EARTHQUAKE READY BURNSIDE BRIDGE

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

BETTER – SAFER – CONNECTED May 18, 2020

Community Task Force – Agenda Meeting #15

Project:	Earthquake Ready Burnside Bridge
Subject:	Community Task Force Meeting #15
Date:	May 18, 2020
Time:	*Early Arrivals: 5:30 p.m. – 6:00 p.m.* Meeting Timing: 6:00 p.m. to 8:00 p.m.
Location:	WebEx Virtual Meeting

TASK FORCE MEMBERS

Art Graves, Multnomah County Bike and Pedestrian Citizen Advisory Committee
Cameron Hunt, Portland Spirit
Dan Lenzen, Old Town Community Association
Ed Wortman, Community Member
Frederick Cooper, Laurelhurst Neighborhood Emergency Team
Gabe Rahe, Burnside Skate Park
Howie Bierbaum, Portland Saturday Market
Jackie Tate, Community Member
Paul Leitman, Oregon Walks
Jennifer Stein, Central City Concern
Robert McDonald, American Medical Response
Marie Dodds, AAA of Oregon
Kiley Wilson, Portland Business Alliance
Neil Jensen, Gresham Area Chamber of Commerce
Peter Finley Fry, Central Eastside Industrial Council
Sharon Wood Wortman, Community Member
Stella Funk Butler, Coalition of Gresham Neighborhood Associations
Susan Lindsay, Buckman Community Association
Tesia Eisenberg, Mercy Corps
Timothy Desper, Portland Rescue Mission
William Burgel, Portland Freight Advisory Committee

PROJECT TEAM MEMBERS

Megan Neill, Multnomah County
Ian Cannon, Multnomah County
Mike Pullen, Multnomah County
Heather Catron, HDR
Cassie Davis, HDR
Steve Drahota, HDR
Liz Stoppelmann, HDR
Jeff Heilman, Parametrix
Allison Brown, JLA
Bridger Wineman, EnviroIssues
Sarah Omlor, EnviroIssues

Purpose:

- Review scoring results of the alternatives evaluation for bridge alternatives including traffic options during construction and make a recommendation on a Preferred Alternative.

EARTHQUAKE READY BURNSIDE BRIDGE

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

BETTER – SAFER – CONNECTED

May 18, 2020

Agenda:

Time	Session	Lead
5:30 p.m.	*Early Arrivals* • *WebEx meeting platform will be available for folks that want to join early and test computer functions before meeting start*	Project Team
6:00 p.m.	Welcome, Introductions and Housekeeping • Meeting Protocols • Roundtable Introductions / Roll Call	Allison Brown
6:10 p.m.	Public Comment • Acknowledge Any Public Comments Received	Allison Brown
6:20 p.m.	Project Update • Timeline and Process	Heather Catron

6:25 p.m.	Scoring Process and Results
	• Evaluation Weighting, Rating and Scoring
	• Bridge Alternatives
	  ○ *Scoring Results*
	  ○ *Highlights*
	  ○ *Questions & Answers*
	• Traffic Options During Construction
	  ○ *Scoring Results*
	  ○ *Highlights*
	  ○ *Questions & Answers*
	• <u>CTF Discussion:</u>
	  ○ *Questions and Clarifications*
	  ○ *Recommendation on Preferred Alternative Including Traffic Option During Construction*
		Heather Catron
		Steve Drahota
		Jeff Heilman

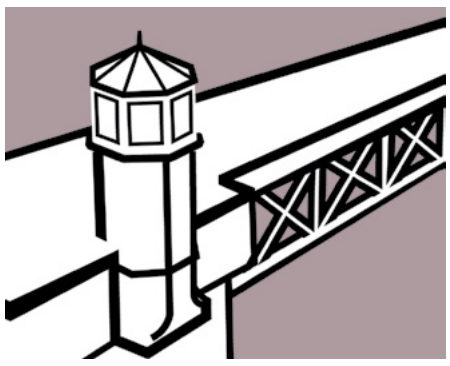
7:45 p.m.	Next Steps • Upcoming Meetings • Next Phase of Project • Closing Remarks	Heather Catron Allison Brown

The purpose of the CTF is to serve as an advisory body to Multnomah County by:

- *Considering the potential environmental impacts of the alternatives*
- *Providing informed insights and opinions on the impacts being evaluated*
- *Discussing technical recommendations, suggesting measures to avoid, minimize or mitigate potential impacts*
- *Representing the interests, needs and opinions of community, business organizations and groups*
- *Considering input and information from other community members, stakeholders and interested parties.*

CTF members approached by interest groups other than their own constituencies are encouraged to share these conversations at CTF meetings. For information contact Mike Pullen, County Communications Office at mike.j.pullen@multco.us

ALTERNATIVE 1: Enhanced Seismic Retrofit



Description:

Upgrade of the existing bridge to meet current seismic standards.This includes a combination of retrofitting portions of the bridge and replacing others.

Total Score out of 100	
Full Bridge Closure	61
Temporary Bridge	53

BETTER - SAFER - CONNECTED

Criteria Topic		Criteria Description	Weighting %	Full Bridge Closure		Temporary Bridge	
				Rating	Criteria Topic Score	Rating	Criteria Topic Score
Seismic Resiliency	1a.1:	Maximize confidence in post-earthquake crossing operability and reparability.	3.33	○	10.3 of 14 possible	○	8.6 of 14 possible
	1a.2:	Maximize ability for all modes to use the crossing post-earthquake.	3.33	◒		◒	
	1a.3	Minimize risk that adjacent buildings could damage or block the bridge after a major earthquake, and minimize risk that crossing construction could lessen the seismic resilience of adjacent buildings.	3.33	●		●	
	1b.1	Minimize delay in achieving a seismically resilient crossing.	4.29	●		◒	
Community Quality of Life	2a.1	Minimize long-term noise and light/shadow impacts.	2.35	◒	3.7 of 8 possible	◒	2.5 of 8 possible
	2a.2	Minimize long-term impacts to community facilities and events under and near the bridge (e.g., Skatepark, Saturday Market, park festivals, parades, organized runs, etc.).	2.35	○		○	
	2b.1	Minimize temporary impacts to community facilities and events under and near the bridge.	3.00	◒		○	
Equity and Environmental Justice	3a.1	Minimize temporary impacts to social service providers.	1.21	●	4.6 of 8 possible	●	4.6 of 8 possible
	3a.2	Maintain social service providers' long-term ability to provide current level of service and potential for enhancement.	1.21	●		●	
	3a.3	Avoid disproportionate adverse impacts to vulnerable and Environmental Justice communities.	1.21	◒		◒	
	3b.1	Minimize temporary impacts to social service providers.	1.17	○		○	
	3b.2	Avoid temporary disproportionate adverse impacts to vulnerable and Environmental Justice communities.	1.17	◔		◔	
	3b.3	Ensure that design and construction approach allow ample opportunities for DBE firms to be involved in the construction/ contracting process.	1.17	◒		◒	
Crime Reduction and Personal Safety	4a.1	Maximize personal safety and crime reduction by following principles of Crime Prevention Through Environmental Design (CPTED).	1.65	○	0.3 of 2 possible	○	0.3 of 2 possible
Business and Economics	5a.1	Minimize business displacements and permanent access impacts.	0.90	●	2.9 of 4 possible	●	2.9 of 4 possible
	5a.2	Support redevelopment potential consistent with local plans.	0.90	●		●	
	5b.1	Minimize temporary access impacts to businesses.	0.68	◒		●	
	5b.2	Minimize temporary regional economic impacts.	0.68	◔		◔	
	5b.3	Minimize loss of economic benefits (includes businesses and charities) from temporary impacts to major community events under and near the bridge.	0.68	◒		○	

Indicates: ■ Long Term ■ Short Term

AVERAGE CRITERION RATING 1 ○ 2 ◔ 3 ◒ 4 ◕ 5 ●

Scores range from 1 (empty circles) at the lowest and 5 (full circles) at the highest.

Criteria Topic		Criteria Description	Weighting %	Full Bridge Closure		Temporary Bridge	
				Rating	Criteria Topic Score	Rating	Criteria Topic Score
Parks and Recreation Resources	6a.1	Minimize park displacements and adverse functionality impacts (include impacts to river recreation).	3.4	○	1.7 of 6 possible	○	1.1 of 6 possible
	6b.2	Minimize park displacements and adverse functionality impacts (include impacts to river recreation).	2.08	◔		○	
Historic Resources	7a.1	Minimize historic resource impacts.	4.95	●	5.2 of 6 possible	●	5.2 of 6 possible
	7b.1	Minimize temporary impacts to historic resources.	1.09	○		○	
Visual and Aesthetics	8a.1	Minimize adverse impacts to existing views and view corridors.	1.28	◕	1.5 of 4 possible	◓	1.3 of 4 possible
	8a.2	Maximize aesthetic experience for all users approaching, on, and under the bridge.	1.28	○		○	
	8a.3	Create opportunity for a crossing that provides an iconic/ demonstrative visual experience.	1.28	○		○	
		N/A					
Natural Resources, Climate Change, and Sustainability	9a.1	Minimize impacts to water quality and flooding.	3.29	◔	5.9 of 11 possible	◔	3.5 of 11 possible
	9a.2	Minimize impacts to fish and wildlife.	3.29	○		○	
	9b.1	Minimize temporary impacts to water quality and flooding.	0.97	●		◔	
	9b.2	Minimize temporary impacts to air quality, greenhouse gas emissions and carbon sequestration.	0.97	●		◔	
	9b.3	Minimize temporary impacts to fish and wildlife.	0.97	◕		◔	
	9b.4	Minimize resource consumption and waste production during construction.	0.97	●		○	
Pedestrians, Bicyclists and People with Disabilities (ADA – Americans with Disabilities Act)	10a.1	Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).	3.14	◔	7.9 of 12 possible	◔	9.2 of 12 possible
	10a.2	Minimize temporary travel time and access/connectivity impacts to pedestrians.	3.14	◕		◕	
	10a.3	Maximize access/connectivity for pedestrians and ADA.	3.14	◕		◕	
	10b.1	Minimize temporary travel time and access/connectivity impacts to bicyclists.	0.89	◓		●	
	10b.2	Minimize temporary travel time and access/connectivity impacts to pedestrians.	0.89	◓		●	
	10b.3	Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).	0.89	○		◔	
Motor Vehicles, Freight, and Emergency Vehicles	11a.1	Maximize safety for motor vehicles and freight.	3.41	◓	6.2 of 11 possible	◓	6.0 of 11 possible
	11a.2	Maximize emergency service operations and responsiveness.	3.41	○		○	
	11b.1	Minimize temporary access and travel time impacts to freight and emergency vehicles.	1.39	◕		◕	
	11b.2	Minimize temporary safety, impacts to motor vehicles, freight, and emergency vehicles.	1.39	●		◓	
	11b.3	Minimize temporary access and travel time impacts to motor vehicles.	1.39	◕		◕	
Transit	12a.1	Maximize Streetcar readiness.	2.64	◓	7.8 of 11 possible	◓	6.6 of 11 possible
	12a.2	Maximize bus accessibility.	2.64	●		●	
	12a.3	Minimize transit collision vulnerability.	2.64	○		○	
	12b.1	Minimize temporary impacts to transit access, safety, travel times, and ridership.	3.08	●		◓	
Fiscal Responsibility	13a.1	Minimize total Project cost.	2.75	●	3.3 of 6 possible	○	1.1 of 6 possible
	13a.2	Minimize long-term maintenance needs/costs.	2.75	○		○	
		N/A					
ALTERNATIVE 1: Enhanced Seismic Retrofit			Total		61		53

Indicates: ■ Long Term ■ Short Term

AVERAGE CRITERION RATING 1 ○ 2 ◔ 3 ◓ 4 ◕ 5 ●

Scores range from 1 (empty circles) at the lowest and 5 (full circles) at the highest.

ALTERNATIVE 2: Replacement – Short Span

Description:

New movable bridge at about the same height and location as the current bridge (also considered a conventional in-kind replacement).

Total Score out of 100		
	Full Bridge Closure	75
	Temporary Bridge	66

BETTER - SAFER - CONNECTED

Criteria Topic		Criteria Description	Weighting %	Full Bridge Closure		Temporary Bridge	
				Rating	Criteria Topic Score	Rating	Criteria Topic Score
Seismic Resiliency	1a.1:	Maximize confidence in post-earthquake crossing operability and reparability.	3.33	◔	13 of 14 possible	◔	9.5 of 14 possible
	1a.2:	Maximize ability for all modes to use the crossing post-earthquake.	3.33	◔		◔	
	1a.3	Minimize risk that adjacent buildings could damage or block the bridge after a major earthquake, and minimize risk that crossing construction could lessen the seismic resilience of adjacent buildings.	3.33	●		●	
	1b.1	Minimize delay in achieving a seismically resilient crossing.	4.29	●		○	
Community Quality of Life	2a.1	Minimize long-term noise and light/shadow impacts.	2.35	◔	5.1 of 8 possible	◔	3.9 of 8 possible
	2a.2	Minimize long-term impacts to community facilities and events under and near the bridge (e.g., Skatepark, Saturday Market, park festivals, parades, organized runs, etc.).	2.35	◒		◒	
	2b.1	Minimize temporary impacts to community facilities and events under and near the bridge.	3.00	◒		○	
Equity and Environmental Justice	3a.1	Minimize temporary impacts to social service providers.	1.21	●	5.7 of 8 possible	●	6.0 of 8 possible
	3a.2	Maintain social service providers' long-term ability to provide current level of service and potential for enhancement.	1.21	●		●	
	3a.3	Avoid disproportionate adverse impacts to vulnerable and Environmental Justice communities.	1.21	●		●	
	3b.1	Minimize temporary impacts to social service providers.	1.17	◒		◔	
	3b.2	Avoid temporary disproportionate adverse impacts to vulnerable and Environmental Justice communities.	1.17	◒		◒	
	3b.3	Ensure that design and construction approach allow ample opportunities for DBE firms to be involved in the construction/ contracting process.	1.17	◒		◒	
Crime Reduction and Personal Safety	4a.1	Maximize personal safety and crime reduction by following principles of Crime Prevention Through Environmental Design (CPTED).	1.65	◒	1.0 of 2 possible	◒	1.0 of 2 possible
Business and Economics	5a.1	Minimize business displacements and permanent access impacts.	0.90	●	3.0 of 4 possible	●	2.9 of 4 possible
	5a.2	Support redevelopment potential consistent with local plans.	0.90	●		●	
	5b.1	Minimize temporary access impacts to businesses.	0.68	◒		●	
	5b.2	Minimize temporary regional economic impacts.	0.68	◒		◔	
	5b.3	Minimize loss of economic benefits (includes businesses and charities) from temporary impacts to major community events under and near the bridge.	0.68	◒		○	

Indicates: ■ Long Term ■ Short Term

AVERAGE CRITERION RATING 1 ○ 2 ◔ 3 ◒ 4 ◕ 5 ● Scores range from 1 (empty circles) at the lowest and 5 (full circles) at the highest.

