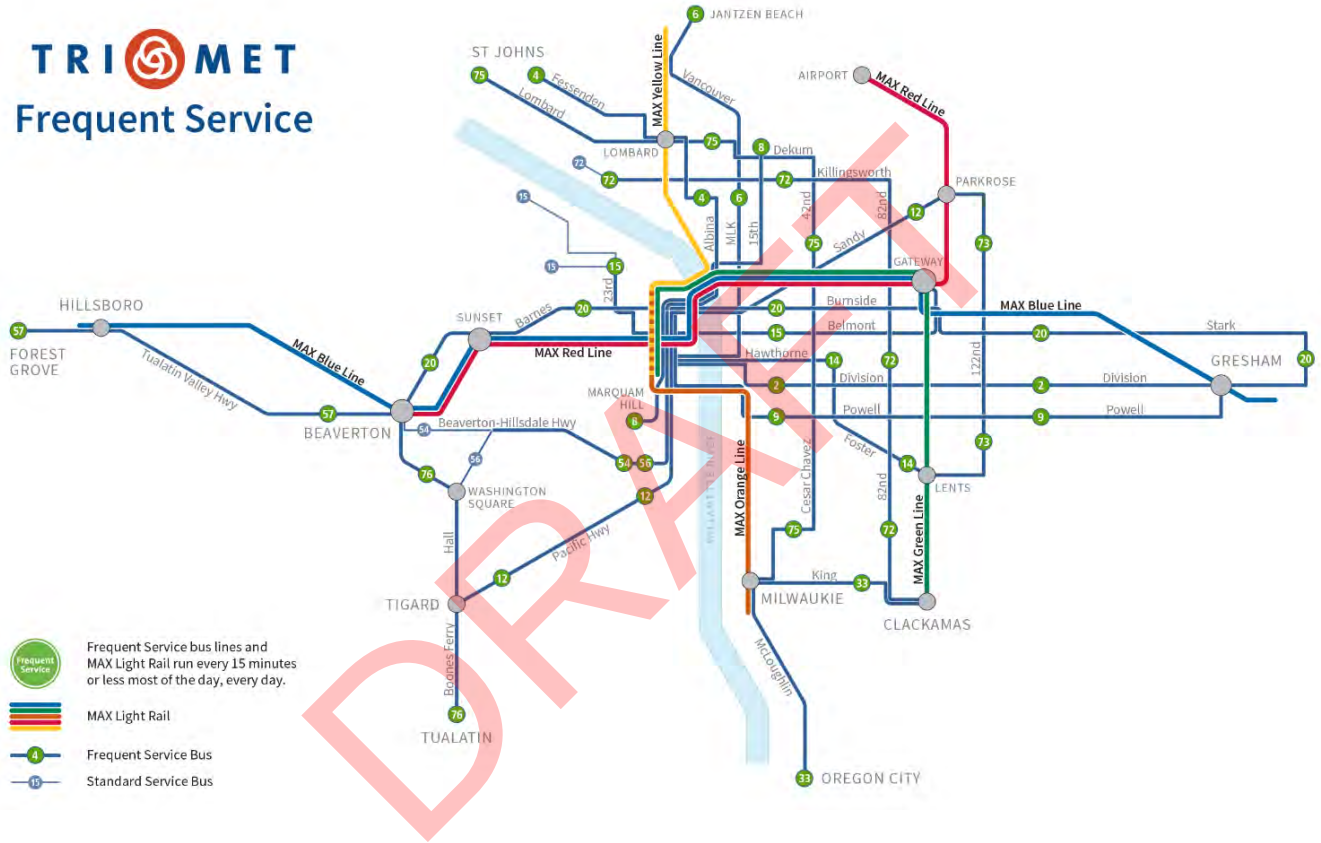
