

UPDATED 5/9/13

 Metro | Agenda

Meeting: SW Corridor Plan Steering Committee
Date: May 13, 2013
Time: 9:30 to 11:30 a.m.
Place: Tualatin Police Station
Purpose: Review and discuss evaluation results in the context of upcoming summer decisions and public engagement

9:30 a.m. Welcome and introductions Co-chair Dirksen
9:35 a.m. Project partner updates All
1-2 minute updates from project partners to share information related to the Southwest Corridor Plan.

ACTION ITEM

9:40 a.m. Consideration of the Steering Committee meeting summary from April 22, 2013 ACTION REQUESTED Co-chair Dirksen

INFORMATION/DISCUSSION ITEMS

9:45 a.m. Transit evaluation results Matt Bihn, Metro
Presentation of transit evaluation key results and discussion of how the results inform upcoming decisions.

11:00 a.m. Roadway and active transportation evaluation Neil McFarlane,
approach Jason Tell, ODOT
Presentation of approach for roadway and active transportation projects evaluation and discussion of how it informs the upcoming decisions.

11:15 a.m. Upcoming public engagement Co-chair Dirksen
Short overview of upcoming public engagement events and calendar.

11:20 a.m. Public comment Co-chair Dirksen

11:30 a.m. Adjourn

Materials for 5/13 meeting:

- 4/22 meeting summary
- Transit decision framework
- What is BRT? fact sheet
- Considerations for funding SW Corridor Plan investments
- Transit modes and considerations for transit investments
- HCT Alternatives
- Narrowing process

Next meetings:***May 21, 2013, 7:30 to 9 a.m., Tigard Library***

- Economic Summit: Discuss which projects and policies best support economic development

May 23, 2013, 6 to 8 p.m., Tualatin Library

- Community Planning Forum: Advice on refinement process; implementation ideas

June 10, 2013, 9:30 to 11:30 a.m., Tigard Library

- Draft recommendation for Southwest Corridor Plan and Shared Investment Strategy

July 8, 2013, 9:30 to 11:30 a.m., Metro Council Chamber

- Share project partner discussions at city councils on the draft recommendation for the Southwest Corridor Plan and Shared Investment Strategy

July 22, 2013, 9:30 to 11:30 a.m., Tigard Library

- Consider action on Southwest Corridor Plan and shared investment strategy, forward to implementing jurisdictions (cities, counties, agencies)



Southwest Corridor Plan Steering Committee

Monday, April 22, 2013

9:30 to 11:30 a.m.

Metro Council Chamber, 600 NE Grand Ave, Portland, OR 97232

Committee Members Present

Bob Stacey, Co-chair	Metro Council
John Cook	City of Tigard
Denny Doyle	City of Beaverton
Neil McFarlane	TriMet
Bill Middleton	City of Sherwood
Roy Rogers	Washington County
Gery Schirado	City of Durham
Loretta Smith	Multnomah County
Jason Tell	ODOT
Suzan Turley	City of King City

Committee Members Excused

Co-chair Craig Dirksen	Metro Council
Charlie Hales	City of Portland
Skip O'Neill	City of Lake Oswego
Lou Ogden	City of Tualatin

Alternate Members Present

Monique Beikman	City of Tualatin
Amanda Fritz	City of Portland

Metro Staff

Robin McArthur, Elissa Gertler, Malu Wilkinson, Catherine Ciarlo, Matt Bihn, Crista Gardner, Clifford Higgins, Leila Aman, Emma Fredieu, Tim Collins, Joyce Felton, Heather Kent, Janet Bebb, John Williams, Andy Cotugno, Alexa Ross, Ramona Perrault

1.0 Welcome and introductions

Co-chair Bob Stacey, Metro Councilor, called the meeting to order at 9:31 a.m. He explained that the SW Corridor Plan was at the final stages of Phase I, and that the committee would be adopting an agreement to refine transit alignments and projects to support the land use vision in July 2013. He asked the committee members to introduce themselves and provide a brief update on their communities.

Ms. Suzan Turley, City of King City, noted that King City was finalizing its comprehensive plan. Ms. Amanda Fritz, City of Portland, informed the committee that the Portland City Council would consider the SW Barbur Blvd Plan for adoption on Wednesday, April 24, 2013.

Mayor Denny Doyle, City of Beaverton, described his recent trip to Atlanta and the work that the City of Atlanta has done to develop a street car corridor around the city limits. Mayor John Cook, City of Tigard, announced a SW Corridor community forum at Tigard City Hall on Tuesday, April 30, 2013. Mayor Gery Schirado, City of Durham, updated the committee on the status of his city's Bridgeport apartments. He reported that construction is on schedule, and that the buildings will represent a 20% population increase in Durham.

Mr. Neil McFarlane, TriMet, reported on TriMet's recent public meeting regarding service changes on SW Barbur Blvd and 99W. Mr. Jason Tell, ODOT, updated the committee on the status of the Statewide Transportation Improvement Program (STIP) grant allocation process. He explained that the process would be completed in the fall and that the STIP region 1 committee was currently reviewing applications representing 150% of available funding.

Co-chair Stacey expressed appreciation for the work the City of Atlanta had completed for its streetcar connector around downtown Atlanta, and how the city has leveraged trails and parks projects to complete the connector. He noted that their strategy for redevelopment is similar to SW Corridor Plan efforts.

2.0 Consideration of the Steering Committee meeting summary from February 11, 2013

Co-chair Stacey directed the committee to the February 11, 2013 meeting summary (included in the meeting packet) and asked if there were any proposed edits or changes. Hearing none, Mayor Doyle motioned to accept the summary. Committee members did not object and the summary was adopted.

3.0 Implementing the Corridor Land Use Vision

Co-chair Stacey outlined the purpose of the SW Corridor land use vision as a means of encouraging community building and economic development. He introduced Ms. Leila Aman, Metro, and Mr. Alan Lehto, TriMet, to present additional information regarding the land use vision.

Ms. Aman began a presentation regarding implementation of the SW Corridor land use vision (included in the meeting packet). She explained that the SW Corridor Plan is organized around the land use vision, and uses the vision to determine the most appropriate transit alignment and transportation projects. Ms. Aman described some of the policies and partnerships necessary to implement the land use vision. She reminded the committee that the land use vision was developed using current concept plans from project partners and project partner feedback. Beginning with land use, project partners and staff identified key places in the corridor, developed potential transit alignments for the key places, and compiled project bundles to support the transit alignments.

Ms. Aman outlined the regulatory framework, public realm investments, and public subsidies needed to fill the gap between the land use vision and the current market. She provided several examples from the region and around the country to illustrate how successful use of these investments can bring the land use vision into reality.

Mr. Lehto addressed the criteria used by the Federal Transit Administration (FTA) to evaluate high capacity transit (HCT) projects and determine the level of federal funding provided to local jurisdictions to implement the projects. He added that land use and economic development are important metrics that the FTA uses to evaluate transit plans for funding.

Co-chair Stacey asked if the committee had any questions or comments on Ms. Aman and Mr. Lehto's presentations. Mr. Roy Rogers, Washington County, asked Mr. Lehto how the SW Corridor Plan's transit alignment options compare to the recent Portland-Milwaukie light rail (PMLR) project in terms of complexity, costs, and ridership. Mr. Lehto responded that he would have more details for that comparison in the coming months, and could likely speak to that at the next steering committee meeting.

Ms. Elissa Gertler, Metro noted that one difference between the SW Corridor and the PMLR is that the SW Corridor would be the first project under new Moving Ahead for Progress in the 21st Century (MAP21) regulations. Mr. Lehto noted that the FTA, under MAP21, placed greater emphasis on economic development efforts and land use. Co-chair Stacey wondered if previous projects on the westside of the region that focused on livability would help current projects such as the SW Corridor Plan pursue funding. Mr. Lehto believed that the focus on livability, economic development, and land use would make the region competitive for federal funding.

4.0 Parks and natural resources priorities

Ms. Heather Kent, Metro, presented the process for narrowing and implementing parks and natural resources projects in the SW Corridor. She described a focus on place-building, quality of life issues, and using the regulatory framework to support green projects. Ms. Kent provided examples of public feedback regarding green projects and explained how project partners identified existing conditions and needs in the corridor. She described the project narrowing process and noted that staff would prioritize projects that best support the land use vision and transit alignments. Over the next few months, staff will narrow the project list and explore implementation strategies.

Mr. Rogers wondered if the SW Corridor Plan required parks and natural resources projects to be evenly distributed throughout the corridor, or if they would be implemented in jurisdictions on an individual basis. He also wondered how the SW Corridor Plan would measure success in implementing green projects – corridor-wide or from community to community.

Ms. Malu Wilkinson, Metro, responded that the SW Corridor Plan provides a consistent way of valuing green projects, but does not require a consistent application of green projects if they are impractical or inappropriate for a certain jurisdiction. She added that members of the public throughout the corridor provided positive comments for parks and natural resources. Ms. Gertler noted that a shared appreciation of parks and natural resources attracts development and residents to the SW Corridor and is a means of branding for the region.

Ms. Fritz responded to Mr. Rogers that the City of Portland has found it necessary to begin planning with green projects first to ensure a less complicated implementation process than if green projects are planned as an afterthought. Mr. Rogers answered that it may be challenging to determine how to apply the green projects vision practically and appropriately for each community in the SW Corridor. Fritz agreed, but added that the purpose of Metro and committees such as the SW Corridor steering committee is to share benefits and expectations for community development, even if they are a different scale in each jurisdiction.

Ms. Kent described the next steps for narrowing and prioritizing the list of green projects, and developing strategies for implementation. She added that the green projects would be presented for feedback during community outreach events in May.

5.0 Moving towards a shared investment strategy

Co-chair Stacey introduced Ms. Wilkinson, who would describe the process for moving towards a shared investment strategy. Ms. Wilkinson directed the committee to the shared investment strategy document (included in the meeting packet). She explained how the committee would complete Phase I of the SW Corridor Plan at the end of July 2013. She presented the SW Corridor work plan and noted that the project was currently at steps 10 and 11.

Ms. Wilkinson informed the committee that project partners had worked since January 2013 to develop five transit alignment options, and to narrow down the lists of roadway, active transportation, and natural resources projects. In July 2013, project partners would develop a shared investment strategy, and the committee would adopt an agreement to refine chosen transit alignments before entering a National Environmental Policy Act (NEPA) process.

Ms. Wilkinson outlined the next four steps that project staff would work through for the June 10, 2013 steering committee discussion: 1. Develop a draft narrowed list of projects; 2. Review and adjust project lists; 3. Consider funding opportunities and needs; 4. Develop a draft project list, transit alignment proposal, and investment strategy.

Co-chair Stacey opened the discussion up to questions from the committee. Mr. Tell believed that the HCT project was the critical piece of the SW Corridor Plan and encouraged project partners to prepare for the political and capital investments required to compete for federal funding on a national level.

Mr. Rogers agreed with Mr. Tell and wondered if bus rapid transit (BRT) would require a different approach to pursuing funding. Mr. McFarlane noted that the FTA is mode-neutral as to the evaluation criteria for federal funding. He believed that project partners would need to focus around developing key station areas to support an HCT project in order to fulfill the FTA's criteria.

6.0 Transit evaluation framework

Co-chair Stacey introduced Mr. Matt Bihn, Metro, to brief the committee on the preliminary transit evaluation results, which would be discussed in greater detail at the May 13, 2013 meeting.

Mr. Bihn briefly described the five transit alternatives and listed the evaluation considerations project staff would use on each alternative. He outlined the tradeoffs between adding a lane and converting lane to roadways to accommodate an HCT project, as well as the tradeoffs between using exclusive transit lanes, business and transit only lanes, and mixed traffic lanes.

Mr. Rogers asked if the tradeoffs applied to infrequent transit runs, such as a single bus running every few hours. Mr. Bihn responded that the model uses the year 2035 as the model year, land use projections for the corridor in 2035, and a run every 7.5 minutes.

Ms. Wilkinson noted the difference between the decisions that would need to be made in July 2013 and the decisions that would be made after July, during the refinement process.

Mr. McFarlane noted that there was demand for transit expansion in the region, despite TriMet's current funding challenges.

7.0 Public Comment

Co-chair Stacey opened the meeting to public comment. He invited members of the public from SW Haines St. to address the committee.

Mr. George Vranas, resident of SW Portland on SW Haines St., read speaking points in opposition to routing a BRT or HCT project through SW Haines St. (included in the meeting packet). He supporting the SW Corridor Plan overall, and encouraged the committee to approve an HCT alignment closer to Barbur Blvd. Mr. Vranas believed that the SW Corridor Plan could bring renewed development to Crossroads and Tigard Triangle neighborhoods but urged the committee to keep the transit alignment off of SW Haines St.

Mr. Peter Johnson, resident of SW Portland on SW Haines St., read additional speaking points in opposition to routing an HCT project through SW Haines St. (included in the meeting packet). Mr. Johnson spoke of the high quality of life on SW Haines St. and believed that adding a transit line would widen the road, eliminate the dead end, and remove 100-

year old Douglas fir trees. He also asserted that the period of uncertainty before the transit project is finalized will lower property values in the neighborhood. Mr. Johnson urged the committee to keep any transit alignment on Barbur Blvd.

Ms. Ariane Holzhauer, resident of SW Portland, read final speaking points in opposition to routing an HCT project through SW Haines St. (included in the meeting packet). Ms Holzhauer expressed appreciation for the natural areas in her neighborhood, as well as the access to the urban amenities in the SW Portland region. She elaborated on her concerns for the environmental impacts of placing a transit route on SW Haines St. She highlighted Lester Park, indigenous wildlife, walkable corridors, and the large trees lining the neighborhood streets as characteristics she would like the neighborhood to retain. She also expressed concerns for increasing traffic and speeds on SW Haines St., which she believed could increase road kill in the area. She stated that she supported the SW Corridor Plan in general.

Ms. Marianne Fitzgerald, SW Neighborhoods Inc., appreciated the SW Corridor Plan's approach of looking at transit as a means of economic and community development, and the multi-modal approach to transportation planning. She hoped that the committee would look at the root causes of congestion and develop alternative means of transportation. Ms. Fitzgerald encouraged the committee to look passed simply widening roads.

Mr. John Gibbon, Chair of the Land Use committee for SW Neighborhoods Inc., noted that transit use had increased on Barbur Blvd. He described riding full buses to and from Barbur Blvd. and the Portland city center. Mr. Gibbon added that he did have trouble finding transit service to NE Portland from Barbur Blvd. He commented on the SW Haines Street concerns, and suggested focusing on the NE corner of the Tigard Triangle. Mr. Gibbon believed that transit alignments should be kept on Barbur Blvd. He also highlighted significant storm water issues in the SW Corridor.

8.0 Next meetings and adjourn

Co-chair Stacey adjourned the meeting at 11:29 a.m.

Meeting summary respectfully submitted by:

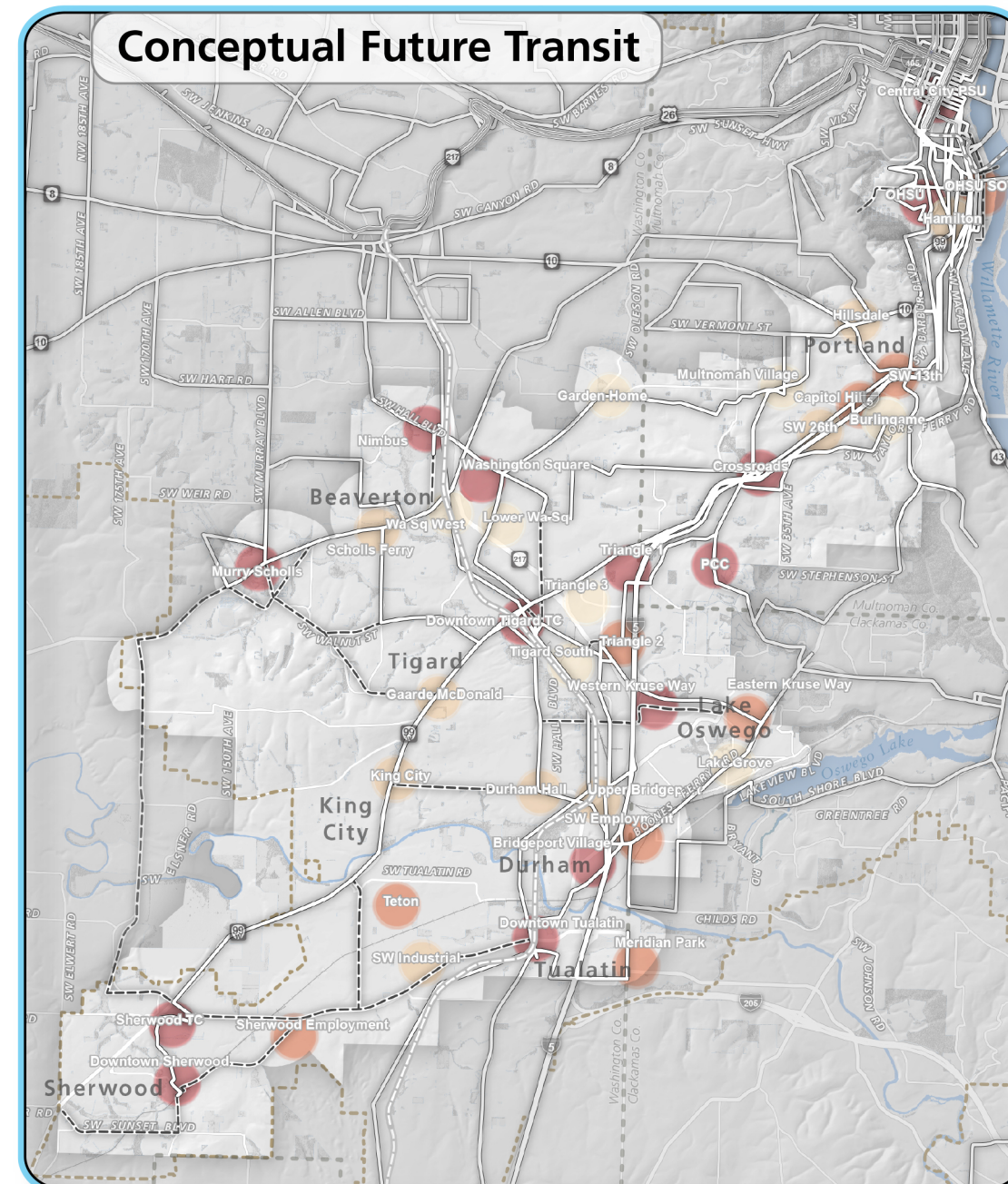
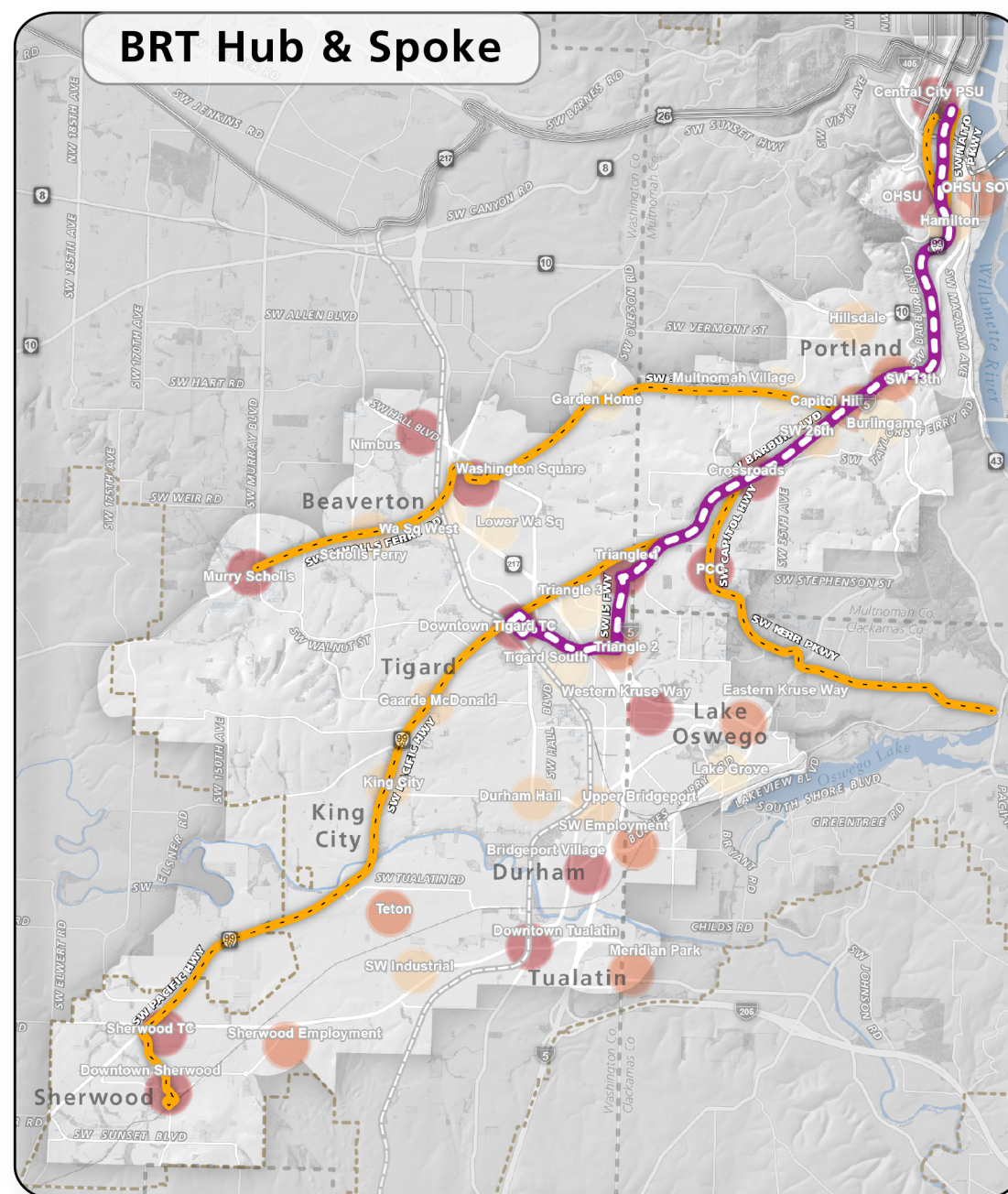
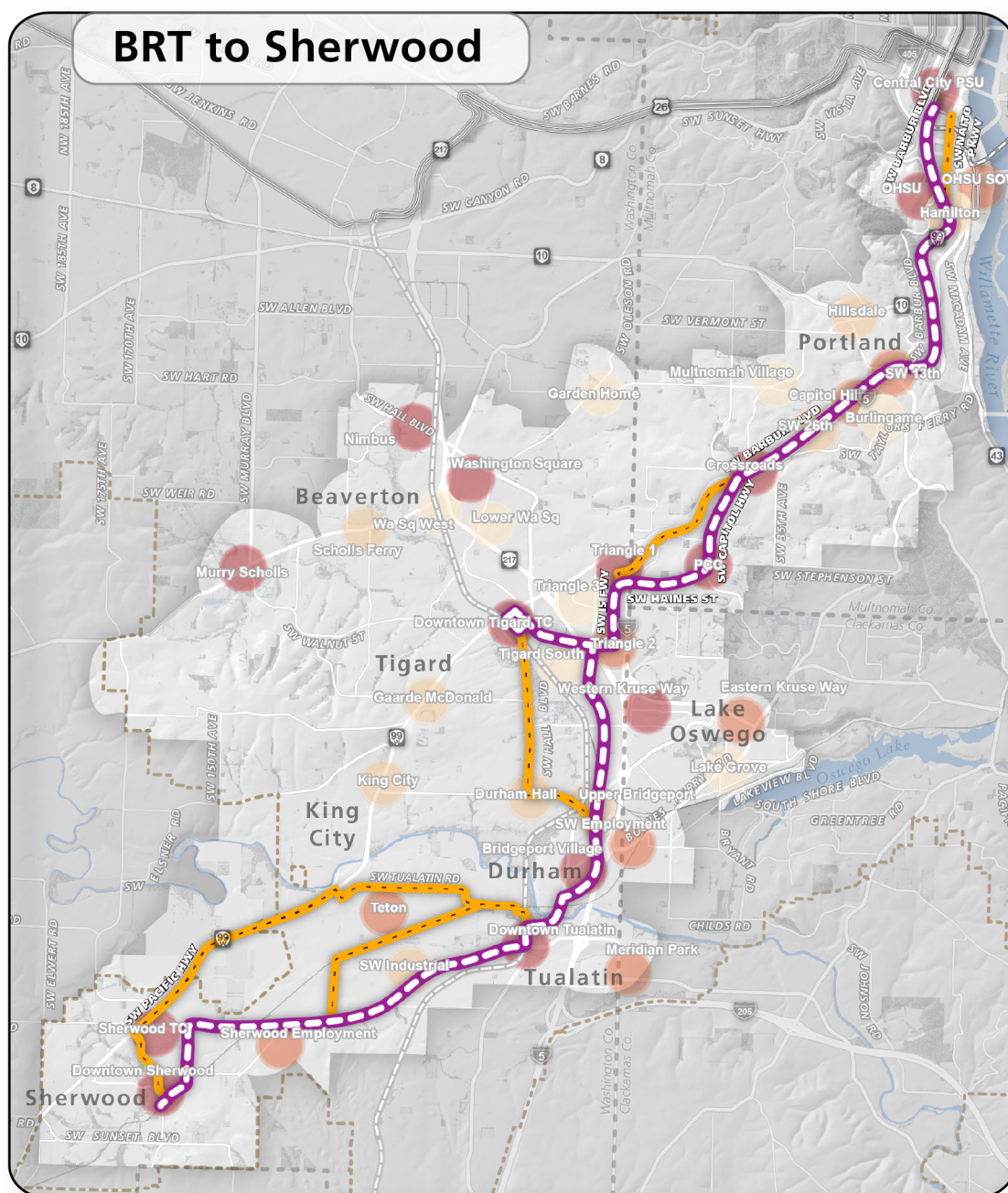
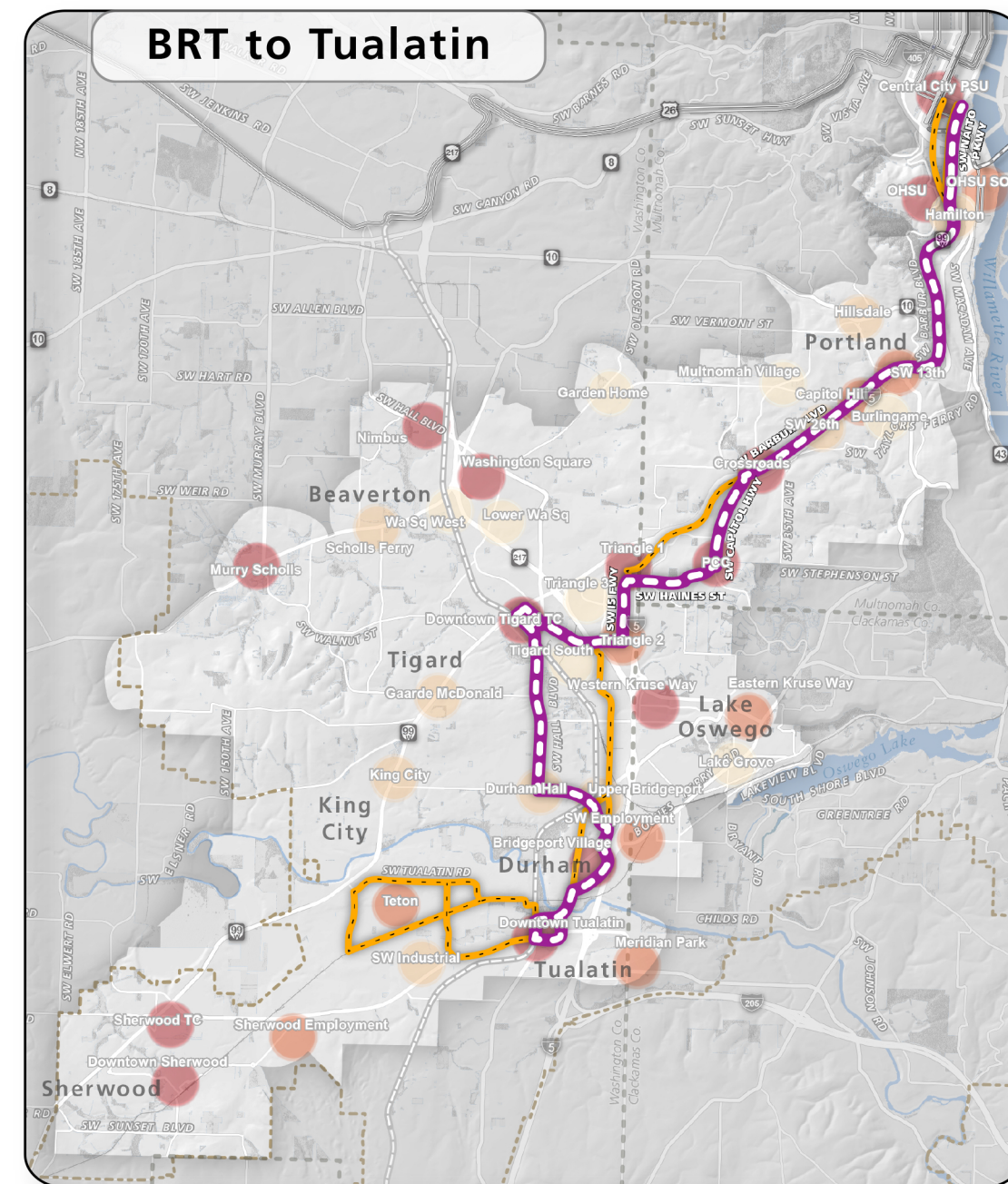
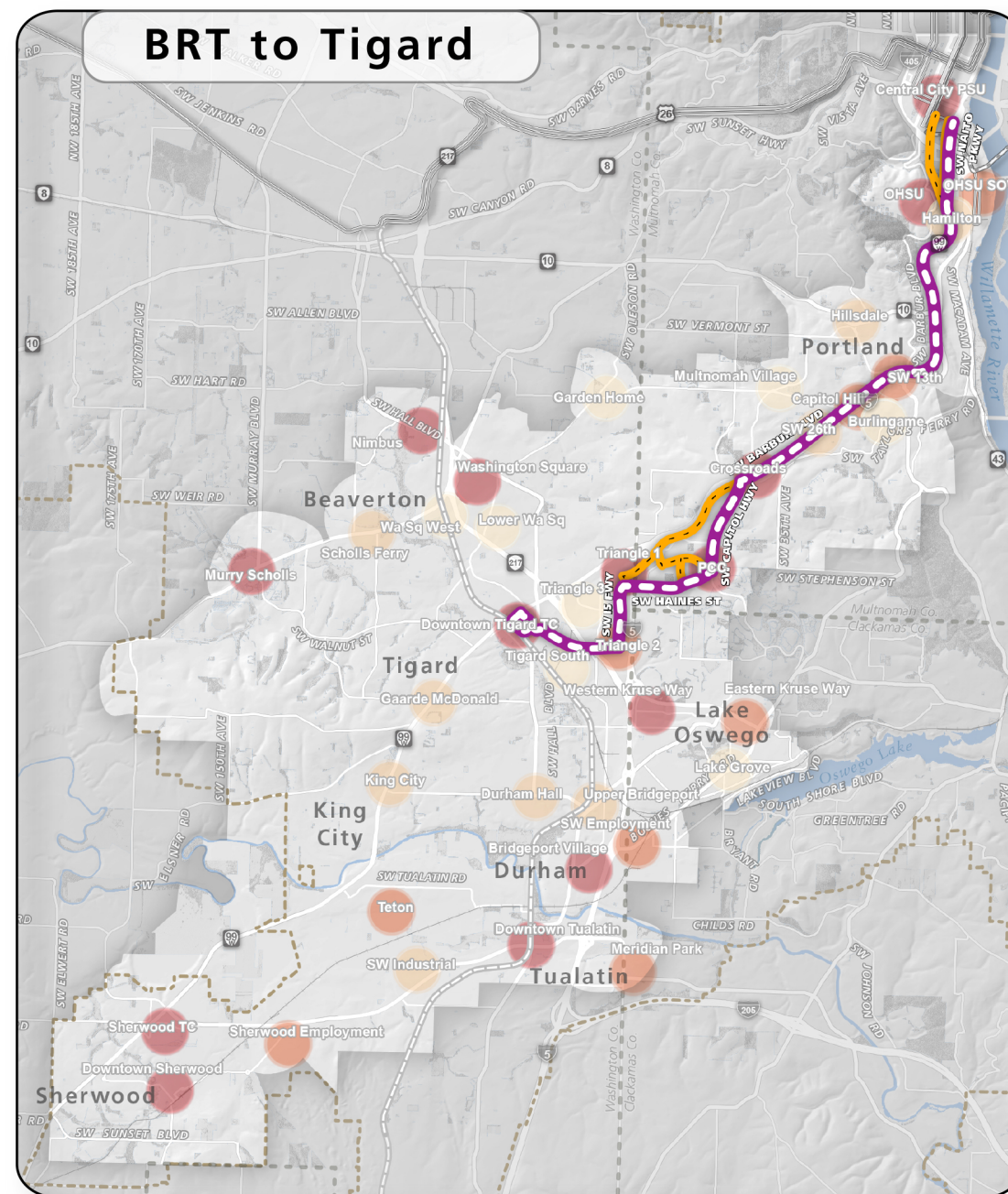
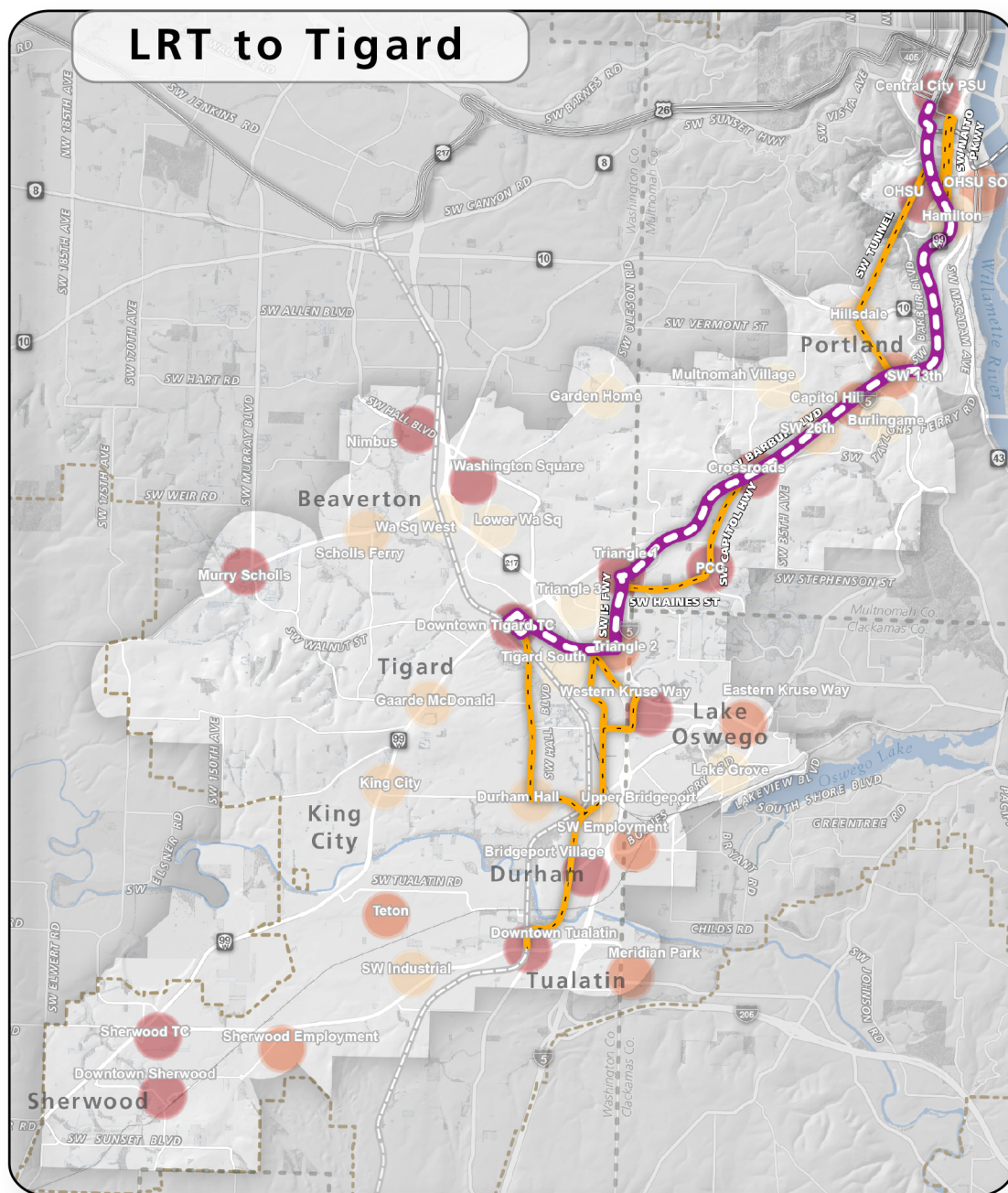
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Emma Fredieu