Criteria Topic		Criteria Description	Weighting %	Full Bridge Closure		Temporary Bridge	
				Rating	Criteria Topic Score	Rating	Criteria Topic Score
Parks and Recreation Resources	6a.1	Minimize park displacements and adverse functionality impacts (include impacts to river recreation).	3.4	◔	3.7 of 6 possible	◒	2.5 of 6 possible
	6b.2	Minimize park displacements and adverse functionality impacts (include impacts to river recreation).	2.08	◔		○	
Historic Resources	7a.1	Minimize historic resource impacts.	4.95	◔	5.4 of 6 possible	◔	4.3 of 6 possible
	7b.1	Minimize temporary impacts to historic resources.	1.09	●		◒	
Visual and Aesthetics	8a.1	Minimize adverse impacts to existing views and view corridors.	1.28	●	2.3 of 4 possible	◔	2.1 of 4 possible
	8a.2	Maximize aesthetic experience for all users approaching, on, and under the bridge.	1.28	◒		◒	
	8a.3	Create opportunity for a crossing that provides an iconic/ demonstrative visual experience.	1.28	○		○	
		N/A					
Natural Resources, Climate Change, and Sustainability	9a.1	Minimize impacts to water quality and flooding.	3.29	◒	6.8 of 11 possible	◒	4.9 of 11 possible
	9a.2	Minimize impacts to fish and wildlife.	3.29	◒		◒	
	9b.1	Minimize temporary impacts to water quality and flooding.	0.97	●		◔	
	9b.2	Minimize temporary impacts to air quality, greenhouse gas emissions and carbon sequestration.	0.97	◔		○	
	9b.3	Minimize temporary impacts to fish and wildlife.	0.97	◒		○	
	9b.4	Minimize resource consumption and waste production during construction.	0.97	◒		○	
Pedestrians, Bicyclists and People with Disabilities (ADA – Americans with Disabilities Act)	10a.1	Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).	3.14	◔	8.5 of 12 possible	◔	10.1 of 12 possible
	10a.2	Minimize temporary travel time and access/connectivity impacts to pedestrians.	3.14	◔		◔	
	10a.3	Maximize access/connectivity for pedestrians and ADA.	3.14	◔		◔	
	10b.1	Minimize temporary travel time and access/connectivity impacts to bicyclists.	0.89	○		●	
	10b.2	Minimize temporary travel time and access/connectivity impacts to pedestrians.	0.89	○		◒	
	10b.3	Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).	0.89	○		◔	
Motor Vehicles, Freight, and Emergency Vehicles	11a.1	Maximize safety for motor vehicles and freight.	3.41	◒	7.0 of 11 possible	◒	7.0 of 11 possible
	11a.2	Maximize emergency service operations and responsiveness.	3.41	◒		◒	
	11b.1	Minimize temporary access and travel time impacts to freight and emergency vehicles.	1.39	◔		◔	
	11b.2	Minimize temporary safety, impacts to motor vehicles, freight, and emergency vehicles.	1.39	◒		◒	
	11b.3	Minimize temporary access and travel time impacts to motor vehicles.	1.39	◔		◔	
Transit	12a.1	Maximize Streetcar readiness.	2.64	◒	7.6 of 11 possible	◒	7.6 of 11 possible
	12a.2	Maximize bus accessibility.	2.64	●		●	
	12a.3	Minimize transit collision vulnerability.	2.64	◒		◒	
	12b.1	Minimize temporary impacts to transit access, safety, travel times, and ridership.	3.08	◒		◒	
Fiscal Responsibility	13a.1	Minimize total Project cost.	2.75	●	5.5 of 6 possible	◒	4.4 of 6 possible
	13a.2	Minimize long-term maintenance needs/costs.	2.75	●		●	
		N/A					
ALTERNATIVE 2: Replacement – Short Span			Total		75		66

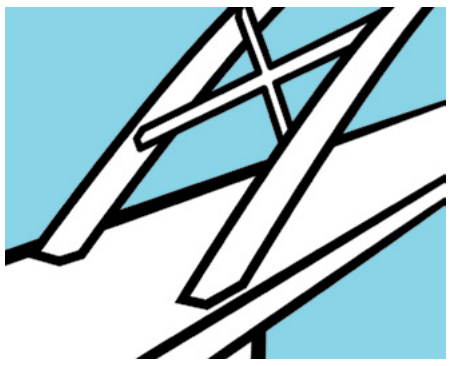
Indicates: ■ Long Term ■ Short Term

AVERAGE CRITERION RATING

1 ○ 2 ◔ 3 ◒ 4 ◔ 5 ●

Scores range from 1 (empty circles) at the lowest and 5 (full circles) at the highest.

ALTERNATIVE 3: Replacement – Long Span



Description:

New movable bridge at about the same height and location as the current bridge but with longer and fewer spans than compared to all other alternatives. This would include additional above deck structure to accomplish.

Total Score out of 100		
Full Bridge Closure	82	
Temporary Bridge	72	

BETTER - SAFER - CONNECTED

Criteria Topic		Criteria Description	Weighting %	Full Bridge Closure		Temporary Bridge	
				Rating	Criteria Topic Score	Rating	Criteria Topic Score
Seismic Resiliency	1a.1:	Maximize confidence in post-earthquake crossing operability and reparability.	3.33	●	13.6 of 14 possible	●	10.2 of 14 possible
	1a.2:	Maximize ability for all modes to use the crossing post-earthquake.	3.33	◔		◔	
	1a.3	Minimize risk that adjacent buildings could damage or block the bridge after a major earthquake, and minimize risk that crossing construction could lessen the seismic resilience of adjacent buildings.	3.33	●		●	
	1b.1	Minimize delay in achieving a seismically resilient crossing.	4.29	●		○	
Community Quality of Life	2a.1	Minimize long-term noise and light/shadow impacts.	2.35	●	7.7 of 8 possible	●	5.3 of 8 possible
	2a.2	Minimize long-term impacts to community facilities and events under and near the bridge (e.g., Skatepark, Saturday Market, park festivals, parades, organized runs, etc.).	2.35	●		●	
	2b.1	Minimize temporary impacts to community facilities and events under and near the bridge.	3.00	●		○	
Equity and Environmental Justice	3a.1	Minimize temporary impacts to social service providers.	1.21	●	6.2 of 8 possible	●	6.0 of 8 possible
	3a.2	Maintain social service providers' long-term ability to provide current level of service and potential for enhancement.	1.21	●		●	
	3a.3	Avoid disproportionate adverse impacts to vulnerable and Environmental Justice communities.	1.21	●		●	
	3b.1	Minimize temporary impacts to social service providers.	1.17	◒		◔	
	3b.2	Avoid temporary disproportionate adverse impacts to vulnerable and Environmental Justice communities.	1.17	●		◒	
	3b.3	Ensure that design and construction approach allow ample opportunities for DBE firms to be involved in the construction/ contracting process.	1.17	◒		◒	
Crime Reduction and Personal Safety	4a.1	Maximize personal safety and crime reduction by following principles of Crime Prevention Through Environmental Design (CPTED).	1.65	●	1.7 of 2 possible	●	1.7 of 2 possible
Business and Economics	5a.1	Minimize business displacements and permanent access impacts.	0.90	●	3.3 of 4 possible	●	2.9 of 4 possible
	5a.2	Support redevelopment potential consistent with local plans.	0.90	●		●	
	5b.1	Minimize temporary access impacts to businesses.	0.68	◒		●	
	5b.2	Minimize temporary regional economic impacts.	0.68	◒		◔	
	5b.3	Minimize loss of economic benefits (includes businesses and charities) from temporary impacts to major community events under and near the bridge.	0.68	●		○	

Indicates: ■ Long Term ■ Short Term

AVERAGE CRITERION RATING 1 ○ 2 ◔ 3 ◒ 4 ◕ 5 ●

Scores range from 1 (empty circles) at the lowest and 5 (full circles) at the highest.

Criteria Topic		Criteria Description	Weighting %	Full Bridge Closure		Temporary Bridge	
				Rating	Criteria Topic Score	Rating	Criteria Topic Score
Parks and Recreation Resources	6a.1	Minimize park displacements and adverse functionality impacts (include impacts to river recreation).	3.4	●	4.7 of 6 possible	◕	3.7 of 6 possible
	6b.2	Minimize park displacements and adverse functionality impacts (include impacts to river recreation).	2.08	◓		◔	
Historic Resources	7a.1	Minimize historic resource impacts.	4.95	◓	4.1 of 6 possible	◔	3.0 of 6 possible
	7b.1	Minimize temporary impacts to historic resources.	1.09	●		◓	
Visual and Aesthetics	8a.1	Minimize adverse impacts to existing views and view corridors.	1.28	◓	3.3 of 4 possible	◔	3.1 of 4 possible
	8a.2	Maximize aesthetic experience for all users approaching, on, and under the bridge.	1.28	●		●	
	8a.3	Create opportunity for a crossing that provides an iconic/ demonstrative visual experience.	1.28	●		●	
		N/A					
Natural Resources, Climate Change, and Sustainability	9a.1	Minimize impacts to water quality and flooding.	3.29	◕	9.0 of 11 possible	◕	7.0 of 11 possible
	9a.2	Minimize impacts to fish and wildlife.	3.29	●		●	
	9b.1	Minimize temporary impacts to water quality and flooding.	0.97	●		◔	
	9b.2	Minimize temporary impacts to air quality, greenhouse gas emissions and carbon sequestration.	0.97	◕		○	
	9b.3	Minimize temporary impacts to fish and wildlife.	0.97	●		◓	
	9b.4	Minimize resource consumption and waste production during construction.	0.97	◓		○	
Pedestrians, Bicyclists and People with Disabilities (ADA – Americans with Disabilities Act)	10a.1	Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).	3.14	◕	8.5 of 12 possible	◕	10.1 of 12 possible
	10a.2	Minimize temporary travel time and access/connectivity impacts to pedestrians.	3.14	◕		◕	
	10a.3	Maximize access/connectivity for pedestrians and ADA.	3.14	◕		◕	
	10b.1	Minimize temporary travel time and access/connectivity impacts to bicyclists.	0.89	○		●	
	10b.2	Minimize temporary travel time and access/connectivity impacts to pedestrians.	0.89	○		◓	
	10b.3	Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).	0.89	○		◕	
Motor Vehicles, Freight, and Emergency Vehicles	11a.1	Maximize safety for motor vehicles and freight.	3.41	◓	7.0 of 11 possible	◓	7.0 of 11 possible
	11a.2	Maximize emergency service operations and responsiveness.	3.41	◓		◓	
	11b.1	Minimize temporary access and travel time impacts to freight and emergency vehicles.	1.39	◕		◕	
	11b.2	Minimize temporary safety, impacts to motor vehicles, freight, and emergency vehicles.	1.39	◓		◓	
	11b.3	Minimize temporary access and travel time impacts to motor vehicles.	1.39	◕		◕	
Transit	12a.1	Maximize Streetcar readiness.	2.64	◓	7.6 of 11 possible	◓	7.6 of 11 possible
	12a.2	Maximize bus accessibility.	2.64	●		●	
	12a.3	Minimize transit collision vulnerability.	2.64	◓		◓	
	12b.1	Minimize temporary impacts to transit access, safety, travel times, and ridership.	3.08	◓		◓	
Fiscal Responsibility	13a.1	Minimize total Project cost.	2.75	●	5.5 of 6 possible	◓	4.4 of 6 possible
	13a.2	Minimize long-term maintenance needs/costs.	2.75	●		●	
		N/A					
ALTERNATIVE 3: Replacement – Long Span			Total		82		72

Indicates: ■ Long Term ■ Short Term

AVERAGE CRITERION RATING

1 ○ 2 ◔ 3 ◓ 4 ◕ 5 ●

Scores range from 1 (empty circles) at the lowest and 5 (full circles) at the highest.

ALTERNATIVE 4: Replacement – Couch Extension

Description:

New movable bridge of about the same height as the current bridge but instead of NE Couch St connecting into Burnside where it does now on the eastside, the bridge would extend out and over NE 2nd Ave and the highway and connect back to the bridge at a point over the river.

Total Score out of 100	
Full Bridge Closure	65
Temporary Bridge	57

BETTER - SAFER - CONNECTED

Criteria Topic		Criteria Description	Weighting %	Full Bridge Closure		Temporary Bridge	
				Rating	Criteria Topic Score	Rating	Criteria Topic Score
Seismic Resiliency	1a.1:	Maximize confidence in post-earthquake crossing operability and reparability.	3.33	◓	9.0 of 14 possible	◓	5.5 of 14 possible
	1a.2:	Maximize ability for all modes to use the crossing post-earthquake.	3.33	○		○	
	1a.3	Minimize risk that adjacent buildings could damage or block the bridge after a major earthquake, and minimize risk that crossing construction could lessen the seismic resilience of adjacent buildings.	3.33	◓		◓	
	1b.1	Minimize delay in achieving a seismically resilient crossing.	4.29	●		○	
Community Quality of Life	2a.1	Minimize long-term noise and light/shadow impacts.	2.35	◔	4.1 of 8 possible	◔	2.9 of 8 possible
	2a.2	Minimize long-term impacts to community facilities and events under and near the bridge (e.g., Skatepark, Saturday Market, park festivals, parades, organized runs, etc.).	2.35	◓		◓	
	2b.1	Minimize temporary impacts to community facilities and events under and near the bridge.	3.00	◓		○	
Equity and Environmental Justice	3a.1	Minimize temporary impacts to social service providers.	1.21	●	5.7 of 8 possible	●	6.0 of 8 possible
	3a.2	Maintain social service providers' long-term ability to provide current level of service and potential for enhancement.	1.21	●		●	
	3a.3	Avoid disproportionate adverse impacts to vulnerable and Environmental Justice communities.	1.21	●		●	
	3b.1	Minimize temporary impacts to social service providers.	1.17	◓		◔	
	3b.2	Avoid temporary disproportionate adverse impacts to vulnerable and Environmental Justice communities.	1.17	◓		◓	
	3b.3	Ensure that design and construction approach allow ample opportunities for DBE firms to be involved in the construction/ contracting process.	1.17	◓		◓	
Crime Reduction and Personal Safety	4a.1	Maximize personal safety and crime reduction by following principles of Crime Prevention Through Environmental Design (CPTED).	1.65	◓	1.0 of 2 possible	◓	1.0 of 2 possible
Business and Economics	5a.1	Minimize business displacements and permanent access impacts.	0.90	◔	2.2 of 4 possible	◔	2.5 of 4 possible
	5a.2	Support redevelopment potential consistent with local plans.	0.90	●		●	
	5b.1	Minimize temporary access impacts to businesses.	0.68	○		●	
	5b.2	Minimize temporary regional economic impacts.	0.68	◓		◓	
	5b.3	Minimize loss of economic benefits (includes businesses and charities) from temporary impacts to major community events under and near the bridge.	0.68	◓		○	

Indicates: ■ Long Term ■ Short Term

AVERAGE CRITERION RATING 1 ○ 2 ◔ 3 ◓ 4 ◕ 5 ●

Scores range from 1 (empty circles) at the lowest and 5 (full circles) at the highest.

Criteria Topic		Criteria Description	Weighting %	Full Bridge Closure		Temporary Bridge	
				Rating	Criteria Topic Score	Rating	Criteria Topic Score
Parks and Recreation Resources	6a.1	Minimize park displacements and adverse functionality impacts (include impacts to river recreation).	3.4	◔	3.7 of 6 possible	◒	2.5 of 6 possible
	6b.2	Minimize park displacements and adverse functionality impacts (include impacts to river recreation).	2.08	◔		○	
Historic Resources	7a.1	Minimize historic resource impacts.	4.95	◔	4.7 of 6 possible	◒	3.6 of 6 possible
	7b.1	Minimize temporary impacts to historic resources.	1.09	●		◒	
Visual and Aesthetics	8a.1	Minimize adverse impacts to existing views and view corridors.	1.28	◔	2.1 of 4 possible	◔	2.1 of 4 possible
	8a.2	Maximize aesthetic experience for all users approaching, on, and under the bridge.	1.28	◒		◒	
	8a.3	Create opportunity for a crossing that provides an iconic/ demonstrative visual experience.	1.28	◒		◒	
		N/A					
Natural Resources, Climate Change, and Sustainability	9a.1	Minimize impacts to water quality and flooding.	3.29	◒	6.8 of 11 possible	◒	4.7 of 11 possible
	9a.2	Minimize impacts to fish and wildlife.	3.29	◒		◒	
	9b.1	Minimize temporary impacts to water quality and flooding.	0.97	●		○	
	9b.2	Minimize temporary impacts to air quality, greenhouse gas emissions and carbon sequestration.	0.97	◔		○	
	9b.3	Minimize temporary impacts to fish and wildlife.	0.97	◒		○	
	9b.4	Minimize resource consumption and waste production during construction.	0.97	◒		○	
Pedestrians, Bicyclists and People with Disabilities (ADA – Americans with Disabilities Act)	10a.1	Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).	3.14	◒	5.8 of 12 possible	◒	7.4 of 12 possible
	10a.2	Minimize temporary travel time and access/connectivity impacts to pedestrians.	3.14	◒		◒	
	10a.3	Maximize access/connectivity for pedestrians and ADA.	3.14	◔		◔	
	10b.1	Minimize temporary travel time and access/connectivity impacts to bicyclists.	0.89	○		●	
	10b.2	Minimize temporary travel time and access/connectivity impacts to pedestrians.	0.89	○		◒	
	10b.3	Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).	0.89	○		◔	
Motor Vehicles, Freight, and Emergency Vehicles	11a.1	Maximize safety for motor vehicles and freight.	3.41	◒	6.8 of 11 possible	◒	6.8 of 11 possible
	11a.2	Maximize emergency service operations and responsiveness.	3.41	◒		◒	
	11b.1	Minimize temporary access and travel time impacts to freight and emergency vehicles.	1.39	◔		◔	
	11b.2	Minimize temporary safety, impacts to motor vehicles, freight, and emergency vehicles.	1.39	◒		◒	
	11b.3	Minimize temporary access and travel time impacts to motor vehicles.	1.39	◒		◒	
Transit	12a.1	Maximize Streetcar readiness.	2.64	●	9.8 of 11 possible	●	9.8 of 11 possible
	12a.2	Maximize bus accessibility.	2.64	●		●	
	12a.3	Minimize transit collision vulnerability.	2.64	●		●	
	12b.1	Minimize temporary impacts to transit access, safety, travel times, and ridership.	3.08	◒		◒	
Fiscal Responsibility	13a.1	Minimize total Project cost.	2.75	◒	3.3 of 6 possible	○	2.2 of 6 possible
	13a.2	Minimize long-term maintenance needs/costs.	2.75	◒		◒	
		N/A					
ALTERNATIVE 4: Replacement – Couch Extension			Total		65		57

Indicates: ■ Long Term ■ Short Term

AVERAGE CRITERION RATING

1 ○ 2 ◔ 3 ◒ 4 ◕ 5 ●

Scores range from 1 (empty circles) at the lowest and 5 (full circles) at the highest.

