
SOUTHWEST CORRIDOR
LIGHT RAIL PROJECT

# Community Advisory Committee

July 18, 2019

GREAT PLACES
SW Corridor


SOUTHWEST CORRIDOR
LIGHT RAIL PROJECT

# Station Access/ Park & Rides

GREAT PLACES
SW Corridor

# 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.

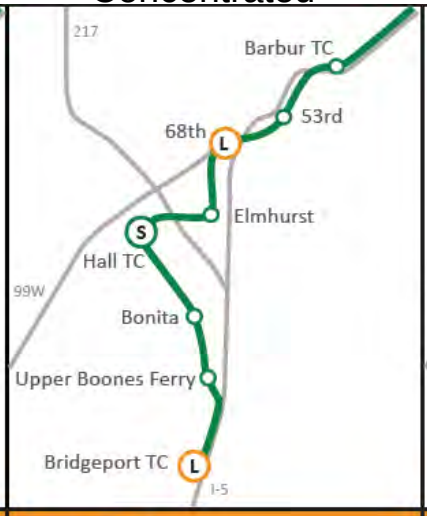
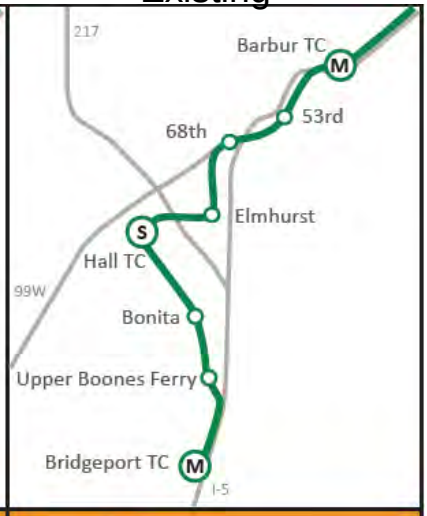
- Phone apps will make trip planning & fare payments simple & easy to use.

Image Source: TriMet

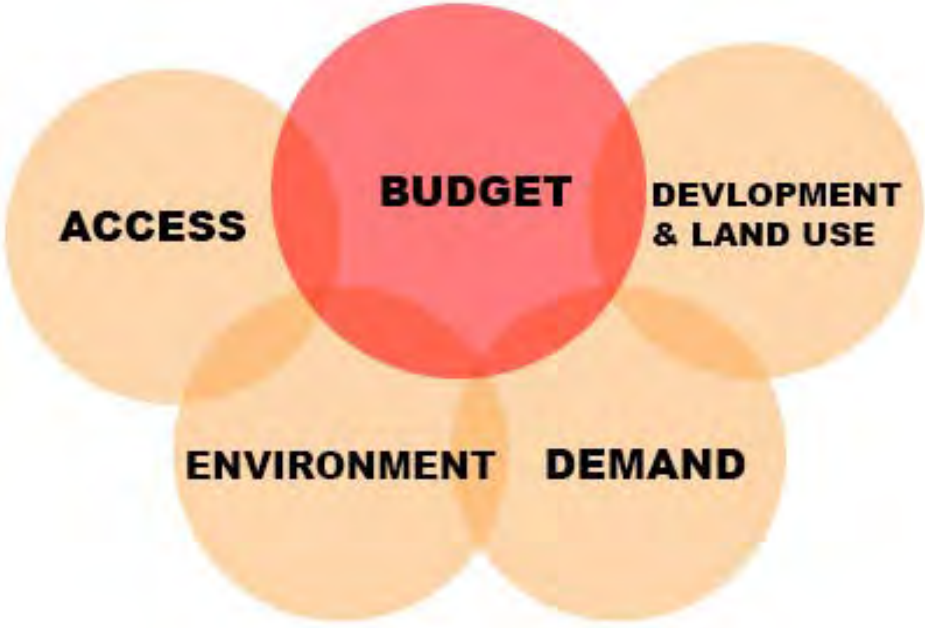
Image Source: TriMet

Image Source: TriMet

# Park & Ride Scenarios

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

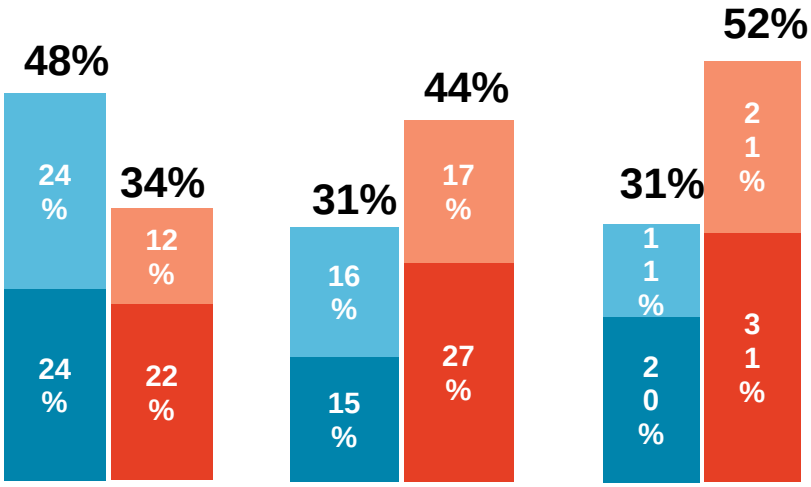
Rate the scenario from 1-5 stars with 5 being best.

