EARTHQUAKE READY BURNSIDE BRIDGE

Design Commission Briefing

Presenters:
Hillary Adam, BDS
Patrick Sweeney, PBOT
Megan Neill, Multnomah County
Steve Drahota, HDR

Department of Community Services
Transportation Division

December 17, 2020

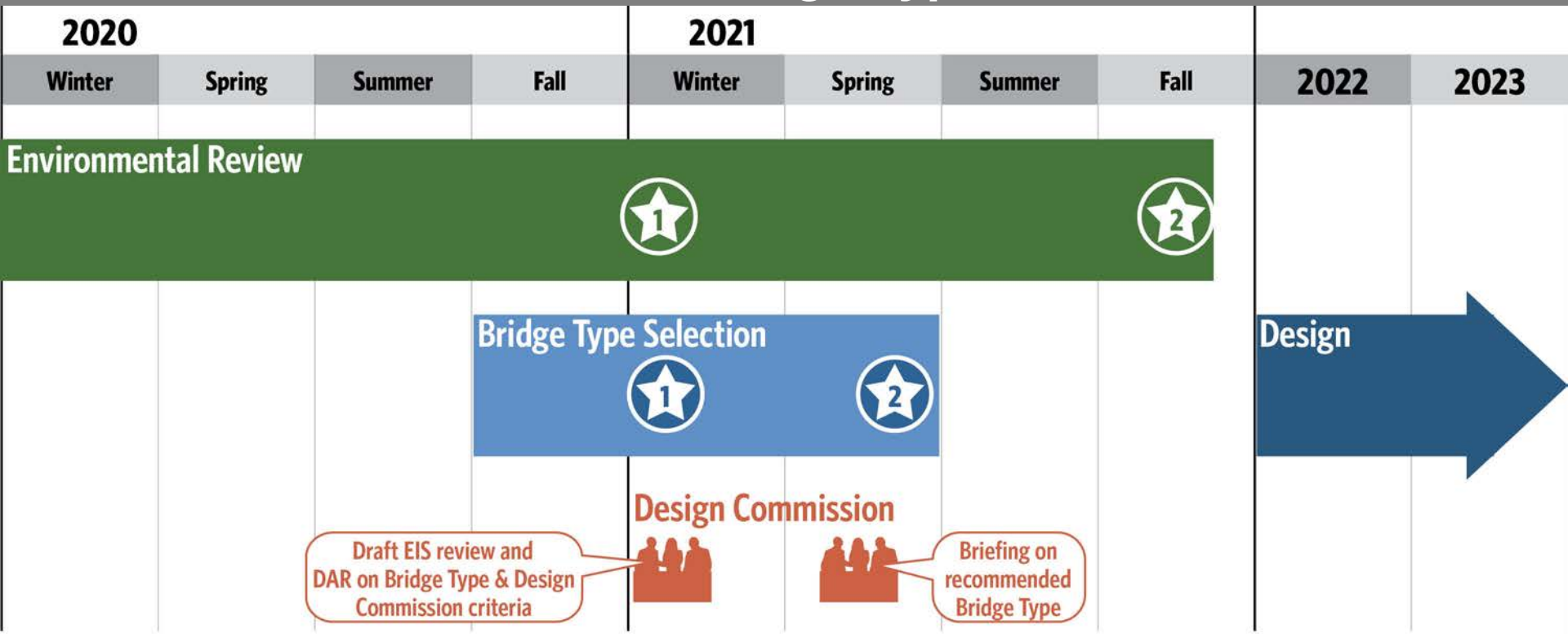
Briefing Overview

1. Project Timeline and Key Milestones
2. Preferred Alternative and Outreach
3. Bike/Pedestrian/ADA Access
4. Bridge Type Selection Process
5. Next Steps and Closing Remarks

Project Timeline

EARTHQUAKE READY BURNSIDE BRIDGE

Environmental Review and Bridge Type Selection



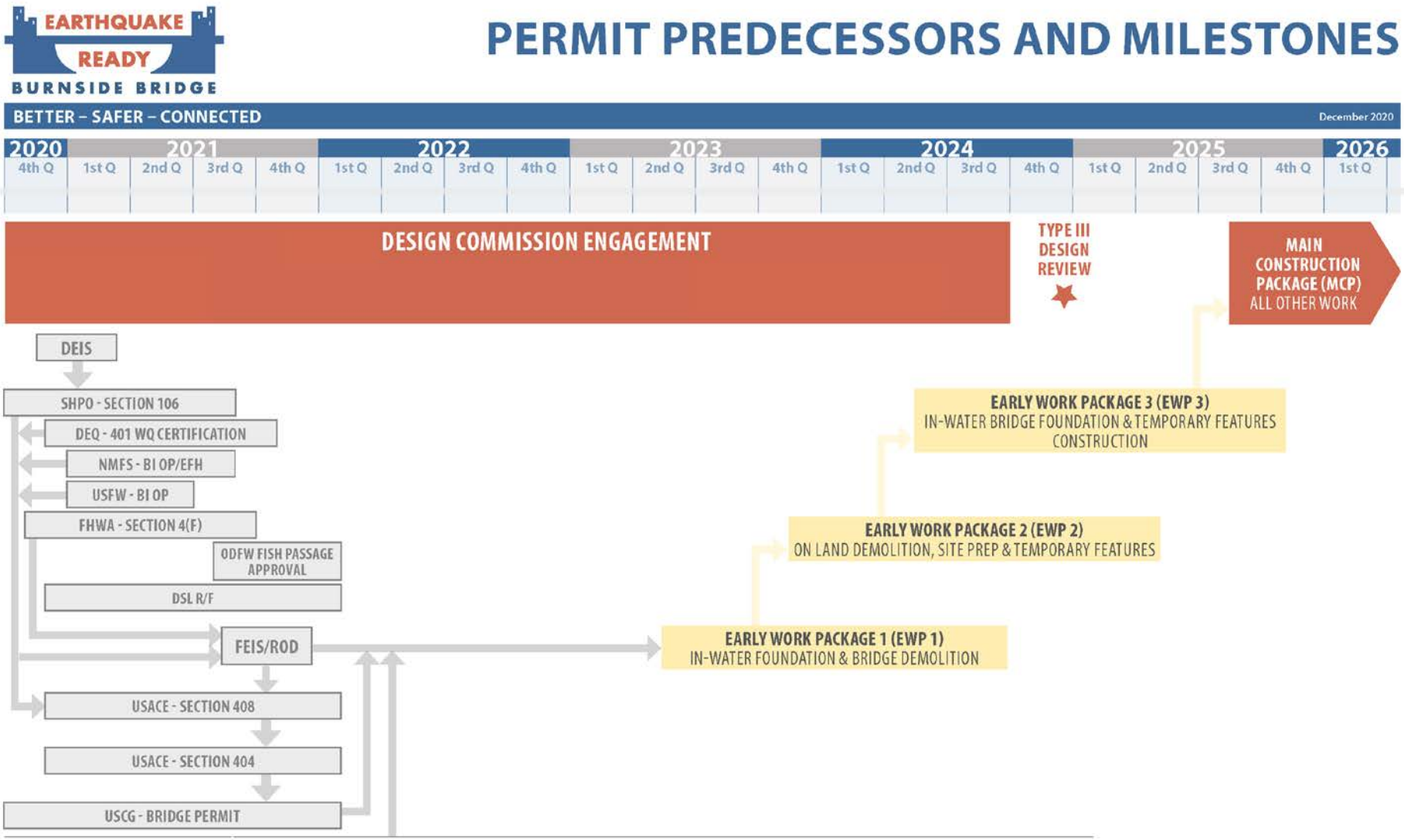
Environmental Review

1. Jan 2021: Publish Draft EIS and begin 45-day comment period
2. Fall 2021: Final EIS and Record of Decision

Bridge Type Selection

1. Jan/Feb 2021: Community input on range of Bridge Type options and evaluation criteria
2. June 2021: Bridge Type approval

