New Castle-Rye Bridge Project
Summary of Meeting
Public Information Meeting
August 14th, 2013, 7:00 p.m.

The first Public Information Meeting for the New Castle-Rye Bridge Project was held on Wednesday, August 14th, 2013 in The Common (Recreation Center) in New Castle, NH. Jill Barrett of the HDR consultant team moderated the meeting and introduced NHDOT representatives and members of the consultant team. A brief presentation was provided on the status of the project and attendees were encouraged to ask questions.

Bob Landry, the Consultant Design Chief with the New Hampshire Department of Transportation (NHDOT), began by providing some basic information on the bridge including its date of construction (1941), average traffic volumes (4,200 vehicles), and weight limit (15 tons). He shared that the steel grate bridge deck is noisy and that the bridge crosses a channel regulated by the U.S. Coast Guard. He also provided a brief history of the project, explaining that an 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 was established; two Public Advisory Committee meetings have occurred to date, in January and July of 2013.

Jim Murphy, a Project Engineer with HDR, then provided a summary of the condition of the bridge, explaining that the 2011 bridge inspection determined that 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. A new paint job masks the true level of deterioration. 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.

Paul Stanton, an Environmental Planner with FHI, outlined investigations to date pertaining to Natural Resources. In the spring of 2013, coordination letters were sent to the U.S. Fish and Wildlife Service, the National Oceanographic and Atmospheric Administration, the U.S. Coast Guard, the New Hampshire Natural Heritage Bureau, and New Hampshire Fish and Game. In addition, a coordination meeting was held in March 2013 at NHDOT in order to introduce the project to environmental resource agencies. Field survey and coordination has identified Little Harbor, three wetland areas, and threatened and endangered species in the vicinity of the bridge. An eelgrass bed has also been identified in the New Hampshire State GIS southeast of the bridge. Preliminary field survey did not indicate the presence of eelgrass directly adjacent to the bridge. Threatened and endangered species that have been identified 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 sensitive natural resources.

Stephanie Dyer-Carroll, a Planner and Cultural Resources Specialist with FHI, provided a summary of progress to date in the areas of Historic and Archaeological Resources. In order to initiate consultation with the NH State Historic Preservation Office under Section 106 of the National Historic Preservation Act, 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 for the project; the area was defined based on the potential for visual impacts to surrounding properties from the improvements to the bridge. Two historic

properties have been identified within the Area of Potential Effect, the Wentworth by the Sea Hotel (determined National Register eligible) and the Wentworth-Coolidge Mansion (listed in the National Register). At the direction of the New Hampshire State Historic Preservation Office, an Individual Inventory Form was 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 the abutments from the 1874 bridge within the Area of Potential Effect. Ms. Dyer-Carroll stated that this meeting was intended to meet the requirements for public involvement under Section 106, and that anyone interested in becoming a consulting party in the process should contact her or Sheila Charles with NHDOT. A pamphlet outlining how to become a consulting party was also provided.

Following these updates, Jim Murphy outlined the alternatives that are being considered as potential options for the rehabilitation or replacement of the bridge:

- Alternative 1 – Bridge Rehabilitation
- Alternative 2 – Replacement with Fixed Bridge, Raised Roadway
- Alternative 3 – Replacement with Widened Roadway
- Alternative 4 – Replacement with Offline Roadway, Phased Construction

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. Overall, it would require the replacement of approximately 90% of the steel making up the bridge.

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 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 and the potential for an even greater vertical clearance for marine traffic, 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.

Comparing the alternatives, there would be a longer closure with Rehabilitation versus Replacement and less flexibility with the closure season. In addition, Replacement provides more opportunities and options in construction techniques than does Rehabilitation. The construction on the bridge will begin in early 2016, after 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 end of the presentation, the consultant team identified key next steps in process, including the completion of the Type, Size and Location Study in December 2013, the review of this study at a Public Advisory Committee meeting in January 2014, and another Public Information Meeting in late winter.

Both during and following the presentation, attendees asked questions and offered information and concerns. The comments and questions were as follows:

Q. What does a 15 ton weight limit look like?
A. A fully loaded large U-Haul truck, or a 3-axle box truck, would weigh approximately 15 tons.

Q. What is a trunnion?
A. A trunnion is a large pin on which the bridge pivots.

Q. How many times is the bridge opened per year?
A. The bridge is opened approximately eight times, primarily for the U.S. Coast Guard but also for maintenance. We also heard tonight that a sailboat moored inside the harbor has recently needed the bridge to be opened.

Q. What other types of lift bridges could be employed, and what would be the implications in terms of cost and construction time?
A. A towerless lift could be employed. The construction time would probably be the same. Costs of this option have not yet been investigated.

