SOUTHWEST CORRIDOR
LIGHT RAIL PROJECT

Steering Committee

July 23, 2019

GREAT PLACES
SW Corridor

SOUTHWEST CORRIDOR
LIGHT RAIL PROJECT

Station Access/ Park & Rides

Connected Transportation Choices

Existing bus routes in & near Southwest Corridor

- Light Rail
- Bus
- Westside Express Service
- Park & Ride

Image Source: Bruce Forster

Image Source: Bruce Forster

Image Source: Mayer/Reed

Connected Transportation Choices

Existing trails in & near the Southwest Corridor

- Multi-use Trails for Cycling & Walking
- Bike Facilities

Image Source: Bruce Forster

Image Source: Bruce Forster

Image Source: Bruce Forster

Connected Transportation Choices

- Electric bikes, scooters & shuttles are being considered for connections to stations.

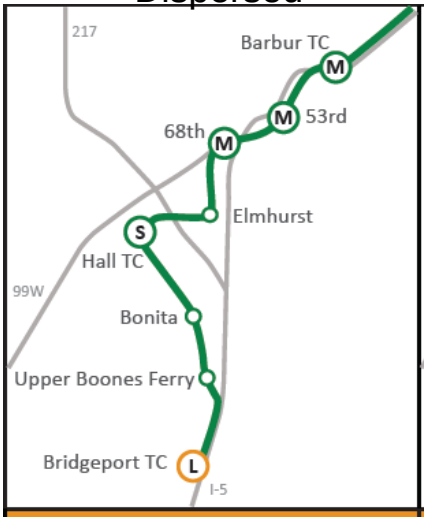
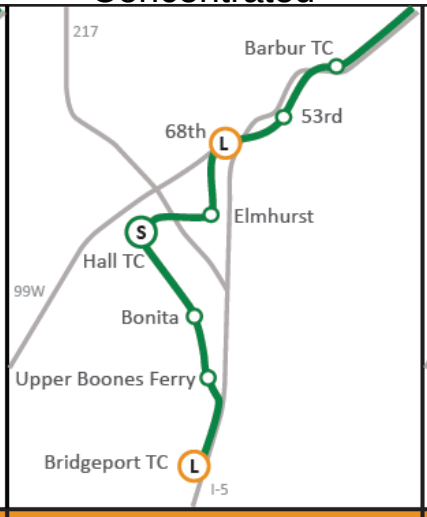
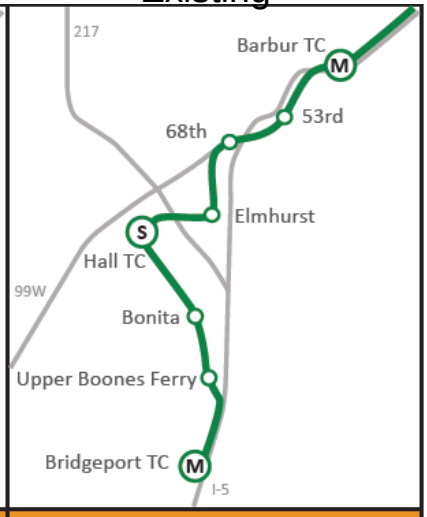
- Phone apps will make trip planning & fare payments simple & easy to use.

Image Source: TriMet

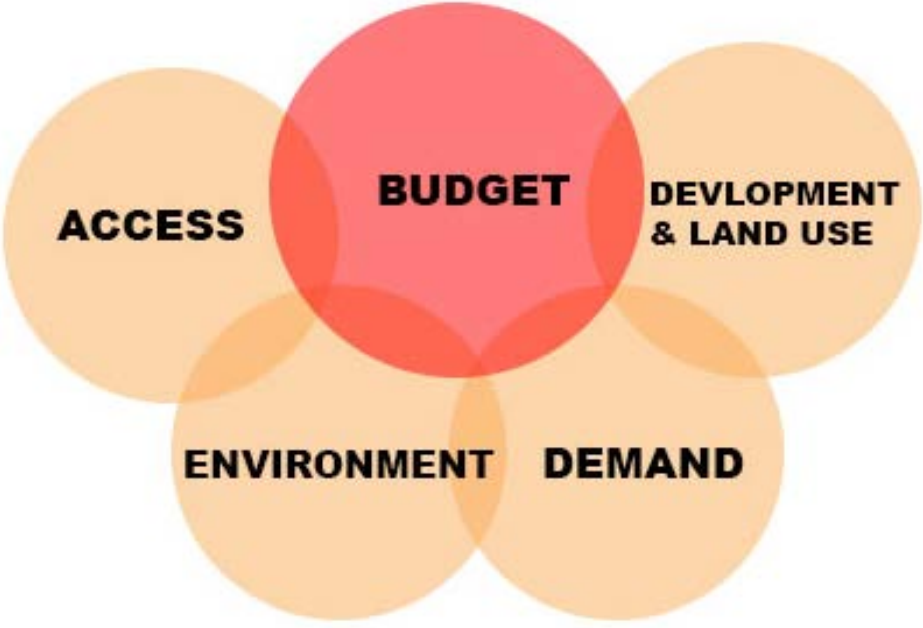
Image Source: TriMet

Image Source: TriMet

Park & Ride Scenarios

Dispersed	Concentrated	Existing
		
Scenario A Park & Rides Spread Among Stations	**Scenario B** Large Regional Structures only at Major Arterials	**Scenario C** Maintain Existing Park & Rides (No New Facilities)
Cost: $48.3 million **Spaces:** 1,763	**Cost:** $83.3 million **Spaces:** 1,713	**Cost:** $0 **Spaces:** 793

