

Project Description

Bridge No. 02599 supports Route 101 over Alvia Chase Reservoir in the town of Killingly, Connecticut. The bridge is located approximately four miles east of the intersection of Route 101 and Interstate 395 and 0.4 miles west of the Rhode Island border.

The existing structure, originally constructed in 1935, consists of a single span reinforced concrete slab supported by reinforced concrete abutments and wingwalls. The slab is approximately 15 feet long with a 12-foot clear span and a 35-foot out-to-out width with no skew. The slab has a bituminous concrete wearing surface and the barriers on either side consist of concrete rail bases with baluster type concrete bridge rail and three-beam metal beam rail. Based on the latest inspection report, the structure is in overall poor condition (Condition Rating = 4) due to the condition of the concrete deck and superstructure. The existing substructure is in satisfactory condition (Condition Rating = 6).

The bridge supports utility conduits and a fire supply standpipe system, with aerial utilities traversing the bridge along the south side.

Temporary right-of-way impacts, consisting of two construction easements, are anticipated to accommodate construction activities.

The project site lies within the Whetstone Brook drainage basin (3404), which is part of the Fivemile River regional basin and the Thames River major basin. The site is not located within an aquifer protection area. The site is located approximately one mile from a public water supply watershed. According to the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map for Windham County, Connecticut, the site lies within FEMA Floodplain (Zone A). A review of the Connecticut Department of Energy and Environmental Protection (CTDEEP) Natural Diversity Database (NDDB) for Killingly indicates that the project site is located within an area identified as a known habitat for state and federally listed species.

The proposed replacement involves replacing the existing reinforced concrete slab structure with a 12-foot wide by 9-foot high precast concrete box culvert, with 2.5 feet of natural streambed material placed along the bottom of the structure. New in-line reinforced concrete wingwalls founded on spread footings will be constructed at the inlet and the outlet of the culvert. The precast concrete box culvert will be supported by cutoff and return walls at either end of the structure. The structure will be topped with waterproofing membrane and a bituminous concrete wearing surface. Additionally, 42-inch Federal Highway Administration (FHWA) Manual for Assessing Safety Hardware (MASH) compliant vertical shaped concrete parapets will be constructed on either side of the bridge and the existing guiderail will be replaced to meet FHWA MASH requirements.

It is anticipated that accelerated bridge construction (ABC) techniques will be used to perform construction over an approximate two-week detour period.

It is anticipated that construction will begin in the spring of 2027 and will be complete in the fall of 2027.