Attachments to the Record:

Item	Type	Document Date	Description	Document Number
1	Agenda	04/22/13	Meeting agenda	042213swcpsc01
2	Summary	02/11/13	02/11/13 meeting minutes	042213swcpsc02
3	Memo	04/21/13	Prioritizing and funding green projects	042213swcpsc03
4	Diagram	04/18/13	Moving towards a shared investment strategy	042213swcpsc04
5	Calendar	04/18/13	Steering committee calendar	042213swcpsc05
6	Report	04/22/13	Economic development executive summary	042213swcpsc06
7	Petition	04/21/13	Residents opposed to BRT routes on Haines Street	042213swcpsc07
8	Presentation	04/22/13	Implementing the land use vision	042213swcpsc08
9	Presentation	04/22/13	Natural resources and green projects	042213swcpsc09
10	Presentation	4/22/13	Preliminary evaluation results	042213swcpsc10
11	Letter	04/22/13	Speaking notes regarding SW Haines St.	042213swcpsc11

Southwest Corridor - High Capacity Transit Alternatives



High Capacity Transit (HCT)
 HCT Alternatives
 HCT Option

Key Places

- Essential
- Priority
- Opportunity
- Neighborhood

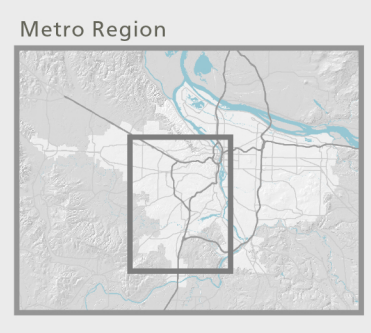
Data Collection Area
 Urban Growth Boundary
 County Boundaries

Local Transit
 2010 modeled transit lines

 2035 conceptual local transit additions

0 1 2 Miles

April 24, 2013



Bus rapid transit in other cities

Boston, Mass.



The Massachusetts Bay Transit Authority's (MBTA) Silver Line in Boston is an example of bus rapid transit in an urban corridor. The Silver Line operates using dedicated transit lines as well as in mixed traffic. In addition, the Silver Line has a 1.5 mile underground segment which includes three underground stations.

Eugene, Ore.



The Eugene Emerald Express (EmX) operates using both separate running ways and in dedicated lanes alongside mixed traffic. The separate running ways account for about 60 percent of the route and consist of exclusive single and dual bus lanes. The remaining 40 percent of the route is dedicated bus lanes, which are at a grade and separated from general traffic by yellow bus lane marking. When operating alongside traffic, the EmX utilizes traffic signal prioritization and queue jump lanes.

Cleveland, Ohio



The HealthLine operates in Cleveland in dedicated bus lanes and uses traffic signal prioritization. In downtown Cleveland, buses run along exclusive lanes in the center of the street.

Las Vegas, Nev.



The Metro Area Express (MAX) in Las Vegas has 4.5 miles of dedicated lanes out of a total route of 7.5 miles. These dedicated lanes are aligned at the curb and shared with right turning traffic. The Strip Downtown Express (SDX) includes the same elements as the MAX plus a central median and dedicated right of way for 2.25 miles.

Los Angeles, Calif.



The Orange Line operated by the Los Angeles County Metropolitan Transit Authority (Metro) is a two lane, fourteen mile dedicated busway. The Orange Line operates using signal prioritization, dedicated bus lanes and uses an existing railroad right of way.

Kansas City, Mo.



The Metro Area Express (MAX) runs on a 6-mile linear route in Kansas City. The MAX operates using bus-only curb lanes during peak hours and full time bus-only lanes in downtown Kansas City. The MAX is also given signal priority during peak hours.

What is bus rapid transit?

Bus rapid transit service uses high capacity buses in their own guideway or mixed in with traffic, with limited stops and a range of transit priority treatments to provide speed, frequency and comfort to users. Most stations have significant and easily identifiable passenger infrastructure, including waiting areas that are weather protected. Additional station amenities may include real-time schedule information, trip planning kiosks, ticket machines, special lighting, benches and bicycle parking.

Building a Better Bus

How some cities are tricking out their rapid-transit systems

Most rapid-transit bus systems, especially those that allow riders to pay at the bus stop, outfit their buses with **three or four doors** for quicker loading and unloading of passengers.

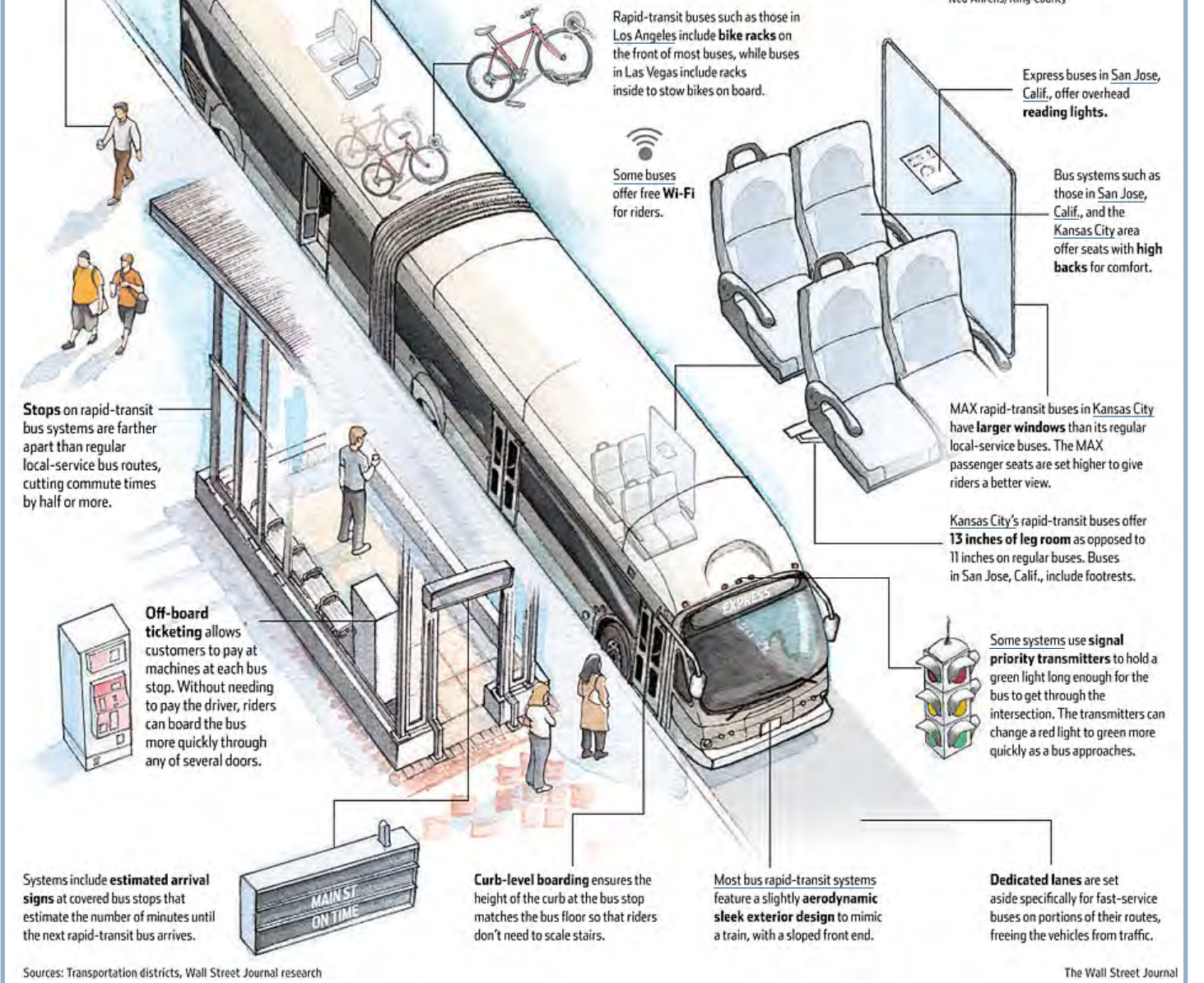
Electric-diesel hybrid systems cut emissions and noise.

Some buses include rows of seats that **face the aisle** rather than the front, providing more leg room and wider aisles.



Seattle unveiled its rapid-transit bus lines in 2010 and 2011. Their bright colors are designed to stand out from regular, local buses.

Ned Ahrens/King County



Sources: Transportation districts, Wall Street Journal research

The Wall Street Journal

Vehicles

Bus rapid transit vehicles often have a larger passenger capacity than conventional buses and utilize modern designs and special branding to differentiate bus rapid transit from standard local bus service. They often have level-platform boarding and multiple doors to make entering and exiting the vehicles easier and faster. Many bus rapid transit systems use vehicles with alternative fuels and pollutant emissions controls.



Cleveland vehicle (Matt Johnson, GGW)



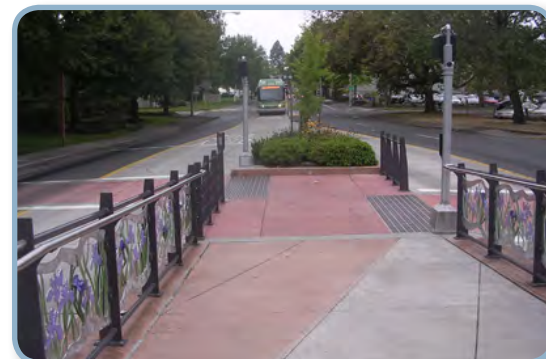
Vehicle interior



Eugene vehicle

Stops and stations

Bus rapid transit stations are generally spaced further apart than standard service stops in order to improve travel time for riders. Stations are typically designed similarly to light rail stations, with features that enhance the passenger experience. These may include enhanced shelters, improved accessibility, improved security elements, and real-time arrival information. Stations contribute to the branding of bus rapid transit systems that distinguish them from standard bus service.



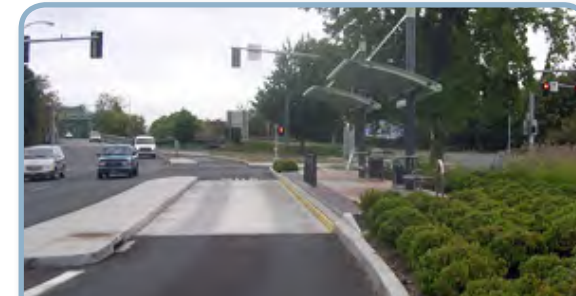
Eugene station and crosswalk



Cleveland's HealthLine (Institute for Transportation and Development Policy; Urban Indy)

Dedicated lanes

Bus rapid transit can operate in mixed traffic, in transit priority lanes or in dedicated transitways. Dedicated transitways operate much like light rail tracks, providing the bus rapid transit with exclusive use of a transit guideway that greatly improves speed and reliability. Transitways could be constructed over long distances or over shorter distances in targeted areas, and could operate in one or both directions.



Eugene dedicated lane and station



Eugene double track median guideway with landscaping



Eugene single track median guideway and station

Off-board ticketing

Some bus rapid transit systems include off-board ticketing similar to light rail. Off-board ticketing allows passengers to board through either door, expediting boardings, minimizing vehicle time at stations and contributing to improved travel times and reliability.



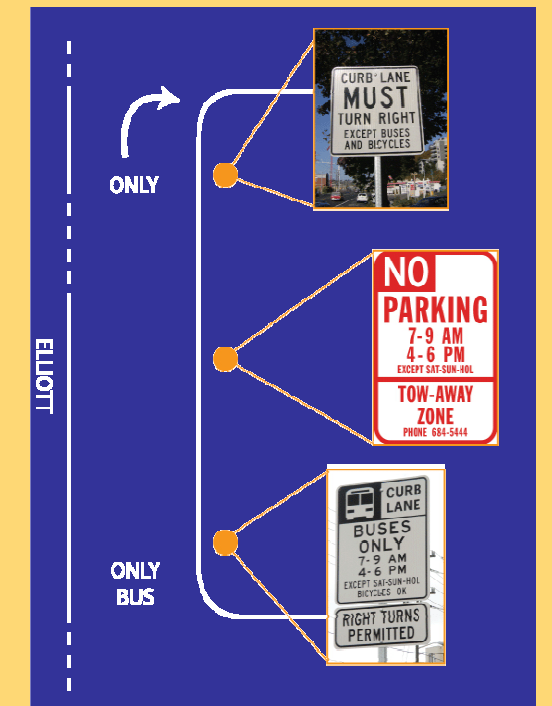
Eugene fare machine with emergency call button



Cleveland fare machine (Marvin Fong, The Plain Dealer)

Business access and transit lanes

Transit priority lanes might include business access and transit (BAT) lanes, where buses share the lane with autos turning right at the next intersection or into a business. BAT lanes can operate all-day or only in peak periods. BAT lanes provide auto access to businesses along the route while allowing bus rapid transit vehicles to bypass congestion on the main roadway.



Seattle Department of Transportation

Funding for the investments identified in the Southwest Corridor Plan must come from many federal, state, regional, county and local sources. Traditional and historic sources of funding may not be available or cover the needs identified in the corridor. Each jurisdiction will have to determine what its priorities and funding capacities are in order to develop mutual commitments to an investment strategy that will help connect and support great communities in the corridor.

What are current sources of revenue for transportation projects?

The 2035 Regional Transportation Plan defines traditional sources of revenues available for the regional transportation system from federal, state and local levels.

Federal

Highway Trust Fund For road-related projects, Congress provides these revenues to the region through the Federal Highway Administration (FHWA) to the Oregon Department of Transportation (ODOT) and then to Metro and the cities and counties.

These monies primarily come from the federal gas tax, various truck taxes and funding from the federal general fund.

Highway Trust Fund distribution includes Surface Transportation Program and Congestion Mitigation/Air Quality (CMAQ) funds, which comprise what is known as “regional flexible funds” in the Portland metro region.

Allocation and distribution of federal funds, other than routine maintenance, are accounted for in the Metropolitan Transportation Improvement Program (MTIP).

Local

Many of the cities and counties in the region raise other sources of revenue for operation, maintenance and preservation (OMP) and new construction. The amount of revenue applied to the system is controlled by each jurisdiction and is spent within their boundaries.

Local portion of State Highway Trust Fund Forty percent (historic) to 50 percent (anticipated) of state trust fund revenues are distributed to the cities and counties of Oregon.

Local gas tax Gas taxes are levied by Multnomah (three-cents per gallon) and Washington (one-cent per gallon) counties, which share the revenues with the cities within their boundaries. Recently, gas taxes have been approved for the cities of Milwaukie and Tigard. These revenues currently may be used for road maintenance and road expansion, including sidewalks and bike lanes when they are part of a roadway project.

Washington County Major Streets Transportation Improvement Program Funded by local property taxes, MSTIP funds major transportation improvements countywide.

Transit discretionary funds In this region, these funds for major new transit capital projects have primarily been used to provide the federal portion of construction capital cost of the light rail system. Other eligible uses include bus purchases, bus rapid transit and system capital improvements.

