



CONNECTICUT DEPARTMENT OF TRANSPORTATION

LOCAL BRIDGE PROGRAM



PRELIMINARY APPLICATION

Preliminary application is hereby made by Town/City/Borough of _____
for possible inclusion in the Local Bridge Program for the following structure:

Bridge Location: _____
 Bridge Number: _____ Structure Length: _____ feet Curb-to-Curb Width: _____ feet
 Sufficiency Rating: _____ % Priority Rating: _____ %

State Local Bridge Program: _____

Federal Local Bridge Program: _____

Evaluation & Rating Performed by: State Forces _____ Others _____

Inspection Report performed under NBIS rules must accompany this application. Screenings or other evaluations are not sufficient.

If Others, Name of Professional Engineer: _____

Connecticut Professional Engineers License Number: _____

Engineering Firm: _____

Engineer's Address: _____

Engineer's E-mail Address: _____

Description of Scope of Project: _____ *(note Bridge Repair Code as per Figure 5-1 of the Local Bridge Program Manual; attach narrative/preliminary plans & specifications).*

Name of Municipal Official to Contact: _____

Title: _____ Telephone: _____ Ext: _____ Fax: _____

Mailing Address: _____

E-mail: _____

Anticipated Schedule:

(MM/DD/YYYY)

Public Meeting Conducted: _____

Design Completion: _____

Property Acquisition Completion: _____

Utilities Coordination Completion: _____

Construction Advertising: _____

Supplemental Application Submission: _____

Start of Construction: _____

Completion of Construction: _____

Preliminary Cost Figures:

Preliminary Engineering Fees (Include Breakdown of Fees): \$ _____
Rights-of-Way Cost (If Applicable): \$ _____
Municipally Owned Utility Relocation Cost: \$ _____
Estimated Construction Costs (Include Detailed Estimate): \$ _____
Construction Engineering (Inspection, Materials Testing): \$ _____
Contingencies (10% of Construction Costs Only): \$ _____
Total Estimated Project Cost: \$ _____

Financial Aid Data:

Federal Reimbursement:

Total Estimated Project Cost multiplied by 100% (minimum 80% Federal Funds):

Federal Aid Request \$ _____

State Local Bridge Project Grant: (Cannot be combined with Federal reimbursement)

Total Estimated Project Cost multiplied by 50%:

Project Grant Request \$ _____

Other Source of State or Federal funding received/applied for: \$ _____, State/Federal: _____
Funding Program: _____

I hereby certify that the above is accurate and true, to the best of my knowledge and belief. I also certify that this form has not been modified in any way from that distributed by the Connecticut Department of Transportation.

Signature: _____ Date: _____

Name: _____ Title: _____

(Must be signed by Chief Elected Official, Town Manager, or other Officer Duly Authorized)

Required Attachments:

Description of Existing Conditions

Description of Scope of Project

Bridge Inspection Report

Description of Existing Conditions

Bridge No. 04355 carries River Gate Drive over West Branch Saugatuck River in the Town of Wilton, Connecticut. The bridge is located just west of the intersection of River Gate Drive with Newtown Turnpike. The bridge consists of (4) concrete box culverts each with a span of 10' +/- and a structure length of 46'. The height of the culvert is unknown, but the structure provides an approximately 8' +/- vertical clearance between the low chord and the channel bed. The bridge was built in 1980 (43 years old). The bridge carries bi-directional traffic in an east-west direction over a 22'-0" wide roadway curb-to-curb width. The Average Daily Traffic (ADT) on the bridge is estimated to be 220 vehicles (Year 2019, based on BS&E Inspection Report dated 10/7/19) and the roadway over the bridge is classified as an Urban Local Road. The bridge does not carry any sidewalks. West Branch Saugatuck River flows under the bridge from the north to the south. There are no utilities carried by the bridge while there are overhead utilities present on the south side of the bridge. The bridge is not considered to be historic. There is a pedestrian bridge present upstream of this bridge.

