UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930

September 24, 2024

Rebecca Ledebohm
Federal Highway Administration
1201 College Park Drive, Suite 102
Dover, DE 19904

RE: Delaware - T202007303 - Replacement of BR 3-437 on SR 54 (Lighthouse Road) Over Assawoman Bay

Dear Ms. Ledebohm:

We have reviewed the essential fish habitat (EFH) consultation materials, received July 31, 2024, for the proposed replacement of Bridge 3-437 on State Route 54 (Lighthouse Road) over the canal connecting Assawoman Bay and Little Assawoman Bay, Fenwick Island, Sussex County, Delaware. As the lead federal action agency, the U.S. Department of Transportation's Federal Highway Administration (FHWA) is responsible for consultation with NOAA Fisheries' Habitat & Ecosystem Services Division (HESD) under the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act (FWCA) due to project activities which will adversely impact aquatic resources.

The existing bridge was constructed in 1957 and rehabilitated in 1980. A 2019 inspection identified significant structural deficiencies and a full bridge replacement was recommended to ensure safe and efficient crossing of vehicles and pedestrians. The replacement bridge will be constructed on a similar alignment, consisting of six 80-foot spans for a total structure length of 480 feet. The proposed out-to-out width of nearly 60 feet is approximately 20 feet wider than the existing bridge, primarily to provide improved bike and pedestrian access and to accommodate a center turn lane. Construction will be multi-staged and two active travel lanes will be maintained at all times. In-water work will consist primarily of: 1) existing pile removal/cutting, 2) installation of 70 24-inch pre-stressed concrete piles to support five bridge piers, 3) installation of 90 36-inch steel-pipe piles to support temporary construction trestles, 4) removal and subsequent replacement of four private docks impacted by bridge construction using 26 18-inch timber piles, 5) sewer line removal, and 6) a minimal amount of fill associated with installation of riprap scour protection at the eastern abutment.

Magnuson-Stevens Fishery Conservation and Management Act

The MSA requires federal agencies to consult with one another on projects such as this that may adversely affect EFH. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in this consultation procedure. In January 2024, our agencies

completed the revised *FHWA Programmatic Essential Fish Habitat Consultation and General Concurrence for Select Transportation Actions in the NMFS Greater Atlantic Region* which serves as a programmatic EFH consultation for a number of types of activities authorized, funded, or undertaken by FHWA and state departments of transportation. Although this project is not covered under the programmatic consultation because it exceeds the impact thresholds, its programmatic conservation measures and EFH conservation recommendations, and the practices outlined in the *NOAA Fisheries/FHWA Best Management Practices (BMPs) Manual for Transportation Actions in the Greater Atlantic Region* should be incorporated into the project design and construction.

The project area is designated EFH for summer flounder (*Paralichthys dentatus*), windowpane flounder (*Scophthalmus aquosus*), black sea bass (*Centropristis striata*), bluefish (*Pomatomus saltatrix*), scup (*Stenotomus chrysops*), Atlantic herring (*Clupea harengus*), Atlantic butterfish (*Peprilus triacanthus*), and many others. The narrow canal which will be spanned by the proposed bridge is the primary migratory route between the Atlantic Ocean and Little Assawoman Bay, which provides important foraging and rearing habitat for a variety of estuarine-dependent fish. Most notably, young-of-year summer flounder use these habitats in spring and summer months and could be adversely affected by construction activities.

EFH Conservation Recommendations

Pursuant to Section 305 (b)(4)(A) of the MSA, we recommend the following EFH conservation recommendations be incorporated into the project to minimize adverse effects on EFH and federally-managed species:

- Prohibit in-water work between March 1 - September 30 to minimize impacts to young-of-year summer flounder.
- Drive piles using a vibratory hammer before using an impact hammer to minimize acoustic impacts. Jetting of piles is not preferred.
- Limit pile driving activities to no more than 12 hours per day and provide a 12 hour quiet (recovery) period between pile driving days.
- Ensure pile driving activities begin with a "soft start" or "ramp up" period (e.g. driving does not begin at 100% energy).
- Use a cushion block when using an impact hammer.
- Should fish kill events be observed, coordinate with NOAA Fisheries' HESD to discuss the implementation of additional mitigative measures (e.g., contained bubble curtains).
- Limit the amount and extent of turbidity and sedimentation by using appropriate sedimentation and turbidity controls such as silt curtains.
- Ensure that greater than 50% of the canal width remains unobstructed by silt curtains at all times to provide adequate access to and from Little Assawoman Bay.
- Minimize the suspension of sediments and disturbance of the substrate when removing piles by implementing the applicable techniques:
    - Remove piles with a vibratory hammer, rather than by direct pull or clamshell.
    - Remove piles slowly to reduce sediment sloughing off in the water column.