NEPA Evaluation Criteria Rating Sheet

Status Date: May 7, 2020

Group	CTF Weighting Factor (WF)	Criteria	Measure	(1) CTF Weighting Factor (WF)	(2) CTF Weighting Factor per Criteria	(3) % of WF to each Measure	(4) = (2) x (3) CTF WF applied to each Measure (%)	Alt 1: Enhanced Seismic Retrofit								Alt 2: In-kind Replacement (Short Span)								Alt 3: In-kind Replacement (Long Span)								Alt 4: Couch Connection Replacement							
								Temp Bridge (All Modes / Full Width)		Temp Bridge (Bike/Ped Only)		Temp Bridge (Bus/Bike/Ped)		Detour Traffic		Temp Bridge (All Modes / Full Width)		Temp Bridge (Bike/Ped Only)		Temp Bridge (Bus/Bike/Ped)		Detour Traffic		Temp Bridge (All Modes / Full Width)		Temp Bridge (Bike/Ped Only)		Temp Bridge (Bus/Bike/Ped)		Detour Traffic		Temp Bridge (All Modes / Full Width)		Temp Bridge (Bike/Ped Only)		Temp Bridge (Bus/Bike/Ped)		Detour Traffic	
								Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)
Group 1: Seismic Resiliency	10.00%	1a.1: Maximize confidence in post-earthquake crossing operability and reparability.	1	10.00%	3.33%	50%	1.67%	1	0.017	1	0.017	1	0.017	1	0.017	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083
			2			50%	1.67%	1	0.017	1	0.017	1	0.017	1	0.017	3	0.050	3	0.050	3	0.050	3	0.050	3	0.050	3	0.050	3	0.050	3	0.050	1	0.017	1	0.017	1	0.017	1	0.017
		1a.2: Maximize ability for all modes to use the crossing post-earthquake.	1		3.33%	50%	1.67%	5	0.083	5	0.083	5	0.083	5	0.083	3	0.050	3	0.050	3	0.050	3	0.050	3	0.050	3	0.050	3	0.050	3	0.050	1	0.017	1	0.017	1	0.017	1	0.017
			2			50%	1.67%	1	0.017	1	0.017	1	0.017	1	0.017	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083	5	0.083	1	0.017	1	0.017	1	0.017	1	0.017
		1a.3 Minimize risk that adjacent buildings could damage or block the bridge after a major earthquake, and minimize risk that crossing construction could lessen the seismic resilience of adjacent buildings.	1		3.33%	100%	3.33%	5	0.167	5	0.167	5	0.167	5	0.167	5	0.167	5	0.167	5	0.167	5	0.167	5	0.167	5	0.167	5	0.167	5	0.167	3	0.100	3	0.100	3	0.100	3	0.100
	4.29%	1b.1: Minimize delay in achieving a seismically resilient crossing.	1	4.29%	4.29%	100%	4.29%	3	0.129	3	0.129	3	0.129	5	0.214	1	0.043	1	0.043	1	0.043	5	0.214	1	0.043	1	0.043	1	0.043	5	0.214	1	0.043	1	0.043	1	0.043	5	0.214
Group 2: Community Quality of Life (includes Indirect Land Use Impacts and Community Resources)	4.69%	2a.1: Minimize long-term noise and light/shadow impacts.	1	4.69%	2.35%	50%	1.17%	1	0.012	1	0.012	1	0.012	1	0.012	3	0.035	3	0.035	3	0.035	3	0.035	5	0.059	5	0.059	5	0.059	5	0.059	1	0.012	1	0.012	1	0.012	1	0.012
			2			50%	1.17%	5	0.059	5	0.059	5	0.059	5	0.059	5	0.059	5	0.059	5	0.059	5	0.059	5	0.059	5	0.059	5	0.059	5	0.059	3	0.035	3	0.035	3	0.035	3	0.035
		2a.2: Minimize long-term impacts to community facilities and events under and near the bridge (e.g., Skatepark, Saturday Market, park festivals, parades, organized runs, etc.).	1		2.35%	50%	1.17%	1	0.012	1	0.012	1	0.012	1	0.012	3	0.035	3	0.035	3	0.035	3	0.035	5	0.059	5	0.059	5	0.059	5	0.059	3	0.035	3	0.035	3	0.035	3	0.035
			2			50%	1.17%	1	0.012	1	0.012	1	0.012	1	0.012	3	0.035	3	0.035	3	0.035	3	0.035	5	0.059	5	0.059	5	0.059	5	0.059	3	0.035	3	0.035	3	0.035	3	0.035
	3.00%	2b.1: Minimize temporary impacts to community facilities and events under and near the bridge.	1	3.00%	3.00%	50%	1.50%	1	0.015	1	0.015	1	0.015	3	0.045	1	0.015	1	0.015	1	0.015	3	0.045	1	0.015	1	0.015	1	0.015	5	0.075	1	0.015	1	0.015	1	0.015	3	0.045
			2			50%	1.50%	1	0.015	1	0.015	1	0.015	3	0.045	1	0.015	1	0.015	1	0.015	3	0.045	1	0.015	1	0.015	1	0.015	5	0.075	1	0.015	1	0.015	1	0.015	3	0.045
Group 3: Equity and Environmental Justice (includes Social Services)	3.64%	3a.1: Minimize displacements of emergency beds.	1	3.64%	1.21%	100%	1.21%	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061	5	0.061
		3a.2: Maintain social service providers' long-term ability to provide current level of service and potential for enhancement.	1		1.21%	33%	0.40%	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020
			2			33%	0.40%	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020
			3			33%	0.40%	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020	5	0.020
		3a.3: Avoid disproportionate adverse impacts to vulnerable and Environmental Justice communities.	1		1.21%	50%	0.61%	3	0.018	3	0.018	3	0.018	3	0.018	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030
			2			50%	0.61%	3	0.018	3	0.018	3	0.018	3	0.018	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030	5	0.030
	3.50%	3b.1: Minimize temporary impacts to social service providers.	1	3.50%	1.17%	50%	0.58%	1	0.006	1	0.006	1	0.006	1	0.006	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017
			2			50%	0.58%	1	0.006	1	0.006	1	0.006	1	0.006	5	0.029	5	0.029	5	0.029	3	0.017	5	0.029	5	0.029	5	0.029	3	0.017	5	0.029	5	0.029	5	0.029	3	0.017
		3b.2: Avoid temporary disproportionate adverse impacts to vulnerable and Environmental Justice communities.	1		1.17%	50%	0.58%	1	0.006	1	0.006	1	0.006	1	0.006	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017
			2			50%	0.58%	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	3	0.017	5	0.029	3	0.017	3	0.017	3	0.017	3	0.017
		3b.3: Ensure that design and construction approach allow ample opportunities for DBE firms to be involved in the construction/contracting process.	1		1.17%	100%	1.17%	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035	3	0.035
Group 4: Crime Reduction and Personal Safety	1.65%	4a.1: Maximize personal safety and crime reduction by following principles of Crime Prevention Through Environmental Design (CPTED).	1	1.65%	1.65%	50%	0.83%	1	0.008	1	0.008	1	0.008	1	0.008	3	0.025	3	0.025	3	0.025	3	0.025	5	0.041	5	0.041	5	0.041	5	0.041	3	0.025	3	0.025	3	0.025	3	0.025
			2			50%	0.83%	1	0.008	1	0.008	1	0.008	1	0.008	3	0.025	3	0.025	3	0.025	3	0.025	5	0.041	5	0.041	5	0.041	5	0.041	3	0.025	3	0.025	3	0.025	3	0.025
	0.00%																																						
Group 5: Business and Economics	1.81%	5a.1: Minimize business displacements and permanent access impacts.	1	1.81%	0.90%	50%	0.45%	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	3	0.014	3	0.014	3	0.014	3	0.014
			2			50%	0.45%	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	5	0.023	1	0.005	1	0.005	1	0.005	1	0.005
		5a.2: Support redevelopment potential consistent with local plans.	1		0.90%	100%	0.90%	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045	5	0.045
	2.04%	5b.1: Minimize temporary access impacts to businesses.	1	2.04%	0.68%	100%	0.68%	5	0.034	3	0.020	3	0.020	5	0.034	3	0.020	3	0.020	5	0.034	3	0.020	5	0.034	3	0.020	3	0.020	5	0.034	3	0.020	3	0.020	1	0.007		
		5b.2: Minimize temporary regional economic impacts.	1		0.68%	50%	0.34%	3	0.010	3	0.010	1	0.003	1	0.003	3	0.010	3	0.010	1	0.003	1	0.003	3	0.010	3	0.010	1	0.003	1	0.003	5	0.017	3	0.010	1	0.003	1	0.003		
			2			50%	0.34%	1	0.003	1	0.003	1	0.003	3	0.010	1	0.003	1	0.003	1	0.003	5	0.017	1	0.003	1	0.003	1	0.003	1	0.003	5	0.017	1	0.003	1	0.003	1	0.003	5	0.017
		5b.3: Minimize loss of economic benefits (includes businesses and charities) from temporary impacts to major community events under and near the bridge.	1		0.68%	100%	0.68%	1	0.007	1	0.007	1	0.007	3	0.020	1	0.007	1	0.007	1	0.007	3	0.020	1	0.007	1	0.007	1	0.007	1	0.007	5	0.034	1	0.007	1	0.007	1	0.007	3	0.020
Group 6: Park and Recreation Resources	3.40%	6a.1: Minimize park displacements and adverse functionality impacts, (include impacts to river recreation).	1	3.40%	3.40%	50%	1.70%	1	0.017	1	0.017	1	0.017	1	0.017	3	0.051	3	0.051	3	0.051	5	0.085	3	0.051	3	0.051	3	0.051	5	0.085	3	0.051	3	0.051	3	0.051	5	0.085
			2			50%	1.70%	1	0.017	1	0.017	1	0.017	1	0.017	3	0.051	3	0.051	3	0.051	5	0.085	5	0.085	5	0.085	5	0.085	5	0.085	3	0.051	3	0.051	3	0.051	3	0.051
	2.09%	6b.1: Minimize temporary impacts to parks.	1	2.09%	2.08%	33%	0.69%	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007	1	0.007
			2			33%	0.69%	1	0.007	1	0.007	1	0.007	3	0.021	1	0.007	1	0.007	1	0.007	3	0.021	3	0.021	3	0.021	3	0.021	3	0.021	5	0.035	1	0.007	1	0.007	1	0.007	3	0.021
			3			33%	0.69%	1	0.007	1	0.007	1	0.007	3	0.021	1	0.007	1	0.007	1	0.007	3	0.021	3	0.021	3	0.021	3	0.021	3	0.021	1	0.007	1	0.007	1	0.007	1	0.007	3	0.021
Group 7: Historic Resources	4.95%	7a.1: Minimize historic resource impacts.	1	4.95%	4.95%	33%	1.65%	5	0.082	5	0.082	5	0.082	5	0.082	1	0.016	1	0.016	1	0.016	3	0.049	1	0.016	1	0.016	1	0.016	3	0.049	1	0.016	1	0.016	1	0.016	3	0.049
			2			33%	1.65%	5	0.082	5	0.082	5	0.082	5	0.082	5	0.082	5	0.082	5	0.082	3	0.049	3	0.049	3	0.049	3	0.049	3	0.049	3	0.049	3	0.049	3	0.049	3	0.049	3	0.049
			3			33%	1.65%	5	0.082	5	0.082	5	0.082	5	0.082	5	0.082	5	0.082	5	0.082	3	0.049	3	0.049	3	0.049	3	0.049	3	0.049	5	0.082	5	0.082	5	0.082	5	0.082	5	0.082
	1.09%	7b.1: Minimize temporary impacts to historic resources.	1	1.09%	1.09%	100%	1.09%	1	0.011	1	0.011	1	0.011	1	0.011	3	0.033	3	0.033	3	0.033	3	0.033	5	0.054	3	0.033	3	0.033	3	0.033	5	0.054	3	0.033	3	0.033	3	0.033	5	0.054
Group 8: Visual and Aesthetics	3.85%	8a.1: Minimize adverse impacts to existing views and view corridors.	1	3.85%	1.28%	50%	0.64%	5	0.032	5	0.032	5	0.032	5	0.032	5	0.032	5	0.032	5	0.032	5	0.032	1	0.006	1	0.006	1	0.006	1	0.006	3	0.019	3	0.019	3	0.019	3	0.019
			2			50%	0.64%	1	0.006	1	0.006	1	0.006	3	0.019	3	0.019	3	0.019	3	0.019	5	0.032	3	0.019	3	0.019	3	0.019	5	0.032	1	0.006	1	0.006	1	0.006	1	0.006	1	0.006
		8a.2: Maximize aesthetic experience for all users approaching, on, and under the bridge.	1		1.28%	100%	1.28%	1	0.013	1	0.013	1	0.013	3	0.039	3	0.039	3	0.039	3	0.039	5	0.064	5	0.064	5	0.064	5	0.064	5	0.064	3	0.039	3	0.039	3	0.039	3	0.039	3	0.039
		8a.3: Create opportunity for a crossing that provides an iconic/demonstrative visual experience.	1		1.28%	100%	1.28%	1	0.013	1	0.013	1	0.013	1	0.013	1	0.013	1	0.013	1	0.013	5	0.064	5	0.064	5	0.064	5	0.064	5	0.064	3	0.039	3	0.039	3	0.039	3	0.039	3	0.039
	0.00%																																						
Group 9: Natural Resources, Climate Change and Sustainability	6.58%	9a.1: Minimize impacts to water quality and flooding.	1	6.58%	3.29%	33%	1.10%	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033
			2			33%	1.10%	1	0.011	1	0.011	1	0.011	1	0.011	3	0.033	3	0.033	3	0.033	3	0.033	5	0.055	5	0.055	5	0.055	5	0.055	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033
			3			33%	1.10%	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033	3	0.033
		9a.2: Minimize impacts to fish and wildlife.	1		3.29%	100%	3.29%	1	0.033	1	0.033	1	0.033	1	0.033	3	0.099	3	0.099	3	0.099	3	0.099	5	0.164	5	0.164	5	0.164	5	0.164	5	0.164	3	0.099	3	0.099	3	0.099	3	0.099
	3.86%	9b.1: Minimize temporary impacts to water quality and flooding.	1	3.86%	0.97%	50%	0.48%	3	0.014	3	0.014	3	0.014	5	0.024	3	0.014	3	0.014	3	0.014	5	0.024	3	0.014	3	0.014	3	0.014	5	0.024	1	0.005	1	0.005	1	0.005	5	0.024
			2			50%	0.48%	1	0.005	1	0.005	1	0.005	5	0.024	1	0.005	1	0.005	1	0.005	5	0.024	1	0.005	1	0.005	1	0.005	5	0.024	1	0.005	1	0.005	1	0.005	5	0.024		
		9b.2: Minimize temporary impacts to air quality and green-house gas emissions.	1		0.97%	50%	0.48%	3	0.014	3	0.014	3	0.014	5	0.024	1	0.005	1	0.005	1	0.005	1	0.005	3	0.014	1	0.005	1	0.005	1	0.005	3	0.014	1	0.005	1	0.005	1	0.005	3	0.014
			2			50%	0.48%	1	0.005	1	0.005	1	0.005	5	0.024	1	0.005	1	0.005	1	0.005	5	0.024	1	0.005	1	0.005	1	0.005	5	0.024	1	0.005	1	0.005	1	0.005	5	0.024		
		9b.3: Minimize temporary impacts to fish and wildlife.	1		0.97%	50%	0.48%	1	0.005	3	0.014	3	0.014	5	0.024	1	0.005	3	0.014	3	0.014	5	0.024	1	0.005	3	0.014	3	0.014	5	0.024	1	0.005	3	0.014	3	0.014	5	0.024		
			2			50%	0.48%	3	0.014	3	0.014	3	0.014	1	0.005	1	0.005	1	0.005	1	0.005	1	0.005	5	0.024	5	0.024	5	0.024	5	0.024	1	0.005	1	0.005	1	0.005	1	0.005		
		9b.4: Minimize resource consumption and waste production during construction.	1		0.97%	100%	0.97%	1	0.010	1	0.010	1	0.010	5	0.048	1	0.010	1	0.010	1	0.010	3	0.029	1	0.010	1	0.010	1	0.010	3	0.029	1	0.010	1	0.010	1	0.010	3	0.029		

