

PROJECT OVERVIEW & TIMELINE

What is the Project?

The Embarcadero Enhancement Project (Project) is focused on improving safety, comfort, and access for all who travel on the Embarcadero. The project will develop a **conceptual design** for a protected bikeway along San Francisco's waterfront, from South Beach to Fisherman's Wharf.

The preferred design will:

- **enhance safety** for everyone on our waterfront
- **be flexible** to accommodate a wide range of needs;
- **reflect public values**; and
- **enhance the experience** of all travelers and visitors.

Where is the Project?

The study area extends from the Lefty O'Doul's Bridge at Third and King Streets (at AT&T Park), to the intersection of Powell and Jefferson Streets at Fisherman's Wharf.



When will it be completed?

A preferred conceptual design and cost estimate is expected to be identified by Fall 2015. Future project phases include environmental review, detailed design, and construction.

Read on to learn more about **Why** this Project is proceeding and **How** you can help tonight and beyond.

PROJECT DEVELOPMENT FALL 2013

- Initial Project Scoping
- Data Collection
- Existing Conditions Analysis

EARLY OUTREACH/EDUCATION SUMMER 2014

- Summary 'White Paper'
- Website & Survey
- Presentations
- Open House #1

DEVELOP DESIGN ALTERNATIVES FALL 2014 - SPRING 2015

- Stakeholder Meetings
- **Design Workshop Series**
- Cost Estimates
- Open House #2

We Are Here

SELECT PREFERRED DESIGN CONCEPT SUMMER - FALL 2015

- Workshop Series #2
- Open House #3
- Stakeholder Presentations
- SFMTA Board

ENVIRONMENTAL REVIEW, DETAILED DESIGN & CONSTRUCTION

To Be Determined (NOT FUNDED)

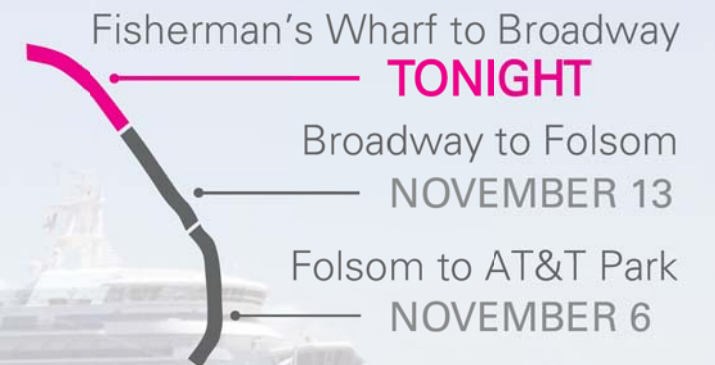
WORKSHOP PURPOSE & FORMAT

Tonight is the **third of three public design workshops** to discuss and explore potential solutions to space challenges along the Project corridor, with a specific focus on the segment between Broadway and Pier 39/ Fisherman's Wharf.

Why hold design workshops?

Fitting a new protected bikeway into a corridor as complex as the Embarcadero presents challenges. Namely, how wide should the facility be, and in what configuration? What existing elements should be removed, relocated, improved, or left unchanged?

This is where YOU come in.



Tonight you will break out into facilitated small groups to focus on three key objectives:

Objective #1



Discuss existing corridor features (such as the number of travel lanes, availability of parking/curbspace, and width of the Promenade) and their functions and relationship to adjacent land uses.

Seek creative solutions and small group consensus as to what design enhancements feel most appropriate at key locations along the corridor, through a hands-on "gameboard" exercise.

Objective #2



Objective #3



Find consistent messages and themes that can become guidelines for the SFMTA to develop conceptual design alternatives.

IMPROVING SAFETY, COMFORT, & ACCESS

HOW WILL THIS PROJECT BENEFIT YOU?

Walking

Improved walking experience by reducing conflicts with bicyclists. Additional pedestrian enhancements could include signal and crosswalk upgrades, sidewalk extensions, better wayfinding, reduced streetscape 'clutter' and other complementary treatments.



