EARTHQUAKE READY BURNSIDE BRIDGE

Urban Design and Aesthetics Working Group Mtg #8

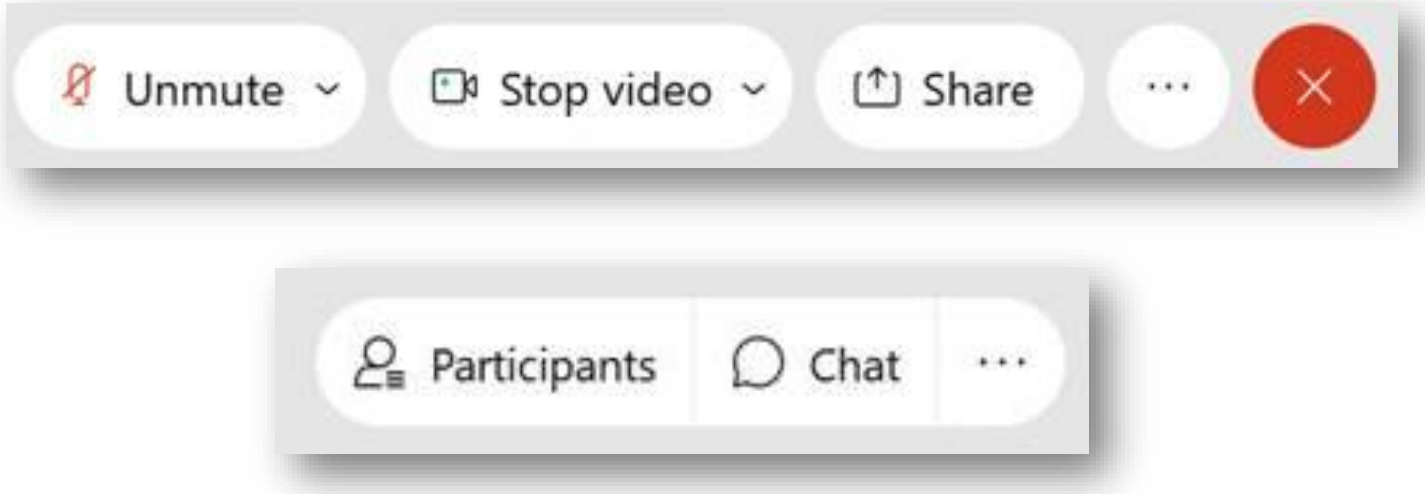
Attendees join meeting via WebEx link in calendar invite

Transportation Division
Department of Community Services
Multnomah County

July 28, 2021

Meeting Protocols

Using WebEx participation features



For WebEx tech support call or email Katy Segura:
(503) 423-3709
Katy.Segura@hdrinc.com

Urban Design & Aesthetics Working Group

Members

DESIGN COMMUNITY:

- *Parks, Randy Gragg, Executive Director, Portland Parks Foundation*
- *Community Arts, Bill Will, Public Works Artist*
- *Urban Design and Architecture, Paddy Tillett, Principal, ZGF*
- *Art & Design, Chris Herring, Artistic Director, Portland Winter Lights Festival*
- *Development, Megan Crosby, Urban Development + Partners*
- *Businesses, Ian Williams, Deadstock Coffee*
- *River Access, Priscilla Macy, Oregon Outdoor Coalition*
- *Transportation Equity, Izzy Armenta, Oregon Walks*
- *Community Events, Dave Todd, Portland Rose Festival*
- *Cultural, Brian Kimura, Japanese American Museum of Oregon*
- *Bob Hastings, Agency Architect – At-large (former TriMet)*

AGENCY COMMUNITY:

- *City of Portland*
  - *Patrick Sweeney, Capital Project Manager, PBOT*
  - *Lora Lillard, AICP, Senior Planner - Urban Design, BPS*
  - *Hillary Adams, City Planner, BDS*
  - *Tate White, AICP, Senior Planner, PPR*
- *Justin Douglas, Manager - Governance, Learning & Outcomes, Prosper Portland*
- *Magnus Bernhardt, Landscape Architect, ODOT Region 1*

PROJECT TEAM:

- *Megan Neill, MultCo, Project Manager*
- *Mike Pullen, MultCo, Public Involvement*
- *Heather Catron, HDR, Consultant PM*
- *Allison Brown, JLA, Facilitator*
- *Steve Drahota, HDR, Technical Lead*
- *Cassie Davis, HDR, Public Involvement Lead*
- *Michael Fitzpatrick, HDR, Bridge Architect Lead*
- *Jeff Heilman, Parametrix, Environmental Lead*
- *Carol Mayer-Reed, Mayer/Reed, Principal*
- *Jeramie Shane, Mayer/Reed, Landscape Architect*
- *Josh Carlson, Mayer/Reed, Landscape Architect*
- *Anne Monnier, KPFF*

Agenda

1. Welcome and Introductions
2. Opening Remarks and Discussions
3. Project Update
   - Funding Context
   - CTF Adopted Recommendations from UDAWG
   - Cost Saving Measures Under Analysis
4. Next Steps
   - UDAWG Workplan
   - Closing Remarks

Pre-meeting Information Packet

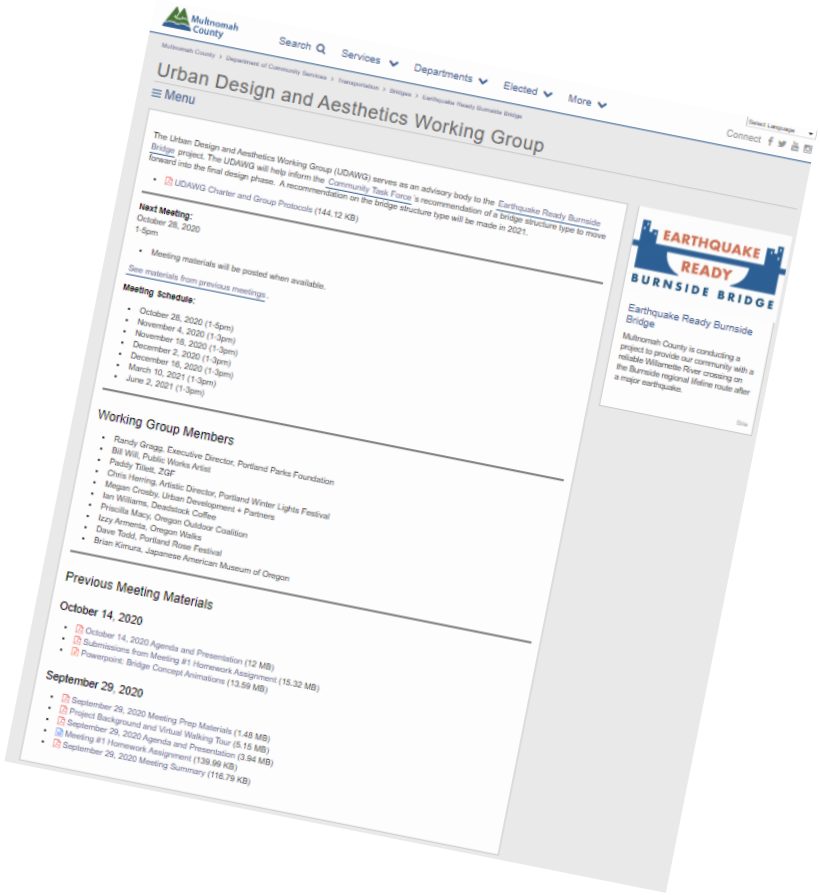
Content

Online UDAWG Library:

https://multco.us/earthquake-ready-burnside-bridge/urban-design-and-aesthetics-working-group

UDAWG Meeting #8 Materials:

- UDAWG Mtg #7 Notes
- UDAWG Mtg #8 Agenda
- UDAWG Mtg #8 Presentation
- Final Type Selection Criteria