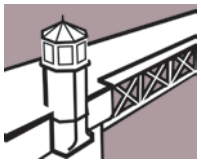
Project Permit Predecessors & Milestones



Preferred Alternative & Outreach

Range of Alternatives in DEIS

EARTHQUAKE READY BURNSIDE BRIDGE

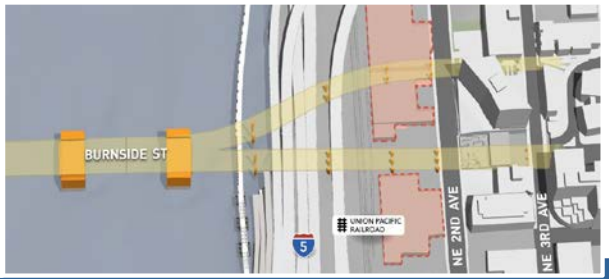


Enhanced Seismic Retrofit

Replacement:
Short Span
(Bascule or Lift)

Replacement:
Long Span
(Bascule or Lift)

Replacement:
Couch Extension
(Bascule or Lift)



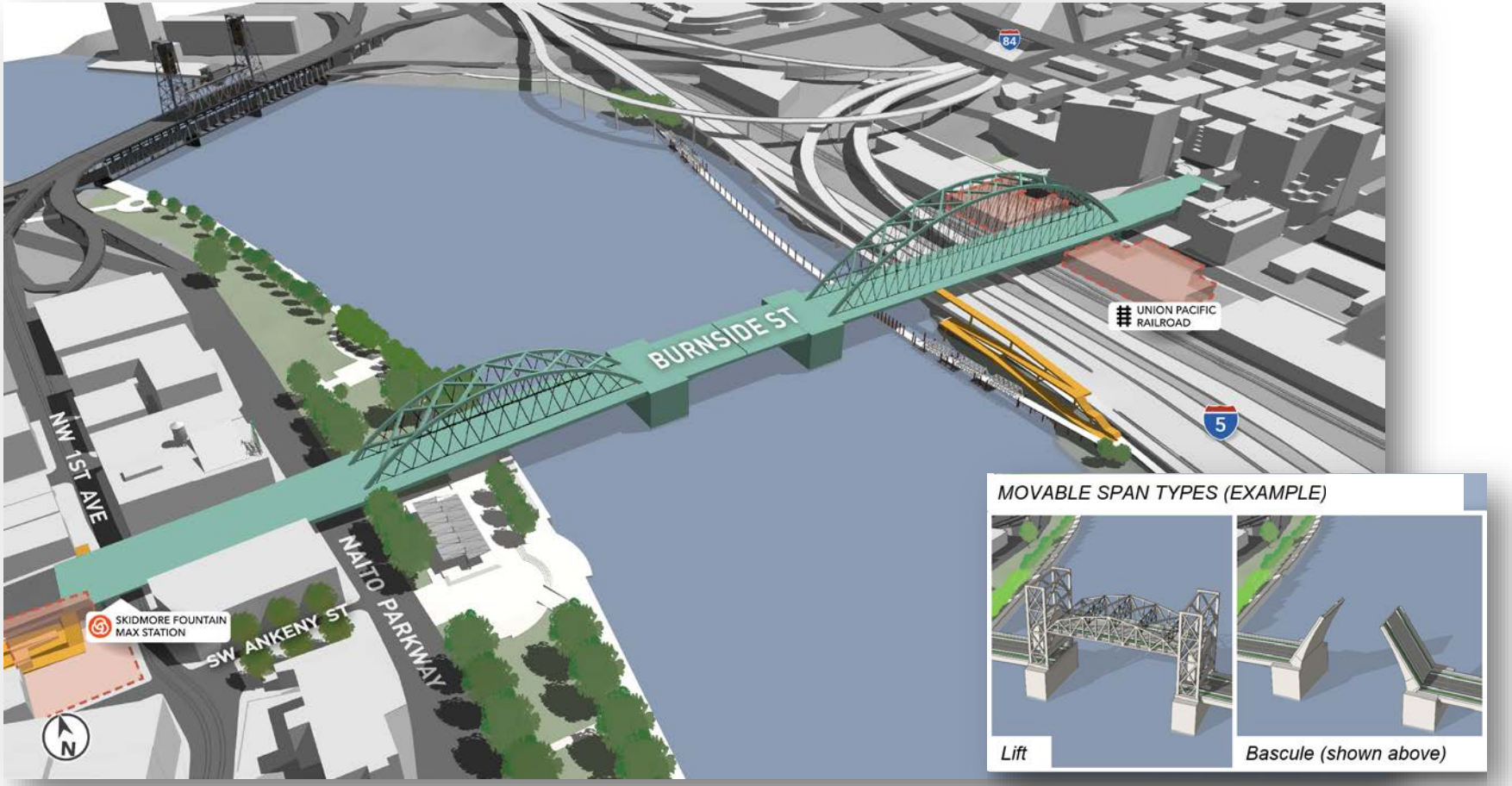
(Concept Images)

Recommended Preferred Alternative

EARTHQUAKE READY BURNSIDE BRIDGE

By Community Task Force, Policy Group and Board of County Commissioners

Replacement Long Span



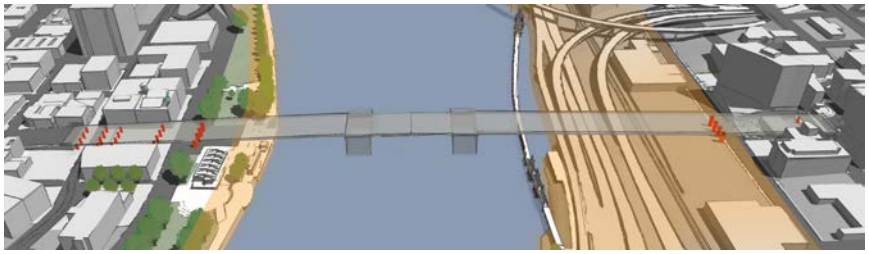
The example image above is just one variation of what a long span bridge could look like.

Best for Seismic Resiliency

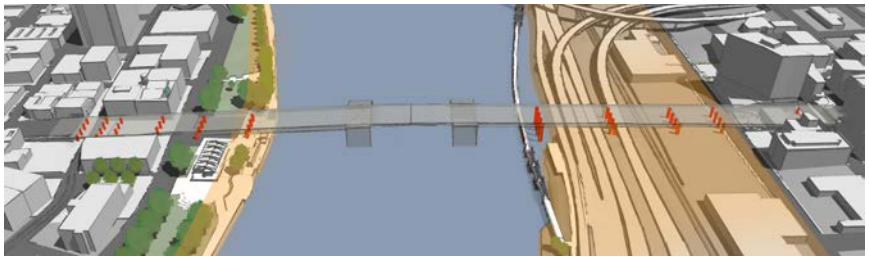
EARTHQUAKE READY BURNSIDE BRIDGE

Locating fewer columns in liquefiable soils gives it the least risk from soil movement during an earthquake