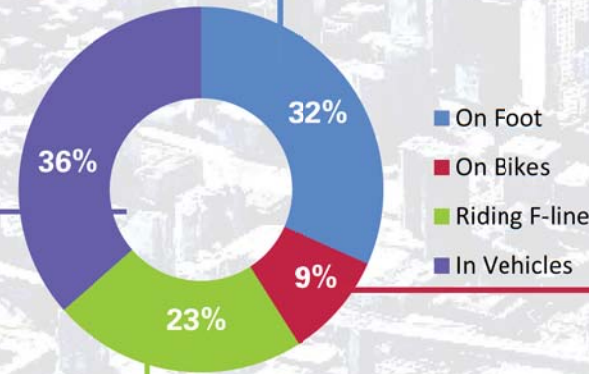
Biking



Driving



How We Travel on the Embarcadero
(Embarcadero at Broadway, 2014)



Riding Transit

The Project will help unburden the crowded MUNI F-Line by improving walking/biking options, and could include signal upgrades that speed up trains, station access enhancements, and better connections to bike share and key destinations. Loading access for private shuttles and tour buses will also be studied and clarified.



The Project will make it safer, more convenient, and more attractive to ride a bicycle along the waterfront, improving neighborhood linkages to the citywide bike network. A protected bikeway would set the stage for bicycling to capture a larger share of trips among a broader spectrum of users - from growing residential and employee populations to an ever expanding number of regional and international visitors.



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FOCUS ON SAFETY

A majority of the project area is part of the City's High-Injury Network, which represents just 6% of all City streets yet accounts for 60% of all severe and fatal injuries.

By the Numbers...

27%

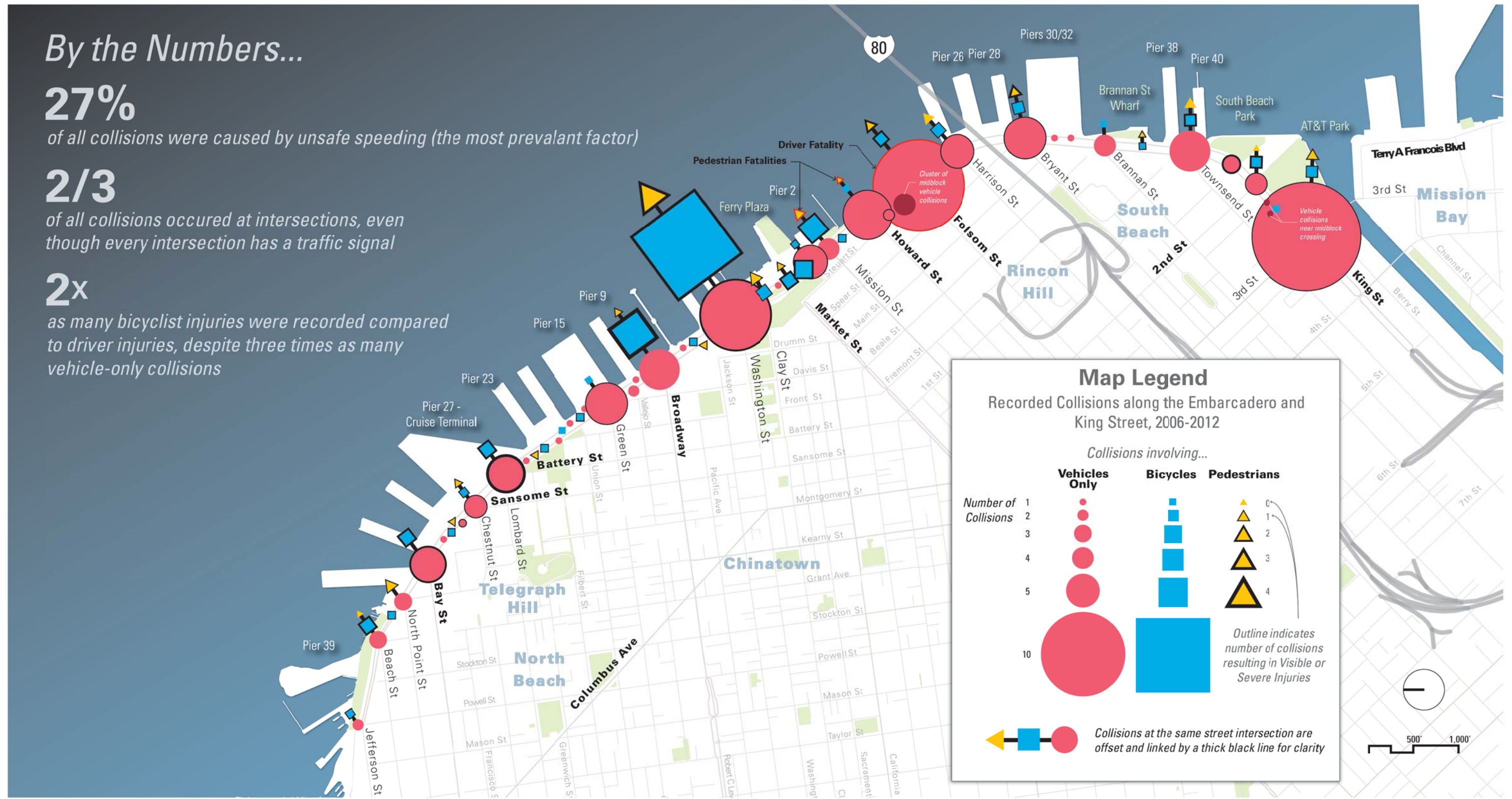
of all collisions were caused by unsafe speeding (the most prevalent factor)

