



PROJECT LOCATION
BRIDGE NO. 06887



ROUTE 151
OVER SHADY BROOK
EAST HADDAM, CONNECTICUT

LOCATION MAP
SCALE: 1" = 1000'

BR. NO.: 06887
PROJ. NO.: 0040-0144
FIGURE NO.:

**Bridge No. 06887 in the Town of East Haddam
Route 151 over Shady Brook
State Project No. 40-144
Project Description**

Project Location

Bridge No. 06877 supports Route 151 (Town Street) over Shady Brook in the town of East Haddam. The bridge site is located at the intersection of Route 151 and Wigwam Road.

Existing Conditions

The existing bridge consists of two asphalt-coated corrugated metal pipe culverts. The main eastern culvert is in poor condition (Rating = 4) and it consists of 117-feet of 84-inch diameter corrugated metal pipe which travels from the inlet to the outlet directly. There are open joints within the pipe of up to 3-inches. Asphaltic coating is also missing above and below the waterline which contributes to corrosion of the pipe.

The main western culvert is in poor condition (Rating = 4) and it consists of 146-feet of 72-inch diameter corrugated metal pipe which travels from the inlet, under Route 151 to a junction chamber, then underneath Wigwam Road to the outlet. Asphaltic coating is missing above and below the waterline which contributes to corrosion of the pipe. Numerous rivets with Rose Budding have corroded heavily, leading up to 100 percent section loss. Approximately 71 feet from the outlet, there is an area of extreme distortion. The vertical distortion is approximately 2 feet 5 inches, horizontal distortion of approximately 4 feet, and the length of the distortion of approximately 6 feet.

The site lies within the Shady Brook drainage basin (4710), part of the Salmon Regional Basin, and is not located within a public water supply watershed. Connecticut Department of Energy and Environmental Protection (CT DEEP) Aquifer Protection Area Maps indicate that the project site is not within an Aquifer Protection Area. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map, number 09007C0252G (Panel 252 of 450), for Middlesex County, Connecticut, (effective date August 28, 2008), the site lies within an area outside of the 0.2% annual chance floodplain (Zone X). A review of the CTDEEP Natural Diversity Database (NDDDB) for East Haddam indicates that the project area is within an area identified as known habitat for endangered, threatened, or special concern species (map dated December 2017) or mapped critical habitat.

Proposed Bridge

The proposed bridge will be an 8-foot by 12-foot precast concrete box culvert, along a slightly shifted alignment across the intersection. A headwall and wingwalls will be provided at both the inlet and the outlet of the structure. A low flow channel will be provided with natural channel bottom material installed along the bottom of the culvert to improve aquatic habitat. Reconstruction of approximately 120 feet of the roadway along Route 151 and 70 feet of the roadway along Wigwam Road, matching the existing horizontal alignment. A detour is anticipated for construction on Route 151 in order to install the box culvert due to the relatively low traffic volumes through the intersection.