
Minneapolis Bridge Collapse Puts Spotlight on Ailing California Infrastructure

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From the Benicia-Martinez Bridge in the Bay Area to the Riverside Drive Bridge across the Los Angeles River (which is scheduled to be replaced) and more, the inspectors were sent out. This initial batch checked was steel deck truss structures similar to the one that collapsed in Minnesota; there are four such bridges in the Bay Area. The bridges under scrutiny in the Bay Area are:

- The Benicia-Martinez Bridge, which is due to be replaced by a new structure by October.
- The Interstate 680 Olympic Boulevard off-ramp in Walnut Creek.
- The Temescal Park under-crossing of Highway 13 in Oakland.
- The Presidio Viaduct on Doyle Drive approaching the Golden Gate Bridge in San Francisco.

All but the Presidio Viaduct have received "non-deficient" ratings by federal highway inspectors, meaning there are no obvious repairs to be made. Plans to rebuild the approach are already underway with construction work slated to begin in 2010.

The truss bridges are described as non-redundant, meaning that if one component fails, the bridge will likely collapse. They were commonly built more than 40 years ago to span distances of 300 to 800 feet, said Shankar Nair, a Chicago-based structural engineer specializing in bridge design.

Beyond the steel truss bridges, another 1,700 bridges and freeway overpasses in this state suffer some form of deterioration and have been called "basically intolerable requiring a high priority of corrective action." 49 of those high-priority bridges are in the Bay Area, including the Doyle Drive approach to the Golden Gate Bridge in the Presidio, which received a rating of only two out of a possible 100, and the elevated portion of Interstate 880 over High Street in Oakland.

"Sufficiency ratings" are calculated by weighing various factors such as structural adequacy and safety, which accounted for 55% of the rating. Other factors include how heavily traveled the spans are. Caltrans stressed that low numbers do not mean a bridge is unsafe. If the score is below 50 and a bridge is given the status of structurally

deficient or functionally obsolete, it is eligible for federal funding.

Will Kempton, Caltrans director, said that the state's bridges and highways are safe: "If we had any unsafe bridges in this state, those bridges would be closed or they would be posted for limited operation," he said.

Compared other areas of the country, the Bay Area bridges are in good shape due to recent retrofitting that has been done, said Dan Hellevig, Executive Officer of Ironworkers Local 377.

"We've been pretty fortunate in the Bay Area and have been retrofitting or rebuilding our bridges in recent years," said Hellevig. "In addition, bridges in California are designed to withstand earthquakes and are not subjected to the same corrosive elements that bridges back east are."

While there is little chance of a similar catastrophic failure on California bridges, the Minneapolis bridge collapse is seen as symbol for the nation neglected, and deteriorating infrastructure, and the need to invest greater funding in infrastructure repair.

"We have all over the country crumbling infrastructure," said Senate Majority Leader Harry Reid. In addition to being the "right thing to do," Reid also said that repairing infrastructure was "good for America." "For every billion dollars we spend in our crumbling infrastructure, 47,000 high-paying jobs are created," added Reid.

"Every Building and Construction Trade Union across the country is on record warning of the need to bring our infrastructure up to acceptable standards. The collapse of the bridge in Minnesota has brought this need to light in a very tragic way," said Bob Balgenorth, President of the State Building and Construction Trades Council. "The Bush administration has neglected the proper funding to repair and replace the infrastructure. Instead Bush rewards his fat-cat friends, which comes at the expense of the safety of the American public."

There are 24,000 bridges in California. Roughly half are state owned and the other half are divided between city and municipalities. Half of all of those structures were built before 1967, with several hundred made entirely of steel where matters such as metal fatigue play a factor. In the aftermath of the Loma Prieta and Northridge earthquakes, the aforementioned billions were allocated for repairing and reinforcing some 2,000 freeway bridges up and down the state. But untold billions more will have to be generated and spent to upgrade or replace existing bridges and overpasses.

As the population and traffic steadily increases in our state, clearly the means of moving people from one place to the other is key, and their safety on those roadways and bridges is of paramount concern. From retrofitting to rebuilding, to using emerging technologies such as real-time sensors designed to track changes in vibration characteristics in bridges, these safety measures will be incorporated by our members as together we build for the future.