

# I-80 Expressway Lane Additions



## PROJECT DESCRIPTION

Ciorba Group completed design plans for improvements along I-80 from US 30 to US 45 in Will County. The project improves safety and capacity along I-80 by adding a third lane in each direction and replacing the existing grass median and ditch with new shoulders and a Jersey barrier wall. The ADT on this section of roadway is 80,500 vpd including 18,000 trucks. Because of the high traffic volumes, two lanes of traffic were maintained at all times on I-80 during construction.

A new median storm sewer system was designed to collect runoff from the inside lane and shoulders. In-line detention for sensitive outlets was provided via over-sized storm sewer. Drainage outfalls were designed to maintain current drainage patterns with stormwater detention provided where necessary. The storm drain outlets were jacked under I-80. The cross-slope of the inside shoulder was warped at several locations to provide the desirable minimum grade for drainage. Coordination with federal, state and county agencies for outfall and stormwater detention permitting was necessary. Finalized plans were submitted with the permit application to these various agencies. Best

management practices for erosion control, both temporary and permanent, were instituted in the design to maintain stormwater quality.

The dual three-span bridge over the Norfolk Southern Railroad on I-80 was widened with steel rolled beams to match the existing structure while maintaining the minimum required vertical clearance. The existing deck was widened, patched and overlaid. Noise walls were designed for three locations with sensitive receptors. An intelligent transportation system (ITS) was designed to provide volume and occupancy information for the calculation of travel speeds. Components of the ITS included traffic surveillance equipment (cabinets and in-pavement sample station), conduit and fiber optic equipment, closed circuit television cameras, radar vehicle sensing devices and overhead dynamic message signs.

Ciorba prepared two sets of contract plans for the project. Lane additions and the noise wall were advertised as separate construction contracts for I-80.

### LOCATION

Will County, Illinois

### CLIENT

Illinois Department of Transportation,  
District One

### CONTACT

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### CONSTRUCTION COST

\$27 Million

### PROJECT TEAM

Lead Structural Engineer  
Salvatore Di Bernardo, PE, SE  
Lead Drainage Engineer  
Tony Wolff, PE, CFM  
QA/QC Engineer  
Mark Johnson, PE, PTOE

### SCOPE OF SERVICE

► Final Design

