EARTHQUAKE READY BURNSIDE BRIDGE

Senior Agency Staff Group Meeting

Department of Community Services
Transportation Division

March 31, 2020

Agenda

1. Welcome & Introductions
2. Project Update
3. Technical Updates
4. CTF Updates
5. Joint-Agency Criteria Ratings Workshop
6. Environmental Technical Reports
7. Upcoming Meetings and Next Steps

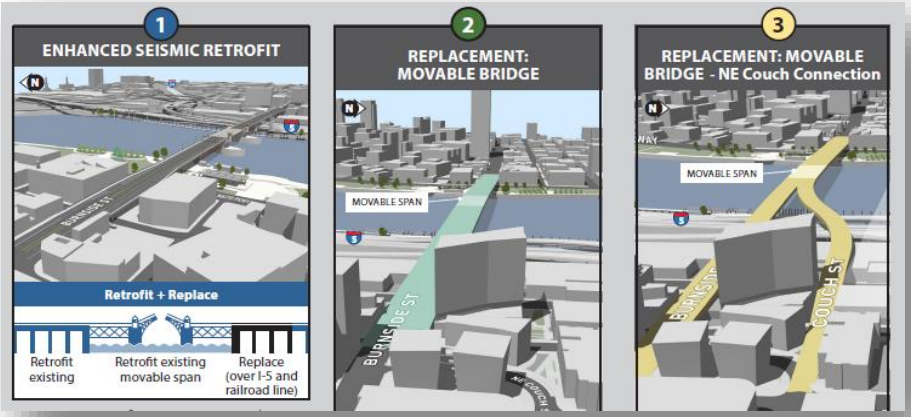
Project Update

EARTHQUAKE READY BURNSIDE BRIDGE

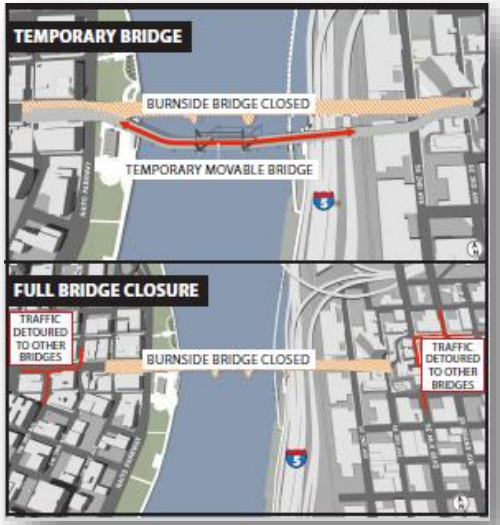
Since we last met…

Policy Group and Board approved for further study:

