

Trunk Highway 47 under Saint Anthony Boulevard

Minneapolis, Minnesota



Jurors Comments

A beautiful bridge...elegant and shallow main span...interesting concept to counterweight the short back spans and hide them behind the abutments.

The bridge is a three span continuous welded plate girder with a 124' main span and 52' end spans. It has six girders with a 53" webs in the end spans, parabolic haunches at the piers and 32" webs in the main span. The bridge replaces a bridge with a haunched concrete slab main span flanked by deck girder end spans hidden by walled enclosures.

The aesthetics of the new bridge remind motorists that this is the northern gateway to Minneapolis. The girders were haunched to give a slender appearance to the main span. Enclosed end spans give the appearance of a walled abutment, retaining the style of the original bridge. The end span enclosures have a random stone surface finish, giving texture to the vertical faces. Aesthetic requirements called for an unobstructed view without a pier in the median of the highway below, and a shallow structure depth. This was

accomplished by using three span continuous girders. A pier wall and side walls create a hollow enclosure for the end spans. Counterweights were used to shorten the end spans in order to maintain similar proportions to the original bridge while controlling uplift at the abutments. The end spans were not haunched at the pier for ease of fabrication and to allow more depth for the concrete counterweights at the abutments.

Project Team

Owner
Minnesota Department of
Transportation

Designer
Minnesota Department of
Transportation

Steel Fabricator
Egger Steel Company

Steel Detailer
Egger Steel Company

Steel Erector
High Five Erectors, Inc.

General Contractor
Lunda Construction Co.