Metro, together with project partners, determines which large transit capital projects will be given priority in the region to compete for these funds.

State

State Highway Trust Fund State revenues for transportation projects are distributed by the Oregon Transportation Commission, in accordance with state statutes. The fund primarily derives its revenues from:

- statewide gas taxes
- vehicle registration fees
- weight mile taxes on trucks.

Local development-based sources Local governments may collect fees based on the development or use of land. These fees provide funding for transportation and other public investments as determined by the local government that collects and allocates the revenue, including

- transportation system development charges (SDCs) levied on new development
- traffic impact fees (TIFs) on commercial properties
- urban renewal funding in designated districts
- developer contributions.

Local capital improvement programs Funded by local taxes and/or bonds, these programs have been put in place to match the cost of large-scale transportation and other infrastructure improvements – like fixing roads and water and sewer systems.

Beyond current funding sources and levels

Each jurisdiction has different current or potential funding mechanisms – such as system development charges, local gas taxes, local improvement districts – that could be tailored to the goals being served by the investment.

Determining how new investments might be funded can be an iterative process, both on regional and local levels. For example, when the region was preparing the last Regional Transportation Plan update, Metro went to JPACT and broke down what it might look like with system development charges, local improvement districts, etc. and asked whether that was reasonable, whether it might cause “sticker shock” with taxpayers, developers, etc. Getting that information ahead of time from city councils, county commissions, chambers of commerce, other stakeholders and even JPACT or TPAC can help get that level of feedback ahead of time, giving an opportunity to express the “how and why” not just the “how much.”

Funding for previous transit investments in the region

Every project has its own story, and its financing package reflects the capacity and motivations of and long-term benefits for the contributors. Decisions about alignment, mode and station locations of the transit investment may advance broader urban development goals, which may motivate local jurisdictions to increase their contributions toward those goals through system development charges. Likewise, direct property benefits can be leveraged to create local improvement districts.



There are four major groups of funding:

- federal discretionary funds (mostly through FTA)
- state- and regionally-directed federal formula funds (Highway Trust Fund monies)
- state, regional and local funds
- private funds and in-kind contributions (like donated land).

Though still significant at a projected 50 percent, the federal discretionary contribution for transit and other transportation investments has reduced over the years, shifting more of the responsibility to state, regional, county and city funding mechanisms. Meanwhile, sources used for the local share in the past may not be sufficient or available to fund future projects. Additional considerations for project funding include the labor and materials cost increases over time and engineering challenges in the corridor (such as topography) that would raise the cost of a project.

The budget figures below give an idea of the state, regional and local contribution on previous regional transit projects as well as some of the local funding mechanisms used. The budgets include the transit lines and stations, environmental impact mitigation and other improvements related to the transit project, which may include pedestrian and bicycle facilities to improve access to stations.

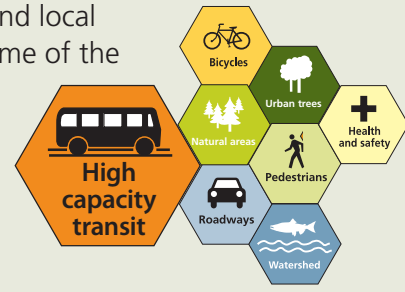
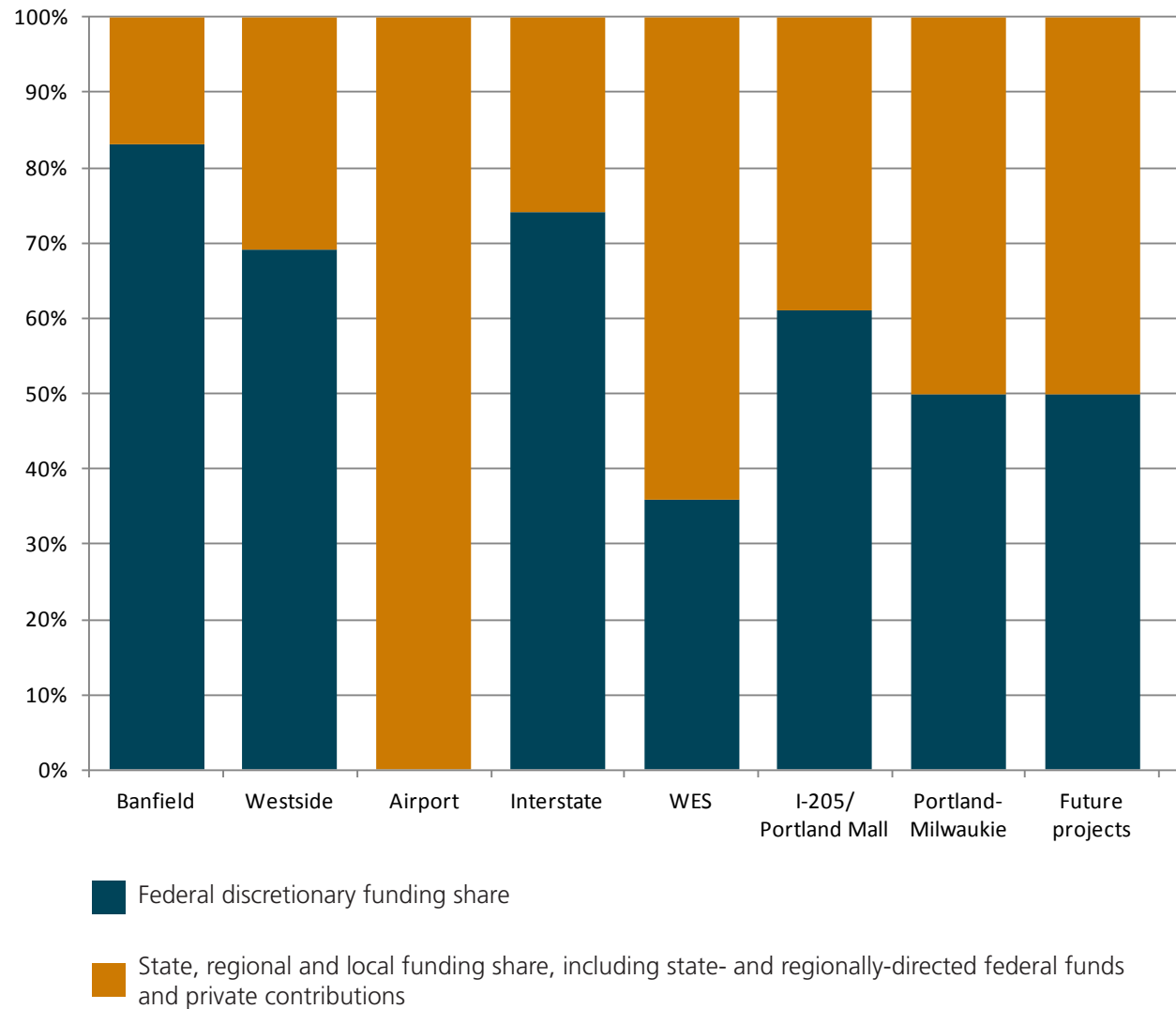


Figure 1. Historic ratio of federal discretionary funds to state, regional, local and private contributions and directed funds, by transit project



Banfield \$214 million+\$107 million in highway-related work | 15 miles, 30 stations | opened September 1986

Federal discretionary contribution:	\$267,520,000	(83%)
State/regionally-directed federal contribution:	\$0	(0%)
State, regional and local contribution:	\$53,800,000	(17%)
Private contribution:	\$0	(0%)

The bulk of state, regional and local funds were through the State of Oregon (\$37.5 million), including funds from the state gas tax, and TriMet (\$13.4 million). City of Portland contributions (\$2.8 million) included funds from the Portland Development Commission (urban renewal funds) and local improvement districts. Multnomah County and Metro had relatively minor contributions.

Westside \$963 million | 18 miles, 32 stations | opened September 1998

Federal discretionary contribution:	\$659,850,000	(69%)
State/regionally-directed federal contribution:	\$44,000,000	(5%)
State, regional and local contribution:	\$259,250,000	(27%)
Private contribution:	\$0	(0%)

The bulk of state, regional and local funds were through the State of Oregon (\$113.6 million), voter-approved TriMet bonds (\$110 million) and additional TriMet funds (\$21.6 million), with contributions from City of Portland (\$7 million), Washington County (\$3 million), City of Beaverton (\$2 million) and Metro (\$2 million).

Airport \$125 million | 5.5 miles, 4 stations | opened September 2001

Federal discretionary contribution:	\$0	(0%)
State/regionally-directed federal contribution:	\$0	(0%)
State, regional and local contribution:	\$96,800,000	(77%)
Private contribution:	\$28,200,000	(23%)

The funds were made up of contributions from the Port of Portland (\$28.3 million), TriMet (\$27.5 million), City of Portland (\$30 million), Metro (\$18 million in exchange for CMAQ funds) and the developer of the Cascade station area (\$28.2 million in exchange for undeveloped land).

Interstate \$350 million | 5.8 miles, 10 stations | opened May 2004

Federal discretionary contribution:	\$257,500,000	(74%)
State/regionally-directed federal contribution:	\$24,100,000	(7%)
State, regional and local contribution:	\$68,490,000	(20%)
Private contribution:	\$0	(0%)

The state, regional and local funds were through TriMet (\$38.5 million) and City of Portland (\$30 million).

WES \$161 million | 14.7 miles, 5 stations | opened February 2009

Federal discretionary contribution:	\$58,650,000	(36%)
State/regionally-directed federal contribution:	\$25,500,000	(16%)
State, regional and local contribution:	\$74,560,000	(66%)
Private contribution:	\$2,500,000	(2%)

The state, regional and local funds were through the State of Oregon (\$38.8 million), including lottery bonds, TriMet (\$25.3 million) and Washington County (\$20.5 million). Local property donations accounted for \$2.5 million in contributions.

I-205/Portland Mall \$576 million | 8.3 miles, 14 stations | opened September 2009

Federal discretionary contribution:	\$348,560,000	(61%)
State/regionally-directed federal contribution:	\$87,790,000	(15%)
State, regional and local contribution:	\$136,230,000	(24%)
Private contribution:	\$3,120,000	(1%)

The state, regional and local funds were through TriMet (\$27.9 million), Clackamas County Development Agency (urban renewal) funds (\$39.3 million) and City of Portland, including parking enterprise funds (\$27.7 million), Portland Development Commission (urban renewal) funds (\$22.3 million) and local improvement district funds (\$19 million).

Portland-Milwaukie \$1.49 billion | 7.3 miles, 10 stations | scheduled to open 2015

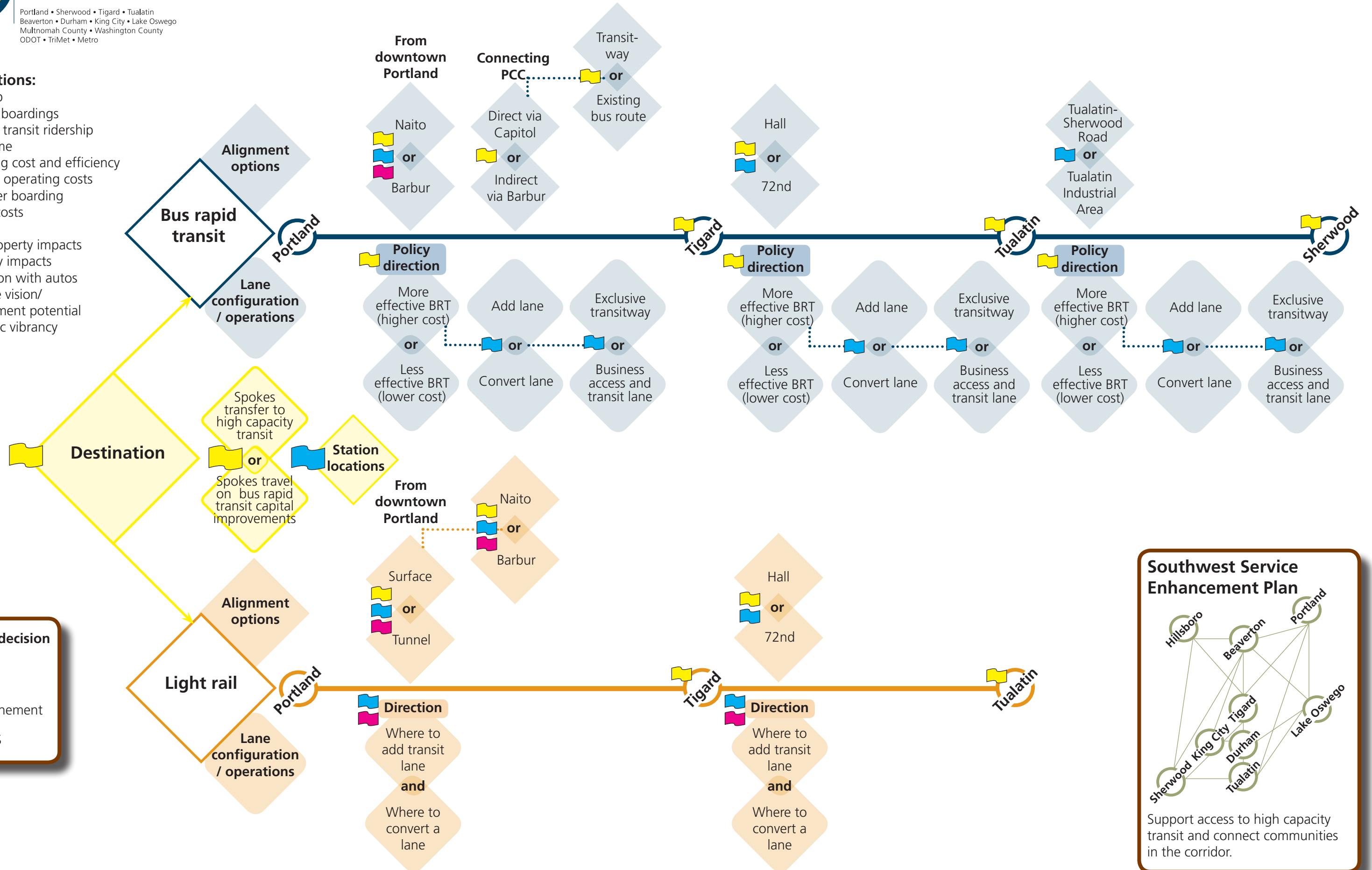
Federal discretionary contribution:	\$745,180,000	(50%)
State/regionally-directed federal contribution:	\$315,440,000	(21%)
State, regional and local contribution:	\$381,090,000	(26%)
Private contribution:	\$48,650,000	(3%)

The bulk of non-federal funds were through the State of Oregon (\$252.1 million), primarily through lottery bonds, TriMet (\$341.3 million), property donation (\$48.6 million), City of Portland (\$50 million), Clackamas County (\$26.3 million), regional flexible funds (\$21.6 million) and the City of Milwaukie (\$5 million). Metro also had a relatively minor contribution.

Connecting great places: High capacity transit decision points

Considerations:

- Ridership
 - Project boardings
 - System transit ridership
- Travel time
- Operating cost and efficiency
 - Annual operating costs
 - Cost per boarding
- Capital costs
- Funding
- ROW/property impacts
- Roadway impacts
- Interaction with autos
- Land use vision/development potential
- Economic vibrancy



Potential decision horizons

- July (Yellow icon)
- Refinement (Blue icon)
- DEIS (Pink icon)

Southwest Service Enhancement Plan

Support access to high capacity transit and connect communities in the corridor.

Local and high capacity transit

Transit modes



Local bus

Local bus service focuses on community access, with stops about every 2 blocks to a quarter mile. This service typically uses traditional buses (about 45 seats) but may also use articulated buses (about 65 seats). Local bus service shares roadway and ranges in frequency depending on the route and time of day.



Express bus

Express buses in the region are local bus service, using the same vehicles and following the same routes. Express bus service moves the focus toward regional mobility by reducing the number of stops during peak periods between concentrated housing and employment areas.



Enhanced bus

Enhanced bus service focuses on regional mobility, connecting concentrated housing and employment areas. The service may use traditional buses or those with more amenities (for instance, coach-style vehicles) or more capacity, be given signal priority, have few stops, and/or have special lanes in limited areas. Service frequency can be increased during peak hours.



Streetcar

Streetcar focuses on community access within an urban area, with stops about every three or four blocks. Local streetcar service has been used in Portland to encourage development of shopping, housing and other destination areas. Streetcars have 30 seats per car with room and design for several passengers to stand. Cars can be doubled, and service frequency increased, during peak hours. The service operates in mixed traffic.



Rapid streetcar

Using the same technology as local streetcar, rapid streetcar focuses on regional mobility, offering fewer stops through less populated areas to connect housing areas to jobs or other destinations. Cars can be doubled, and service frequency increased, during peak hours. The service operates in mixed traffic, in exclusive right of way or a combination of the two.



Bus rapid transit

Bus rapid transit uses coach-style or high capacity buses (40-60 seats with room and design for several passengers to stand). The service may be in the roadway with turnouts and signal priority for stops, have an exclusive right of way, or be some combination of the two. The service focuses on regional mobility, with higher speeds, fewer stops, higher frequency and more substantial stations than local bus, connecting concentrated housing or local bus hubs and employment areas. Service frequency can be increased during peak hours.



Light rail

Light rail uses high capacity trains (68 seats with room and design for several passengers to stand) and focuses on regional mobility with stops typically one-half to 1 mile apart, connecting concentrated housing or local bus hubs and employment areas. The service has its own right of way. Cars can be doubled, and service frequency increased, during peak hours.



Commuter rail

Commuter rail uses high capacity heavy rail trains (74 seats in a single car, 154 in doubled cars), typically sharing right of way with freight or other train service (though out of roadway). The service focuses on connecting major housing or local bus hubs and employment areas with few stops and higher speeds. The service may have limited or no non-peak service.

Local and high capacity transit

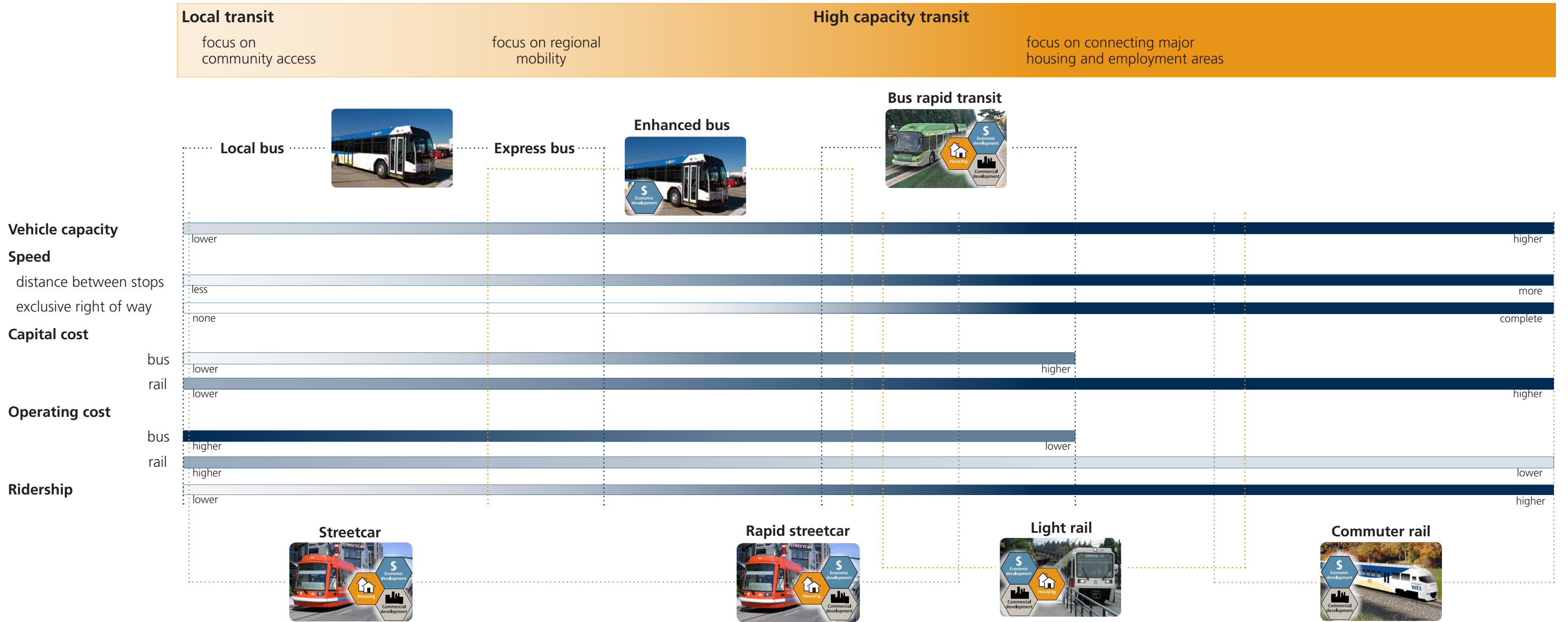
Considerations for transit investments



There are multiple, interdependent needs and constraints that are considered when determining the optimal transit solution for the corridor.

Local and high capacity transit

Choices on a spectrum: Meeting different needs and goals



Choices for community benefits

Planning for the future transit system and transit service requires a focus on the local visions for the areas transit will serve. However, just as a roadway system that grows to meet short-term demand in turn affects growth and development – and thus future demand – so too does the transit system.

High quality, permanent transit service attracts redevelopment, bringing more diverse housing, amenities and employment centers. Choices about the level of investment – including type (transit mode), alignment, stop or station location and design – are made with an eye toward the return on investment in how it benefits

the economic and livability goals of the community it serves. Forecasts for this return on investment depend on two main considerations: ridership and integration.

Ridership

Ridership projections consider capacity, frequency, speed and calculations about how many people want to go from one location or area to another. These elements are dependent on the type of service (affecting capacity and speed), alignment (affecting frequency and speed and a reflection of how many people want to go from one place to another), number and locations of stops or stations (affecting speed and a reflection of how many

people want to go from one location or area to another).

Integration

Integration refers to both the physical space as well as the policies affecting community development.

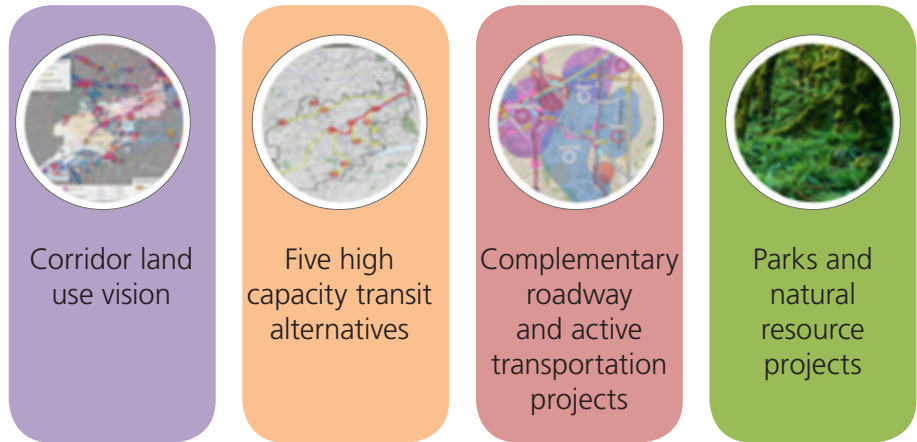
Physical Physical integration requires consideration of type of service, alignment, number and location of stops or stations, but it focuses on station – and station area – design so that it reflects the community and provides comfortable and convenient access to the transit investment from housing, jobs and community amenities. Physical integration also includes the level of permanence

in the community, which signals that private investment will have its own long-term return.

Policy State, regional and local policies can both support and leverage high quality, permanent transit service. Land use and policies that guide investments – such as those designed to increase housing choices, improve employment centers and create opportunities for additional community amenities – improve the physical integration of the transit investment over time.

Moving towards a shared investment strategy for the Southwest corridor

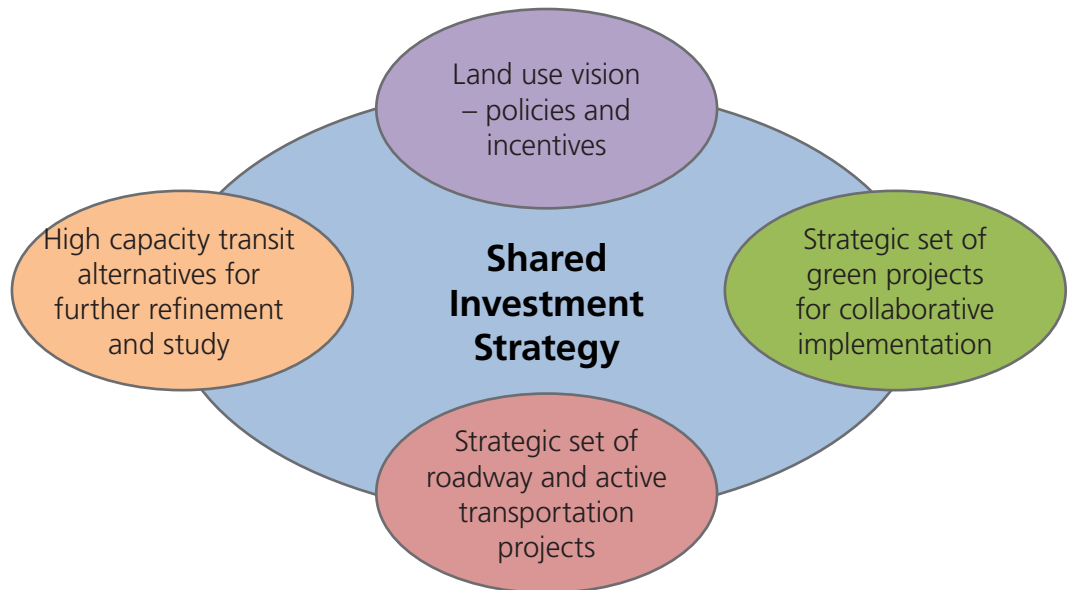
January – February 2013



- 1. Qualitative land use assessment
- 2. Transit supportiveness
- 3. Funding responsibility and availability



June- July 2013





Portland • Sherwood • Tigard • Tualatin
Beaverton • Durham • King City • Lake Oswego
Multnomah County • Washington County
ODOT • TriMet • Metro



Transit Evaluation

SW Corridor Steering Committee

May 13, 2013

Timeline for HCT decisions

July 2013	Refinement/DEIS
<ul style="list-style-type: none"> • Destination • Which modes to carry forward for more study • Policy direction on “level” of BRT for further study • Direction on Southwest (Transit) Service Enhancement Plan 	<ul style="list-style-type: none"> • Alignments <ul style="list-style-type: none"> ◆ Direct connection to PCC? ◆ Naito or Barbur? ◆ Hall or 72nd? • Surface or tunnel? • Station locations • Add a lane or convert a lane? • Transit system connections?