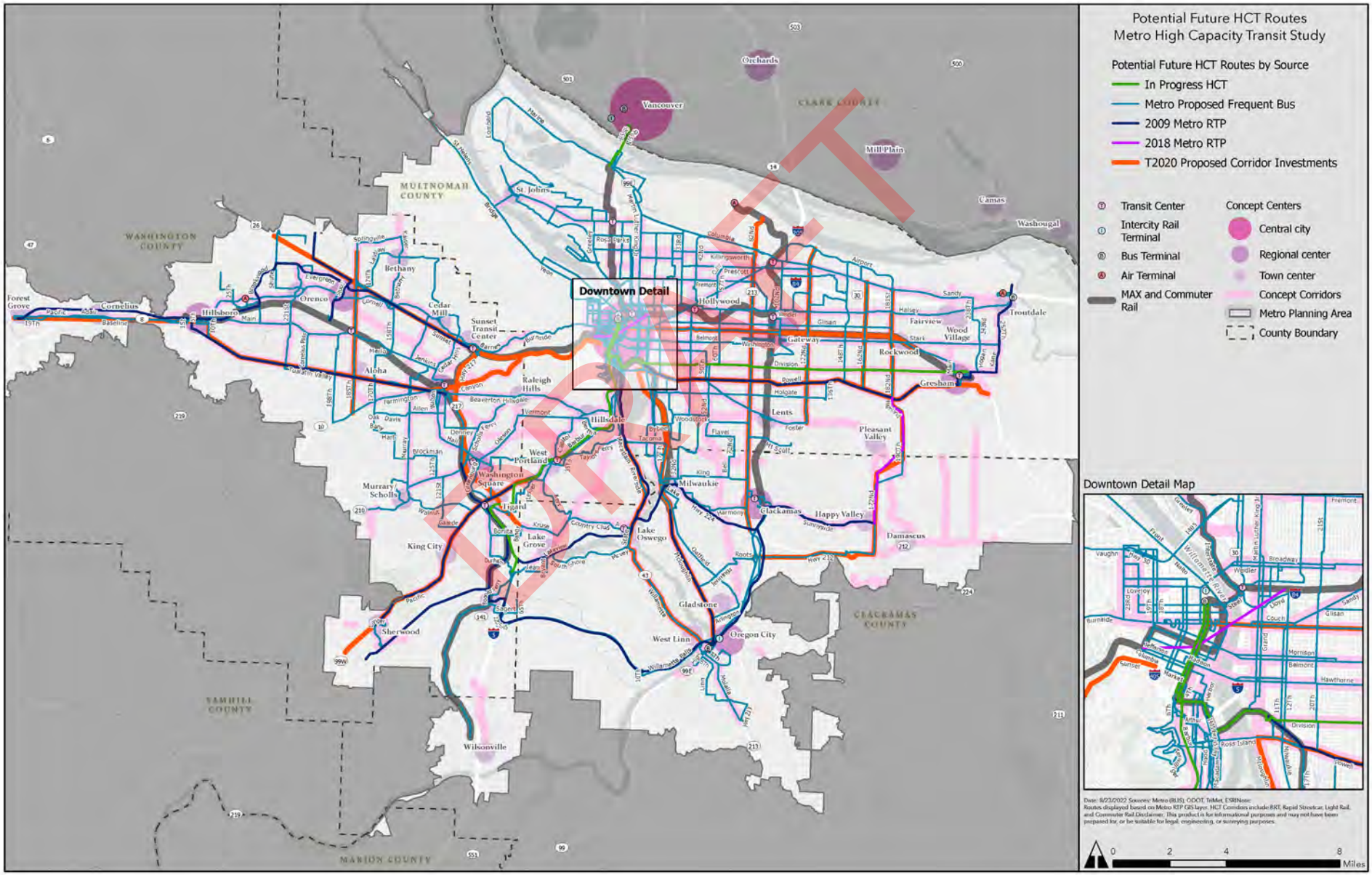