The following summarizes the condition of the existing bridge components based on a Routine Inspection performed on 10/12/21 by the Connecticut Department of Transportation (Report attached) in accordance with National Bridge Inspection Standards (NBIS):

1. **Deck** (NBIS Item 58): Rating N (Not Applicable) – The bituminous concrete overlay is in good condition exhibiting random transverse cracks open up to 1/4" wide. The stone masonry curbs/rail bases are rated to be fair condition due to cracked and spalled mortared joints and loose or missing stones near voids of mortared joints. The bridge rail system comprising of wood encased steel posts with a wood top rail and two cable rails, that extend to the approaches, is rated to be in satisfactory condition due to presence of decay and rot in the wood casings of posts and loose/sagging cable rails. **The bridge and approach rail system do not meet current safety standards.**
2. **Culverts and Retaining Walls** (NBIS Item 62): Rating 5 (Fair Condition) – The walls and the underside of the roof slabs of the (4) concrete box culverts are in fair condition due to presence of cracks, hollows areas, spalls and active leakage at joints. There is sand and stone debris present in the floor slab of some of the culverts. The stone masonry retaining walls are in good condition with presence of random cracked mortared joints and hairline cracks in the stone.
3. **Channel & Channel Protection** (NBIS item 61): Rating 6 (Satisfactory) – Channel scour is rated to be in satisfactory with exposed floor slabs at inlet and outlet. The Channel flow is mainly in the (2) westerly box culverts due to the presence of an island debris with vegetation at the inlet of the (2) easterly box culverts.
4. **Load Rating Capacity** – A load rating analysis for the bridge recently completed in May 2023 by the Town as part of LOTCIP Repair/Rehabilitation project indicates **the inventory rating factor for an AASHTO HL-93 Design Vehicle to be 0.59 (1.00 standard) and the bridge does not rate for any AASHTO or CT Legal Loads. It is likely that the bridge will be posted for weight restrictions.**

5. **Structural Evaluation** (NBIS Item 67): Rating 5 –Structural evaluation is currently rated a 5 based on the condition of the culvert. **However, it is likely to be downgraded once the recently completed load rating is accepted by the Department.**
6. **Deck Geometry** (NBIS Item 68): Rating 4 - The existing roadway width of 22'-0" meets FHWA Standards (20'-0" Minimum based on ADT between 101-400 vehicles). However, it may not meet the CTDOT Standards (24'-0" minimum for Urban Local Road).
7. **Waterway Adequacy** (NBIS Item 71): Rating 8 – The Inspection Report has assigned a rating of 8 indicating that the bridge deck is above the roadway approaches with slight chance of overtopping of roadway approaches.
8. **Scour Critical Rating** (NBIS Item 113): Rating 8 – A rating of 8 indicates the bridge foundations are stable for scour conditions since the bridge type is a box culvert.
9. **Sufficiency Rating** of the bridge is currently calculated to be 75.0. **However, it is likely to be downgraded once the recently completed load rating is accepted by the Department.**

Description of Proposed Conditions

Based on the inadequate load carrying capacity of the existing bridge, a full bridge replacement is proposed. The proposed work for a full bridge replacement will involve:

1. Removal of the existing box culverts and stone masonry retaining walls.
2. Construction of new concrete abutments supported on pile foundations, if necessary, designed for scour.
3. Installation of a new superstructure to carry a 24'-0" wide roadway meeting existing roadway width (22'), current FHWA (20') and CTDOT (24') design standards.
4. The proposed bridge rail system will comprise of an aesthetically pleasing open bridge rail system meeting current safety standards. The deck out-to-out width is estimated to be approximately 28'-0".
5. It is assumed that the proposed span length will closely match existing (46' clear span; 54' total span), and the low chord may be adjusted as necessary to improve its hydraulic performance.
6. The proposed superstructure will likely be multiple steel or prestressed concrete beams with a concrete deck.
7. Roadway will be reconstructed approximately 125' at both approaches to the bridge.
8. New guiderails will be installed at all approach corners to the bridge to meet current design standards.

M&PT - The availability of a 2 mile detour route will allow for the bridge to be closed during construction which will help reduce construction duration and costs and provide for better work zone safety. Considering the low ADT on the bridge, the detour is not likely to cause too much inconvenience to the public.

Costs - The construction cost of the project assuming a full bridge replacement is estimated to be approximately \$4,855,000 (see attached). The total cost of project is estimated to be approximately \$3,100,000 including Incidentals (\$775,000), Contingencies (\$310,000), ROW (\$50,000) and Engineering (\$620,000).

Schedule -The following is the tentative project schedule:

- Town-State Contractual Agreement/ Early Documents by Town – 12/31/23
- Initiate Preliminary Design - 1/1/24
- Public Information Meeting – 3/1/25
- Completion of Preliminary Design & Design Approval – 6/1/25
- Completion of Final Design (FDP) – 6/1/27
- Design Completion (DCD) – 7/1/27
- Advertising – 8/1/27
- Construction (1 season) – 4/1/28 – 11/30/28