# Scenario Preferences

## All Respondents

*569 responses*

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

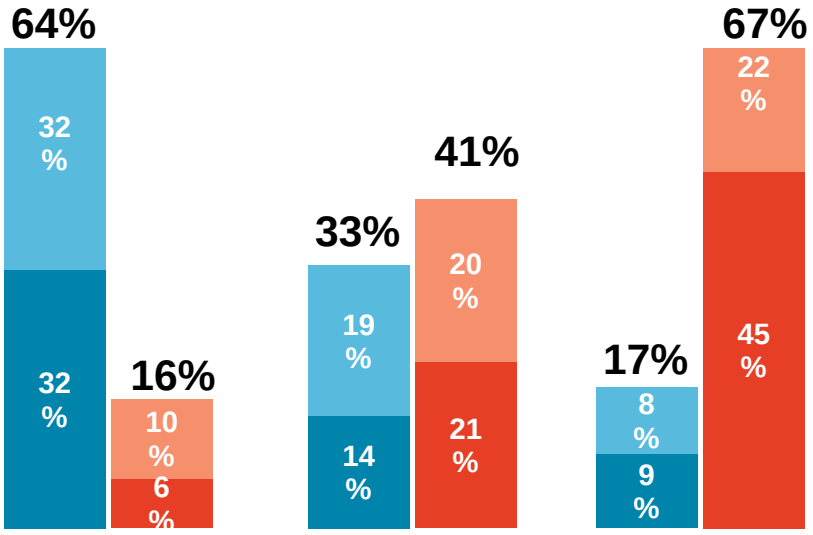



| Scenario | A | B | C |
|---|---|---|---|
| | Dispersed | Concentrated | Existing |