NEPA Evaluation Criteria Rating Sheet

Status Date: May 7, 2020

Group	CTF Weighting Factor (WF)	Criteria	Measure	(1) CTF Weighting Factor (WF)	(2) CTF Weighting Factor per Criteria	(3) % of WF to each Measure	(4) = (2) x (3) CTF WF applied to each Measure (%)	Alt 1: Enhanced Seismic Retrofit								Alt 2: In-kind Replacement (Short Span)								Alt 3: In-kind Replacement (Long Span)								Alt 4: Couch Connection Replacement							
								Temp Bridge (All Modes / Full Width)		Temp Bridge (Bike/Ped Only)		Temp Bridge (Bus/Bike/Ped)		Detour Traffic		Temp Bridge (All Modes / Full Width)		Temp Bridge (Bike/Ped Only)		Temp Bridge (Bus/Bike/Ped)		Detour Traffic		Temp Bridge (All Modes / Full Width)		Temp Bridge (Bike/Ped Only)		Temp Bridge (Bus/Bike/Ped)		Detour Traffic		Temp Bridge (All Modes / Full Width)		Temp Bridge (Bike/Ped Only)		Temp Bridge (Bus/Bike/Ped)		Detour Traffic	
								Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)	Rating	Raw Score = Rating x (4)
Group 10: Pedestrians, Bicyclists and People with Disabilities (ADA – Americans with Disabilities Act)	9.43%	10a.1: Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).	1	0.00%	3.14%	33%	1.05%	3	0.031	3	0.031	3	0.031	3	0.031	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	3	0.031	3	0.031	3	0.031	3	0.031
			2			33%	1.05%	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	1	0.010	1	0.010	1	0.010	1	0.010
			3			33%	1.05%	1	0.010	1	0.010	1	0.010	1	0.010	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052
		10a.2: Maximize access/connectivity for bicyclists and other low-impact vehicles.	1		3.14%	50%	1.57%	5	0.079	5	0.079	5	0.079	5	0.079	5	0.079	5	0.079	5	0.079	5	0.079	5	0.079	5	0.079	5	0.079	5	0.079	3	0.047	3	0.047	3	0.047	3	0.047
			2			50%	1.57%	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047	3	0.047
		10a.3: Maximize access/connectivity for pedestrians and ADA.	1		3.14%	33%	1.05%	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	3	0.031	3	0.031	3	0.031	3	0.031
			2			33%	1.05%	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	5	0.052	1	0.010	1	0.010	1	0.010	1	0.010
			3			33%	1.05%	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031	3	0.031
	2.66%	10b.1: Minimize temporary travel time and access/connectivity impacts to bicyclists.	1	2.66%	0.89%	100%	0.89%	5	0.044	5	0.044	5	0.044	3	0.027	5	0.044	5	0.044	5	0.044	1	0.009	5	0.044	5	0.044	5	0.044	1	0.009	5	0.044	5	0.044	5	0.044	1	0.009
		10b.2: Minimize temporary travel time and access/connectivity impacts to pedestrians.	1		0.89%	100%	0.89%	5	0.044	5	0.044	5	0.044	3	0.027	3	0.027	3	0.027	3	0.027	1	0.009	3	0.027	3	0.027	3	0.027	1	0.009	3	0.027	3	0.027	3	0.027	1	0.009
		10b.3: Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).	1		0.89%	25%	0.22%	3	0.007	5	0.011	5	0.011	1	0.002	3	0.007	5	0.011	3	0.007	1	0.002	3	0.007	5	0.011	3	0.007	1	0.002	3	0.007	5	0.011	3	0.007	1	0.002
			2			25%	0.22%	5	0.011	5	0.011	5	0.011	1	0.002	5	0.011	5	0.011	5	0.011	1	0.002	5	0.011	5	0.011	5	0.011	1	0.002	5	0.011	5	0.011	5	0.011	1	0.002
			3			25%	0.22%	3	0.007	5	0.011	3	0.007	1	0.002	3	0.007	5	0.011	3	0.007	1	0.002	3	0.007	5	0.011	3	0.007	1	0.002	3	0.007	5	0.011	3	0.007	1	0.002
			4			25%	0.22%	5	0.011	1	0.002	5	0.011	1	0.002	5	0.011	1	0.002	5	0.011	1	0.002	5	0.011	1	0.002	5	0.011	1	0.002	5	0.011	1	0.002	5	0.011	1	0.002
Group 11: Motor Vehicles, Freight and Emergency Vehicles	6.81%	11a.1: Maximize safety for motor vehicles and freight.	1	6.81%	3.41%	100%	3.41%	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102
		11a.2: Maximize emergency service operations and responsiveness.	1		3.41%	100%	3.41%	1	0.034	1	0.034	1	0.034	1	0.034	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102	3	0.102
	4.18%	11b.1: Minimize temporary access and travel time impacts to, freight and emergency vehicles.	1	4.18%	1.39%	33%	0.46%	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	3	0.014	3	0.014
			2			33%	0.46%	3	0.014	3	0.014	3	0.014	5	0.023	1	0.005	1	0.005	1	0.005	5	0.023	1	0.005	1	0.005	1	0.005	5	0.023	1	0.005	1	0.005	1	0.005	5	0.023
			3			33%	0.46%	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	3	0.014	3	0.014
		11b.2: Minimize temporary safety, impacts to motor vehicles, freight, and emergency vehicles.	1		1.39%	100%	1.39%	3	0.042	3	0.042	3	0.042	5	0.070	3	0.042	3	0.042	3	0.042	3	0.042	3	0.042	3	0.042	3	0.042	3	0.042	3	0.042	3	0.042	3	0.042	3	0.042
		11b.3: Minimize temporary access and travel time impacts to motor vehicles.	1		1.39%	33%	0.46%	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	3	0.014	3	0.014
			2			33%	0.46%	3	0.014	3	0.014	3	0.014	5	0.023	1	0.005	1	0.005	1	0.005	5	0.023	1	0.005	1	0.005	1	0.005	5	0.023	1	0.005	1	0.005	1	0.005	5	0.023
			3			33%	0.46%	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	3	0.014	3	0.014	5	0.023	3	0.014	1	0.005	1	0.005
Group 12: Transit	7.91%	12a.1: Maximize streetcar readiness.	1	7.91%	2.64%	100%	2.64%	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	5	0.132	5	0.132	5	0.132
		12a.2: Maximize bus accessibility.	1		2.64%	100%	2.64%	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132	5	0.132
		12a.3: Minimize transit collision vulnerability.	1		2.64%	100%	2.64%	1	0.026	1	0.026	1	0.026	1	0.026	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	3	0.079	5	0.132	5	0.132	5	0.132	5	0.132
	3.08%	12b.1: Minimize temporary impacts on transit access, safety, travel times and ridership.	1	3.08%	3.08%	100%	3.08%	3	0.092	1	0.031	3	0.092	5	0.154	3	0.092	1	0.031	3	0.092	3	0.092	3	0.092	1	0.031	3	0.092	3	0.092	3	0.092	1	0.031	3	0.092	3	0.092
Group 13: Fiscal Responsibility	5.49%	13a.1: Minimize total project cost.	1	5.49%	2.75%	100%	2.75%	1	0.027	1	0.027	1	0.027	5	0.137	3	0.082	3	0.082	3	0.082	5	0.137	3	0.082	3	0.082	3	0.082	5	0.137	1	0.027	1	0.027	1	0.027	3	0.082
		13a.2: Minimize long-term maintenance needs/cost.	1		2.75%	100%	2.75%	1	0.027	1	0.027	1	0.027	5	0.137	5	0.137	5	0.137	5	0.137	5	0.137	5	0.137	5	0.137	5	0.137	5	0.137	3	0.082	3	0.082	3	0.082	3	0.082
	0.00%																																						
									2.64		2.54		2.60		3.06		3.30		3.20		3.26		3.73		3.59		3.49		3.55		4.10		2.84		2.73		2.79		3.25
		Summary Score (= Raw Score x Scaling Factor of 20):							**53**		**51**		**52**		**61**		**66**		**64**		**65**		**75**		**72**		**70**		**71**		**82**		**57**		**55**		**56**		**65**

EARTHQUAKE READY BURNSIDE BRIDGE

Evaluation Criteria & Measures: Rating Definitions

Department of Community Services
Transportation Division

SEISMIC RESILIENCY

Support reliable and rapid emergency response, evacuation and recovery after a major earthquake.

Criteria Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

1. Seismic Resiliency – support reliable and rapid emergency response, evacuation and recovery after a major earthquake	
Long Term	**1a.1 Maximize confidence in post-earthquake crossing operability and reparability.** *Measure: Qualitative assessment for how much reliance on original components is needed for seismic resiliency.* *Measure: Ability to implement reliable seismic performance mechanisms and devices.* **1a.2 Maximize ability for all modes to use the crossing post-earthquake.** *Measure: Ability to accommodate over-dimensional vehicles and loads.* *Measure: Ability to simultaneously accommodate all travel modes.* **1a.3 Minimize risk that adjacent buildings could damage or block the bridge after a major earthquake, and minimize risk that crossing construction could lessen the seismic resilience of adjacent buildings.** *Measure: Quantify level of risk exposure from adjacent buildings, weighting those alternatives that are at risk due to URM exposure from adjacent buildings at a higher risk.*
During Const.	**1b.1 Minimize delay in achieving a seismically resilient crossing.** *Measure: Estimated duration of construction*

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Seismic Resiliency: Criteria 1a.1

Criteria 1: Maximize confidence in post-earthquake crossing operability and reparability.		
Measure 1: Qualitative assessment for how much reliance on original components is needed for seismic resiliency.		
Scoring	**5**	No reliance on the remaining original (95+yr old) bridge components for another 100 years of design life after the project is complete
	3	N/A
	1	Complete reliance on the remaining original (95+yr old) bridge components for another 100 years of design life after the project is complete

Criteria Ratings Definitions

Seismic Resiliency: Criteria 1a.1

Topics:
Topic 1: Opportunity for Seismic performance Mechanism: Geotechnical Hazard

Topic 2: Opportunity for Seismic performance Devices

Criteria 1: Maximize confidence in post-earthquake crossing operability and reparability.		
Measure 2: Ability to implement reliable seismic performance mechanisms and devices.		
Scoring	**5**	Topic 1: Minimum Geotechnical Hazard Risk Topic 2: High Opportunity for Device Implementation
	3	Topic 1: Minimum Geotechnical Hazard Risk Topic 2: Moderate Opportunity for Device Implementation
	1	Topic 1: Minimum Geotechnical Hazard Risk Topic 2: Low Opportunity for Device Implementation

Criteria Ratings Definitions

Seismic Resiliency: Criteria 1a.2

Criteria 2: Maximize ability for all modes to use the crossing post-earthquake.		
Measure 1: Ability to accommodate over-dimensional vehicles and loads.		
Scoring	5	Largest effective width
	3	Middle effective width
	1	Smallest effective width

Criteria Ratings Definitions

Seismic Resiliency: Criteria 1a.2

Criteria 2: Maximize ability for all modes to use the crossing post-earthquake.		
Measure 2: Ability to simultaneously accommodate all travel modes.		
Scoring	5	Largest effective width
	3	Middle effective width
	1	Smallest effective width

Criteria Ratings Definitions

Seismic Resiliency: Criteria 1a.3

Criteria 3: Minimize risk that adjacent buildings could damage or block the bridge after a major earthquake, and minimize risk that crossing construction could lessen the seismic resilience of adjacent buildings.		
Measure 1: Quantify level of risk exposure from adjacent buildings, weighting those alternatives that are at risk due to URM exposure from adjacent buildings at a higher risk.		
Scoring	**5**	Smallest effective building surface area along bridge sides
	3	Largest effective building surface area along bridge sides
	1	N/A

Criteria Ratings Definitions

Seismic Resiliency: Criteria 1b.1

Criteria 1: Minimize delay in achieving a seismically resilient crossing.		
Measure 1: Estimated duration of construction.		
Scoring	5	Lowest 1/3 of construction duration range
	3	Middle 1/3 of construction duration range
	1	Highest 1/3 of construction duration range

COMMUNITY QUALITY OF LIFE

(includes Indirect Land Use Impacts and Community Resources)

Promote land use compatibility and minimize impacts to community facilities and events.

Criteria Definitions

2. Community Quality of Life – promote land use compatibility and minimize impacts to community facilities and events	
Long Term	**2a.1 Minimize long-term noise and light/shadow impacts.** *Measure: Qualitative assessment of light/shadow impacts due to changes in roadway alignments relative to land uses (e.g., will new alignment direct headlights at or away from residential uses; will it change sunlight/shadow on residential or community spaces?).* *Measure: Assessment of noise impacts due to changes in roadway alignments relative to land uses.* **2a.2 Minimize long-term impacts to community facilities and events under and near the bridge (e.g., Skatepark, Saturday Market, park festivals, parades, organized runs, etc.).** *Measure: Number of community facilities impacted, as well as magnitude and character of those impacts* *Measure: Number of community events impacted, as well as magnitude and character of those impacts.*
During Const.	**2b.1 Minimize temporary impacts to community facilities and events under and near the bridge.** *Measure: Number of community facilities impacted, as well as magnitude and duration of those impacts.* *Measure: Number of community events impacted, as well as magnitude and duration of those impacts.*

Criteria Ratings Definitions

Community Quality of Life: Criteria 2a.1

Criteria 1: Minimize long-term noise and light/shadow impacts.		
Measure 1: Qualitative assessment of light/shadow impacts due to changes in roadway alignments relative to land uses.		
Scoring	5	No added headlight impacts to residences (no alignment change); and most reduction in piers/bents and shadow underneath
	3	No added headlight impacts to residences; moderate reduction in piers/bents and shadow under bridge
	1	New alignment directs headlights toward residences; and/or no reduction in piers/bents and shadow under bridge

Criteria Ratings Definitions

Community Quality of Life: Criteria 2a.1

Criteria 1: Minimize long-term noise and light/shadow impacts.		
Measure 2: Assessment of noise impacts due to changes in roadway alignments relative to land uses.		
Scoring	5	No or little change in modelled noise impacts
	3	Medium increase in modelled noise impacts
	1	High increase in noise impacts (no alternatives have high increases)

Criteria Ratings Definitions

Community Quality of Life: Criteria 2a.2

Criteria 2: Minimize long-term impacts to community facilities and events under and near the bridge.		
Measure 1: Number of community facilities impacted, as well as magnitude and character of those impacts.		
Scoring	5	Highest net benefit to community facilities (no impacts to Skate Park; opens area under bridge for Waterfront Park/Saturday Market; and increases area on bridge dedicated to bike and peds)
	3	Medium net benefit to community facilities (no permanent impacts to community facilities; moderate decrease in bridge column footprint in space used for Saturday Market; and increases area on bridge dedicated to bikes and peds)
	1	Lowest net benefits to community facilities (increases bridge column footprint in Skatepark; increases bridge column footprint area for Saturday Market; least increase in ped and bike area on bridge)

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Community Quality of Life: Criteria 2a.2

Criteria 2: Minimize long-term impacts to community facilities and events under and near the bridge.		
Measure 2: Number of community events impacted, as well as magnitude and character of those impacts.		
Scoring	5	Highest net benefit to community events (highest opening of area under bridge to allow more activated space and potentially more events; increase in width and protection of ped and bike facilities on bridge)
	3	Medium net benefit to community events (moderate opening of area under bridge; increase in ped and bike facility width on bridge)
	1	Lowest net benefit to community events (no opening of area under bridge; least increase in ped and bike area on bridge)

Criteria Ratings Definitions

Community Quality of Life: Criteria 2b.1

Criteria 1: Minimize temporary impacts to community facilities and events under and near the bridge.		
Measure 1: Number of community facilities impacted, as well as magnitude and duration of those impacts.		
Scoring	5	Lowest temporary impact to community facilities (shortest duration closure for most of the referenced facilities, and longest duration closure)
	3	Medium temporary impact to community facilities (shortest or medium duration closure for most of the referenced facilities, and longest duration closure of not more than one)
	1	Highest temporary impact to community facilities (medium or longest duration closure of all of the referenced facilities)

Referenced Facilities:

- Saturday Market
- Esplanade
- Skatepark

Criteria Ratings Definitions

Community Quality of Life: Criteria 2b.1

Reference facilities that host events including:

- Saturday Market area
- Organized runs/walks on the Esplanade/Waterfront Trail loop
- Skatepark

Criteria 1: Minimize temporary impacts to community facilities and events under and near the bridge.		
Measure 2: Number of community events impacted, as well as magnitude and duration of those impacts.		
Scoring	5	Lowest temporary impact to community events (shortest duration closure for most of the referenced facilities, and longest duration closure for none of the referenced facilities)
	3	Medium temporary impact to community events (shortest or medium duration closure for most of the referenced facilities, and longest duration closure of not more than one)
	1	Highest temporary impact to community events (medium or longest duration closure of all of the referenced facilities)

EQUITY AND ENVIRONMENTAL JUSTICE

(includes Social Services)

Promote transportation equity and minimize impacts to social service providers and historically marginalized populations.

Criteria Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

3. Equity and Environmental Justice – promote transportation equity and minimize impacts to social service providers and historically marginalized populations.

Long Term

3a.1 Minimize displacements of emergency beds.
Measure: Shelter beds displaced.

3a.2 Maintain social service providers' long-term ability to provide current level of service and potential for enhancement.
Measure: Social service provider functions (not including beds) displaced.

Measure: Permanent access impacts (number and significance), and availability and quality of alternative access (distance/convenience to alternative access).

Measure: Impact on ability of existing services to be enhanced, compared to No-build.

3a.3 Avoid disproportionate adverse impacts to vulnerable and Environmental Justice communities.
Measure: Based on qualitative analysis of impacts to low income and minority populations as measured in the analysis of compliance with the Exec Order on Environmental Justice.

Measure: Based on qualitative analysis of impacts to other vulnerable populations as identified during outreach conducted for the Diversity, Equity, and Inclusion program outreach.

Criteria Definitions

3. Equity and Environmental Justice – promote transportation equity and minimize impacts to social service providers and historically marginalized populations.

During Construction

3b.1 Minimize temporary impacts to social service providers.
Measure: Social service provider functions temporarily displaced.
Measure: Temporary access impacts (number, duration, and significance), and availability and quality of alternative access (walking distance/time to alternative locations).

3b.2 Avoid temporary disproportionate adverse impacts to vulnerable and Environmental Justice communities.
Measure: Based on qualitative analysis of impacts to low income and minority populations as measured in the analysis of compliance with the Exec Order on Environmental Justice.
Measure: Based on qualitative analysis of impacts to other vulnerable populations as identified during outreach conducted for the Diversity, Equity, and Inclusion program outreach.

