

South Platte River Bridge

STRUCTURE

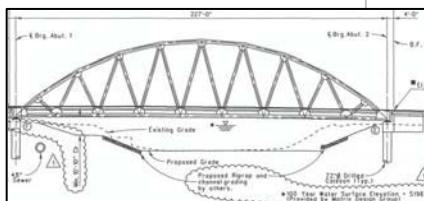


June '10

- The South Platte River Bridge is 40 feet wide, providing for double track Light Rail access over the South Platte River west of the Auraria campus and south of INVESCO Field at Mile High.
- The bridge is highly visible from the Colfax viaduct, serving as a dramatic focal point for RTD's West Rail Line.
- The bridge type is referred to as a "Bowstring Warren Pony Truss" and is the only bridge of its kind in Colorado.
- The type of high-strength steel used for the steel trusses is called "weathering steel". It will naturally rust to a dark purple-brown color and form a protective oxide coating, eliminating the need and expense of painting, now or in the future.
- To make the bridge lighter, the rails are attached directly to the concrete of the bridge deck, eliminating the ballast and ties.
- The surrounding industrial setting was considered when choosing the aesthetic look of the bridge which was developed from a similar commuter rail bridge in England, the "Newark Dyke Bridge".
- South Platte River Bridge has more than 90,000 pounds of reinforcing steel, 778,000 pounds of structural steel and 1.9 million pounds of concrete.

Construction

- The bridge truss was constructed in place on a temporary structure utilizing approximately 50,000 high-strength structural bolts.
- The truss was fabricated in Texas and shipped to Denver for erection.
- The truss top chords are designed to withstand a compressive force of over 1.2 million pounds each, and the span can withstand a sustained hurricane force wind of 100 mph.
- From extreme cold to extreme hot, the truss span will elongate approximately 2.25 inches.
- The bottom chord of the truss has full interior access, to facilitate erection and allow for future inspection and maintenance.



Bridge Rendering

OVERVIEW

Total weight of bridge	3 million pounds
Length of bridge	227 feet
Overall Height	46 feet
Number of spans	1 (228')

The South Platte River Bridge is part of the RTD FasTracks West Rail Line.

Designed by Jennifer Wood, David Evans and Associates, Inc., RTD's design consultant on the West Rail Line project.

Constructed by Edward Kraemer & Sons, sub-contractor to Denver Transit Construction Group.



October '10