# Scenario Preferences

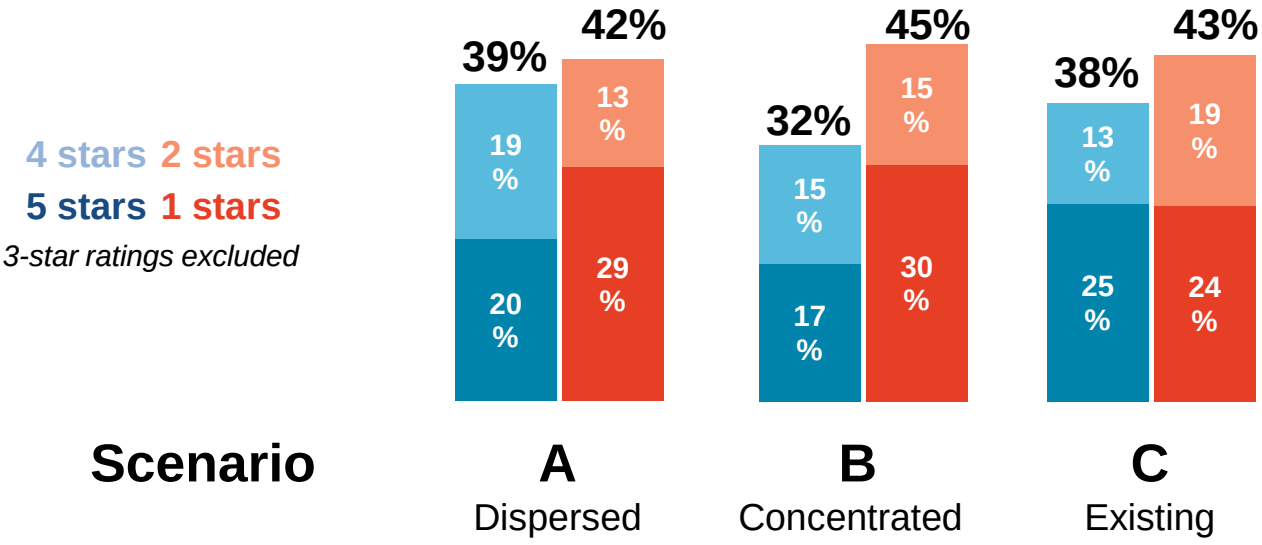
*202 responses*

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



# Scenario Preferences

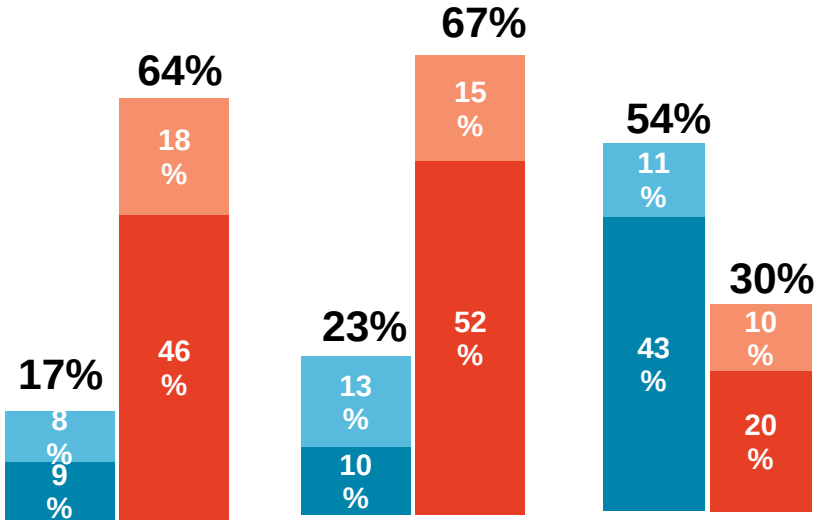
*311 responses*



# Scenario Preferences

*95 responses*

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




**Scenario**

**A** Dispersed

**B** Concentrated

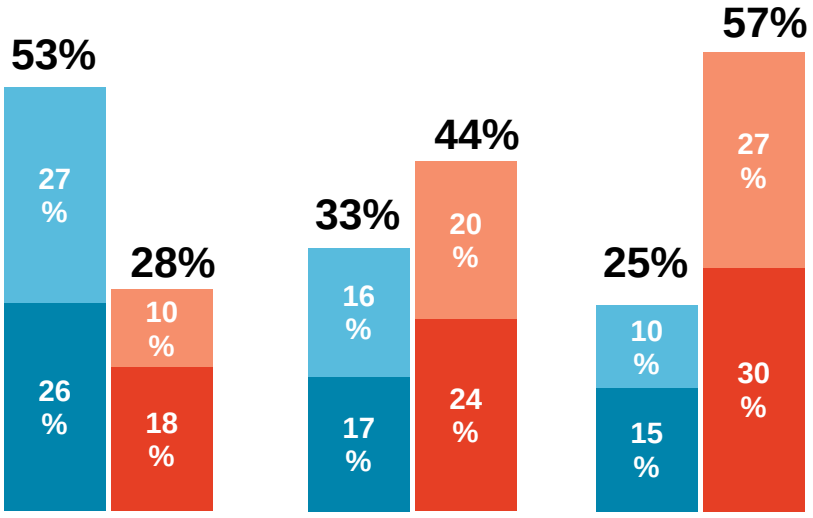
**C** Existing

# Scenario Preferences

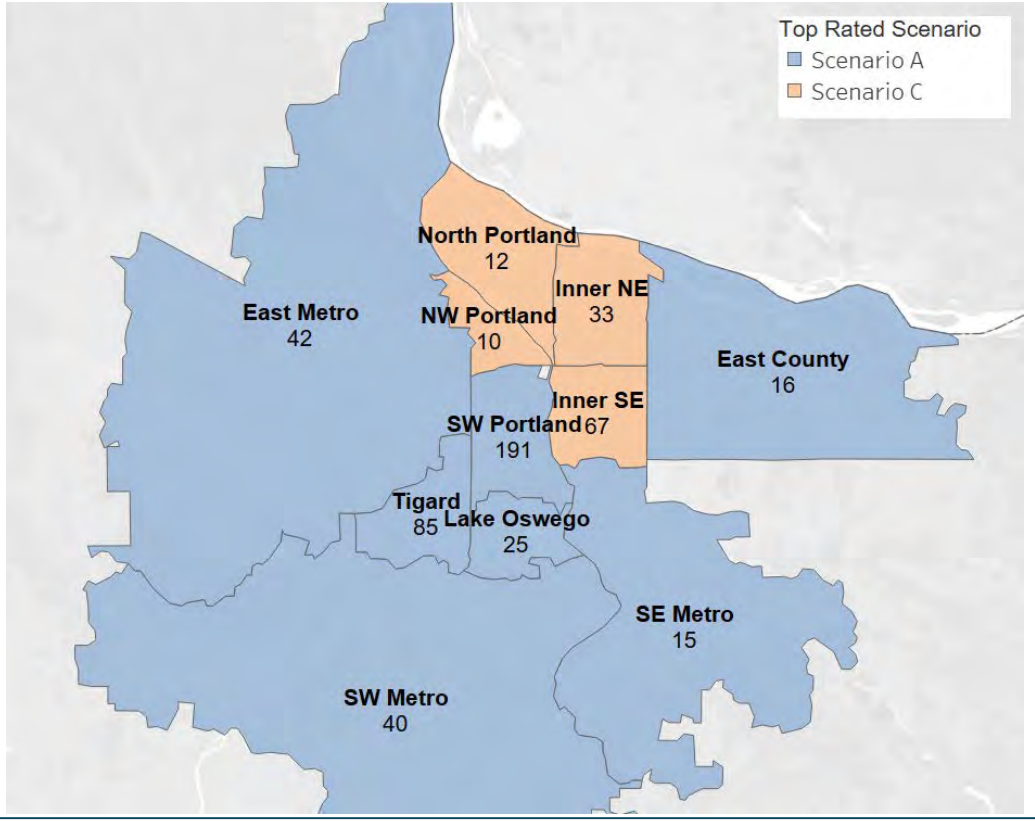
## SW Corridor Residents

*276 responses*

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



# Scenario 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**

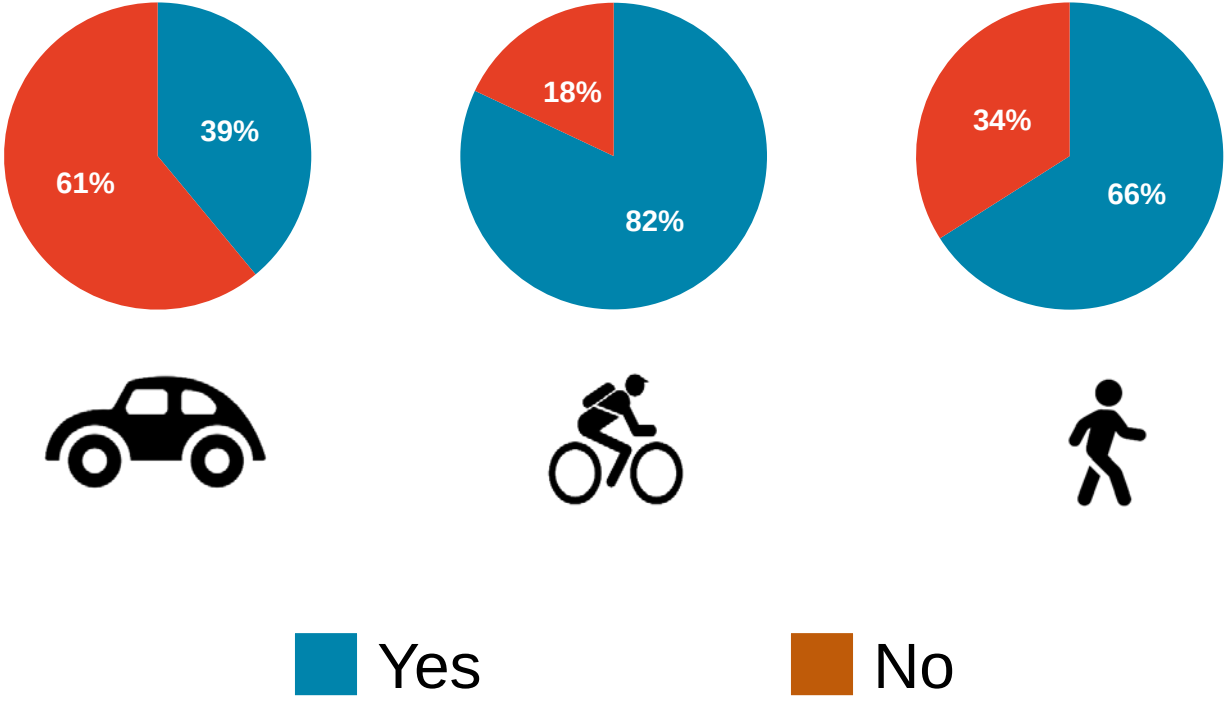
**Bus Connections**

## Tigard & Tualatin

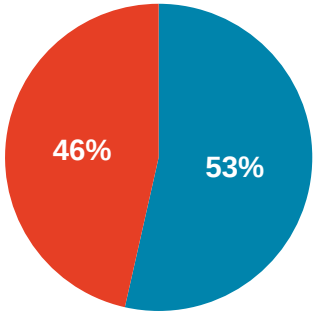
**Bus Connections**

**Automobile Parking**

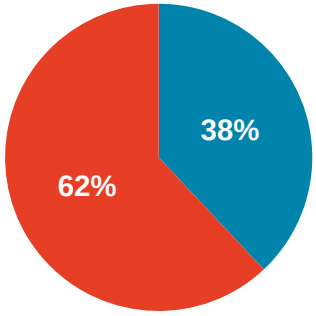
# Fee for Parking?



# Fee for Parking?




SW Portland




Tigard & Tualatin

Yes

No

# Next Steps

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



# Conceptual Design Report (CDR) Introduction

GREAT PLACES SW Corridor

# Overview

**Reference:**
Portland-Milwaukie Light Rail Project

# Purpose

- ✓ Communication Tool for team, project partners and the public; defines project vision, principles, goals and measures;
- ✓ Documents project opportunities and issues, what was evaluated, what is recommended via the public process;
- ✓ High level concepts, used to help evolve design for project development;
- ✓ Documents shared investments; and
- ✓ **Builds public support for the project.**

# Timeline

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

# DRAFT- Table of Contents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- 7.3 Downtown Tigard Land Use District
- 7.4 Tigard Employment Corridor Land Use District
- 7.5 Bridgeport Village Land Use District


# Framing the Project
# Principles, Goals, Objectives

# Terminology

1. **Vision:** An aspirational description of what the Project would like to accomplish, intended to serve as a clear guide for choosing current and future courses of action
2. **Principles:** Overarching **values** used to frame Goals and Objectives
3. **Goals:** Desired outcomes that support the Vision and Principles
4. **Objectives:** Strategies or implementation steps (actions) required to achieve stated goals
    - SMART (Specific, Measurable, Achievable, Realistic, and Time-bound)
5. **Requirements:** Measurable project requirements based on technical, safety, and funding requirements

# Principles, Goals and Objectives

EQUITABLE COMMUNITIES

Principle

Goals

Objectives

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

- **Goal 1:** Maintain and strengthen existing community and cultural assets.
  - Seek community input to identify essential assets within the corridor to avoid
  - Design transportation facilities with efficient footprint to avoid or minimize impacts
  - Encourage transit access to community features and assets
  - Encourage the development of assets near transit centers
- **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

