EARTHQUAKE READY BURNSIDE BRIDGE

Historic Landmarks Commission Briefing

Presenters:

Hillary Adam, BDS

Patrick Sweeney, PBOT

Megan Neill, Multnomah County

Jeff Heilman, Parametrix

Steve Drahota, HDR

Cathy Corliss, Angelo Planning

Department of Community Services
Transportation Division

December 7, 2020

Project Overview

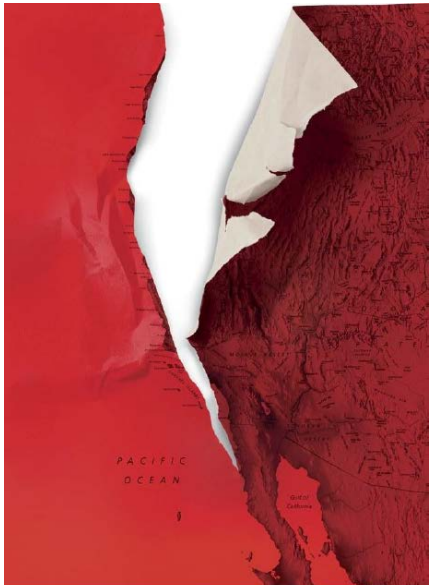
Project Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Background

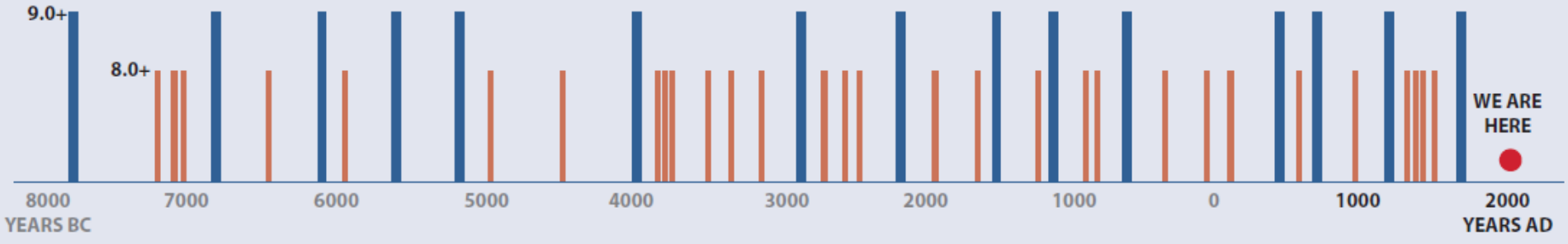
REGIONAL EARTHQUAKE RISK

1 in 3 chance of magnitude 8+ earthquake within 50 years



CASCADIA SUBDUCTION ZONE (CSZ) EARTHQUAKE

Last major quake in Oregon occurred 317 years ago, a timespan that exceeds 75% of the intervals between the major quakes to hit Oregon over the last 10,000 years.



Project Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Purpose and Need

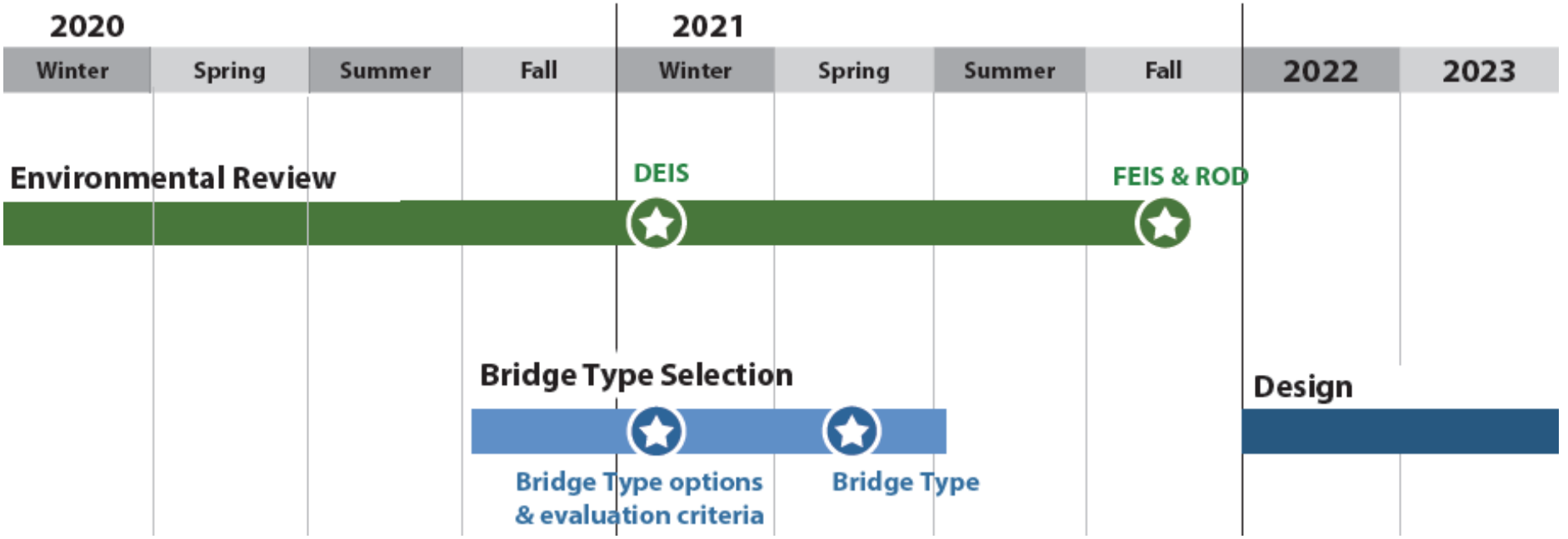
Seismic Resiliency and Emergency Response

Regional Recovery and Rebuilding

Long-term Use

Project Timeline

Environmental Review and Bridge Type Selection



Environmental Review

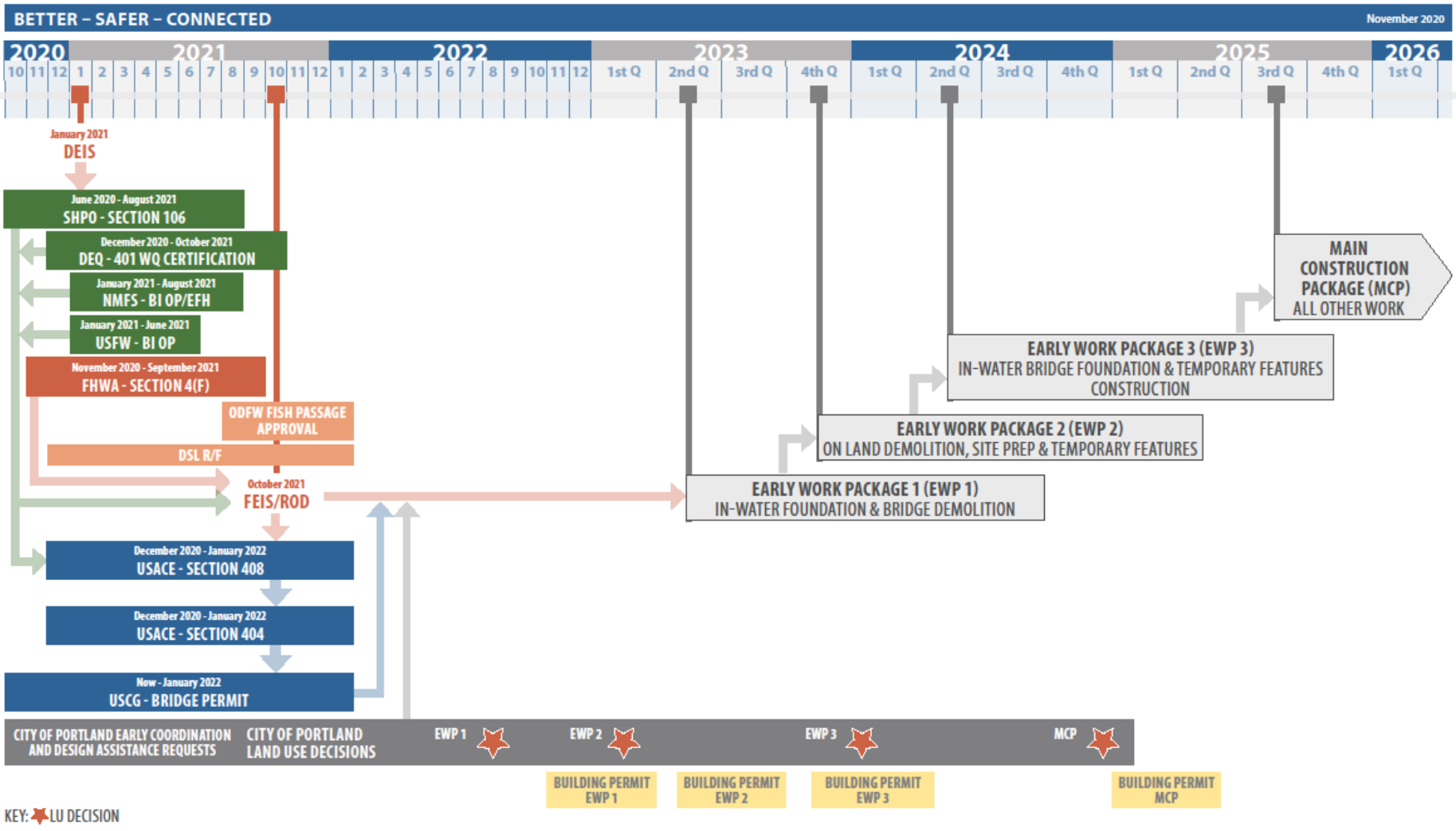
- Jan 2021: Publish Draft Environmental Impact Statement (DEIS) and begin 45-day comment period
- Fall 2021: Final Environmental Impact Statement (FEIS) and Record of Decision (ROD)