3b.3 Ensure that design and construction approach allow ample opportunities for DBE firms to be involved in the construction/contracting process.
Measure: Approximate percentage of the construction work that could potentially be done by DBE (small) firms, relative to DBE goals.

Criteria Ratings Definitions

Equity and Environmental Justice: Criteria 3a.1

Criteria 1: Minimize displacements of emergency beds.		
Measure 1: Shelter beds displaced.		
Scoring	**5**	No shelter beds displaced (no alternatives displace shelter beds)
	3	Medium number of shelter beds displaced
	1	Highest number of shelter beds displaced

Criteria Ratings Definitions

Equity and Environmental Justice: Criteria 3a.2

Criteria 2: Maintain social service providers' long-term ability to provide current level of service and potential for enhancement.		
Measure 1: Social service provider functions (not including beds).		
Scoring	5	No or little permanent change in social service provider functions (all alternatives)
	3	Medium permanent change in social service provider functions
	1	Highest permanent change in social service provider functions

Criteria Ratings Definitions

Equity and Environmental Justice: Criteria 3a.2

Criteria 2: Maintain social service providers' long-term ability to provide current level of service and potential for enhancement.		
Measure 2: Permanent access impacts (number and significance), and availability and quality of alternative access (distance/convenience to alternative access).		
Scoring	**5**	No or little permanent impact to Social Services access (all alternatives)
	3	Medium permanent impact to Social Services access
	1	Highest permanent impact to Social Services access

Criteria Ratings Definitions

Equity and Environmental Justice : Criteria 3a.2

Criteria 2: Maintain social service providers' long-term ability to provide current level of service and potential for enhancement.		
Measure 3: Impact on ability of existing services to be enhanced, compared to No-build.		
Scoring	**5**	No or little permanent impact to social service to enhance services (all alternatives)
	3	Medium permanent impact to social service to enhance services
	1	Highest permanent impact to social service to enhance services

Criteria Ratings Definitions

Equity and Environmental Justice : Criteria 3a.3

Criteria 3: Avoid disproportionate adverse impacts to vulnerable and Environmental Justice communities.		
Measure 1: Based on qualitative analysis of impacts to low income and minority populations as measured in the analysis of compliance with the Exec Order on Environmental Justice.		
Scoring	**5**	Lowest level of net, long-term disproportionate adverse impacts to low income and minority populations (highest improvement in ped/bike facility width and safety on bridge; no physical impact to Skatepark)
	3	Medium level of net, long-term disproportionate adverse impacts to low income and minority populations (moderate improvements in ped/bike facility on bridge; physical impact to Skatepark)
	1	Highest level of net, long-term disproportionate adverse impacts to low income and minority populations **no alternatives have significant, long-term disproportionate adverse impacts to EJ populations so none get the lowest rating*

Criteria Ratings Definitions

Equity and Environmental Justice : Criteria 3b.1

Criteria 1: Minimize temporary impacts to social service providers.		
Measure 1: Social service provider functions temporarily displaced.		
Scoring	5	No temporary closure of social services functions including fixed location and mobile functions
	3	Low to Medium risk of temporary closure of fixed location functions, and/or temporary displacement of Night Strike
	1	High risk of temporary closure of some fixed location functions and temporary displacement of Night Strike

Criteria Ratings Definitions

Equity and Environmental Justice : Criteria 3b.1

Criteria 1: Minimize temporary impacts to social service providers.		
Measure 2: Temporary access impacts (number, duration, and significance), and availability and quality of alternative access (walking distance/time to alternative locations).		
Scoring	5	Maintains Burnside Street direct client access to all social services agencies during construction; Crossing open during construction
	3	Maintains Burnside Street direct client access to all social services agencies during construction; Crossing closed during construction
	1	Blocks Burnside Street direct client access to at least one social services agency during construction

Criteria Ratings Definitions

Equity and Environmental Justice : Criteria 3b.2

Referenced Items:

- Crossing open or closed
- Duration of Skatepark Closure
- duration closure of WF park
- Duration closure of Esplanade
- Closure or not of client access to SS
- Duration closure of Skidmore MAX station

Criteria 2: Avoid temporary disproportionate adverse impacts to vulnerable and Environmental Justice communities.		
Measure 1: Based on qualitative analysis of impacts to low income and minority populations as measured in the analysis of compliance with the Exec Order on Environmental Justice.		
Scoring	5	Lowest level of net temporary disproportionate adverse impacts, relative to benefits, to low income and minority populations (at least four of the referenced items)
	3	Medium level of temporary disproportionate adverse impacts, relative to benefits to low income and minority populations (2 or 3 of the referenced items)
	1	Highest level of temporary disproportionate adverse impacts, relative to benefits, to low income and minority population (1 or less 2 of the referenced items)

Criteria Ratings Definitions

Equity and Environmental Justice: Criteria 3b.2

Referenced Items:

- Crossing access
- Duration closure of Esplanade
- Duration closure of Skidmore MAX Station

Criteria 3: Avoid temporary disproportionate adverse impacts to vulnerable and Environmental Justice communities.		
Measure 2: Based on qualitative analysis of impacts to other vulnerable populations as identified during outreach conducted for the Diversity, Equity, and Inclusion program outreach.		
Scoring	5	Lowest level of net temporary disproportionate adverse impacts relative to benefits, to other vulnerable populations (at least two of the referenced items)
	3	Lowest level of net temporary disproportionate adverse impacts relative to benefits, to other vulnerable populations (1 of the referenced items)
	1	Lowest level of net temporary disproportionate adverse impacts relative to benefits, to other vulnerable populations (none of the referenced items)

Criteria Ratings Definitions

Equity and Environmental Justice: Criteria 3b.3

Criteria 3: Ensure that design and construction approach allow ample opportunities for DBE firms to be involved in the construction/contracting process.		
Measure 1: Approximate percentage of the construction work that could potentially be done by DBE (small) firms, relative to DBE goals.		
Scoring	**5**	Highest percentage of construction work that could potentially be done by DBE firms
	3	Moderate percentage of construction work that could potentially be done by DBE firms
	1	Lowest percentage of construction work that could potentially be done by DBE firms

CRIME REDUCTION AND PERSONAL SAFETY

Promote crime prevention and safety through design.

Criteria Definitions

4. Crime Reduction and Personal Safety - Promote crime prevention and safety through design.	
Long Term	**4a.1 Maximize personal safety and crime reduction by following principles of Crime Prevention Through Environmental Design (CPTED).** *Measure: Qualitative assessment of consistency with the CPTED principle of Natural Surveillance.* *Measure: Ability of design to allow activated spaces and improved sightlines beneath the bridge.*
During Const.	N/A

Criteria Ratings Definitions

Crime Reduction and Personal Safety: Criteria 4a.1

Criteria 1: Maximize personal safety and crime reduction by following principles of Crime Prevention Through Environmental Design (CPTED).		
Measure 1: Qualitative assessment of consistency with the CPTED principle of Natural Surveillance.		
Scoring	**5**	Maximizes potential to improve "Natural Surveillance" under the bridge by removing the most columns in public spaces
	3	Moderate potential to improve "Natural Surveillance" under the bridge by removing some columns in public spaces
	1	Lowest potential to improve "Natural Surveillance" under the bridge due to no removal of columns in public spaces. Increases the size of columns.

Criteria Ratings Definitions

Crime Reduction and Personal Safety: Criteria 4a.1

Criteria 1: Maximize personal safety and crime reduction by following principles of Crime Prevention Through Environmental Design (CPTED).		
Measure 2: Ability of design to allow activated spaces and improved sightlines beneath the bridge.		
Scoring	**5**	Highest creation of potential new activated space and improved sightlines beneath the bridge
	3	Medium creation of potential new activated space and improved sightlines beneath the bridge
	1	Creation of no potential new activated space and no improvement in sightlines beneath the bridge

BUSINESS AND ECONOMICS

Minimize impacts to businesses and economic activity, including river-based businesses.

Criteria Definitions

5. Business and Economics – minimize impacts to businesses and economic activity.	
Long Term	**5a.1 Minimize business displacements and permanent access impacts.** *Measure: Number of business displacements.* *Measure: Qualitative assessment of permanent access impacts that do not result in full displacement of business.* **5a.2 Support redevelopment potential consistent with local plans.** *Measure: Qualitative assessment of the extent to which newly vacant land is able to support uses that are consistent with local plans.*
During Const.	**5b.1 Minimize temporary access impacts to businesses.** *Measure: Qualitative assessment of short-term access impacts.* **5b.2 Minimize temporary regional economic impacts.** *Measure: Estimated impact of construction on regional economic indicators.* *Measure: Estimated temporary direct and indirect impacts to navigation during construction.* **5b.3 Minimize loss of economic benefits (includes businesses and charities) from temporary impacts to major community events under and near the bridge.** *Measure: Estimated loss of participation (# of people) in community events that would be impacted.*

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Business and Economics: Criteria 5a.1

Criteria 1: Minimize business displacements and permanent access impacts.		
Measure 1: Number of business displacements (measured in number of businesses, square feet, or number of employees).		
Scoring	**5**	Least business displacements
	3	Moderate business displacements
	1	High business displacements **no alternatives are significantly higher than others*

Criteria Ratings Definitions

Business and Economics: Criteria 5a.1

Criteria 1: Minimize business displacements and permanent access impacts.		
Measure 2: Qualitative assessment of permanent access impacts that do not result in full displacement of business (includes number, duration and magnitude of access impacts, and availability and quality of alternative access).		
Scoring	**5**	Minimizes permanent access impacts
	3	Moderate permanent access impacts
	1	High permanent access impacts

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Business and Economics: Criteria 5a.2

Criteria 2: Support redevelopment potential consistent with local plans.		
Measure 1: Qualitative assessment of the extent to which newly vacant land is able to support uses that are consistent with local plans (vs creating landlocked parcels or supporting changes in use that are not consistent with local plans).		
Scoring	5	Maximizes extent to which newly vacant land is able to support uses consistent with local plans (all alternatives)
	3	Moderate extent to which newly vacant land is able to support uses consistent with local plans
	1	Minimizes extent to which newly vacant land is able to support uses consistent with local plans

Criteria Ratings Definitions

Business and Economics: Criteria 5b.1

Criteria 1: Minimize temporary access impacts to businesses.		
Measure 1: Qualitative assessment of short-term access impacts.		
Scoring	5	Least short-term access impacts to businesses (crossing open to all modes; lowest Q of direct access blockages/impacts)
	3	Moderate short-term access impacts to businesses (either (a) crossing open to all modes but highest Q of direct access impacts; or (b) crossing open to no or limited modes and lowest Q of direct access impacts)
	1	Highest short-term access impacts to businesses (crossing closed to all modes; and highest Q of direct access impacts)

Criteria Ratings Definitions

Business and Economics: Criteria 5b.2

Criteria 2: Minimize temporary regional economic impacts.		
Measure 1: Estimated impact of construction on regional economic indicators (e.g., jobs, income, and cost of delay).		
Scoring	5	Highest jobs and income related to construction; and least amount of travel delay (highest construction cost; and temp bridge with all modes)
	3	Moderate short-term access impacts to businesses (eather (a) crossing open to all modes but highest Q of direct access impacts; or (b) crossing open to no or limited modes and lowest Q of direct access impacts)
	1	Highest short-term access impacts to businesses (crossing closed to all modes; and highest Q of direct access impacts)

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Business and Economics: Criteria 5b.2

Criteria 2: Minimize temporary regional economic impacts.		
Measure 2: Estimated temporary direct and indirect impacts to navigation during construction.		
Scoring	5	Least temporary direct and indirect impacts to navigation (lowest duration and number of closures)
	3	Moderate temporary direct and indirect impacts to navigation (medium duration and number of closures)
	1	Highest temporary direct and indirect impacts to navigation (highest duration and/or number of closures)

Criteria Ratings Definitions

Business and Economics: Criteria 5b.3

Measure based on duration of closure of:

- Saturday Market,
- Waterfront Park,
- Esplanade

Criteria 3: Minimize loss of economic benefits (includes businesses and charities) from temporary impacts to major community events under and near the bridge.		
Measure 1: Estimated loss of participation (# of people) in community events that would be impacted		
Scoring	5	No or low adverse impact to parks and rec (footprint) and to functions, events and access (shortest duration of closures of at least two of the referenced facilities; longest duration closure of none)
	3	Moderate impact to participation in community events and finances related to those events (moderate duration of closures of at least one of the above facilities; longest duration closure of none)
	1	Highest impact to participation in community events and finances related to those events (long or medium duration closure of all of the above facilities)

PARKS AND RECREATION RESOURCES

Minimize impacts to parks and recreational resources.

Criteria Definitions

6. Parks and Recreation Resources – minimize impacts to parks and historic resources.	
Long Term	**6a.1 Minimize park displacements and adverse functionality impacts (include impacts to river recreation).** *Measure: Assessment of adverse impacts to parks and recreation (e.g., magnitude (square feet) and qualitative assessment of impacts on functions, events, and access (for maintenance, events, etc.).* *Measure: Qualitative assessment of beneficial impacts (e.g., access, functions, potential to increase Parks revenues, increase resiliency, etc.).*
During Const.	**6b.1 Minimize temporary impacts to parks.** *Measure: Magnitude (square feet) of temporary parkland displacements.* *Measure: Assessment of temporary impacts to parks (e.g., magnitude (square feet) and qualitative assessment of impacts on functions, events, access (for maintenance, events, etc.).* *Measure: Impact of displaced events on Parks revenue.*

Criteria Ratings Definitions

Parks and Recreation Resources: Criteria 6a.1

Criteria 1: Minimize park displacements and adverse functionality impacts (include impacts to river recreation).		
Measure 1: Assessment of adverse impacts to parks and recreation (e.g., magnitude (square feet) and qualitative assessment of impacts on functions, events, and access (for maintenance, events, etc.).		
Scoring	5	No or low adverse impact to parks and rec (footprint) and to functions, events and access (avoids adding pier/column footprint in Waterfront park area under bridge and avoids removing large trees south of Bridge)
	3	Moderate adverse impact to parks and rec (footprint) and to functions, events and access (no increase in pier/column footprint in WF park area and removes six large trees south of Bridge)
	1	High impact to parks and rec (footprint) and to functions, events and access (moderate increase in pier/column footprint in WF park, and removes six large trees south of Bridge)

Criteria Ratings Definitions

Parks and Recreation Resources: Criteria 6a.1

Criteria 1: Minimize park displacements and adverse functionality impacts (include impacts to river recreation).		
Measure 2: Qualitative assessment of beneficial impacts (e.g., access, functions, potential to increase Parks revenues, increase resiliency, etc.).		
Scoring	**5**	Most beneficial impacts (largest decrease in pier/column footprint in WF park area)
	3	Moderate beneficial (moderate decrease in pier/column footprint in WF park area)
	1	Least impact to parks and rec (footprint) and to functions, events and access (no decrease in pier/column footprint in WF park area)

Criteria Ratings Definitions

Parks and Recreation Resources: Criteria 6b.1

Criteria 1: Minimize temporary impacts to parks.		
Measure 1: Magnitude (square feet) of temporary parkland displacements.		
Scoring	**5**	Least magnitude of temporary impacts to parks
	3	Moderate magnitude of temporary impacts to parks
	1	Highest magnitude of temporary impacts to parks **all alternatives and options*

Criteria Ratings Definitions

Parks and Recreation Resources: Criteria 6b.1

Criteria 1: Minimize temporary impacts to parks.		
Measure 2: Assessment of temporary impacts to parks.		
Scoring	5	Lowest duration closure of Skatepark, WF Park resources, and Esplanade
	3	Low to medium duration of Skatepark closure; low to medium duration closure of WF Park resources; and, low to average duration of closures of Esplanade
	1	Highest duration closure of Skatepark; medium to longest duration closure of WF Park resources; longer than average duration of closures of Esplanade

Criteria Ratings Definitions

Parks and Recreation Resources: Criteria 6b.1

Criteria 1: Minimize temporary impacts to parks.		
Measure 3: Impact of displaced events on Parks revenue.		
Scoring	5	Shortest or near shortest duration closure of Saturday Market; Shortest duration closure of Esplanade
	3	Medium or shortest duration closure of Saturday Market; and medium duration closure of Esplanade
	1	Longest duration closure for Saturday Market; longest duration closure of Esplanade

HISTORIC RESOURCES

Minimize impacts to historic resources.