Considerations



STATION ACCESS AND PARK & RIDE ONLINE OPEN HOUSE

- June 10 to June 28, 2019
- Version in English and Spanish
- Promoted through email, social media, signage at P&R
- 569 total responses

Respondents

- Access transit by*:
  - 36% drive
  - 71% bike/walk

5% of TriMet rides originate from Park & Rides

**Is more than 100% because respondents could provide multiple answers.*

Key Survey Takeaways

- Priorities for station areas is strongly correlated with how a person accesses transit
- Overall preference for Scenario A - Park & Rides spread among stations
- Those who bike and walk prefer less parking
- Most respondents want better bike, walk and bus access

Scenario Preferences

How well does each scenario address the considerations of access, budget, development, environment, and demand?

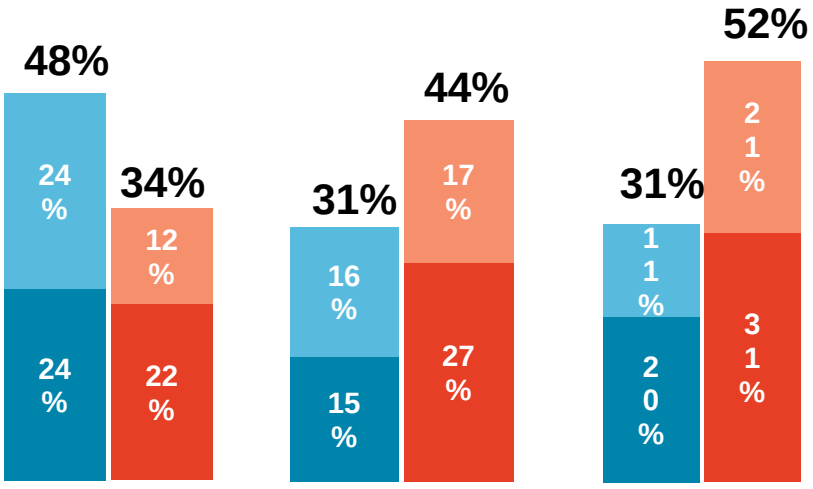
Rate the scenario from 1-5 stars with 5 being best.