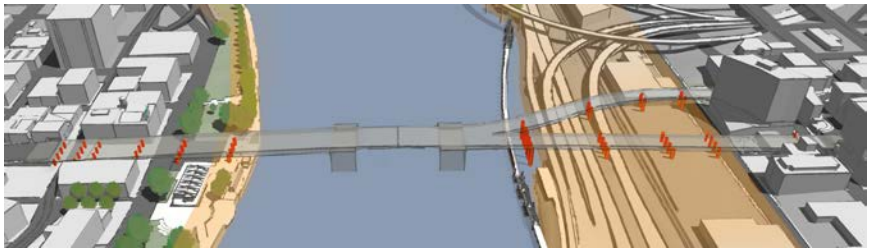
Replacement
Long Span



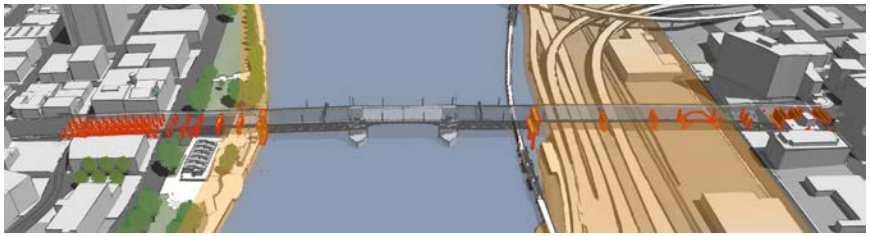
Replacement
Short Span



Replacement
Couch Extension



Enhanced
Seismic Retrofit



Best for Seismic Resiliency

EARTHQUAKE READY BURNSIDE BRIDGE

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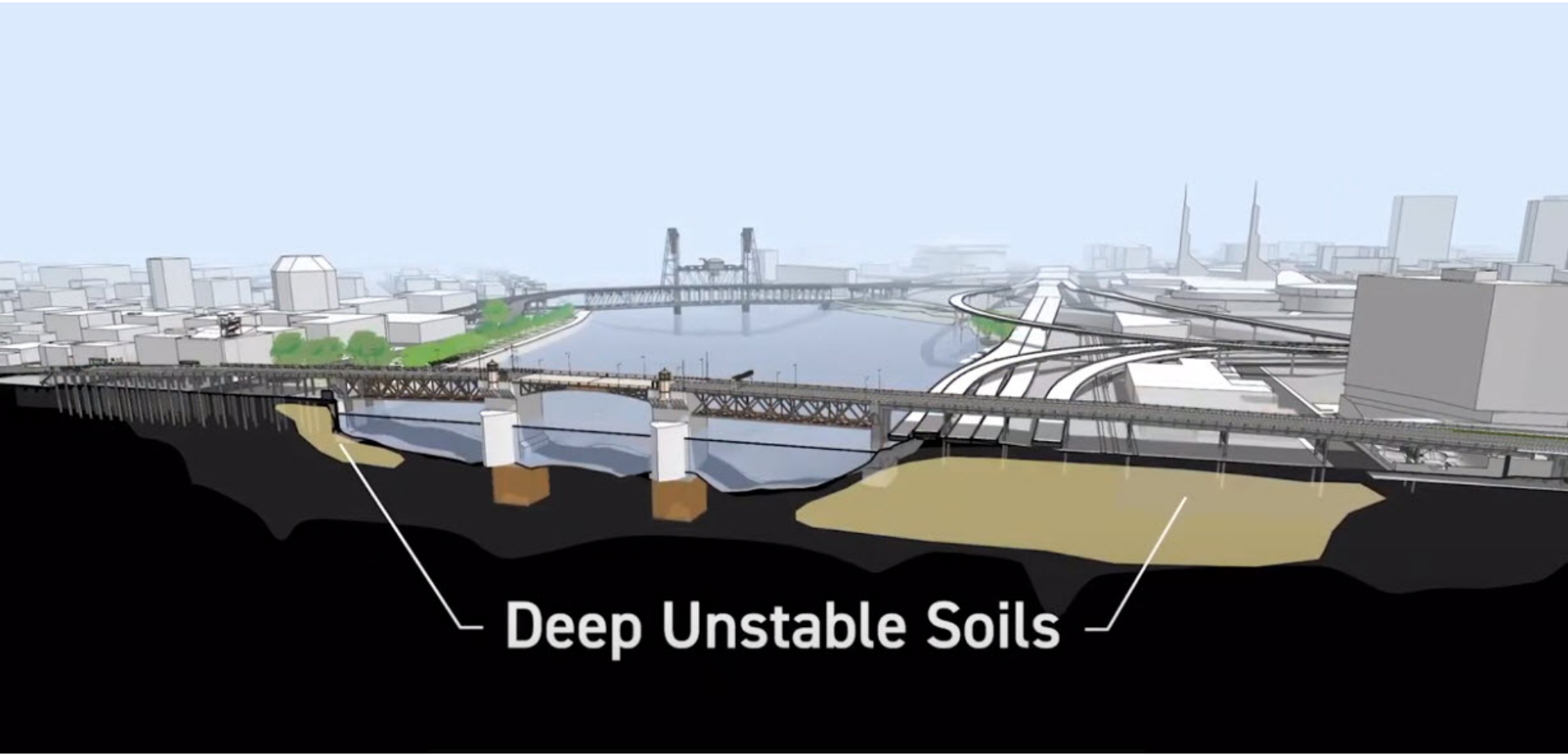
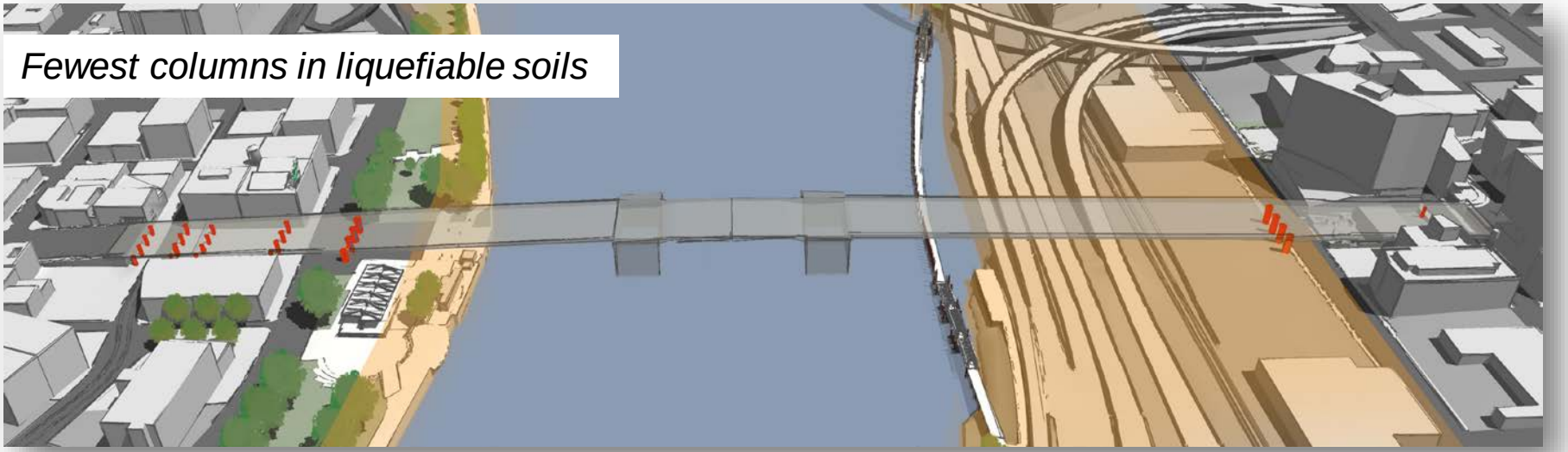


Recommended Preferred Alternative

Replacement Long Span



BENEFITS

- Best for seismic resiliency
- Least cost alternative
- Enhances/preserves community resources
- Improves safety for bike/ped/ADA
- Least impacts to natural resources

