

# Federal Bridge

## STRUCTURE

- The Federal Boulevard Bridge is being reconstructed as part of the West Rail Line Project for the Colorado Department of Transportation.
- The bridge is made from both concrete and steel. It uses several concrete girders and a reinforced concrete deck to span not only Lakewood Gulch, but two light rail tracks and two pedestrian pathways as well.
- Federal Boulevard Bridge is 100 feet wide on the east side, avoiding two existing sewer lines which are buried over 30 feet below ground.
- The bridge has more than 500,000 pounds of reinforcing steel, and 8.4 million pounds of concrete.
- The girders for the bridge are pre-stressed, making them able to incur nearly 50 million pounds of force.
- The new structure will be 119 feet wide, carrying three lanes of traffic in each direction, plus a south bound bus lane. It will provide 10 foot sidewalks on both sides of Federal Boulevard.
- The sidewalks of the bridge are more than 40 feet above the Lakewood Gulch.

## CONSTRUCTION

- The bridge was constructed in three phases to allow traffic to remain on Federal Boulevard. Keeping the old Federal bridge in tact during construction made for a very constrained area.
- The new bridge carries multiple utilities hidden between girders under the bridge which have remained in service throughout construction.

## OVERVIEW

Total weight of bridge	8.5 million pounds
Length of bridge	229 feet
Height over Gulch	40 feet from sidewalk on the Bridge
Number of spans	3 (69'-79'-79')

*The Federal Blvd. Bridge is part of the RTD FasTracks West Rail Line.*

*Designed by Patrick Stein, Bridge Section Manager, Felsburg Holt and Ullevig, sub-consultant to David Evans & Associates*

*Constructed by Lawrence Construction, sub-contractor to Denver Transit Construction Group*



September '09



October '09



January '10



June '10