Scenario Preferences

All Respondents

569 responses

4 stars 2 stars
5 stars 1 stars
3-star ratings excluded

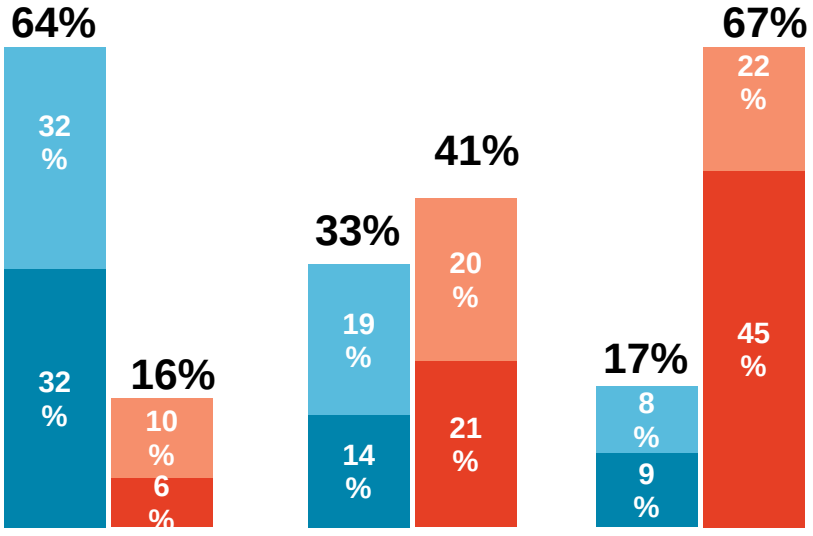


Scenario	A	B	C
	Dispersed	Concentrated	Existing

Scenario Preferences

202 responses

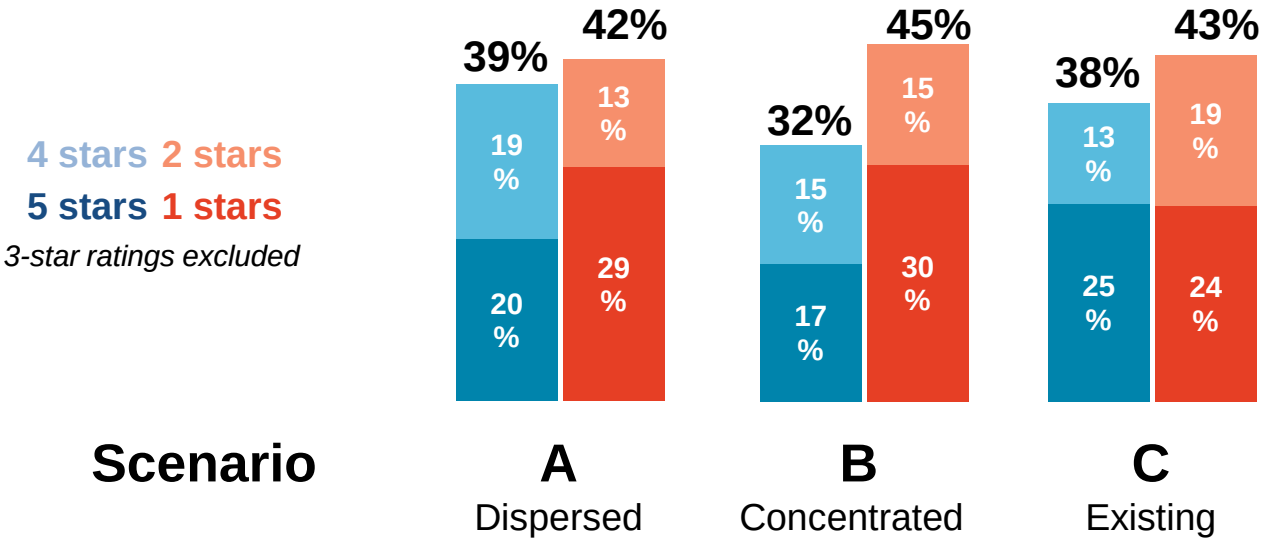
4 stars 2 stars
5 stars 1 stars
3-star ratings excluded