IMPACTS

- Removes historic Burnside Bridge

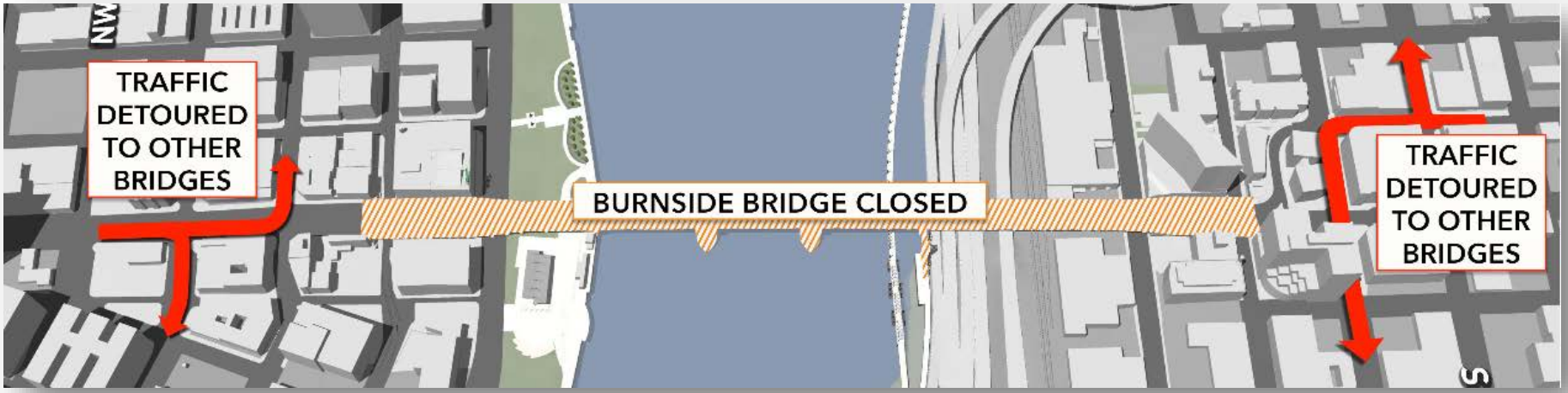
CONSIDERATIONS

- Views

Recommended Preferred Alternative

Traffic Management During Construction

Full Bridge Closure



- **Least cost** - the temporary bridge would add $90 million to the project cost
- **Shortest construction duration** (the temporary bridge would add 1.5 years to construction duration, extending duration of impacts to surrounding area including parks, residents, recreational activities and transportation
- Least in-water construction which **reduces impact to natural resources**

Outreach

EARTHQUAKE READY BURNSIDE BRIDGE

By the Numbers

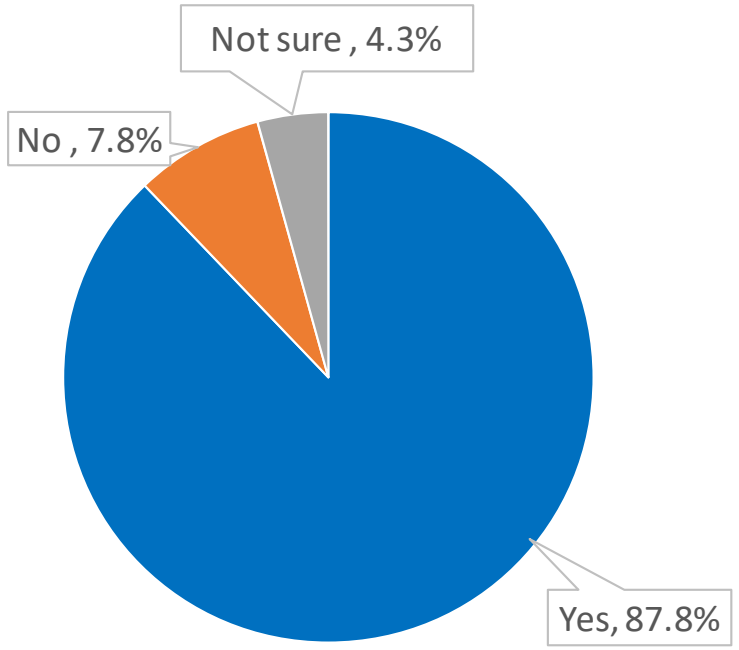
70+	**BRIEFINGS** to agencies, individuals, and organizations
19	**DEI** organizations reached
25,000+	**UNIQUE VISITORS** to the online open house and survey
6,800+	**SURVEY RESPONSES**
6	In-language **TRANSLATIONS** of the online open house and materials
38	Social media **POSTS** and **ADVERTISEMENTS**
2,578	E-newsletter **RECIPIENTS**
4	**NEWS RELEASES AND E-NEWSLETTERS**
147	**BUSINESSES CONTACTED** via phone canvassing
41,900	**FLYERS MAILED**

Outreach

Summer 2020 Online Survey – What we heard

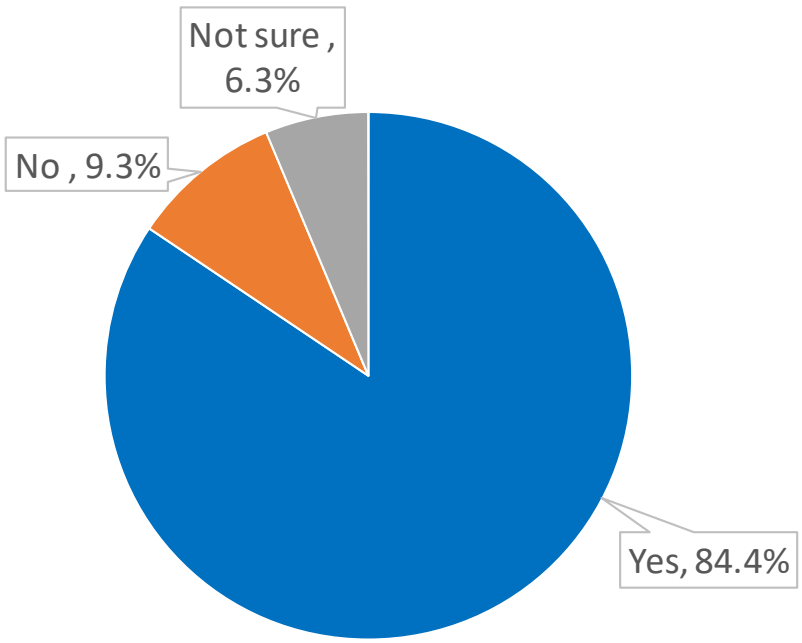
Is the Replacement Long Span the right choice?

87.8% agree with the Replacement Long Span



Is a full bridge closure during construction the right choice?

