

# Georgia Street Bridge Seismic Retrofit and Rehabilitation

As the lead consultant and bridge designer, Kleinfelder developed a full retrofit plan and addressed other rehabilitation efforts for the 100-year-old Georgia Street Bridge and adjacent retaining walls, which presented several deficiencies related to seismic capacity, standard vehicle capacity, vertical clearance, barrier rails, and deck width.

## PROJECT RESULTS

*Kleinfelder provided the City with an innovative design that balanced safety, historic preservation, cost, and seismic performance. Kleinfelder continued to be involved throughout the construction process, making adjustments as needed to accommodate the challenges of rebuilding a 100-year-old structure. Working closely with the City and contractor, Kleinfelder ensured that the project requirements were met while balancing the schedule and costs, and ultimately restored the aging landmark.*



## A HISTORIC BRIDGE WITH NEEDED REPAIRS

The local community stressed the importance of maintaining the bridge's historic integrity and was engaged during preliminary engineering, concept approval, environmental clearance, and final design. Kleinfelder also worked with historic architects during design development to optimize solutions for preserving the historic value of the structures while developing a reconstruction plan that would increase public safety by alleviating structural deficiencies, seismic vulnerability and extensive deterioration.

## INNOVATIVE DESIGN TO MAINTAIN HISTORIC INTEGRITY

Squeezing a modern seismic design into the framework of a historic arch bridge, along with working in a confined environment that had to maintain the continuity of traffic flow, required an innovative design and thoughtful approach. Kleinfelder utilized innovative techniques including integration of existing arch ribs into the final structural system, hydrodemolition of cover concrete, and self-consolidating concrete with reinforcing fibers.

### Location:

San Diego, California

### Owner:

City of San Diego

