

North First Avenue Bridge Maintenance

Kleinfelder was selected by the City of Barstow to provide Bridge Engineering Services for the North First Avenue Barstow Overhead Structure. This 1160-foot-long structure was originally constructed in 1930 and is comprised of three different materials that make up its overall length, which include timber approaches on each end, steel trusses, and built up plate girders.

PROJECT RESULTS

As part of the larger, ongoing project, Kleinfelder designed an immediate maintenance solution to remove posting limits that could be carried out by the City of Barstow in-house staff. This saved the City both time and money, while providing a solution for immediate and future needs.



AN AGING INFRASTRUCTURE

The original timber approaches were showing signs of fatigue and had received a sufficiency rating of three out of 100 on a recent Caltrans inspection. Kleinfelder performed a visual inspection of the timber approaches and determined that additional timber posts were needed at various locations to reduce the span length and loading of the timber caps. Additional timber cross bracing was also installed along the length of the timber approaches to better distribute the longitudinal forces exerted by the traffic traveling over the structure.

KEEPING THE BRIDGE OPERATIONAL

Working with the California Department of Transportation, Kleinfelder was able to design a maintenance solution that could be immediately implemented, which would remove the posting limits that had been set for this bridge. Reducing the posting limits, or weight restrictions, allows this bridge to stay operational for emergency vehicles. The maintenance design was created so that City staff could carry out the maintenance themselves.

Location:

Barstow, California

Owner:

City of Barstow

