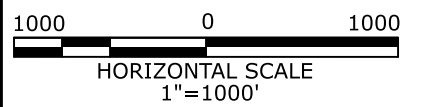


PROJECT LOCATION

LOCATION PLAN
REPLACEMENT OF BRIDGE NO.01571
CARRYING RT. 263 OVER
E. BRANCH NAUGATUCK RIVER

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION
OFFICE OF ENGINEERING

PROJECT NO.: 0162-0159
WINCHESTER
DATE: 12/07/2022



Project Description
State Project 0162 – 0159, F.A.P. No. 0263(001)(PE)
Replacement of Bridge No. 01571 – Route 263
Over E. Branch Naugatuck River
City of Winchester

Location: This project involves Bridge 01571 which carries Route 263 over East Branch Naugatuck River in Winchester. The bridge is located approximately 1.5 miles East of Route 272.

Purpose and Need: Constructed in 1935, the existing structure is a simple span multi-girder structure. The superstructure consists of multiple concrete tee-beams with a cast-in-place concrete deck and a bituminous overlay. The span of the bridge is approximately 27' with a 20' 8" out to out deck width. The superstructure spans over concrete abutments. The average daily traffic (ADT) is approximately 400 vehicles per day with 2 percent truck traffic (2015).

The most recent Routine Inspection Report (03/03/2021) assigned the deck a conditional rating of "5" indicating the deck is in fair condition. The existing tee-beams were assigned a conditional rating "4" indicating a poor condition. The existing substructure overall rating is a "7."

The inspection report noted the following concerns with the current condition of Bridge No. 01571 that need to be addressed:

- Bituminous overlay has light to moderate segregation with isolated longitudinal and transverse cracks. Overlay has four 6" patched core holes.
- Concrete deck has widely scattered transverse and diagonal hairline cracks with light efflorescence stains near the abutments.
- Bay #2, near abutment #2, contains a 31" x 23" hollow patched spall area with cracks. Also contains a 17" x 7" spall area with exposed rebar.
- Bay #3, near abutment #2, contains a previously patched spall with exposed rebar (30" x 27" x 1-1/2" deep).
- Bay #3, near abutment #1, has previously patched spall (3' x 2' x 1-1/2" deep) with partially exposed and debonded primary and secondary rusted rebar with section loss.
- Beams #1, #3, and #4 show longitudinal cracks and transverse cracks.
- Beam #1 south face and beam #4 north face have light to moderate efflorescence.
- Beam #3 south face near abutment #1 has spall (3' L x 10" H x 14" W up to 2" deep) with exposed rusted primary rebar and stirrups. Area has been repainted in the past, but rusting has reoccurred.
- Underside of flanges contain widely scattered transverse and diagonal hairline cracks with light efflorescence stains near abutments.
- Bays #2 and #3 (underside of flanges, near abutment #2) contain spall area with exposed rebar. Bay #2 has a hollow patched spall area, while bay #3 has a previously patched spall area.
- Bay #3 near abutment #1 has a previously patched spall area with partially exposed and debonded primary and secondary rusted rebar. Major section loss has occurred.
- Superstructure Condition Rating was reduced from '5' to '4' since the last inspection due to observed deterioration in the structure.

Due to the extent of the deterioration of the existing bridge and considering its age, Project 0162-0159 was initiated to replace the bridge.

Description: Subsequent to the project initiation through the RSR process, during the preliminary design phase the decision was made to fully replace the existing structure with a precast three-sided rigid frame. The frame structure will be supported on a deep foundation. To accommodate the frame geometry, the existing alignment of Route 263 will be revised, and the vertical elevation will be increased. The existing natural stream bed material will be reused.

Additionally, in order to meet the current roadway standards, the bridge will be constructed wider than the existing structure to accommodate wider travel lanes and shoulders.

Maintenance and Protection of Traffic: The work will be performed with a proposed 16-mile-long detour to accommodate the closure of this bridge on Route 263. This detour will consist of using state roads.

Utilities: There are no existing utilities attached to the bridge. Utility poles are present adjacent to the bridge and roadway. Due to potential conflicts during construction and with the finished work, the utility poles may have to be relocated either temporarily or permanently or both.

Permits: TBD

Rights of Way: TBD

Current Schedule:

Design Approval: 03/13/2024
FDP: 11/19/2025