AGENDA SUMMARY REPORT
ENVIRONMENTAL PROTECTION BOARD

APPLICATION: #2023-14, City of Stamford **DATE:** October 13, 2023

LOCATION: Lakeside Drive Bridge **WATERSHED:** Rippowam River

FLOOD MAP & DATE: 09001C0368F, 6/18/2010 **ZONE:** A

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REFERENCES:

- "Environmental permit plans, State project No. 0135-0343, Replacement of Bridge No. 04069, Lakeside Drive over North Samford Reservoir," for City of Stamford, Sheets 1-7, by Andrew Lessard PE 22652, Stantec Consulting Services Inc, dated May 16, 2023.
- "Geotechnical Engineering Report, Rehabilitation of Bridge No. 04069," Lakeside Drive over North Stamford Reservoir, Stamford, CT, for CT Department of Transportation, prepared by Stantec Consulting Services Inc, dated May 19, 2023.
- "Hydraulic Design Report, proposed replacement of Bridge No 04069," Lakeside Drive over North Stamford Reservoir, City of Samford, prepared by Eric Buckely and approved by Thomas Ryan, PE 13469, Close, Jensen, and Miller PC, dated May 22, 2023.
- "Hydraulic Report, Bridge No 04069," Lakeside Drive over North Stamford Reservoir, City of Samford, prepared by Eric Buckely and approved by Thomas Ryan, PE 13469, Close, Jensen, and Miller PC, dated May 27, 2023.
- "Wetland Delineation Report" CT Bridge Program, Replacement of Bridge No 04069, State Project No 135-343, Lakeside Drive over North Stamford Reservoir, Stamford, CT, Fitzgerlad & Halliday, Inc, February 2020.
- Correspondence from Patricia Bisacky, Environmental Analyst, CT Department of public health to Close, Jensen and Miller PE, dated June 28, 2018.
- Correspondence from Dawn McKay, Environmental Analyst, CT DEEP to CT Dept of Transportation, dated October 7, 2022.

PROPOSAL: The applicant is proposing to replace the bridge superstructure, with new abutments, and metal beam rail over the North Stamford Reservoir.

Approximately 11,327 square feet of the upland review area and conservation area, along with 427 square feet of the flood plain will be affected by the proposed activities according to the applicant.

This application for permit was filed on July 21, 2023, and ACCEPTED by the Board at its meeting held on September 21, 2023.

Property Description: The property is situated on Lakeside Drive over the North Stamford Reservoir, approximately 1,225 feet east of the intersection of Lakeside Drive and North Stamford Road.

The soils report found no inland wetland soils between the bridge and the watercourse within the project limits. The North Stamford Reservoir flows south into the Rippowam River. The banks between the bridge and reservoir are steep with a narrow area of small trees and shrubs such as red maple, black oak, and northern bayberry. The subject property lies within the public drinking water supply watershed of the Rippowam River. The Environmental Protection Board typically regulates a minimum of 100 feet to watercourses situated within the public drinking water supply watersheds.

The project area is within a CT DEEP Natural Diversity Database area of concern for the State Threated bald eagle. The applicant did submit this proposal with best management practices and received approval from CT DEEP prior to submission for an EPB Wetlands permit. Best management practices include: No construction activities within 600 feet of a confirmed nest between February 1st and August 1st, no construction activities within 600 feet of a confirmed winter roost area between December 1st and March 31st, and cutting of trees greater than 30 In DBH to be reviewed by the engineer prior to removal.

ISSUES/DISCUSSION: The applicant seeks the board's permission to replace the bridge superstructure, with new abutments, and metal beam rail which will encroach on the upland review area and within the special flood hazard area. Given the scope and nature of the project, the applicant is expected to demonstrate that impacts to resources and regulated areas, drainage, and water quality are avoided or minimized to the greatest extent possible. The applicant seeks to address these requirements as follows:

The superstructure of the existing bridge was determined to be in serious condition with structural deficiencies. A detailed site development plan has been provided by the applicant in which the bridge deck will be replaced by a new reinforced concrete deck with new wingwalls and abutments. The applicant determined that the existing abutments would not be sufficient to support the design loads of the new superstructure. The new abutments will be installed on micropiles socketed into bedrock behind the existing abutments, which are set to stay in place to reduce environmental impact. The new wingwalls will allow a grade separation between the roadway and the reservoir. The old abutments will be cut down to an elevation of 200.00 feet and riparian wildlife shelves between will be installed using the old abutments. The proposal will increase the span of the bridge.

The project area is within the special flood hazard area, Zone A. Special flood hazard areas in Zone A do not have a Base Flood Elevation as determined by FEMA. Hydraulic analysis and review of previous flood events, a 100-year flood boundary was calculated by the applicant at an elevation of 201.5 feet upstream and 201.3 feet downstream of the bridge. The ordinary high water line elevation is 199.5 feet. The lowest point of the proposed bridge will have 0.7 feet of clearance, losing 0.1 feet of clearance from existing due to the increase in span and superstructure thickness. The project hydraulic engineer has determined that that the flood discharge is still not expected to overtop the roadway and will not increase flooding potential to upstream properties. The project engineer has also certified that the proposed bridge replacement will not cause any increase (0.00) in water surface elevation of the calculated base flood and will not reduce the water holding capacity of the flood plain. Study methodology and results will be checked by Engineering Bureau staff. The project description indicates that the design will withstand pressure flow and uplift forces due to the 100 year and 500-year design storms. EPB staff will require the standard certified language from a CT certified engineering that the design is in accordance with the provisions of Section 15.B of the Zoning Regulations ("Flood Prone Area Regulations").

The applicant has provided a sedimentation and erosion control plan to reduce potential impacts to water quality. This includes silt fencing, debris shield, an absorbent debris boom, a phased cofferdam plan, and final stabilization measures. The stockpile, parking, and fueling areas are proposed along the roadway above the calculated 100-year flood boundary. In addition to the BMPs for the bald eagle, the applicant will follow the recommendation from CT DEEP to limit unconfined instream work to the period between June 1st and September 30th. Construction of the new bridge will include installation of riprap for protection of the slope. Protective measures should be in put place for trees not proposed for removal within the area of work.

RECOMMENDATIONS: If the Board confirms that the proposed bridge replacement will not have significant watercourse impact, is compliant with Stamford's Flood Prone Area regulations, an appropriate range of conservation enhancements have been applied to define the buffer, and protect remaining trees of value, the Board may determine to **APPROVE** EPB Permit Application No. 2023-14 with the following conditions:

1. Work shall comply with the following plans and correspondence:
    - "Environmental permit plans, State project No. 0135-0343, Replacement of Bridge No. 04069, Lakeside Drive over North Samford Reservoir," for City of Stamford, Sheets 1-7, by Andrew Lessard PE 22652, Stantec Consulting Services Inc, dated May 16, 2023.
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2. 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://stamfordct.seamlessdocs.com/f/contractors_compliance_statement).

3. Prior to the start of any site activity, a Connecticut-licensed professional engineer shall submit written correspondence certifying that the pertinent structures/facilities have <u>been designed 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".</u>

4. Sediment and erosion controls shall be installed in the manner and location shown on the permit plans, with additional protections for trees to be saved, prior to the start of any site activity and approved in writing by EPB Staff.

5. Engineering Bureau approval of methodology and results of the submitted hydraulic analysis shall be obtained prior to the start of any site activity.

6. 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 DEEP during project implementation shall be available for review at this meeting.

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".

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