Bridge Type Selection

- Jan/Feb 2021: Input on range of Bridge Type options and evaluation criteria
- May 2021: Input on recommended Bridge Type

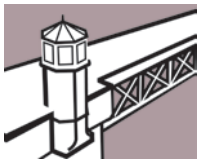
Project Permits

PERMIT PREDECESSORS AND MILESTONES



Range of Alternatives in DEIS

EARTHQUAKE READY BURNSIDE BRIDGE

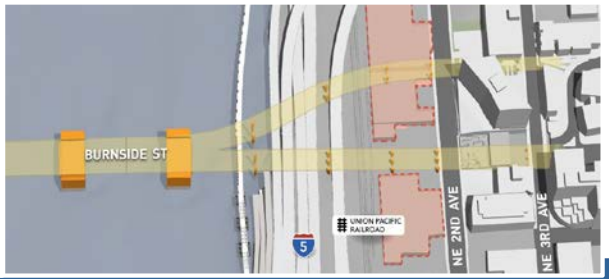


Enhanced Seismic Retrofit

Replacement:
Short Span
(Bascule or Lift)

Replacement:
Long Span
(Bascule or Lift)

Replacement:
Couch Extension
(Bascule or Lift)



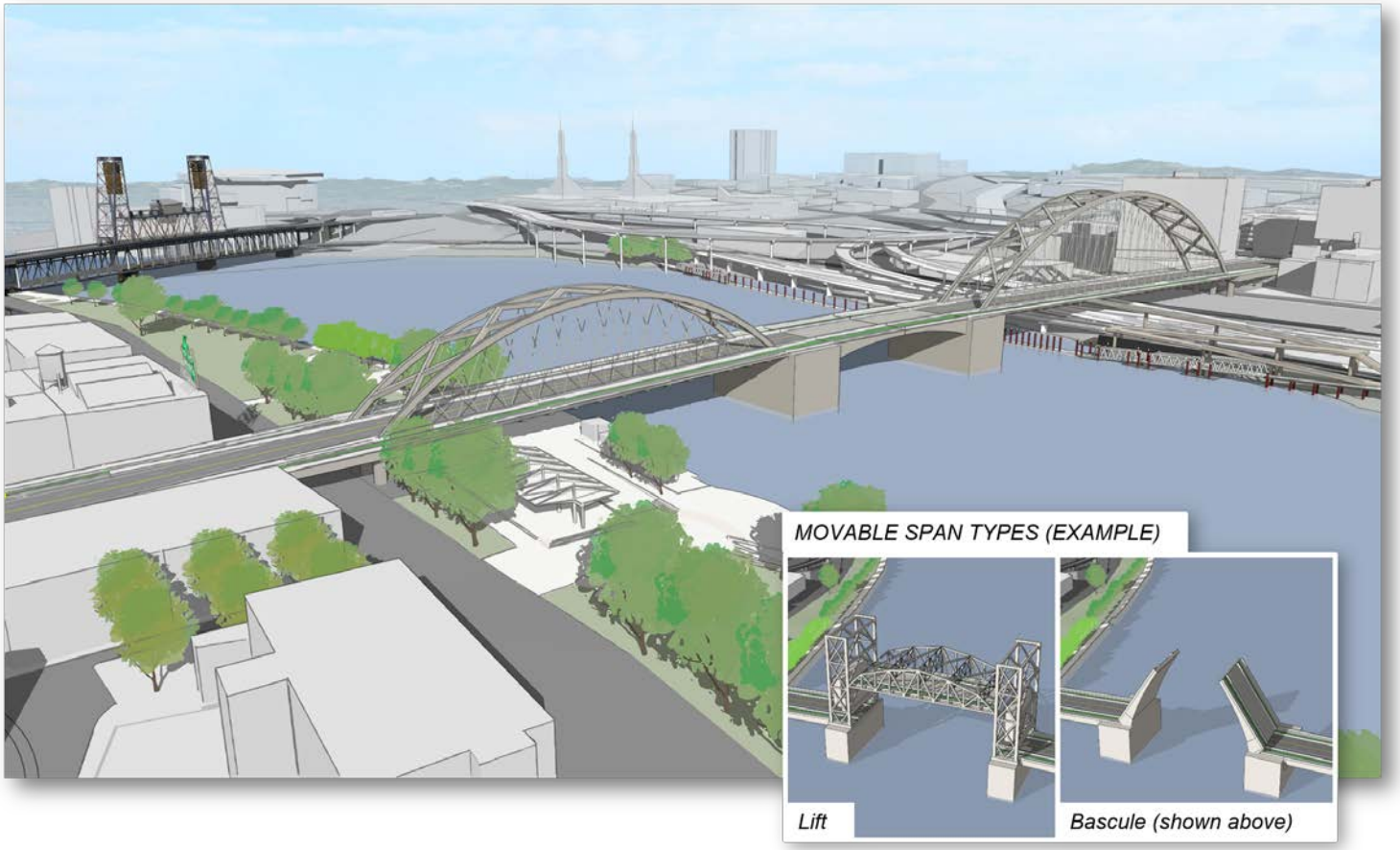
(Concept Images)