2/3

of all collisions occurred at intersections, even though every intersection has a traffic signal

2x

as many bicyclist injuries were recorded compared to driver injuries, despite three times as many vehicle-only collisions



BIKEWAY DESIGN - What You Need to Know

What is a Protected Bikeway?

A protected bikeway is physically separated from vehicles by something other than just a white line on the roadway, and is not shared with pedestrians (like a trail).



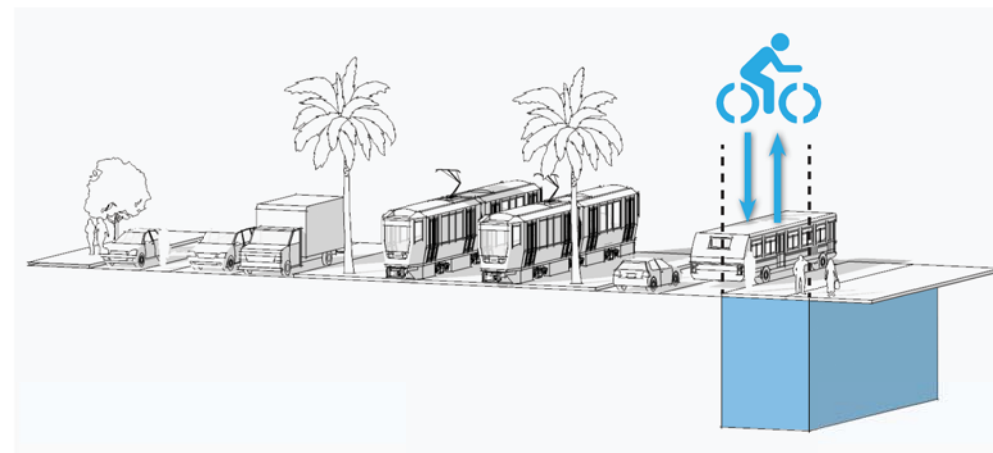
Methods of separation can include painted buffers, flexible bollards, curbs or medians, landscaping, and/or parked cars between the bikeway and traffic. They can be one-way or two-way, and may be at street level, at sidewalk level, or at an intermediate level.

By greatly reducing the threat of collisions and injuries, and by minimizing the overall interaction between cyclists and other users, protected bikeways typically result in streets that are safer and more comfortable for all road users - including drivers and pedestrians.