84.4% agree with a full bridge closure



Bicycle / Pedestrian and ADA Access

Bike/Ped & ADA Access

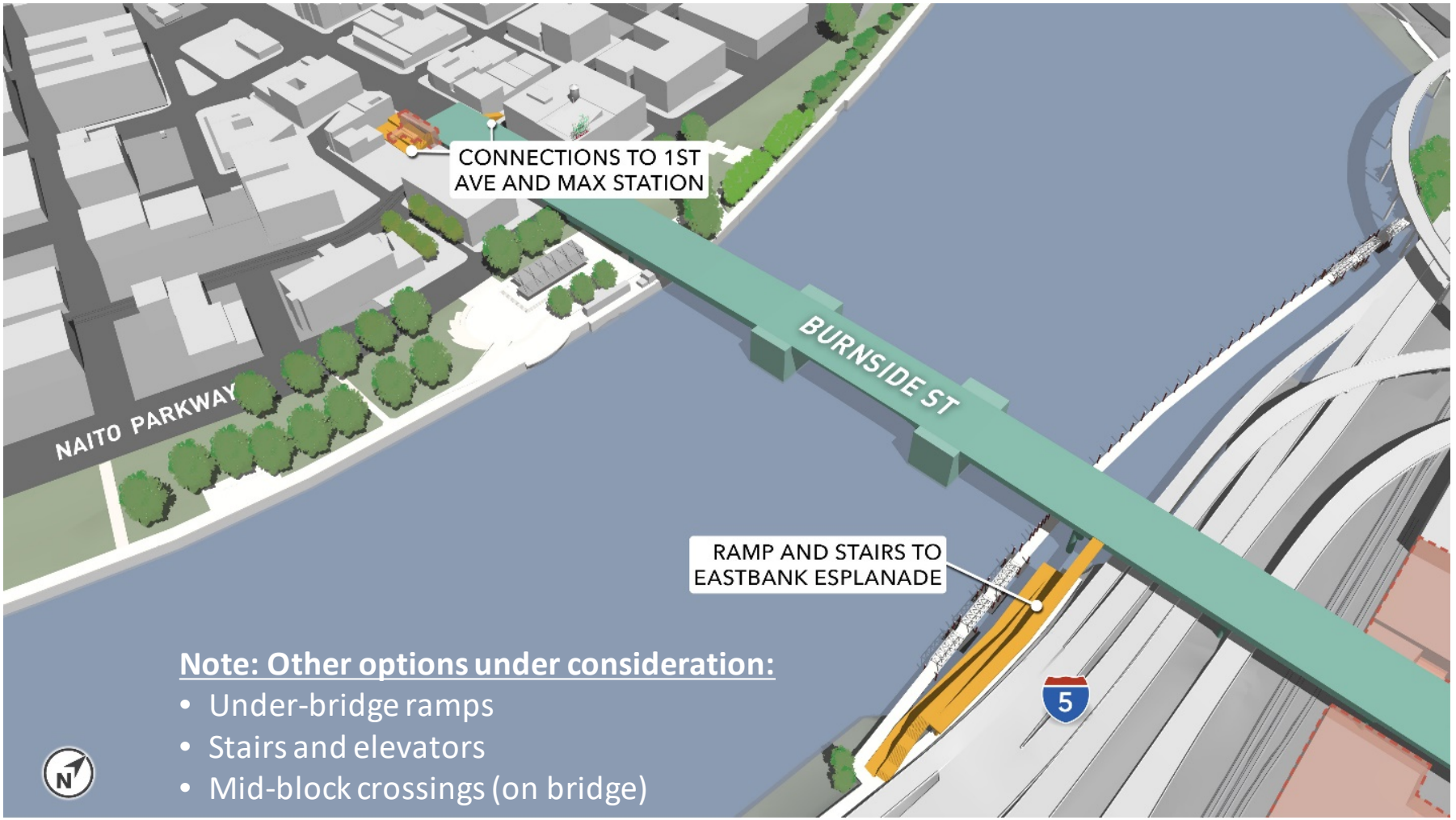
Existing Condition

Westside: Stairway to Skidmore Fountain Max Station

Eastside: Stairway to Eastbank Esplanade

Bike/Ped & ADA Access

Potential Access Options

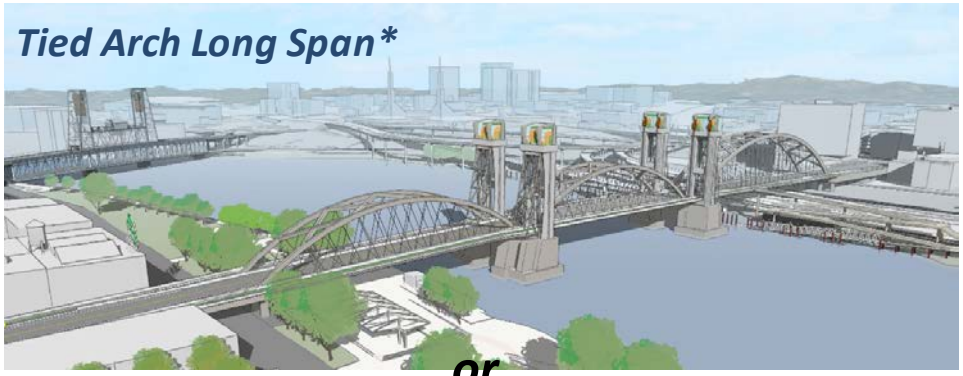


Bridge Type Selection Phase

Study a range of different Bridge Types

EARTHQUAKE READY BURNSIDE BRIDGE

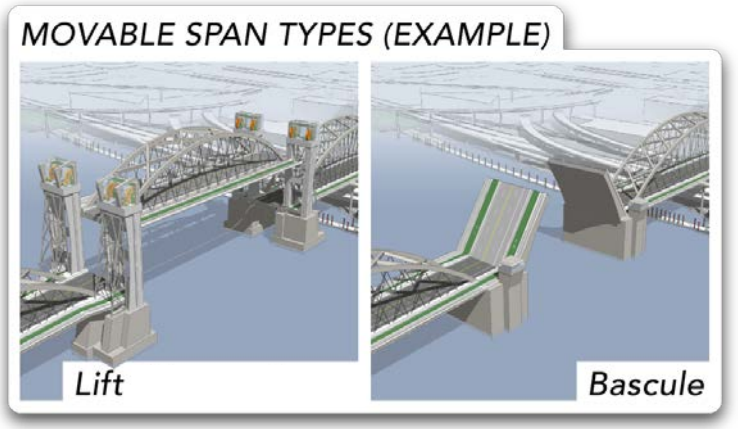
Examples of Long Span Bridges Under Consideration



or

or

+



** Note: Other options are also being considered*

Study a range of different Bridge Types

Urban Design and Aesthetics Working Group

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

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
- Bob Hastings, Agency Architect - TriMet
- 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

Urban Design & Aesthetics Working Group

UDAWG Purpose and Outcome

Purpose: To serve as a technical resource to the Community Task Force (CTF) for:

- Insights and opinions on the visual features
- Measures to enhance aesthetic enhancing opportunities or mitigate potential visual impacts
- Urban design and aesthetic interests
- Place-making opportunities that reflect character of Portland

Outcomes: To provide input on the following products for the CTF's consideration:

- A set of feasible bridge type options
- A project-specific Visual Design Guidelines
- Recommendations for visual and aesthetic evaluation criteria

UDAWG Meetings

General Focus

We are HERE

	UDAWG Meeting Number and Date								
	#1 (9/30)	#2 (10/14)	#3 (10/28)	#4 (11/4)	#5 (11/18)	#6 (12/2)	#7 (12/16)	#8 (3/10)	#9 (6/2)
Character of Portland and the Burnside Bridge									
Visual Design Principles									
Visual Design Guidelines									
Technical Design Criteria									
Menu of Bridge Types									
Range of Feasible Bridge Types									
Evaluation Criteria Topic(s)									
Evaluation Measures									
Input on CTF's Eval Criteria									
Input on CTF's Rec Bridge Type									