Scenario	A	B	C
	Dispersed	Concentrated	Existing

Scenario Preferences

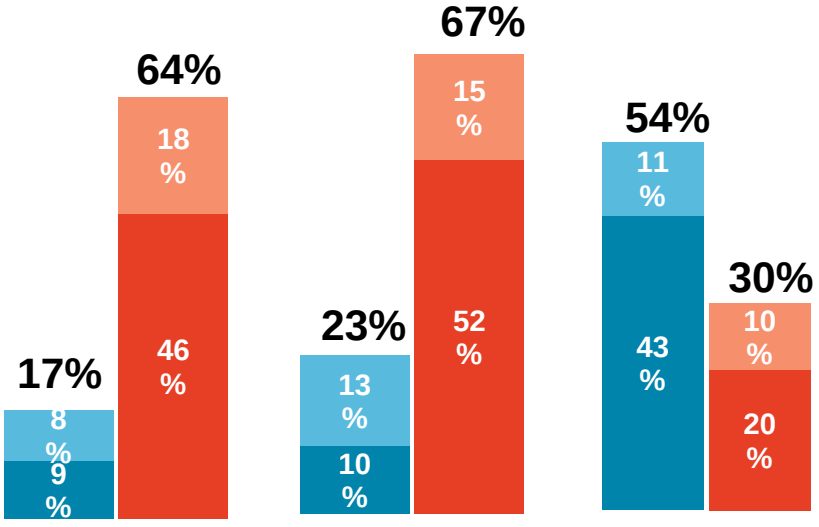
311 responses



Scenario Preferences

95 responses

4 stars 2 stars
5 stars 1 stars
3-star ratings excluded



Scenario

A Dispersed

B Concentrated

C Existing

Scenario Preferences

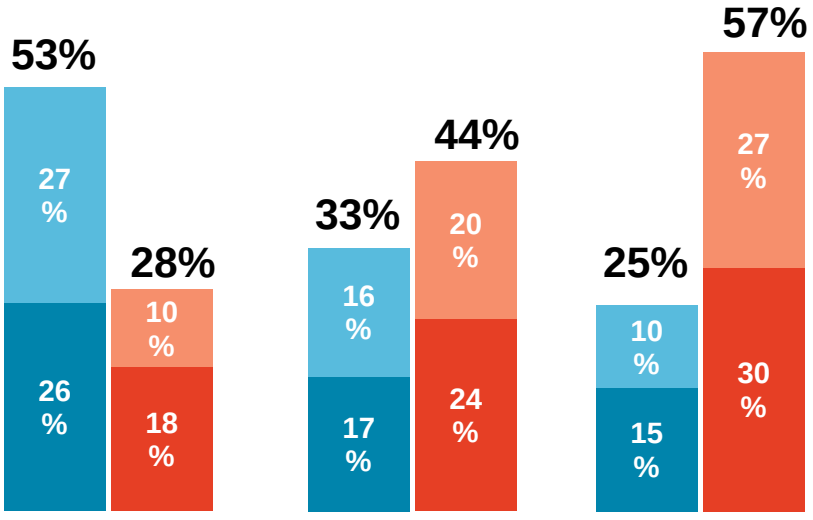
SW Corridor Residents

276 responses

4 stars 2 stars

5 stars 1 stars

3-star ratings excluded



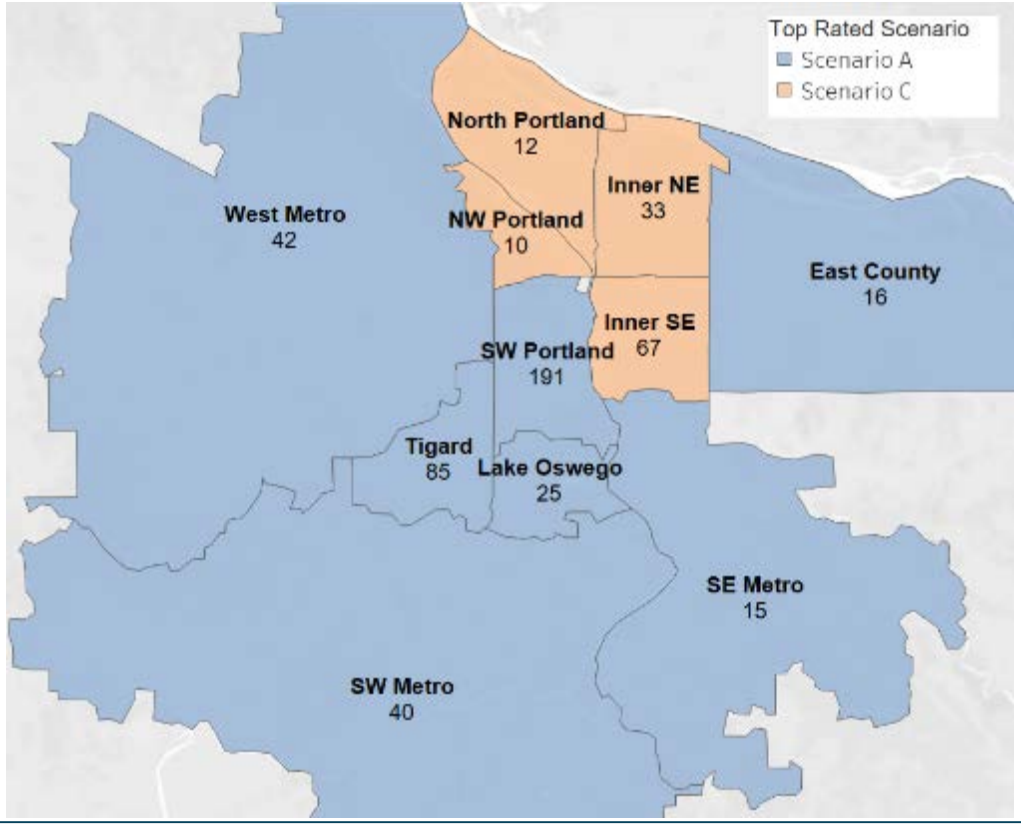
Scenario

A Dispersed

B Concentrated

C Existing

Scenario Preferences



Considerations (Overall Rankings)

Rank	Consideration
1	Access
2	Environment
3	Demand
4	Development
5	Budget

Considerations (Top Two)

Access

Demand

Environment

Development

Access

Environment

Considerations (Top Two)

Residents

SW Portland

Access

Environment

Tigard & Tualatin

Access

Demand

Values (Overall Rankings)

Rank	Value
1	Bus Connections
2	Bike/Walk Access
3	Automobile Parking
4	Mobility Hub
5	Affordable Housing
6	Housing and Shops
7	Green Space and Nature
8	Public Gathering Space

Values (Top Two)

Automobile Parking

Bus Connections

Bike/Walk Access

Bus Connections

Bike/Walk Access

Bus Connections

Values (Top Two)