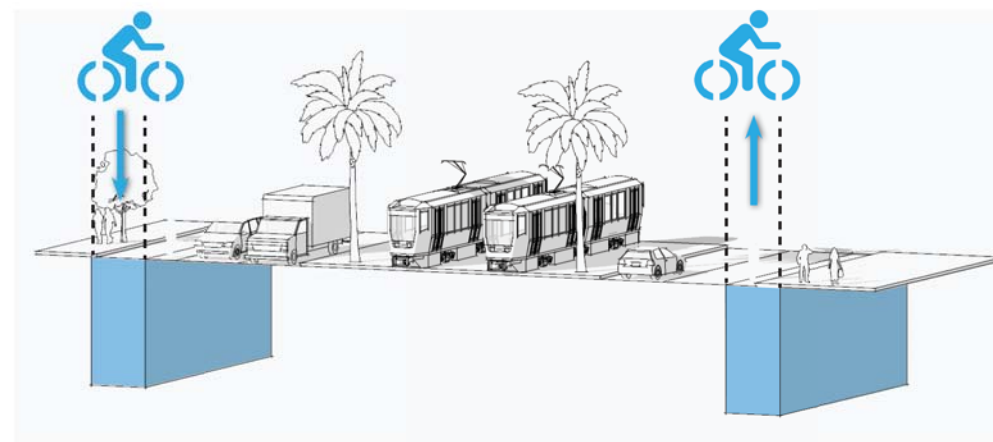
Project Assumptions

The Project is not exploring (nor will result in) changes to the MUNI light rail tracks or stations, but will consider modifications to non-essential medians, travel lanes, turn lanes, parking lanes, bike lanes, sidewalks, and the shared-use Promenade.

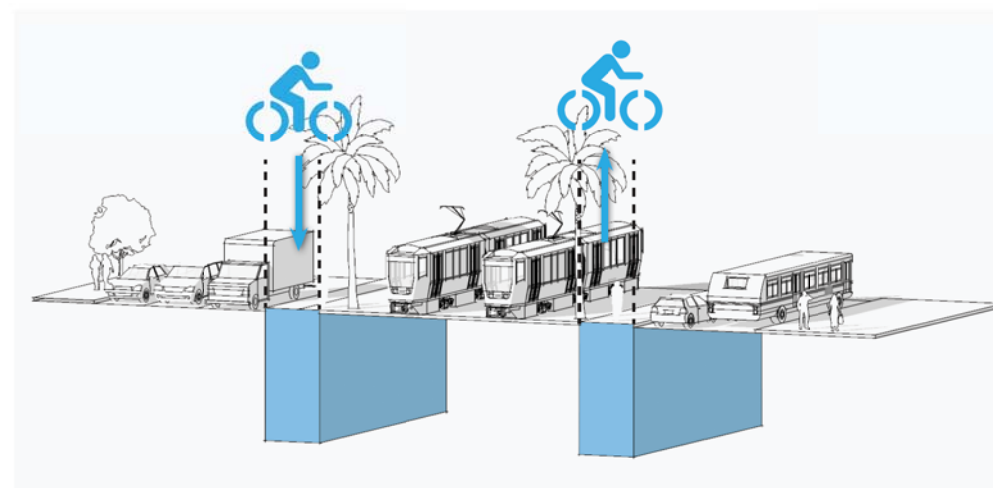
Bikeway Design Options



Option 1:
A two-way bikeway on the "water-side" of the Embarcadero



Option 2:
A pair of one-way bikeways at the outer curbs



Option 3:
A pair of one-way bikeways along the curb edges of the center median(s)

There is limited ability to "mix and match" among these options in order to develop a preferred bikeway design concept.

BIKEWAY DESIGN - What You Need to Know

Two-Way Bikeway (Waterside)

Minimum Width (Conceptual): 15 feet (total)

A two-way bikeway on the “waterside” of the Embarcadero generally requires a minimum of 15 feet for travel space and separation from other modes; and may require additional space if next to parking. A two-way bikeway on the “cityside” of the waterfront was proven infeasible during early analysis (due to lack of room) and is not being considered.



