

# The Embarcadero Enhancement Project Bikeway Alignment Alternatives Impacts Summary

## Two-Way Waterside



### Traffic / Circulation

The basic two-way alignment keeps two NB travel lanes and double-left turn lanes at Washington, Broadway, and Bay; prohibits NB left-turns at Folsom; and repurposes a third travel lane between Howard & Pier 5 (approximately 4 blocks). A modest increase in NB congestion during peak periods is anticipated for these blocks. Alignment options north of Bay Street, in front of Pier 27, and the "Big Move" concept at the Ferry Building require more study. Existing SB travel conditions largely would not be affected.



### Parking / Loading

The basic two-way alignment impacts approximately 89 parking spaces spread over the length of the water-side (approximately 3 miles), and up to 132 spaces depending on various alignment options. Parking mitigation / replacement options would be explored.

Although some shifting of zones may be necessary, existing loading areas on the water-side would be retained and/or enhanced.



### Pedestrian Facilities

The basic two-way alignment has varied impacts to the Promenade: for most blocks it would be minimal (narrowing of 0-4 ft), at key pinch-points it may be narrowed by 11-14 ft, and in some cases it could be widened slightly. All alignment options would 'de-clutter' the Promenade where possible, improve marginal wharf areas, and upgrade curb ramps. Except for short sections at Pier 38 and at Broadway, a minimum Promenade width of 20 ft is expected to be maintained throughout.

City-side sidewalks could be widened if the SB bike lane is removed.



### Trees / Landscape Design

The basic two-way alignment impacts up to 6 palm trees (total) at Folsom and Battery streets where center medians may be narrowed, and could impact up to 20 Sycamore trees near Pier 39. Otherwise, the basic and optional alignments create opportunities for new/improved landscaping and urban design elements pending additional design.



### Transit / Bus Operations

The basic two-way alignment minimally impacts public transit, and should not impact tour bus operations beyond some increased congestion for the few blocks where travel lanes are removed. Impacts to trolley operations are not expected and may be enhanced, although trolley impacts from the 'big move' concept require further study.

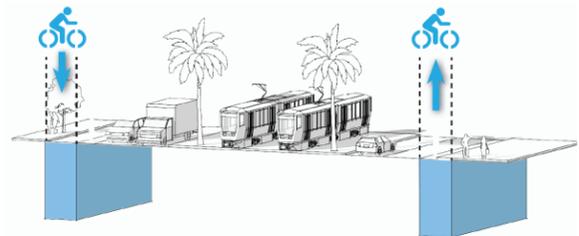


### Bikeway Quality

*(impacts considered positive)*

The two-way alignment meets or exceeds the preferred minimum width in virtually all locations, provides ample opportunities to physically protect users from traffic, has fewer signalized intersections, and is directly adjacent to most waterfront destinations. If desirable, some or all portions of the existing SB bike lane could also be retained.

## One-Way



The one-way alignment keeps two NB and SB travel lanes and NB double-left turn lanes; repurposes a NB travel lane between Howard & Pacific; and repurposes SB peak period lanes between Broadway and Don Chee Way. Due to required bike signal phases, SB congestion is forecast to substantially increase at Battery Street and at most intersections south of Ferry Building. SB right turns at Folsom and Harrison would be prohibited.



The one-way alignment impacts approximately 314-330 parking spaces depending on final design. Mitigation/replacement efforts may reduce the number of parking spaces removed, but options are limited.

Existing load zones on the water-side would be largely retained; City-side impacts include Chaya, Delancey Street restaurant load zones.



Due to existing narrow sidewalks on the City-side, the one-way alignment results in potentially unacceptable sidewalk widths (9 feet or less) from North Point to Battery, Howard to Harrison, and at Brannan Street. Existing bulbouts for midblock crossings at Greenwich and Delancy streets would be removed.

On the water-side, the one-way alignment would still impact the width of the Promenade but much less so than the two-way alignment. The Promenade, wharf areas, and curb ramps would be upgraded.



The one-way alignment could impact up to 62 London Plane trees and 44 pedestrian light poles on the City-side, with limited options to replace or relocate on site (in addition to the 6 center median palm trees that would be removed). Opportunities for new / improved landscaping on the water-side are similar to the basic two-way alignment.



The one-way (vs. two-way) alignment impacts bus operations more due to further congestion from additional SB lane reductions and dedicated bike signal phasing. Trolley impacts are not expected. For both one-way and two-way alignments, consolidating or removing trolley stops is optional and may (or may not) be explored as part of the Project.



The one-way alignment would widen the existing SB bike lanes and improve intersection safety at most locations with dedicated signals or vehicle right-turn bans. Wider and physically-protected NB lanes are achievable, but opportunities for SB protection are more limited (in many locations only a raised bikeway is feasible), which may limit its attractiveness as an alternative to the Promenade pathway.



### Cost



While detailed cost estimates are not available, the one-way alignment is expected to be roughly double the cost of a two-way bikeway (all else being equal) due to its larger footprint and impacts to both sides of The Embarcadero.

Symbols denote overall level of change from existing conditions



"SB" = Southbound or 'City-side'  
"NB" = Northbound or 'water-side'



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