Range of Alternatives



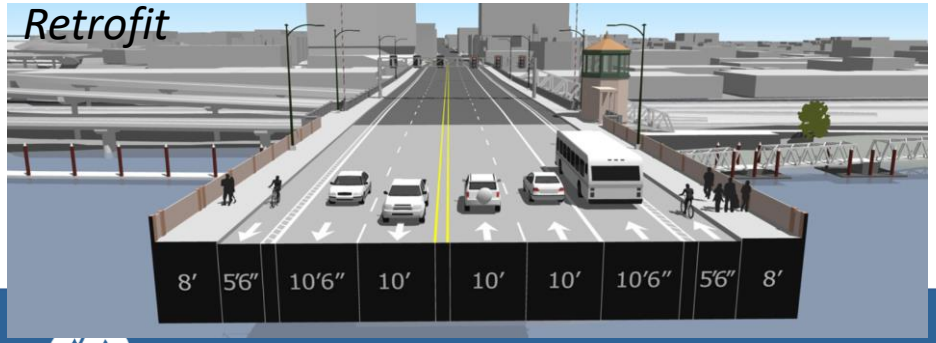
Traffic Management



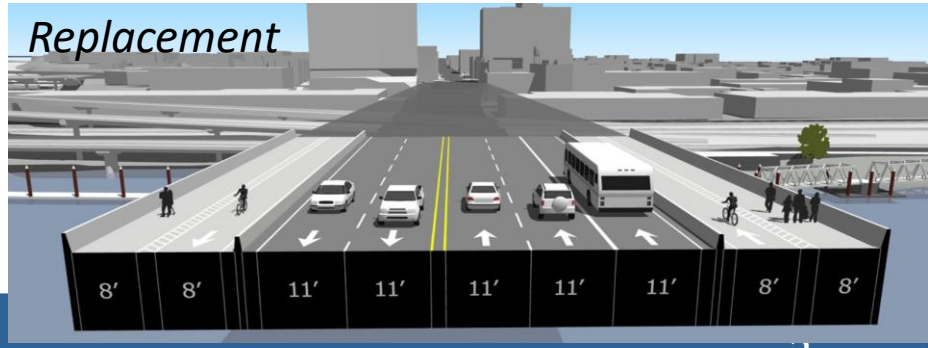
Evaluation Criteria

Cross Sections

Retrofit



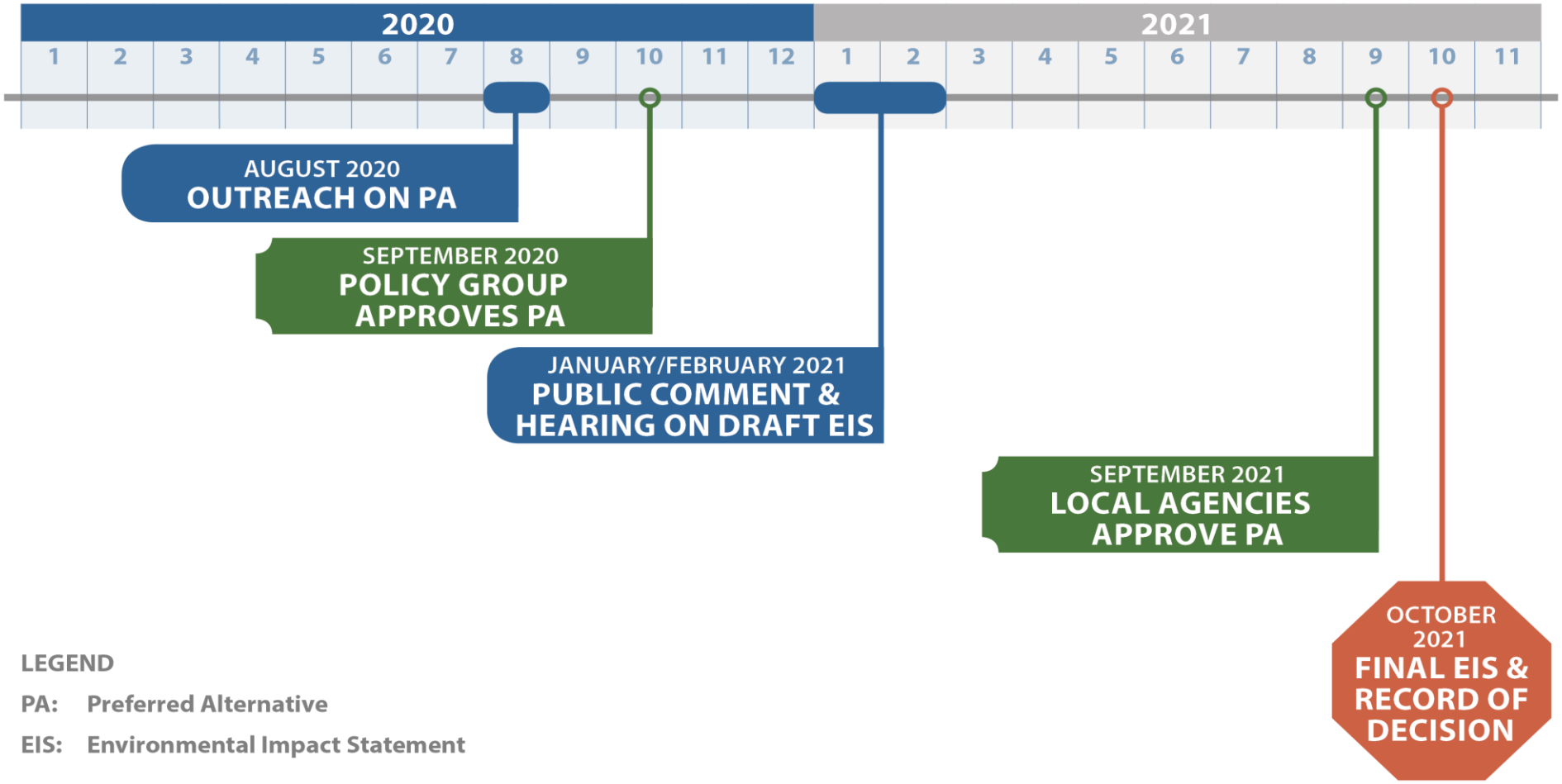
Replacement



Project Update

EARTHQUAKE READY BURNSIDE BRIDGE

Environmental Review Phase – Key Milestones



LEGEND

PA: Preferred Alternative

EIS: Environmental Impact Statement

Project Update

EARTHQUAKE READY BURNSIDE BRIDGE

Funding Update

Potential Funding Sources

- County Vehicle Registration Fee (fund Planning, Design, Construction Phases)
- Regional Metro *Get Moving 2020* bond measure (Construction Phase)
- State/Federal (Construction Phase)

Multnomah County VRF

- Originally $19/year (lowest of 3 Metro counties)
- Raised to $56/year
  - County Board voted 11/14/2019 and 12/5/2019
  - Effective 1/1/2021
- Dedicated to County's Willamette River bridges
- New $ targeted for Burnside Bridge
- Exploring options for full or partial refund for low income communities

