New Castle-Rye Bridge Project
Summary of Meeting
Cultural Resources Coordination Meeting
August 1, 2013

Attendees:

Jill Edelmann, NHDOT
Sheila Charles, NHDOT
Victoria Chase, NHDOT
Bob Juliano, NHDOT
Marc Laurin, NHDOT
Jamie Sikora, FHWA
Rich Roach, USACE
Laura Black, NHDHR
Edna Feighner, NHDHR
Jim Murphy, HDR
Stephanie Dyer-Carroll, FHI
Matt Kirk, Hartgen Archaeology

The first coordination meeting with SHPO on the New Castle-Rye Bridge Project was held on August 1, 2013 at NHDOT. Attendees introduced themselves and a brief presentation was provided on the status of the project.

Jim Murphy, a Project Engineer with HDR, explained that the Inspection and Condition Report for the bridge was completed in 2011. In 2012, NHDOT began investigating rehabilitation/replacement options. In early 2013, a Project Advisory Committee (PAC) was established; two PAC meetings have occurred to date, in January and July of 2013. This summer an engineering report was completed and a public meeting is planned for August 14, 2013

Stephanie Dyer-Carroll, a Planner and Cultural Resources Specialist with FHI, updated SHPO on progress to date in the areas of Natural, Historical, and Archaeological Resources. Coordination letters were sent to various state and federal environmental agencies in the winter and spring of 2013. In addition, a coordination meeting to introduce the project to environmental resource agencies was held in March 2013 at NHDOT. Field survey and coordination has identified three wetland areas, an eelgrass bed, and threatened and endangered species in the vicinity of the bridge. These species include both the Atlantic and shortnose sturgeon. In addition, the Marsh Elder and Bald Eagle have been identified just outside of the project area. The bridge design will seek to avoid or minimize impacts to the wetlands and eelgrass beds. In addition, construction will seek to avoid disrupting sturgeon habitat, specifically during the spawning season.

NHDOT prepared a Request for Project Review form and submitted it to the SHPO in January 2013. The form defined an Area of Potential Effect (APE) for the project; the area was defined based on the potential for visual impacts to surrounding properties from the improvements to the bridge and as such is fairly broad. Research identified the Wentworth-Coolidge Mansion (NHL) and the Wentworth by the Sea Hotel (NR Eligible) within the APE. An Individual Inventory Form was also prepared for the bridge in order to evaluate its eligibility for listing in the National Register of Historic Places. NHDOT determined

that the bridge is eligible under Criterion A for its association with the defense of Portsmouth Harbor in World War II, and under Criterion C as one of two remaining bascule bridges in the State of New Hampshire. In addition, fieldwork has been completed for a Phase 1A Archaeological Study and a report is underway. The survey identified one of the abutments from the 1874 bridge within the APE.

Jim Murphy then gave a brief presentation on the bridge and the alternatives currently under consideration for its rehabilitation or replacement. He explained that a bridge inspection was undertaken in 2011 that determined the bridge has structural deficiencies including advanced section loss in the pier caps and piles, the stringers and bascule girders, and the approach span stringers. Additional deficiencies include the fact that the bascule machinery doesn't meet code, the sidewalks and shoulders are narrow, and the open deck is noisy and a hazard to bicyclists. Furthermore, there are safety issues as pedestrians must cross the road on the north roadway approach to use the bridge's sidewalk.

The following alternatives were outlined as potential options for the rehabilitation or replacement of the bridge:

- Alternative 1 – Existing Horizontal Alignment/Existing Profile (Rehabilitation)
- Alternative 2 – Existing Horizontal Alignment/Raised Profile, Fixed Bridge (Replacement)
- Alternative 3 – Shifted Horizontal Alignment (Replacement)
- Alternative 4 – Offline Horizontal Alignment (Replacement)

Rehabilitation under Alternative 1 would require the strengthening of the deck, the approach stringers, the bascule span floorbeams, the bascule girders, the pier caps, and the pier piles. In addition, the bridge railings require replacement, an approach slab may be necessary at the abutments, and the electrical systems require replacement. New mechanical components would be required to meet modern standards and the machinery and trunnion may not allow for a solid deck.

This alternative would match the existing bridge in its alignment and profile, and would not align the north approach sidewalk with the bridge sidewalk. The paved roadway shoulder width would be increased from 1 to 2 feet and the sidewalk width would be increased from 4 to 5 feet. A full bridge closure and off-site detour would be required during the 6-8 month period of construction however the feasibility of alternating one lane of traffic will be investigated during the construction of the approach superstructure. The estimated cost of this option is $17M and the expected life of the bridge would be 30-40 years. NHDOT has determined that they will continue to evaluate the rehabilitation option.

