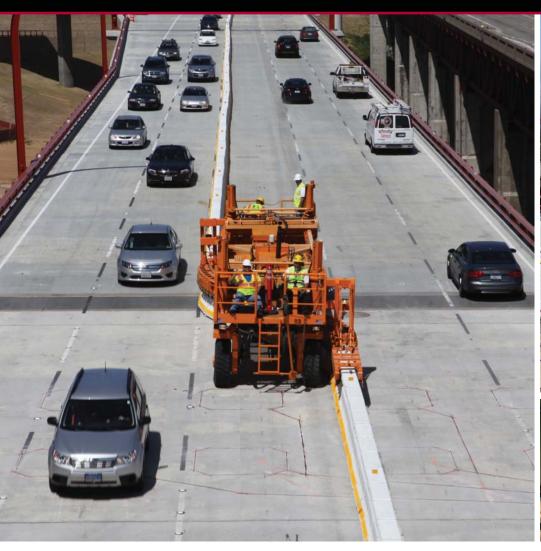
## DOYLE DRIVE BYPASS SAN FRANCISCO, CA

MOVEABLE BARRIER FOR CONSTRUCTION URBAN HIGHWAY BYPASS









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## MOVEABLE BARRIER IMMEDIATELY RAISES LEVEL OF SAFETY

Doyle Drive in San Francisco was in desperate need of replacement. Scoring a "2" out of a possible 100 safety rating, this connector from the Golden Gate Bridge into the city would not have likely withstood a major earthquake. The \$1.1 billion construction project to replace the structurally and seismically deficient roadway started in 2009, when the first steps were taken to build a temporary bypass. In April, 2012, the bypass was completed and traffic was switched over as the elevated sections of the old Doyle Drive were demolished in a single 57-hour weekend to make room for the new "Presidio Parkway" that will be complete in 2015.

Historically, congestion on Doyle Drive was managed by using plastic pylons as a center divider. While the pylons could be reconfigured to create a 3/2, 2/3 traffic pattern, they did not offer positive protection between opposing lanes of traffic. This unfortunate fact was proven many times over the life of the roadway, including an incident less than one month before the bypass opened, when an SUV swerved across the center line and created a four-car accident that injured 5 people. To raise the level of safety on the new Doyle Drive bypass, the California Department of Transportation (CalTrans) installed an innovative moveable median barrier system. 1.25 miles of moveable barrier was deployed on the 5-lane bypass, and the barrier is shifted back and forth multiple times per day to create

three lanes in the peak traffic direction in a 3/2, 2/3 configuration, and unlike the plastic pylons, the moveable barrier provides positive barrier separation between opposing traffic lanes to eliminate the possibility of a head-on collision. The barrier is transferred laterally between 12 and 14 feet (one lane width) at a speed of five miles per hour. The entire transfer takes only 15 to 20 minutes.

Four days after being deployed onto the new bypass, an intoxicated motorist swerved toward oncoming traffic and would have crossed over the center line to cause a head-on accident if not for the moveable median barrier. Captain Amy Mangan of the California Highway Patrol (CHP) stated, "There is no doubt in our minds that there would have been a head-on collision, and those types of collisions usually result in significant injury if not death... this lane configuration and the moveable barrier are absolutely fantastic for the safety of the motorists here on the Doyle Drive project."

The moveable median will stay in place until construction of the new Presidio Parkway is finished, completing what the city calls, "...a spectacular regional gateway between the iconic Golden Gate Bridge and the city of San Francisco."