MOBILITY

EQUITABLE COMMUNITIES

ENVIRONMENT

RESILIENCE

# 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.*

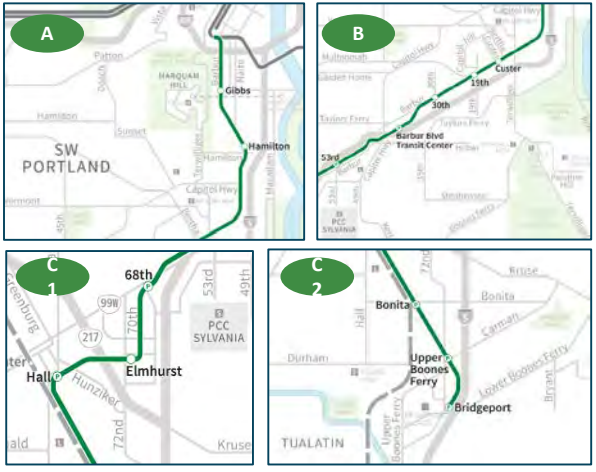
### GOALS

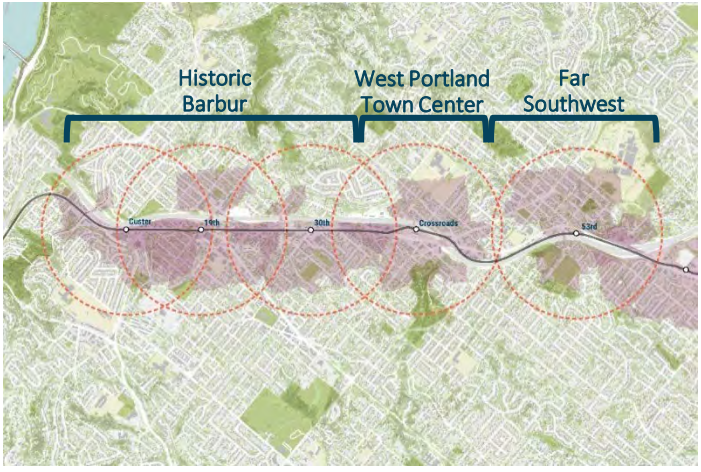
- Goal 1: Promote community sustainability by incorporating flexibility, adaptability, affordability, and diversity into the Project to withstand the test of time.
- Goal 2: Assist communities with the transition to a low-carbon future.


# CDR Document: Overview

# Scale & Content

## Project-wide Study Areas



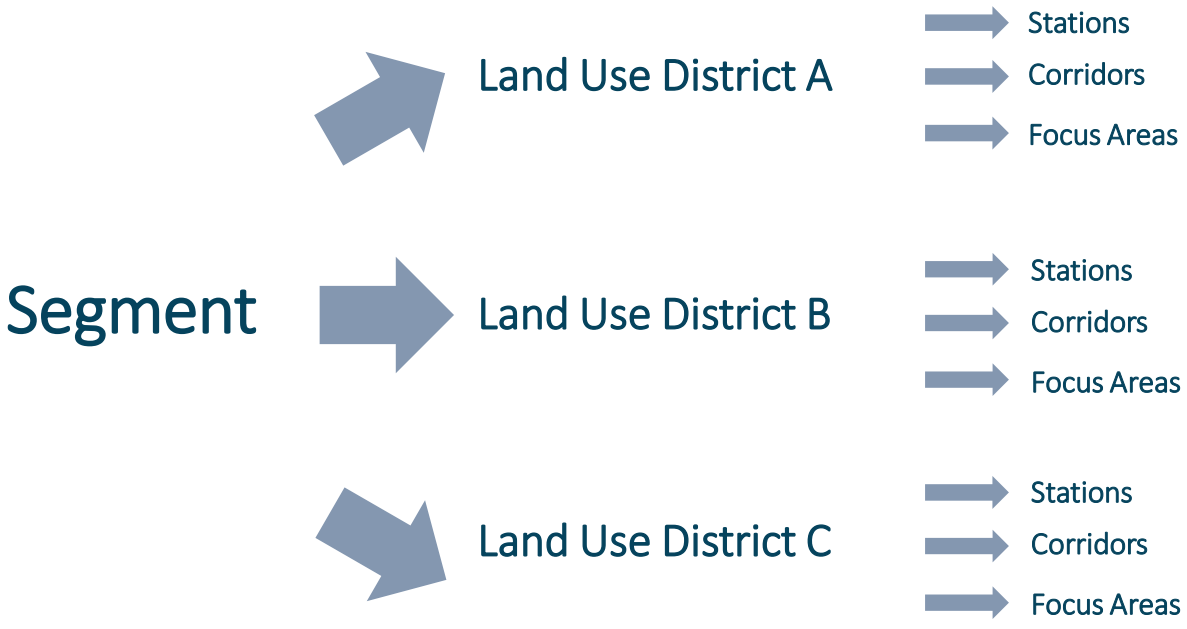

### Segments

- Project area defined in DEIS
- Segments based on historic land use and transportation context, LRT configuration, and local jurisdiction

### Land Use Districts

- Districts within each segment with regional and local plans and existing qualities that contribute to their unique character
- Existing land use, mobility, and environmental patterns and assets

