



## BECK STREET BRIDGE

Salt Lake City, Utah



Owner: Utah DOT

Designer: Parsons Transportation Group

Contractor Joint Venture:

Kiewit Construction

W.W. Clyde & Co.

Years of Project: 2008—2010

Total Project Cost: \$115 Million

Owner Reference:

Grant Gummow, P.E. (801-965-4307)

Client Reference:

Steve Arent, P.E., S.E. (Parsons— 303-638-3635)

Project Highlights:

The Beck Street Bridge is a 10-lane structure that replaced an existing 6-lane structure over I-15 as part of the I-15 Express Link project. DBA served as the geotechnical engineer for this bridge while Shannon & Wilson, Inc. performed geotechnical engineering services for the rest of the project. The bridge spans 2 Union Pacific Railroad mainline tracks, two spur tracks, and the Utah Transit Authority commuter rail line.

Drilled shafts were selected as the best foundation for the interior bents due to the site restrictions imposed by the adjacent railroads and the performance of shafts under seismic loading. A single 9-foot 2-inch diameter shaft supports each column. The shaft design included base grouting to enhance end bearing resistance in the silty sands, resulting in shorter shaft lengths. The shafts were constructed using an oscillator and segmental casing to prevent collapse of excavations adjacent to the active railroads.

Each abutment is supported on a group of 12.75-inch closed-end driven pipe piles. The abutment is isolated from the approach embankment to reduce loading effects from lateral spread of the embankment in an earthquake.

*Photo Credits: Dan Brown and Associates, PC.; UDOT*