Recommended Preferred Alternative

EARTHQUAKE READY BURNSIDE BRIDGE

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

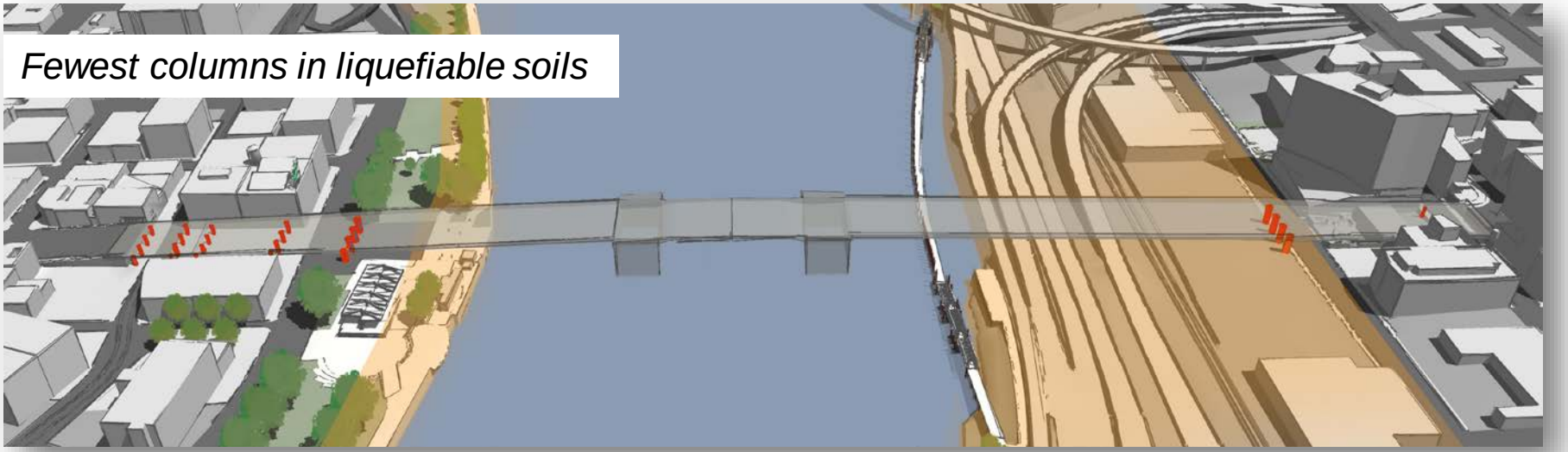
Replacement Long Span



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

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

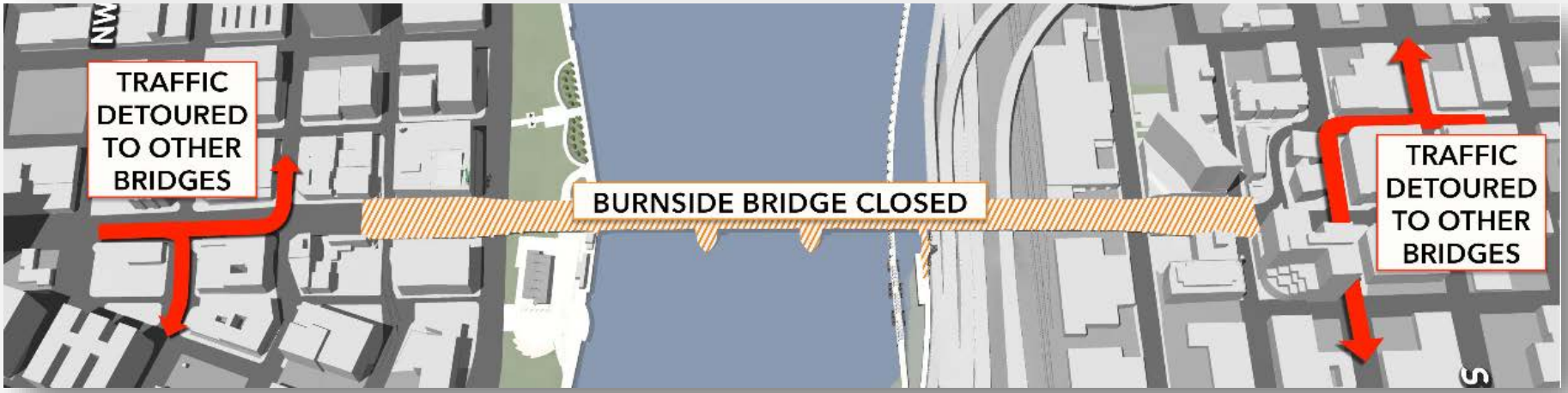
CONSIDERATIONS

- 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

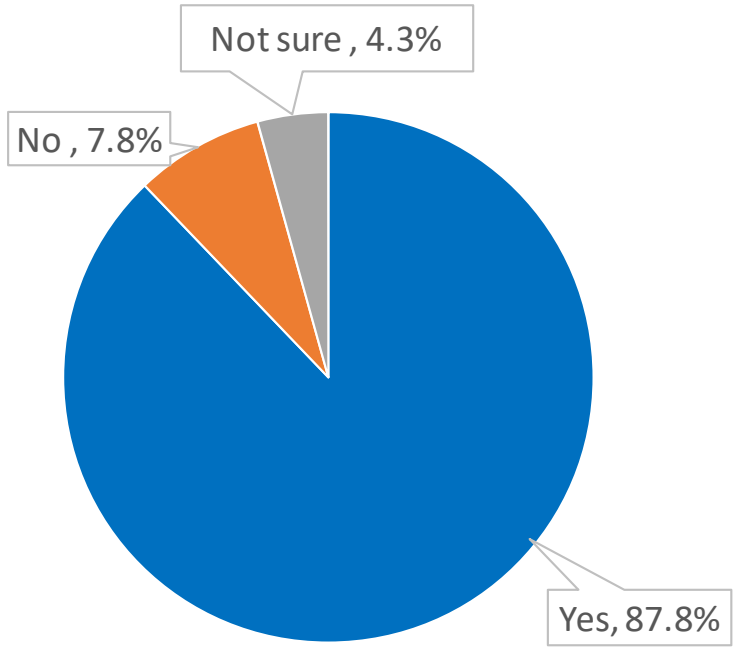
70+	**BRIEFINGS** to agencies, individuals, and organizations
19	**DEI** organizations reached
25,000+	**UNIQUE VISITORS** to the online open house and survey
6,800+	**SURVEY RESPONSES**
6	In-language **TRANSLATIONS** of the online open house and materials
38	Social media **POSTS** and **ADVERTISEMENTS**
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

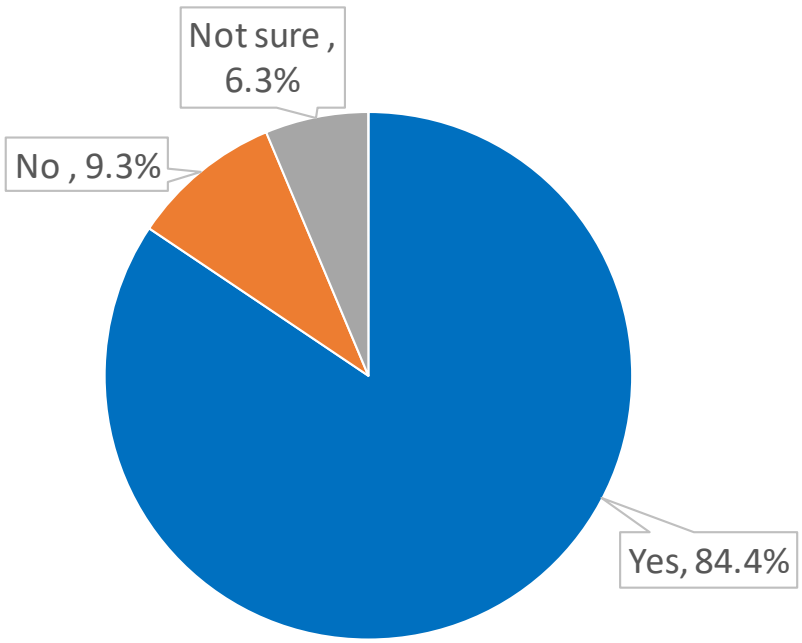
Is the Replacement Long Span the right choice?

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



Historic Resources and Items of Interest

What else should we be thinking about?

Historic Resources

Historic Landmarks Commission – Items of Interest

Resources and regulatory processes

- Section 106 resources and process
- Section 4(f) resources and process
- Local Historic Landmarks

Historic Resources

Section 106 Resources and Effects

New Chinatown / Japantown Historic District & Skidmore / Old Town National Historic Landmark District

- No Adverse Effects on districts; Construction vibration impact concerns but no adverse effect;
- Removes 108 Burnside (HRI)

