



April 15, 2016
15449

Cape Elizabeth Conservation Commission
Maureen O'Meara, Town Planner
Town of Cape Elizabeth
320 Ocean House Road
Cape Elizabeth, Maine 04107

RE: Pollack Brook Trail (Trail 13) Pre-Design and Permitting Investigation

Dear Commission Members and Maureen:

Introduction

Sebago Technics, Inc. (Sebago) has been actively engaged in the investigation for the pre-design planning and the potential permitting situation associated with the Pollack Brook Trail and associated pedestrian boardwalk or bridge. Sebago begin with a field assessment and preparation of a site conditions map, including the location of salt water and freshwater wetlands. Sebago has communicated with both State and Federal regulatory agencies as well as other State of Maine departmental agencies that would have input into the design and permitting process. We have also been in contact with several vendors to investigate potential options regarding the pedestrian structure crossing of Pollack Brook. The following discussion provides a preliminary assessment of the permitting conditions associated with the proposed trail and boardwalk/bridge project and also reviews potential boardwalk and bridge options with associated budgetary construction costs.

Potential Project Scope

The Conservation Commission is contemplating a new trail project to be an improvement of an existing path and boardwalk brook crossing and then an extension of a newly aligned trail. A USGS Location Map and a Plan View Exhibit of the potential improvements to the Pollack Brook Trail and surrounding area characteristics are included in this report in Appendix A.

The Pollack Brook Trail, also referred to as Trail 13, starts at an existing trailhead off Spurwink Avenue to the north of the location of the culvert pipe crossing under Spurwink Avenue and draining into Pollack Brook. The trail follows a footpath past the possible remnants of an informal cemetery and then makes a sharp turn to the south which in the past has gone over a rundown boardwalk bridge which crossed over Pollack Brook. Due to the poor condition of the boardwalk, most of it was removed in December, 2015. Remnants will be removed in the spring of 2016. The past structural crossing of the brook was 51 feet in length with the ends of the boardwalk sitting on the banks of the brook. Subsequent failure of the bridge left it sitting directly on the marsh surface of Pollack Brook. It is envisioned that a major improvement to the trail would be the replacement of the past boardwalk. This replacement boardwalk or bridge would provide for a safe and readily available pedestrian passage over Pollack Brook in a manner in keeping with current environmental regulatory requirements.

Once on the south side of the brook, the trail then traverses near the Spurwink Cemetery. One of the concerns that has been raised in relation to this trail is that trail users should not interfere with the reverence related to the cemetery and, in order to accomplish this objective, that this

trail must be physically separated from the cemetery. The trail would then continue in a generally westerly direction past the Spurwink Cemetery via a new extension westerly along the Spurwink Marsh which in one stretch runs through a very narrow sloped area between the marsh and the cemetery. This portion of the trail will be a challenge given the close proximity of these two prominent features, the sloping terrain of the area, and the offset siting requirements associated with the both the marsh wetlands and the cemetery which in turn relates to the level of permitting which will be required to obtain prior to construction.

Once past this area, the trail will be able to maneuver through a wider upland area offering options to traverse the open space without compromising the cemetery boundaries or being affected by the restrictions associated with the tidal marsh. The new trail has a goal of reaching a terminus point at a viewing area at the Spurwink River across the river from an existing parking area located in Scarborough with a dock overlooking the river and marsh area (note: within the last 20 years, a trail extended to the river, however no remnants of the trail remains). In order to do so, the trail will need to cross over a narrow strip of wetlands.

The trail length from the Spurwink Avenue trailhead to the Spurwink River terminus is approximately 2,500 linear feet. A short connector through upland areas will bring the trail back onto Bowery Beach Road (Route 77) by doubling back onto the main trail for a short distance and taking a spur trail of 300 to 400 feet in length depending on the route alignment to the south to connect onto Bowery Beach Road.