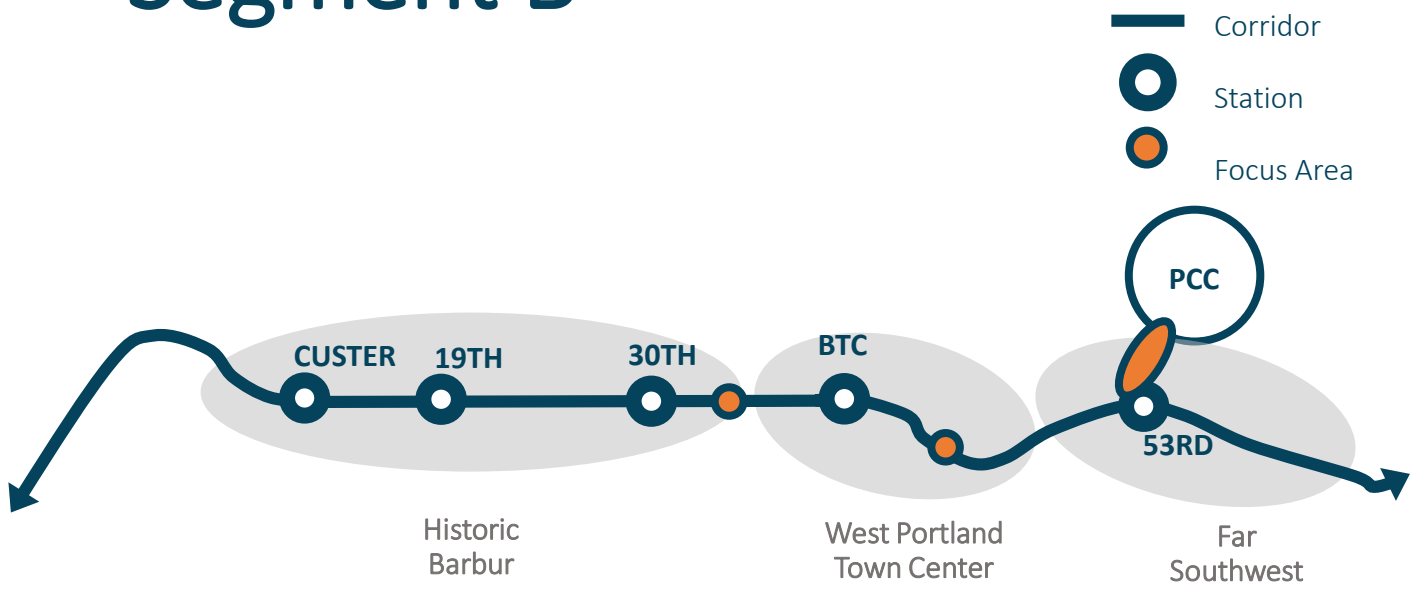
# Organization



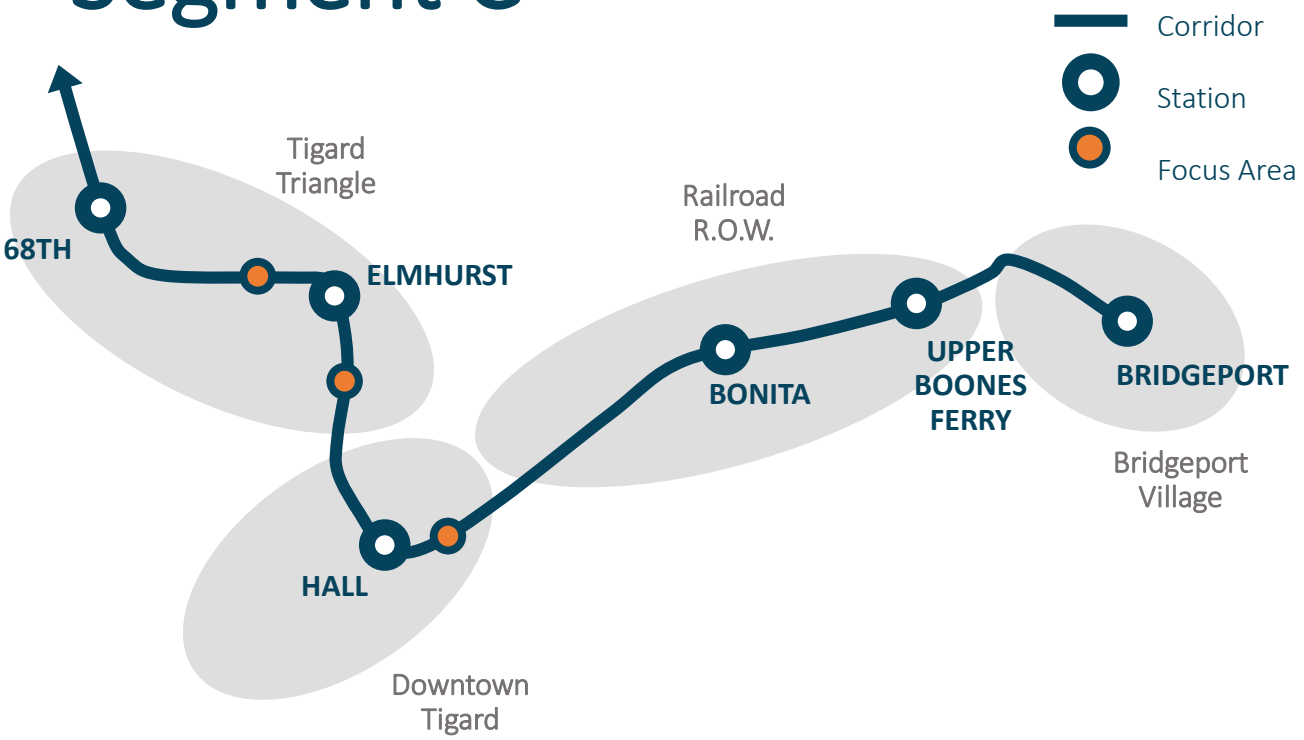
# Segment A


Corridor
Station
Focus Area
Lair Hill/South Portland
HAMILTON
GIBBS
OHSU
South Downtown
The Woods
Homestead

# Segment B


Corridor
Station
Focus Area
PCC
CUSTER
19TH
30TH
BTC
53RD
Historic Barbur
West Portland Town Center
Far Southwest

# Segment C


Corridor
Station
Focus Area
Tigard Triangle
Railroad R.O.W.
68TH
ELMHURST
HALL
BONITA
UPPER BOONES FERRY
BRIDGEPORT
Bridgeport Village
Downtown Tigard

