

Options Evaluation Criteria

Criteria 1: Seismic Resiliency

Support reliable and rapid emergency response after an earthquake

Potential Measures:

- 1.1 To what degree is the option vulnerable to traffic blockage or damage to the bridge from adjacent facilities?
 - Area (length X height) of unreinforced masonry buildings located adjacent to the bridge.
- 1.2 To what extent is the option vulnerable to traffic blockage from disabled vehicles?
 - This vulnerability is a function of width and length.

Criteria 2: Non-motorized Transportation

Support access and safety for bikes, pedestrians and people with disabilities

Potential Measures:

- 2.1 How does the profile grade affect bicycles, pedestrians and people with disabilities ease of use?
 - Percent and length of grade
- 2.2 How safe and convenient are the bike and pedestrian connections between the bridge and other planned bike and pedestrian facilities?
 - Access to existing and planned bike and pedestrian facilities.
- 2.3 To what extent does the option support personal security for pedestrians and bicyclists?
 - The extent to which the option’s design locates pedestrians and bicyclists where they can be easily observed by others. For example, avoiding enclosed or less visible areas like elevators and pedestrian underpasses.¹

Criteria 3: Connectivity

Support street system integration and function (cars, freight, transit, bikes, pedestrians and ADA)

Potential Measures:

- 3.1 How well does the option connect with the existing and planned street network (for all modes)?
 - Number of streets permanently closed (including number of modes closed in those sections)?
 - Number of streets bypassed?
- 3.2 How safe and convenient are the crossing roadway and the roadway connections to the existing and planned street grid at both ends?
 - Extent to which the crossings grade and curvature potentially affect vehicle safety.
 - Degree to which the option diverts vehicle traffic from an arterial to a non-arterial street.
 - Extent of non-standard intersection layouts and vehicle movements.
- 3.3 Will bridge openings cause periodic delay in crossing time (affects all modes)?
 - Is the crossing a movable bridge?

Criteria 4: Equity

Minimize adverse impacts to historically marginalized communities and promote transportation equity

Potential Measures:

- 4.1 To what extent would the option displace or impact access to existing social services (including overnight shelters)?
 - Social service providers displaced.
 - Number of social service providers (not displaced) that would have their existing access substantially diminished.
- 4.2 To what extent would the option affect low income housing?
 - Units of low income housing displaced.
 - Are you precluding opportunities for future low incoming housing under zoning requirements?

¹ This measures general consistency with the CPTED (Crime Prevention Through Environmental Design) principle of “Natural surveillance,” which advocates for the placement of physical features, activities and people in such a way as to maximize visibility of the space and its users, fostering positive social interaction and reducing the risk of crime. Security concerns increase with features such as elevators or pedestrian-only underpasses where pedestrians and bicyclists are isolated from view by others.

Options Evaluation Criteria (continued)

Criteria 5: Built Environment

Promote land use compatibility and minimize impacts to parks and historic resources

Potential Measures:

- 5.1 To what extent does the option permanently impact (not displace) buildings (direct blockage of view, light and/or access)?
- Linear feet of buildings adjacent to new vertical alignments (affecting views and light).
- 5.2 How many commercial and industrial properties would be permanently displaced?
- Number of businesses displaced.
 - Number of employees displaced.
- 5.3 How many units of long-term housing would be permanently displaced?
- Number of units displaced.
- 5.4 To what extent would the option permanently displace park and recreation land?
- Amount (area) of parkland permanently displaced.
 - Substantial impacts to park circulation/access.
- 5.5 To what extent does the option impact national register historic resources and national register historic districts?
- Number of national register historic resources², including “contributing” resources, displaced or visually obstructed.
 - Extent of the proposed transportation structures³ within the New Chinatown/Japantown Historic District and the Skidmore/Old Town Historic District.

Criteria 6: Financial Stewardship

Ensure public funds are invested wisely

Potential Measures:

- 6.1 What is the initial capital cost of the option?
- Rank the options by cost “tiers” or “ranges”.
- 6.2 What are the relative levels of maintenance and operational requirements through the options design life?
- Number of major maintenance projects required over design life.
 - Relative level of on-going operational (including minor maintenance) needs by crossing type (e.g. power and staffing demands to operate tunnel, movable bridge or fixed bridge).

² Displacements of concern will include: properties already on or determined eligible for listing on the National Register of Historic Places; and, properties already determined to be “contributing” to a national register historic district. Also considers impacts to the Chinatown Gate.

³ The extent of non-displacement impacts from new transportation structures, such as viaducts or retained fill is based on new structure’s height and length within the national historic districts.

POTENTIAL CRITERIA FOR CONSIDERATION IN FUTURE PHASES

Seismic Safety

- How does the option affect seismic vulnerability beyond the bridge?
- How well does the option accommodate river use after a major earthquake?
- To what extent does the option's functional reliance on a power source affect its ability to provide immediate access for emergency response?
- To what extent does the option's length increase emergency vehicle travel time response and decrease reliability?

Transportation

- How consistent is the option with relevant transportation plans and policies?
- What is the impact from temporary traffic detours?
- What is the impact on congestion and street operations?
- How well does the alignment serve existing bus routes?
- How does the option affect safe and direct access to and from existing and planned (adopted) bike/ped/ADA facilities?
- What is the proximity/separation between bikes/peds and motor vehicles?
- To what extent does the option support safe and direct access for streetcar on the crossing?

Built Environment

- How consistent is the option with relevant land use plans and policies?
- To what degree does the option provide improved access to areas designated for development and redevelopment?
- How consistent is the option with relevant parks and recreation plans and policies?
- How would the option affect access to parks and recreation resources?
- How would the option affect archaeological resources?
- How would the option affect visual and aesthetic resources?
- What would the noise and vibration impacts be?

Natural Environment

- What is the net change in pollutant generating impervious surfaces?
- What is the extent of net new in-water fill?
- What would be the potential effect of new in-water fill on fish?
- What would be the potential effect of construction activities on fish?
- What are the effects on regulated air emissions?
- What are the effects of traffic changes on greenhouse gas emissions?
- How will future lower river flows and periodic higher water levels affect the bridge touchdown (flooding)?
- What are the embodied greenhouse gas emissions of construction materials?

Cost

- What is the total cost of ownership?
- What is the operations and maintenance cost?

Equity

- What is the community significance of the displaced properties and other changes?
- How will the option affect community cohesion?
- To what extent does the option affect the County's ability to meet housing goals?

Other

- Cumulative Impacts
- Construction Impacts
- Permitting
- Sustainability
- Technology