

## E-470 Improvements at Segment 1

A HOCHTIEF Company

### Owner

E-470 Highway Authority

### Location

Denver, CO

### Value

\$6,400,000

### Market

Highways & Interchanges

### Start - Completion Dates

5/2004 - 6/2005

- Toll road bridges and toll booth construction
- Bridge construction at three sites
- Ramp construction, grading, and paving

## Project Description

E-470 is a 47-mile toll road that runs along the eastern perimeter of the Denver metropolitan area. This project, designated as E-470 Segment 1, included reconstruction of three intersections along the southern portion of the perimeter. Without Flatiron's expertise in such a variety of structure types—five different bridge structures at three locations—this project would have been very difficult. The three main elements of construction were:

- Widening E-470 over Jordan Rd. — two bridge structures with a concrete deck placed atop 72-inch steel girders. The length exceeded what could be delivered by semi, so the girders were sent in two pieces and required splicing prior to erection.
- Widening E-470 over Happy Canyon Creek—two bridges comprised of 72-inch bulb-T precast girders.
- New Chambers Rd. bridge over E-470—a complex structure with prestressed, precast 72-inch tub girders which required post-tensioning.

Flatiron was solely responsible for all quality control done on the project. The extent of the QC went above and beyond standard CDOT requirements. Flatiron delegated a QC manager and monitored every aspect of the project in-house—from rebar installation inspections to concrete temperature monitoring.

### Company Role

Flatiron was the prime contractor for this project.

### Awards

- *Colorado Construction Magazine*—Bronze Hard Hat Award for Concrete Construction, 2005

