

## San Francisco\_Oakland Bay(SFOBB) Seismic (link B/W San Francisco & East bay cities of California)

San Francisco - Oakland Bay Bridge (SFOBB) Seismic retrofit of west span Length : 9260 feet

Tonnage : 5700 tons

Cost : \$150 million

Detailing Environment : AutoCAD

Duration : December 1999 to January 2001 The San Francisco - Oakland Bay Bridge (SFOBB) is a major transportation link between San Francisco and East bay cities of California. It is actually two bridges - an East span and a West span that are connected about halfway across the Bay at Yerba Buena Island.

West span of the bridge extends from Yerba Buena Island westward to the San Francisco City. It is comprised of two back-to-back suspension bridges built more than 60 years ago. The west span is one of five retrofit projects being undertaken by Caltrans in San Francisco to bring some of the city's most important elevated roadways up to modern seismic standards. The objectives of the seismic retrofit for SFOBB West span are to improve operational and safety standards to the greatest extent possible and to allow the SFOBB to remain open and functional following a Maximum Credible Earthquake.

The structural steel detailing of the retrofit work was performed in association with A. A. International for the joint venture of Contractors, California Engineering Contractors and Modern Continental. The work includes detailing of: Steel Towers

- All diagonals and deck floor struts and selected gussets by adding new plates and angles and replacing existing rivets with High strength bolts
- Portions of legs by adding plates along the longitudinal faces in all the towers and along both the faces, longitudinal and transverse, in tower 6
- Cable saddle connections at the top of towers
- Tower 6 base strengthening
- New wind tongue in upper deck
- Special assemblies for installation of viscous dampers Superstructure
- Selected upper and lower chord members, truss verticals and member connections and all diagonals and rocker posts by adding plates and angles, by replacing existing lacing with perforated plates and by replacing existing rivets with High strength bolts
- New lateral bracing on the upper deck and strengthening of bottom lateral bracing on the lower deck of suspended truss
- Floor beam connections to the chords
- Assemblies for installation of viscous dampers on lower and upper chords adjacent to towers