Connecticut Department of Transportation

State Project No. 0111-0127
Federal-Aid Project No. 6111(013)
Replacement of Bridge No. 05350 – Bosworth Road over Mashamoquet Brook
Town of Pomfret

June 25, 2024 at 7:00 PM
Virtual Meeting via Zoom Webinar and YouTube Live

Minutes of Public Informational Meeting

In Attendance:

There was 1 person in attendance (1 on Zoom and 0 on YouTube), not including the project team. The meeting participants included one resident, the First Selectwoman of the Town of Pomfret, the Connecticut Department of Transportation, and CHA Consulting, Inc.

Presentation:

The virtual meeting, using Zoom Webinar and YouTube Live, was started at 7:00 p.m. with an introductory slide which provided project contact and website information for attendees to view while they waited for the presentation to start. At 7:00 p.m., the formal presentation started with Transportation Supervising Engineer, Mr. Marc Byrnes, stating the goals for the meeting and that the purpose of this public information meeting is to present the proposed design and discuss any questions, comments, or concerns that the public or town officials may have. He provided details of how participants could interact with the project team during the meeting and then outlined the Design Managed by State (DMS) program and the subject project goals. Mr. Byrnes then introduced Ms. Maureen Nicholson, Town of Pomfret First Selectwoman, who provided introductory remarks. Mr. Byrnes then continued by introducing the representatives of the Connecticut Department of Transportation (CTDOT), and CHA Consulting, Inc. (CHA), the Consultant Liaison Engineer (CLE). Mr. Byrnes then gave a general overview of bridge elements and explained how the element conditions are rated on a scale from 1-9.

Ms. Rachelle Clark from CHA continued with the technical portion of the presentation. She explained the existing bridge condition, provided an overview of the project site, and described the purpose of the project. Ms. Clark presented the proposed project plans and maintenance and protection of traffic plan to replace Bridge No. 05350. Ms. Clark described the environmental and right-of-way impacts associated with the project and noted that while there were no utilities carried by the bridge, overhead utilities were present adjacent to the bridge site. Mr. Zachary Guarino from CTDOT Division of Rights of Way continued the presentation with an explanation of the right-of-way acquisition process. Ms. Clark then finished the presentation with the proposed project schedule and estimated cost.

Key Points Regarding the Existing Bridge:

- The existing bridge was built in 1950 and consists of a 28.6-foot-long single span steel beam superstructure with galvanized corrugated steel deck supported by concrete abutments with spread footings founded on soil. The bridge was rehabilitated in 2000, when the superstructure was replaced.

- The existing roadway width on the bridge is 18 feet, and the roadway is classified as a Rural Local Road.
- A traffic count taken in July 2023 determined the Average Daily Traffic (ADT) on the bridge to be 79 vehicles per day.
- The existing clear span of the bridge, measured from face of abutment wall to face of abutment wall, is 26 feet. The clear span is less than 1.2 times Bankfull Width. The clear span required to meet the criterion of 1.2 times bankfull width is 54 feet.
- The existing height of backwater above natural conditions is 1.7 feet, which is greater than the standard of 1.0-foot Maximum.
- The existing underclearance is 0 feet for the 100-Year design storm, which is less than the required standard of 2.0-foot Minimum.
- The existing freeboard is 0 feet for the 100-Year design storm, which is less than the required standard of 1.0-foot Minimum. The freeboard is measured at the low point of the road, which is west of the bridge. The roadway overtops for storms greater than the 10-Year storm.
- The existing bridge abutment spread footings, assumed to be founded on soil, are scour critical based on Scour Analysis. The most recent underwater inspection report indicates that the scour walls and abutment stems are partially undermined.
- There are no utilities carried by bridge. Overhead utilities are present at the site.
- The existing deck is rated to be in good condition (NBIS rating = 7) based on the overlay, and the superstructure is also rated to be in good condition (NBIS rating = 7). The substructure is rated to be in poor condition (NBIS rating = 4) both due to concrete deterioration and observed undermining.
- The existing bridge and approach rail system is rated to be in good condition (NBIS rating = 7); however, the existing bridge and approach rail systems do not meet current safety standards.