SW Portland

Bike/Walk Access

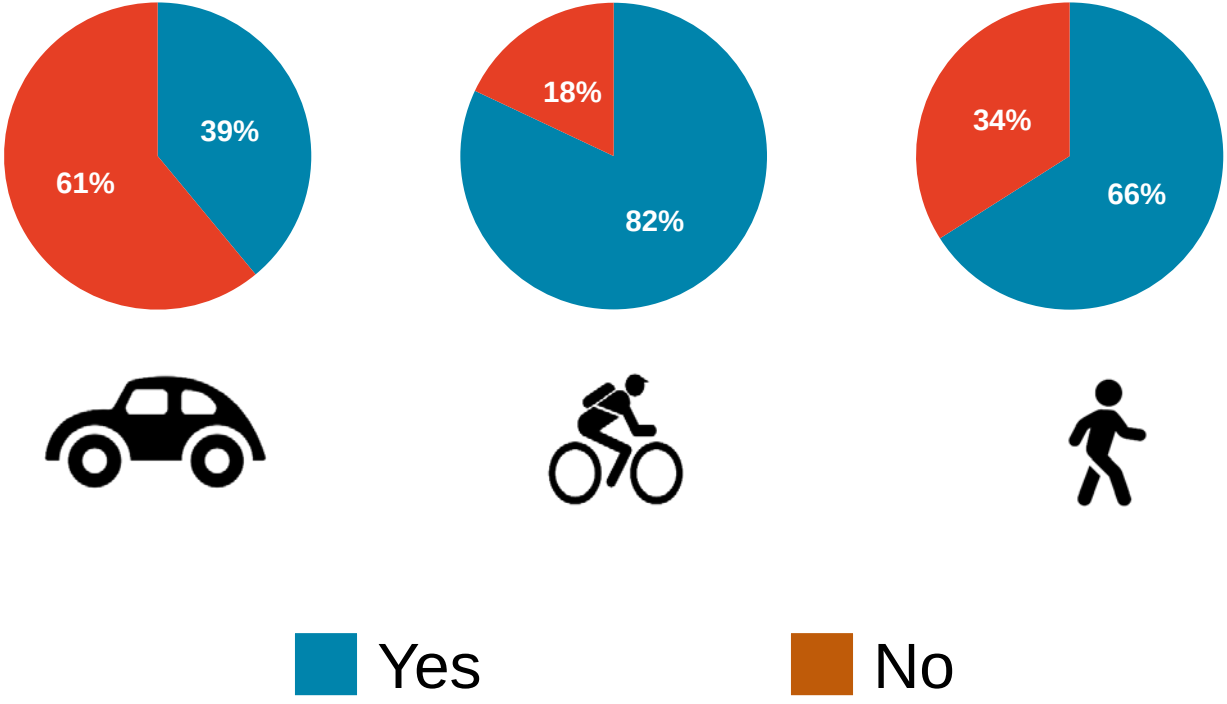
Bus Connections

Tigard & Tualatin

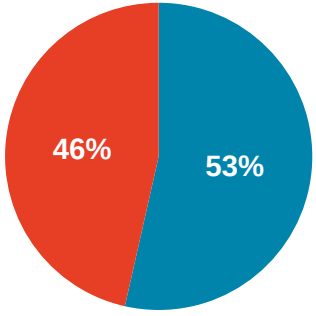
Bus Connections

Automobile Parking

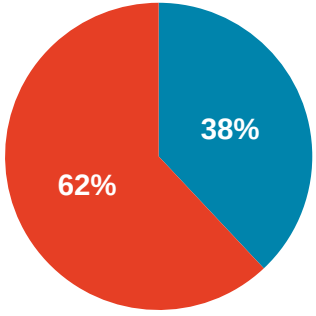
Fee for Parking?



Fee for Parking?



SW Portland



Tigard & Tualatin

Yes

No

Next Steps

- Define project scope — October 2019
- Conceptual Design Report (CDR) — Early 2020
- Final Environmental Impact Statement (FEIS) — Early 2020

Conceptual Design Report (CDR) Introduction

GREAT PLACES
SW Corridor

Overview

Reference:
Portland-
Milwaukie
Light Rail Transit Project

Purpose

- ✓ Communication tool for team, project partners and the public;
- ✓ Defines the project vision, principles, goals and objectives;
- ✓ Clearly documents the project scope and it's benefits, as well as issues to be resolved during design;
- ✓ Identifies partnership opportunities (shared investments);
- ✓ Captures public process to date;
- ✓ **Builds public support for the project.**

Timeline

- **Draft – December**
- **Public Engagement – early 2020**
- **Final – mid 2020**

DRAFT- Organization

DRAFT- Project Principles

MOBILITY

MOVE AND CONNECT PEOPLE : *Move people between destinations quickly, conveniently and safely.*

GOALS

- Goal 1: Design and implement a safe, dependable transit project that is competitive for Federal funds.
- Goal 2: Provide riders with an attractive and desirable transit experience.
- Goal 3: Design for adaptability to future modes and technology.
- Goal 4: Support completion of a multi-modal transportation network.

DRAFT- Project Principles

EQUITABLE COMMUNITIES

MAINTAIN AND CREATE EQUITABLE PLACES: *Build partnerships to support vibrant and unique places for diverse people living in, and moving to, the Corridor.*

GOALS

- Goal 1: Maintain and strengthen existing community and cultural assets.
- Goal 2: Promote equitable access to community resources and transit benefits.
- Goal 3: Support creation of welcoming and intuitive spaces for users of all abilities to support the well-being of individuals and the larger social fabric.
- Goal 4: Inspire equitable economic development.

DRAFT- Project Principles

ENVIRONMENT

ENVIRONMENTAL PROTECTION, RESTORATION, AND CONNECTION:
Preserve, restore and create natural resources to increase ecosystem benefits and habitat.

GOALS

- Goal 1: Preserve and support wildlife habitat and connectivity within the regional ecosystem.
- Goal 2: Design a Project that is ecologically responsive and optimized to support the natural environment.
- Goal 3: Provide and maintain access to nature, recreation and green spaces.

DRAFT- Project Principles

RESILIENCE

WALK, BIKE AND TRANSIT IS THE PREFERRED CHOICE: *Maximize the community's physical and social resilience while reducing carbon emissions.*

GOALS

- Goal 1: Promote community sustainability by incorporating flexibility, adaptability, affordability and diversity into the Project to withstand the test of time.
- Goal 2: Assist communities with the transition to a low-carbon future.