# Station



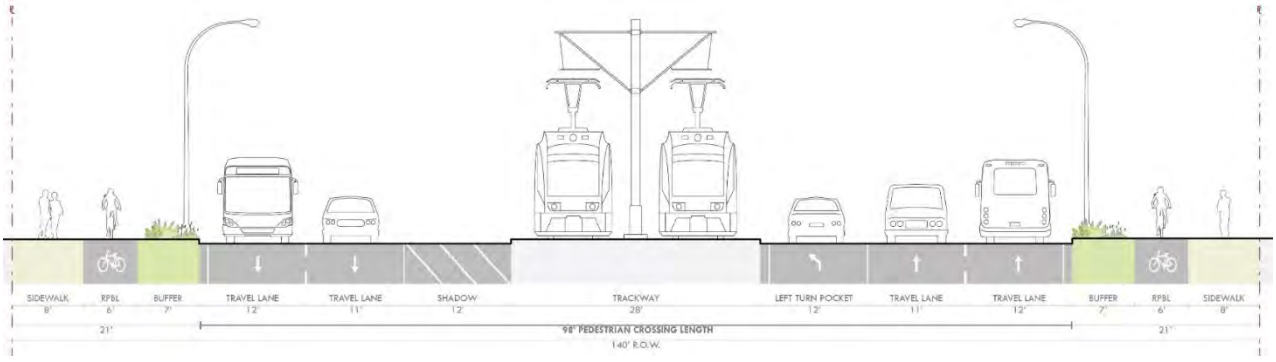
## Station Community

- 1/2 mile around each station
- Focus on issues and opportunities shared through land use district

## Station Core

- 1/4 mile around each station
- Basic station elements (platform, parking, access) included
- Focus on issues and opportunities unique to station

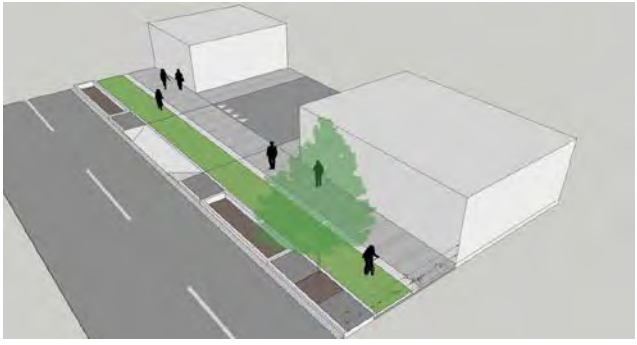
# Corridors




## Corridors

- Areas between stations following the LRT alignment
- Varies between on-street ROW vs. off-street vs. elevated structure
- Landscape, stormwater, and utilities, etc.

# Focus Areas

## Geography-Based Focus Areas

- Specific areas along the alignment that are not stations
- Examples include street design, creeks, and overcrossings

## Topic-Based Focus Areas

- Project programs and elements along the corridor
- Examples include micro-mobility, retaining walls, pedestrian crossings, raised protected bike lanes (RPBLs), etc.

# Next Steps

- **CAC Homework Assignment:**

  - *What did we miss?*

  - *Please send homework to swcorridor@trimet.org by Friday July 26*

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


SOUTHWEST CORRIDOR
LIGHT RAIL PROJECT

# Project Cost Update

July 18, 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

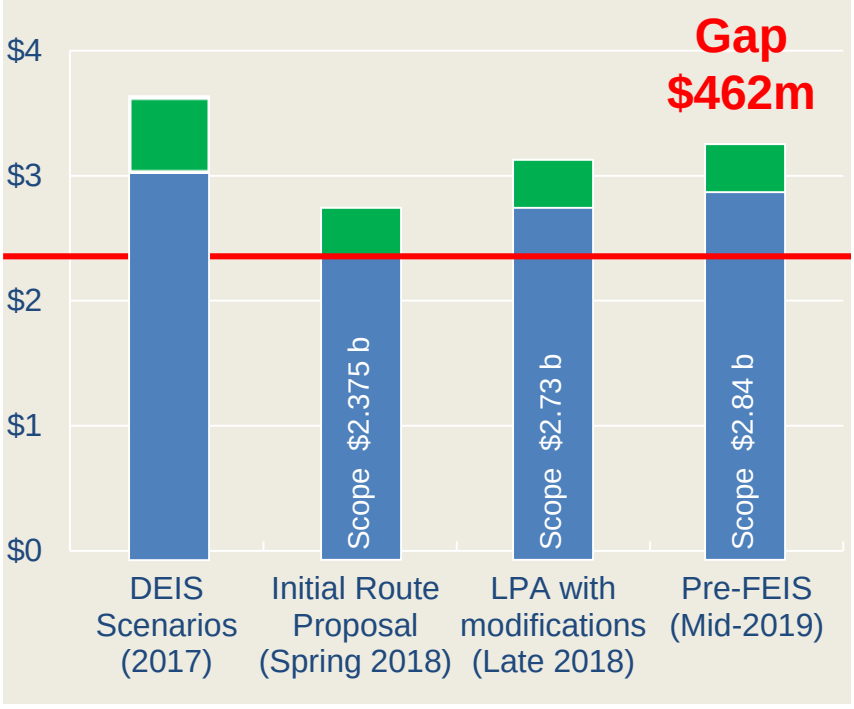
**Funding constraints**

- 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<br>+ $10-40M | [+$20M] |
| B | Marquam Hill Connector<br>+ $12-60M | |
| C | Consolidate Station(s)<br>- $3.4-7.5M | |
| D | Viaducts<br>- $100-200M | |
| E | High Value ROW *<br>- $15-50M | [-$30M] |
| F | B2 - Short Span<br>- $0-7.5M | [-$10M] |
| G | O&M Facility<br>- $15-50M | [-$25M] |
| H | 74th Alignment Options<br>- $0-75M | [N/A] |
| I | Upper Boones At-Grade<br>- $55M | [-$53M] |