    - Strike or vibrate the pile to break the bond between the sediment and pile to minimize the pile breakage and reduce the amount of sediment sloughing off the pile during removal.
    - Cut or drive the pile below the mudline and leave the stub in place.
    - Surround the pile with a silt curtain from the surface of the water to the substrate.
    - Place piles on a barge equipped with a basin to contain all attached sediment and runoff water after removal.
- Installation of subtidal riprap at the east abutment should be conducted at low tide.
- Waterborne equipment associated with construction should float at all stages of the tide.

Please note that Section 305 (b)(4)(B) of the MSA requires that you provide us with a detailed written response to our EFH conservation recommendations, including the measures you have adopted to avoid, mitigate, or offset the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305 (b)(4)(B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate or offset such effect pursuant to 50 CFR 600.920 (k).

Please also note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CFR 600.920 (j) if new information becomes available, or if the project is revised in such a manner that affects the basis for the above EFH conservation recommendations.

Fish and Wildlife Coordination Act

The FWCA requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider the effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Benthic habitat disturbance and acoustic impacts associated with this project may adversely affect resources we manage under the FWCA such as striped bass (*Morone saxatilis*), American eel (*Anguilla rostrata*), blue crabs (*Callinectes sapidus*), horseshoe crabs (*Limulus polyphemus*), hard clam (*Mercenaria mercenaria*), soft clam (*Mya arenaria*), and a variety of species that may serve as prey for species with designated EFH. However, the conservation recommendations described above will provide sufficient minimization of impacts to these species and no further protection measures are required.

Endangered Species Act

Threatened or endangered species under the jurisdiction of NOAA Fisheries may be present in the project area, and consultation, pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, may be necessary. The FHWA will be responsible for determining whether the proposed action may affect listed species. If you determine that the proposed action may affect a listed species, please submit a determination of effects, along with justification and a request for concurrence to the attention of the Section 7 Coordinator, NMFS, Greater Atlantic Regional Fisheries Office, Protected Resources Division, 55 Great Republic Drive, Gloucester, MA 01930 or nmfs.gar.esa.section7@noaa.gov.

Conclusion

We appreciate the coordination between our offices during the EFH consultation process. Should you or your staff have any questions regarding our comments, please contact Robert Bourdon in our Annapolis Field Office at (410)-205-6055 or robert.bourdon@noaa.gov.

Sincerely,

GREENE.KAREN.M.1365830785 Digitally signed by GREENE.KAREN.M.1365830785 Date: 2024.09.24 15:17:24 -04'00'

for

Louis A. Chiarella
Assistant Regional Administrator
for Habitat and Ecosystem Services

cc: NOAA HESD - K. Greene
NOAA PRD - C. Vaccaro, B, Hopper
USFWS - G. LaRouche, R. Li
USEPA - C. Mazzarella, N. Motley
DNREC - K. Kadlubar

STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
800 BAY ROAD
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DOVER, DELAWARE 19903

NICOLE MAJESKI
SECRETARY

MEMORANDUM

TO: Rebecca Ledebohm, FHWA

FROM: Wendy March, DelDOT Environmental Specialist Supervisor

DATE: 10/18/2024

SUBJECT: DelDOT Contract: T202007303
Federal Aid No.: EBROS-S058(3)
Contract Title: Replacement of BR 3-437 on SR54 Lighthouse Rd

In reference to the response letter dated September 24, 2024 for the Essential Fish Habitat (EFH) consultation for the proposed replacement of BR 3-437 on State Route 54 (Lighthouse Rd) over Assawoman Bay, Fenwick Island, Sussex County, DE, the following responses are offered as shown in blue:

- Prohibit in-water work between March 1 - September 30 to minimize impacts to young-of-year summer flounder. This prohibition is included in the project plans (see sheet 98, note 2B).
- Drive piles using a vibratory hammer before using an impact hammer to minimize acoustic impacts. Jetting of piles is not preferred. The concrete piles which will be used for the new bridge cannot be vibrated in. The only option to drive these piles is jetting followed by driving for capacity or impact driving full length. Jetting will significantly reduce the vibrations caused and impacts to the surrounding area compared to use of an impact hammer for the full length of pile, so this is the preferred method. Additionally, the stiff layers present at shallow depths at this location have been known to cause issues with driving piles using an impact hammer on recent projects. Attempting to drive the concrete piles with an impact hammer would require more force (i.e. larger vibrations) for a longer duration as compared to the jetting. For the temporary steel trestle piles, a vibratory hammer will be utilized where not adjacent to an existing underground utility which requires protection. Timber piles used for replacing the impacted docks will be driven by impact hammer as this is the only viable means of installation. The small size of these piles minimizes vibrations caused by impact

driving. Related to any concerns for turbidity caused by the jetting (for the concrete piles and select temporary steel piles in proximity to existing underground utilities), turbidity curtains are already prescribed by the project plans and will be required for all pile driving operations regardless of the method. Another reason for the need to jet the temporary steel piles (in close proximity to existing underground utilities) and permanent concrete piles is the proximity of some to existing underground utilities which have been noted as susceptible to vibration. To mitigate the potential to require a new line being installed across the channel, piles will be jetted until they are below the adjacent utilities and then driven to minimize vibrations.

- Limit pile driving activities to no more than 12 hours per day and provide a 12 hour quiet (recovery) period between pile driving days. Complied (see sheet 98, note 9).
- Ensure pile driving activities begin with a "soft start" or "ramp up" period (e.g. driving does not begin at 100% energy). Complied (see sheet 98, note 4K).
- Use a cushion block when using an impact hammer. Complied (see sheet 98, note 10).
- Should fish kill events be observed, coordinate with NOAA Fisheries' HESD to discuss the implementation of additional mitigative measures (e.g., contained bubble curtains). Complied (see sheet 98, note 11).
- Limit the amount and extent of turbidity and sedimentation by using appropriate sedimentation and turbidity controls such as silt curtains. Turbidity curtains will be utilized and are included in the project plans (see sheet 102).
- Ensure that greater than 50% of the canal width remains unobstructed by silt curtains at all times to provide adequate access to and from Little Assawoman Bay. Complied (see sheet 98, note 12).
- Minimize the suspension of sediments and disturbance of the substrate when removing piles by implementing the applicable techniques: Per DelDOT Standard Specifications Section 211, deep foundations are to be removed 2 feet below the ground level (mudline). Therefore, piles will be cutoff a few feet below the mudline rather than pulled as suggested in the highlighted item below.
    - o Remove piles with a vibratory hammer, rather than by direct pull or clamshell.
    - o Remove piles slowly to reduce sediment sloughing off in the water column.
    - o Strike or vibrate the pile to break the bond between the sediment and pile to minimize the pile breakage and reduce the amount of sediment sloughing off the pile during removal.
    - o Cut or drive the pile below the mudline and leave the stub in place. (see sheet 98, note 13 and DelDOT Standard Specifications Section 211)
    - o Surround the pile with a silt curtain from the surface of the water to the substrate.
    - o Place piles on a barge equipped with a basin to contain all attached sediment and runoff water after removal.
- Installation of subtidal riprap at the east abutment should be conducted at low tide. Sheeting along the waters edge (above the tide line) has been added to protect the areas during installation of riprap (see sheet 26). This should preclude the need to conduct work at low tide.
- Waterborne equipment associated with construction should float at all stages of the tide. Complied (see sheet 98, note 14).

These supporting documents are included to supplement the responses offered:

- DelDOT Standard Specifications Section 211 (pages 125-126)

- Sheet 26 – General Plan and Elevation
- Sheets 98-103 – Environmental Compliance Plans

If you should have any questions, please contact Wendy March at (302) 760-2129.

Thank you for your assistance.

Attachment: DelDOT Standard Specifications Section 211 and Updated Plan Sheets

cc:
Jason Hastings, PE – DelDOT Chief of Bridges and Structures
Scott Walls, PE - DelDOT Bridge Design Engineer
Nicholas Dean, PE - DelDOT Project Manager
Alexa Fuad – DelDOT Environmental Specialist
Anna Smith – DelDOT Environmental Stewardship Manager
Jon Eberle, PE – AECOM Consultant Project Manager
Neil Shemo, PE – AECOM Consultant Project Manager
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