For the purposes of this report's evaluation, we assumed that the trail would not be improved much beyond the level of that existing today which is basically a worn footpath with little to no surface improvements. Any proposed boardwalk or bridge crossing the wetland was assumed to have a width of four feet. According to regulatory stipulations, one foot of vertical clearance is required per one foot of structure width. No ADA provisions have been applied to the trail or the crossing structure.

It was also assumed that no removal of significant trees would result with the proposed improvement within the trail itself and the only trail related vegetation removal would be of shrubs and the trimming of branches protruding into the trail pathway. Some isolated tree removal may be required to maneuver and install the crossing structure depending on which crossing option is ultimately selected.

Resource Investigation

In order to assess the resources which would need to be protected through the permitting required to be able to construct the project, Sebago field investigated the marsh and its associated saltwater wetlands as well as reviewed the remainder of the trail area for the presence of freshwater wetlands. We also contacted Maine Department of Inland Fish and Wildlife (IF&W) and the Maine Historic Preservation Commission (MHPC) to gain insight on concerns that these agencies would have with the proposed project scope.

Wetlands

Sebago Technics investigated the limits of the various wetland types and boundaries and flagged these wetlands in the field. The delineation was performed in November of 2015 by Sebago's Gary Fullerton and was conducted in general accordance with the 1987 Wetlands Delineation Manual and Northeast Regional Supplement authored and published by the U.S.

Army Corps of Engineers. A separate report of wetland field investigation's findings along with a variety of site photographs are included here in this report in Appendix B.

In general, our field delineation identified saltwater marsh limits and freshwater wetlands associated with the Spurwink Marsh and Pollard Brook. There are also sections of freshwater wetlands that are isolated from the nearby marsh and brook. The wetlands in the marsh and adjacent to the marsh are considered Wetlands of Special Significance (WOSS) by the Maine Department of Environmental Protection (DEP) so they would receive more attention and permitting restrictions. Federal rules regarding impacts to tidal, saltwater wetlands and marsh areas are also more stringent.

Permitting Considerations

The Pollack Brook Trail may require local, state, and federal permits, respectively from the Town of Cape Elizabeth Planning Board, the Maine DEP, and the U.S. Army Corps of Engineer (USACE). If the trail and the structural crossing of Pollack Brook and the adjacent marsh are able to be crossed without actually impacting the wetlands, no USACE permit would be required as federal permitting requirements only address actual wetland impacts and not adjacency impacts.

Local Level Permitting

According to the Town of Cape Elizabeth Code Enforcement Officer, Ben McDougal, the local permitting needs will consist of a Resource Protection permit from the Cape Elizabeth Planning Board. Given that the Planning Board has issued permits for trail projects of a similar scope, the Planning Board approval would not represent a significant obstacle and could be readily achieved.

State Level Permitting

We met in the field with Jennifer Harris of the Maine DEP to walk the site and review the project parameters. We observed the boardwalk sitting in the marsh bed of Pollack Brook. A copy of Ms. Harris' January 15, 2016 Field Determination Report is included in Appendix C. According to this determination, the DEP will allow the Town to replace the existing boardwalk with a new crossing structure under the DEP's Natural Resource of Protection Act (NRPA) Permit-by-Rule (PBR) program for replacement of existing structures. Actual physical impacts to the WOSS tidal or adjacent wetlands of the marsh, however, will require a NRPA DEP permit.

Due to the presence of the WOSS associated with the marsh, this permit would technically require an individual permit. Impacts within 25 feet of a WOSS would also require an individual NRPA permit although there is an abbreviated Permit-by-Rule (PBR) process that would apply to impacts of between 25 to 75-feet from a WOSS. Since the location of the trail at a narrow pinch point section between the cemetery limits and the WOSS associated with the Spurwink Marsh will likely need to be located within 25 feet of the WOSS to avoid the cemetery and its required setbacks, it doesn't appear that the abbreviated PBR process will be available for this aspect of the project.