Figure 2 shows all potential HCT candidate corridors in the region. The corridors included in this figure represent the first draft of the HCT network vision that will be evaluated through the process described in this memorandum.

Figure 2. HCT Network - "Universe" of Corridors



3 APPROACH TO CORRIDOR EVALUATION

3.1 Draft Policy Framework

The corridor evaluation builds upon work completed to date for the Regional Transportation Plan (RTP) 2023 Update, which developed a draft updated policy framework based on a review of existing regional transit network policy as well as peer agency policies to identify gaps and priorities for HCT now and in the future. Building from this work, the corridor screening and evaluation criteria were developed to reflect the updated 2023 RTP policy framework to ensure that the analysis reflects current and future regional priorities and desired outcomes for HCT. Some of the key policy areas and drivers influencing the development of screening and evaluation criteria include focus on:

- **Developing specific policies to address equity and climate.** The screening and evaluation criteria evaluate corridor-level impacts to equity and climate based on the RTP draft policy framework. These equity and climate criteria will be used to prioritize investments in the HCT plan.
- **Connecting regional centers.** As part of the 2040 Metro Growth Concept, current RTP network policy focuses on HCT with a majority or all of the service in exclusive guideway connecting Regional Centers and City Centers. With the additional consideration of corridor-based HCT that includes many of the same elements, but without the majority exclusive guideway, an expansion of the network policy was proposed to connect Regional Town Centers to Regional Centers and the Central City. In that case, the evaluation criteria include a policy screen to ensure HCT investments connect Regional Town Centers to Regional Centers and the Central City.
- **Higher capacities.** The RTP currently defines HCT as carrying more transit riders than local, regional, and frequent transit lines. The screening and evaluation criteria consider a range of ridership and operational factors to identify corridors with the highest potential for needing greater transit capacity.
- **Frequency and reliability.** The draft policy framework is also focused on improving access to the regional network by making local transit more frequent, faster, and more reliable through the Enhanced Transit Concept (ETC). Although Enhanced Transit or "better bus" improvements may not always qualify as corridor-based HCT investments, ETC investments supports complimentary investments to HCT by improving access to regional transit, jobs, services, parks, and other essential destinations in the Metro area.

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3.2 Two-Phase Corridor Evaluation Process

The HCT Plan update will replicate the two-phase analysis process done in the 2018 HCT Plan. Level 1 refers to a corridor screening process, which applies criteria to sort and organize the initial universe of potential HCT corridors. As a first step, the screening process is intended to refine the universe of potential HCT corridors by identifying the lowest-performing corridors. The remaining corridors will then be evaluated using the Level 2 Evaluation Criteria. The Level 2 criteria will prioritize corridors into "tiers" based on the technical analysis and corridor readiness criteria. The following subsections summarize the draft Level 1 and Level 2 screening and evaluation criteria.

3.2.1 Level 1 Corridor Screening Criteria

The Level 1 Corridor Screening Criteria is intended as a broad analysis step for sorting and screening out potential HCT corridors based on key evaluation criteria. The Level 1 analysis intentionally uses few criteria to home in on the most important characteristics for successful HCT corridors according to the draft policy framework. The Level

1 Screening also includes a "Policy Screen" that refers to qualitative determinations about where to invest in future HCT based on feedback from the Project Management team and Working Group. For example, the Policy Screen pulls out corridors that are already substantially underway (i.e., advanced design or environmental work underway) such as the I-5 Interstate Bridge Replacement Program and Division Transit Project. Table 1 below summarizes the proposed Level 1 Screening Criteria.