BENEFITS

- Puts bicyclists closest to Embarcadero attractions, ferries
- Generally limits impacts/trade-offs to one side of the street
- Minimizes potential vehicular conflicts - fewer cross streets and high-volume driveways
- Good for high bicycle capacity and ease of passing (of pedicabs, for example, or by faster cyclists)
- Easy to navigate; intuitive design for existing Promenade users should result in high compliance
- Greater opportunity for “real” separation from traffic, both for bicyclists and Promenade users
- Creates opportunities on city-side of Embarcadero for wider sidewalks and/or redundancy in southbound bicycle facility

CHALLENGES

- Requires the most right-of-way from one side of the street
- Potential conflicts with pedestrians, Port driveways, and loading/unloading curbspace needs
- Likely to result in reduced northbound vehicular capacity (locations to be determined)
- Requires reducing Promenade width in certain areas (locations to be determined)
- Higher complexity for design of transitions, intersections
- Potential for running/skating/walking in wider bikeway
- Commuter and/or higher-speed cyclists may not prefer facility

BIKEWAY DESIGN - What You Need to Know

One-Way Bikeway (Curbside)

Minimum Width (Conceptual): 8 feet in each direction

A one-way protected bikeway concept along the outer curb edges of the Embarcadero requires a minimum of 8 feet in each direction (although more is preferred), pending type of separation from traffic and whether the facility is raised or at street-level. This option is most similar to the existing bike lane configuration along the Embarcadero.



BENEFITS

- Intuitive; similar to existing bike lane configurations
- More compatible with existing traffic signals
- Reduces the amount of right-of-way needed on the waterside Promenade/northbound roadway
- Reduced impacts to overall travel modes; may better preserve vehicle capacity
- Retains more design flexibility around constraints (i.e., can “revert” to bike lane if necessary)

CHALLENGES

- Requires changes and impacts to both sides of the Embarcadero/King Street corridor
- Need to address numerous right-turning vehicle conflicts; solutions either reduce safety/comfort benefit or require separate signal phases (reducing vehicle capacity)
- May reduce parking and loading on both sides of the street
- Conflicts with desire for wider sidewalks on cityside
- Desire to be on the waterside may encourage southbound cyclists to continue using Promenade (potential compliance and enforcement issues)
- Less opportunity for “real” separation from traffic without inducing similar impacts to the two-way alternative
- Less bike capacity and opportunities for passing compared to the two-way alternative

BIKEWAY DESIGN - What You Need to Know

One-Way Bikeway (Center Median-Running)

Minimum Width (Conceptual): 8 feet in each direction

A one-way concept along the edges of the center median(s) generally requires the same width as the outer curb option, pending design details. This option is the most unusual of the protected bikeway concepts, but is being explored for potential applicability to the Embarcadero's unique conditions.



One-way center median-running bikeway, New York, NY (Photo: Eric Fischer)



Center median bikeway, New York City, NY (Photo: Dylan Passmore)



Center median bikeway, Washington, D.C.

BENEFITS

- Potentially the most space-efficient option, due to existing (underutilized) center median space
- Fewer conflicts with and impacts to existing loading/parking
- Better preserves vehicle capacity (e.g., retains options for vehicle right-turn pockets, "right on red" conditions)
- Direct access to bikeway from light rail transit stops

CHALLENGES

- Requires changes and impacts to both sides of the Embarcadero/King Street corridor
- Low compatibility with vehicle left-turns and U-turns
- Less opportunity for "real" separation from traffic without inducing similar impacts to the two-way alternative
- Desire to be on the waterside may encourage cyclists to continue using Promenade (potential compliance & enforcement issues)
- More impacts to transit infrastructure (e.g., overhead poles) increases risk, potential for higher cost
- Does not eliminate parking/loading/Promenade impacts in narrow areas
- Unusual design may be less intuitive and more difficult to fund and approve
- May result in significant loss of center median palm trees