**STATE PROJECT NO. 0130-0189**
**REHABILITATION OF BRIDGE NO. 07045**
**INTERSTATE 84 OVER SAMS BROOK**
**TOWN OF SOUTHBURY**

## PROJECT DESCRIPTION

**Project Location:**

Bridge No. 07045 conveys Sams Brook beneath Interstate 84 in the Town of Southbury. The structure is located near mile marker 20 at the interchange of I-84 and State Route 172.

**Existing Bridge:**

Bridge No. 07045, built in 1961, is an 84-inch diameter asphalt coated corrugated metal pipe (ACCMP) supported by a concrete cradle and collar at the inlet and outlet. The total length of the structure is approximately 323 feet with a ballast ranging from 15 feet at the outlet to 30 feet at the inlet. I-84 WB over the structure consists of a single lane on-ramp with a right-side shoulder and two 12-foot travel lanes with a left-side shoulder joined by a paved gore area. I-84 EB over the structure consists of two 12-foot travel lanes with a left and right shoulder. The east and westbound lanes are separated by approximately 90 feet of vegetated median. The AADT of I-84 over the structure is 71,700 vehicles per day, cumulatively (2018 CTDOT Traffic Logs). The structure is in overall poor condition (Rating = 4) due to the deteriorated condition of the steel. The inlet exhibits numerous holes up to 27-inches high by 5-inches wide from approximately mid height down to the lower connections; backfill seeps through these holes and some yield to a 15-inch probe. More than 80% of the length of the culvert is filled with 2 to 4 feet of sand and gravel accumulation, greatly reducing the pipe capacity. The concrete collar carries a 15-inch ACCMP drainage pipe to the outlet and exhibits complete separation from the pipe with gaps ranging from 1 to 4 inches. The cradle is cracked at several locations and spalled off at the ends.

There are no overhead or underground utilities within the project area. The Project Site is not within an Aquifer Protection Area and is not within the FEMA 100-year floodplain. Inland wetlands were flagged within the project area at the inlet and outlet. 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 Rehabilitation:**

The purpose and need of this project is to address the poor structural condition of the bridge. The rehabilitation will consist of constructing a 66-inch corrugated aluminum pipe within the existing 84-inch pipe. The annular space between the existing pipe and the new pipe would be filled with controlled low strength material. Prior to the construction of the structural pipe liner, the pipe should be cleaned and any voids around the existing pipe should be filled with pressure grout.

The concrete cradles at the inlet and outlet would be removed and new reinforced concrete headwall/endwall/wingwalls constructed. Water handling will likely consist of cofferdams and low flow pumping through the existing culvert.

One temporary and one permanent construction access road will be established off the I-84 ramps to reach the upstream and downstream ends of the structure to facilitate completion of the proposed work. All proposed rehabilitation work can generally be performed with minimal, temporary disturbance to the travel way, consisting of ramp lane shifts and shoulder closures. Sections of the existing R-B 350 guiderail would require temporary removal to maintain admittance to the construction access roads.

Construction is anticipated to begin in the spring of 2026.

The construction cost is to be undertaken with 90% Federal and 10% State funds.