BRT considerations

Fully
mixed
traffic

Fully
exclusive
transitway

Mixed traffic

- Slower
- Lower ridership
- Less reliable
- Lower capital costs

Eligible for federal
New Starts funding
at 50% dedicated
right of way

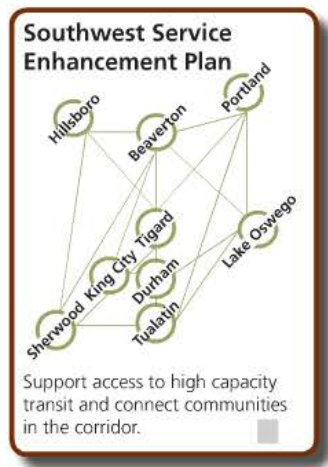
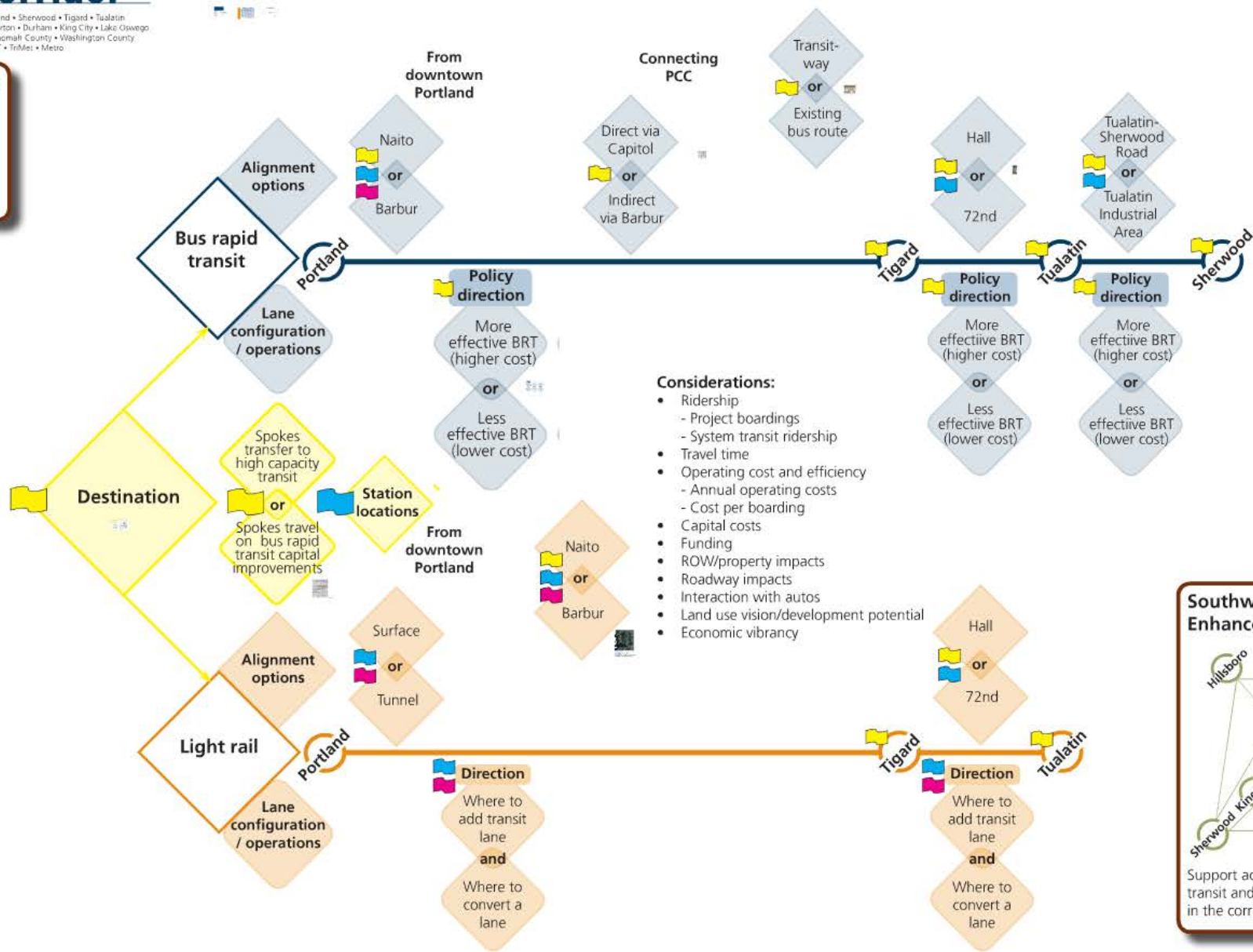
Exclusive transitway

- Faster
- Higher ridership
- More reliable
- More expensive capital costs

Connecting great places: High capacity transit decision points

Potential decision horizons

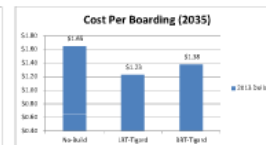
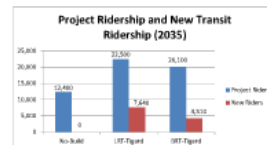
- July
- Refinement
- DEIS



Mode

Comparing:

- No-Build Lines 12 and 94
- LRT to Tigard
60% convert lane, 40% add lane
Exclusive ROW
- BRT to Tigard
Add lane, Exclusive ROW
(Gold Standard BRT)

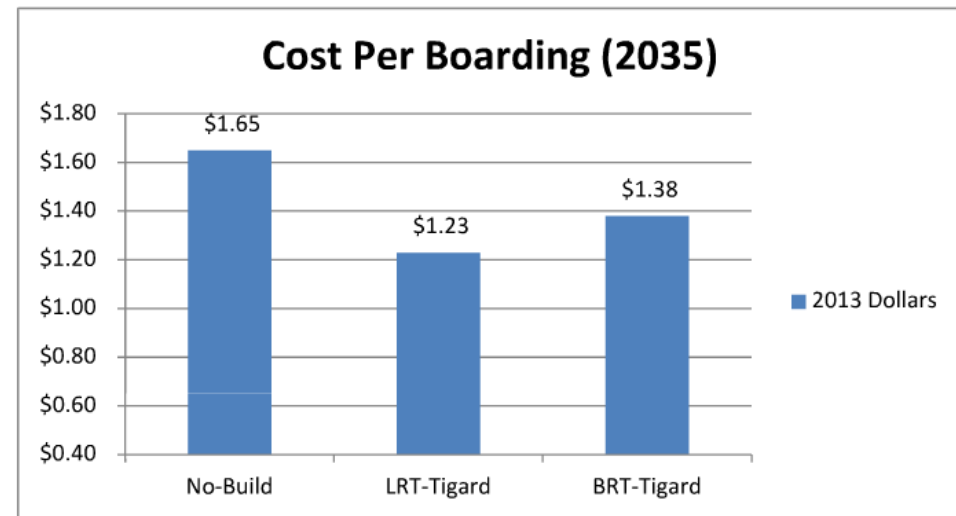
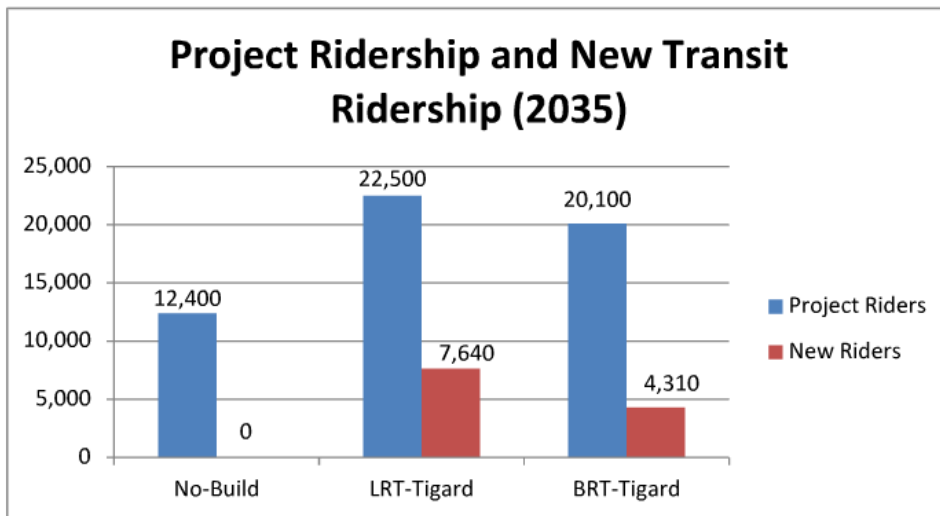
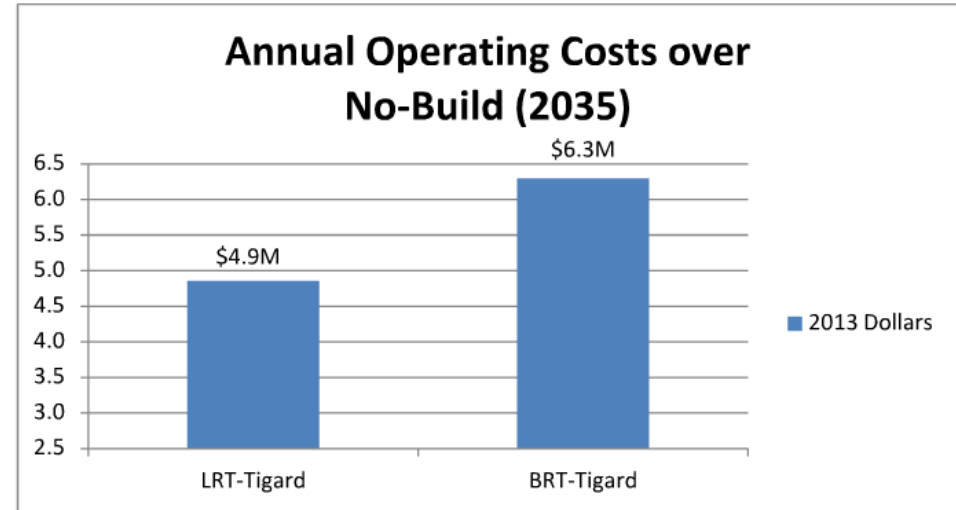


2022
10/11

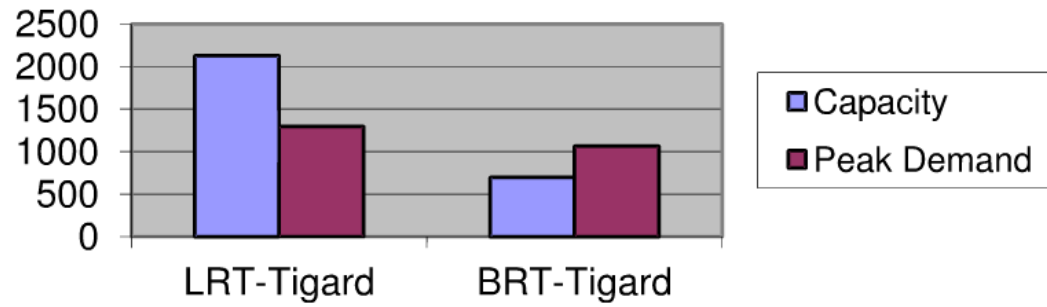


Comparing:

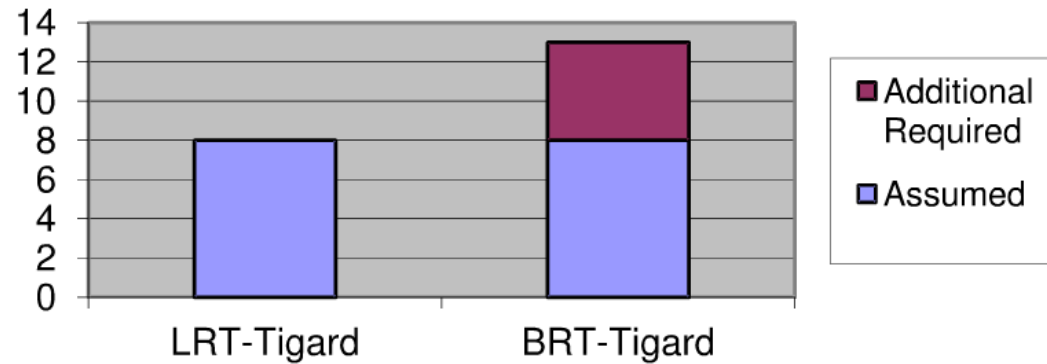
- **No-Build** Lines 12 and 94
- **LRT to Tigard**
60% convert lane, 40% add lane
Exclusive ROW
- **BRT to Tigard**
Add lane, Exclusive ROW
(Gold Standard BRT)



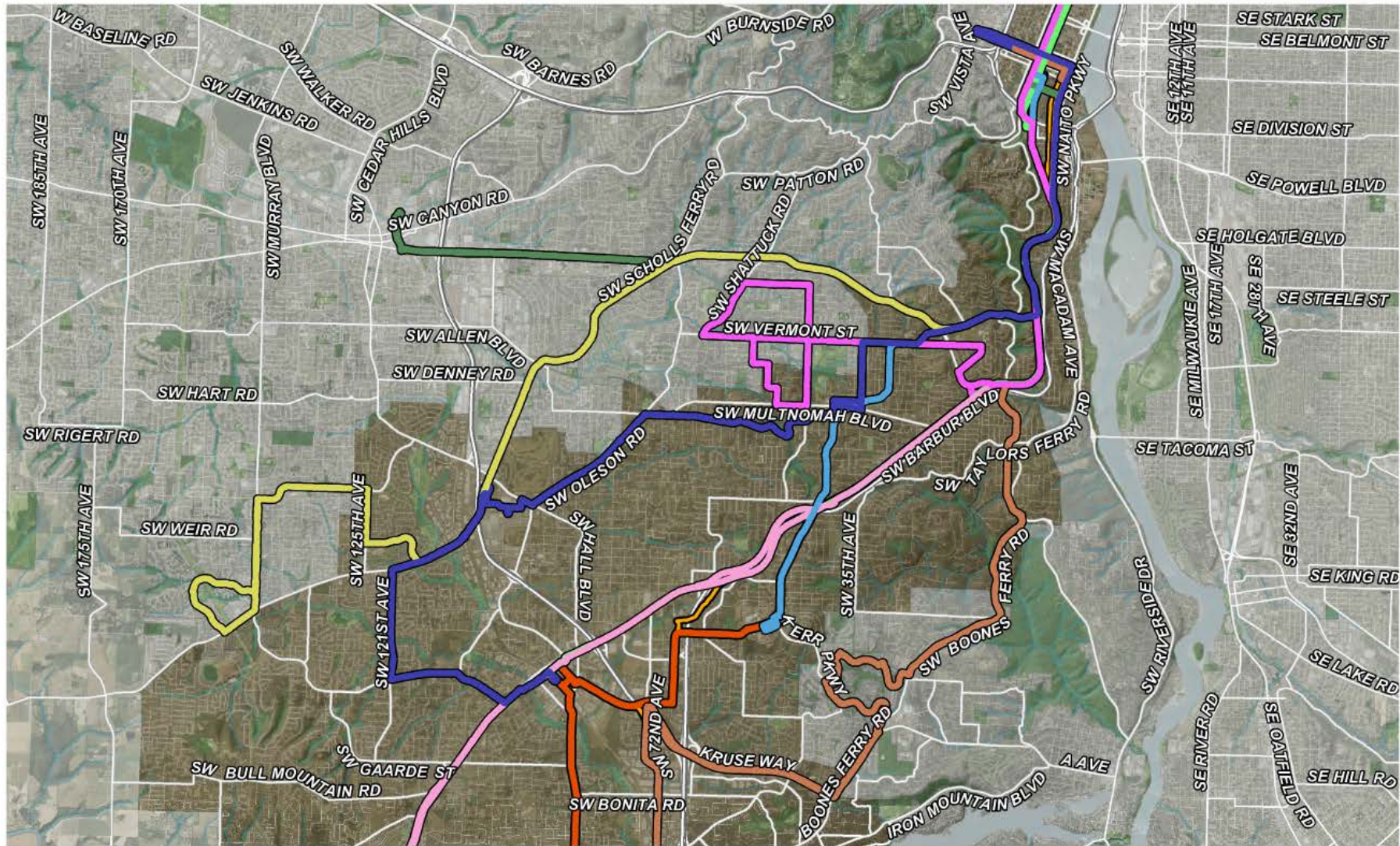
Hourly Carrying Capacity and Peak Demand with Eight Vehicles/Hour



Hourly Frequencies



High frequencies can affect reliability as signal priority and vehicle spacing become more challenging

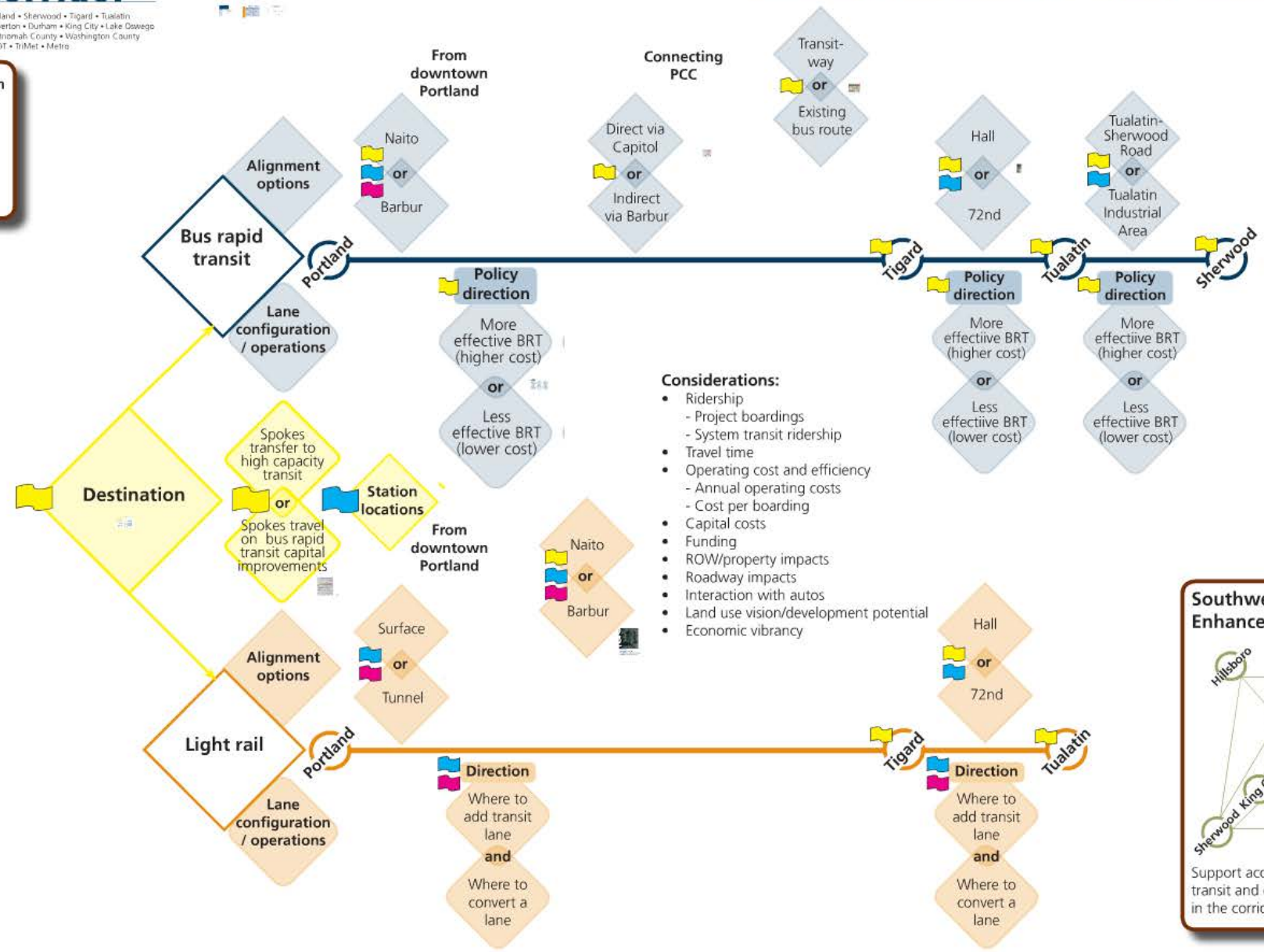


- Lines 12, 38, 44, 45, 54, 92, 94 - 24 buses/ hour on Barbur
- Because LRT would have remaining capacity local routes could be restructured as feeder lines, increasing LRT ridership and providing an opportunity to reallocate service hours
- Because BRT would be at (or over) capacity, there would be less opportunity to reallocate service hours without increasing BRT service hours.

Connecting great places: High capacity transit decision points

Potential decision horizons

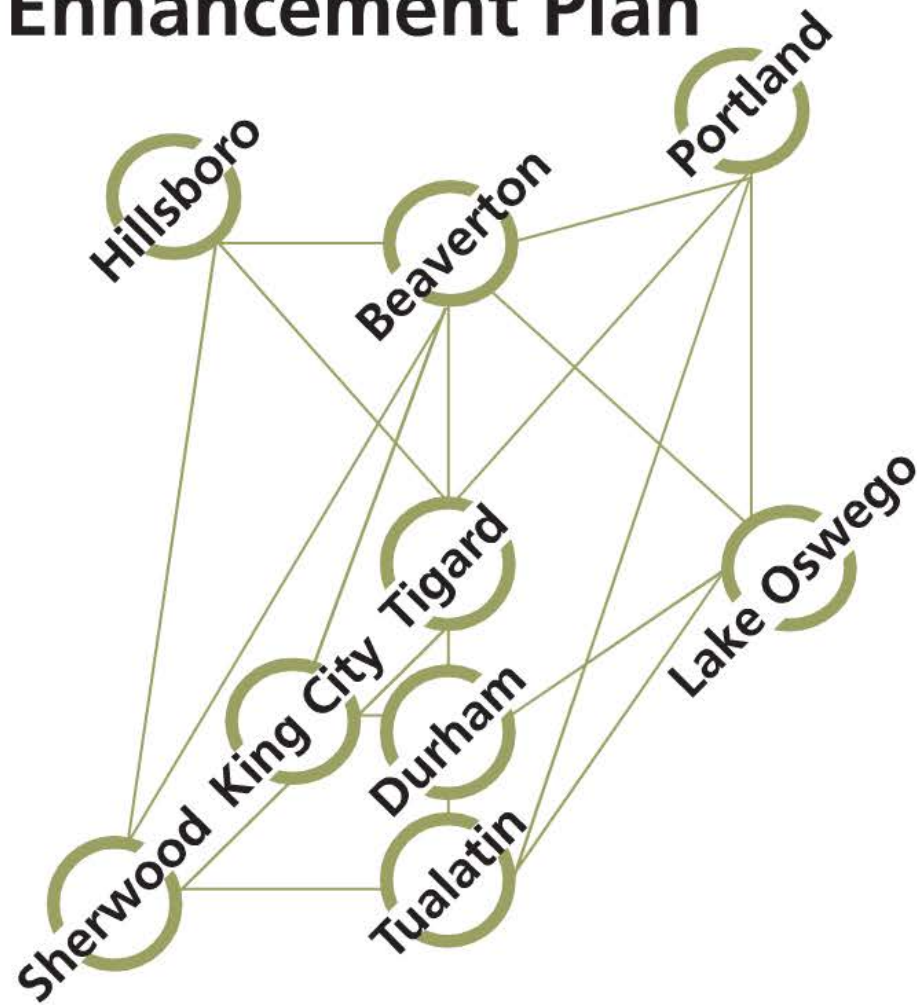
- July
- Refinement
- DEIS



Southwest Service Enhancement Plan

Support access to high capacity transit and connect communities in the corridor.