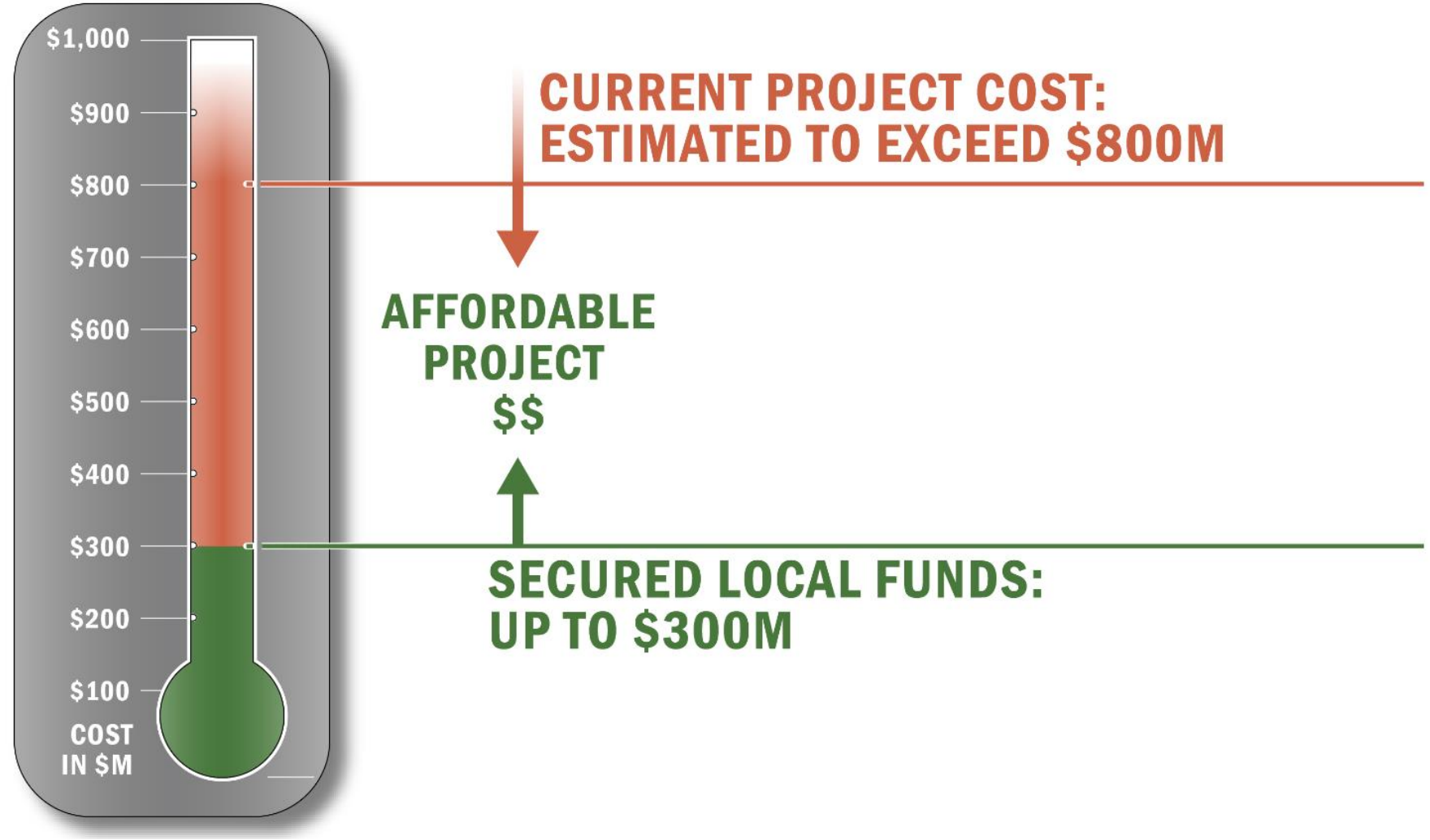


Opening Remarks and Discussion

Project Update

Funding Context

Must achieve an affordable Project to be viable



Note: City of Portland and other local cities agreed to forego VRF revenue to provide financial support of the project.

Project Update

Funding Opportunities

- Federal Transportation & Infrastructure Package
- Federal RAISE Grant
- Potential Future Regional Transportation Bond Measure
- Multnomah County Vehicle Registration Fee (secured)

Budget Approach

- Cost reductions
- Establishing a cost cap

CTF Adopted Recommendations from UDAWG

#1 - Range of Bridge Types

EARTHQUAKE READY BURNSIDE BRIDGE

CTF Adopted Truss Option Dismissal on 3/1/21

Tied Arch

Truss

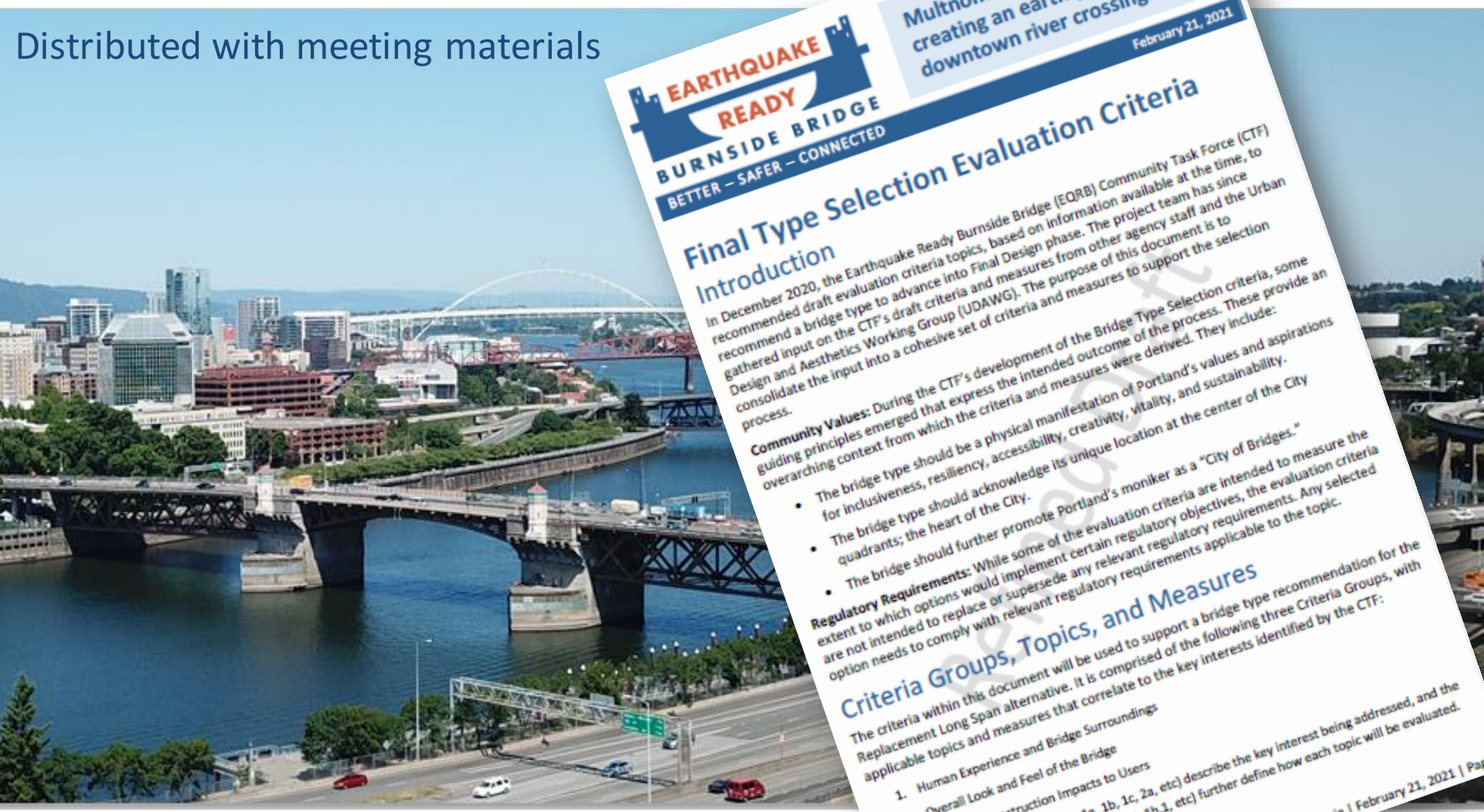
Cable Stayed / Extradosed

Girder (applicable to west approach only)

Type Selection Evaluation Criteria

CTF Adopted Criteria on 3/1/21

Distributed with meeting materials



EARTHQUAKE READY BURNSIDE BRIDGE

BETTER – SAFER – CONNECTED

Multnomah County is creating an earthquake-ready downtown river crossing.