1 2 3

Info from UDAWG to CTF

- Bridge Type Input
- Type Selection Evaluation Criteria Recommendations

Study a range of different Bridge Types

EARTHQUAKE READY BURNSIDE BRIDGE

Bridge Type Examples

BRIDGE TYPE OPTION: Tied Arch examples


Hastings Bridge, Minnesota


Torikai Ohas Bridge, Japan


Siuslaw River Bridge, Oregon


Tacony-Palmyra Bridge, Pennsylvania


Gateway Bridge, Michigan

BRIDGE TYPE OPTION: Cable Stayed examples


Indian River Inlet Bridge, Delaware


Chongqing Expressway Bridge, Oregon


Copper River Bridge, South Carolina


Tilikum Crossing Bridge, Oregon

BRIDGE TYPE OPTION: Through Truss examples


Main Street Bridge, Florida


Triborough (Harlem River) Bridge, New York


Tower Bridge, CA


Broadway Bridge, Oregon


Hawthorne Bridge, Oregon

MOVABLE SPAN: Bascule examples


South Park Bridge, Washington


Harbor Bridge, Spain


New Johnson St. Bridge, Canada


Woodrow Wilson Bridge, Maryland

MOVABLE SPAN: Vertical Lift examples


Teregganu Bridge, Malaysia


Fore River Bridge, Massachusetts

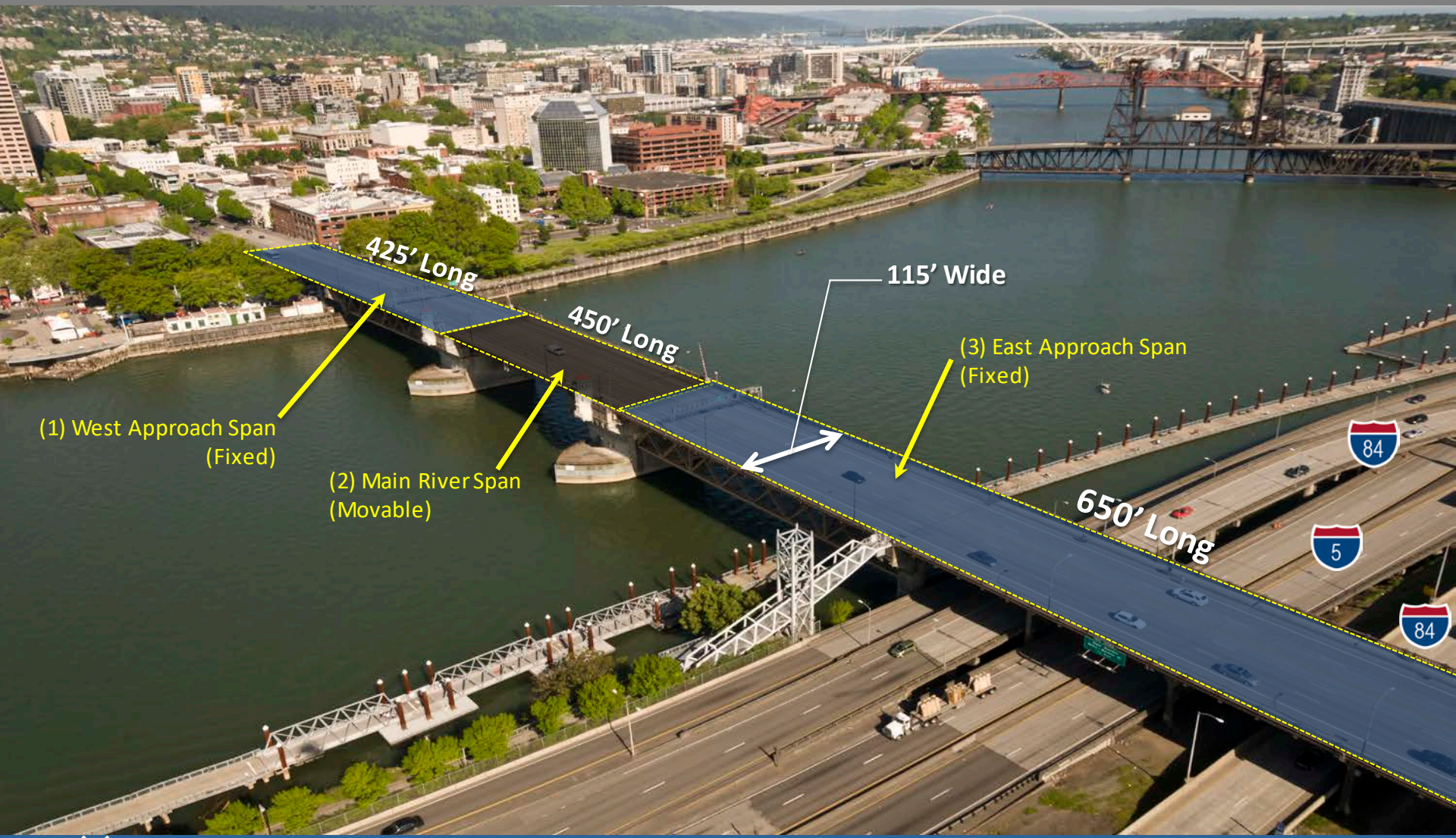

Pont Jacques Chaban, Delmas


Manchester Millenium Bridge, England

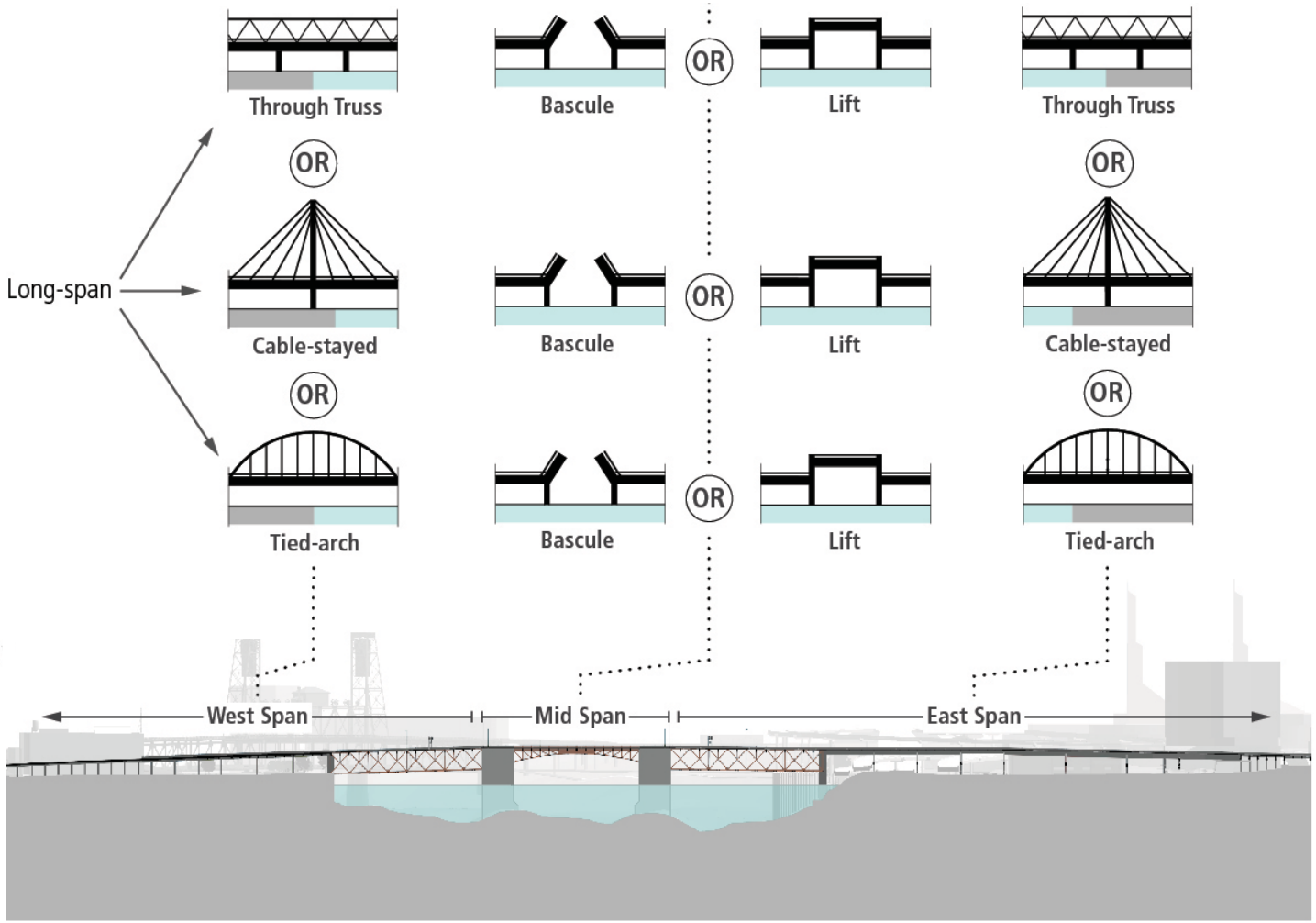
Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Long Span – "Three bridges in one"



Bridge Types Overview



Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Tied Arch Option (support near Naito Parkway)