Table 1. HCT Level 1 Corridor Screening Criteria

Criteria	Approach to measurement	Data Source/Notes	Methodology
Existing Ridership	• Average Daily Boardings by Route (2019)[1]	• TriMet ridership data • Meets HCT Plan (2018) Core Criteria • Only applied to existing routes	• Assess TriMet Average Daily Boardings by TriMet Route IDs • Aggregate route-level boardings and classify using 20th percentile breaks
Future Ridership	• 2040 Person Productions + Attractions of TAZs within ½ mile of corridors • Average 2040 Person Productions + Attractions of TAZs within ½ mile of corridors[2]	• Metro Travel Model • Meets HCT Plan (2018) Core Criteria • Applied to existing and proposed routes • Person trips account for all modes • Productions + Attractions is a proxy measure for total activity	• Select TAZ boundaries within ½ mile of corridors as baseline geography for calculation • Sum existing 2040 Person Productions and 2040 Person Attractions for selected TAZs as a proxy for total future activity for corridors; • Calcualate the average of the sum of 2040 Person Productions and Attraction by TAZ to account for shorter corridors • Aggregate route-level future productions and attractings using 20th percentile breaks
Equity	• Metro Equity Focus Areas (EFAs) – EFAs within ½ mile of corridors	• Metro RTP Update (2022) • Meets HCT Plan (2018) Core Criteria • Metro Equity Focus Areas are measured at the Census Tract Level	• Select Census Tracts within ½ mile of potential HCT corridors • Identify Metro Equity Focus Areas (EFAs) within ½ mile of potential HCT corridors • Aggregate route-level EFAs based on 20th percentiles

DRAFT

[1] The Level 1 Corridor Screen will screen existing routes and planned/proposed routes separately to account for the fact that planned/proposed routes do not yet have ridership. Existing average weekday corridor ridership (2019) was only factored into the scoring for existing routes.

[2] Summing the *total* productions and attraction of all TAZs within a ½ mile of corridors accounts for longer corridors with higher potential demand for trips along the length of the route. Using the *average* of the sum of productions and attractions by TAZ within a ½ mile of corridors accounts for shorter corridors that may have concentrated activity but lower total person trips.

Criteria	Approach to measurement	Data Source/Notes	Methodology
Policy Screen (Qualitative)	• *Supports Metro Regional Concept:* Connects at least one (1) Town Center to a Regional Center/Central City. • *Remove Duplicity:* Remove corridors where HCT improvements are already planned such as Interstate Bridge Replacement Program and Southwest Corridor. • Remove C-TRAN routes, tram, and existing streetcar. Remove Division Transit since revenue service will start soon.	• Policy screens are conditional checks to qualify potential HCT routes from the starting universe of corridors.	• Qualitative assessment. Corridors are not scored based on the policy screen, but some candidate corridors will be eliminated based on the application of this criterion.

4 LEVEL 1 CORRIDOR SCREENING RESULTS

Figure 3 shows the results of the Level 1 screening. The policy screen criterion (Table 1) was applied to remove certain corridors; the project team then scored the remaining corridors and displayed the corridors by quintiles, showing those that scored highest, lowest, and in between.

[The Level 1 screening results provide information for decision-making, but do not dictate which corridors should be advanced to the Level 2 screening. The Level 1 screening results will be reviewed by Metro staff and the HCT Working Group to make the determination about which corridors should advance to the Level 2 screening. This memorandum will be revised and updated with Level 2 results at a later date.]

5 BIG MOVES

[DRAFT CONCEPT IN DEVELOPMENT]