Criteria Definitions

7. Historic Resources – minimize impacts to parks and historic resources.	
Long Term	**7a.1 Minimize historic resource impacts.** *Measure: Number of resources displaced or damaged (include National Register resources and districts and local historic landmarks and districts) and magnitude/character of impacts.* *Measure: Number of resources with access, and context, and indirect impacts, and magnitude/character of impacts.* *Measure: Character and magnitude of impacts to historic districts.*
During Const.	**7b.1 Minimize temporary impacts to historic resources.** *Measure: Qualitative assessment of construction-related (direct and indirect) impacts to historic resources.*

Criteria Ratings Definitions

Historic Resources: Criteria 7a.1

Criteria 1: Minimize historic resource impacts.		
Measure 1: Number of resources displaced or damaged (include National Register resources and districts and local historic landmarks and districts) and magnitude/character of impacts.		
Scoring	5	No or minor displacement or impacts to resources and districts (either: (a) lowest impact to Burnside Bridge, or (b) lowest impact to Skatepark and Harbor Wall)
	3	Moderate displacements or impacts to resources and districts (highest impact to Burnside Bridge; and either (a) medium impact to Skatepark combined with lowest impact to Harbor Wall and buried resources, or (b) lowest impact to Skatepark combined with medium impact to Harbor wall and highest impact to potential buried resources)
	1	Highest displacement or impacts to resources and districts (highest impact to Burnside Bridge; medium impact to Skatepark and Harbor Wall; and highest impact to potential buried resources)

Criteria Ratings Definitions

Historic Resources: Criteria 7a.1

Criteria 1: Minimize historic resource impacts.		
Measure 2: Number of resources with access, and context, and indirect impacts, and magnitude/character of impacts.		
Scoring	**5**	Lowest access and context impacts to resources (little or no change in both access to and context of historic resources)
	3	Average access and context impacts to resources (moderate to high change in either access or context but not both)
	1	Highest access and context impacts to resources (high change in both access and context) *(no alternatives)*

Criteria Ratings Definitions

Historic Resources: Criteria 7a.1

Criteria 1: Minimize historic resource impacts.		
Measure 3: Character and magnitude of impacts to historic districts.		
Scoring	**5**	Low magnitude of access and context impacts to historic districts (little or no meaningful change in views from and access to historic districts)
	3	Medium access and context impacts to historic districts (medium to high change in either views from or access to historic districts
	1	High access and context impacts to historic districts (medium to high change in both views from and access to historic districts) (*no alternatives)*

Criteria Ratings Definitions

Historic Resources: Criteria 7b.1

Criteria 1: Minimize temporary impacts to historic resources.		
Measure 1: Qualitative assessment of construction-related (direct and indirect) impacts to historic resources.		
Scoring	5	Low temporary impacts to historic resources (shortest duration closure)
	3	Average temporary impacts to historic resources (medium duration closure)
	1	Highest temporary impacts (longest duration closure)

VISUAL AND AESTHETICS

Protect and enhance views, view corridors and aesthetic experience.

Criteria Definitions

8. Visual and Aesthetics – protect and enhance views, view corridors and aesthetic experience on the crossing.	
Long Term	**8a.1 Minimize adverse impacts to existing views and view corridors.** *Measure: Qualitative assessment of potential impacts on existing views and view corridors (consider historic districts' design criteria and City-designated view corridors).* *Measure: Qualitative assessment of potential compatibility/conflicts with existing urban design features.* **8a.2 Maximize aesthetic experience for all users approaching, on, and under the bridge.** *Measure: Qualitative assessment of visual and aesthetic opportunities (based on conceptual designs) for users on and under the bridge during both daytime and nighttime hours.* **8a.3 Create opportunity for a crossing that provides an iconic/demonstrative visual experience**. *Measure: Qualitative assessment of potential to develop gateways, new views, processional experiences, and demonstrative and/or iconic visual experiences of and on the bridge.*
During Const.	N/A

Criteria Ratings Definitions

Visual and Aesthetics: Criteria 8a.1

Criteria 1: Minimize adverse impacts to existing views and view corridors.		
Measure 1: Qualitative assessment of potential impacts on existing views and view corridors (consider historic districts' design criteria and City-designated view corridors).		
Scoring	**5**	Lowest potential for change to existing views and view corridors (little or no change in alignment and vertical profile)
	3	Medium potential for change to existing views and view corridors (moderate change in alignment or vertical profile)
	1	Highest potential for change to existing views and view corridors (high change in alignment of vertical profile)

Criteria Ratings Definitions

Visual and Aesthetics: Criteria 8a.1

Criteria 1: Minimize adverse impacts to existing views and view corridors.		
Measure 2: Qualitative assessment of potential compatibility/conflicts with existing urban design features.		
Scoring	**5**	Lowest potential for adverse impacts to urban design features (removes columns from under the bridge; no permanent adverse visual change in Skatepark area; avoids removing large trees in WF park south of Burnside Bridge; avoids impacts to courtyard north side of the Yard)
	3	Medium potential for adverse impacts to urban design features (either (a) removes columns; no adverse visual change in Skatepark area; removes large trees in WF park south of Burnside Bridge; avoids impacts to courtyard north side of the Yard; or (b) does not remove columns from under the bridge; adverse visual change in Skatepark area; does not remove large trees in WF park south of Burnside Bridge; avoids impacts to courtyard north side of the Yard)
	1	Highest potential for adverse impacts to urban design features (either (a) moderate removal of columns under the bridge, no adverse visual changes in Skatepark area, removes courtyard north side of the Yard) or (b) does not remove columns from under the bridge; adverse visual change in Skatepark area; removes large trees in WF park south of Burnside Bridge; avoids impacts to courtyard north side of the Yard)

Criteria Ratings Definitions

Visual and Aesthetics: Criteria 8a.2

Based on:

- extent of column removal from Saturday Market and WF park area which increases potential to activate areas and reduce undesirable shadows/shading;
- width of bridge deck devoted to bike and ped influences ability to activate on-deck area;
- extent of replacement affects potential for affecting visual experience with form and materials;
- taller bridge influences potential for affecting experience with scale;
- more visible bridge (taller) increases wayfinding potential;
- visual effects with lighting possible with all alts, but greatest visibility with more above deck structure

Criteria 2: Maximize aesthetic experience for all users approaching, on, and under the bridge.		
Measure 1: Qualitative assessment of visual and aesthetic opportunities (based on conceptual designs) for users on and under the bridge during both daytime and nighttime hours.		
Scoring	**5**	Highest potential for wayfinding, activating areas under or on bridge, visual effects from forms and materials, visual effects from scale, visual effects from lighting, shade shadows (provides high potential for all of the above factors)
	3	Medium potential (provides high potential for some of the above factors)
	1	Lowest potential (provides high potential for none of the above factors)

Criteria Ratings Definitions

Visual and Aesthetics: Criteria 8a.3

Criteria 3: Create opportunity for a crossing that provides an iconic/demonstrative visual experience.		
Measure 1: Qualitative assessment of potential to develop gateways, new views, processional experiences, and demonstrative and/or iconic visual experiences of and on the bridge.		
Scoring	**5**	Highest potential (provides high potential on most of the above factors)
	3	Medium potential (provides high potential on some of the above factors)
	1	Lowest potential (provides high potential on none of the above factors)

NATURAL RESOURCES, CLIMATE CHANGE AND SUSTAINABILITY

Promote sustainability in design and construction and minimize impacts to natural resources.

Criteria Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

9. Natural Resources, Climate Change and Sustainability – promote sustainability in design and construction and minimize impacts to natural resources.	
Long Term	**9a.1 Minimize impacts to water quality and flooding.** *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.* **9a.2 Minimize impacts to fish and wildlife.** *Measure: Estimated changes to aquatic habitat (due to change in pier area below OHW and above the critical scour depth - differentiate habitat quality: higher quality (<20' deep) and lower quality (>20' deep).*
During Const.	**9b.1 Minimize temporary impacts to water quality and flooding.** *Measure: Estimated area of disturbance in proximity to the Willamette River.* *Measure: Estimated temporary change in flood levels during construction (reasonable worst-case during construction).* **9b.2 Minimize temporary impacts to air quality, greenhouse gas emissions and carbon sequestration.** *Measure: Qualitative assessment of effects on emissions due to traffic diversions/detours.* *Measure: Change in carbon sequestration (based on change in tree cover).* **9b.3 Minimize temporary impacts to fish and wildlife.** *Measure: Extent of pile driving.* *Measure: Size of cofferdams and extent of temporary fill in the river.* **9b.4 Minimize resource consumption and waste production during construction.** *Measure: (TBD, based on information provided by Greenroads analysis).*

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Natural Resources, Climates Change and Sustainability: Criteria 9a.1

Criteria 1: Minimize impacts to water quality and flooding.		
Measure 1: Estimated changes in treatment of stormwater generated from impervious surface compared to No-build.		
Scoring	**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

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Natural Resources, Climates Change and Sustainability: Criteria 9a.1

Criteria 1: Minimize impacts to water quality and flooding.		
Measure 2: Estimated long-term changes in flood levels.		
Scoring	**5**	Lowest new encroachment into floodplain and floodway
	3	Not more than medium new encroachment into floodplain and floodway
	1	Highest new encroachment into floodplain or floodway

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Natural Resources, Climates Change and Sustainability: Criteria 9a.1

Criteria 1: Minimize impacts to water quality and flooding.		
Measure 3: Estimated area of disturbance of potentially contaminated river substrate.		
Scoring	**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

Criteria Ratings Definitions

Natural Resources, Climate Change and Sustainability: Criteria 9a.2

Criteria 2: Minimize impacts to fish and wildlife.		
Measure 1: Estimated changes to aquatic habitat (due to change in pier area below OHW and above the critical scour depth - differentiate habitat quality: higher quality (<20' deep) and lower quality (>20' deep).		
Scoring	5	Lowest total permanent area of fill in water; and least permanent area of fill in shallow water
	3	Not more than medium total permanent area of fill in water; and not more than medium permanent area of fill in shallow water
	1	Higher total permanent area of fill in water; and higher permanent area of fill in shallow water

Criteria Ratings Definitions

Natural Resources, Climate Change and Sustainability: Criteria 9b.1

Criteria 1: Minimize temporary impacts to water quality and flooding.		
Measure 1: Estimated area of disturbance in proximity to the Willamette River.		
Scoring	5	Least ground disturbance in proximity to Willamette River
	3	Medium ground disturbance in proximity to Willamette River
	1	Highest ground disturbance in proximity to Willamette River

Criteria Ratings Definitions

Natural Resources, Climate Change and Sustainability: Criteria 9b.1

Criteria 1: Minimize temporary impacts to water quality and flooding.		
Measure 2: Estimated temporary change in flood levels during construction (reasonable worst-case during construction).		
Scoring	5	Least total fill in the river during construction
	3	Medium total fill in the river during construction
	1	Highest total fill in the river during construction

Criteria Ratings Definitions

Natural Resources, Climate Change and Sustainability: Criteria 9b.2

Criteria 2: Minimize temporary impacts to water quality and flooding.		
Measure 1: Qualitative assessment of effects on emissions due to traffic diversions/detours.		
Scoring	5	Lowest net GHG emissions
	3	Medium net GHG emissions
	1	Highest net GHG emissions

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Natural Resources, Climate Change and Sustainability: Criteria 9b.2

Criteria 2: Minimize temporary impacts to water quality and flooding.		
Measure 2: Change in carbon sequestration (based on change in tree cover).		
Scoring	**5**	Lowest removal of tree mass (differentiator is the six large trees in WF park south of the bridge) (does not remove the six trees)
	3	Medium removal of tree mass **no alts or options for medium rating*
	1	Highest removal of tree mass (removes the six trees)

Criteria Ratings Definitions

Natural Resources, Climate Change and Sustainability: Criteria 9b.3

Criteria 3: Minimize temporary impacts to fish and wildlife.		
Measure 1: Extent of pile driving.		
Scoring	5	Least amount of in-water pile driving
	3	Medium amount of in-water pile driving
	1	Highest amount of in-water pile driving

Criteria Ratings Definitions

Natural Resources, Climate Change and Sustainability: Criteria 9b.3

Criteria 3: Minimize temporary impacts to fish and wildlife.		
Measure 2: Size of cofferdams and extent of temporary fill in the river.		
Scoring	5	Least area of temporary cofferdams and fill in the river
	3	Medium area of temporary cofferdams and fill in the river
	1	Highest area of temporary cofferdams and fill in the river

Criteria Ratings Definitions

Natural Resources, Climate Change and Sustainability: Criteria 9b.4

Criteria 4: Minimize resource consumption and waste production during construction.		
Measure 1: Amount of construction and demolition.		
Scoring	5	Least production of waste and consumption of resources during construction (Lowest extent of demolition and construction for main bridge and none for Temp Bridge)
	3	Medium production of waste and consumption of resources during construction (Medium to high extent of demolition and construction for main bridge, and none for Temp Bridge)
	1	Highest production of waste and consumption of resources during construction (Low to high extent of demolition and construction for main bridge, and high for Temp Bridge)

PEDESTRIANS, BICYCLISTS AND PEOPLE WITH DISABILITIES

(ADA – Americans with Disabilities Act)

Support daily access and safety for bicyclists, pedestrians and people with disabilities.

Criteria Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

10. Pedestrians, Bicyclists and People with Disabilities (ADA – Americans with Disabilities Act) – support daily access and safety for bicyclists, pedestrians and people with disabilities.

Long Term	**10a.1 Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).** *Measure: Width of bike path, potential for future bicycle climbing lanes, and safety at intersections and crossings.* *Measure: Width and slope of pedestrian and ADA facilities on bridge.* *Measure: Quality of protection from motor vehicles.* **10a.2 Maximize access/connectivity for bicyclists and other low-impact vehicles.** *Measure: How well the bike facility on the bridge connects to existing and planned bike networks.* *Measure: Quality and quantity of accesses to transit stops and other destinations.* **10a.3 Maximize access/connectivity for pedestrians and ADA.** *Measure: How well the pedestrian and ADA facilities on the bridge connect to existing and planned pedestrian and ADA networks.* *Measure: How well the pedestrian and ADA facilities on the bridge connects to social services and other frequent destinations for users.* *Measure: Quality and quantity of accesses to transit stops and other destinations.*
During Const.	**10b.1 Minimize temporary travel time and access/connectivity impacts to bicyclists.** *Measure: Extent of out-of-direction travel, or travel time change, for bicyclists during construction (reflect information, if available, on origins and destinations of trips using the Burnside Bridge; may require quantitative or qualitative assessment and professional-judgment; possibly consider the duration of temporary changes in access/connectivity).* **10b.2 Minimize temporary travel time and access/connectivity impacts to pedestrians.** *Measure: Extent of out-of-direction travel, or travel time change, for ADA users and pedestrians during construction (reflect information, if available, on origins and destinations of trips using the Burnside Bridge; may require quantitative or qualitative assessment and professional judgment; possibly consider the duration of temporary changes in access/connectivity).* **10b.3 Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).** *Measure: Quality of protection of bicycle and pedestrian paths from other modes.* *Measure: Width of temporary bicycle and pedestrian paths.* *Measure: Qualitative safety assessment of temporary ADA and pedestrian facilities.* *Measure: Quality and quantity of accesses to transit connections.*

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10a.1

Topics:
Topic 1: Directional bike widths

Topic 2: Uphill climbing lane potential

Topic 3: Potential safety issues at intersections

Criteria 1: Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).		
Measure 1: Width of bike path, potential for future bicycle climbing lanes, and safety at intersections and crossings.		
Scoring	5	Topic 1: Greatest (Shy + Bike lane + Buffer) width Topic 2: Has bike climbing lane space and 1 or less bridge approach with a profile grade > 4% Topic 3: Possesses no unique intersection safety issues, such as narrowed bike/ped widths or re-routing off major bikeways.
	3	Topic 1: Middle (Shy + Bike lane + Buffer) width Topic 2: Has bike climbing lane space and 2 bridge approaches with a profile grade > 4% Topic 3: Possesses 1 unique intersection safety issue
	1	Topic 1: Least (Shy + Bike lane + Buffer) width Topic 2: Does not have bike climbing lane space Topic 3: Possesses 2+ unique intersection issues, such as narrowed bike/ped widths or re-routing off major bikeways.

Criteria Ratings Definitions

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10a.1

Topics
Topic 1: Directional Sidewalk Widths and slopes

Topic 2: Uphill climbing lane potential

Topic 3: Pedestrian modal mixing / speed differential impacts

Criteria 1: Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).		
Measure 2: Width and slope of pedestrian and ADA facilities on bridge.		
Scoring	5	Topic 1: Greatest (Sidewalk + Buffer) width Topic 2: No bridge approaches with profile grades > 4% Topic 3: Contains a curb-separated facility between pedestrians and bikes
	3	Topic 1: Middle (Sidewalk + Buffer) width Topic 2: One bridge approach with profile grade > 4% Topic 3: Does not contains a curb-separated facility, but has a generally consistent buffer between pedestrians and bikes
	1	Topic 1: Least (Sidewalk + Buffer) width Topic 2: Two bridge approaches with profile grades > 4% Topic 3: Does not contains a curb-separated facility, and does not have a generally consistent buffer between pedestrians and bikes

Criteria Ratings Definitions

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10a.1

Criteria 1: Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).		
Measure 3: Quality of protection from motor vehicles.		
Scoring	5	Yes, there is a crashworthy barrier protecting bicycles from vehicles
	3	N/A
	1	No, there is no crashworthy barrier protecting bicycles from vehicles

Criteria Ratings Definitions

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10a.2

Criteria 2: Maximize access/connectivity for bicyclists and other low-impact vehicles.		
Measure 1: How well the bike facility on the bridge connects to existing and planned bike networks.		
Scoring	5	Connections on both bridge ends are tied directly into existing and planned bike routes.
	3	There is one indirect bike connection on either side of the bridge.
	1	There are multiple indirect bike connections on either side of the bridge.