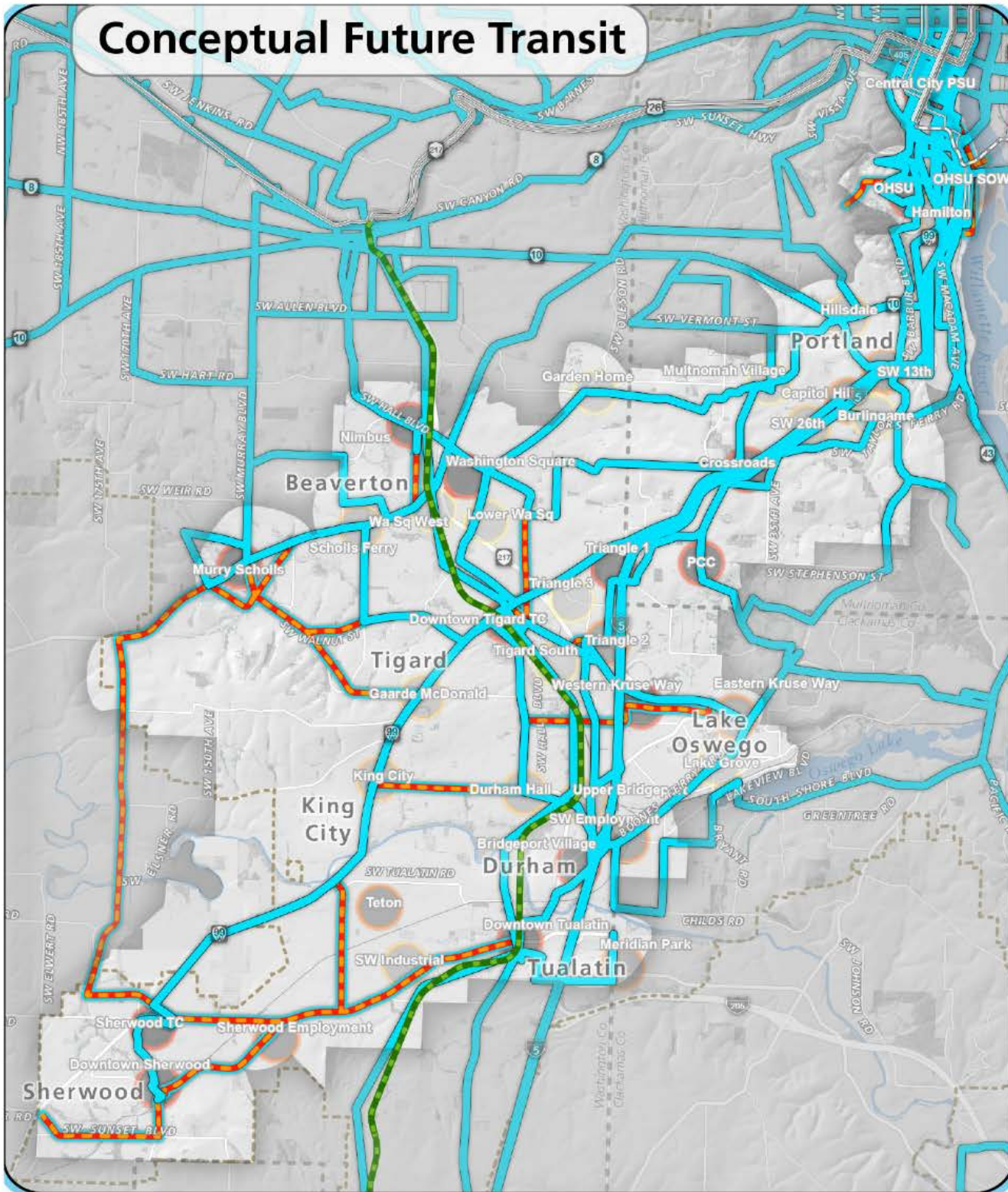
Southwest Service Enhancement Plan



Support access to high capacity transit and connect communities in the corridor.



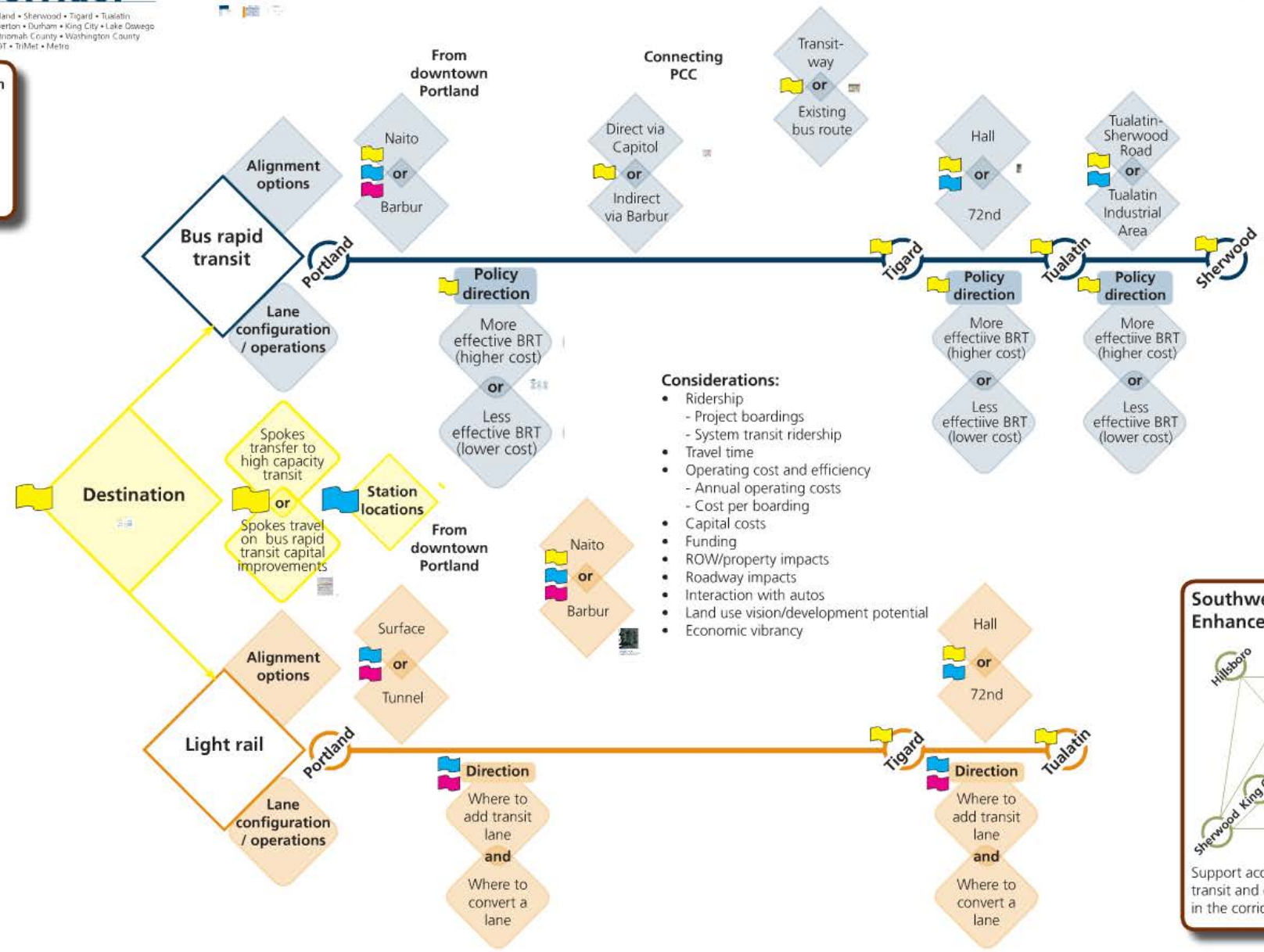
Conceptual Future Transit



Connecting great places: High capacity transit decision points

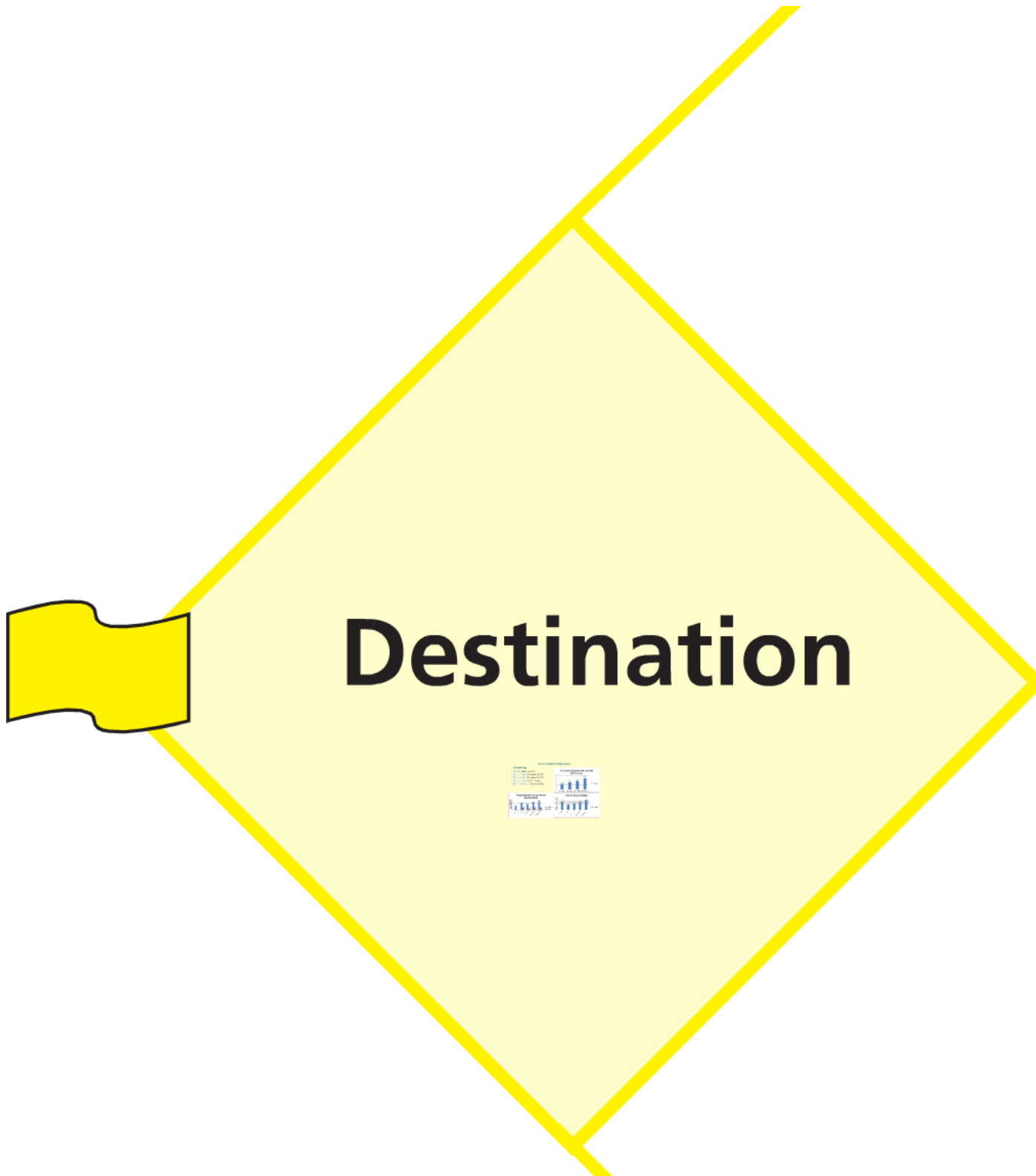
Potential decision horizons

- July
- Refinement
- DEIS

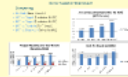


Southwest Service Enhancement Plan

Support access to high capacity transit and connect communities in the corridor.



Destination



Sp
tran
high
tra

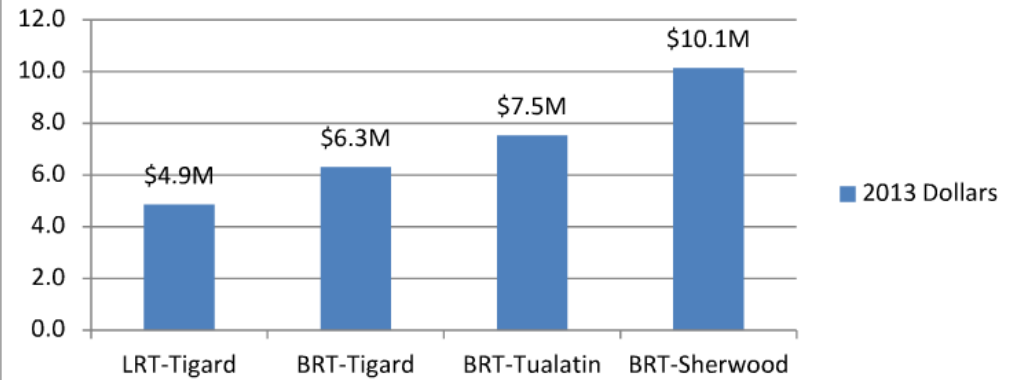
Spoke
on b
transi
impro

On to Tualatin? Sherwood?

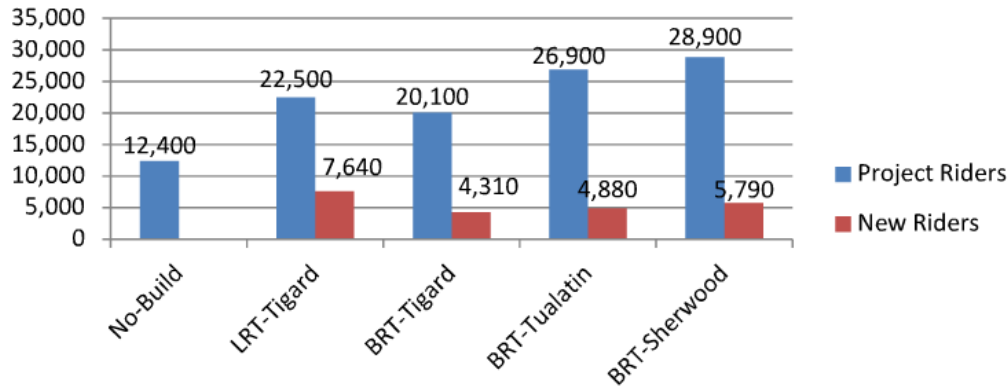
Comparing:

- No-Build lines 12 and 94
- LRT to Tigard (Exclusive ROW)
- BRT to Tigard (Exclusive ROW)
- BRT to Tualatin (BAT lanes)
- BRT to Sherwood (mixed traffic)

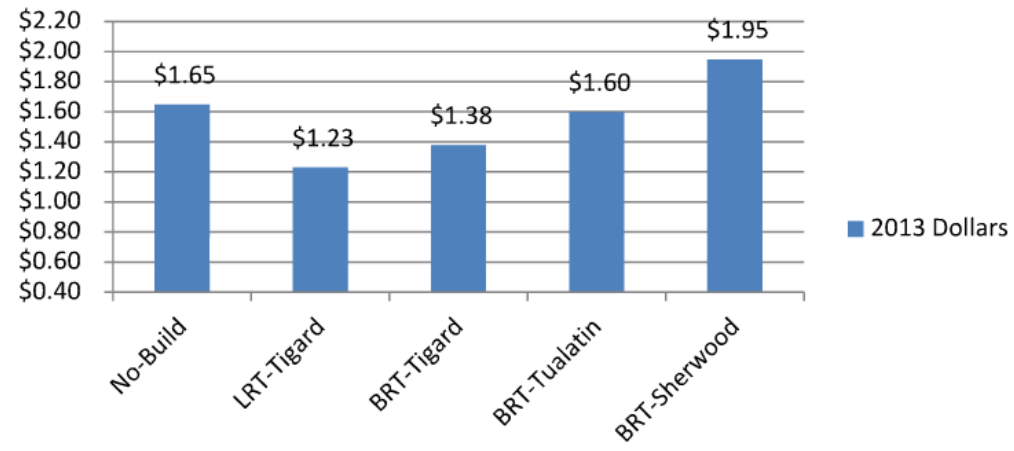
Annual Operating Costs Over No-Build (2035 Service)



Project Ridership and New Transit Ridership (2035)



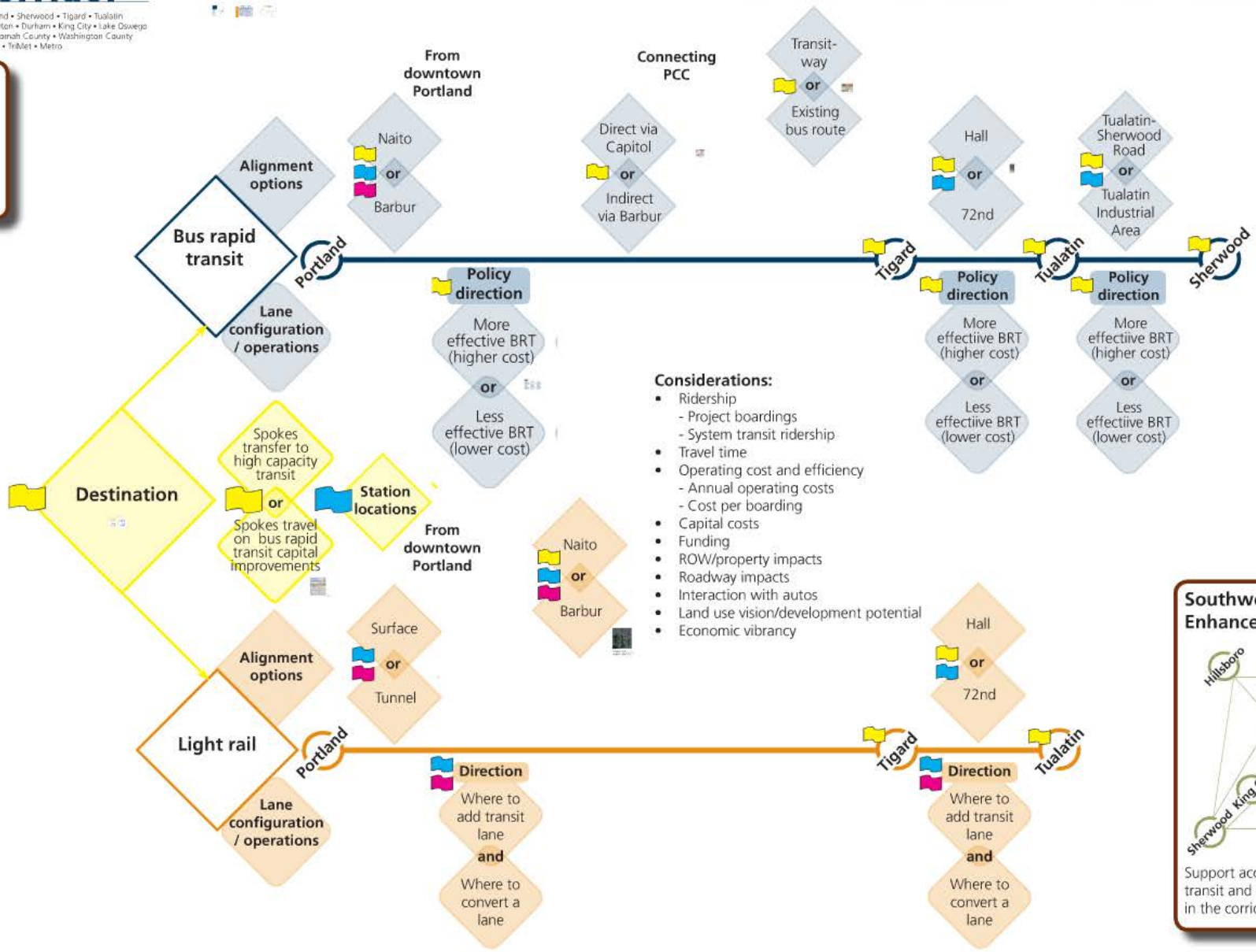
Cost Per Boarding (2035)



Connecting great places: High capacity transit decision points

Potential decision horizons

- July
- Refinement
- DEIS



Southwest Service Enhancement Plan

Support access to high capacity transit and connect communities in the corridor.

Policy direction

More effective BRT (higher cost)

or

Less effective BRT (lower cost)



Policy direction

More effective BRT (higher cost)

or

Less effective BRT (lower cost)

Add lane

or

Convert lane

Exclusive transitway

or

Business access and transit lane

Compare Add Lane vs Convert Lane

Exclusivity/Exclusive Transit vs BRT Lanes vs Mixed Traffic

Tradeoffs: Add Lane vs Convert Lane

Add lane (BRT to Tigard)

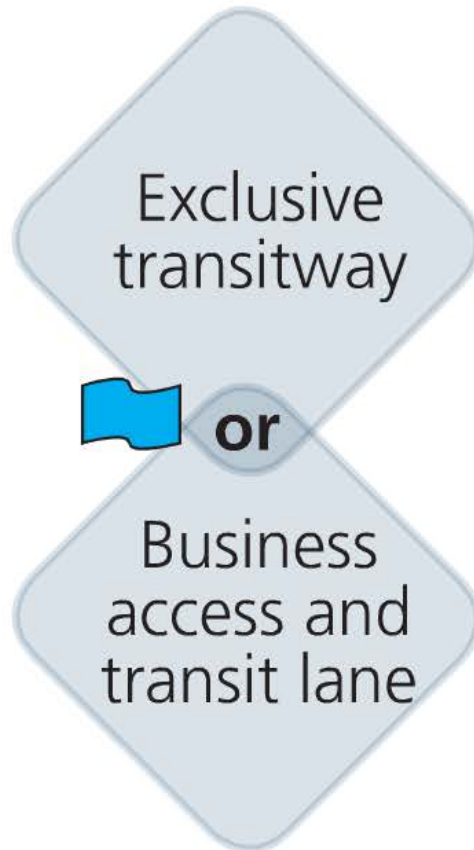
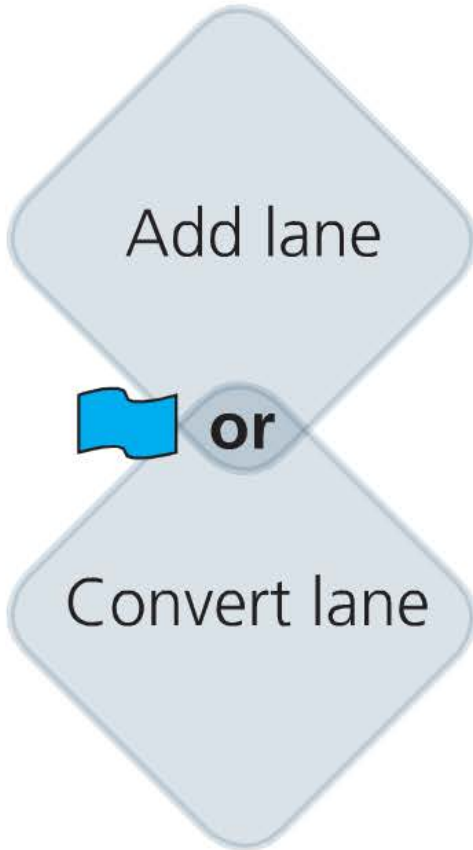
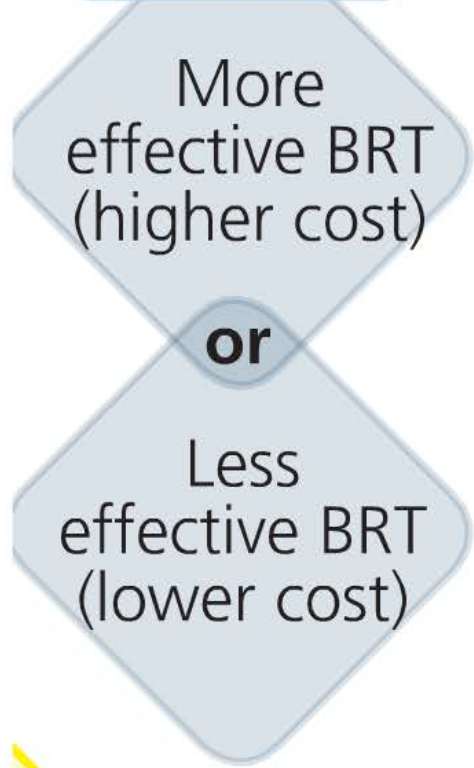
- Comparable ridership*
- Comparable travel time*
- Comparable operating efficiency*
- Lower roadway impacts
- Higher property impacts
- Higher capital costs

Convert lane (LRT to Tigard)

- Comparable ridership*
- Comparable travel time*
- Comparable operating efficiency*
- Higher roadway impacts
- Lower property impacts
- Lower capital costs

* Assumes identical use for lane (i.e.. exclusive transit or shared lane)

Policy direction



Transit/Bus Add Lanes/Convert Lane

Transit/Bus Add Lanes/Convert Lane

Tradeoffs: Exclusive Transit vs BAT Lanes vs Mixed Traffic

Exclusive Transit

- Highest ridership
- Fastest travel times
- Highest operating efficiency
- Least interaction with autos
- Highest capital cost or roadway impacts

BAT Lanes

- Lower ridership
- Slower travel times
- Lower operating efficiency
- More interaction with autos

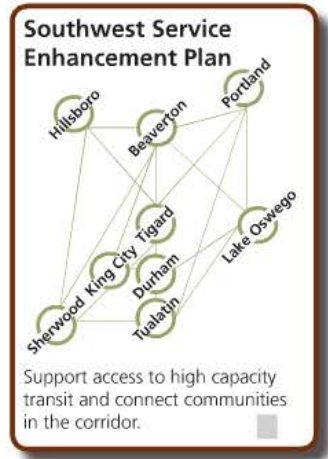
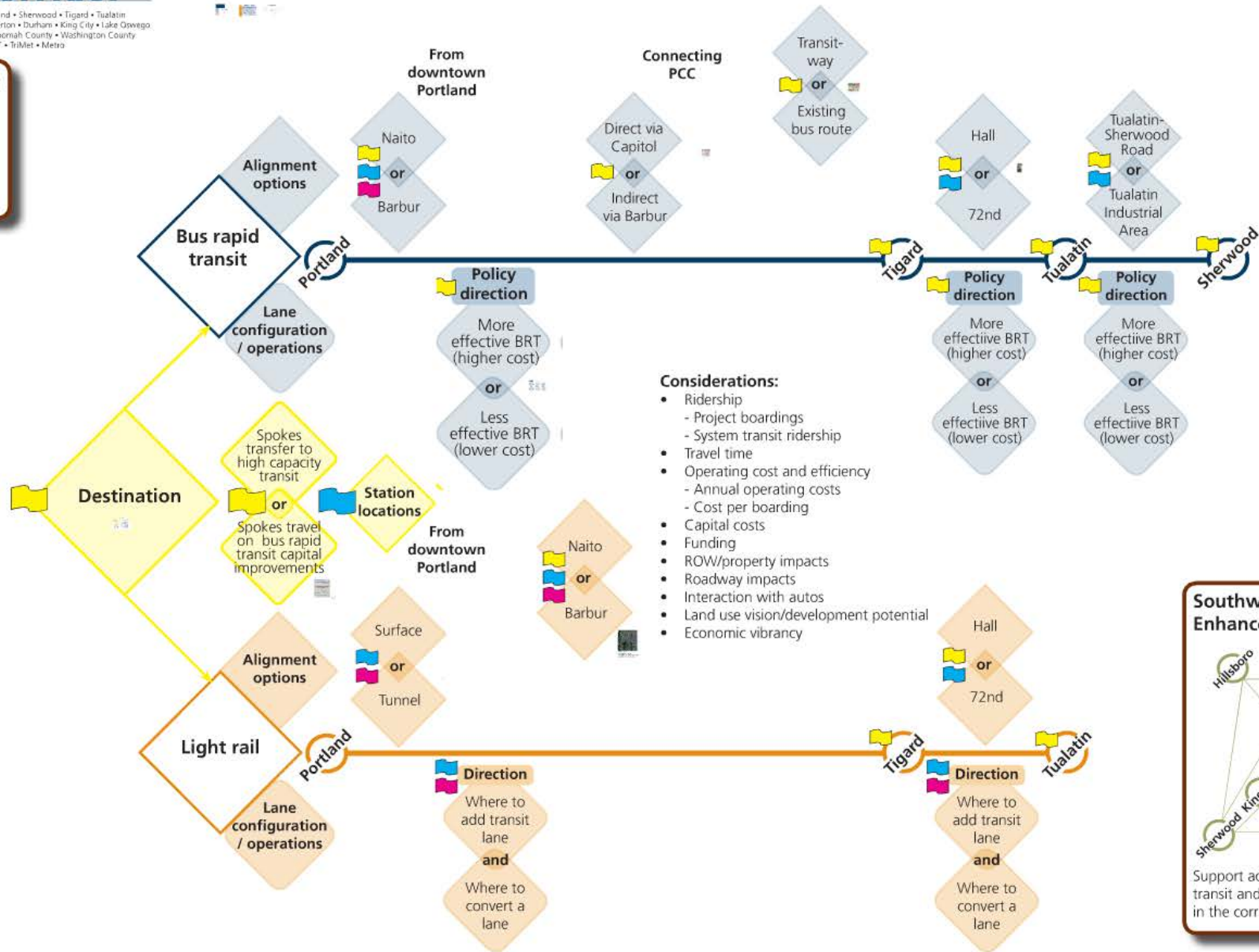
Mixed Traffic

