San Francisco-Oakland Bay Bridge

Treasure Island

Yerba Buena Island

San Francisco

Oakland
Seismic Safety Projects

- West Approach
- West Span
- Yerba Buena Island (YBI) Transition Structure
- Existing East Span (to be demolished)
- Skyway
- Self-Anchored Suspension (SAS) Span
- Oakland Touchdown

Bay Bridge Overview

CALTRANS  BAY AREA TOLL AUTHORITY  CALIFORNIA TRANSPORTATION COMMISSION
Project Overview

- Largest public works effort in state history
- Bridge damaged in Loma Prieta earthquake
- Entire bridge being retrofitted or replaced
- Opens to westbound traffic in 2012, eastbound traffic in 2013
West Span

- Retrofit began in 1999; finished in 2004
- 8,500 tons of structural steel added
- Seismic devices including “shock absorbers” installed
- Entire 3 million-ton span was lifted to install seismic bearings
West Span

Bay Bridge Overview
West Span
West Approach

• 1-mile stretch of Interstate 80 with 6 on- and off-ramps
• Inches from homes/businesses
• Extremely complex construction project
• Lower deck closed Labor Day weekend 2006
• Completed in early 2009
• Western half of bridge is now seismically safe
West Approach
West Approach
West Approach
Oakland Touchdown

- Connects Interstate 80 to East Span
- Constructed in two phases
Oakland Touchdown
Oakland Touchdown
Oakland Touchdown

Bay Bridge Overview
Skyway

- Parallel roadways replace existing double-deck
- 1.2 miles long
- Completed in early 2008
- 452 pre-cast concrete segments
- Seismic innovations in design
Skyway
Skyway
Skyway
Skyway

Bay Bridge Overview
Skyway
Self-Anchored Suspension Span

• Iconic
• Longest self-anchored suspension bridge in the world (2,047 feet)
• Single 525-foot-tall tower
• Unique design
• Deck sections arrive this summer
Self-Anchored Suspension Span
Self-Anchored Suspension Span
Bay Bridge Overview
Yerba Buena Island Transition Structure

- Transitions parallel decks to double decks
- Foundations completed in earlier contract
Yerba Buena Island Transition Structure
Yerba Buena Island Transition Structure
Yerba Buena Island Transition Structure
Labor Day Weekend 2007

- Closed entire bridge
- Removed and replaced 350 foot, 6,500 ton section of roadway
- Bridge reopened 11 hours ahead of schedule
Labor Day Weekend 2007
Labor Day Weekend 2007
Labor Day Weekend 2007 Timelapse
Bay Bridge Overview

Labor Day Weekend 2009

• Closing entire bridge
• Cutting out 350-foot long, 3,300 ton section of bridge
• Sliding in 3,600 ton segment to connect East Span to bypass
• Work will occur 150 feet in the air
• Traffic will use bypass until new East Span opens
Labor Day Weekend 2009 Simulation
Risk Management

• On-time, on-budget
• Hailed as national example
Financials

- Retrofit is many mega-projects
- Total project cost: $6.5 billion
Environment

• Team of dedicated environmental professionals

• “Bubble curtain” used to minimize impact on marine life during Construction

• Created new bird nesting habitat under Skyway

• Monitoring and protecting water quality
Environment
Environment
East Span Flythrough
We’re making history.