Adverse Effects

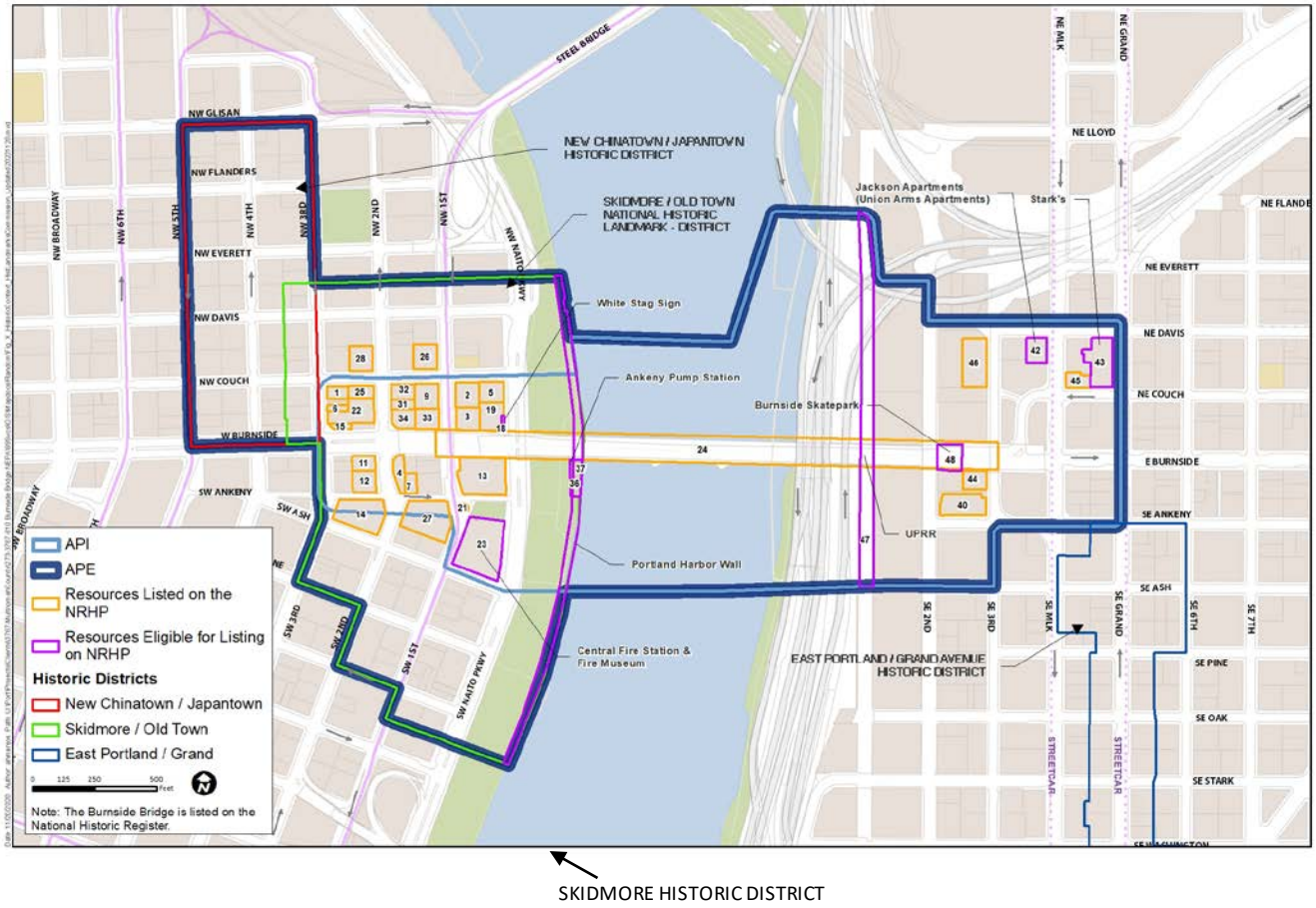
- Burnside Bridge (all alts)
- Burnside Skatepark (retrofit)

No Adverse Effects

- Portland Harbor Wall*
- White Stag sign*

New Eligible – No Effect

- Fire Station No. 1
- Ankeny Pump Station
- Union Pacific Railroad
- Stark's
- Jackson Apartments (Union Arms)



SKIDMORE HISTORIC DISTRICT

Potential Effect on Buried Resources

Historic Resources

Historic Landmarks Commission – Items of Interest

Historic and Cultural Resources Consulting Parties Meeting – Nov. 30

To be completed after Nov 30th meeting, will be updated prior to Dec 7th meeting

Future Coordination

Environmental/NEPA Phase (2019-2021)

- Draft Environmental Impact Statement (EIS) input and comment period
- Section 106 and Section 4f regulatory processes
- Mitigation (for Section 106 Agreement)
- City permit coordination regarding applications
- Final EIS and Record of Decision

Type Selection Phase (2020-2021)

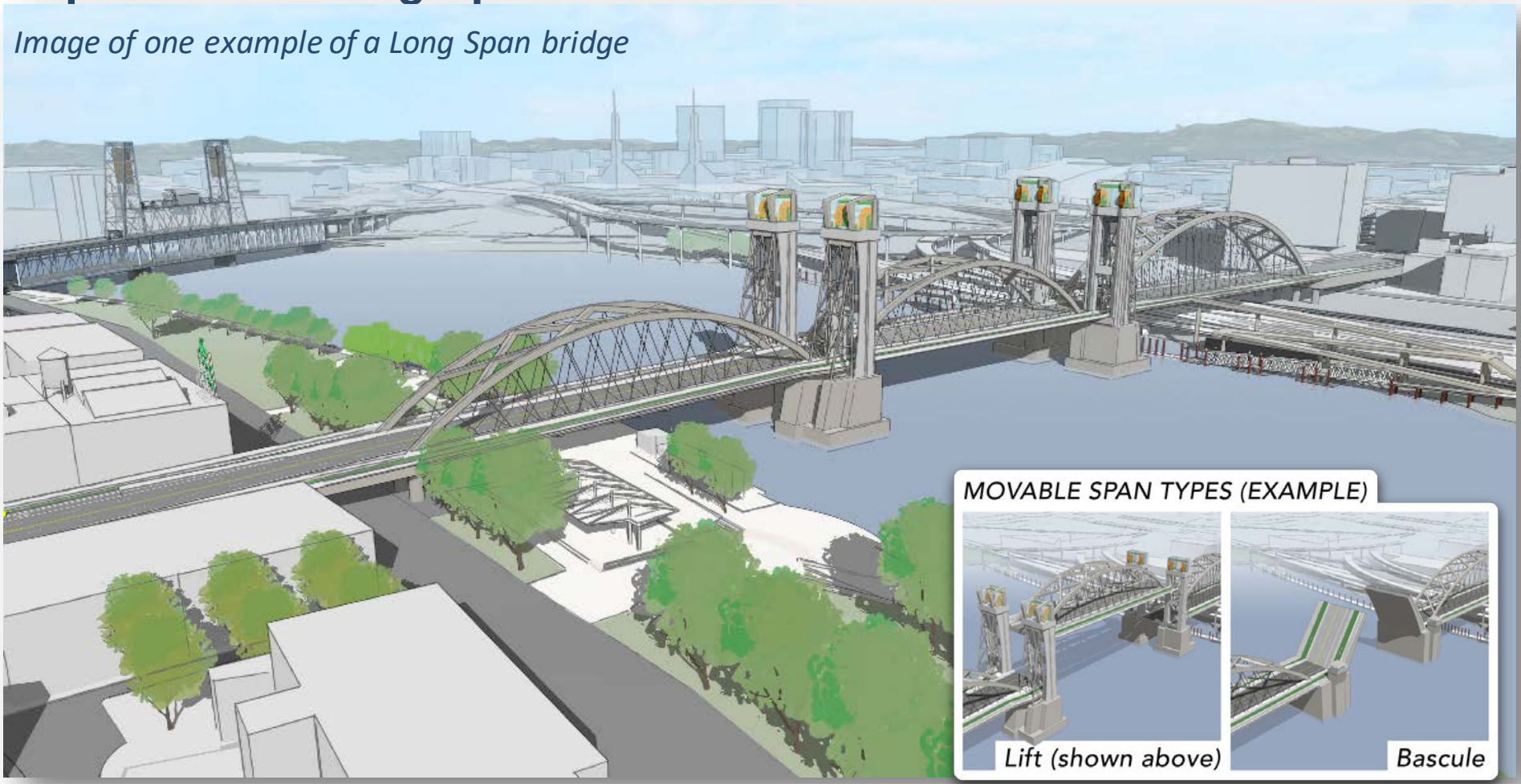
Final Design Phase (2022-2024)