DRAFT- Project Principles

MOBILITY

EQUITABLE COMMUNITIES

ENVIRONMENT

RESILIENCE

SOUTHWEST CORRIDOR
LIGHT RAIL PROJECT

Project Cost Update

July 23, 2019

GREAT PLACES
SW Corridor

Context

June meeting

- Cost gap based on late 2018 estimate
- MOS required for FEIS

Today

- Updated cost estimate with larger gap
- Process to define competitive project to Bridgeport (and MOS) by October

Paradigm shift needed

2019 cost estimate

- Larger gap between scope and target

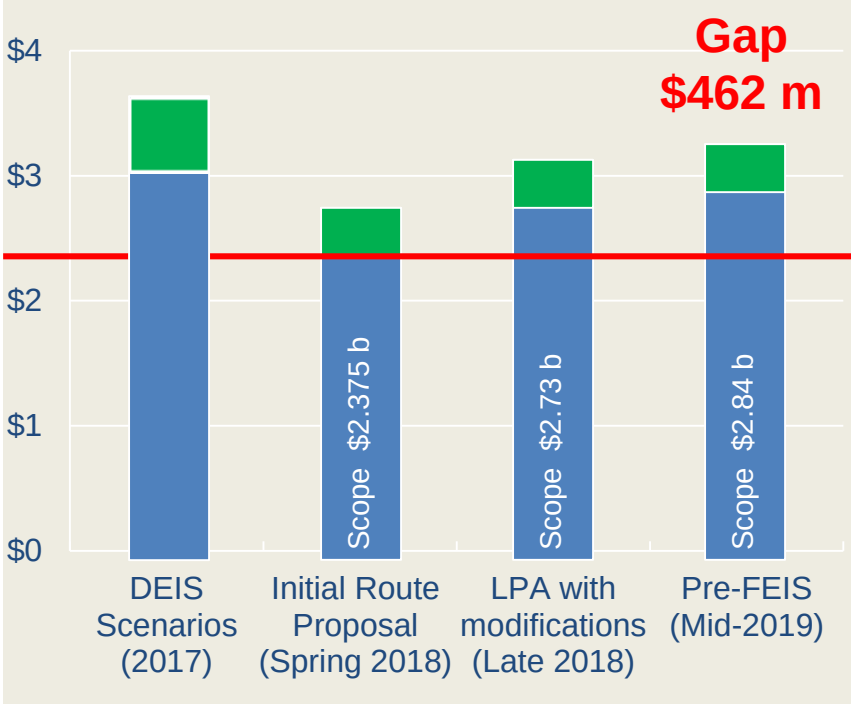
Funding constraints

- Local sources
- Criteria for federal dollars

Cost estimates (billions)

Scope target
$2.375 b

Finance costs
Scope



Cost elements

Scope

- Design, construction, acquisition, relocation, mitigation, vehicles

Escalation: 3.5%

Contingency: 25% overall at entry to engineering phase (required by FTA)