Key Points Regarding the Proposed Bridge:

- The proposed replacement structure will consist of a single span prestressed concrete adjacent deck unit bridge with a 43’-0” span. The increase in span length is achieved by shifting both abutments outward an equal distance. The existing 18-foot-wide roadway will be widened to a 24-foot width to meet FHWA and State standards. U-shaped concrete wingwalls are proposed at all four corners.
- The proposed replacement structure will provide a 40-foot clear span, which does not meet the requirement for 1.2 times the Bankfull Width, which is 54 feet.
- The proposed replacement structure reduces the backwater surface elevation from 1.7 feet above natural conditions to 1.6 feet above natural conditions, which does not meet the 1.0 foot maximum criterion.
- The proposed replacement structure does not meet the 1.0-foot minimum underclearance criterion and will continue to operate with 0 feet underclearance for the design 100-Year storm.
- The proposed replacement structure does not meet the 1.0-foot minimum freeboard criterion and will continue to operate with overtopping for the design 100-Year storm. The roadway low point will overtop for storms greater than the 25-Year storm, which is an improvement over existing conditions, which overtops for storms greater than the 10-Year storm. The increased length of the bridge reduces the frequency of overtopping events.

- A bridge that would meet all the hydraulic requirements listed above was determined that to require a span length in excess of 90 feet. This was determined to be impractical for a low-ADT Rural Local Road. Additionally, the road is being raised 1 foot to improve underclearance for the 10-Year storm event. It was determined that raising the roadway greater than 1 foot would have a negative impact on upstream properties due to an increase the backwater elevations.
- The new bridge will provide a service life of 75 years and is anticipated to require minimal maintenance.
- The proposed open bridge rail system and approach guiderail systems will meet current safety standards.
- Exposed concrete surfaces of the bridge end blocks and wingwalls are proposed to have simulated stone concrete form liner applied to the surface. The three-tube, open bridge railings are proposed to be metallized to a color of the Town's choice.
- The project will include roadway reconstruction of approximately 525 feet within the project limits.
- The proposed maintenance and protection of traffic plan involves a temporary bridge, which is estimated to be utilized for 20 months. The temporary bridge will be located to the south of the existing bridge and will be 14 feet wide. It will accommodate school busses, and the width will be checked to ensure that it can accommodate farm machinery.
- Environmental permits will be required from federal, state and Town of Pomfret permitting agencies for the project and best management practices will be used to minimize impacts to the wetlands and watercourse during construction.
- A partial take (1 property), slope easements (4 properties), temporary construction easements (5 properties), and a guiderail end anchorage easement (1 property) are proposed at abutting properties for construction of the new bridge. Right to Construct Driveway, Right to Install Sedimentation Control System, Right to Install Riprap, and Right to Grade are also proposed at the five properties that abut the bridge.
- Construction is currently anticipated to start Spring 2027, subject to approval of environmental permits and ROW acquisitions. Construction is anticipated to last two seasons.
- The project Design, Construction, and ROW acquisition costs will be funded with 80% Federal funds and 20% State funds (0% Town Funds). The construction cost is currently estimated to be $3.47 million.

Public Comments and Questions:

There were two (2) questions asked during the Q&A session on Zoom that focused on the following:

Q1: Mr. Bob Hanley asked whether raising the Bosworth Road profile elevation, will cause the bridge to act more like a dam and flood the property nearby?

R1: No, the new bridge will be longer and along with a raised roadway will allow the passage of more water. The backwater elevation for the 100-Year design storm will drop by 0.1 foot, from 1.7 feet over natural conditions to 1.6 feet over natural conditions.

Q2: Ms. Maureen Nicholson asked how the disposal of the concrete and other materials from the existing bridge that is being replaced will be handled.

R2: The foundation will be fully removed, and all waste materials from the demolition will be properly disposed off-site.

Adjournment:

The email address, telephone number and project webpage address were provided for any additional questions or comments regarding the project following the meeting. Attendees were reminded to fill out the voluntary survey and that any additional comments can be submitted until July 9th, 2024.

The presentation was well received, and the meeting was adjourned at 7:45 PM.

No additional questions were received during the two-week comment period following the Virtual Public Information Meeting.