- Lowest ridership
- Slowest travel times
- Lower operating efficiency
- Most interaction with autos
- Lowest capital cost

Connecting great places: High capacity transit decision points

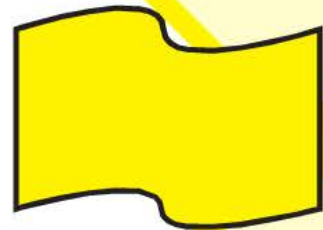
Potential decision horizons

- July
- Refinement
- DEIS

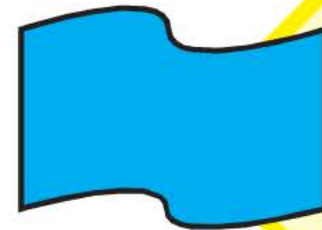


tion

Spokes transfer to high capacity transit



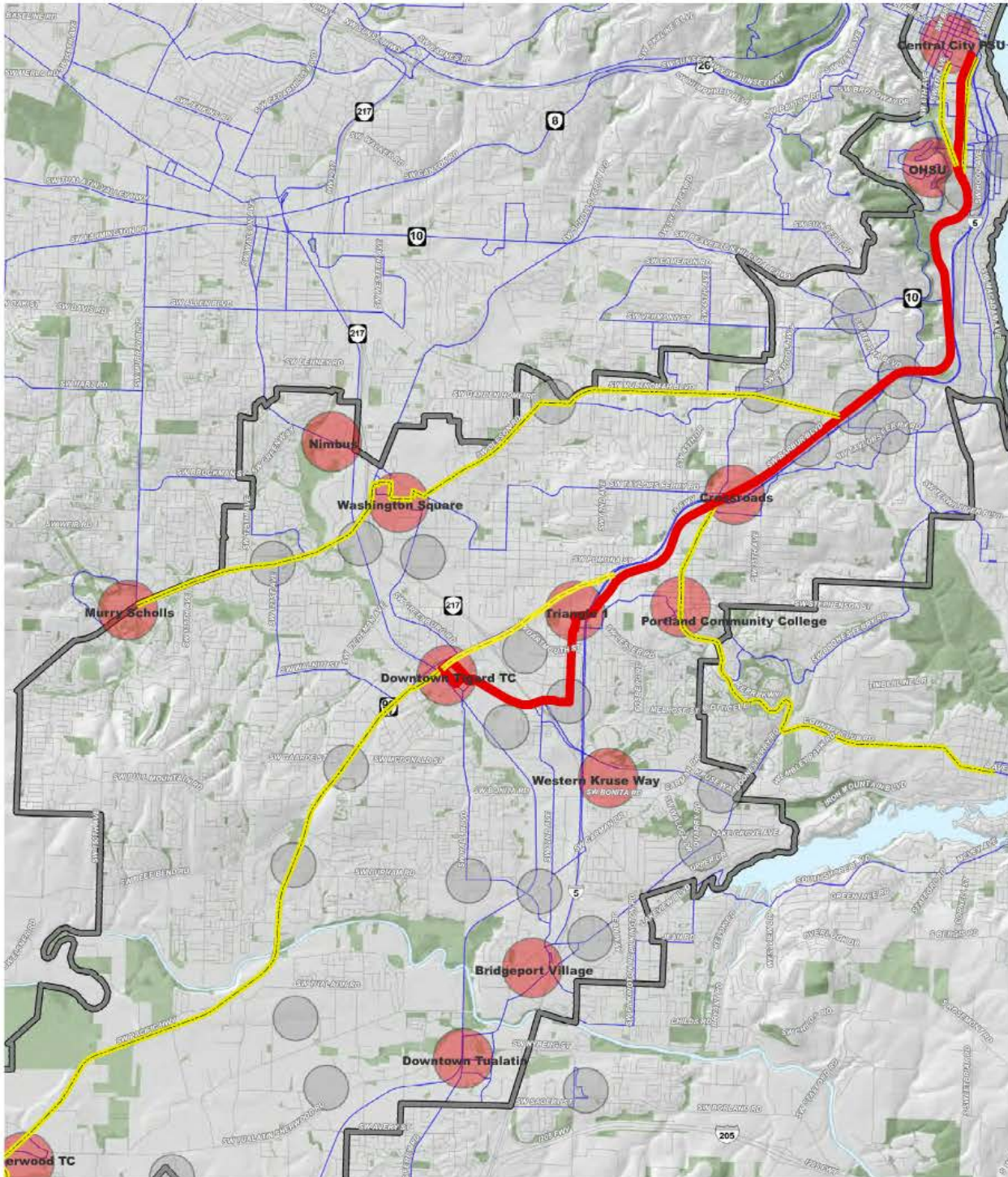
or



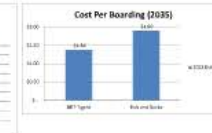
Static location

Spokes travel on bus rapid transit capital improvements





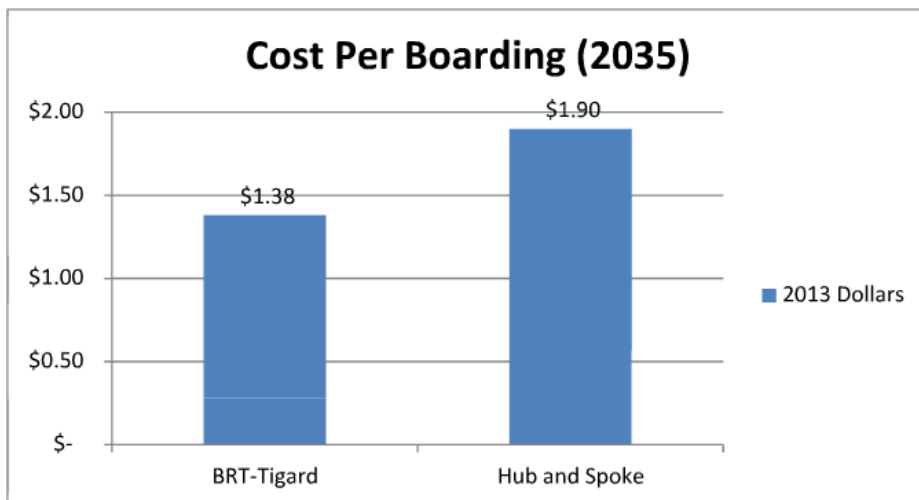
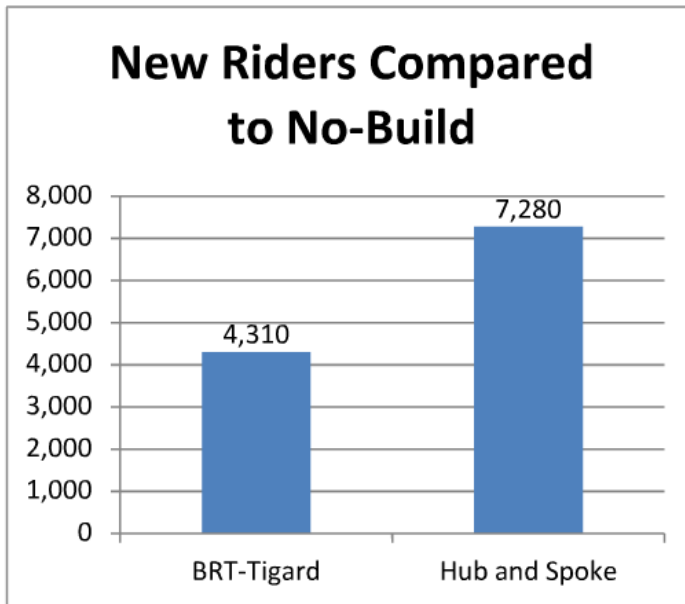
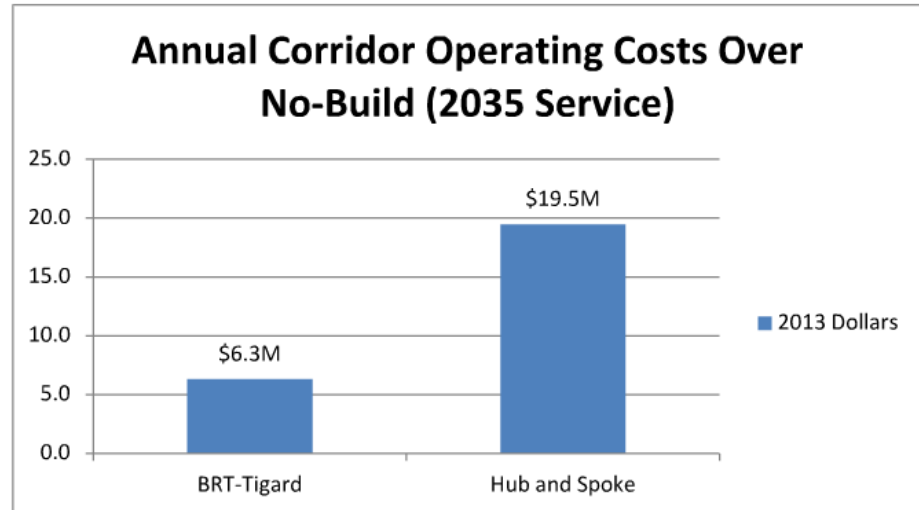
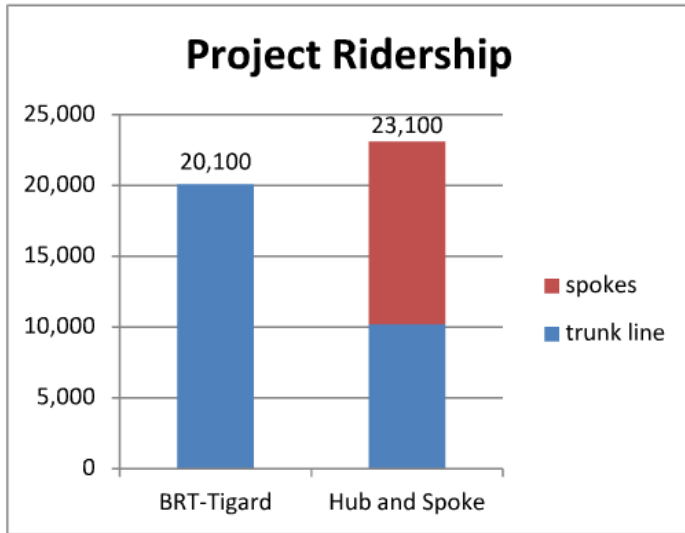
Comparing:
 - SRT to Tigard
 - SRT - Hub and Spoke



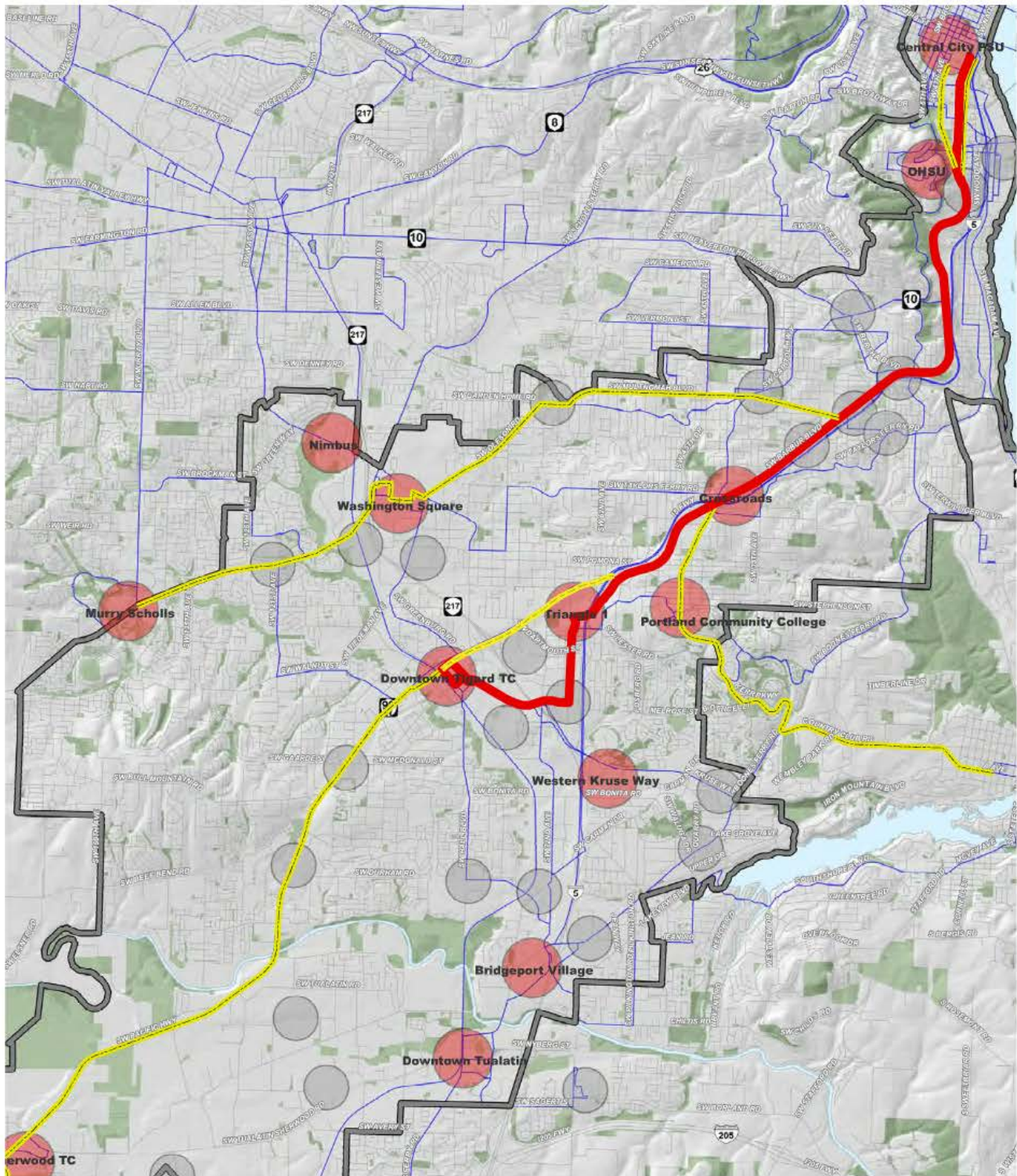
insert ridership, operating costs, cost per boarding charts and physical constraints

Comparing:

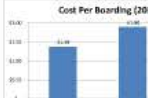
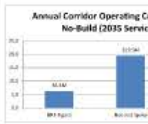
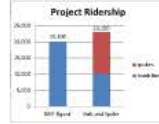
- BRT to Tigard
- BRT - Hub and Spoke



design constraint - center-running BRT lanes are precluded with use of local buses as spokes



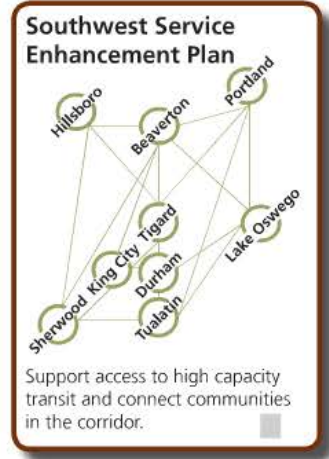
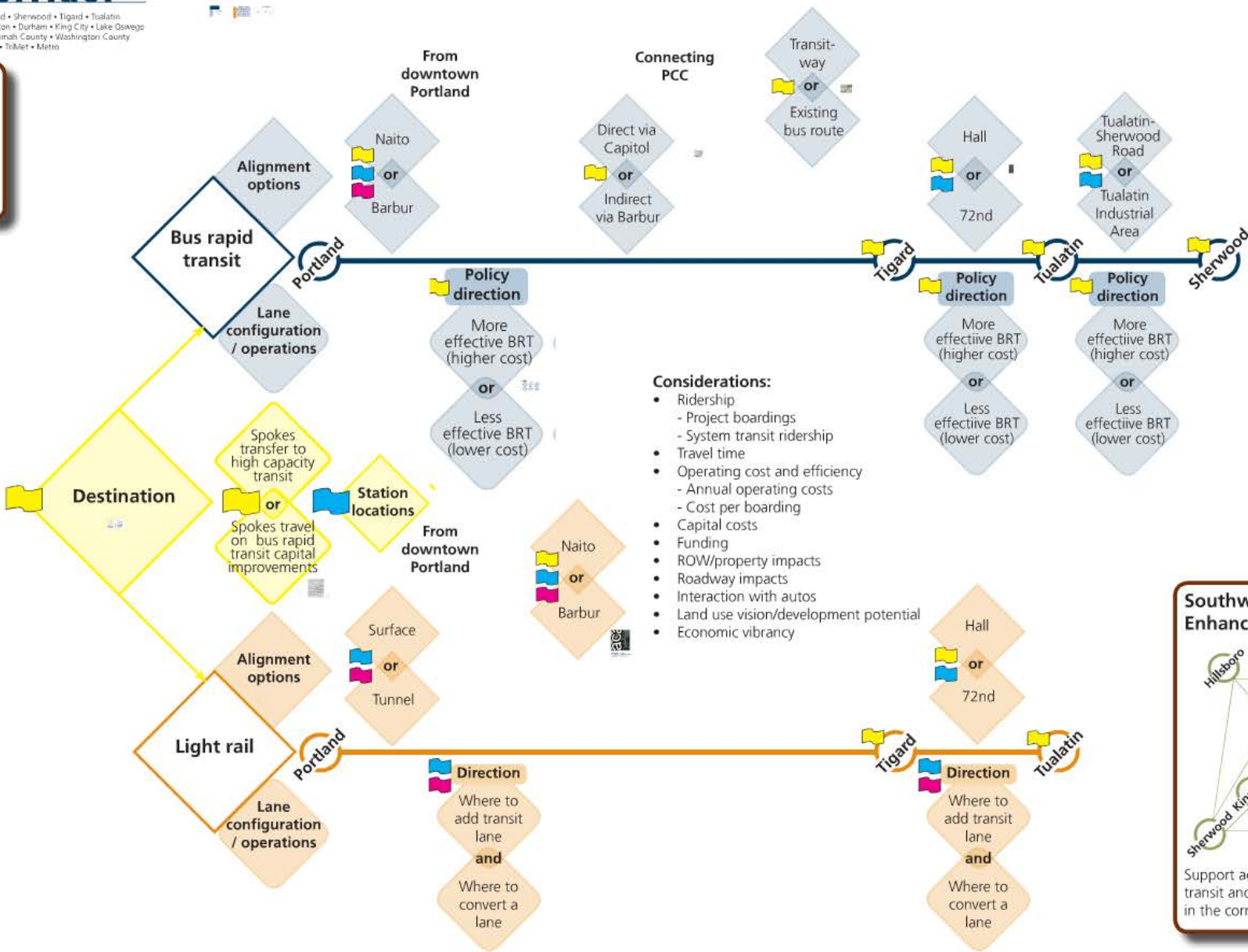
Comparing:
 - BRT to Tigard
 - BRT - Hub and Spoke



Connecting great places: High capacity transit decision points

Potential decision horizons

- July
- Refinement
- DEIS



Connecting PCC

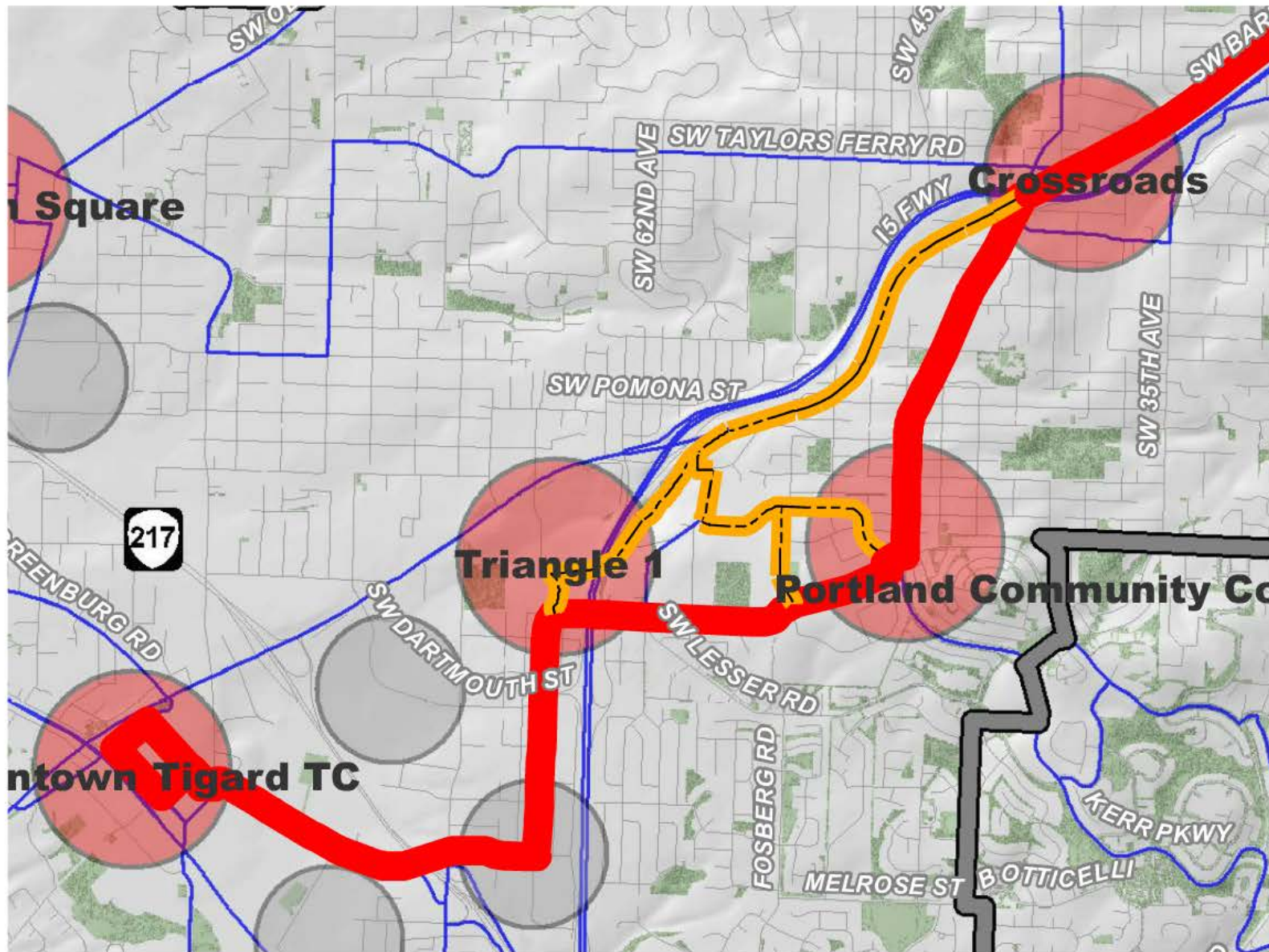
Direct via
Capitol



or

Indirect
via Barbur





Direct to PCC via Capitol Hwy & SW 49th or indirect connection via Barbur (1/2 mile walk on 53rd) with potential p&r lot?

