

STATE PROJECT NO. 0130-0190
REHABILITATION OF BRIDGE NO. 07051
U.S. ROUTE 6 AND STATE ROUTE 67 OVER SOUTH BRANCH BULLET HILL BROOK
TOWN OF SOUTHBURY

PROJECT DESCRIPTION

Project Location:

Bridge No. 07051 conveys South Branch Bullet Hill Brook under U.S. Route 6 and State Route 67 in the town of Southbury. The structure is located at the intersection of the Interstate 84 (I-84) eastbound (EB) exit 15 ramps and the junction of U.S. Route 6, coming in with 84 EB and turning north as Main Street North, and State Route 67, coming in from the north with Route 6 and continuing south as Southford Road.

Existing Bridge:

Bridge No. 07051, built in 1961, is a 172-foot long, 112-inch wide by 75-inch tall, asphalt coated corrugated metal pipe (ACCMP) arch culvert that conveys South Branch Bullet Hill Brook, from south to north, under the signalized intersection of the I-84 EB ramps and U.S. Route 6 and State Route 67 in Southbury. The culvert is supported by a concrete cradle and collar at the inlet and the outlet and is beneath 18 to 30 inches of material.

The I-84 EB off ramp consists of 3 lanes at the intersection. West of the intersection, Main Street North eastbound consists of two through lanes and two left turn lanes onto the I-84 EB on-ramp. East of the intersection, Southford Road westbound consists of 3 through lanes across the intersection. The AADT over the structure is 15,800 vehicles per day west of the intersection and 14,000 vehicles per day east of the intersection. (2020 CTDOT Traffic Logs). The westbound lane has an 18" wide band of braided longitudinal cracking. The culvert is in overall Fair Condition (Rating = 5) due to the condition of the ACCMP. The asphalt coating is missing on the lower corner plates and the invert at most locations, consequently, light to moderate rust conditions are present with moderate laminar rust build up where the asphalt coating is missing. There are several bulges and perforations in the pipe soffit and small dents up to 12-inches long by 2-inches wide by 1-inch deep. Additionally, random bolts show seepage from behind. The concrete slope protection is covered with heavy vegetation at the inlet and outlet, limiting the condition assessment. Two RCP pipes, an 18-inch and a 24-inch, outlet within the concrete collar at the inlet.

Aerial utilities including Eversource Energy – Electric Distribution (Eversource), Frontier Communication of Connecticut (Frontier), and Crown Castle Fiber Networks (Crown Castle) exist along the southern side of Route 67. Eversource is the custodian of the poles. Underground facilities exist within the project limits including an Eversource ductbank, a Frontier ductbank with leased conduit space to Crown Castle, and a 12-inch watermain owned by the Connecticut Water Company. The Project Site is not within an Aquifer Protection Area and is not within the FEMA 100-year floodplain. No wetlands exist in the project area. A review of the CTDEEP Natural Diversity Database (NDDB) indicates that the project area is not located within an area of known habitat for endangered, threatened, or special concern species (NDDB map dated December 2022).

Proposed Bridge Replacement:

The purpose and need of this project is to address the deterioration of the existing structure. This structure will be replaced with a 10-foot-wide by 6-foot-tall precast reinforced concrete box culvert. The invert will be buried beneath one foot of natural streambed material to provide continuous fish passage. The concrete collar and cradles will be replaced with new headwall/endwall/wingwalls. There is an existing drainage pipe that crosses over the structure that will be relocated during construction. Bridge No. 07051 has utilities in the vicinity that are expected to be protected and supported in place during construction. It is anticipated that the bridge replacement will utilize Accelerated Bridge Construction (ABC) methods, using precast structural elements, staged over two long weekends.

At least one lane of traffic in each direction will be maintained, utilizing a crossover for each stage apart from the left turn movement entering the I-84 eastbound on-ramp during stage two. This will require a state route marked detour for passenger vehicles as well as an advance detour for commercial truck traffic.

Construction is anticipated to begin in the spring of 2026.

The construction cost is to be undertaken with 80% Federal and 20% State funds.