Bridge Type Selection Phase

A New Burnside Bridge

Preferred Option Moving Forward

Replacement Long Span

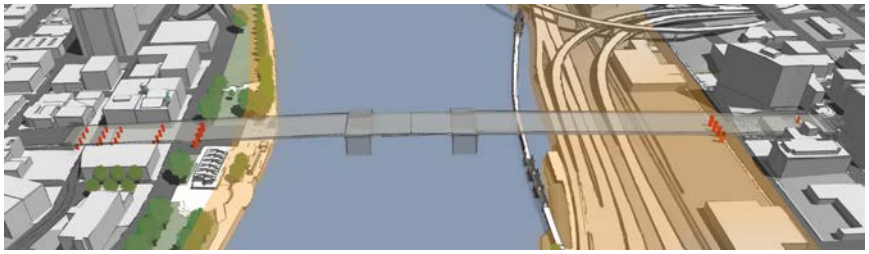


Best for Seismic Resiliency

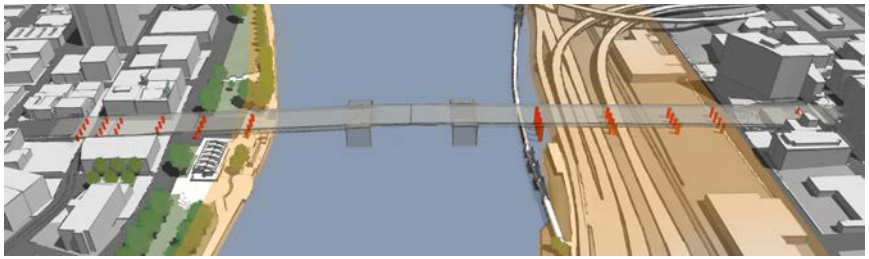
EARTHQUAKE READY BURNSIDE BRIDGE

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

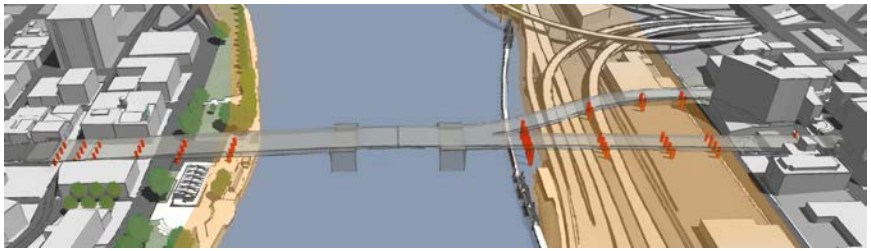
Replacement
Long Span



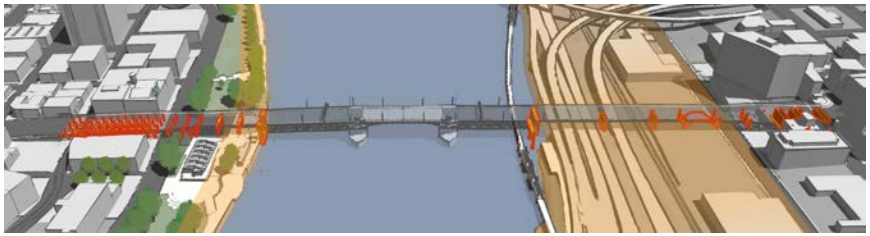
Replacement
Short Span



Replacement
Couch Extension



Enhanced
Seismic Retrofit



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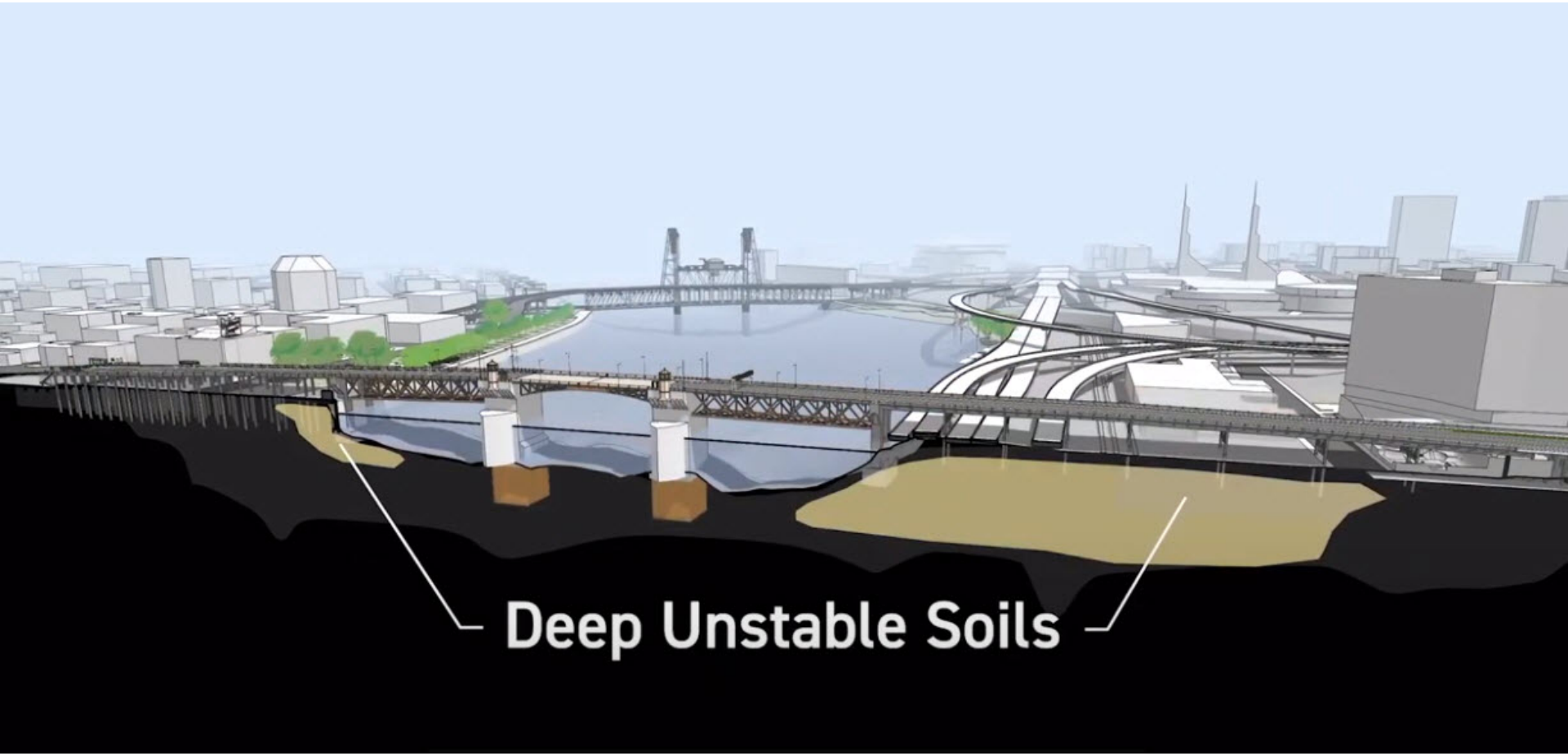
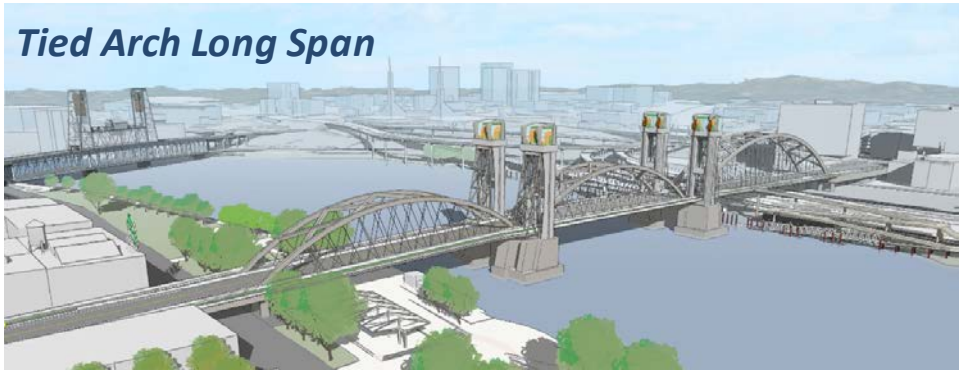
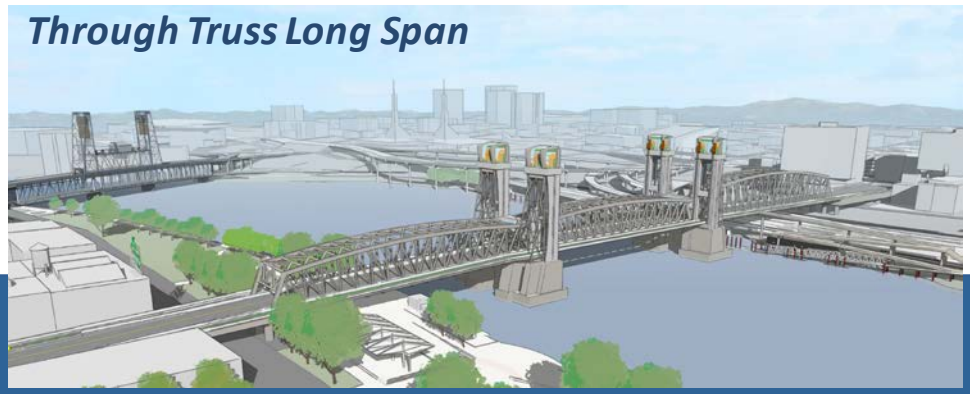