Bridge Types Overview

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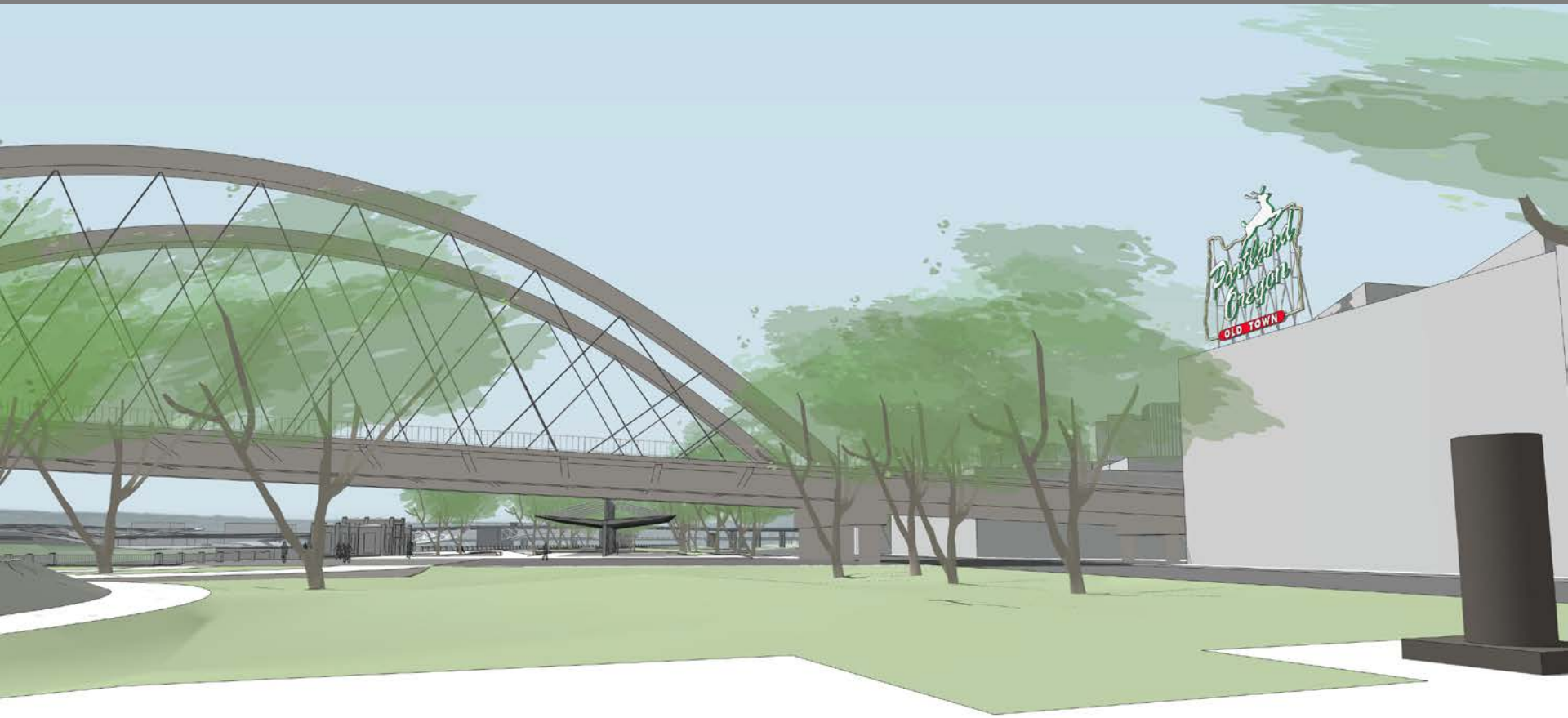
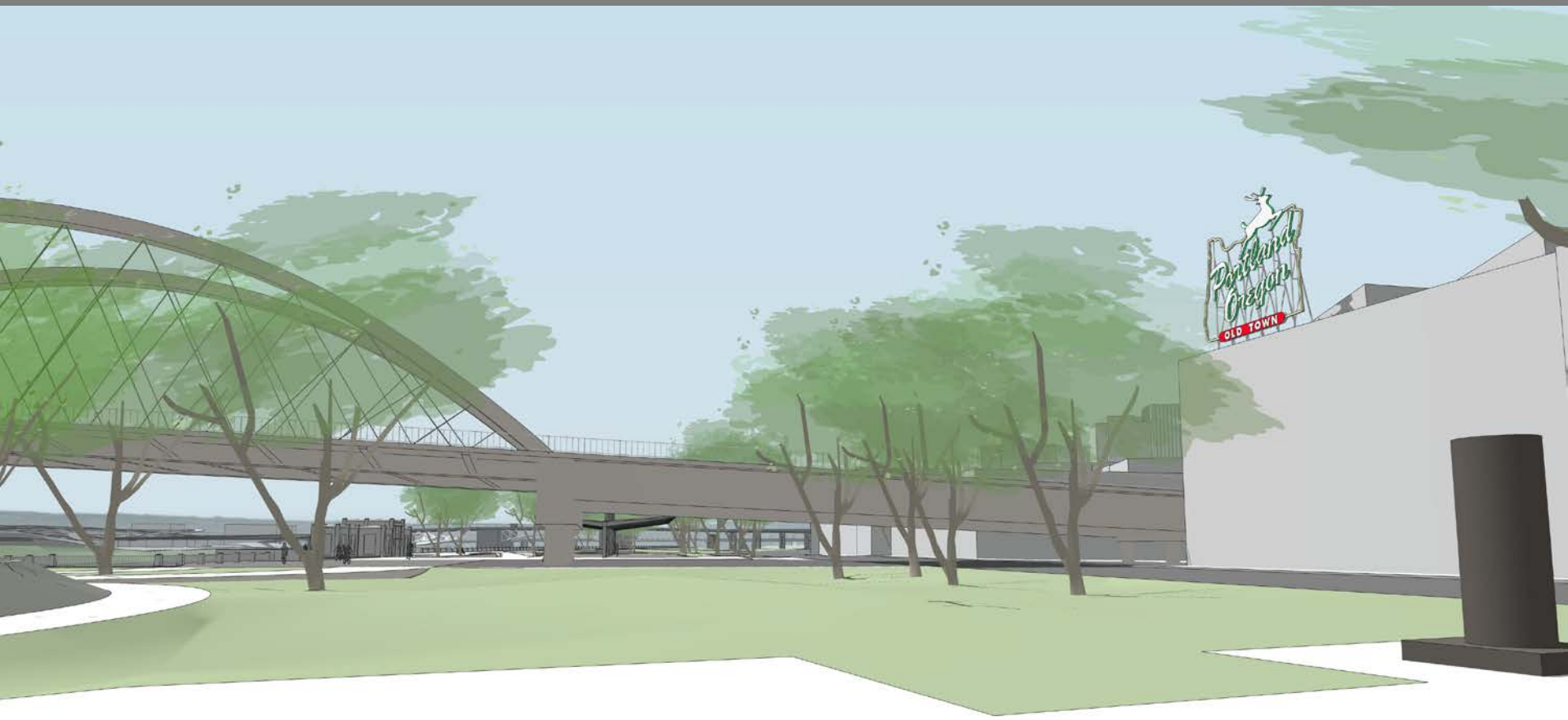
Tied Arch Option (support near Naito Parkway)



Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Tied Arch Option (support within Waterfront Park)



Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Cable Stayed Option (support within Waterfront Park)

Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Cable Stayed Option (support within Waterfront Park)