February 21, 2021

Final Type Selection Evaluation Criteria

Introduction

In December 2020, the Earthquake Ready Burnside Bridge (EQRB) Community Task Force (CTF) recommended draft evaluation criteria topics, based on information available at the time, to recommend a bridge type to advance into Final Design phase. The project team has since gathered input on the CTF's draft criteria and measures from other agency staff and the Urban Design and Aesthetics Working Group (UDAWG). The purpose of this document is to consolidate the input into a cohesive set of criteria and measures to support the selection process.

Community Values: During the CTF's development of the Bridge Type Selection criteria, some guiding principles emerged that express the intended outcome of the process. These provide an overarching context from which the criteria and measures were derived. They include:

- The bridge type should be a physical manifestation of Portland's values and aspirations for inclusiveness, resiliency, accessibility, creativity, vitality, and sustainability.
- The bridge type should acknowledge its unique location at the center of the City quadrants; the heart of the City.
- The bridge should further promote Portland's moniker as a "City of Bridges."

Regulatory Requirements: While some of the evaluation criteria are intended to measure the extent to which options would implement certain regulatory objectives, the evaluation criteria are not intended to replace or supersede any relevant regulatory requirements. Any selected option needs to comply with relevant regulatory requirements applicable to the topic.

Criteria Groups, Topics, and Measures

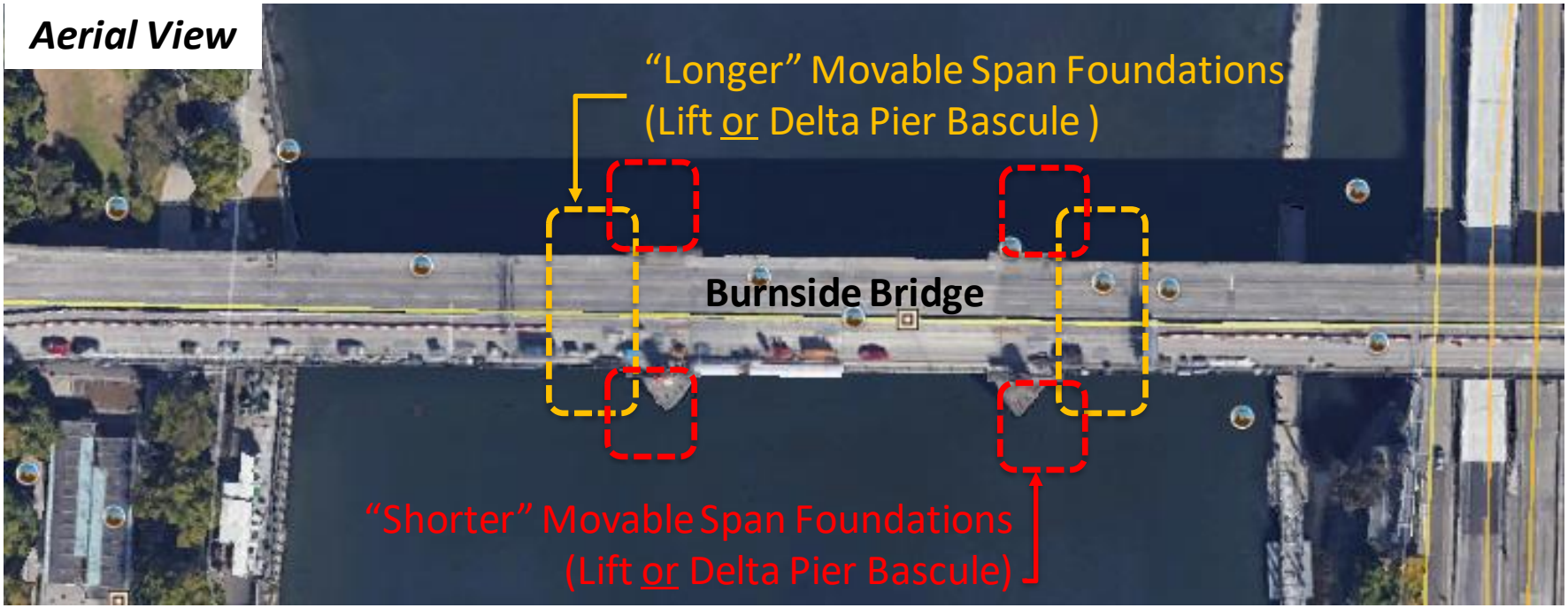
The criteria within this document will be used to support a bridge type recommendation for the Replacement Long Span alternative. It is comprised of the following three Criteria Groups, with applicable topics and measures that correlate to the key interests identified by the CTF:

1. Human Experience and Bridge Surroundings
2. Overall Look and Feel of the Bridge
3. Cost and Construction Impacts to Users

The criteria topics (designated as 1a, 1b, 1c, 2a, etc) describe the key interest being addressed, and the criteria measures (designated as 1a.1, 1a.2, 1b.1, etc) further define how each topic will be evaluated.

Movable Span Length

Short movable and long movable span comparison



Input from UDAWG:

- Reduce the pier size to the maximum extent possible (reduces in-water footprint)
- Position the piers as far away from the riverbanks as possible (better for scale)

Technical Opportunities:

- Potential to reduce construction cost with a shorter movable span
- Potential to reduce traffic detour duration

Movable Span Length

EARTHQUAKE READY BURNSIDE BRIDGE

CTF Adopted Short Movable Span on 3/1/21

Technical recommendation:

Advance only the Short Movable Span options

Why?

- ✓ Reduces construction cost without sacrificing seismic or bridge opening performance
  - Reduces cost by $20M - 50M (depending on the bridge type)
- ✓ Reduces the exposed pier size to almost that of the existing bridge
  - Better for overall river hydraulics
  - Better for side channel vessel usage
  - Better overall aesthetic scale
- ✓ Reduces construction impacts
  - Enables construction of foundations while bridge is open to traffic
  - Reduces traffic detour duration by up to 1 year

Trade-offs

- X Taller approach span superstructure heights
- X Possibly longer bridge foundation (north-south foundation length)

Cost Saving Measures Under Analysis

Approach to Cost Saving Measures

Guiding Principles

- Moving forward with recommended Long Span Replacement Alternative
- Ensure the Purpose and Need is met
  - Seismic resiliency
  - Emergency response and regional recovery
  - Long term transportation needs
- Maintain County's equity lens
- Fiscal responsibility

Cost Saving Measures NOT Pursued

EARTHQUAKE READY BURNSIDE BRIDGE

Things we considered but chose NOT to pursue

The Project will not:

- Reduce seismic design criteria
- Eliminate potential for future Streetcar
- Reduce to three vehicular lanes
- Eliminate capacity for oversized and specialized heavy haul vehicles
- Reduce bike/ped width to less than 14-feet
- Remove the crash worthy barrier between vehicular lanes and bike/ped space

Cost Saving Measures

Range of Cost Saving Options being Considered

1. Bridge-specific Changes
   - 1a. Bridge Types
   - 1b. Bridge Width
   - 1c. Span Lengths
2. Property Impacts / ROW Acquisition
3. Connections to Skidmore MAX, Eastbank Esplanade
4. Aesthetic / Visual Quality “Return-on-Investment”
5. Delivery Method

West Approach Bridge Type

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Girder Type with Two Supports in Waterfront Park