Alternative 2 would construct a new bridge, raising the existing profile to allow for a fixed span. A profile increase of 6'-3" was investigated, and is based on the minimum requirement of active US Coast Guard (USCG) vessels. With a 6'-3" increase in profile, this alternative would require significant driveway tie-ins, new retaining walls up to 13 feet in height, and additional work in the water. It also could impact the Amurcork tree on the southwest side of the bridge and would require full bridge closure and a detour during construction. Due to the magnitude of site disturbance, NHDOT will likely eliminate this alternative from further consideration.

Under Alternative 3, a new bridge would be constructed that matches the vertical geometry of the existing roadway. It would widen the approach area to the bridge by 1'-9" on the west side, and shift the centerline of the roadway 6'-9" to the west. This would allow for wider roadway shoulders and the

relocation of the sidewalk to the east side of the bridge. This alternative would require a full bridge closure and off-site detour during the 3-4 month construction period. The estimated cost of this alternative is $20M and the expected life of the bridge is 75 years. NHDOT intends to continue to evaluate this replacement option.

Under Alternative 4, a new bridge would be constructed that would be located 17'-5" to the west of the existing alignment. This alternative would have the greatest environmental impacts to the harbor and stonewalls, as well as the Amurcork tree. The bridge would remain open with one lane of traffic during the majority of construction however the construction period would be substantially longer than Alternative 3. Due to the potential environmental impacts, NHDOT will likely eliminate this alternative from further consideration.

HDR indicated that construction on the bridge will begin in 2016, not before the Sagamore Bridge is reopened. The detour during construction will add approximately 15 minutes of travel time and 6 miles. NHDOT will seek to limit the bridge closure period and schedule construction to minimize impacts to mobility, environmental resources, marine navigation, and area businesses.

At the closure of the meeting, the consultant team identified key next steps in process, including a public information meeting to be held on August 14th, 2013, the completion of the Type, Size and Location Study in December 2013, and the review of this study at a PAC meeting in January 2014. Over 600 people have been invited through direct mail postcards to attend the public information meeting.

Throughout the meeting, attendees asked questions and offered information or concerns. The comments and questions were as follows:

- FHWA asked how many properties abut the bridge. The consultant team indicated that there are two private residences on the Rye side of the bridge. The Wentworth by the Sea Hotel and Marina lie on the New Castle side of the bridge.
- FHWA asked whether there are sidewalks on the north and south sides of the bridge. The consultant team stated that there's a wide shoulder on the southeast side and a sidewalk on the northeast side. The bridge sidewalk lies on the west side of the structure.
- FHWA asked about the necessary detour during construction. The consultant team indicated that the detour would add approximately six miles, or 15 minutes, to commutes.
- SHPO asked whether staging areas have been determined. They stated that they prefer these areas to be paved. NHDOT indicated that the project will be completed through the CM/GC process, thereby allowing them to determine the staging areas early. NHDOT believes the project will be staged from the water, likely using a barge. Once the staging areas have been determined, NHDOT will undertake additional archaeological survey if it's determined to be necessary.
- NHDOT asked the archaeologists whether a Phase 1B survey of the area will be recommended. The consultant team stated that a Phase 1B is not being recommended, as the area is primarily fill. However, one of the abutments for the 1874 bridge does lie within the APE.
- USACE asked whether the lengthening of the bridge has been looked at. The consultant team indicated that they have concerns about silting and runoff.
- SHPO stated that Inventory Forms may be necessary for adjacent properties on the Rye side. NHDOT thinks that it may be too soon to make this determination, that it should wait until the preferred alternative has been defined. SHPO indicated that preparing them now would ensure

that this doesn't impact the project schedule. They stated that if the bridge work encroaches on the property lines, or impacts mature landscaping or stonewalls, NHDOT should come back to discuss the preparation of additional inventory forms.

- SHPO asked about the visibility of the bridge from the Wentworth-Coolidge National Historic Site and whether the APE could be reduced if Alternative 2 is ruled out. The consultant team indicated that the bridge is viewed from a substantial distance across the water, and that the view is of the entire bridge in profile. The elimination of Alternative 2 would not narrow the APE.
- SHPO asked whether consulting parties have been identified. The consultant team indicated that members of the PAC have already expressed an interest in being consulting parties. FHWA suggested that we have a handout available at the public meeting that describes how individuals can become consulting parties in the process.
- USACE stated that the raised profile or off-alignment options are not really viable.
- USACE also indicated that the USCG should be invited to the public meeting.
- SHPO asked whether the two properties on the Rye side are over 50 years old. The consultant team indicated that they are, based on the town property records and on historic maps. SHPO stated that they don't know whether they are eligible or not.