The DEP Staff does have the ability, if requested, to waive a project from an individual permit status down to a Tier 1 or Tier 2 permitting level which would be much easier to prepare and process. Given this project's lack of substantial impervious surfaces and its very limited environmental disturbance both during construction and its operational use after construction, it

is very likely that the DEP might waive the permitting to a tier level versus the individual level. It is likely that this possibility would be strengthened if the Pollack Brook crossing was elevated and did not involve physical supports within the marsh area itself.

Federal Level Permitting

In order to assess the permitting for the federal review process, we engaged in a series of email communications with Jay Clement of the USACE. We reviewed the project goals with Mr. Clement so that the permitting needs of the project could be assessed. A copy of these email transmissions are included in Appendix C of this report.

The USACE has jurisdiction on all wetlands, tidal and non-tidal. They do not have an adjacency jurisdiction so activities outside of wetland limits which are not actively impacting the wetlands are not regulated by the USACE. Therefore, Jay Clement's advice was to avoid the wetlands altogether which would not trigger a permitting need from the USACE. He also reminded us of a past Spurwink Marsh crossing permit for a new boardwalk that was very difficult and time consuming process through the USACE due to the federal regulations associated with tidal wetland impacts and restrictions.

If the project were able to span the crossing areas associated with both the Pollack Brook and small narrow wetland finger near the westerly portion of the project area, then no federal permits would be required. Impacts to the wetlands, particularly the saltwater wetlands of the Spurwink Marsh surrounding Pollack Brook, would require a permit from the USACE. Options that would require equipment be used to temporarily impact the marsh, such as a front-end loader working on mats, would need to be reviewed by the USACE to determine if a permit was required for the temporary wetland impacts. Should a permit be required, we would envision that the effort to receive such a permit to be on the lighter side with a concentration on allowing the wetland to re-establish after construction and not create an erosion concern during construction.

The USACE regulates common activities in inland and tidal wetland area under its October 2015 Maine General Permit under two levels, Category 1 and Category 2, with Category 1 standards being less demanding. It appears that if a boardwalk option was pursued for this project that it could be permitted under the USACE Category 2 "Residential, Commercial, Industrial, and Institutional Developments, and Recreational Facilities" so long as there was "less than one acre of temporary or permanent fill, excavation and/or secondary impacts". As the posts for the boardwalk would represent the only impact so long as the boardwalk was raised four feet above the marsh substrate, the project would be well under the Category 2 impact threshold.

It should be noted that while it does not appear that a boardwalk crossing would go beyond the USACE Category 2 permitting level and into the much more difficult individual permit category, the exact permit which the USACE would review this project under is difficult to ascertain without providing the USACE with a Pre-Construction Notification outlining the project's specific characteristics so that the USACE can provide confirmation that the project would be eligible to be permitted under the Maine General Permit.

Due to the awkward nature of federal permitting and its sometimes rigid formatting, there may be a caveat that would not allow the project to be reviewed under the Category 2 General Permit and require a much more strenuous permitting effort. Further, past efforts to cross the

tidal portion of the Spurwink Trail with an elevated boardwalk were only made possible by convincing the USACE of the value of the crossing and that there were no other options available for the Town to accomplish the project's very worthwhile goal which made the tidal boardwalk option the Least Environmentally Damaging Practical Alternative (LEDPA). In the Pollack Brook Trail project, it will be difficult to convince the USACE that the tidal marsh boardwalk crossing is a necessary recreational crossing connection and, with the proximity of Spurwink Avenue and the freshwater wetlands nearby, that the tidal boardwalk option is the LEDPA.

In his email correspondence, Mr. Clement also noted that any permitting through the federal program would expose the project to the issues associated with the Northern Long Eared Bat being listed as a federally threatened species. This new listing caused a significant permitting issue in 2015. These issues have recently been lessened tremendously with the passing of a new 4(d) rule by the U.S. Fish and Wildlife Administration (USF&W) that regulates federally listed species.