Serving PCC directly via Capitol Hwy and SW 49th Ave would gain:

- 1,770 daily riders at Capitol/Pomona
- 4,590 daily riders at PCC Campus
- for a total of 6,370 riders
- but many (5-2,000) would have switched from other buses

Serving PCC indirectly via Barbur Blvd (1/2 mile to PCC) would gain:

- 4,010 daily riders at Barbur/SW 53rd
- this assumes a new P&R lot

le walk

Serving PCC directly via Capitol Hwy and SW 49th Ave would gain:

- 1,770 daily riders at Capitol/Pomona
- 4,590 daily riders at PCC Campus
- for a total of 6,370 riders
- but many (>2,000) would have switched from other buses

Serving PCC indirectly via Barbur Blvd (1/2 mile to PCC) would gain:

- 4,010 daily riders at Barbur/SW 53rd
- this assumes a new P&R lot

Connecting PCC

Direct via
Capitol

or

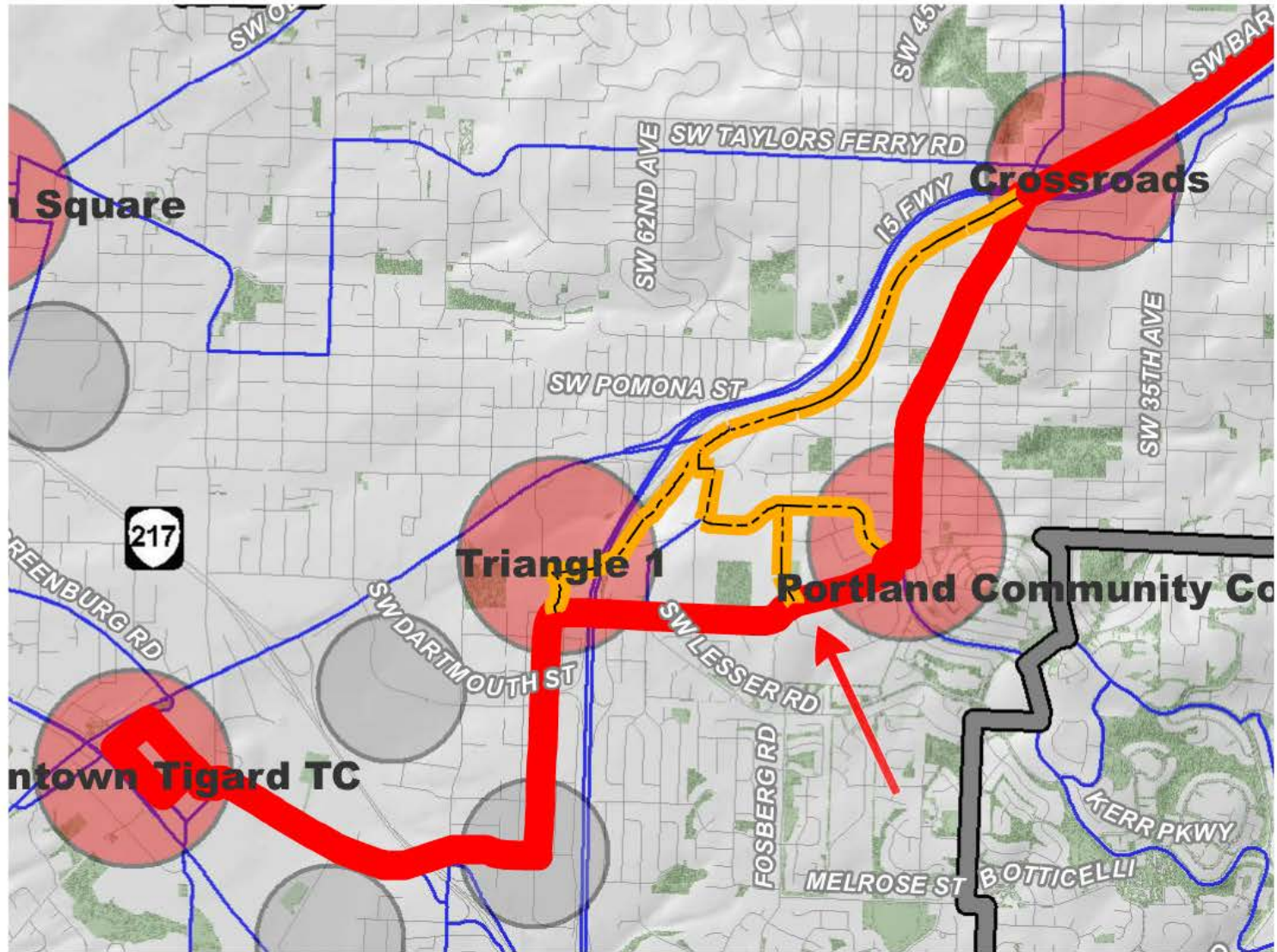
Indirect
via Barbur

Transit-
way

or

Existing
bus route





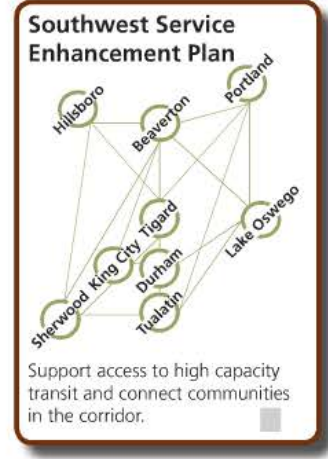
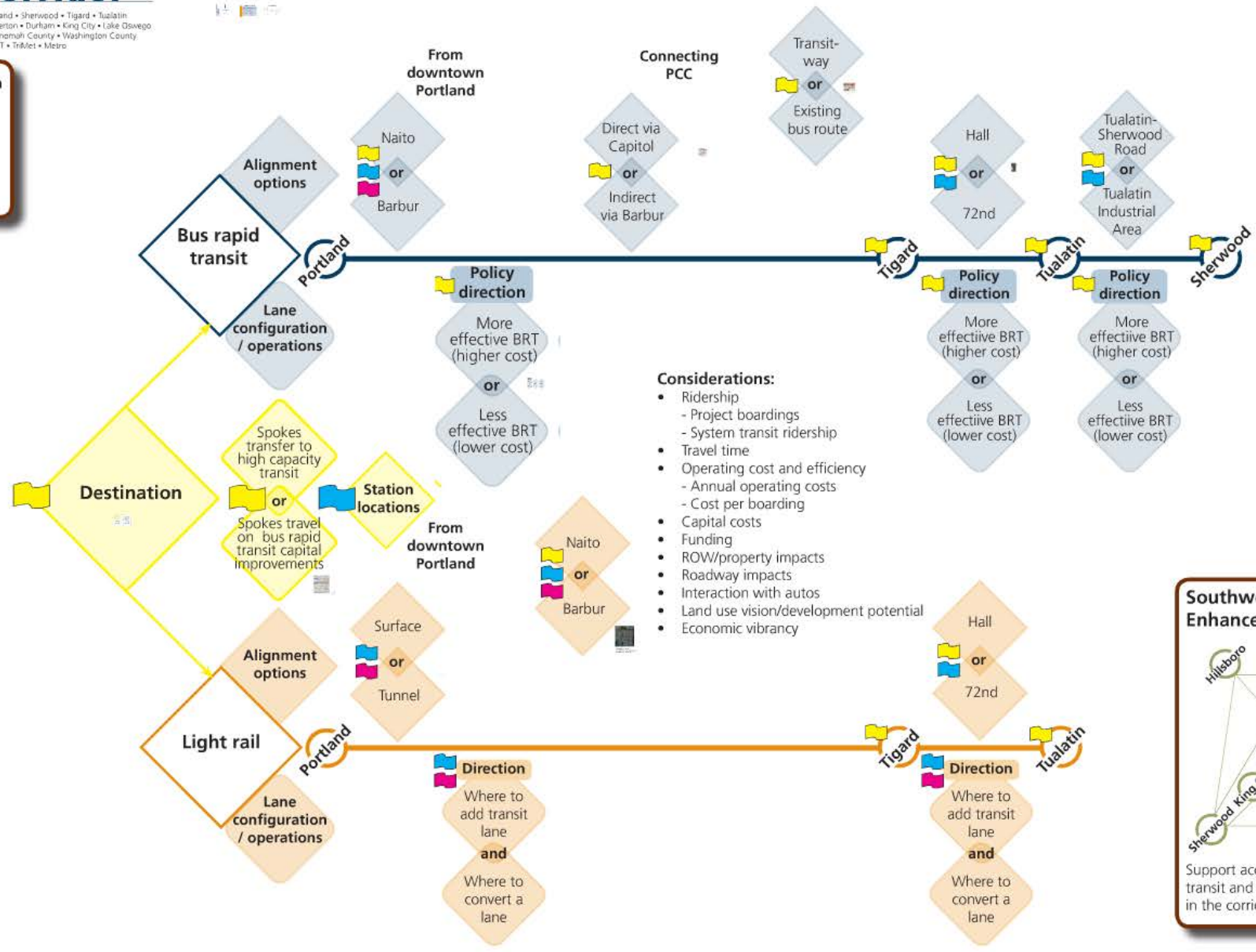
Exclusive BRT transitway on Haines or use existing streets?

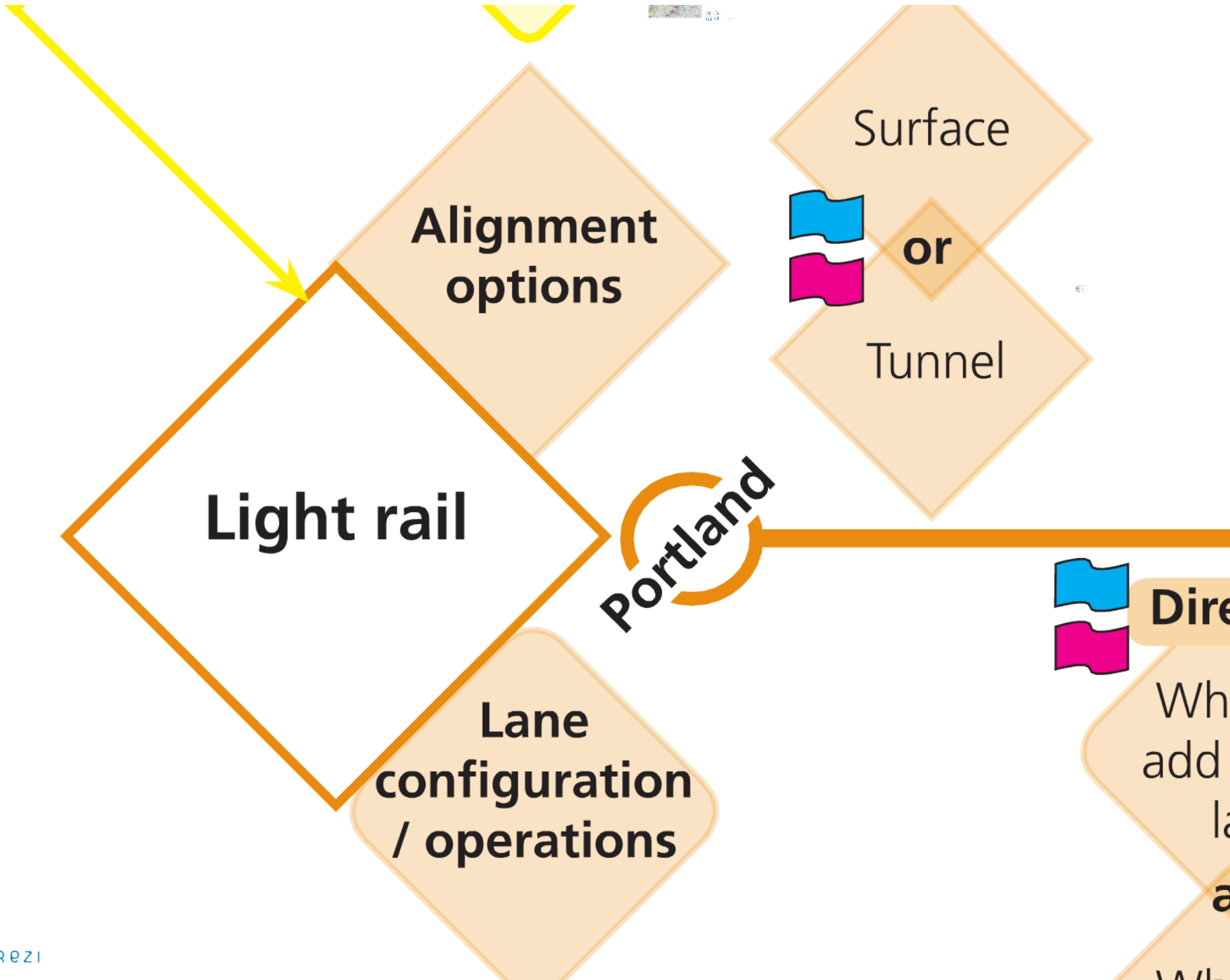
Travel time, reliability, impacts considerations

Connecting great places: High capacity transit decision points

Potential decision horizons

- July
- Refinement
- DEIS

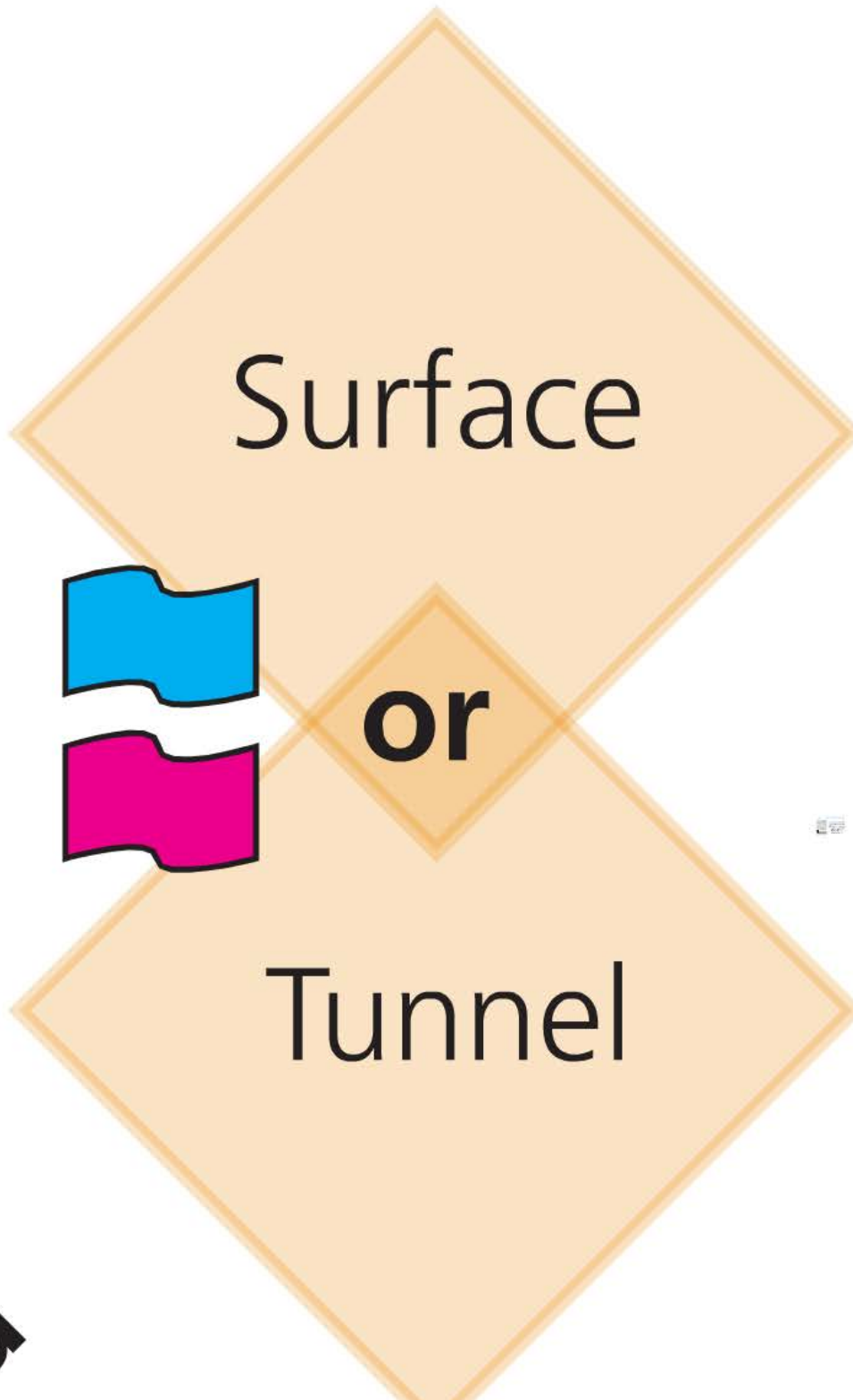






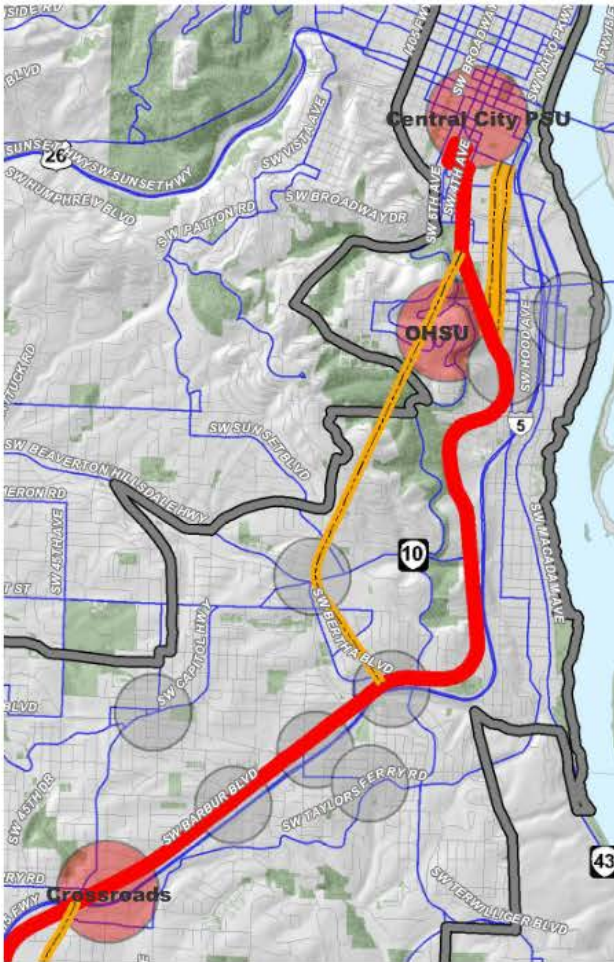
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OHSU Hilltop vs South Waterfront



A subway-type tunnel under OHSU would gain 8,460 daily trips...

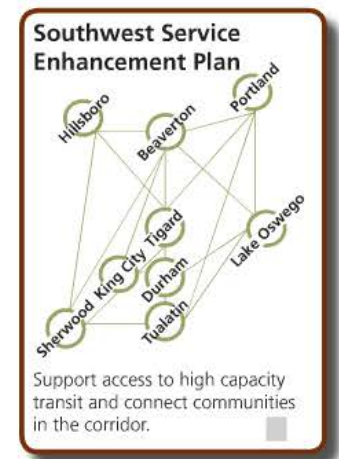
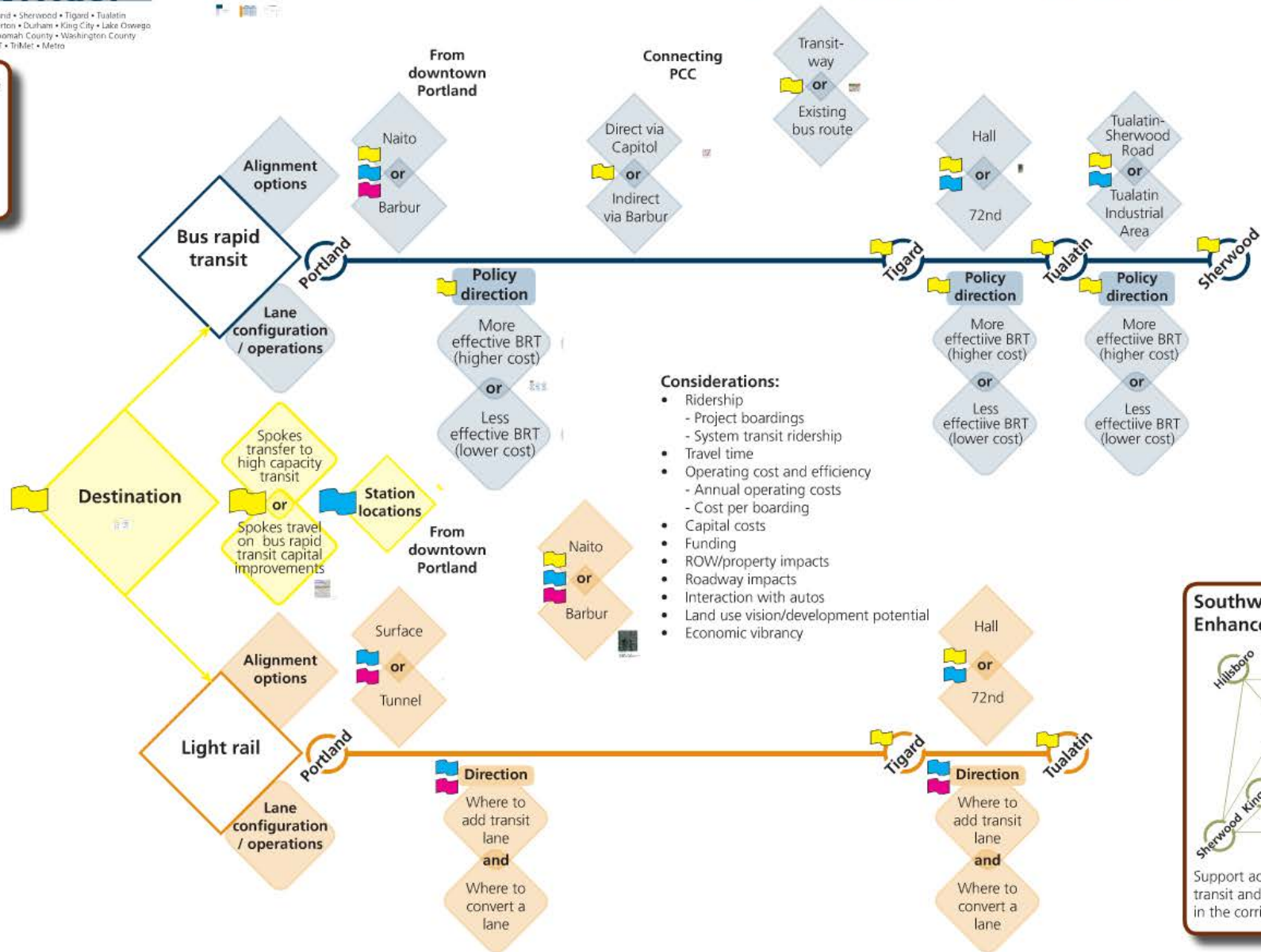
but would lose 6,250 daily trips:

- South Waterfront: 2,250
- Lincoln Station: 3,290
- Barbur/Hamilton: 710

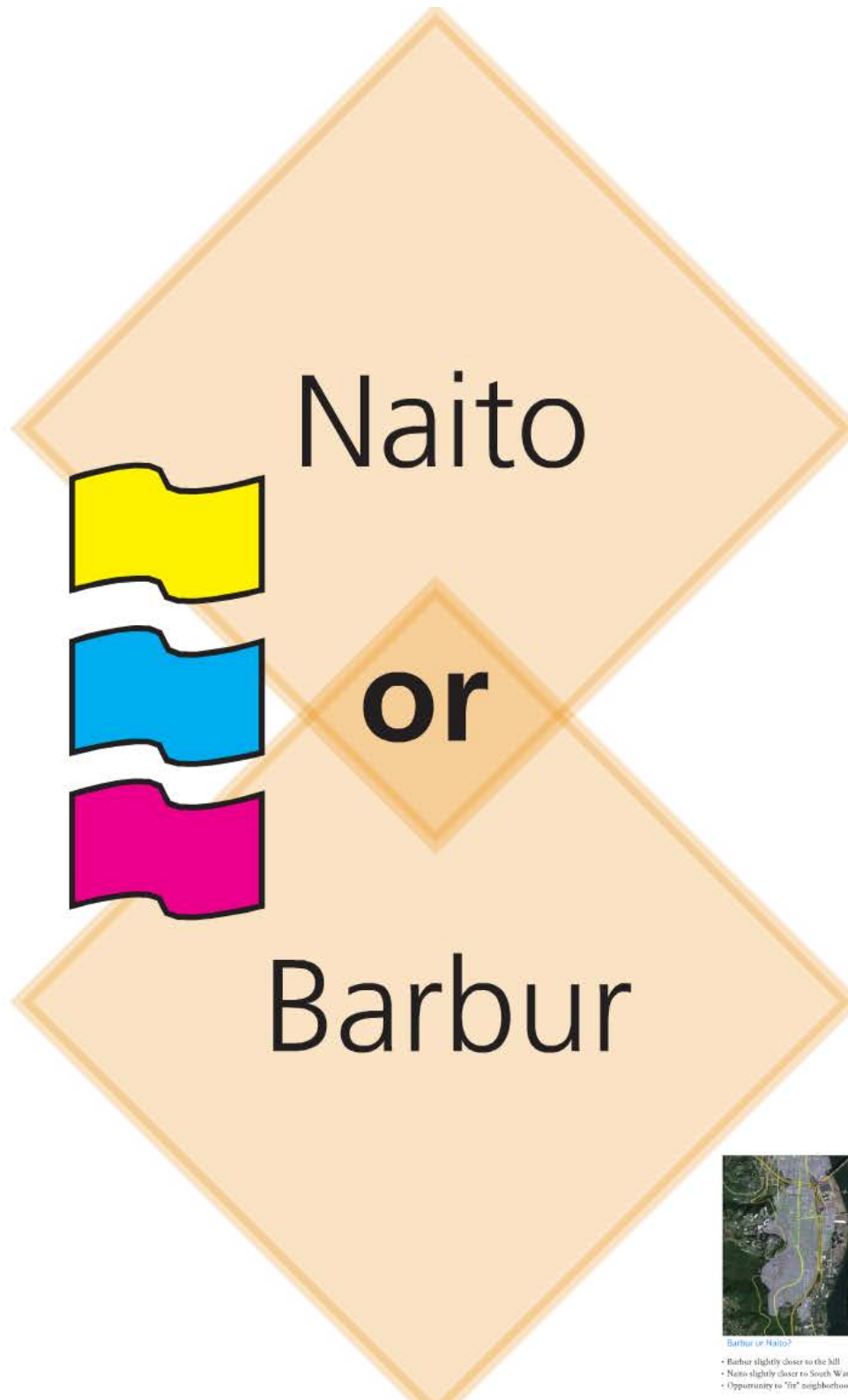
Connecting great places: High capacity transit decision points

Potential decision horizons

- July
- Refinement
- DEIS



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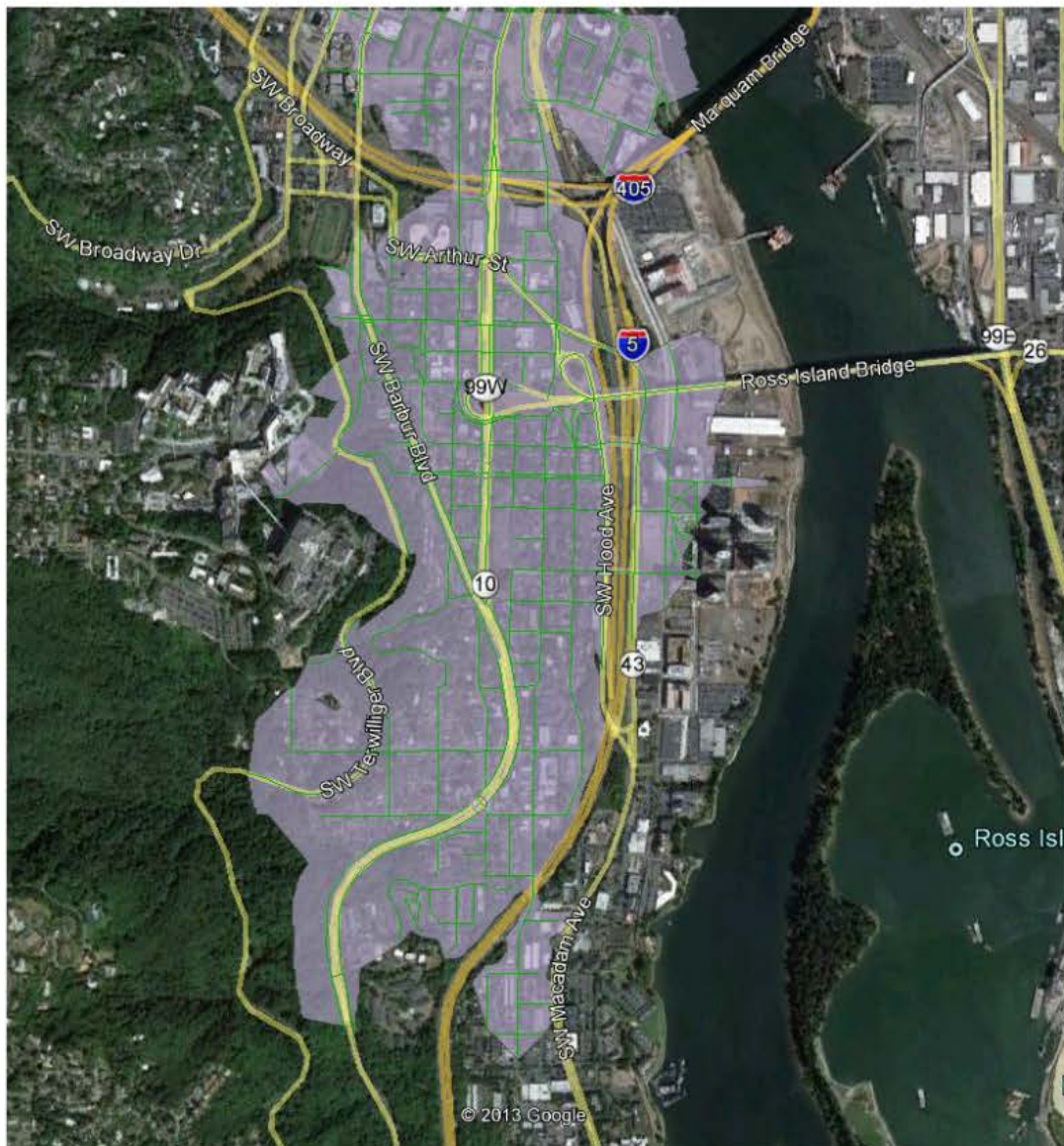


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Barbur or Naito?