Bridge Types Overview

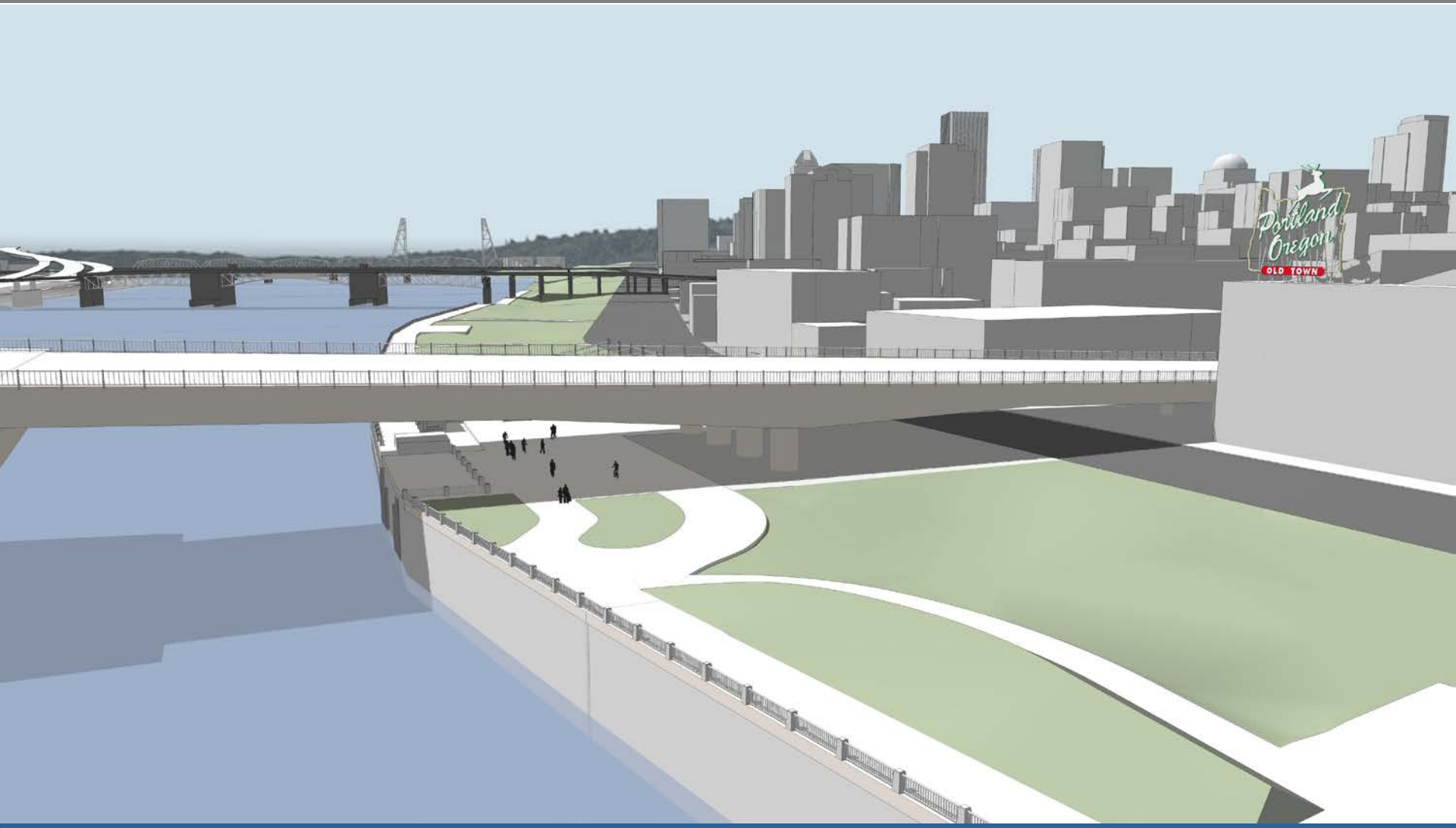
EARTHQUAKE READY BURNSIDE BRIDGE

Cable Stayed Option (support near Naito Parkway)

Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Girder Option (support within Waterfront Park)



Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Girder Option (support near Naito Parkway)

Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Girder Option (support within Waterfront Park)

How will we choose one?

We'll study and compare the options related to:

Urban Context and Experience

- On-bridge Experience
- Urban Setting
- Public Use and Context

Visuals and Aesthetics

- Visual Coherence
- Bridge Form and Style
- Bridge Aspirations

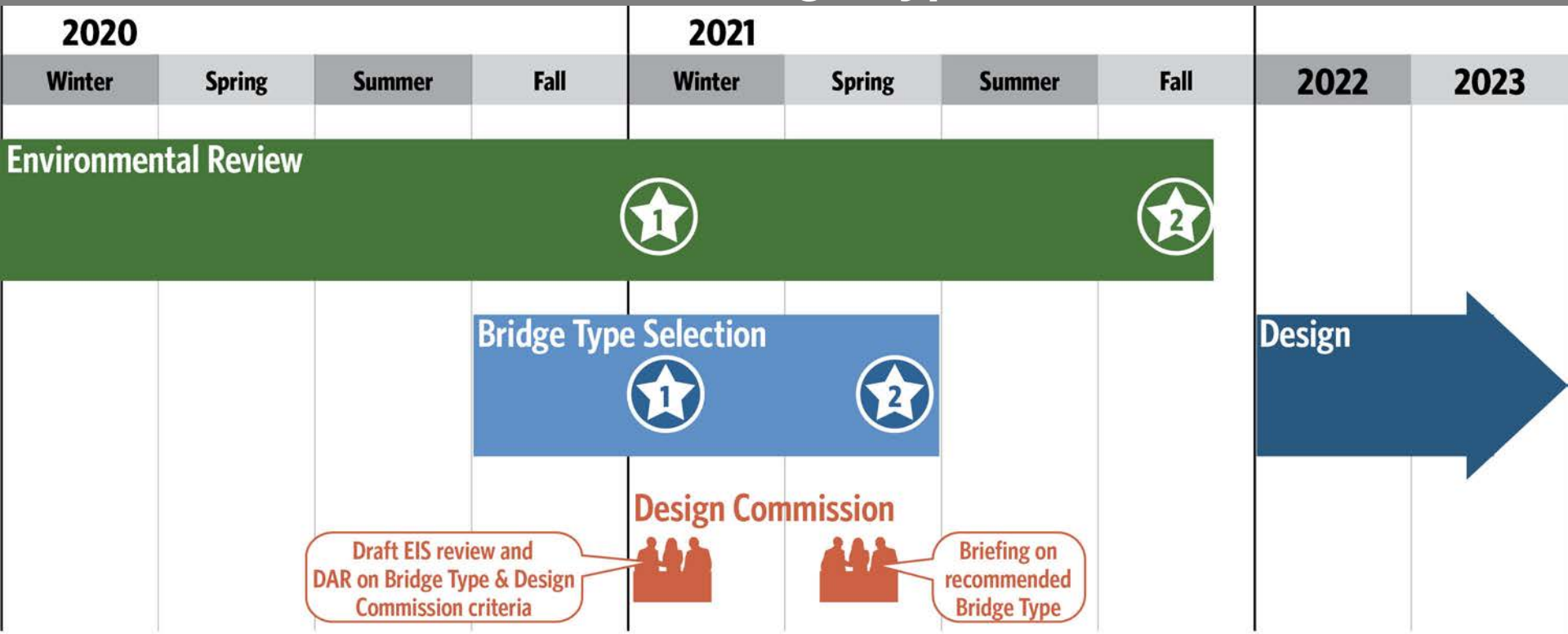
Cost and Construction

- Cost to Design and Construct
- Cost to Maintain Over the Long-Term
- Construction impacts to users

Project Timeline

EARTHQUAKE READY BURNSIDE BRIDGE

Environmental Review and Bridge Type Selection



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Upcoming Meetings and Milestones

2021

- **January:** Publish Draft Environmental Impact Statement
- **Jan/February:** Briefing on Draft EIS and DAR on Bridge Types and Design Commission Guidelines and Criteria
- **March**: City Council Meeting to approve Preferred Alternative
- **May:** Briefing on recommended Bridge Type
- **June:** Policy Group approval of recommended Bridge Type

Questions?