The new 4(d) rule specifically targets areas within a ¼-mile of protected hibernacula where it is known that substantial populations of bats hibernate and within 150-feet of maternity roosting trees. There are no protected hibernacula in Southern Maine and no maternity roosting trees have been identified in Maine so the issue of bats will not be a significant influence onto this project. There are voluntary measures that the USF&W through the USACE are promoting, among which no tree removal during the bat maternity and pup raising period of June/July. Since it is unlikely that this project will require tree removal or at most limited tree removal to maneuver and install the Pollack Brook crossing structure, even these voluntary measures may not apply.

Other Agency Considerations

There are also agencies within the state that can influence permitting and design issues of projects. We contacted both the Maine Department of Inland Fish & Wildlife (IF&W) Department and the Maine Historical Preservation Commission (MHPC). Appendix B of this report includes correspondence from both of these agencies as to their initial concerns with the project.

Maine Inland Fish & Wildlife

IF&W's letter from John Maclaine confirms that there are no locations of Essential or Significant Wildlife Habitat or fisheries habitat that would be directly affected by this project. Mr. Maclaine's letter further outlines potential concerns associated with bats, New England Cottontail Rabbits and fisheries habitats.

As discussed previously, the issues related to the Northern Long Eared Bat have been more clearly outlined and the State is proposing to follow the federal lead in protecting hibernacula and maternity roosting tree areas. The State has listed two other species of bats in addition to the Northern Long Eared Bat, but protection of the bat species should not significantly influence the proposed trail and bridge crossing.

IF&W also raised New England Cottontail Rabbits as a potential concern. We discussed the rabbit issue in relation to this project with Corey Stearns, an IF&W Wildlife Biologist. In general, it does not appear that this project would dramatically impact any of the rabbit habitat that may be in the project vicinity due to the limited clearing of vegetation. It should also be noted that

the Town of Cape Elizabeth has historically been very active in assisting in the protection and enhancement of New England Cottontail Rabbits so we believe that the scope of the project and the Town's past practices would weigh in the Town's favor.

IF&W also promotes fisheries habitat protection. These concerns are typically applied to projects that require culverts to accomplish stream crossings or have significant potential development impacts along a stream corridor. Given the project's proposed use and the limited potential impacts to Pollack Brook and its surrounding terrain, concerns associated with fisheries habitat protection should be minimal.

Maine Historical Preservation Commission

Robin Reed of the MHPC has provided us with their concerns in an email that is included in Appendix B of this report. The MHPC is recommending a Phase 1 Prehistoric Archeological evaluation be done given the location of the project and the characteristics of prehistoric (or Native American) civilization. According to MHPC literature, Phase I surveys are designed to determine whether or not archaeological sites exist on a particular piece of land. Such work involves checking records of previous archaeology in the area, walking over the landscape to inspect land forms and look for surface exposures of soil and possible archaeological material, and the excavation of shovel test pits in areas of high probability.

We discussed this request further with MHPC's Prehistoric Archeologist, Dr. Arthur Spiess, who noted that there is a known significant area of prehistoric interest near the trail which is why the MHPC is requesting the Phase 1 evaluation. We reviewed a possible scope of work and Dr. Spiess indicated that in addition to the record checking step that two test pits each on either side of the Pollack Brook crossing and another three to four test pits in the area of the narrow strip of land between the Spurwink Marsh associated wetlands and the Spurwink Cemetery. Dr. Spiess would also like the project archeologist to walk the premises of the remaining trail alignment for any visible observations related to prehistoric interests and then provide a report to the MHPC outlining the study and its findings.

One possible outcome of this preliminary assessment would be it would trigger interest in having another, more expansive study be conducted. Given the minimal excavation associated with this project, however, we envision that further study beyond the Phase 1 level would be very unlikely. We do believe that should the Commission decide that it would like to proceed with the actual Pollack Brook trail project scope, it would be prudent to complete this Phase 1 study as a first step and hopefully receive the MHPC sign off or identify the need for additional study.