- Barbur slightly closer to the hill
- Naito slightly closer to South Waterfront and train
- Opportunity to "fix" neighborhood barriers



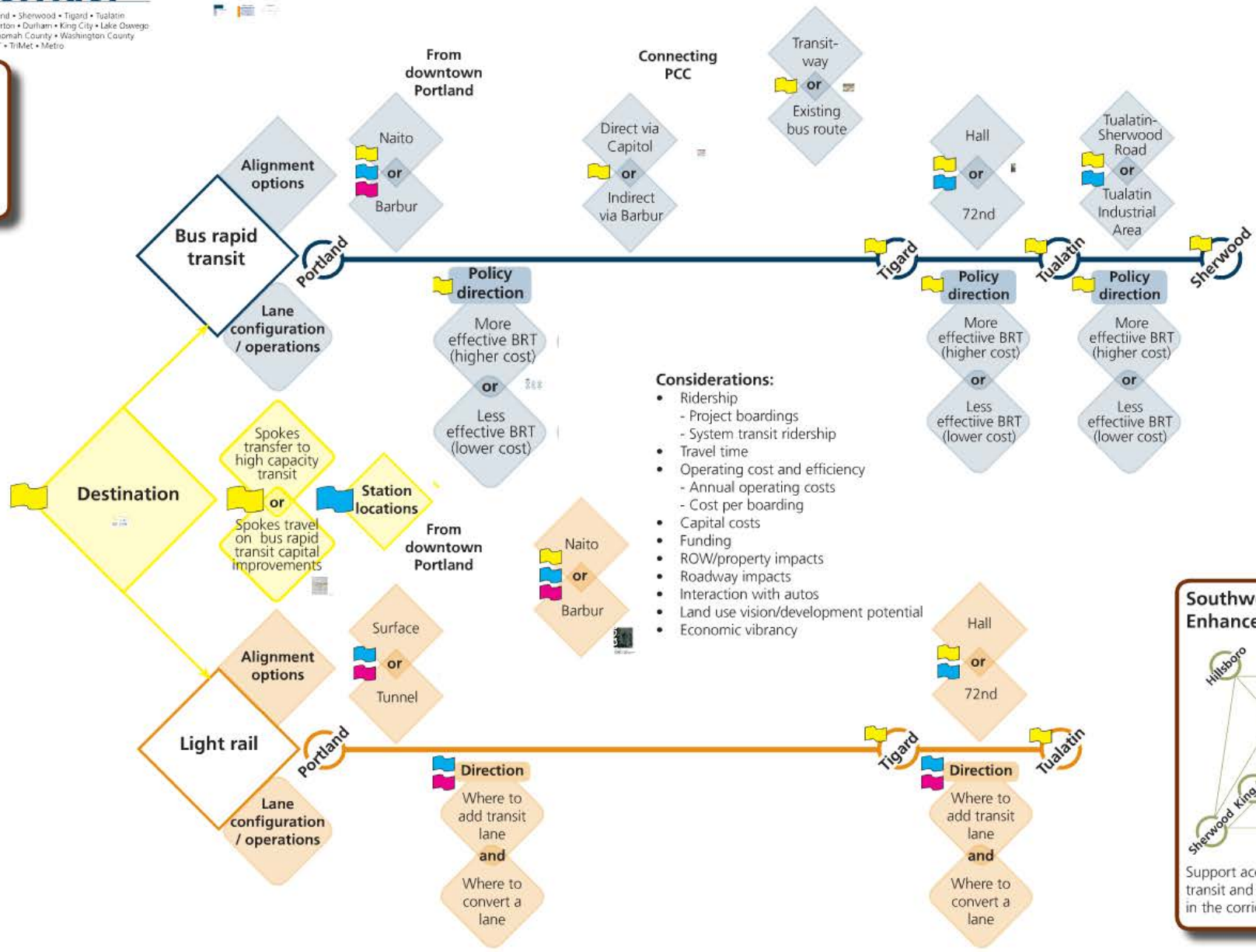
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Connecting great places: High capacity transit decision points

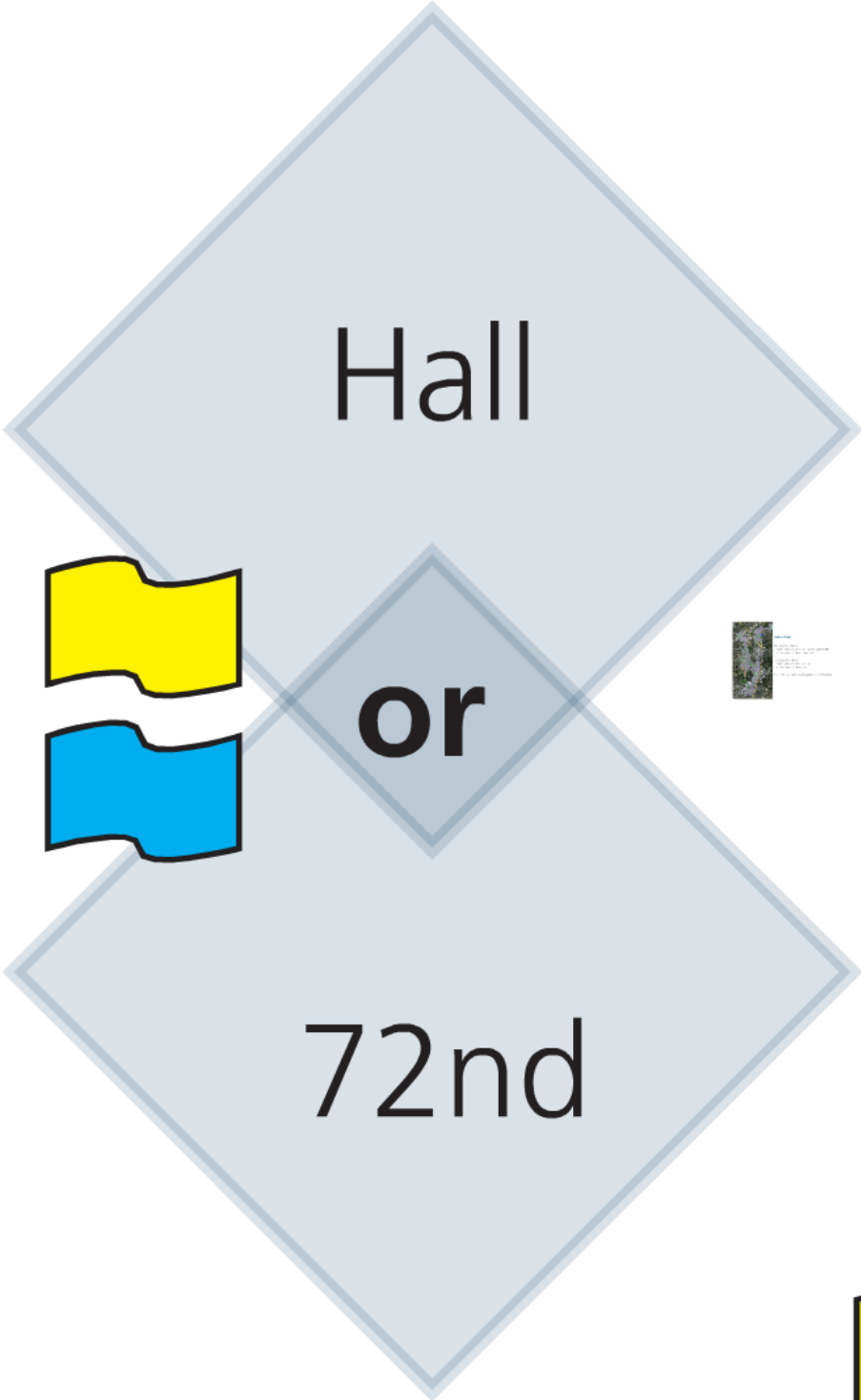
Potential decision horizons

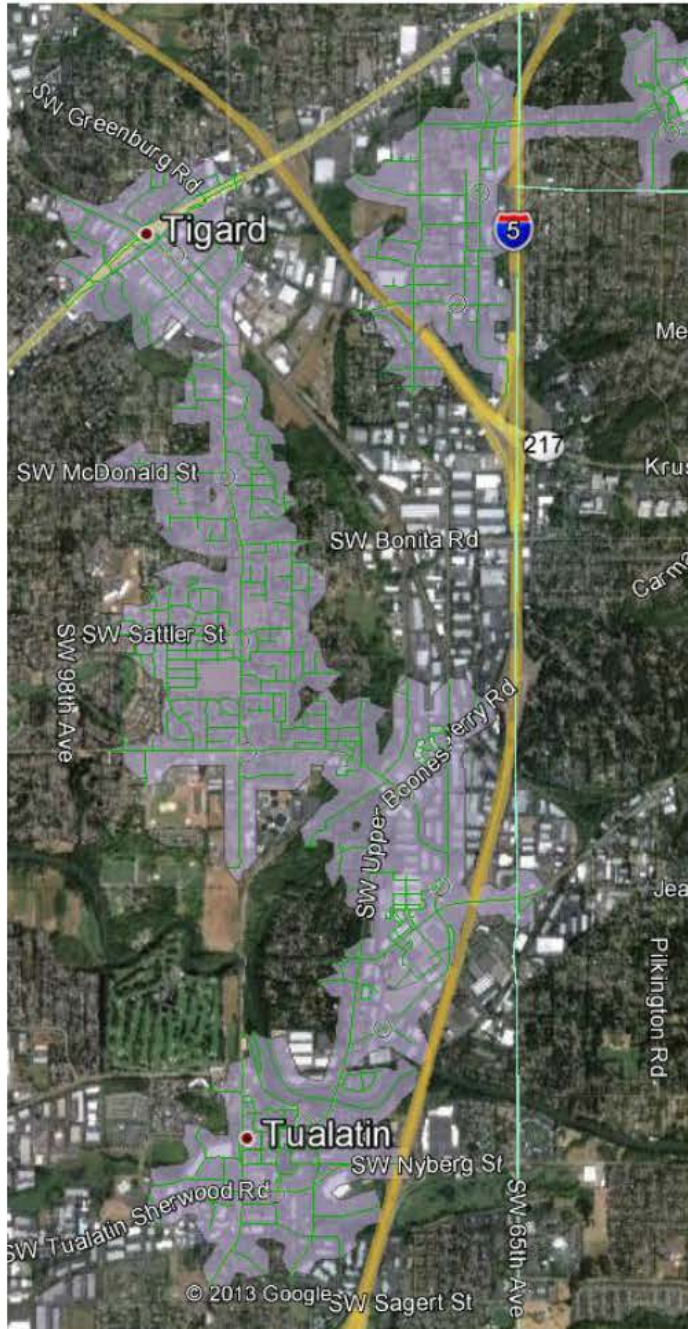
- July
- Refinement
- DEIS



Southwest Service Enhancement Plan

Support access to high capacity transit and connect communities in the corridor.





Hall or 72nd?

Hall alignment would:

- save 5 minutes over local bus (exclusive ROW)
- be accessible to more households

72nd alignment would:

- save 2 minutes over local bus
- be accessible to more jobs

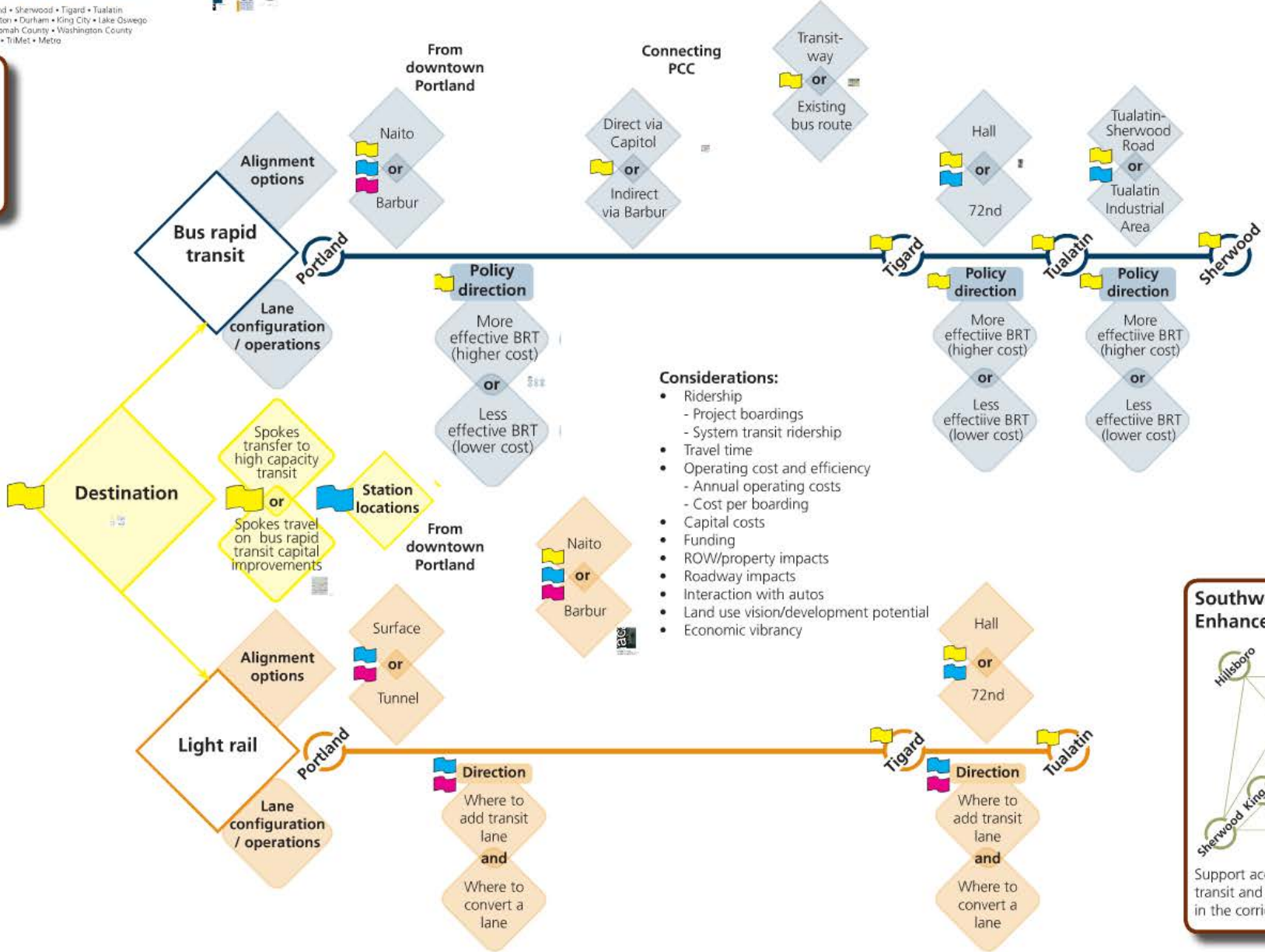
The number of daily boardings would be very similar

Connecting great places: High capacity transit decision points

Potential decision horizons

- July
- Refinement
- DEIS

Mode



Considerations:

- Ridership
 - Project boardings
 - System transit ridership
- Travel time
- Operating cost and efficiency
 - Annual operating costs
 - Cost per boarding
- Capital costs
- Funding
- ROW/property impacts
- Roadway impacts
- Interaction with autos
- Land use vision/development potential
- Economic vibrancy

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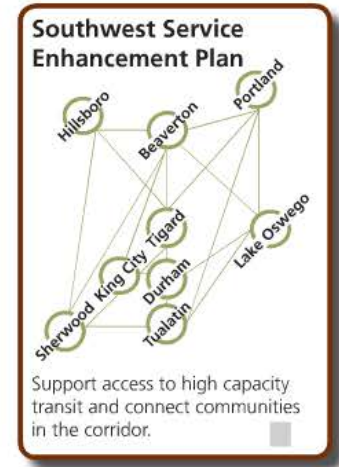
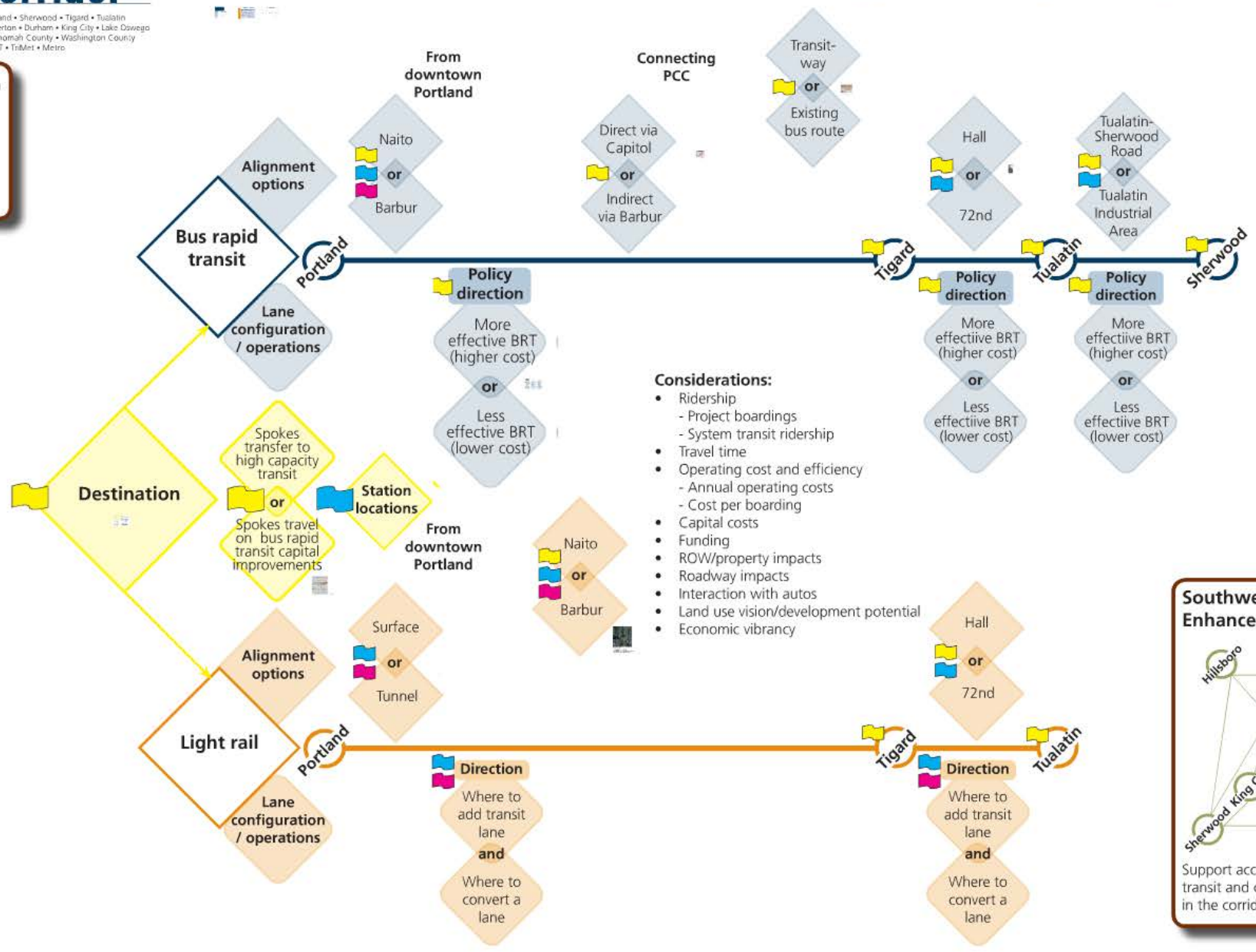
Hall



Connecting great places: High capacity transit decision points

Potential decision horizons

- July
- Refinement
- DEIS



To the SW Corridor Steering Committee -- May 13, 2013
From Kathy Newcomb of Tualatin (Riverpark CIO) -- 503-692-5227 after 10 a.m.

In Tualatin we have two important needs from the SW Corridor project.

#1. Add our Tualatin proposed 99W Park and Ride on your maps. (Copy the location from Tualatin's TSP, Transit chapter map).

#2. We need Bus Rapid Transit (BRT) or high speed transit on 99W all the way from Portland to Sherwood. (We do not need the 15-mile round-about route proposed in the February maps by the three mayors from Tigard, Tualatin and Sherwood. **We do need the #94 bus on 99W as part of BRT from the five miles from Tigard Transit to Sherwood.**)

Tigard wants BRT only from Portland to Tigard Transit. They do not want to relocate businesses on 99W from Tigard Transit south to make room for a high-speed lane for an express bus. **OK. Let's agree on that.** BUT there is lots of room available on 99W for BRT from about Bull Mountain Road south to Sherwood. **AFTER THIS MEETING, IF YOU ARE RETURNING NORTH, PLEASE DRIVE UP 99W TOWARD BULL MOUNTAIN. LOOK AT THE MEDIAN SPACE AVAILABLE FOR BRT !!!**

The most important need for Bus Rapid Transit is a dedicated lane to the greatest extent possible. (Let's plan for it on 99W from Portland to Sherwood *without the segment from Tigard Transit to about Bull Mountain Road.*)

The three mayors' proposal ----- from Tigard Transit round-about to Bridgeport, through Tualatin downtown and west on Tualatin/Sherwood Road (TSR) to 99W ---- will **overload** Tualatin Park and Ride. Tualatin's Park and Ride is one of the three busiest in the Metro area. (Twenty years ago I was commuting on the #96 there with standing room only from Tualatin to Portland.)

WHAT ARE TUALATIN'S PROBLEMS TO BE SOLVED? Tualatin **URGENTLY** needs to reduce traffic congestion with a local east/west bus loop including both TSR and Tualatin Road. We need to remove at least 5% of the Single-Occupancy Vehicles from these roads. Local transit will do this -- NOT high-speed transit. Our Chamber of Commerce is working hard to relieve some of the pressure with its vans (providing rides to almost 100 -- soon to be 200 -- Tualatin employees). They are NOT planning to provide this relief forever!

Our enormous LEVETON BUSINESS DISTRICT, surrounded by the proposed east/west bus loop, is only 65% full. Neither the existing businesses on TSR nor the fire and ambulance services nor the residents can tolerate increasing congestion on TSR and Tualatin Road. *If we don't get relief, we'll need a moratorium on any additional businesses impacting our local main roads.*

SOME APPROXIMATE STATISTICS: Tualatin population: About 26,000. Employees in Tualatin: About 2000 residents and **19,000 non-residents**. (Non-residents cannot afford to live in Tualatin, according to the C of C.) **Tualatin residents commuting out of Tualatin: About 10,000.**