Existing condition

West Approach Bridge Type

EARTHQUAKE READY BURNSIDE BRIDGE

Girder Type with One Support in Waterfront Park

Prior Concept

West Approach Bridge Type

EARTHQUAKE READY BURNSIDE BRIDGE

Girder Type with Two Supports in Waterfront Park

$15 - $20M Savings

Updated Concept

Permit Agency Feedback

Preliminary SHPO Section 106 Feedback:

- Above deck elements in the West Approach create an Adverse Effect on the Skidmore/Old Town Historic District that is avoided if a girder concept is employed

Historic Landmarks / Design Commission Design Advice:

- Due to visual impacts to historic districts, Girder-styled west approach option best meets zoning code and historic guidelines
- Bascule movable bridge option minimizes impacts to views
- Cable Supported option offers similar scale and visual cohesion to east side building heights
- Cable Supported option offers more transparency
- Preference for “observable asymmetry” due to distinct differences in urban fabric on west and east sides

Bridge Composition

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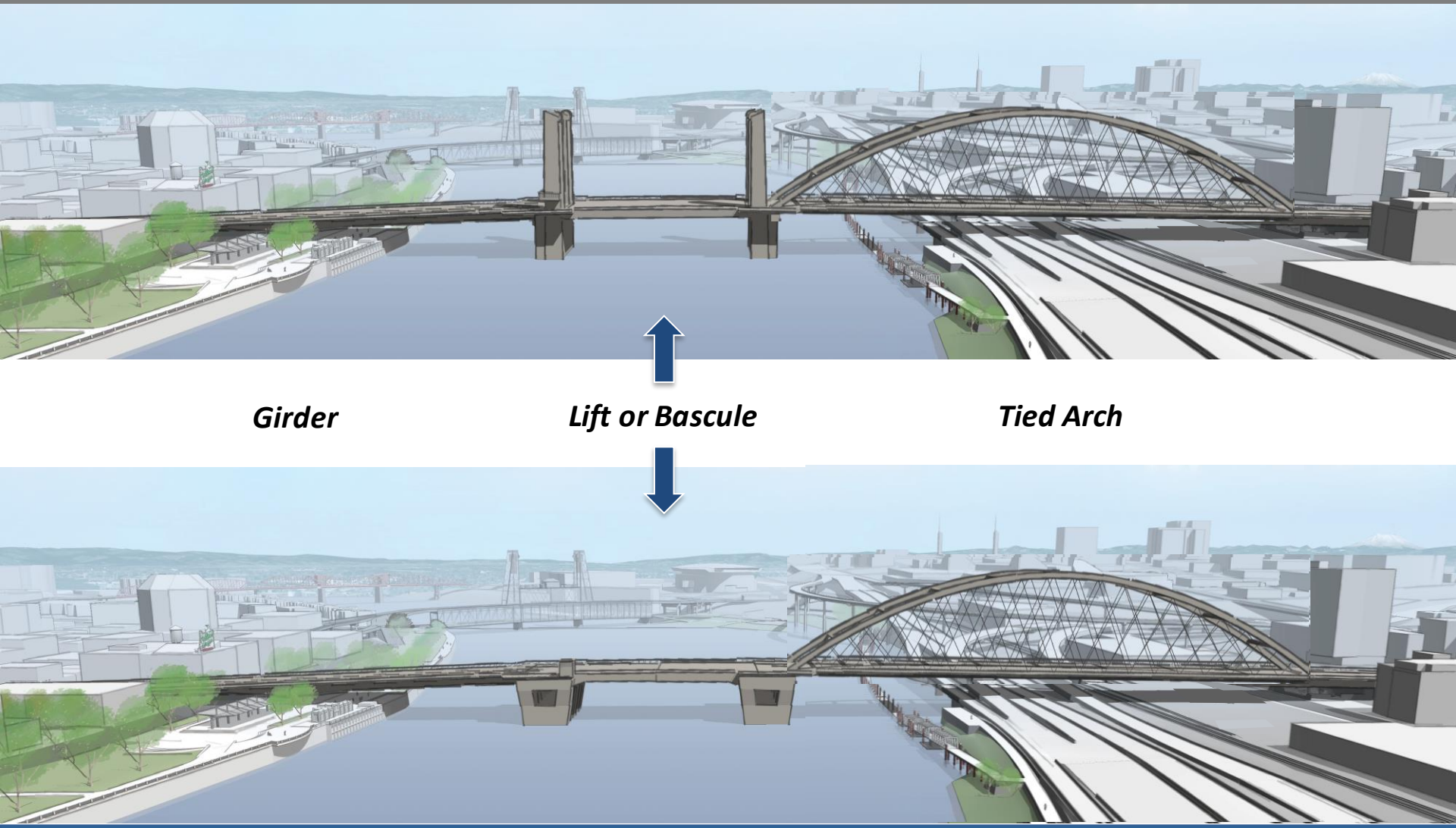
Potential Range of Bridge Options