The Phase 1 studies have traditionally been able to be completed for a cost of less than \$2,000 whereas additional studies can become much more expensive to complete depending on the scope of such studies. Should a more expansive study be requested by the MHPC, the potential cost associated with such a study may affect the Commission's decision to move forward on the Pollack Brook project which would require additional conversations with the MHPC as to the actual impact of the proposed project onto any Prehistoric Resources.

We also communicated with the MHPC for guidance related to excavation activities near cemeteries given the proximity of the Spurwink Cemetery and the possible informal cemetery in the upland area to the north of the Spurwink Marsh near the Pollack Brook crossing area. The

State of Maine regulates construction and excavation activities near cemeteries in its Maine Revised Statute under Title 13, Section 1371 which states that construction or excavation may not be conducted within 25 feet of a known burial site or within 25 feet of the boundaries of an established cemetery, whichever is the greater. Therefore, this restriction will need to be followed for the future alignment of the path near the Spurwink Cemetery and the support system design for the Pollack Brook crossing on the north side of Pollack Brook.

Pollack Brook Crossing Options

There are various options that would accomplish the pedestrian crossing of Pollack Brook. The past practice was a simple wooden boardwalk of approximately 4-foot wide boards nailed to longitudinal supporting beams crossing over the water. The ends of the boardwalk eventually rested entirely onto the marsh surface. The boardwalk in this location also appeared to move due to elevated tidal conditions and/or substantial rainstorm events. This style of crossing is not supported by current permitting regulations and would be very difficult to replicate without elevating the boardwalk well above the marsh.

We considered various options for this crossing with the basic design criteria being a bridge or boardwalk spanning approximately 60-feet across the marsh with a 4-foot wide section elevated at least 4-feet above marsh grade with relatively easy to navigate ends. Given the high cost and installation difficulties, structures constructed primarily of wooden components were considered to not be feasible for this project and we concentrated our research on manufactured systems that would be fabricated off-site and then delivered and installed at the site. Based on this criteria we investigated the following options:

Option 1 - Elevated Boardwalk

Although this option would not be a preferred option of the regulatory agencies, there is in theory a relatively cost-effective method of providing for an elevated boardwalk with supports landing within the floor of the marshland. The boardwalk would need to be elevated on the supports, but clear span the crossing of the Pollack Brook stream channel.

In order to be long-lasting and economically viable, we envision that the materials would consist of aluminum post supports with a composite material tread system rather than wood materials which would be difficult and expensive to construct and maintain in future. In order to gain an understanding of the advantages and disadvantages of such a system, we contacted Great Northern Docks of Windham, Maine who in the past have constructed a system of boardwalks along the Great Pond in Cape Elizabeth.

The advantages of this approach is the relatively ease in installation with metal support posts being driven into the marsh and then the boardwalk, rails, and appurtenant equipment can be constructed onto the posts and extended over the marsh. This installation approach is relatively inexpensive and Great Northern Docks has provided a budget cost of \$16,300 to fabricate the boardwalk. Delivery to the site and having professional installation crews install the boardwalk was estimated at \$1,500 for a total cost of this option in the \$17,800 range to fabricate, deliver, and install the boardwalk. A copy of the Great Northern Docks' system information and representative photographs are provided in Appendix D of this report.

As the boardwalk could be constructed in pieces, large equipment access or extensive rigging of material into the installation area is not required. These boardwalks are also easy to repair

and actually have a relatively minimal wetland impact as only the post supports are impacting the wetland and disrupt very little soil. Great Northern Dock have estimated that the entire boardwalk could be supported by eight posts of a 2-inch diameter. Also, the four foot vertical clearance between the marsh grade and the bottom of the boardwalk as required by regulatory agencies allows for vegetation growth under the boardwalk.

There are also some significant disadvantages associated with this option. Being supported on the open marsh and with Pollack Brook flowing nearby, the boardwalk would be susceptible to damage from large tidal and/or substantial rainstorm or windstorm events. Given that the marsh area with alternating tides and significant stream flow represents a relatively harsh environment, placing a boardwalk directly within this difficult setting may not be a long-term viable solution.

