

Coronado Bridge

Moveable Barrier for Managed Lanes | Moveable Median Application



ROAD ZIPPER™

Moveable Barrier Still the Best Solution After 18 Years

The Coronado Bridge is a 5-lane structure rising 200 feet above the water to connect the cities of San Diego and Coronado. The initial design included a managed lane system to reconfigure the five lanes multiple times per day to provide 3 lanes to the peak traffic direction at all times. Plastic stanchions were placed and moved by hand to reconfigure the lanes, and while this provided adequate delineation for drivers, there was no positive protection between traffic lanes. The bridge opened in 1969 with an average of 11,000 vehicles per day crossing the bridge, but by 1993 the number of vehicles had tripled and head-on accidents were growing out of control. In the three years from 1990 to 1992, there were 21 cross-median accidents with 2 fatalities.

To stem the tide of crossover accidents, Caltrans installed a concrete moveable median barrier called the “road zipper” that was able to reconfigure the bridge lanes in the same manner as the plastic stanchions, while eliminating the possibility of crossover accidents. According to Caltrans, there have been no crossover accidents since the installation of the moveable barrier system. An additional benefit of the positive protection has been increased use of the center lanes, which had previously been underutilized due to the possibility of head-on collisions.

The original moveable barrier system shifted the barriers for 18 years before it was decided that the system should be retired. After researching the new modern options for managing the

bridge lanes, it was decided that the Road Zipper was still the best way to reconfigure the roadway without the possibility of crossover accidents. In 2012, the new system was installed on the bridge with significant upgrades from the old system. The new Reactive Tension barrier is only 18” wide to give the most space possible to drivers. When impacted, the new barrier has half the deflection of the original, from 52” down to 27” at NCHRP 350, Test Level 3.

With a life expectancy of 20 years or more, the new Road Zipper system from Lindsay Transportation Solutions will mitigate congestion and save lives into 2030 and beyond, a faithful companion to the daily drivers on the Coronado Bridge.



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