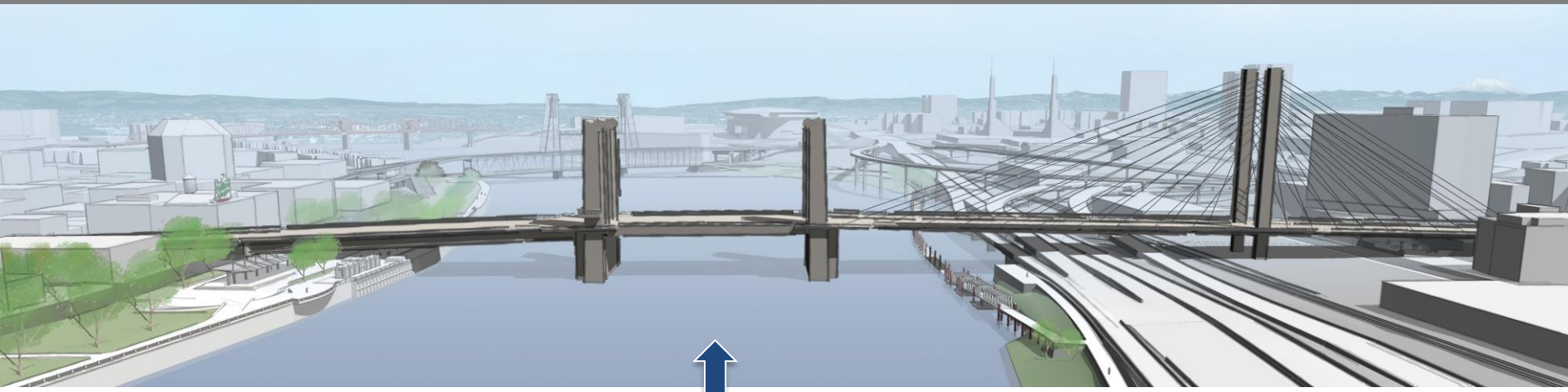


Girder ***Lift or Bascule*** ***Tied Arch***

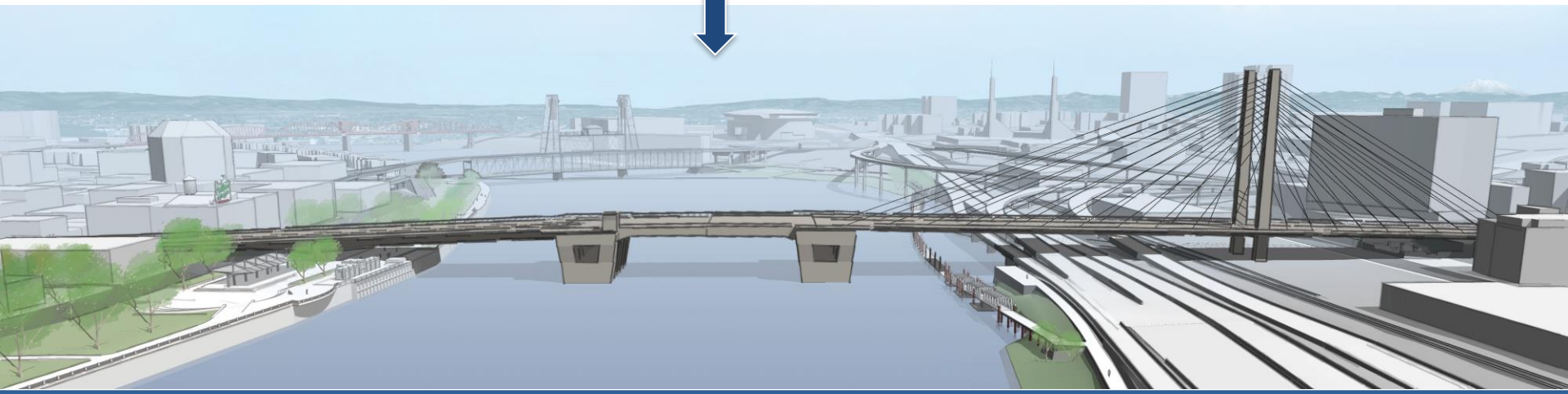
Bridge Composition

EARTHQUAKE READY BURNSIDE BRIDGE

Potential Range of Bridge Options



Girder ***Lift or Bascule*** ***Cable Stayed***



East Approach Structural Options

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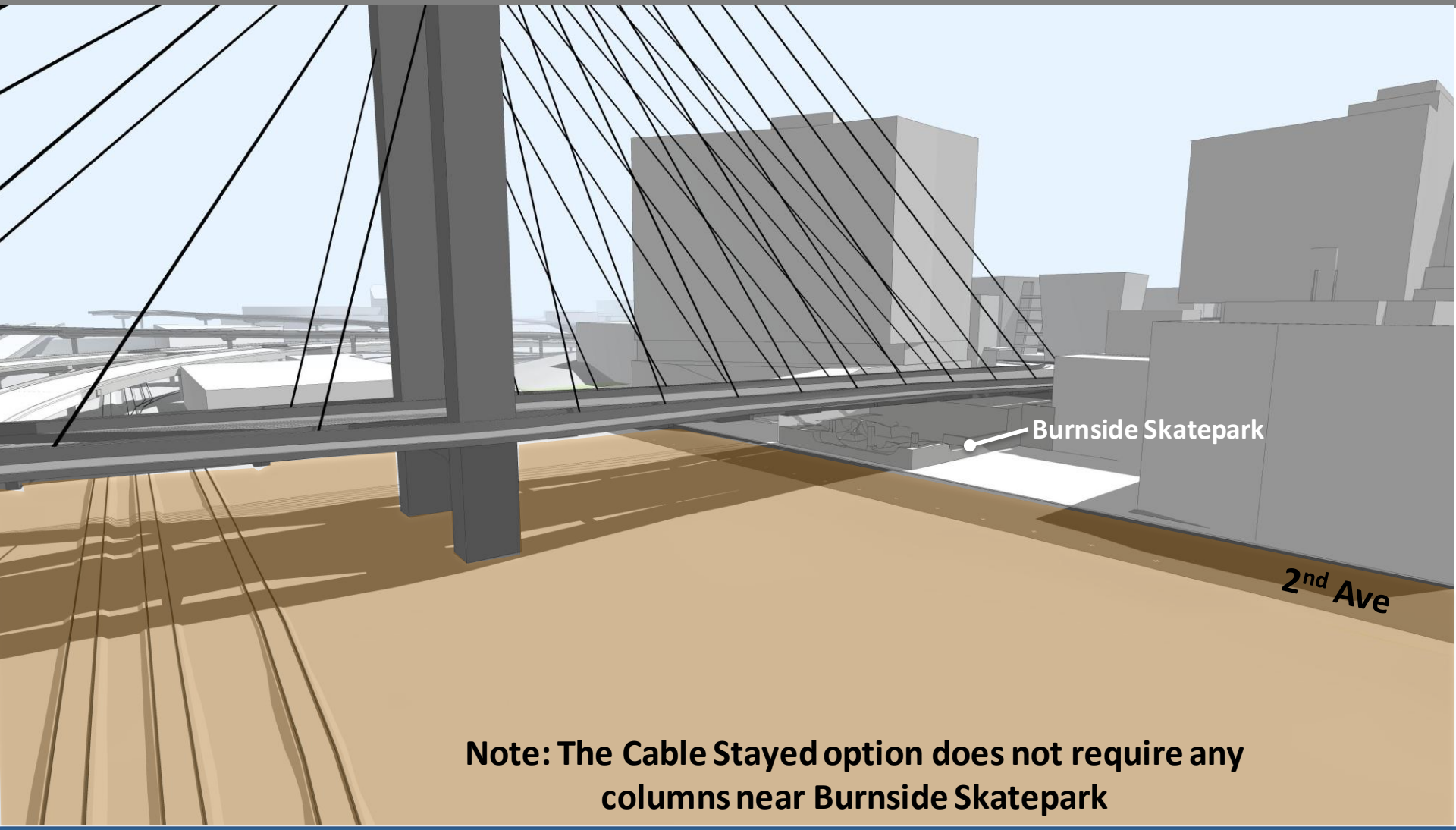
Cable Stayed Alternative

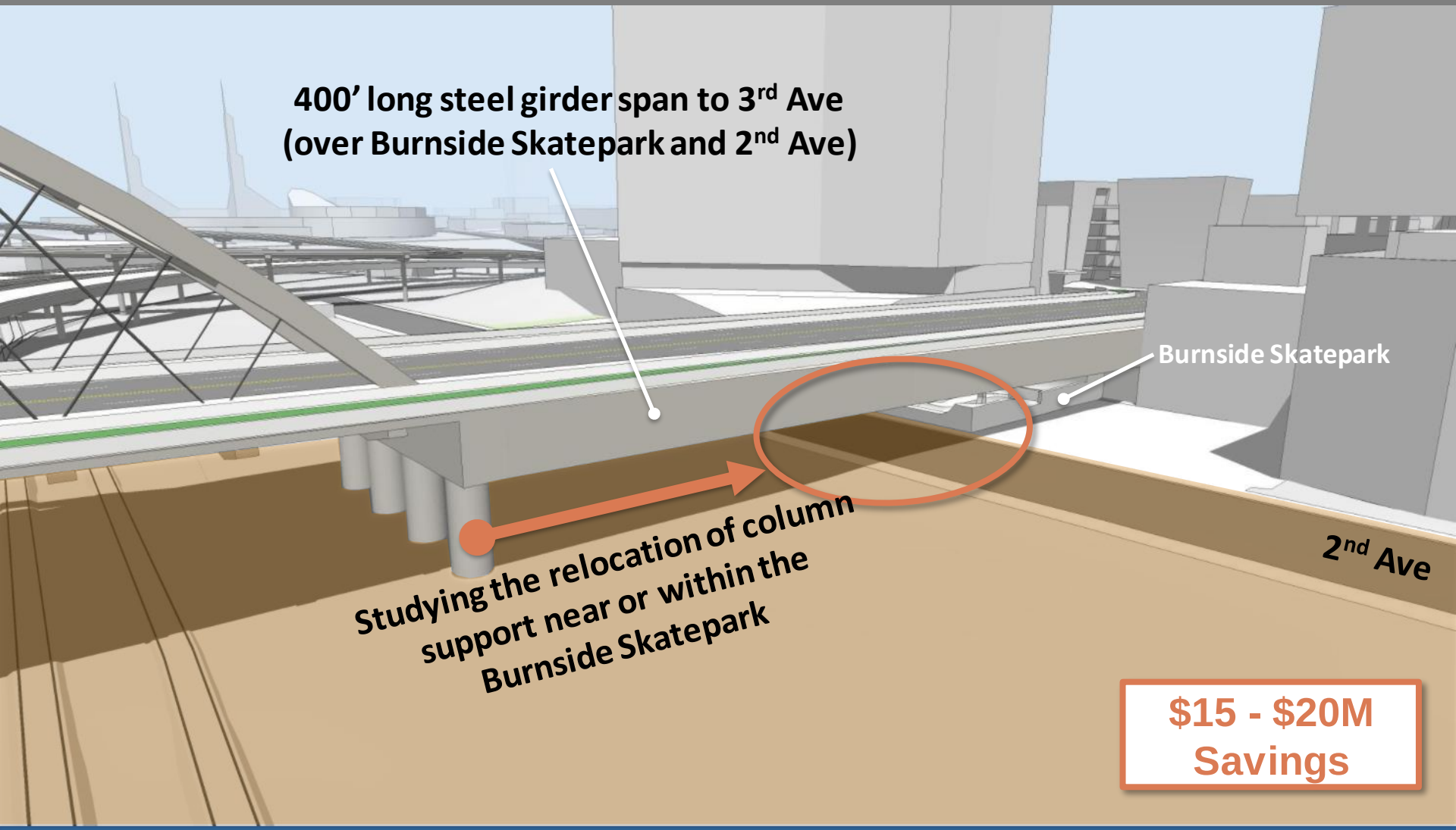


Note: The Cable Stayed option does not require any columns near Burnside Skatepark