As discussed earlier, it is also clear that this approach would be considerably more difficult to permit through the USACE. Locating the boardwalk within the area of the salt marsh rather than moving it upstream into freshwater wetlands also complicates securing approvals. The USACE has stringent regulations regarding such project and this option would represent a challenge to get approved. Although the posts would be relatively small areas of impact, the presence of the support system actually impacting the marsh will be a difficult obstacle to overcome given that there are other options available that could span the marsh and have no wetland impact which is an option that the USACE would need to consider in their approval process. Given that one alternative exists to create a walkway alongside the Spurwink Avenue crossing of Pollack Brook and the fact that it would be difficult to argue the overwhelming value of such a tidal marsh crossing, the USACE may not consider the elevated boardwalk option a viable LEDPA and could reject the permit application altogether.

Options 2 and 3 - Elevated Bridges

There are also options of spanning the entire Spurwink Marsh and Pollack Brook with a single structure that would not physically impact the marsh which would negate the need for federal permitting of the crossing. There are national and local companies that fabricate bridges at an off-site location to specifications desired by the end-user. These bridges are then shipped to the installation site and then off-loaded and installed. Installation in the Pollack Brook Bridge will be complicated by its off-road location and the fact that the only means of access is from the south through the Spurwink Cemetery side.

The main drawback with the pedestrian bridge approach is the sheer size and weight of the bridge and the means of putting it in place. Mats could be used to temporarily access equipment over the marsh, but reaching the installation point would likely require some removal of isolated trees for equipment access. The means of getting the bridge from the off-load site along Spurwink Avenue to the installation location near the marsh would likely involve large mechanical equipment, such as a front-end loader, and extensive rigging and zip line construction technics to get the equipment in place. Once in place, these types of bridges do carry the advantage of long-term durability and limited maintenance needs.

Sebago communicated with two potential providers of fabricated bridges. One company is a national firm that fabricates bridges in Florida and then delivers them throughout the country. GatorBridge, Option 2, manufactures a variety of bridge types and has provided us with a budgetary scope and fee for the Pollack Brook project. A copy of the GatorBridge's system information and representative photographs are provided in Appendix D of this report.

According to the information provided by GatorBridge, a bridge that is 60-feet long and 4-feet wide with standard handrails would weigh approximately 4,350 pounds, cost \$28,350 to manufacture with another \$4,200 delivery cost. These bridges are typically supported on pre-cast concrete bases that would also need to be constructed and delivered to the site from a local concrete plant.

The other substantial item would be the cost to off-load and then maneuver the bridge structure to the installation areas which is complicated by the wooded and one-side access of this bridge project. We are roughly estimating that the concrete supports, earthwork required to set the supports, and the actual bridge installation could add another \$15,000 to the project costs. Therefore, the total budgetary cost of this particular type of bridge could be in the \$48,000 range.

We also contacted a more local company that also manufactures and distributes aluminum pedestrian bridges using more of a gangway-style approach typical of marine applications related to boat, dock, and float connections. Carried as Option 3 in this report, Superior Docks of Ellsworth, Maine fabricates heavy-duty aluminum pedestrian bridges that could be used in this application. Depending on the options desired, the cost to fabricate and deliver a bridge from their factory in Naples, Maine to Cape Elizabeth is in the range of \$17,000 to \$21,800 for a bridge which is approximately 2,000 pounds in weight. A copy of Superior Docks' system information and representative photographs are provided in Appendix D of this report.

While this style of bridge is less than half the weight of bridges such as those provided by GatorBridge, it could still have a significant installation cost due to the size of the overall structure and the off-road installation location. We spoke to Falls Point Marine of South Freeport, Maine who were recommended by Superior Docks as being very familiar with their product and marine related projects' installation needs. Falls Point Marine recommended supporting the bridges on helical anchors which would auger into the soil and provide a ready means to transition from the bridge to the adjacent ground.