Project Update

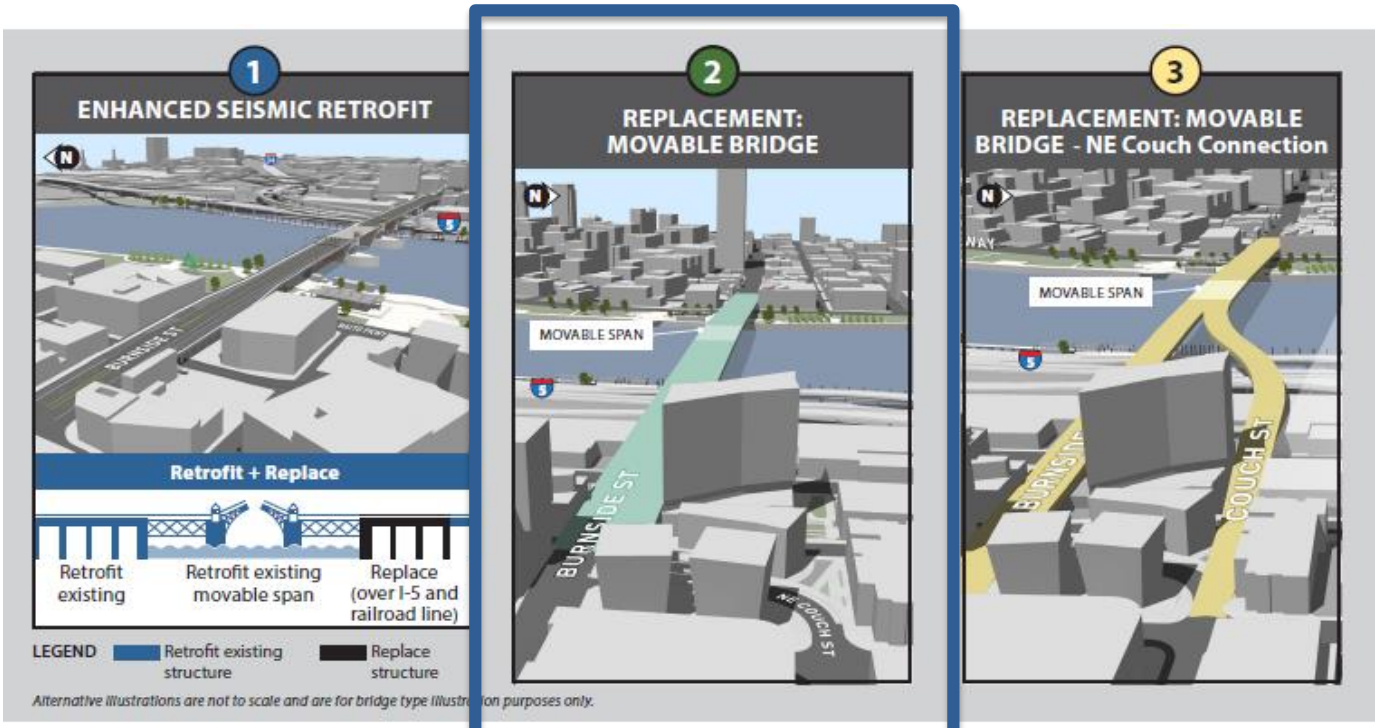
Working/Focus Groups

- Urban Design
- Social Services
- EJ/Equity Advisory Panel

Stakeholder Briefings

Technical Updates

In-Kind Replacement Alternative



Long-Span

Conventional

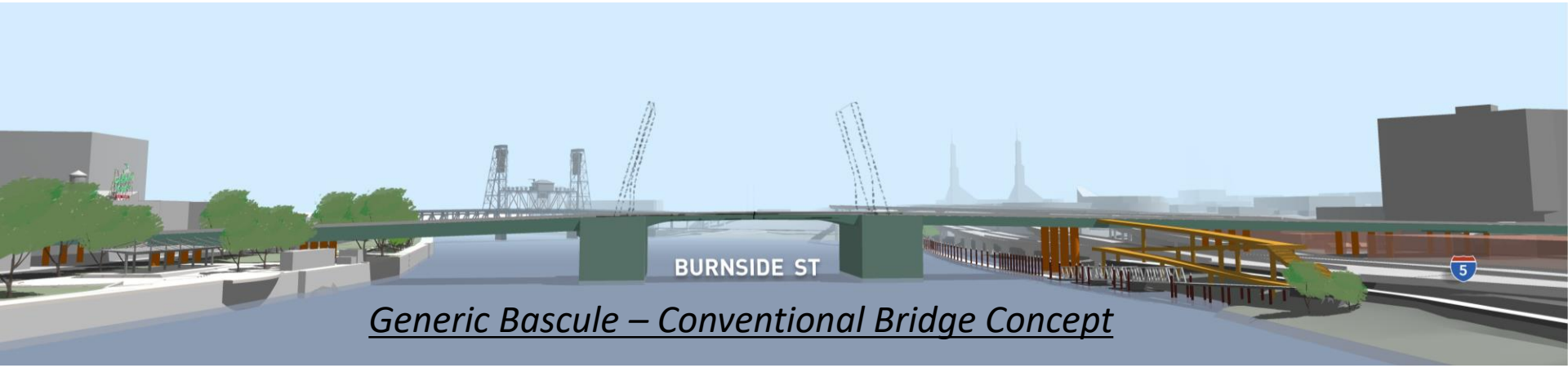
Technical Updates

EARTHQUAKE READY BURNSIDE BRIDGE

Replacement: In-kind Movable Bridge – Conventional Design Option

Technical Updates

Replacement: In-kind Movable Bridge – Conventional Bridge



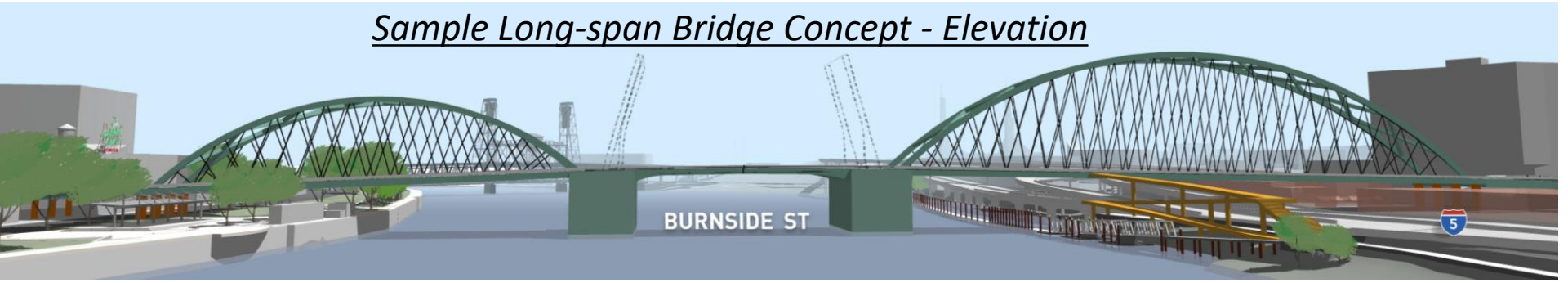
Generic Bascule – Conventional Bridge Concept

Generic Lift – Conventional Bridge Concept

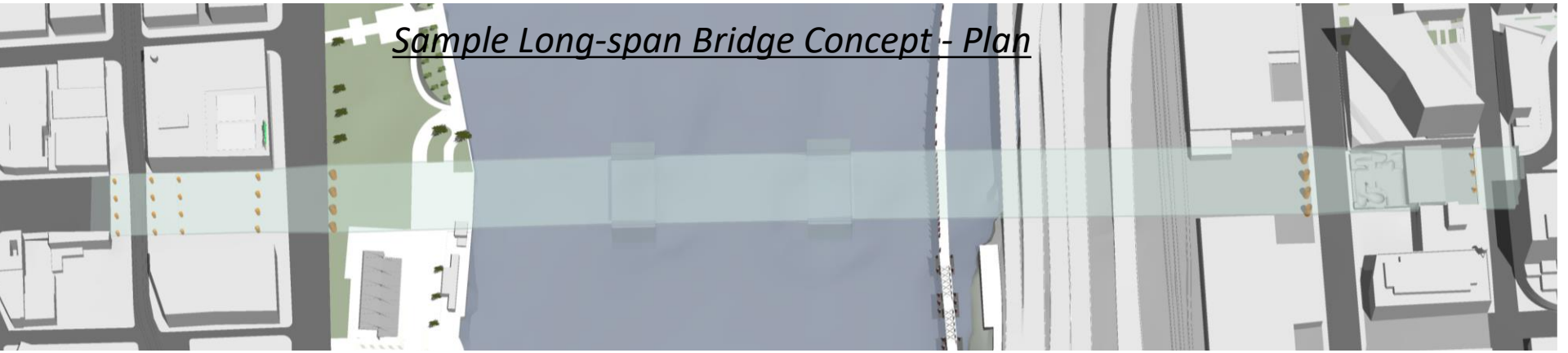
Technical Updates

Replacement: In-kind Movable Bridge – Long-span Design Option

Sample Long-span Bridge Concept - Elevation



Sample Long-span Bridge Concept - Plan



- Reduces geotechnical hazard risk by eliminating 1+ support on each side
- Provides more Waterfront Park open space
- Reduces many construction impacts
- Maintains all vehicular and bike/ped lanes, widths, and connections

Technical Updates

EARTHQUAKE READY BURNSIDE BRIDGE

Cost Risk Analysis (CRA) / Value Engineering (VE) Workshop Highlights

$$
Enhanced Seismic Retrofit

$$
Replacement: In-Kind (Conventional)