East Approach Structural Options

EARTHQUAKE READY BURNSIDE BRIDGE

Tied Arch Alternative



$15 - $20M Savings

Does not apply to Cable Stayed bridge type

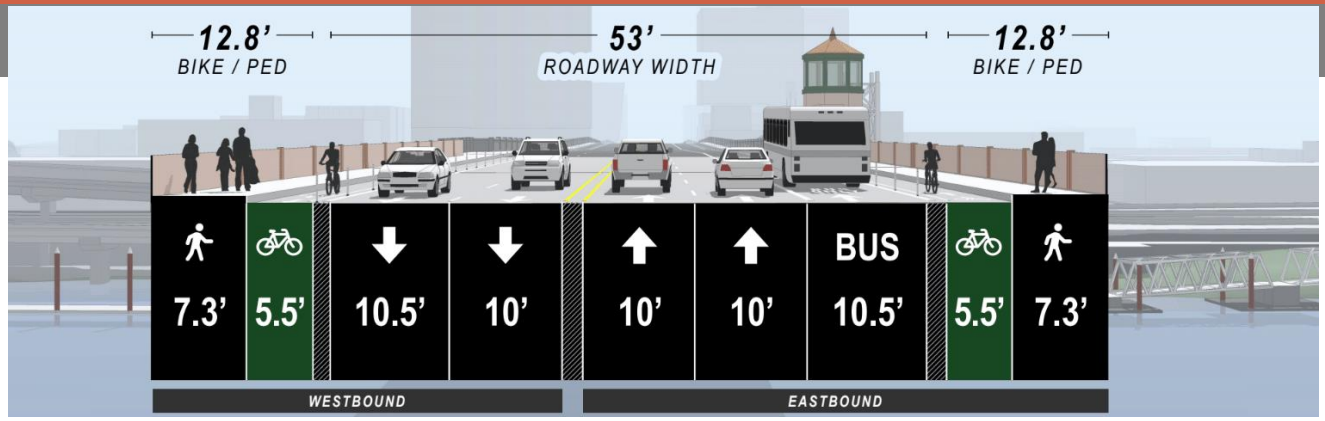
Bridge Cross Section

EARTHQUAKE READY BURNSIDE BRIDGE

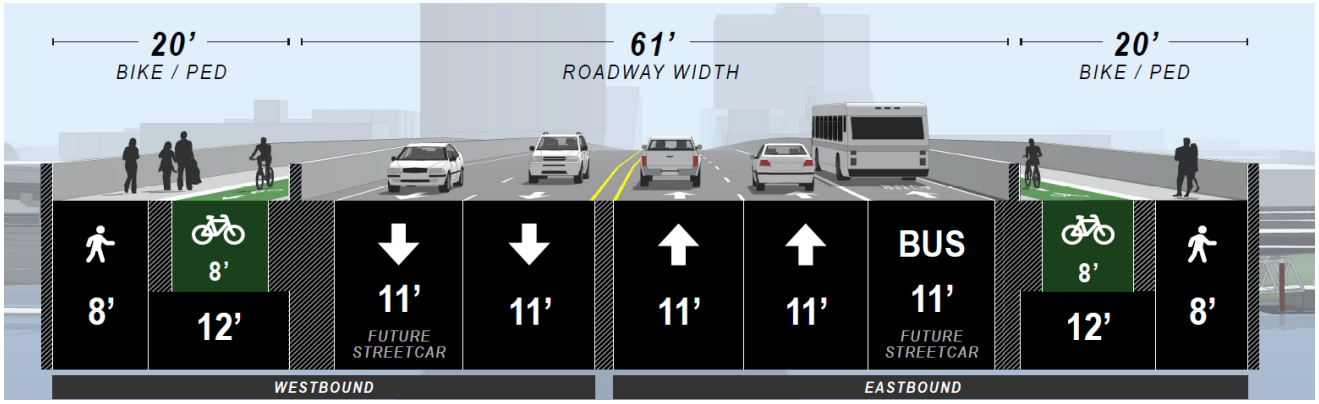
Narrower Bridge

Existing Cross Section

Note: Barrier type to be determined in Final Design

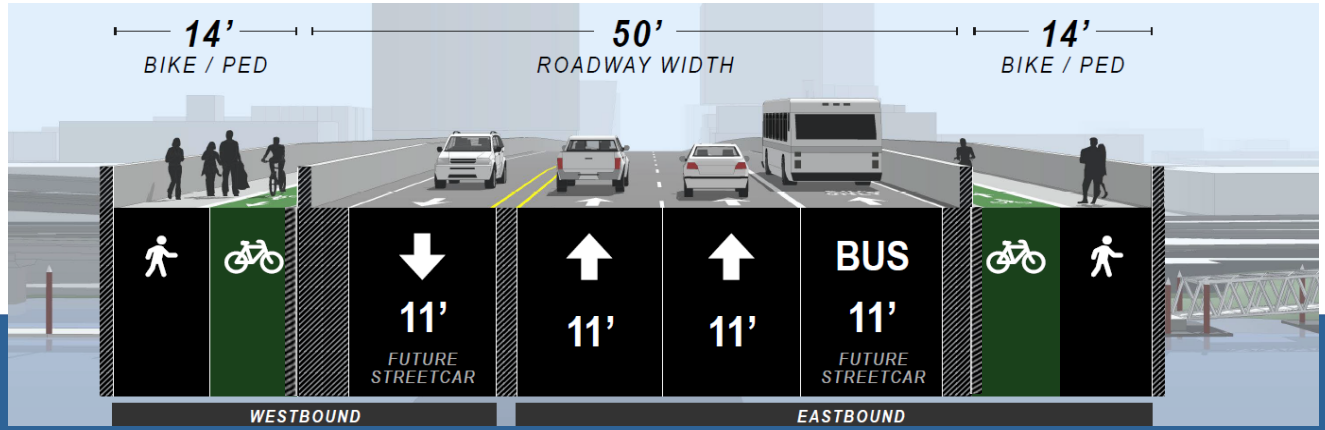


DEIS Cross Section



Refined Cross Section Under Analysis

$140 - $165M Savings

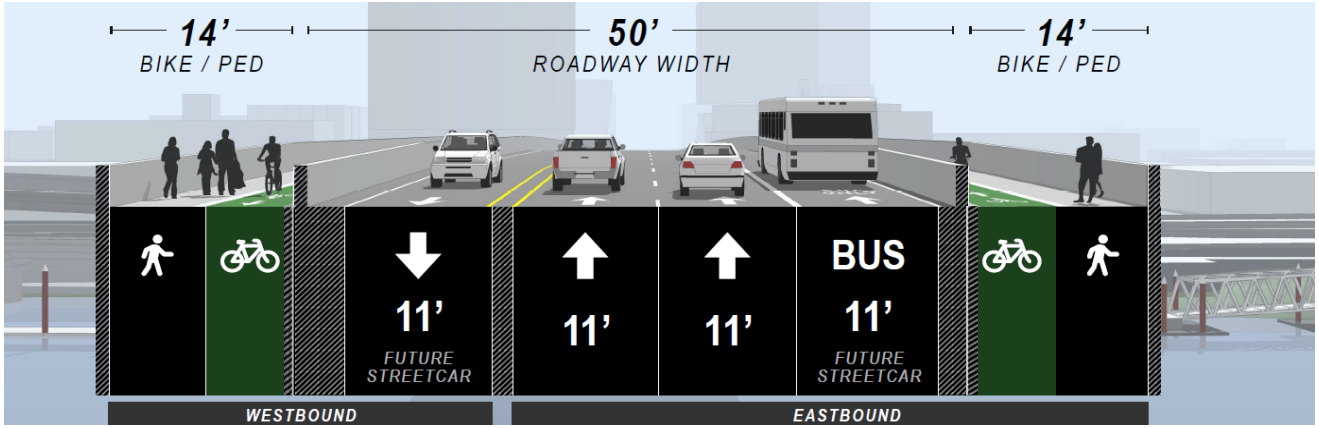