Falls Point Marine was not familiar with the Pollack Brook site, but based on past installations they assume that a combination of heavy equipment and block and tackle/zip line methods would be necessary to install the bridge. They provided a rough estimate in the range of \$12,000 to \$17,000 which is consistent with what was carried above for the much heavier GatorBridge product. Using a mid-range cost of \$20,000 for the fabrication and delivery of the bridge along with another \$15,000 as a comparable installation estimate, the total fabrication, delivery, and installation of this style of bridge would be budgeted in the \$35,000 range.

Conclusions

This report has investigated the wetlands characteristics, potential impacts, and permitting ramifications of the potential Pollack Brook Trail project. We have also investigated various options for a structural system crossing the Pollack Brook/Spurwink Marsh area. These investigations have included email and telephone communications, field reviews and meetings, and documentation research.

For the path portion of this project, the key issues appear to be focused primarily on the narrow strip of land section between the Spurwink March wetlands and the Spurwink Cemetery and a very narrow wetland crossing on the westerly portion of the project area near the Spurwink

River. The Pollack Brook/Spurwink Marsh crossing could be accomplished in a variety of methods. Three options were studied under the scope of this study. Direct costs could not be established at this pre-design level, but an order of magnitude budgetary costs for each studied option are as follows:

| Option | Permitting \$ | Structure \$ | Installation\$ | Total\$ |
|------------------------------------|---------------|--------------|----------------|---------|
| 1. Elevated Boardwalk Walkway | \$10,000 | \$16,300 | \$1,500 | 27,800 |
| 2. Standard pedestrian bridge | \$3,000 | \$32,550 | \$15,000 | 50,550 |
| 3. Gangway style pedestrian bridge | \$3,000 | \$20,000 | \$15000 | 38,000 |

While Option 1 would appear to be the most financially attractive option, this option has significant disadvantages as it would be placed in a very challenging environment directly within the marsh itself as opposed to being elevated above the marsh in Options 2 and 3 which offers a more protected location from the marine environment which should correlate to a longer lifespan and less maintenance costs over the duration of its use.

Permitting for this project would require a Resource Protection Planning Board approval at the local level. A Maine DEP NRPA permit would be required at the state level with this permit likely reduced to a simpler tier level upon request. Federal permitting through the USACE would range from not being required for Options 2 and 3 that span the wetlands to a comprehensive Category 2 permit under the Maine General Permit (or beyond) for Option 1 that directly impact the tidal wetlands. The Category 2 permit applicability would need to be confirmed by the USACE after the submission of a Pre-Construction Notification outlining the specific details of the proposed crossing. It should also be recognized that Option 1 may not be considered of significant value by the USACE and, in comparison to other nearby available options that would not directly impact the tidal wetlands, may not be considered as the LEDPA for the project which would significantly jeopardize Option 1 ability to receive a federal permit.

The project funding will need to include other soft costs such as the MHPC requested Phase 1 Prehistoric Archeological assessment, surveying, design and/or performance standards development, permitting, preparing contract documents, bidding, and construction related services. At this time, it is not possible to determine the costs of such efforts without first establishing a direction of accomplishing the various aspects of this project. For the purposes of the level of this study's scope, soft costs in the range up to \$10,000 to \$15,000 could be possible.

Closing

Sebago Technics is very appreciative of the Conservation Commission's request that we study the various planning aspects of the potential Pollack Brook Trail project. Should the Commission decide to go forward with the project, Sebago would be very pleased to continue to support this project through its fruition. Should there be any questions or comments regarding this report, please do not hesitate to contact us.

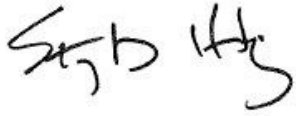
Sincerely,

SEBAGO TECHNICS, INC.

Cape Elizabeth Conservation Commission
Maureen O'Meara
15449

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April 12, 2016



Stephen D. Harding, P.E.
Town Engineer

SDH/sdh

cc: Owens McCullough, Sebago Technics
Gary Fullerton, Sebago Technics

DRAFT