Study a range of different Bridge Types

Examples of Long Span Bridges Under Consideration





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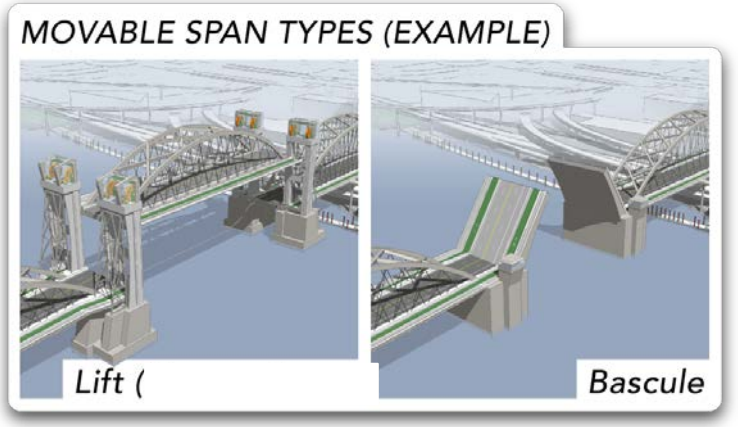


Study a range of different Bridge Types

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

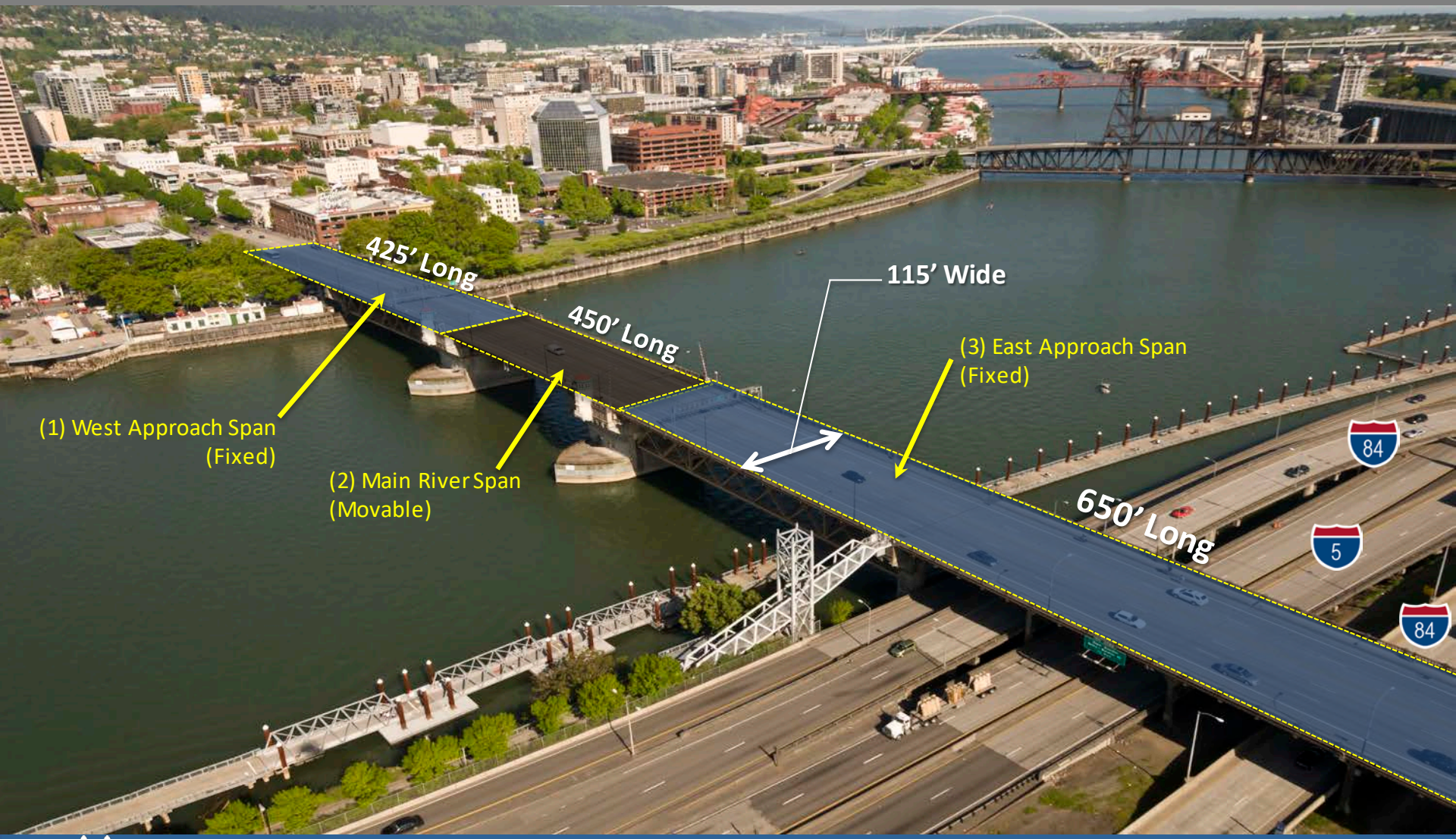

Pont Jacques Chaban, Delmas


Manchester Millenium Bridge, England

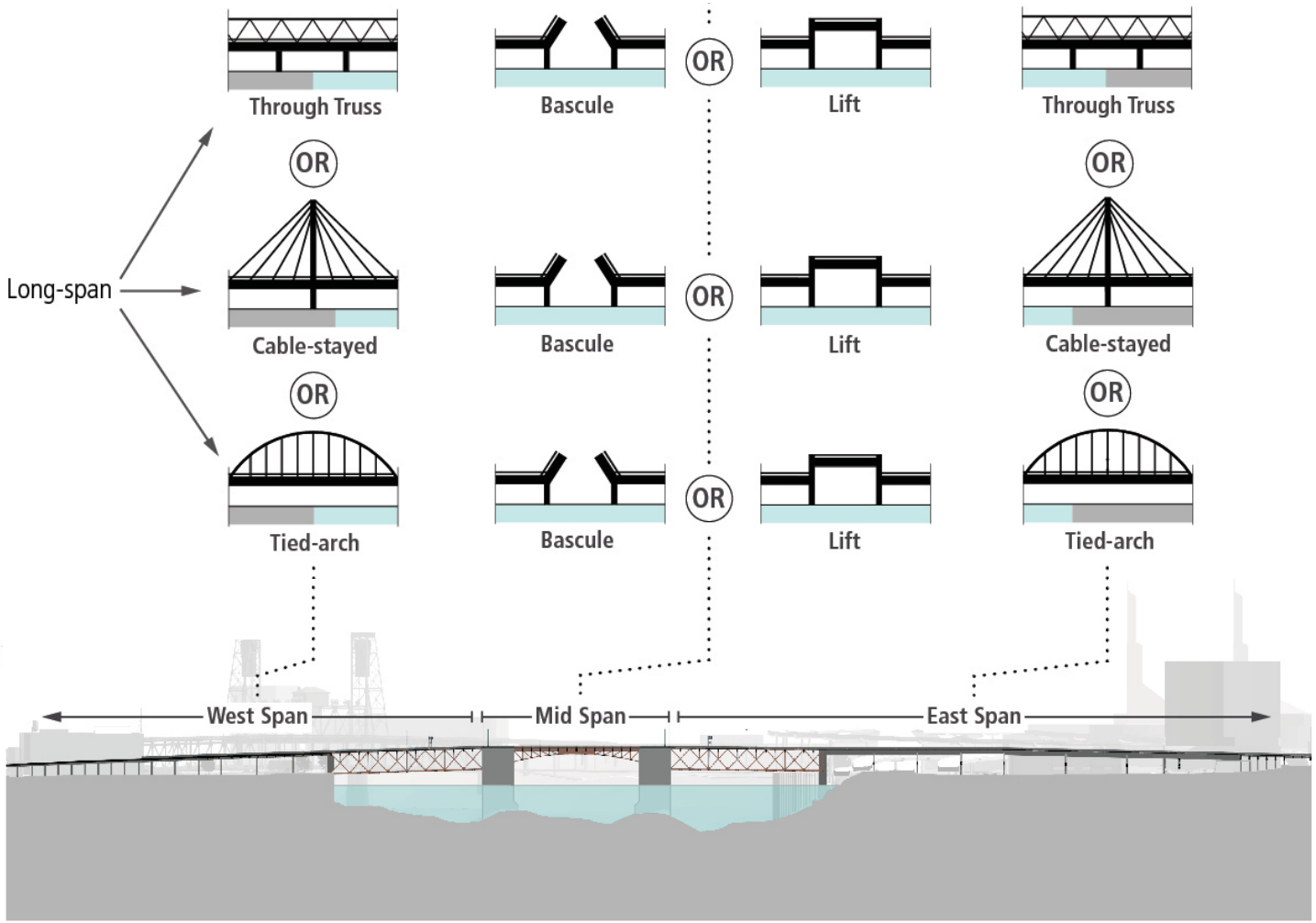
Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Long Span – "Three bridges in one"