Q. Would the Coast Guard be involved if it wasn't a drawbridge?
A. Yes, because it's a navigable waterway. If the bridge were fixed, it would require raising the bridge height at least 6'3", this height is based solely upon allowing the US Coast Guard boat clearance into the harbor and would not accommodate the previously mentioned sailboat.

Q. It seems that the design has been crafted to avoid the eelgrass, but preliminary investigations indicated that it may not be present. Is this correct?
A. *Yes, t*he New Hampshire State GIS indicates that eelgrass is present southeast of the bridge. Eelgrass has not been observed directly adjacent to the bridge, but the designers are concerned with both direct and indirect effects, including siltation.

Q. When will NHDOT decide between Alternatives 1 and 3?
A. A decision will be hopefully made by the end of the year. At this point, NHDOT wants to be sure that eliminating Alternatives 2 and 4 makes sense.

Q. Doesn't Rehabilitation tend to have more unanticipated costs than Replacement?
A. Rehabilitation has higher volatility and thus could cost more.

Q. Would Alternative 1 take two years?
A. No, it would take approximately eight months. Alternative 4 could take two years.

Q. Why is Alternative 1 still being considered?
A. Section 106 requires the consideration of a range of options. The NH State Historic Preservation Office would like NHDOT to pursue Rehabilitation if feasible.

Q. What is the significance of the Marsh Elder?
A. The New Hampshire Natural Heritage Bureau identified it as being within the general area, but the scientist did not observe it on the project site.

Q. Which alternatives would employ a lift bridge?
A. Alternatives 1, 3 and 4 would employ a lift bridge.

Q. What is the cost of Alternative 4?
A. The cost of Alternative 4 has not been developed, but it is anticipated that it would be more than $20 million.

Q. What is the advantage of Alternative 4?
A. Alternative 4 would allow one lane of traffic to be maintained during construction.

Q. Would Rehabilitation maintain the current spacing of the supports? Would Alternative 3 allow for wider vessels?
A. Rehabilitation would maintain the current spacing of the substructure, while Alternative 3 would increase the spacing from 32 to 38 feet, thereby increasing the width of boats that could pass underneath the bridge.

Q. Have you analyzed fire and rescue impacts?
A. Yes, this is being considered. Waiting until the Sagamore Bridge is reopened will ensure Rye ladder trucks can access New Castle. Completion of the Memorial Bridge allows for mutual aid service from Portsmouth Naval Shipyard.

Q. Will traffic be closed the shortest time under Alternative 3?
A. Alternative 3 would require a closure of 3 to 4 months. Alternative 4 would require a brief closure and then one-way traffic during the balance of the construction period.

Q. Is there consideration of the replacement of the electrical lines between New Castle and Rye? It is dangerous because they obstruct views.
A. Because the bridge is movable, the replacement of the lines would require that they be run under the water. However, that would be very costly and is thus unlikely, but will be investigated.

Q. What is the distance between the mean high tide and the bottom of the deck? The design should consider the potential for a rise in sea level.
A. The distance between the mean high tide line and bottom of the bridge is 13 feet.

Q. Will a traffic impact study be completed for the area?
A. Under this project, NHDOT will not study the overall traffic conditions in the area. Instead, a request could be made to the Regional Planning Commission for such a study.

Additional comments included the following:

- Alternative 2 is attractive but the commenter understood that it would have significant environmental impacts.
- Under Alternative 2, drivers would lose their line of sight as they cross the bridge.
- Alternative 3 is the most practical option.
- If you raised the road, as proposed under Alternative 2, access to properties on the Rye side would be difficult.
- It would be unfortunate to spend all this money and still have a grate deck, which is both noisy and dangerous for bicyclists.
- The design needs to consider bike safety.
- Money shouldn't be spent to make the roadway wider, as this could encourage cars to go faster across the bridge. NHDOT responded that while a narrow roadway can be a traffic calming measure, the design needs to consider the safety of pedestrians and bicyclists.
- Retaining walls aren't a good idea, in part because of cost.
- The closure of the bridge will be a nuisance for New Castle.
- NHDOT needs to consider how much traffic will be traveling through New Castle during the bridge closure under Alternatives 1, 2 and 3.

Prior to the closure of the meeting, an electronic polling exercise was undertaken. A summary of the polling is attached at the end of the minutes. Following the polling, attendees asked that a vote be taken on preference for each of the alternatives. No attendees supported Alternatives 1 or 2. Three people supported Alternative 4, while more than 57 supported Alternative 3.

The meeting adjourned at 9:00 p.m.