Financing

- Cost of borrowing before funds arrive

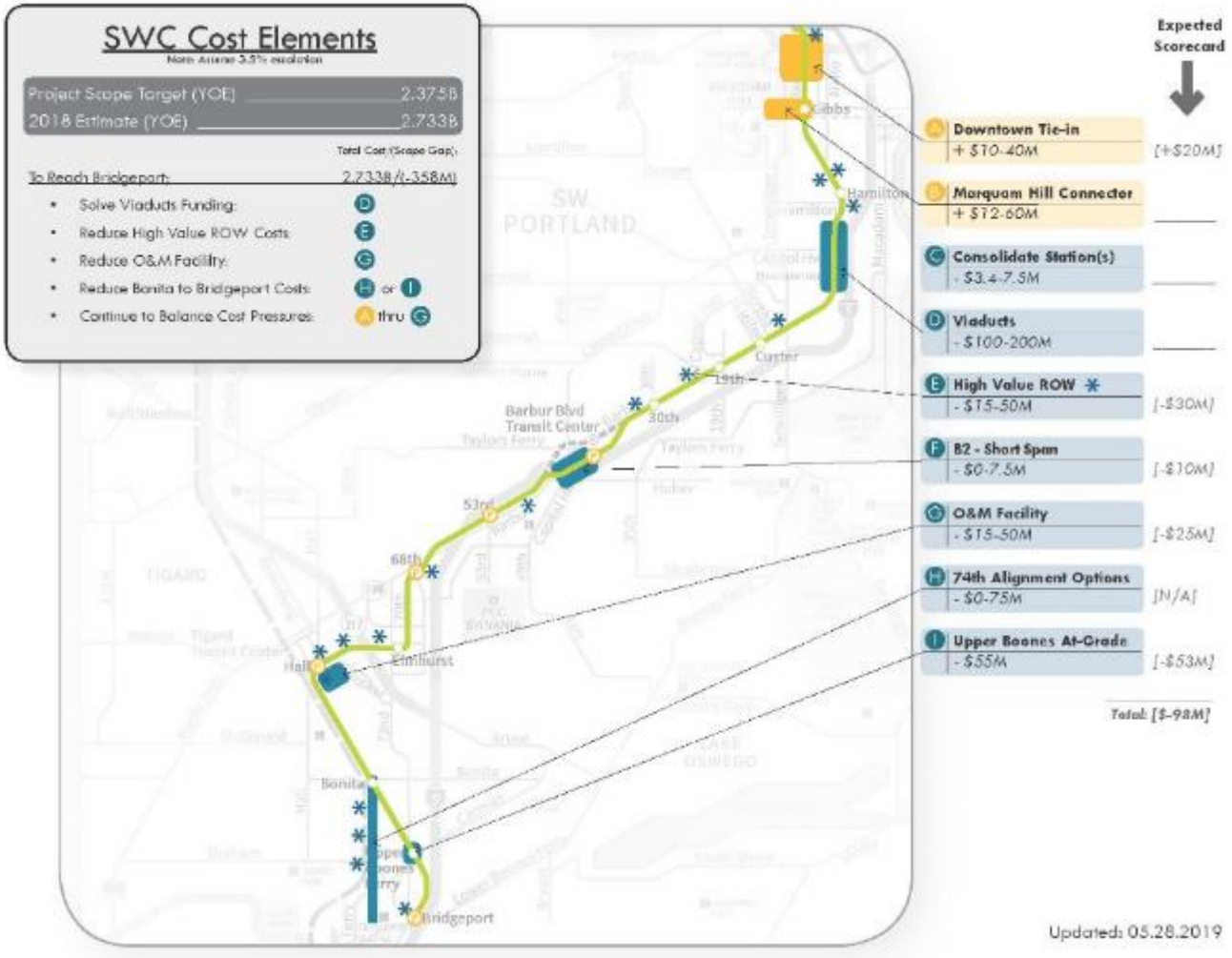
Estimate accuracy

TriMet estimators and consultant expertise

- Industry best practices
- Two independent estimates are within 2% of each other
- Risk assessment: FTA-required analysis of ability to deliver project; contingency
- Market analysis: independent review of materials, contractors, escalation

What Changed? (Late 2018)

- Estimating changes
  - Escalation: 2.75% → 3.5%
- Scope
  - Added viaducts
  - Grade separated Upper Boones Ferry Road


SWC Cost Elements
Note: Assume 3.5% escalation
Project Scope Target (YOE) 2.375B
2018 Estimate (YOE) 2.733B
Total Cost (Scope Gap):
To Reach Bridgeport: 2.733B/(-358M)
Solve Viaducts Funding: D
Reduce High Value ROW Costs: E
Reduce O&M Facility: G
Reduce Bonita to Bridgeport Costs: H or I
Continue to Balance Cost Pressures: A thru G
Expected Scorecard
A Downtown Tie-in
+ $10-40M
[+$20M]
B Marquam Hill Connector
+ $12-60M
C Consolidate Station(s)
- $3.4-7.5M
D Viaducts
- $100-200M
E High Value ROW
- $15-50M
[-$30M]
F B2 - Short Span
- $0-7.5M
[-$10M]
G O&M Facility
- $15-50M
[-$25M]
H 74th Alignment Options
- $0-75M
[N/A]
I Upper Boones At-Grade
- $55M
[-$53M]
Total: [$-98M]
Updated: 05.28.2019
SW PORTLAND
Gibbs
Hamilton
Custer
19th
30th
Barbur Blvd Transit Center
Taylors Ferry
53rd
68th
Elmhurst
Bonita
Bridgeport

What Changed? (Mid-2019)

- Increased costs
  - Stormwater, utilities
  - Property acquisition; relocations
  - Downtown tie-in
- Reduced Costs
  - Light Rail Vehicles
  - Shorter structure over I-5 at BTC
  - Upper Boones at-grade refined

Potential solutions for $462 m gap

- **Increase funding**
- **Reduce scope**

Funding assumptions

Partner	Request ($m)
FTA	1,250
Metro / voters	850
State of Oregon	150
TriMet	75
City of Portland	75
Washington County	75
Regional Flexible funds	50
Total	2,525
(Interim finance)	(150)
YOE Scope Target	**2,375**