$
Replacement: In-Kind (Long Span)

$$$
Replacement: Couch Extension

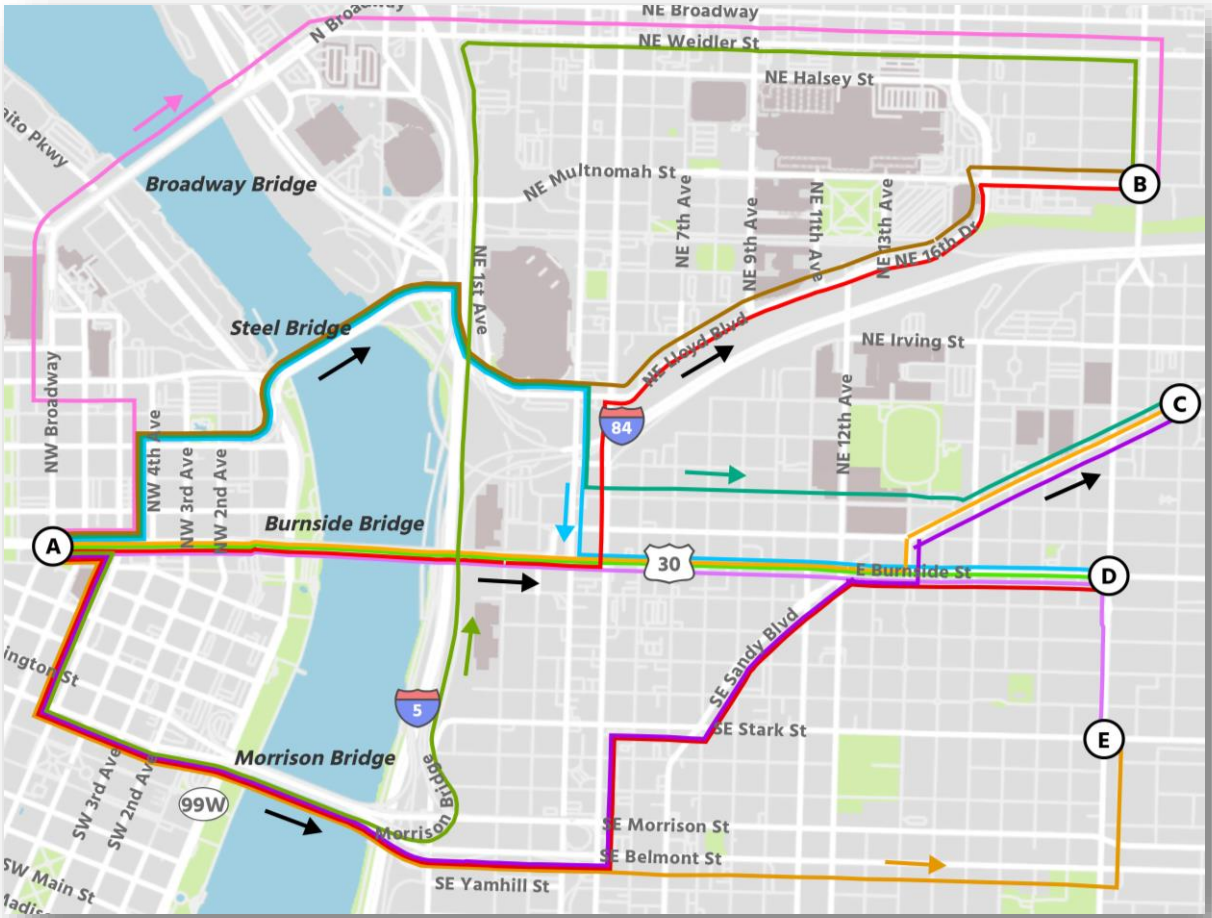
(Representative Images - Bridge Type is yet to be determined)

Technical Updates

EQRB Traffic Analysis – Approach and General Findings

- Methodology – Metro, PBOT, and TriMet collaboration
- No meaningful operational differences between Build and No Build
- Some travel time differences per route

Eastbound Routes

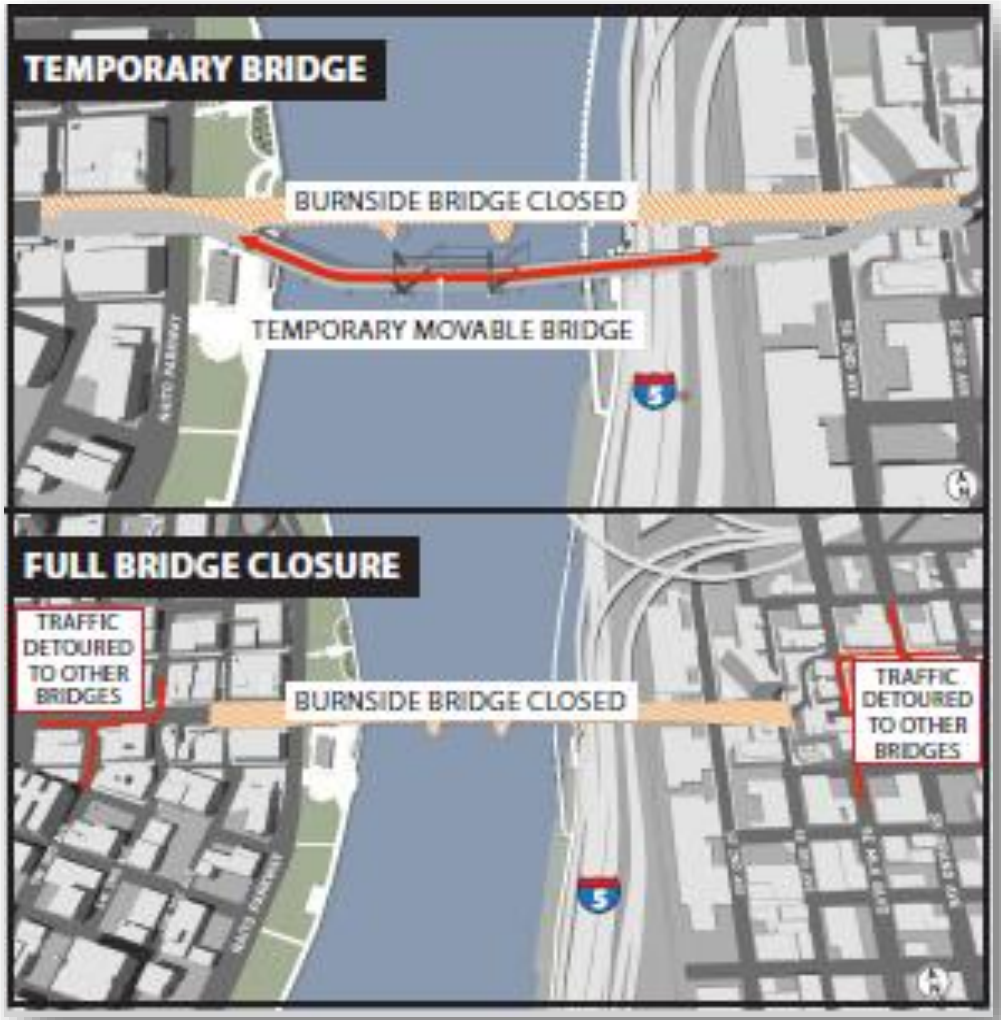


Technical Updates

Traffic Analysis – Full Bridge Closure Vs Temp Bridge

Full Bridge Closure:

- **Cost: Up to** $90M savings
- **Construction Duration:** Reduced by 1.5 years
- **Drivers:** ~2-4 min delay
- **Greenhouse Gas:** Equivalent net GHG emissions



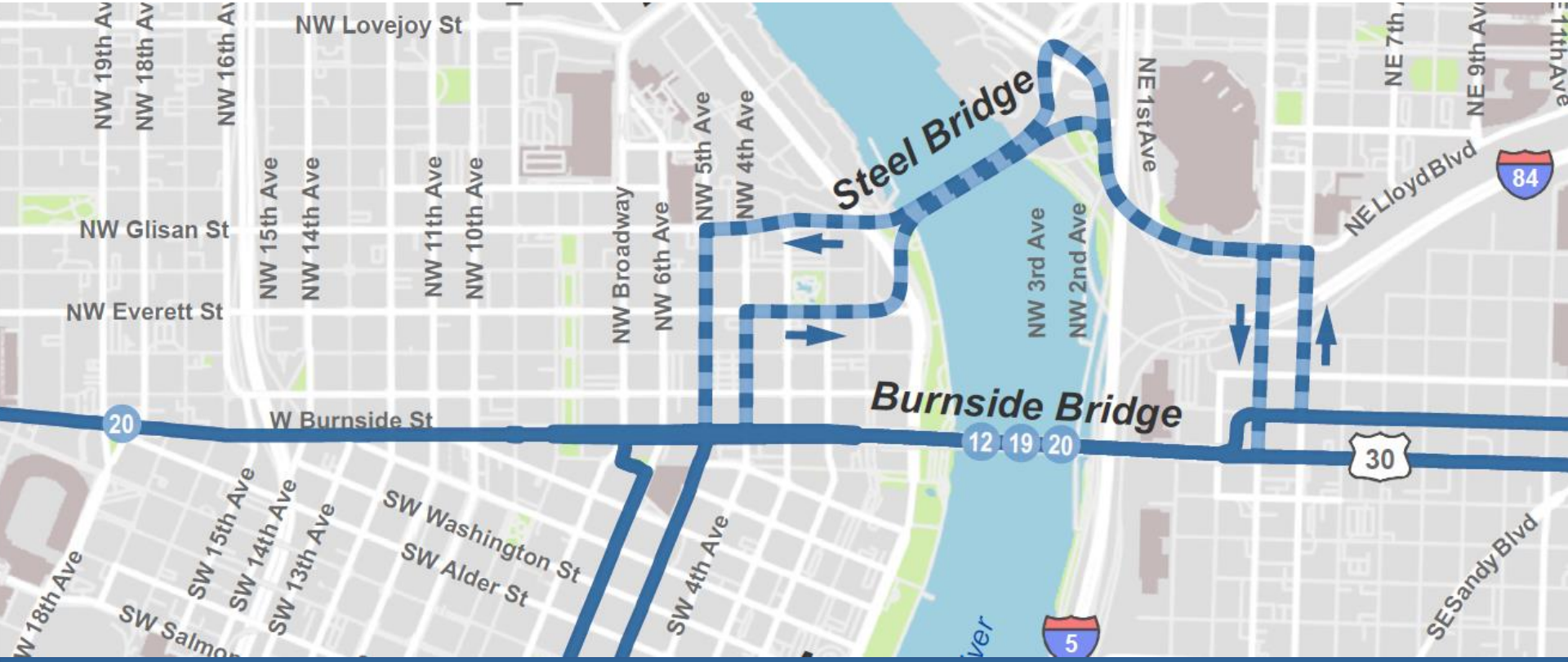
Technical Updates

Traffic Analysis – Full Bridge Closure Vs Temp Bridge

Full Bridge Closure:

- **Buses:** ~5 min travel delay; up to -3.6% ridership for Buses 12, 19, and 20

Bus Detours

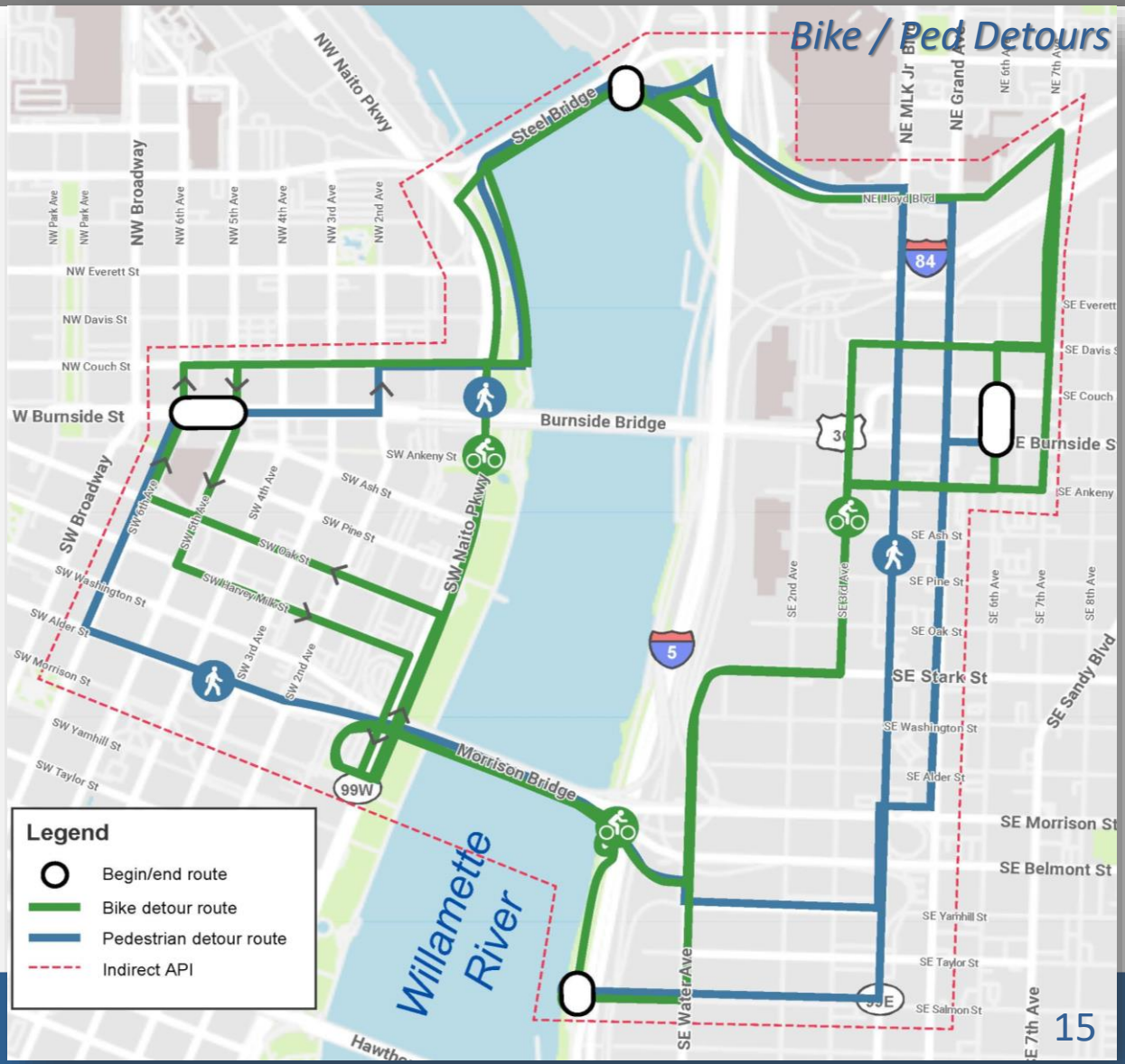


Technical Updates

Traffic Analysis – Full Bridge Closure Vs Temp Bridge

Full Bridge Closure:

- **Bicyclists:** ~5-12 minute delay
- **Pedestrians:** ~10-18 minute delay
- **Safety:** Similar safety levels



CTF Update

Getting to a PA Timeline

Legend:

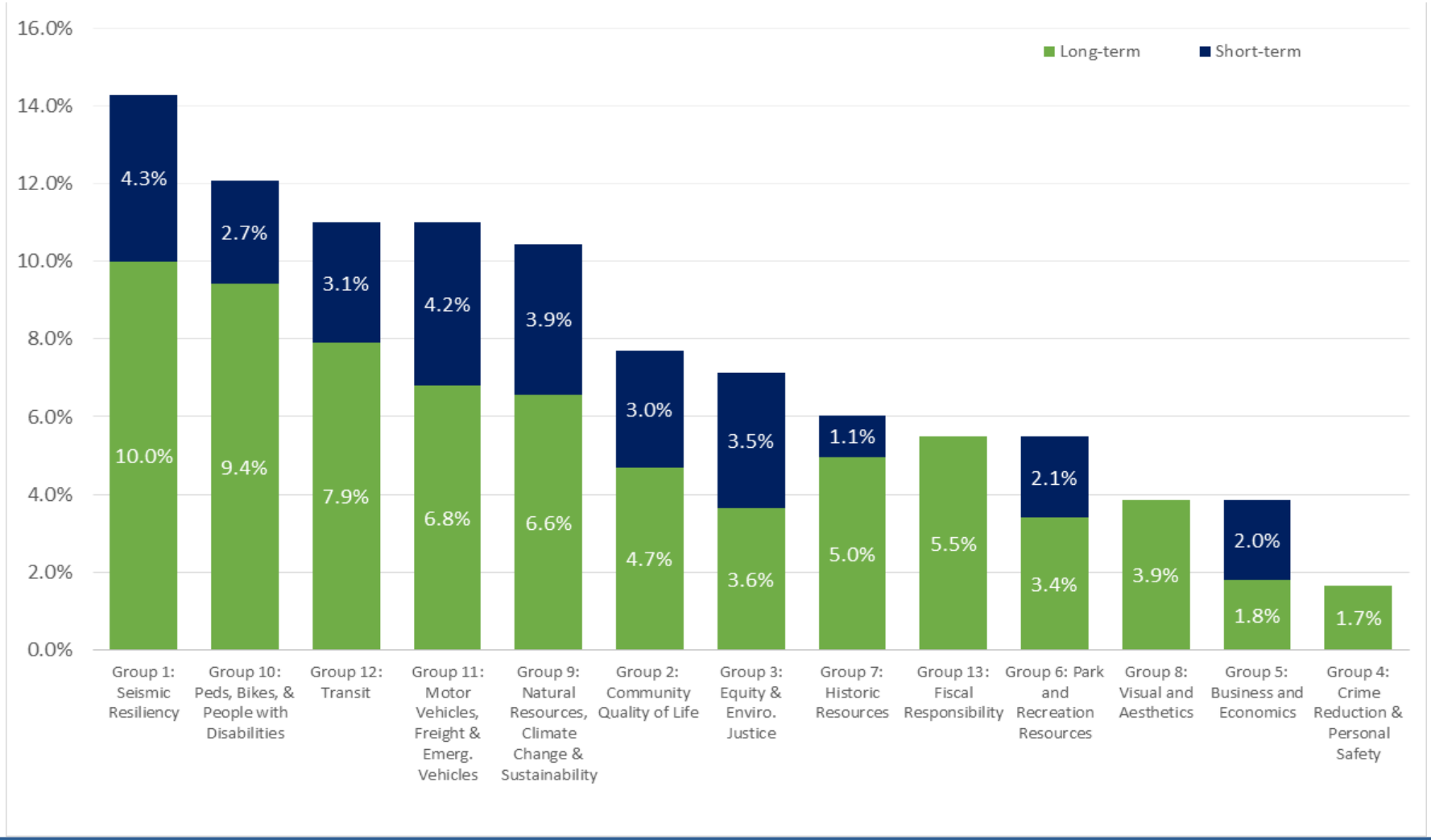
PA	Preferred Alternative
DEIS	Draft Environmental Impact Statement
CTF	Community Task Force
SASG	Senior Agency Staff Group
PG	Policy Group
TAC	Technical Advisory Committee

CTF Update

Weightings – Voting Exercise

CTF Update

Weightings Results



Joint Agency Criteria Ratings Workshop

EARTHQUAKE READY BURNSIDE BRIDGE

BETTER – SAFER – CONNECTED

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

April 21 and 22, 2020

Joint Agency Evaluation Criteria Ratings Workshop

Project:	Earthquake Ready Burnside Bridge
Subject:	Joint Agency Evaluation Criteria Ratings Workshop
Date:	April 21 and 22, 2020
Time:	*Please attend relevant session times*
Location:	HDR, 1050 SW 6th Ave, Suite 1800, Portland, OR – 17th Floor Downing Rm

PURPOSE

- To partner with agency representatives to obtain feedback on rating definitions for the evaluation measures.

AGENDA

- Each session will cover:
  - Welcome and Introductions
  - Evaluation Criteria and Measures Overview
  - Ratings Discussion
  - Next Steps/Action Items

DAY 1: TUESDAY, APRIL 21, 2020

Time	Session Topics	Session Leads
8:50-9:00 (10 min)	*Arrivals and Check-in (at 18th Floor Reception)*	
9:00-10:00 (60)	Seismic Resiliency	Drahota
10:00-10:10 (10)	*Session Rotation*	
10:10-11:10 (60)	Fiscal Responsibility	Drahota
11:10-11:20 (10)	*Session Rotation*	
11:20-12:20 (60)	Motor Vehicles, Freight and Emergency Vehicles	Drahota
	Session Rotation and Lunch Break	
	Pedestrians, Bicyclists and People with Disabilities	Drahota
		Heilman

Joint Agency Criteria Ratings Workshop

Natural Resources, Climate Change & Sustainability

Measure: Estimated changes in treatment of stormwater generated from impervious surface compared to No-build.