Bridge Types Overview



Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Tied Arch Option

Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Cable Stayed Option

Bridge Types Overview

EARTHQUAKE READY BURNSIDE BRIDGE

Girder Option (columns 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

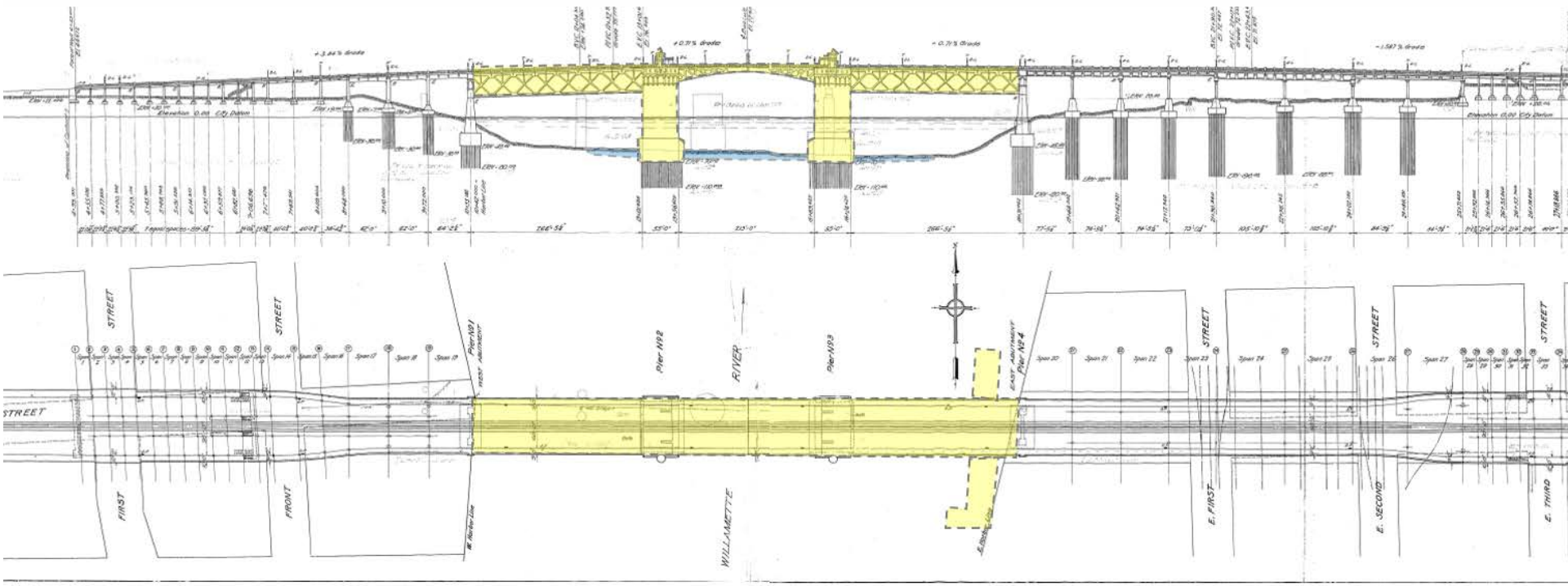
- Cost to Design and Construct
- Cost to Maintain Over the Long-Term

How will the Project be Constructed?

EARTHQUAKE READY BURNSIDE BRIDGE

… using a series of Construction Packages

Work Package 1: In-Water Foundations & Bridge Demolition



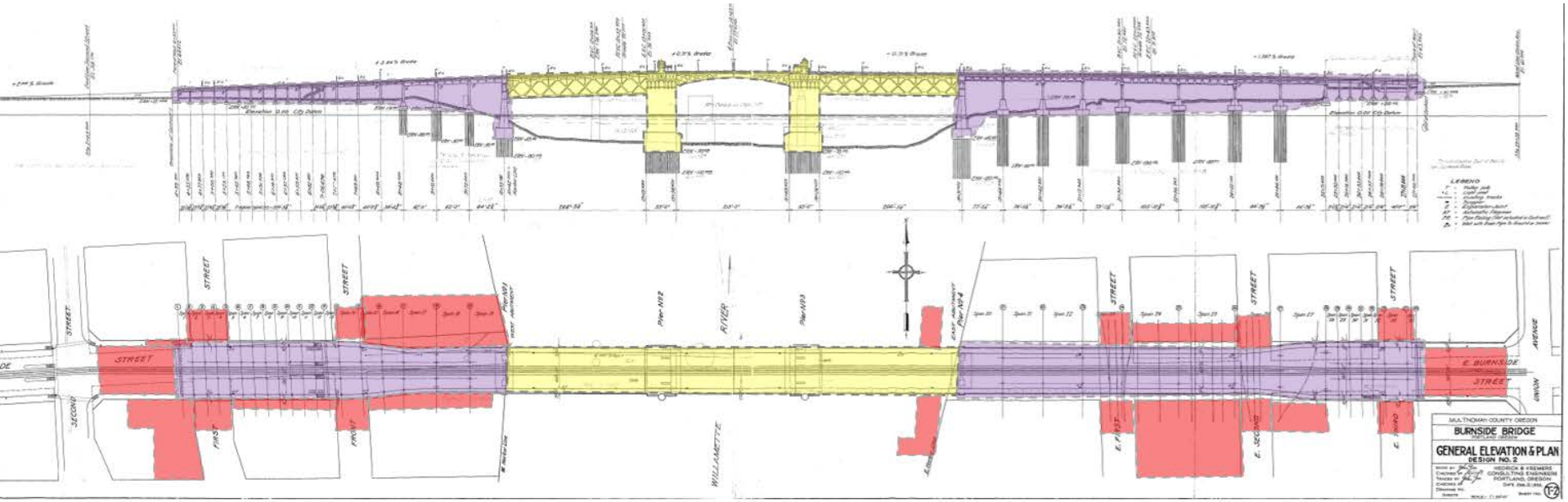
= EWP1: Bridge Demolition / Removal Area

How will the Project be Constructed?

EARTHQUAKE READY BURNSIDE BRIDGE

… using a series of Construction Packages

Work Package 2: On-Land Demolition, Site Prep, & Temp Features



= EWP1: Bridge Demolition / Removal Area

= EWP2: Bridge Demolition / Removal Area

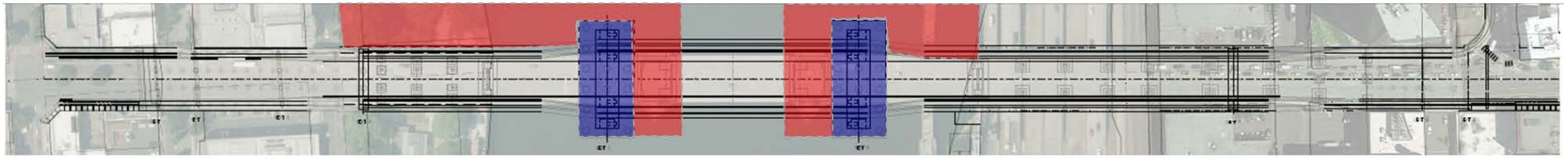
= EWP2: Temporary Facility Construction

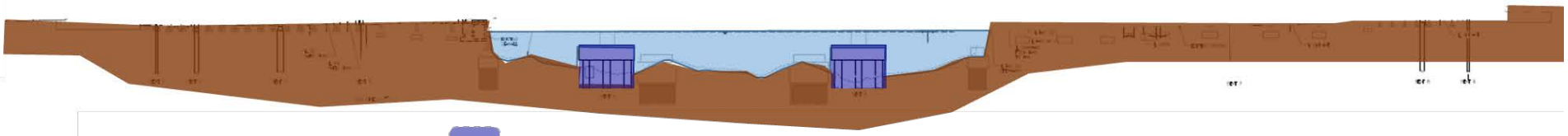
How will the Project be Constructed?