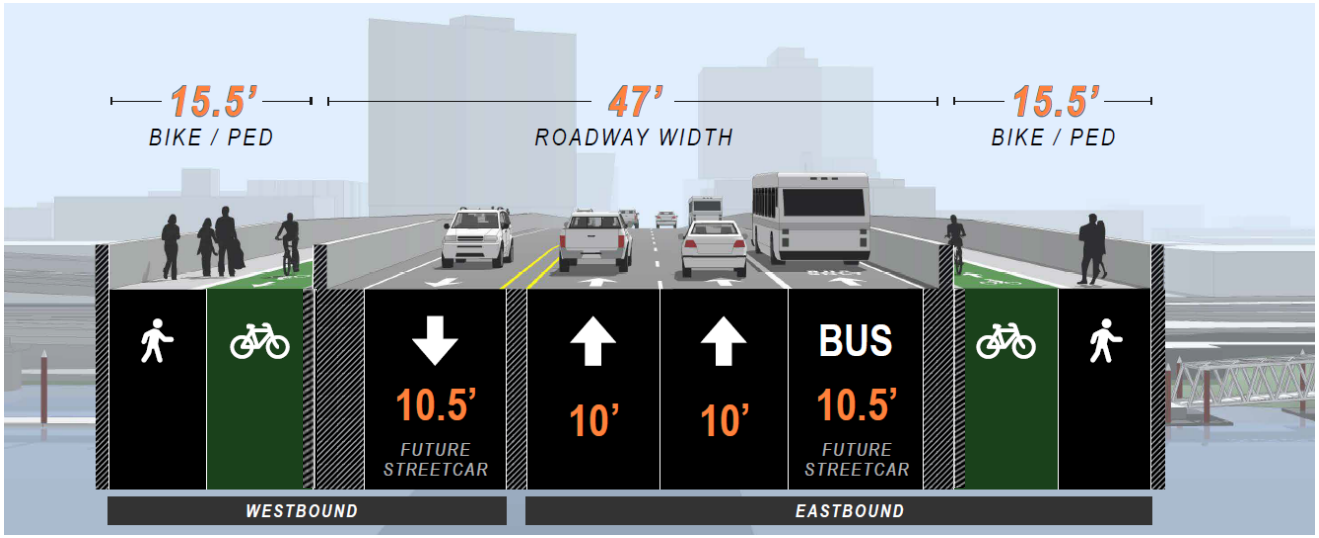
Bridge Cross Section

EARTHQUAKE READY BURNSIDE BRIDGE

Narrower Bridge: Space Allocation Options

Project team will study various ways space could be allocated





* Note: Buffer between bike / pedestrian spaces not shown

Traffic Lane Configurations

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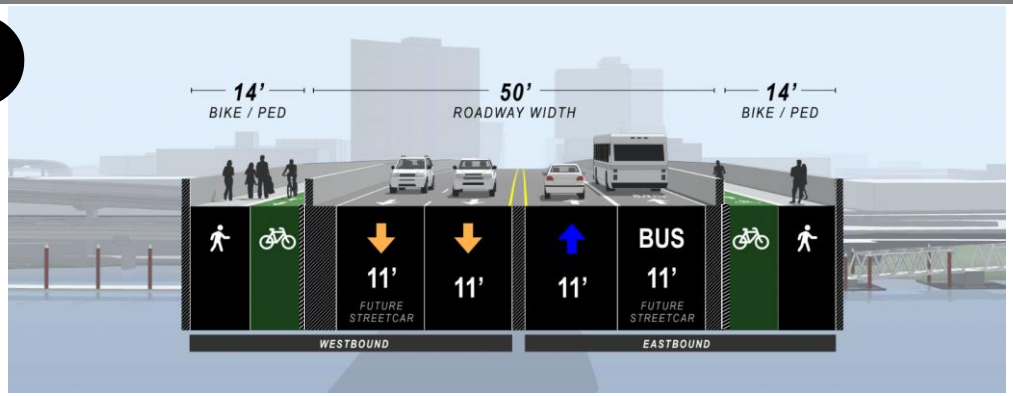
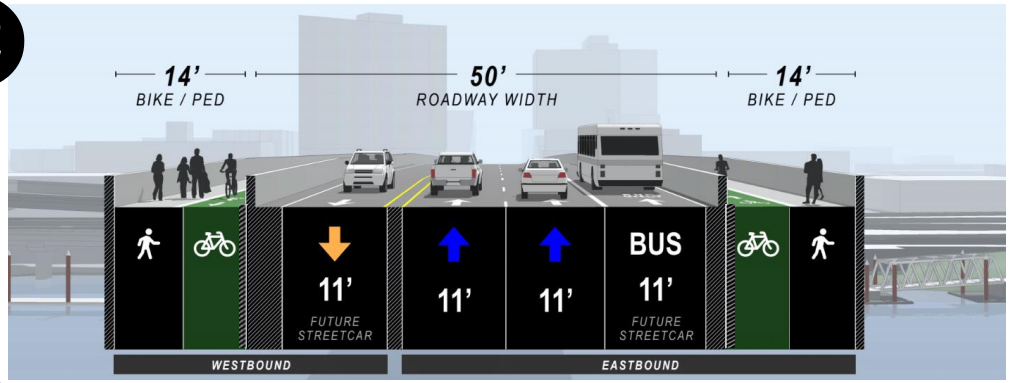
Three Study Options

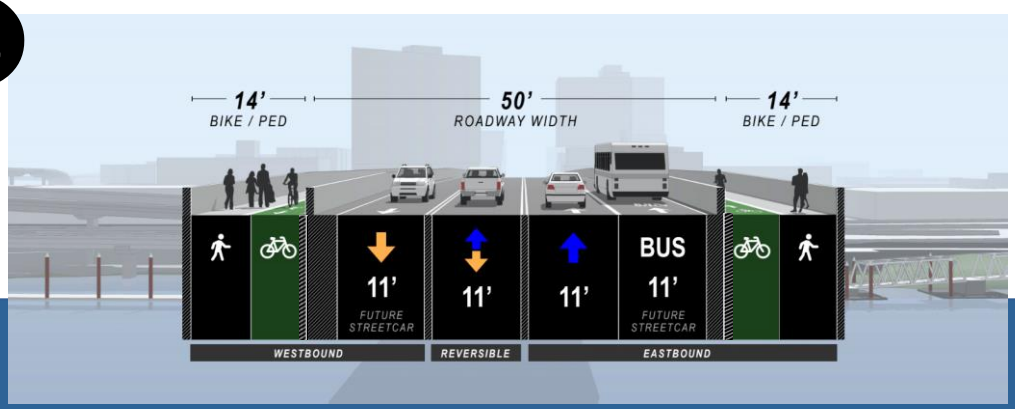
Option 1 (Balanced):
2 WB General Purpose + 2 EB (1 General Purpose and 1 Bus lane)



