WALPOLE-CHARLESTOWN
X-A000(487) - 14747

NH ROUTE 12

CATEGORICAL EXCLUSION REEVALUATION

AUGUST 2017
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Part I: Environmental Study

Introduction and Description of Project

This project involves the reconstruction of approximately 2.8 miles (14,500 ft) of New Hampshire (NH) Route 12 between the towns of Walpole and Charlestown, NH (Exhibit A). The roadway is located in proximity to the Connecticut River and an active railroad line (referred to as the New England Central Railroad or the Sullivan County Railroad). The current roadway is narrow and contains little to no shoulders. Several sections of the roadway embankments are showing signs of deterioration and in some locations have begun sloughing into the Connecticut River.

This project involves widening, shifting and updating NH Route 12 to accommodate for two 11-foot travel lanes and two paved 4 to 5-foot shoulders. This project begins at the NH Route 12/Main Street intersection in North Walpole and proceeds north approximately 2.8 miles to the intersection of NH Routes 12 and 12A (Exhibit B). The proposed project will also require property acquisitions as well as permanent drainage and slope easements to be obtained prior to construction.

This project was developed using the Context Sensitive Solutions (CSS) process which involved the use of a Public Advisory Committee (PAC) to assist in developing the project purpose and need, identifying numerous alternatives and recommending a proposed action. The PAC for this project consisted of local property and business owners, public officials, local organization constituents, members of the NH DOT and other stakeholders. The recommendations of the PAC were strongly considered by both the New Hampshire Department of Transportation (NH DOT, the Department) and the Federal Highway Administration (FHWA) throughout the development of the project. During the CSS process, input was also received from multiple State and Federal agencies representing the natural, cultural and socioeconomic interests of the area. The PAC developed the following vision statement to meet the purpose and need of the project:

“The Route 12 corridor will be safe, efficient, attractive, and environmentally sensitive, while adequately serving the needs of the motoring public, bicyclists, pedestrians and commercial traffic including rail service. Route 12 will be a wider road with adequate shoulders, appropriate guardrails, and safe passage for bicyclists and pedestrians, while providing better access and parking to enjoy the river. This project will realistically maximize the limited space available for the various modes of transportation, while preserving and enhancing the scenic qualities of the area for travelers and residents.”

In accordance with the National Environmental Policy Act (NEPA) of 1969 (42 USC 4332(2)(c)) as implemented in 23 CFR 771.117(d)(1) this Environmental Study addresses the reconstruction of NH Route 12 and has been prepared using a systematic, interdisciplinary approach to assess the engineering considerations and environmental effects of this Categorical Exclusion (CE) project.

A previously proposed action included shifting the roadway east toward the existing railroad with the intention of avoiding or minimizing impacts to the Connecticut River and other environmentally sensitive areas. However, there have been substantial changes to the proposed action that are relevant to environmental concerns documented in the previous CE analysis.
Following the advancement of the design to the Preliminary Plan, Specification and Estimate (PPS&E) level, it became evident that due to several design factors the proposed action chosen prior to 2011 would become cost and schedule prohibitive. These factors include:

1. Geotechnical Issues- Relocation of the railroad in the southern segment would require blasting next to the active railroad (2 Amtrak trains and 4-6 freight trains per day). Taking into consideration the schedule of the trains, the clean-up time required following a blast, time required for inspection of the track prior to the train (required by Federal law prior to each train movement through the segment) and a time allotment for track repair, the maximum blast window becomes four hours, seriously hampering productivity and multiplying the estimated unit price for rock removal in this area by an estimated factor of ten to twenty times the original estimate.

2. Contract Duration- Due to the required construction phasing to keep the railroad tracks active at all times and for the estimated increased time for rock removal due to the factors noted above, the contract duration for the previous proposed action is estimated at a minimum of four (4) years which also affects the estimated cost due to increases in typical daily or monthly use items associated with construction.

3. Limited Reuse Soils- The existing railroad ballast is considered mildly contaminated soil by the State of New Hampshire and must either remain on-site or be disposed of at a special facility. Because the existing railroad must remain active during construction of the new railroad, this material cannot be removed prior to placing the new railroad in service and therefore cannot be used as fill for the new railroad. The design constraints for the relocated segments of Route 12 (the horizontal and vertical controls created by the Route 12A Bridge, the middle un-relocated middle segment and the Connecticut River) do not allow for this fill to be re-used during construction of the relocated northern and southern segments of Route 12. The high cost of the disposal of this material also contributes to the increased costs for the previous proposed action.

Due to the above noted factors, the estimated cost of the previously proposed action now exceeds $33 million, or as much as $13 million to $18 million more than originally estimated. Additionally, the construction duration will take years longer than originally proposed due to blasting and maintaining active rail service. For these reasons, the Department has selected a new proposed action and as such has prepared the following Categorical Exclusion Reevaluation (CER).