EARTHQUAKE READY BURNSIDE BRIDGE

… using a series of Construction Packages

Work Package 3: In-water Bridge Foundation & Temp Construction





= EWP3: In-water Bridge Foundation Construction

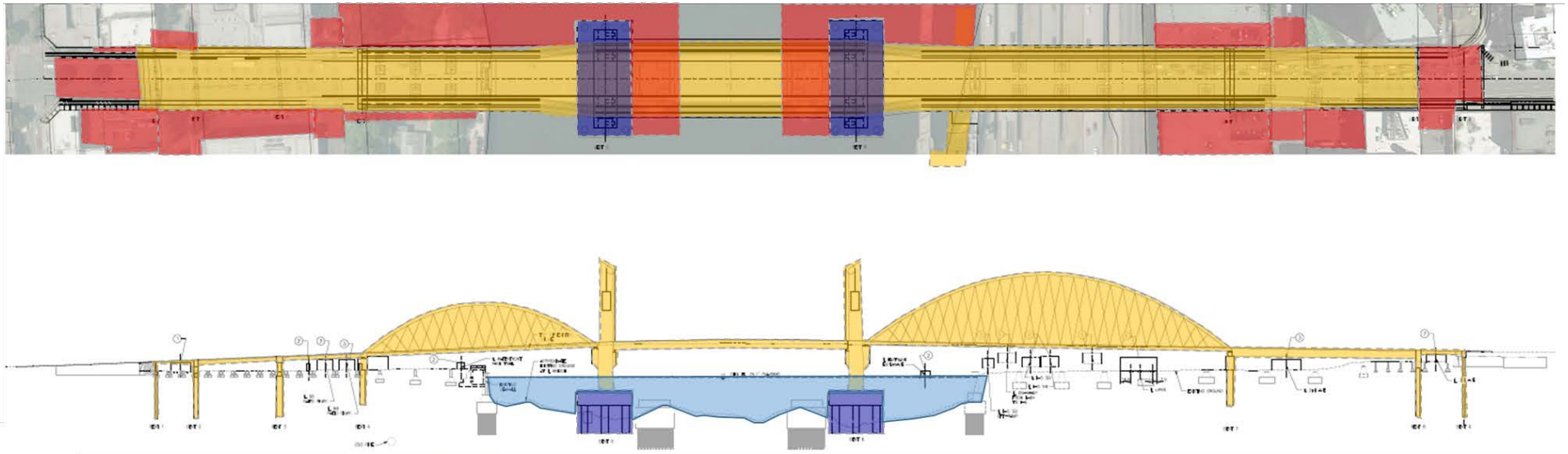
= EWP3: Temporary Facility Construction

How will the Project be Constructed?

EARTHQUAKE READY BURNSIDE BRIDGE

… using a series of Construction Packages

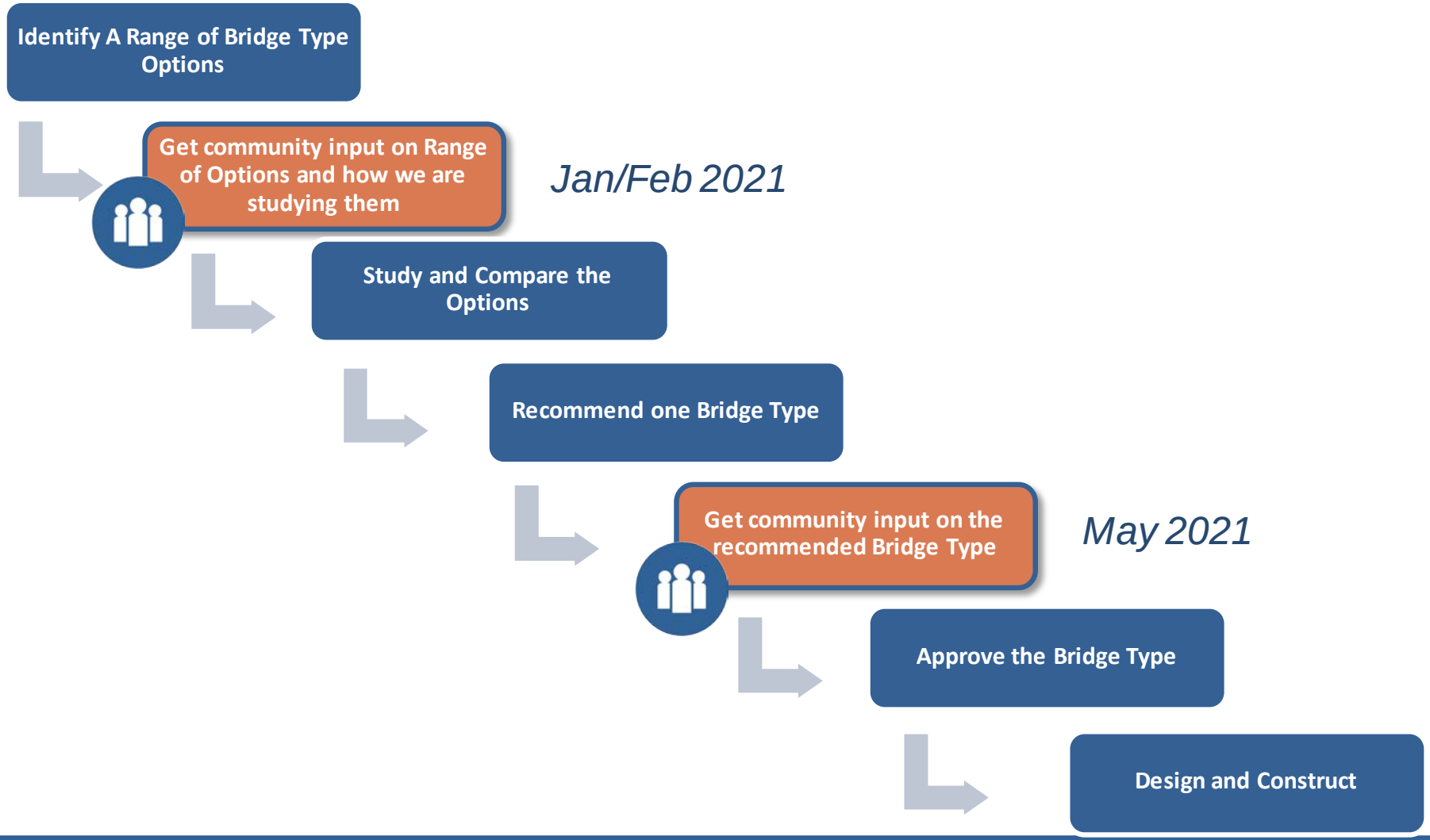
Work Package 4: All Other Construction



= EWP3: In-water Bridge Foundation Construction

= Main Construction Package: All Other Construction

Bridge Type Selection Process



Land Use Reviews

Land Use Reviews

Early Work Package 1 **In-Water Demolition**	• Type IV Demolition Review for the Bridge • Type II Adjustment to requirement that a permit for a new building on the site be issued prior to, or concurrent with, the demolition permit • Type IIx River Review for dredging
Early Work Package 2 **On Land Preparation**	• Possible Type II Historic Resource Review for potential alteration to basement of Portland Rescue Mission building (contributing structure in Historic District • Possible Type II Adjustment to site restoration standard for Saturday Market Administrative building (non-contributing structure in Historic District)
Early Work Package 3 **In Water Foundation**	• Type IIx River Review for in water foundations • Possible Type II Adjustment (if needed) [NOTE: DARs would be held with the Landmarks Commission and Design Commission regarding the design of the bridge and compatibility with adjacent development]
Final Work Package **Main Construction**	• Type III Design Review for new bridge (design details) • Type III Historic Resource Review for new bridge elements within the Historic District (design details) • Modifications (if needed)

Land Use Reviews

Upcoming dates

Date	Activities
Dec 2020	Briefing with Landmarks Commission and Design Commission
Feb 2021	Joint DAR (or briefing) Range of Bridge Types and Evaluation Criteria
Mar 2021	City Council approval of preferred alternative
May 2021	Joint DAR on Bridge Type
Potential Schedule for Early Work Package 1 – In-water Demolition	
Jun 2021	Pre-application conference
Sep 2021	DAR (or briefing) with Landmarks Commission regarding Type IV application
Dec 2021	DAR (or briefing) with Landmarks Commission follow up on Type IV application (if needed)
Apr 2022	Submit application for concurrent review of: • Type IV Demolition Review to demolish a Historic Landmark • Type II Adjustment to obtain demolition permit in advance of building permit
Aug 2022	Landmarks Commission Hearing
Sep 2022	City Council Hearing
Nov 2022	Apply for Permits including demolition permit
Feb 2023	Permits Issued
Spring 2023	Work begins during in-water work window

Next Steps

Upcoming Meetings and Milestones

2020

- **December 17:** Design Commission Briefing

2021

- **January:** Publish Draft Environmental Impact Statement
- **January/February:** Outreach on range of bridge types and evaluation criteria
- **March**: City Council Meeting to approve Preferred Alternative
- **April:** Joint DAR on recommended Bridge Type
- **June:** Policy Group approval of recommended Bridge Type

Questions?