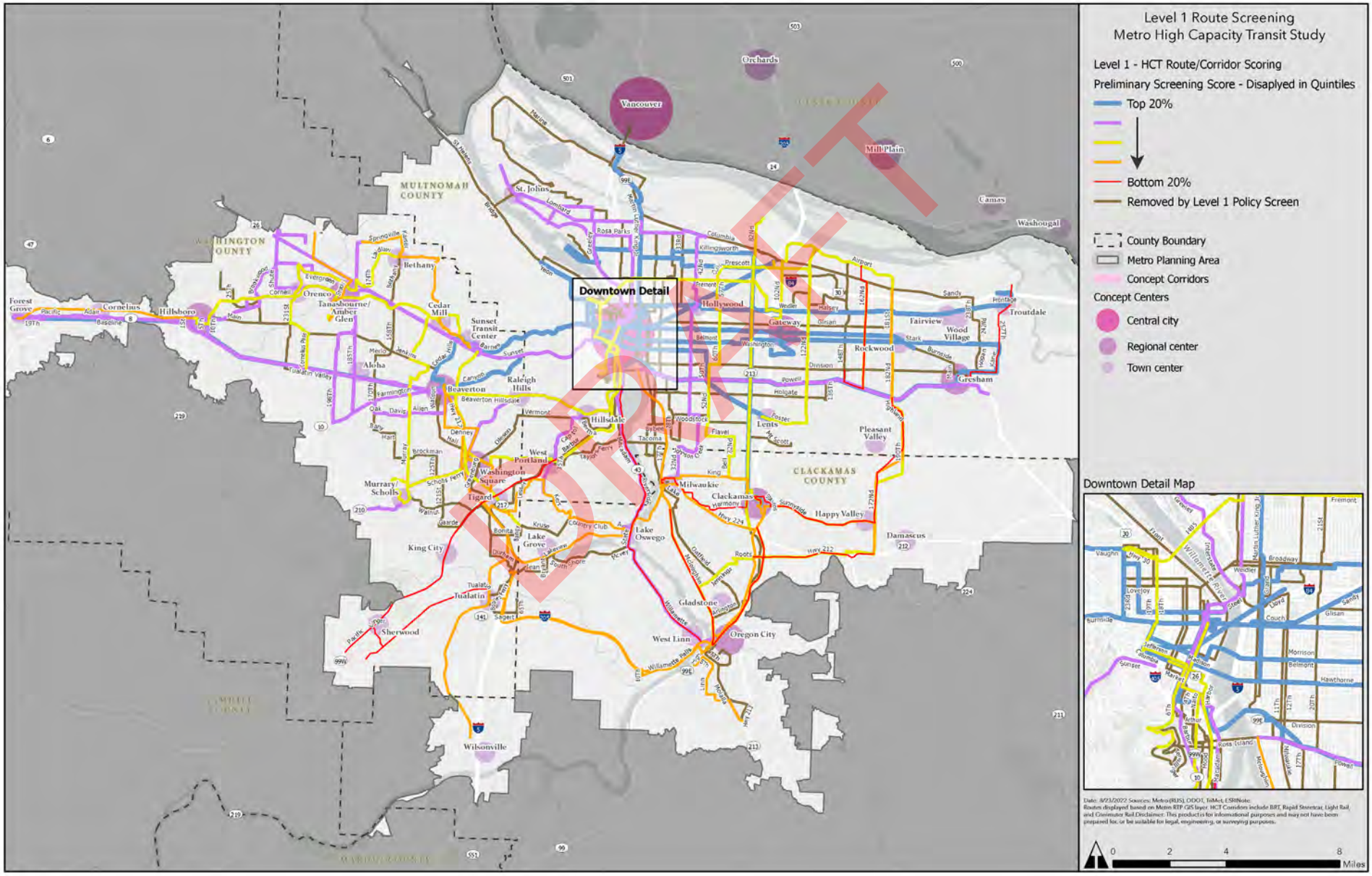
The "Big Moves" approach would complement the approach for screening candidate HCT corridors (HCT Screening) for inclusion in the regional HCT system vision, as described in previous memos. The HCT Screening process analyzed existing and planned frequent service corridors as well as corridors identified through the original HCT Plan in 2009. However, since the screening is primarily based on corridors aligned with the existing TriMet service network, it may not identify travel "desire lines" where the existing transit network does not provide a convenient connection that people would choose for their trip. The project team is proposing an approach to assess additional connections that may not have been identified through the screening process:

1. Where current and future travel demand are strong
2. Where the current transit system does not provide a high quality connection

Connections with strong demand and lower-quality transit may be high priorities to evaluate for HCT, or other types of transit service (HCT may not be the most suitable mode for all areas). This analysis could confirm the need for corridors already identified through the screening process as well as suggest additional connections that should be evaluated as part of the HCT Update. Connections with strong demand and a low-quality transit connection could suggest additional corridors to evaluate for HCT. HCT projects could be identified to strengthen existing parts of the HCT system that are only of moderate quality.