Criteria Ratings Definitions

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10a.2

Criteria 2: Maximize access/connectivity for bicyclists and other low-impact vehicles.		
Measure 2: Quality and quantity of accesses to transit stops and other destinations.		
Scoring	5	N/A
	3	No, there are no permanent negative transit access impacts
	1	Yes, there are permanent negative transit access impacts

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10a.3

Criteria 3: Maximize access/connectivity for pedestrians and ADA.		
Measure 1: How well the pedestrian and ADA facilities on the bridge connect to existing and planned pedestrian and ADA networks.		
Scoring	5	Permanent connections on both bridge ends are tied directly into existing and planned pedestrian / ADA routes. There are no new permanent, out-of-direction pedestrian / ADA connections on either side of the bridge compared to the existing condition.
	3	There is one new permanent, out-of-direction pedestrian / ADA connection on either side of the bridge compared to the existing condition.
	1	There are multiple new permanent, out-of-direction pedestrian / ADA connections on either side of the bridge compared to the existing condition.

Criteria Ratings Definitions

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10a.3

Criteria 3: Maximize access/connectivity for pedestrians and ADA.		
Measure 2: How well the pedestrian and ADA facilities on the bridge connect to social services and other frequent destinations for users.		
Scoring	5	Permanent connections on both bridge ends are tied directly into social services and/or other frequent destinations.
	3	There is one permanent, indirect bridge connection to social services and/or other frequent destinations.
	1	There are multiple permanent, indirect bridge connections to social services and/or other frequent destinations.

Criteria Ratings Definitions

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10a.3

Criteria 3: Maximize access/connectivity for pedestrians and ADA.		
Measure 3: Quality and quantity of accesses to transit stops and other destinations.		
Scoring	5	N/A
	3	No, there are no permanent negative transit access impacts
	1	Yes, there are permanent negative transit access impacts

Criteria Ratings Definitions

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10b.1

Criteria 1: Minimize temporary travel time and access/connectivity impacts to bicyclists.		
Measure 1: Extent of out-of-direction travel, or travel time change, for bicyclists during construction (reflect information, if available, on origins and destinations of trips using the Burnside Bridge; may require quantitative or qualitative assessment and professional judgment; possibly consider the duration of temporary changes in access/connectivity).		
Scoring	**5**	**Lowest 1/3 of "minute-years" range**
	3	**Middle 1/3 of "minute-years" range**
	1	**Highest 1/3 of "minute-years" range**

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10b.2

Criteria 2: Minimize temporary travel time and access/connectivity impacts to pedestrians.		
Measure 1: Extent of out-of-direction travel, or travel time change, for ADA users and pedestrians during construction (reflect information, if available, on origins and destinations of trips using the Burnside Bridge; may require quantitative or qualitative assessment and professional judgment; possibly consider the duration of temporary changes in access/connectivity).		
Scoring	**5**	**Lowest 1/3 of "minute-years" range**
	3	**Middle 1/3 of "minute-years" range**
	1	**Highest 1/3 of "minute-years" range**

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10b.3

Criteria 3: Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).		
Measure 1: Quality of protection of bicycle and pedestrian paths from other modes.		
Scoring	5	Controlled route during construction with a separated and protected bike / ped facility (i.e., a temporary bridge for bikes / peds only)
	3	Controlled route during construction with a curb protected bike / ped facility (i.e., a temporary bridge for vehicles)
	1	Uncontrolled route during construction (i.e., detours to other bridges)

Criteria Ratings Definitions

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10b.3

Criteria 3: Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).		
Measure 2: Width of temporary bicycle and pedestrian paths.		
Scoring	**5**	**Dedicated 12' multi-use facilities**
	3	**N/A**
	1	**On-street detour to adjacent bridges**

Criteria Ratings Definitions

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10b.3

Criteria 3: Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).		
Measure 3: Qualitative safety assessment of temporary ADA and pedestrian facilities.		
Scoring	**5**	**Detour route generally possesses a separated and protected temporary bike / ped facility (i.e., a temporary bridge for bikes / peds only)**
	3	**Detour route generally possesses a curb protected temporary bike / ped facility (i.e., a temporary bridge with bikes / peds adjacent to vehicles)**
	1	**Detour route has inconsistent protection for bike / peds during construction (i.e., detours to other bridges)**

Criteria Ratings Definitions

Pedestrians, Bicyclists and People with Disabilities (ADA): Criteria 10b.3

Criteria 3: Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).		
Measure 4: Quality and quantity of accesses to transit connections.		
Scoring	**5**	**None or minor connection adjustments on route**
	3	**N/A**
	1	**Buses are detoured and accesses are impacted**

MOTOR VEHICLES, FREIGHT AND EMERGENCY VEHICLES

Minimize impacts to motor vehicles, freight and emergency vehicles.

Criteria Definitions

11. Motor Vehicles, Freight and Emergency Vehicles - Minimize impacts to motor vehicles, freight and emergency vehicles.	
Long Term	**11a.1 Maximize safety for motor vehicles and freight.** *Measure: Qualitative assessment of motor vehicle safety based on design (factors including but not limited to: elements that affect operating speed such as lane width and other cross section details, curve radii, as well as potential conflicts with other modes, sideswipes, property damage, and others).* **11a.2 Maximize emergency service operations and responsiveness.** *Measure: Qualitative assessment of emergency service responsiveness independent of a major earthquake (factors including but not limited to: lane width and other cross section details, curve radii, potential conflicts with other modes, and others).*
During Const.	**11b.1 Minimize temporary access and travel time impacts to freight and emergency vehicles.** *Measure: Travel time for motor vehicles from point X to point Y (quantitative ~~if~~ travel model provides reliable estimate.* *Measure: Duration of temporary closure/capacity reduction.* *Measure: Quantify number and duration of temporary road closures due to construction.* **11b.2 Minimize temporary safety, impacts to motor vehicles, freight, and emergency vehicles.** *Measure: Qualitative assessment of the safety of construction phase detours and reroutes relative to existing conditions.* **11b.3 Minimize temporary access and travel time impacts to motor vehicles.** *Measure: Travel time for motor vehicles from point X to point Y (quantitative travel model provides reliable estimate).* *Measure: Duration of temporary closure/capacity reduction.* *Measure: Quantify number and duration of temporary road closures due to construction.*

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Motor Vehicles, Freight and Emergency Vehicles: Criteria 11a.1

Topics

Topic 1: Vertical profile grade and quantity of steep grades

Topic 2: Horizontal alignment for SE Couch St "S" curve

Criteria 1: Maximize safety for motor vehicles and freight.		
Measure 1: Qualitative assessment of motor vehicle safety based on design (factors including but not limited to: elements that affect operating speed such as lane width and other cross section details, curve radii, as well as potential conflicts with other modes, sideswipes, property damage, and others).		
Scoring	5	**Topic 1: No bridge approach grades > 4%** **Topic 2: N/A**
	3	**Topic 1: One bridge approach grade > 4%** **Topic 2: Significantly reduces the curvature versus the existing SE Couch St horizontal alignment**
	1	**Topic 1: Two bridge approach grades > 4%** **Topic 2: Maintains the curvature of the existing SE Couch St horizontal alignment**

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Motor Vehicles, Freight and Emergency Vehicles: Criteria 11a.2

Topics

Topic 1: Lane width and number of lanes

Topic 2: Vertical profile grade and quantity of steep grades

Topic 3: Horizontal alignment for SE Couch St "S" curve

Criteria 2: Maximize emergency service operations and responsiveness.		
Measure 1: Qualitative assessment of emergency service responsiveness independent of a major earthquake (factors including but not limited to: lane width and other cross section details, curve radii, potential conflicts with other modes, and others).		
Scoring	5	**Topic 1: 5 or more wider (11') lanes** **Topic 2: No bridge approach grades > 4%** **Topic 3: N/A**
	3	**Topic 1: N/A** **Topic 2: One bridge approach grade > 4%** **Topic 3: Significantly reduces the curvature versus the existing SE Couch St horizontal alignment**
	1	**Topic 1: Less than 4 wider (11') lanes** **Topic 2: Two bridge approach grades > 4%** **Topic 3: Maintains the curvature of the existing SE Couch St horizontal alignment**

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Motor Vehicles, Freight and Emergency Vehicles: Criteria 11b.1

Criteria 1: Minimize temporary access and travel time impacts to freight and emergency vehicles.		
Measure 1: Travel time for motor vehicles from point X to point Y (quantitative if travel model provides reliable estimate).		
Scoring	**5**	**Lowest 1/3 of "minute-years" range**
	3	**Middle 1/3 of "minute-years" range**
	1	**Highest 1/3 of "minute-years" range**

Criteria Ratings Definitions

Motor Vehicles, Freight and Emergency Vehicles: Criteria 11b.1

Criteria 1: Minimize temporary access and travel time impacts to freight and emergency vehicles.		
Measure 2: Duration of temporary closure/capacity reduction.		
Scoring	5	Lowest 1/3 of construction delay range
	3	Middle 1/3 of construction delay range
	1	Highest 1/3 of construction delay range

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Motor Vehicles, Freight and Emergency Vehicles: Criteria 11b.1

Criteria 1: Minimize temporary access and travel time impacts to freight and emergency vehicles.		
Measure 3: Quantify number and duration of temporary road closures due to construction.		
Scoring	5	No full roadway closures during construction
	3	Only Burnside St is fully closured during construction
	1	N/A

Criteria Ratings Definitions

Motor Vehicles, Freight and Emergency Vehicles: Criteria 11b.2

Topics

Topic 1: Total Crashes crash results vs existing

Topic 2: Fatal / Injury crash results vs existing

Criteria 2: Minimize temporary safety, impacts to motor vehicles, freight, and emergency vehicles.		
Measure 1: Qualitative assessment of the safety of construction phase detours and reroutes relative to existing conditions.		
Scoring	**5**	**Topic 1 and 2: No increase in crashes versus existing (either Total or Fatal/Injury types)**
	3	**Topic 1 and 2: Moderate increase in crashes versus existing (between #25 – 49 for either Total or Fatal/Injury types)**
	1	**Topic 1 and 2: Large increase in crashes versus existing (50+ for either Total or Fatal/Injury types)**

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Motor Vehicles, Freight and Emergency Vehicles: Criteria 11b.3

Criteria 3: Minimize temporary access and travel time impacts to motor vehicles.		
Measure 1: Travel time for motor vehicles from point X to point Y (quantitative if travel model provides reliable estimate).		
Scoring	5	Lowest 1/3 of “minute-years” range
	3	Middle 1/3 of “minute-years” range
	1	Highest 1/3 of “minute-years” range

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Motor Vehicles, Freight and Emergency Vehicles: Criteria 11b.3

Criteria 3: Minimize temporary access and travel time impacts to motor vehicles.		
Measure 2: Duration of temporary closure/capacity reduction.		
Scoring	5	Lowest 1/3 of construction delay range
	3	Middle 1/3 of construction delay range
	1	Highest 1/3 of construction delay range

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Motor Vehicles, Freight and Emergency Vehicles: Criteria 11b.3

Criteria 3: Minimize temporary access and travel time impacts to motor vehicles.		
Measure 3: Quantify number and duration of temporary road closures due to construction.		
Scoring	**5**	**No full roadway closures during construction**
	3	**Only Burnside St is fully closured during construction**
	1	**Burnside St and SE 3rd Ave are fully closured during construction**

TRANSIT

Promote transit access and minimize impacts to bus service while making the crossing streetcar ready.

Criteria Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

12. Transit - minimize impacts to bus service, promote transit access, while making the crossing streetcar ready.	
Long Term	**12a.1 Maximize Streetcar readiness.** *Measure: Qualitative assessment of impacts to future Streetcar and bus operations (factors including but not limited to: may include lane width and other cross section details, curve radii, potential conflict with other modes, and others).* **12a.2 Maximize bus accessibility.** *Measure: Qualitative scale considering presence of dedicated bus pullouts, transit stops, transfer points to other modes (LRT).* **12a.3 Minimize transit collision vulnerability.** *Measure: Qualitative assessment for whether the bridge options create differing intersecting geometries and lane width variations, and how those may increase or decrease the likelihood of motor vehicle collisions with bus, and northbound and southbound Streetcars on MLK and Grand Avenues. (factors including but not limited to: may include lane width, curve radii, intersection cross section, potential for conflicts between modes, anticipated weave motions, and likelihood of sideswipe collisions).*
During Const.	**12b.1 Minimize temporary impacts to transit access, safety, travel times, and ridership.** *Measure: Frequency and duration of LRT, Streetcar, and bus disruptions.*

Criteria Ratings Definitions

Transit: Criteria 12a.1

Topics
Topic 1: Horizontal alignment

Topic 2: Bus Operations

Criteria 1: Maximize Streetcar readiness.		
Measure 1: Qualitative assessment of impacts to future Streetcar and bus operations (factors including but not limited to: may include lane width and other cross section details, curve radii, potential conflict with other modes, and others).		
Scoring	5	**Topic 1: Significantly educes the curvature versus the existing SE Couch St horizontal alignment** **Topic 2: N/A**
	3	**Topic 1: Maintains the curvature of the existing SE Couch St horizontal alignment** **Topic 2: No negative permanent bus impacts**
	1	**Topic 1: N/A** **Topic 2: Some negative permanent bus impacts**

Criteria Ratings Definitions

Transit: Criteria 12a.2

Criteria 2: Maximize bus accessibility.		
Measure 1: Qualitative scale considering presence of dedicated bus pullouts, transit stops, transfer points to other modes (LRT).		
Scoring	5	Yes - Provides accesses to transit and bus pullout at west end and WB Transit lane priority in EB direction
	3	Yes, but limited - Provides some limited accesses to transit and bus pullout at west end and WB Transit lane priority in EB direction
	1	No – Does not provide accesses to transit and bus pullout at west end and WB Transit lane priority in EB direction

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Transit: Criteria 12a.3

Topics

Topic 1: Potential transition conflict issues between modes at west end

Topic 2: Potential for future sideswipes or modal conflicts thru SE Couch St "S"

Criteria 3: Minimize transit collision vulnerability.		
Measure 1: Qualitative assessment for whether the bridge options create differing intersecting geometries and lane width variations, and how those may increase or decrease the likelihood of motor vehicle collisions with bus, and northbound and southbound Streetcars on MLK and Grand Avenues. (factors including but not limited to: may include lane width, curve radii, intersection cross section, potential for conflicts between modes, anticipated weave motions, and likelihood of sideswipe collisions).		
Scoring	5	**Topic 1: No (or minimal) potential transition conflict at west end** **Topic 2: Significantly educes the curvature versus the existing SE Couch St horizontal alignment**
	3	**Topic 1: N/A** **Topic 2: N/A**
	1	**Topic 1: Yes, significant potential transition conflict at west end** **Topic 2: Maintains the curvature of the existing SE Couch St horizontal alignment**

Criteria Ratings Definitions

Transit: Criteria 12b.1

Topics
Topic 1: Bus Travel Time delays during construction (measured in “minute-years”)

Topic 2: Potential MAX impacts during construction (measured in years of construction)

Criteria 1: Minimize temporary impacts to transit access, safety, travel times, and ridership.		
Measure 1: Frequency and duration of LRT, Streetcar, and bus disruptions.		
Scoring	**5**	**Topic 1: Lowest 1/3 of “minute-years” range after combining buses 12, 19, and 20 delay time and years of construction** **Topic 2: Lowest 1/3 of construction delay range**
	3	**Topic 1: Middle 1/3 of “minute-years” range after combining buses 12, 19, and 20 delay time and years of construction** **Topic 2: Middle 1/3 of construction delay range**
	1	**Topic 1: Highest 1/3 of “minute-years” range after combining buses 12, 19, and 20 delay time and years of construction** **Topic 2: Highest 1/3 of construction delay range**

FISCAL RESPONSIBILITY

Invest public funds wisely.

Criteria Definitions

13. Fiscal Responsibility – ensure public funds are invested wisely.	
Long Term	**13a.1 Minimize total Project cost.** *Measure: Estimated total project cost (including design, right-of-way acquisition, construction, temporary bridge, mitigation, utility relocation, etc.).* **13a.2 Minimize long-term maintenance needs/costs.** *Measure: Number and cost of major maintenance projects expected over life of the bridge, including the necessary bridge repairs following a major earthquake.*
During Const.	N/A

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Fiscal Responsibility: Criteria 13a.1

Criteria 1: Minimize Total Project cost		
Measure 1: Estimated total project cost (including design, right-of-way acquisition, construction, temporary bridge, mitigation, utility relocation, etc.).		
Scoring	5	Lowest 1/3 of Total Project cost range
	3	Middle 1/3 of Total Project cost range
	1	Highest 1/3 of Total Project cost range

Criteria Ratings Definitions

EARTHQUAKE READY BURNSIDE BRIDGE

Fiscal Responsibility: Criteria 13a.2

Criteria 2: Minimize long-term maintenance needs/costs.		
Measure 1: Number and cost of major maintenance projects expected over life of the bridge, including the necessary bridge repairs following a major earthquake.		
Scoring	5	Lowest 1/3 of total anticipated future maintenance cost range
	3	Middle 1/3 of total anticipated future maintenance cost range
	1	Highest 1/3 of total anticipated future maintenance cost range

EARTHQUAKE READY BURNSIDE BRIDGE

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

BETTER – SAFER – CONNECTED

December 11, 2019

Evaluation Criteria and Measures

Introduction

In June 2019, the Earthquake Ready Burnside Bridge (EQRB) Community Task Force (CTF) recommended draft evaluation criteria topics, based on information available at the time. Since then, at their July and August meetings, the CTF reviewed the draft criteria as well as draft measures for implementing them, and tentatively approved criteria and measures on 8/19/19.

