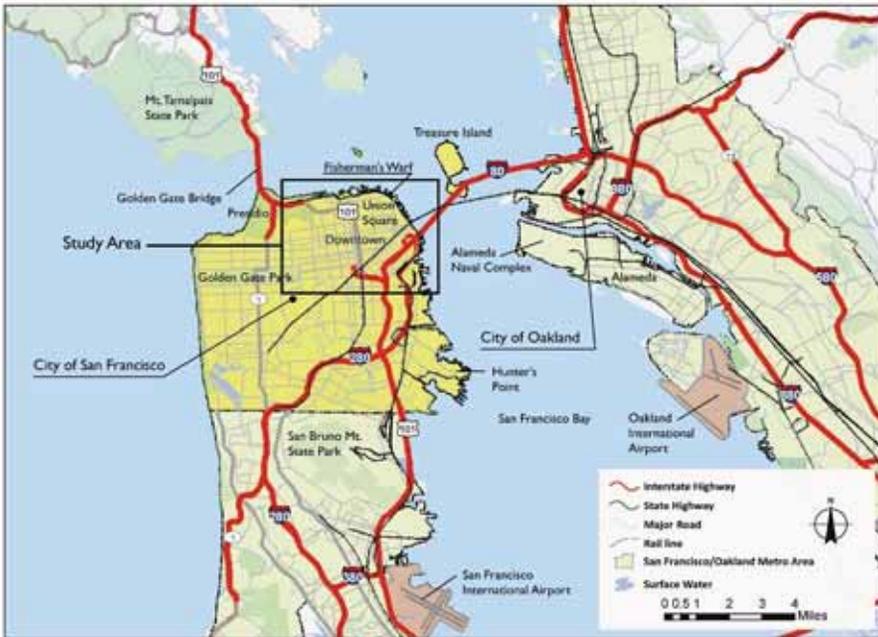


Embarcadero Freeway

	Embarcadero	I-81
Project Type	replacement of an elevated highway with a boulevard	existing elevated highway - TBD
Interstate Highway?	no	yes
Through Traffic?	no: spur highway to downtown	yes
Vehicles /day	61,000	100,000
Project Length	1.6 miles	1.4 mi.
Context	downtown: San Francisco Bay waterfront	downtown
City	San Francisco, CA	Syracuse, NY
Population	724,000	140,658
Timeline	planning and design 1983-1990; earthquake collapse 1989; construction 1991-2001	unknown
Cost/Cost per mile	\$171 million/ \$107 million per mile	unknown

Regional Context: San Francisco



Project Location



The Embarcadero Freeway was originally planned as a through route between the Bay Bridge (I-80) and the Golden Gate Bridge (Hwy 101), but was abandoned after the first leg was built due to growing concerns about the freeway’s impacts on surrounding neighborhoods. In 1985, the City of San Francisco Board of Supervisors moved to eliminate the freeway and replace it with a boulevard and trolley, but this measure failed in a 1987 vote, primarily due to fear of ensuing traffic congestion. In 1989, the Loma Prieta earthquake caused a section of the freeway to collapse, and the freeway was closed.

As the city grew accustomed to the freeway closure, there was a growing realization that traffic had adapted to the new network with few problems, and support for reconstruction waned. The decision-making process culminated in a 6-to-5 City Board of Supervisors vote that called for the highway to be torn down and

replaced with a boulevard, trolley line and waterfront park. The councilors who favored reconstruction did so largely out of concern that freeway removal would isolate the Chinatown neighborhood, located adjacent to the highway. In 1991, the Embarcadero Freeway was removed.



Precedent Design Study, Washington U. 2008

What were the outcomes?

The project is considered highly successful. The waterfront park is extremely popular, and the surrounding area has received significant levels of private investment. The Embarcadero Boulevard carries about 26,000 cars per day, about half the original freeway volume. The remaining traffic has either found other routes or switched to other modes of transportation.

Are there parallels to *The I-81 Challenge*?

Traffic volumes on the Embarcadero Freeway were lower than I-81, and, as a spur, the highway did not have the same function in the regional transportation network.

(Although originally planned as a through route, only the first leg was built.) However, this case provides a model of how local access to a downtown can be provided without a freeway. Traffic proved highly adaptable in this case, likely due to the availability of a robust local street network and a well-developed transit system.



Credit: Bruce Turner

What can we learn from this project?

Traffic Circulation and Urban Mobility: This project illustrates the ability of urban traffic to adapt to a significant change in the network, as drivers seek to avoid congestion and find their most favorable routes. The conversion to a boulevard allowed the route to support not only a significant number of cars, but also pedestrians and transit.

Economic Development/Urban Design: This project illustrates how the removal of an elevated freeway can increase property values and spur redevelopment. The freeway ran along the waterfront in an area with outstanding scenic value. As a result, the boulevard has attracted substantial economic development.

Political/Public Process: The process that led to the freeway removal decision had a number of unique characteristics. Since the freeway was closed after an earthquake, the city had to adapt quickly to the loss of capacity. The City Board of Supervisors took a stand against replacement of the freeway through a vote, which enabled the removal to proceed.

For More Information:

<http://www.streetfilms.org/archives/lessons-from-san-francisco/>

<http://courses.washington.edu/gehlstud/Precedent%20Studies/Embarcadero.pdf>