Measure: Estimated long-term changes in flood levels.

Measure: Estimated area of disturbance of potentially contaminated river substrate.

9a1	Score	Rating descriptions
A	5	Highest increase in Contributing Impervious Area (area where stormwater will be treated) compared to No-build
	3	Medium increase in Contributing Impervious Area (area where stormwater will be treated) compared to No-build
	1	Lowest increase in Contributing Impervious Area (area where stormwater will be treated) compared to No-build
B	5	Lowest new encroachment into floodplain or floodway
	3	Medium new encroachment into floodplain or floodway
	1	Highest new encroachment into floodplain or floodway
C	5	Higher potential area within coffer dams results in largest area of sediment clean up, which is a benefit to habitat
	3	Medium potential area within coffer dams results in largest area of sediment clean up, which is a benefit to habitat
	1	Lower potential area within coffer dams results in largest area of sediment clean up, which is a benefit to habitat

Environmental Tech Reports

EARTHQUAKE READY BURNSIDE BRIDGE

Early Findings

Range of Alternatives – Enhanced Seismic Retrofit

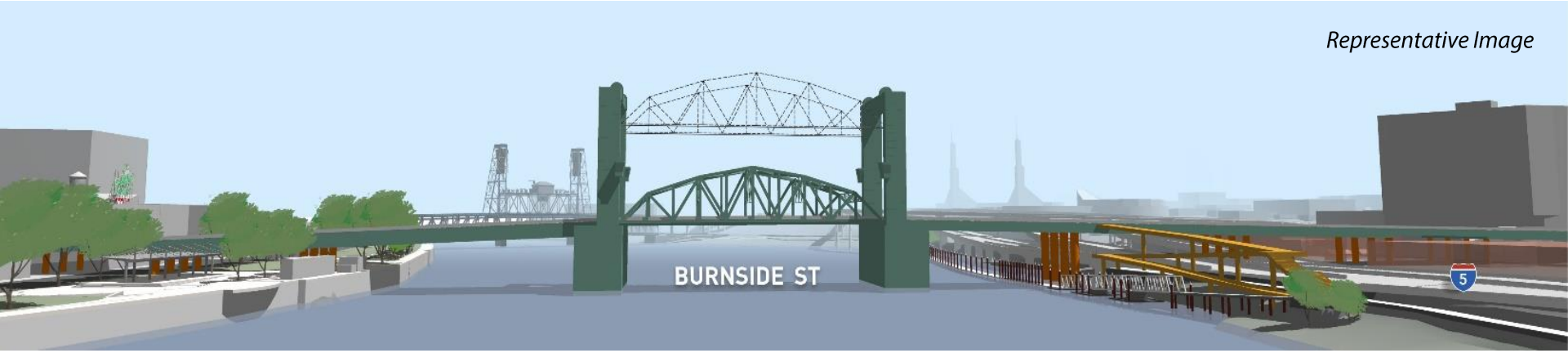
- Shortest construction duration
- Highest long-term maintenance cost
- Highest park impacts
- Highest social service impacts
- Least opportunity for bike / pedestrian improvements
- Least impacts to historic bridge
- Highest river impacts
- Lowest construction-related GHG emissions
- Highest risk from liquefiable soils

Environmental Tech Reports

EARTHQUAKE READY BURNSIDE BRIDGE

Early Findings

Range of Alternatives – Replacement In-Kind *Conventional*



- 2nd lowest cost alternative (the Long Span option costs less)
- Best opportunities for bike / pedestrian improvements
- Less impact to Seawall and Burnside Skatepark
- Preserves access to Portland Rescue Mission during construction
- Highest impact to existing historic Burnside Bridge

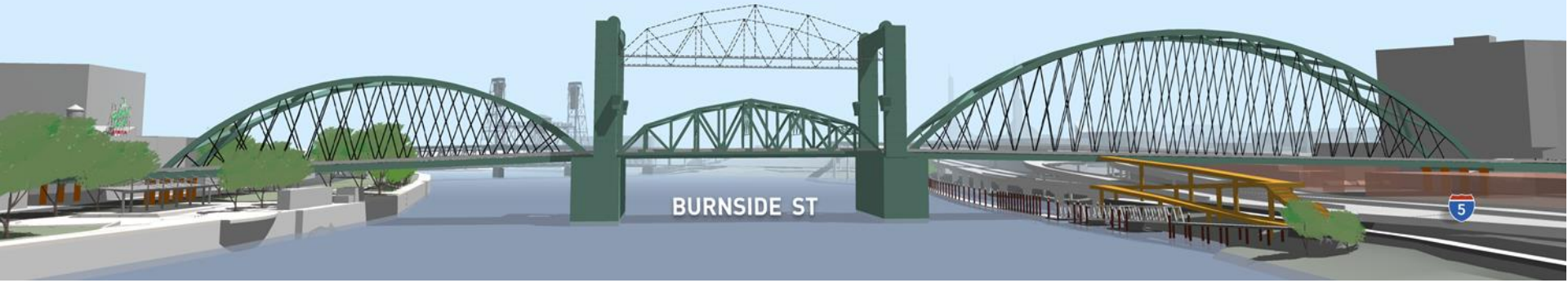
Environmental Tech Reports

EARTHQUAKE READY BURNSIDE BRIDGE

Early Findings

Range of Alternatives – Replacement In-Kind *Long-Span*

Representative Image – Tied Arch



- **Lowest cost**
- **Lowest risk from liquefiable soils**
- **Most opportunities for open park spaces**
- **Shortest duration parks closure**
- **Smallest footprint and impact to natural resources**
- **Lowest impact to Seawall**

- Best opportunities for bike / pedestrian improvements
- Lowest impact to Skatepark
- Preserves access to Portland Rescue Mission during construction
- Highest impact to historic Burnside Bridge

Environmental Tech Reports

EARTHQUAKE READY BURNSIDE BRIDGE

Early Findings

Range of Alternatives – Replacement Couch Extension

- **Highest cost**
- **Most gradual alignment curvature for transit operations**
- **Higher business displacements and permanent access changes**
- **Less impact to Seawall**

