

**AGENDA SUMMARY REPORT
ENVIRONMENTAL PROTECTION BOARD**

Date: October 10, 2023

Application #2023-19

Location: Wire Mill Road bridge over Haviland Brook

Applicant: Engineering Bureau of the City of Stamford

Watershed: Rippowam River

Flood Map: 09001C0506F (6/18/2010)

Flood Zone: AE (FEMA El.136.4)

Area: N/A

Account: N/A

Map: 67

Block: 377/378

Lot: N/A

References

- Plans entitled “Replacement Br. No. 04070 Wire Mill Road over Haviland Brook – Project Number 0135-0344” prepared by Weston & Sampson – Cover Sheet – General Plan – Wetland Impact Plan – Flood Zone Impact Plan – Bridge Plan and Elevation – Suggested Sequence of Construction – Erosion and Sediment Control Plan - certified by Peter J. Grandy, CT PE #15495 – dated August 31, 2023.
- Copy of plan entitled “Reconstruction of Wire Mill Rd. at Gutzon Borglum Rd.” prepared by Close, Jensen & Miller, P.C. – no date.
- “Final Hydrologic Report – Bridge No. 04070 – Wire Mill Road over Haviland Brook – City of Stamford” prepared by Close, Jensen and Miller, P.C. – certified by John H. Miller, CT PE #4142 – dated November 21, 2022.
- “Final Hydraulic Report – Bridge No. 04070 – Wire Mill Road over Haviland Brook – City of Stamford” prepared by Close, Jensen and Miller, P.C. – certified by Thomas M. Ryan, PE – dated August 2023.
- “No Rise” and “No Compensatory Storage” needed letters prepared by Close, Jensen and Miller, P.C. – certified by Thomas M. Ryan, PE – dated September 19, 2023.
- “Wetland Delineation Report” prepared by Fitzgerald & Halliday, Inc., dated February 2023.
- Referral comments from the Connecticut Department of Public Health Drinking Water Division prepared by Eric McPhee, Supervising Environmental Analyst, dated July 6, 2018.
- Referral comments from the Connecticut Department of Energy & Environmental Protection Fisheries Division prepared by Bruce Williams, dated April 22, 2019.

Proposal

The Stamford Engineering Bureau proposes to replace the bridge on Wire Mill Road that spans Haviland Brook just north of the brook’s confluence with the Rippowam River. The bridge is in the special flood hazard area.

The approximately 8,750 square feet of upland review area and special flood hazard area the applicant states will be temporarily impacted by the proposed activities are largely within the footprint of the existing bridge and roadway. The project also entails temporary and permanent impacts to a small portion of the conservation easement that is located southeast of the bridge.

This application was filed on September 20, 2023, and was accepted by the Board at its meeting held on September 21, 2023.

Description of Project Area

The "Wetland Delineation Report" submitted as part of this application contains a thorough description of the natural resources found in the project area and good photographs of the bridge and its environs. The most notable resource identified is Haviland Brook, a perennial watercourse which will be the focus of the protective measures that will be employed during the bridge replacement. There are no areas of wetland soil beyond the extent of the brook. The banks of the brook and roadway shoulders in the vicinity of the bridge are wooded with a mix of deciduous and evergreen trees, and a mix of native and non-native invasive understory species.

The project site lies within the non-drinking water supply portion of Haviland Brook and the Rippowam River. The Environmental Protection Board typically regulates a minimum 25-foot upland review area around wetlands and watercourses situated in such watersheds. However, the Board should take note that the project also lies at the western edge of the Wire Mill Aquifer Protection Area.

The property to the south of the bridge and west of the brook that is labeled with a circled "2" on the application plans is in a conservation easement. This project will not take place within a Connecticut Natural Diversity Data Base area of concern.

Issues/Discussion

The Wire Mill Road bridge over Haviland Brook has been determined to be in critically poor condition and must be replaced. The deficiencies of the bridge are illustrated by the pictures included at the end of the Hydrologic Report. The plan developed for replacement of the bridge will require closing the crossing for 6 - 8 months and entails removal of the superstructure, cutting down the abutments to increase the hydraulic opening and create wildlife shelves, construction of new abutments behind the existing, and placement of the new bridge span on the new abutments.

