Replacement of Bridge No. 05588

Vernon, CT

Client
The Connecticut Department of Transportation
State Project No. 146-196

Completed
2016

Description
Zuvic Carr prepared contract documents for the replacement of the Route 74 Bridge over Hockanum River in Vernon for the Connecticut Department of Transportation. The original bridge was a dual cell corrugated metal pipe arch structure built in 1955 that carried two lanes of traffic over the River.

Our design included removal of the existing bridge and replacement with a new structure utilizing Accelerated Bridge Construction (ABC) methods. The new structure has a clear span of 42 feet over the river. It consists of precast prestressed concrete deck units with a concrete shear slab cast over the top and cast-in-place parapets and sidewalk, precast concrete abutments supported on a 20-foot deep pile system, and integral cantilevered precast concrete wingwalls.

Pedestrian access across the river was maintained during all phases of work by means of a temporary pedestrian/utility bridge, which also carried temporary water and gas mains. The 16-inch diameter water main and 8-inch gas main were permanently relocated onto a steel through-girder utility bridge at each abutment. Overhead electric, telecommunications, and cable television lines on both sides of the roadway were also relocated.

Maintenance and protection of traffic required complete bridge closure and vehicular traffic detour for eleven weeks and temporary off-peak lane closures for the remainder of construction. This ABC project was successfully completed with no design-initiated change orders.