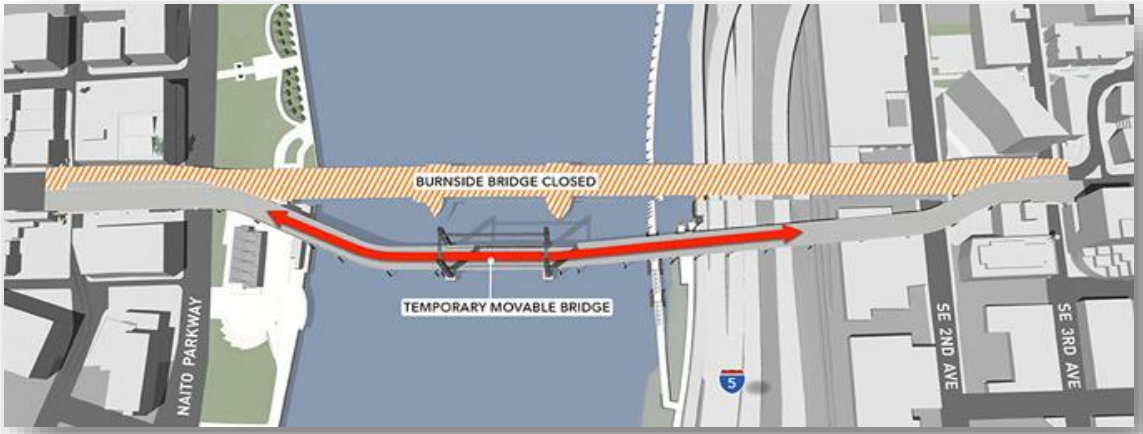
- Best opportunities for bike / pedestrian improvements
- Lowest impact to Skatepark
- Preserves access to Portland Rescue Mission during construction
- Highest impact to historic Burnside Bridge

Environmental Tech Reports

EARTHQUAKE READY BURNSIDE BRIDGE

Early Findings

Traffic Management – Temporary Bridge

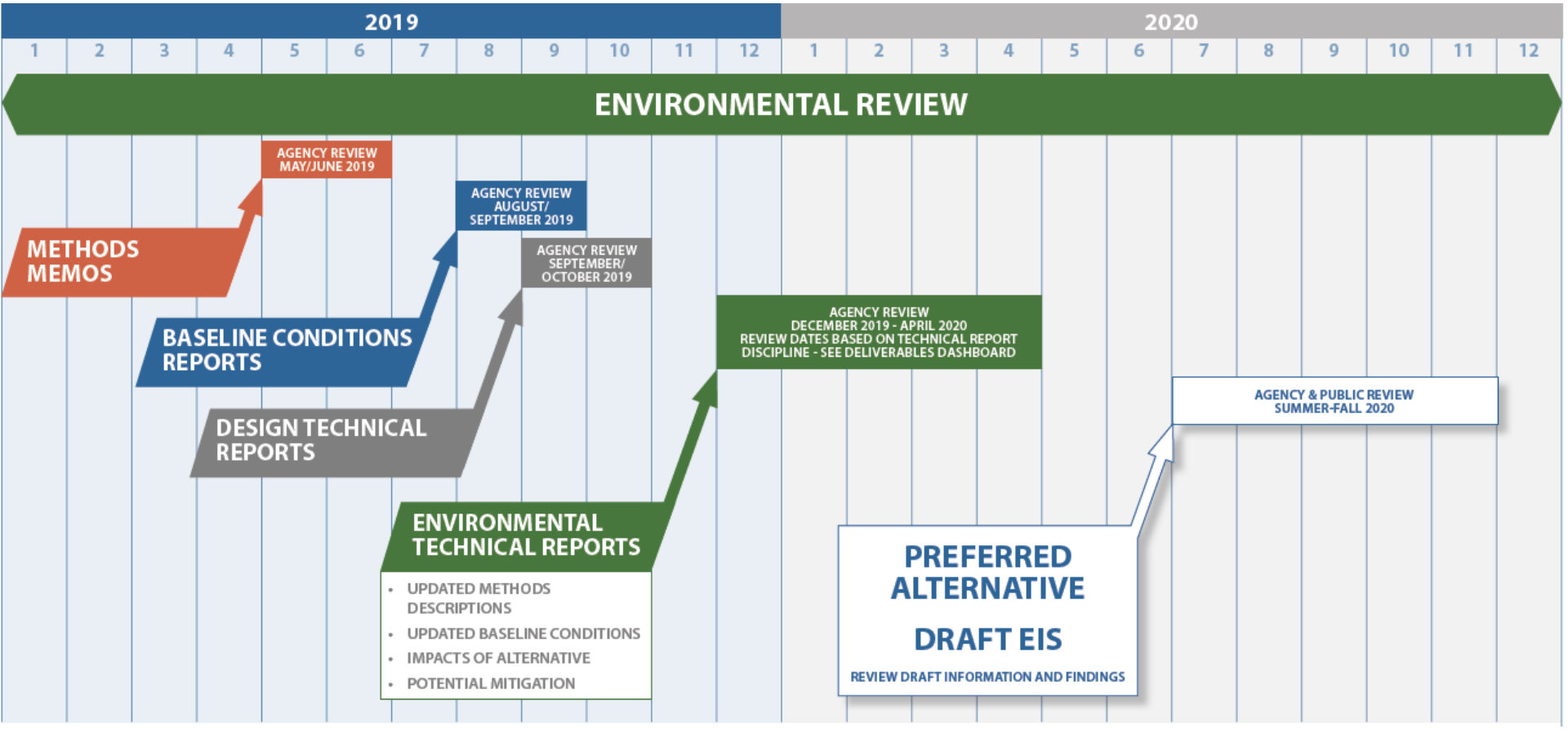


- Maintains 1-lane of traffic in each direction plus bike / pedestrian access across river
- Less travel time delay and better access
- Adds 1.5 years to construction duration
- Adds $60-90 million to overall project cost
- Higher impacts to parks (including partial demo of Burnside Skatepark and longer park closures)
- Higher impacts to natural resources
- Highest GHG emissions

Environmental Tech Reports

EARTHQUAKE READY BURNSIDE BRIDGE

Status of Tech Report Reviews



Environmental Tech Reports

Status of Tech Report Reviews

Batch 3 comments due: 4/6

- Social/Neighborhoods
- Economics
- Public Services
- Climate Change

Batch 4 comments due: 4/17

- Section 4(f) and 6(f)
- Cultural Resources
- Sustainability
- Environmental Justice/Equity
- Health Impact Assessment

Upcoming Meetings

- Joint Agency Criteria Ratings Workshop – 4/21 & 4/22
- CTF – 4/27, 5/18 & 6/14
- City TAC – May
- SASG – June
- Policy Group Briefings – June
- Policy Group – October

Closing Remarks and Adjourn

EARTHQUAKE READY BURNSIDE BRIDGE

Thank you!