Option 2 (EB Focus):
1 WB General Purpose + 3 EB (2 General Purpose and 1 EB Bus lane)



Option 3 (Reversible Lane):
1 WB + 1 Reversible Lane + 2 EB (1 GP and 1 Bus lane)



Aesthetic Enhancements

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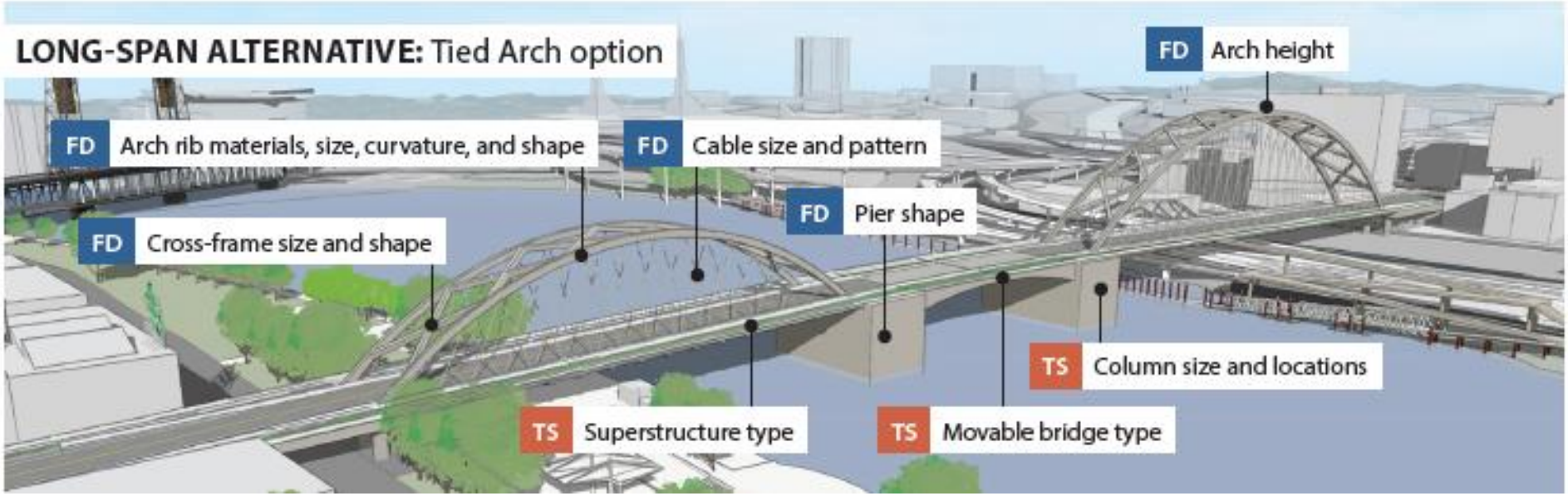
NEPA Phase vs Final Design Decisions



Key Visual / Urban Design Elements to be included in the Project:

- Structural type and form (overall composition and individual members)
- Integrated safety (vehicle barriers / railings; belvederes; safety lighting)
- Complementary elements (connection to MAX station / Eastbank Esplanade; Operator's house)
- Reconstructed elements (Japanese American Historical Plaza landscaping; Waterfront Park pier 1 "pit")

Cost Saving Measures

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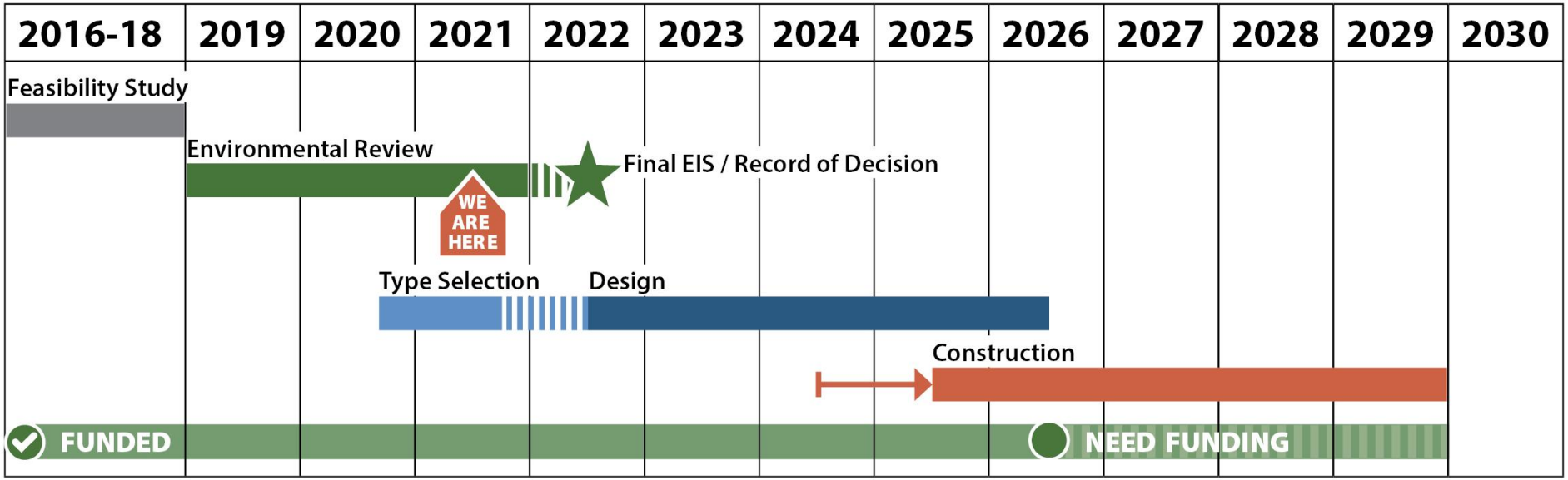
Range of Cost Saving Options being Considered

Topic Buckets	Cost Savings Item	Preliminary Cost Savings Range
1a. Bridge Specific	Girder vs Long Span (on West Approach)	$15M to $20M
	Cable Stayed vs Tied Arch	(Pending Type Sel.)
	Lift vs Bascule	(Pending Type Sel.)
1b. Bridge Width	Roadway reduced from 5 to 4 vehicle lanes	$85M to $100M
	Sidewalks / Bike lanes reduced from 20' to 14'	$55M to $65M
1c. Tied Arch Approach Span Lengths	Additional columns (i.e., Burnside Skatepark)	$15M to $20M
2. Property Impacts / ROW Acquisition	No ROW Acquisition on Couch Couplet for Streetcar	$5M to $10M
3. Connections to MAX / Esplanade	County to provide connections to facilities below	TBD
4. Aesthetic / Visual Quality "Return-on-Investment"	Aesthetics / Lighting / Urban Design	TBD
5. Delivery Method	"Best Value" Bid vs CM/GC Delivery	TBD
	Preliminary Cost Savings Range:	**$180M - $230M**

Workplan Update

Project Timeline



Key Schedule Changes

- Final EIS moved out nine months to accommodate additional analysis
- Construction start moved to provide additional time for fundraising

Project Next Steps

- **Spring / Summer 2021 – Technical Analysis**
- **Fall 2021 – CTF Meetings**
  - Review analysis findings, county cost cap decision and cost saving recommendations
  - Seek CTF concurrence on recommendations
- **Fall / Winter 2021 – Community Outreach and Online Open House**
- **February 2022 – Community Outreach with Publication of Supplemental Draft EIS**
- **Spring 2022 – Finalize Type Selection Recommendation**
- **Summer 2022 – Final EIS and Record of Decision**

UDAWG Next Steps

Fall 2021

- **September Meetings** – to be cancelled
- **October Meeting to be scheduled**
  - Review findings of cost reduction measures analysis
  - Share results from Sept cost estimating workshop
  - Review proposed public outreach plan
  - Discuss future workplan

Closing Remarks and Discussion

Closing Remarks and Adjourn

EARTHQUAKE READY BURNSIDE BRIDGE

Thank you!