The project team has since gathered input on the CTF's draft criteria and measures from other agency staff and stakeholders. At the CTF's 10/21/19 meeting, the input on the criteria was reviewed and approved for recommendation to the Policy Group. The Policy Group approved the criteria at their 10/28/19 meeting. The CTF then reviewed recommended changes to the measures from agency staff and stakeholders at their 12/2/19 meeting. The criteria and measures will be used to help select a Preferred Alternative during the preparation of the Draft EIS.

Notes on Measures and Scoring:

- Net Effect and Mitigation: Many criteria refer to "minimizing" impacts while others refer to "maximizing" benefits, whereas a few refer to "net benefits" (a combination of adverse and beneficial effects). For any criterion where the DEIS analysis reveals a meaningful "net effect" this can be included in the way that Measures are applied, even where "net effect" is not specifically mentioned in the criterion. When rating the alternatives, the scoring will consider the net effect, including the potential for, feasibility of, and level of commitment to mitigation that would avoid or reduce adverse impacts.
- Tradeoffs across Criteria: Minimizing adverse impacts to resources evaluated in one criterion could result in increasing adverse impacts to resources evaluated in another criterion. Each Measure for each criterion will be evaluated independently of the other criteria, so that where there are tradeoffs or conflicts, the combined effect across different criteria will be reflected in the total score for a given alternative.
- While some of the evaluation criteria are intended to measure the extent to which alternatives would implement certain regulatory objectives, the evaluation criteria are not intended to replace or supersede any relevant regulatory requirements. It is assumed that any selected alternative would need to comply with relevant regulatory requirements.

Criteria Groups

1. Seismic Resiliency

Long Term	**1a.1 Maximize confidence in post-earthquake crossing operability and reparability.** • *Measure: Qualitative assessment for how much reliance on original components is needed for seismic resiliency.* • *Measure: Ability to implement reliable seismic performance mechanisms and devices.* **1a.2 Maximize ability for all modes to use the crossing post-earthquake.** • *Measure: Ability to accommodate over-dimensional vehicles and loads.* • *Measure: Ability to simultaneously accommodate all travel modes.* **1a.3 Minimize risk that adjacent buildings could damage or block the bridge after a major earthquake, and minimize risk that crossing construction could lessen the seismic resilience of adjacent buildings.** • *Measure: Quantify level of risk exposure from adjacent buildings, weighting those alternatives that are at risk due to URM exposure from adjacent buildings at a higher risk.*
During Const.	**1b.1 Minimize delay in achieving a seismically resilient crossing.** • *Measure: Estimated duration of construction*

2. Community Quality of Life (includes Indirect Land Use Impacts and Community Resources)

Long Term	**2a.1 Minimize long-term noise and light/shadow impacts.** • *Measure: Qualitative assessment of light/shadow impacts due to changes in roadway alignments relative to land uses (e.g., will new alignment direct headlights at or away from residential uses; will it change sunlight/shadow on residential or community spaces?).* • *Measure: Assessment of noise impacts due to changes in roadway alignments relative to land uses.* **2a.2 Minimize long-term impacts to community facilities and events under and near the bridge (e.g., Skatepark, Saturday Market, park festivals, parades, organized runs, etc.).** • *Measure: Number of community facilities impacted, as well as magnitude and character of those impacts (Note: metrics for these two measures may include duration of impact, distance to temporary relocation, number of people affected, or other metrics as appropriate to the facility, event, and impact).* • *Measure: Number of community events impacted, as well as magnitude and character of those impacts. (See note for above Measure).*
During Const.	**2b.1 Minimize temporary impacts to community facilities and events under and near the bridge.** • *Measure: Number of community facilities impacted, as well as magnitude and duration of those impacts. (Note: metrics for these two measures may include duration of impact, distance to temporary relocation, number of people affected, or other metrics as appropriate to the facility, event, and impact).* • *Measure: Number of community events impacted, as well as magnitude and duration of those impacts. (See note for above Measure).*

3. Equity and Environmental Justice (includes Social Services)

Long Term

3a.1 Minimize displacements of emergency beds.

- *Measure: Shelter beds displaced.*

3a.2 Maintain social service providers' long-term ability to provide current level of service and potential for enhancement.

- *Measure: Social service provider functions (not including beds) displaced (measured in square feet displaced, number of clients served by displaced function, and availability and quality of replacement functions; quality of replacement includes ability to replace the function within the affected service provider, transit access, walking distance/time and dependence of remaining services on being proximate to the services that would be displaced).*
- *Measure: Permanent access impacts (number and significance), and availability and quality of alternative access (distance/convenience to alternative access).*
- *Measure: Impact on ability of existing services to be enhanced, compared to No-build.*

3a.3 Avoid disproportionate adverse impacts to vulnerable and Environmental Justice communities.

- *Measure: Based on qualitative analysis of impacts to low income and minority populations as measured in the analysis of compliance with the Exec Order on Environmental Justice.*
- *Measure: Based on qualitative analysis of impacts to other vulnerable populations as identified during outreach conducted for the Diversity, Equity, and Inclusion program outreach.*

During Const.	**3b.1 Minimize temporary impacts to social service providers.** • *Measure: Social service provider functions temporarily displaced (measured in square feet displaced, number of clients served by displaced function, and availability and quality of temporary replacement functions; quality of replacement includes ability to replace the function within the social service provider affected, transit travel time, walking distance/time and dependence of remaining services on being proximate to the services that would be temporarily displaced).* • *Measure: Temporary access impacts (number, duration, and significance), and availability and quality of alternative access (walking distance/time to alternative locations).* **3b.2 Avoid temporary disproportionate adverse impacts to vulnerable and Environmental Justice communities.** • *Measure: Based on qualitative analysis of impacts to low income and minority populations as measured in the analysis of compliance with the Exec Order on Environmental Justice.* • *Measure: Based on qualitative analysis of impacts to other vulnerable populations as identified during outreach conducted for the Diversity, Equity, and Inclusion program outreach.* **3b.3 Ensure that design and construction approach allow ample opportunities for DBE firms to be involved in the construction/contracting process.** • *Measure: Approximate percentage of the construction work that could potentially be done by DBE (small) firms, relative to DBE goals.*

4. Crime Reduction and Personal Safety

Long Term	**4a.1 Maximize personal safety and crime reduction by following principles of Crime Prevention Through Environmental Design (CPTED).** • *Measure: Qualitative assessment of consistency with the CPTED principle of Natural Surveillance.* • *Measure: Ability of design to allow activated spaces and improved sightlines beneath the bridge.*
During Const.	N/A

5. Business and Economics

Long Term	**5a.1 Minimize business displacements and permanent access impacts.** • *Measure: Number of business displacements (measured in number of businesses, square feet, or number of employees).* • *Measure: Qualitative assessment of permanent access impacts that do not result in full displacement of business (includes number, duration and magnitude of access impacts, and availability and quality of alternative access).* **5a.2 Support redevelopment potential consistent with local plans.** • *Measure: Qualitative assessment of the extent to which newly vacant land is able to support uses that are consistent with local plans (vs creating landlocked parcels or supporting changes in use that are not consistent with local plans).*
During Const.	**5b.1 Minimize temporary access impacts to businesses.** • *Measure: Qualitative assessment of short-term access impacts (includes number, duration and magnitude of short-term access impact, and availability and quality of alternative access).* **5b.2 Minimize temporary regional economic impacts.** • *Measure: Estimated impact of construction on regional economic indicators (e.g., jobs, income, and cost of delay).* • *Measure: Estimated temporary direct and indirect impacts to navigation during construction.* **5b.3 Minimize loss of economic benefits (includes businesses and charities) from temporary impacts to major community events under and near the bridge.** • *Measure: Estimated loss of participation (# of people) in community events that would be impacted; if possible/reliable, estimate the financial impact such as total loss of spending/earnings, or provide qualitative assessment).*

6. Parks and Recreation Resources

Long Term	**6a.1 Minimize park displacements and adverse functionality impacts (include impacts to river recreation).** • *Measure: Assessment of adverse impacts to parks and recreation (e.g., magnitude (square feet) and qualitative assessment of impacts on functions, events, and access (for maintenance, events, etc.).* • *Measure: Qualitative assessment of beneficial impacts (e.g., access, functions, potential to increase Parks revenues, increase resiliency, etc.).*
During Const.	**6b.1 Minimize temporary impacts to parks.** • *Measure: Magnitude (square feet) of temporary parkland displacements.* • *Measure: Assessment of temporary impacts to parks (e.g., magnitude (square feet) and qualitative assessment of impacts on functions, events, access (for maintenance, events, etc.).* • *Measure: Impact of displaced events on Parks revenue.*

7. Historic Resources

Long Term	**7a.1 Minimize historic resource impacts.** • *Measure: Number of resources displaced or damaged (include National Register resources and districts and local historic landmarks and districts) and magnitude/character of impacts.* • *Measure: Number of resources with access, and context, and indirect impacts, and magnitude/character of impacts.* • *Measure: Character and magnitude of impacts to historic districts.*
During Const.	**7b.1 Minimize temporary impacts to historic resources.** • *Measure: Qualitative assessment of construction-related (direct and indirect) impacts to historic resources.*

8. Visual and Aesthetics

Long Term	**8a.1 Minimize adverse impacts to existing views and view corridors.** • *Measure: Qualitative assessment of potential impacts on existing views and view corridors (consider historic districts' design criteria and City-designated view corridors).* • *Measure: Qualitative assessment of potential compatibility/conflicts with existing urban design features.* **8a.2 Maximize-aesthetic experience for all users approaching, on, and under the bridge.** • *Measure: Qualitative assessment of visual and aesthetic opportunities (based on conceptual designs) for users on and under the bridge during both daytime and nighttime hours. Consider opportunities related to scale, forms and materials, viewing, wayfinding, transitions to and from public spaces, lighting/shade/shadows, and activating areas for public use (consider Portland design guidelines).* **8a.3 Create opportunity for a crossing that provides an iconic/demonstrative visual experience.** • *Measure: Qualitative assessment of potential to develop gateways, new views, processional experiences, and demonstrative and/or iconic visual experiences of and on the bridge.*
During Const.	N/A

9. Natural Resources, Climate Change and Sustainability

Long Term	**9a.1 Minimize impacts to water quality and flooding.** • *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.* **9a.2 Minimize impacts to fish and wildlife.** • *Measure: Estimated changes to aquatic habitat (due to change in pier area below OHW and above the critical scour depth - differentiate habitat quality: higher quality (<20' deep) and lower quality (>20' deep).*
During Const.	**9b.1 Minimize temporary impacts to water quality and flooding.** • *Measure: Estimated area of disturbance in proximity to the Willamette River.* • *Measure: Estimated temporary change in flood levels during construction (reasonable worst-case during construction).* **9b.2 Minimize temporary impacts to air quality, greenhouse gas emissions and carbon sequestration.** • *Measure: Qualitative assessment of effects on emissions due to traffic diversions/detours.* • *Measure: Change in carbon sequestration (based on change in tree cover).* ***9b.3 Minimize temporary impacts to fish and wildlife.*** • *Measure: Extent of pile driving.* • *Measure: Size of cofferdams and extent of temporary fill in the river.* **9b.4 Minimize resource consumption and waste production during construction.** • *Measure: (TBD, based on information provided by Greenroads analysis).*

10. Pedestrians, Bicyclists and People with Disabilities (ADA – Americans with Disabilities Act)

Long Term

10a.1 Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).

- *Measure: Width of bike path, potential for future bicycle climbing lanes, and safety at intersections and crossings.*
- *Measure: Width and slope of pedestrian and ADA facilities on bridge.*
- *Measure: Quality of protection from motor vehicles.*

10a.2 Maximize access/connectivity for bicyclists and other low-impact vehicles.

- *Measure: How well the bike facility on the bridge connects to existing and planned bike networks.*
- *Measure: Quality and quantity of accesses to transit stops and other destinations.*

10a.3 Maximize access/connectivity for pedestrians and ADA.

- *Measure: How well the pedestrian and ADA facilities on the bridge connect to existing and planned pedestrian and ADA networks.*
- *Measure: How well the pedestrian and ADA facilities on the bridge connects to social services and other frequent destinations for users.*
- *Measure: Quality and quantity of accesses to transit stops and other destinations.*

During Const.

10b.1 Minimize temporary travel time and access/connectivity impacts to bicyclists.

- *Measure: Extent of out-of-direction travel, or travel time change, for bicyclists during construction (reflect information, if available, on origins and destinations of trips using the Burnside Bridge; may require quantitative or qualitative assessment and professional-judgment; possibly consider the duration of temporary changes in access/connectivity).*

10b.2 Minimize temporary travel time and access/connectivity impacts to pedestrians.

- *Measure: Extent of out-of-direction travel, or travel time change, for ADA users and pedestrians during construction (reflect information, if available, on origins and destinations of trips using the Burnside Bridge; may require quantitative or qualitative assessment and professional judgment; possibly consider the duration of temporary changes in access/connectivity).*

10b.3 Maximize City's Vision Zero principles for safety and comfort for bicyclists, pedestrians, and other low-impact vehicles (e.g., scooters, skateboards).

- *Measure: Quality of protection of bicycle and pedestrian paths from other modes.*
- *Measure: Width of temporary bicycle and pedestrian paths.*
- *Measure: Qualitative safety assessment of temporary ADA and pedestrian facilities.*
- *Measure: Quality and quantity of accesses to transit connections.*

11. Motor Vehicles, Freight and Emergency Vehicles

Long Term	**11a.1 Maximize safety for motor vehicles and freight.** • *Measure: Qualitative assessment of motor vehicle safety based on design (factors including but not limited to: elements that affect operating speed such as lane width and other cross section details, curve radii, as well as potential conflicts with other modes, sideswipes, property damage, and others)* **11a.2 Maximize emergency service operations and responsiveness.** • *Measure: Qualitative assessment of emergency service responsiveness independent of a major earthquake (factors including but not limited to: lane width and other cross section details, curve radii, potential conflicts with other modes, and others)*
During Const.	**11b.1 Minimize temporary access and travel time impacts to freight and emergency vehicles.** • *Measure: Travel time for motor vehicles from point X to point Y (quantitative ~~if~~ travel model provides reliable estimate.* • *Measure: Duration of temporary closure/capacity reduction.* • *Measure: Quantify number and duration of temporary road closures due to construction.* **11b.2 Minimize temporary safety, impacts to motor vehicles, freight, and emergency vehicles.** • *Measure: Qualitative assessment of the safety of construction phase detours and reroutes relative to existing conditions.* **11b.3 Minimize temporary access and travel time impacts to motor vehicles.** • *Measure: Travel time for motor vehicles from point X to point Y (quantitative travel model provides reliable estimate).* • *Measure: Duration of temporary closure/capacity reduction.* • *Measure: Quantify number and duration of temporary road closures due to construction.*

12. Transit

Long Term	**12a.1 Maximize Streetcar readiness.** • *Measure: Qualitative assessment of impacts to future Streetcar and bus operations (factors including but not limited to: may include lane width and other cross section details, curve radii, potential conflict with other modes, and others).* **12a.2 Maximize bus accessibility.** • *Measure: Qualitative scale considering presence of dedicated bus pullouts, transit stops, transfer points to other modes (LRT).* **12a.3 Minimize transit collision vulnerability.** • *Measure: Qualitative assessment for whether the bridge options create differing intersecting geometries and lane width variations, and how those may increase or decrease the likelihood of motor vehicle collisions with bus, and northbound and southbound Streetcars on MLK and Grand Avenues. (factors including but not limited to: may include lane width, curve radii, intersection cross section, potential for conflicts between modes, anticipated weave motions, and likelihood of sideswipe collisions).*
During Const.	**12b.1 Minimize temporary impacts to transit access, safety, travel times, and ridership.** • *Measure: Frequency and duration of LRT, Streetcar, and bus disruptions.*

13. Fiscal Responsibility

Long Term	**13a.1 Minimize total Project cost.** • *Measure: Estimated total project cost (including design, right-of-way acquisition, construction, temporary bridge, mitigation, utility relocation, etc.).* **13a.2 Minimize long-term maintenance needs/costs.** • *Measure: Number and cost of major maintenance projects expected over life of the bridge, including the necessary bridge repairs following a major earthquake.*
During Const.	N/A

Topics for evaluation/decision-making in later project phases:
While developing the draft criteria groups, the CTF identified a number of topics that cannot be adequately or fully evaluated with the level of design and information that will be available during the DEIS phase. These are listed below with the recommendation that they be applied in later project phases such as during design or construction:

Seismic Resilience	Include equipment on bridge to create additional resilient functions after a major earthquake
Personal Safety	Maintain a safe construction site Implement design that minimizes risk of attempted suicide from the structure
Ped, ADA, Bicyclists	Maximize pedestrian/bicycle aesthetic experience on the bridge
Sustainability	Waste reduction and use of sustainable materials in design and construction. Energy sustainability in design
Navigation	Bridge lighting and signals do not adversely affect navigation safety
Aesthetics	Bridge lighting does not increase night sky impacts Provide a structure that instills a sense of community pride