As noted in the application narrative, alternatives using the existing abutments were considered but rejected because they would have shorter design lives and would adversely impact flood elevations. The selected plan raises the lowest chord of the bridge by 0.4 feet and will result in a dry roadway surface during the 100-year storm as opposed to the current situation. Note that the Close, Jensen and Miller hydraulic analysis generated flood elevations that are somewhat different than the FEMA elevation of 136.4. This study demonstrates the project will not increase the elevation of the flood in all analyzed conditions; the study methodology and results will be checked by Engineering Bureau staff. The final design of the bridge should be certified

by a Connecticut-licensed professional engineer as compliant with the Flood Prone Area Regulations and being capable of withstanding the flood depths, pressures, velocities, impact and uplift forces, and other factors associated with the base flood.

The plans indicate the project will not require any in-stream work. The details of the debris screen that will protect the brook during demolition of the superstructure and alteration of the existing abutments will be determined by the contractor hired for this job. It is therefore important that a preconstruction meeting is held between the contractor, project engineer, and EPB staff to review the final plans. Special attention must be paid to the recommendations made by the Connecticut Department of Public Health regarding best management practices to protect the public drinking water aquifer during project implementation.

At its September 21, 2023 meeting, the EPB discussed the matter of a permanent taking, easement, and construction phase encroachments that this project requires in the Conservation Easement southwest of the bridge. After due consideration, the Board voted to approve a ±256 square foot permanent taking, an ±11 square foot easement for grading, a ±441 square foot temporary construction easement, and a ±46 linear foot right to install temporary fencing, as depicted on the May 2022 "Right of Way Survey" provided by the applicant. This approval was granted with the condition that it would be void if the bridge replacement project is not implemented.

Recommendation

The plan for replacement of the Wire Mill Road bridge over Haviland Brook is compliant with Stamford's Flood Prone Area Regulations as it will not reduce the water holding capacity of the floodplain and will not cause an increase in the elevation of the base flood. Careful implementation of site controls will avoid short-term impacts to the brook during construction and no new long-term wetland/watercourse impacts should result from the use and maintenance of the new bridge. Staff therefore recommends the Board issue a permit with the following conditions:

1. Work shall comply with the following plans and correspondence:
 - Plans entitled "Replacement Br. No. 04070 Wire Mill Road over Haviland Brook – Project Number 0135-0344" prepared by Weston & Sampson – Cover Sheet – General Plan – Wetland Impact Plan – Flood Zone Impact Plan – Bridge Plan and Elevation – Suggested Sequence of Construction – Erosion and Sediment Control Plan - certified by Peter J. Grandy, CT PE #15495 – dated August 31, 2023.
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2. Final civil plans certified by a Connecticut-licensed professional engineer as compliant with the Flood Prone Area Regulations and being capable of withstanding the flood depths, pressures, velocities, impact and uplift forces, and other factors associated with the base flood shall be submitted for the review and approval of EPB staff prior to the start of any site activity.
3. Engineering Bureau approval of methodology and results of the submitted hydraulic analysis shall be obtained prior to the start of any site activity.
4. The Engineering Bureau shall arrange a pre-construction site meeting to review the final development plans and the project logistics. This meeting shall include the project contractor, and staff from the Stamford Environmental Protection Board and Engineering Bureau, and any other party with responsibility for monitoring site activities. The contractor's plans for erosion and sedimentation control, debris screening, and implementing the recommendations made by the Connecticut Department of Public Health regarding best management practices to protect the public drinking water aquifer during project implementation shall be available for review at this meeting.
5. Sediment and erosion controls shall be installed and approved in writing by EPB staff prior to the start of any other site activity.
6. A Contractor's Compliance Statement completed by the contractor engaged to perform the regulated activities shall be submitted to EPB staff no less than 48 hours prior to the start of work. (https://stamfordet.seamlessdocs.com/f/contractors_compliance_statement).
7. Upon the completion of construction, all disturbed areas shall be stabilized with topsoil, seed and mulch, sod, or other suitable alternatives.
8. Upon the completion of construction, a final as-built plan certified by a Connecticut-licensed professional land surveyor that shows the final location/elevation of pertinent structures and features shall be submitted to EPB.
9. Upon the completion of construction, a Connecticut-licensed professional engineer shall submit written correspondence certifying that all engineered elements, including walls, grading, and final stabilization measures have been fully and properly completed per the approved plans and permit and that the pertinent structures/facilities have been constructed in accordance with the provisions of Section 15.B of the Zoning Regulations ("Flood Prone Area Regulations"), and are "capable of withstanding the flood depths, pressures, velocities, impact and uplift forces, and other factors associated with the base flood".


Robert E. Clausi