DRAFT

Figure 3. Level 1 Corridor Screening Results



5.1.1 Level 2 Corridor Evaluation Criteria[3]

The Level 2 screening will focus on corridor "readiness;" meaning, whether the right conditions are in place to support advancing a given corridor for HCT investment. The Level 2 criteria are shown in Table 2. These criteria are derived from the 2018 evaluation and include several additional criteria related to climate, equity, and federal funding. The project team added these criteria to reflect regional policy priorities. The federal funding criteria are based on the Federal Transit Administration's (FTA) Capital Investment Grants (CIG) program. This program is the most substantial non-local source for HCT funding and has funded many HCT investments, including much of the existing LRT system. Because of the outsize influence this program has on funding viability, the Level 2 screening criteria were revised to reflect the CIG program's criteria, thereby helping to ensure readiness of project corridors.

Table 2. Level 2 Corridor Evaluation Criteria

Criteria	Measure	Data Source/Notes	Methodology
Transit Travel Time Benefit	• Transit travel time reliability, based on the travel time ratio of congested to free-flow conditions	• HCT Plan (2018) Core Criteria • Meets Section 5309 Capital Investments Grants (CIG) Small Starts Program "Mobility Improvements" • TriMet General Transit Feed Sspecification (GTFS) data	• Using TriMet's automatic vehicle location (AVL) data (2019), the team will determine the average peak and off-peak speeds (in MPH) of transit for those corridors where transit service exists today. The greater the ratio of free-flow to congested travel speeds, the more transit travel time unreliability.
Productivity + Cost Effectiveness	• Existing boardings per revenue hour in a given corridor • Capital Cost per Rider (range to account for modal options)	• HCT Plan (2018) Core Criteria • Input to 5309 Capital Investments Grants (CIG) Program "Cost Effectiveness" measure	• Boardings per revenue hour will be calculated based on 2019 and modeled 2040 boardings and transit revenue hours. • Capital cost per rider will be presented as a range, based on average per-mile costs for LRT and BRT.
Environmental Benefit	• Reduction in corridor-level Vehicle Miles Traveled (VMT)	• "Reduction in emissions" meets HCT Plan (2018) Core Criteria • VMT used as key performance measure in Metro 2021 TSMO Strategy	Using established transit elasticities, estimate the change in ridership that is likely occur in a given corridor by investing in HCT and the corresponding change in auto VMT that would be expected. Convert this change in VMT to GHG emissions using an

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[3] The Level 2 Corridor Evaluation assumes that all Level 1 Criteria will be reapplied to the remaining corridors.

Criteria	Measure	Data Source/Notes	Methodology
			average fleet emissions factor for year 2030.
Equity Benefit	• Access to employment – Essential Jobs and Essential Services by Census Block within ½ mile of corridors • Relative proportion of historically marginalized populations in each corridor, based on Metro's Focus Areas	• TriMet and Metro Essential Destinations data. • Remix Online Tool for Existing Routes • Consider specific impact to in-person jobs in the region (data from TriMet *Forward Together* project)	• The team will rely on data from TriMet's Forward Together program. Forward Together included location analysis of in-person jobs in the Metro region. The team will assess the relative number of in-person jobs within ½ mile of corridors using 20th percentiles. • The relative proportion of historically marginalized populations within ½ mile of each corridor will be reported.
Land Use Supportiveness and Market Potential	• 2040 Population Density by TAZ within ½ mile of corridors • 2040 Employment Density by TAZ within ½ mile of corridors Presence of higher education institutions, multi-family and affordable housing	• Metro Travel Model • HCT Plan (2018) Core Criteria "Land Use Supportiveness and Market Potential" • Meets Section 5309 Capital Investments Grants (CIG) Small Starts Program "Land Use" and "Economic Development" criteria	• Using existing 2040 Metro travel model data, the team will develop population densities within ½ mile of each corridor and rank by 20th percentiles. The project team will also provide for purposes of comparison the average density within 1/2 mile of (1) the average existing frequent service bus line and (2) average light rail line. • The same approach will be applied for total employment within ½ mile of the corridors. • The presence of multi-family and affordable housing, and higher education institutions will be applied as an additional land use check.

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