*Total: [$-98M]*

Updated: 05.28.2019

# 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** |

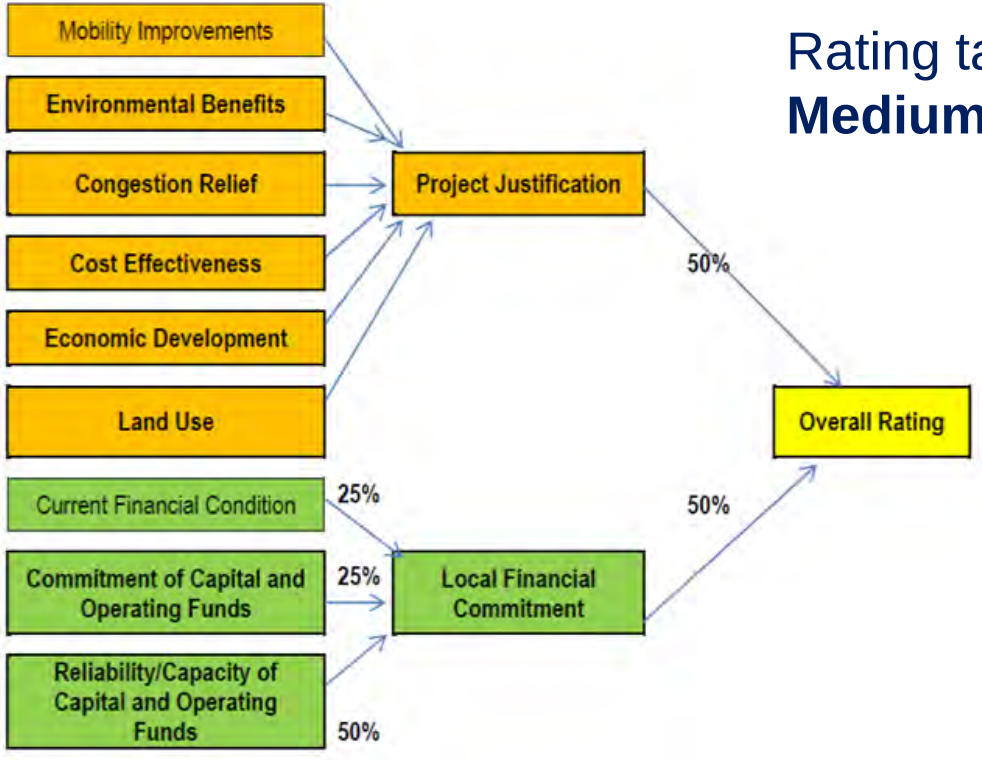
# Competitiveness for federal funding

- 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

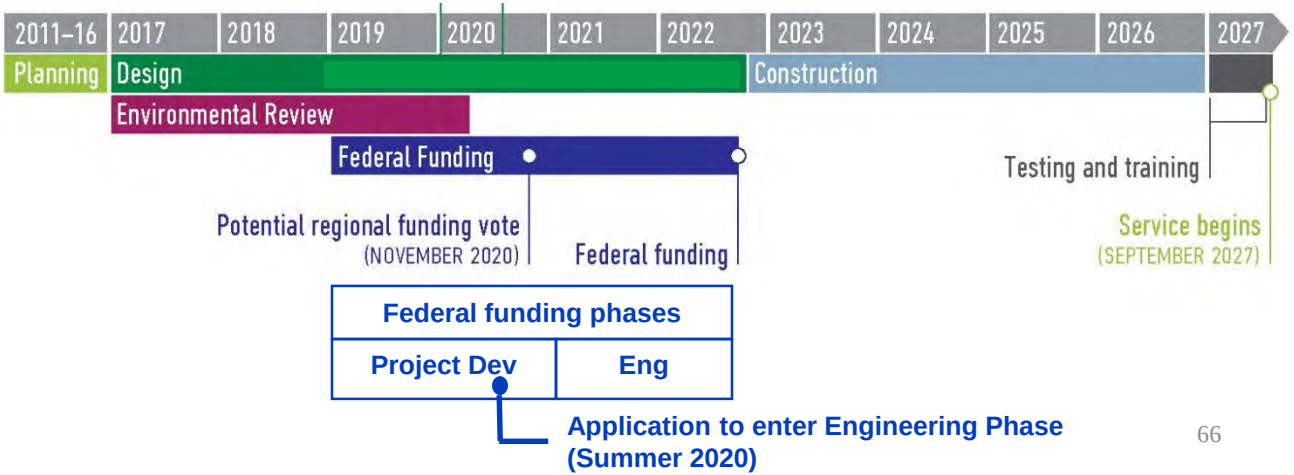
# Local financial commitment

- ✓ 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 cost effectiveness
- Additional local funds could 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 $65m
  - Increases revenue to $2.44b
  - Reduces gap to $397m

- 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 |

# Questions and Comments

**Website: www.trimet.org/swcorridor**

**Email: swcorrdior@trimet.org**

**Phone: 503.962.2150**