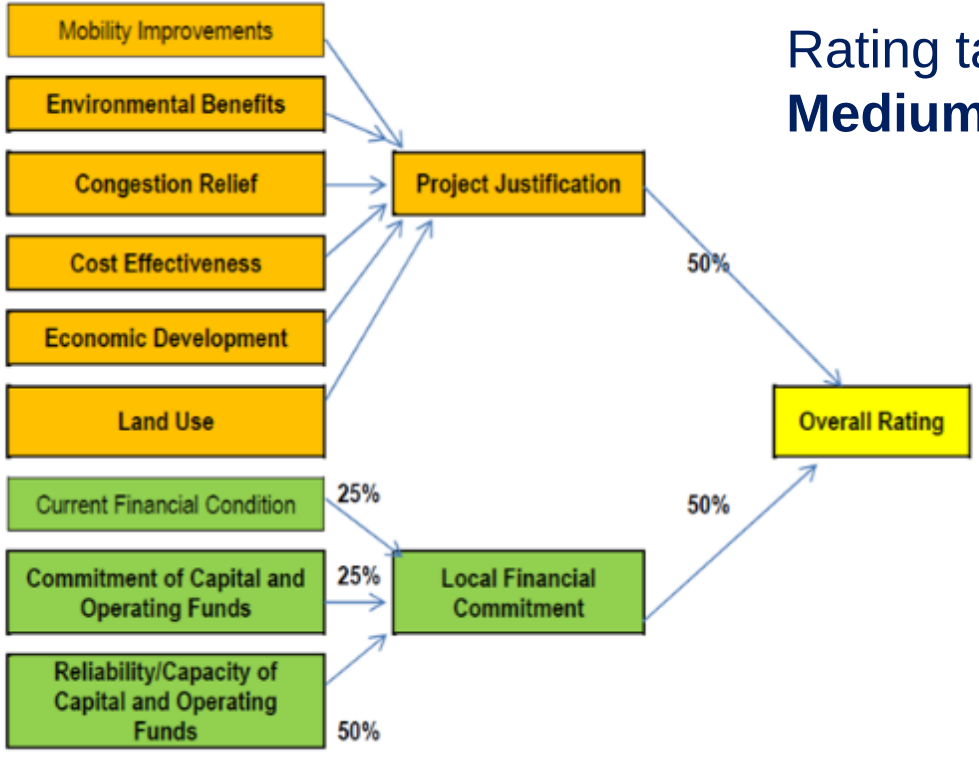
Competitiveness for federal funding

- Competing projects
- Criteria
- Ratings

Current FTA projects

Current LRT Project	Total cost (b)	FTA share (b)	FTA percent	Overall rating
LA regional connector	$1.4	$0.7	48%	M-H
San Diego Mid-Coast Corridor	$2.2	$1.0	48%	M-H
Boston Green Line Extension	$2.3	$1.0	43%	M-H
Maryland Purple Line	$2.4	$0.9	37%	M-H
TriMet Orange Line	$1.5	$0.7	50%	M-H
Minneapolis Blue Line (Eng)	$1.5	$0.8	49%	M-H
Minneapolis Southwest (Eng)	$1.9	$0.9	50%	M-H
Durham – Orange (Eng)	$2.5	$1.2	50%	M
Lynwood Link (SEA) (Eng)	$3.1	$1.2	38%	M-H

FTA funding criteria



Rating target:
Medium-High

Project justification

- ✓ Mobility improvements
- ✓ Environmental benefits
- ✓ Congestion relief
- ❑ Cost effectiveness

$$\frac{\text{(annualized capital cost + operating cost)}}{\text{ridership}}$$

- ✓ Economic development
- ✓ Land use

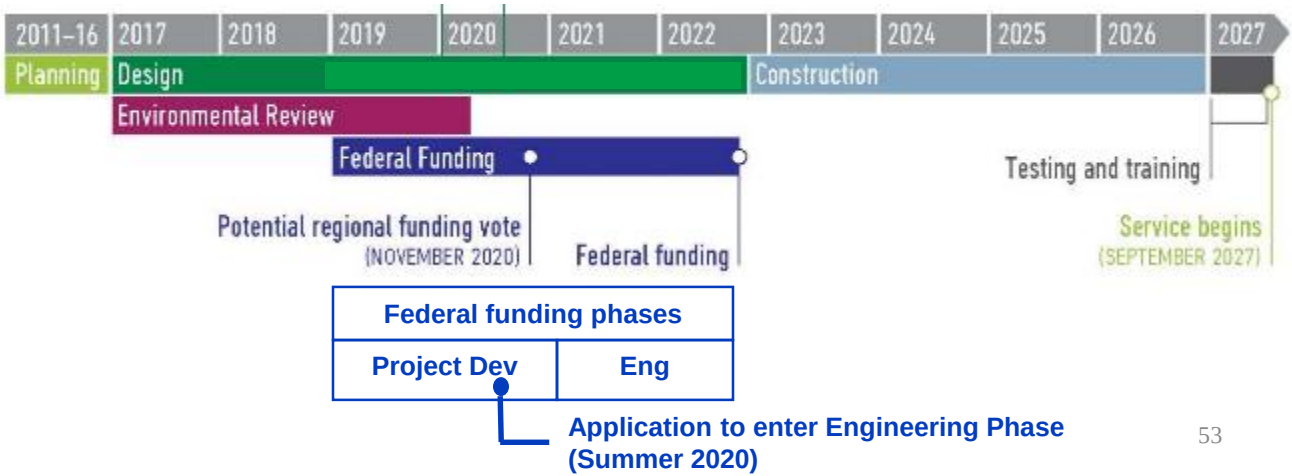
Local financial commitment

- ✓ Current financial condition of agency
- ❑ Commitment of capital and operating funds

  One level higher rating if local partners provide significant additional funds
- ✓ Reliability/capacity of capital and operating funds

Conclusions

- The **project scope must be reduced** to maintain competitiveness
- Additional local funds would help the project be competitive for federal funds



Revisit fundamental assumptions to address $462 m gap

Explore scope reductions over $100 m

- Narrow Barbur
- Adjacent to Barbur
- Avoid viaduct structures

Additional local funding?

- Add Jurisdictional Transfer $65 m
  - Increases revenue to $2.44 b
  - Reduces gap to $397 m

- Additional funds from local partners

Next steps

Summer	Staff develop feasible options
September	Review feasible options (full-length and MOS)
October	Select options (full-length and MOS) for FEIS, local funding commitments, continuing design