**Existing Conditions/ Project Purpose and Need**

The existing roadway is located in proximity to the Connecticut River to the west, and an active railroad to the east. Immediately to the east of the existing railroad line is a very steep hillside leading up to Fall Mountain. The project area is located just to the north of the North Walpole Village and several miles south of the Charlestown Village. The Villages of North Walpole and Charlestown are typical of many small New Hampshire towns with small, moderately dense residential / business districts surrounded by forestlands, agricultural lands and rural/residential
properties. The southern end of the project area abuts the northern outskirts of the North Walpole Village adjacent to several commercial properties. The areas adjacent to the middle and northern segments contain a mix of residential, forested/natural and agricultural properties.

This project is needed as the existing roadway contains two, 12-foot lanes with no shoulders. The lack of roadway shoulders forces bicyclists and pedestrians to travel within the vehicle lanes and do not provide for safe emergency stopping and vehicle recovery. The safety concerns associated with vehicle recovery are further exacerbated by substandard cable guardrail and the proximity of the roadway to the railroad facility to the east and the steep embankments of the Connecticut River to the west of the existing roadway.

Over the past decade there have been multiple accidents along this section of roadway, several of which are of particular importance as they are indicative of the safety concerns associated with a lack of adequate shoulders, updated guardrail and appropriate safety zones between both the Connecticut River and the railroad facility. Two of these accidents, one of which resulted in a fatality, involved vehicles crashing through the guardrail and sliding down the steep embankment into the Connecticut River. Another two accidents involved vehicles crashing through the guardrail and coming to rest on the railroad tracks where they were subsequently hit a train before they could be removed from the tracks. Another accident, which resulted in a fatality, involved a vehicle crossing the centerline and hitting an oncoming vehicle.

In addition to the above noted safety concerns, the roadway is showing signs of substantial deterioration. Several locations along the roadway embankments adjacent to the Connecticut River, mainly near the southern end of the project, are showing signs of instability and in some locations have begun sloughing into the River. Many of the existing drainage structures including culverts, catch basins and headwalls are no longer functioning properly or are also showing signs of substantial deterioration.

The purpose of this project is to address the above noted safety concerns and structural deficiencies of NH Route 12 within the project area.

**Alternatives Overview**

During the CSS process the PAC developed the following alternatives (*Exhibit C*) which were subsequently evaluated on their ability to meet the project’s purpose and need as well as the projects vision statement (see Introduction section for additional information). It was determined early on during the process that in order to address the existing safety deficiencies of NH Route 12, the proposed project should include the construction of an updated roadway which includes the addition of paved shoulders. The American Association of State Highway and Transportation Officials (AASHTO) recommends that a facility similar to NH Route 12 should be constructed with 12-foot travel lanes and 8-foot shoulders for a total roadway width of 40 feet. The Department, at the recommendation of the PAC, and in consultation with the FHWA has determined that despite the AASHTO recommendations, a facility with 11-foot travel lanes and 5-foot shoulders for a total roadway width of 32 feet will adequately meet the project’s purpose and need while minimizing impacts to the surrounding properties and railroad, as well as the natural, cultural and socioeconomic environments as well as reducing the overall project costs.
During the development of this project and for documentation purposes, the project area was broken up into three segments. The southern segment begins at the southern terminus of the project at station 2003 and proceeds north approximately 0.83 miles to station 2047 (*Exhibit D*). The Meany’s Cove (middle) segment begins at station 2047 and proceeds north approximately 0.85 miles to station 2092. The northern segment begins at station 2092 and proceeds north approximately 1.06 miles to the northern terminus of the project at station 2148.

Several of the following alternatives were considered to be “hybrid” alternatives which combined aspects of several of the original 5 alternatives. The naming convention for the hybrid alternatives relates to the options used in each segment. The first number is for the southern segment, the second number is for the middle segment and the third number is for the northern segment. For example; Alternative 3-2-3 utilizes an alignment similar to alternative 3 in the southern segment, alternative 2 in the middle segment and alternative 3 in the northern segment.

**Proposed Action (Western Alignment Shift)**

Due to the apparent safety and structural deficiencies of NH Route 12, the main intent of this project is to widen, reconstruct and update the existing roadway through the construction of a facility with 11-foot travel lanes and 4 to 5-foot shoulders. In order to accommodate the additional roadway width and address the stability issues associated with the roadway’s proximity to the Connecticut River, the roadway will be widened and shifted approximately 8 to 15 feet to the west, towards and into the Connecticut River with the intention of avoiding impacts to the railroad and the Fall Mountain hillside. This alternative was estimated to cost approximately $16 million to $18 million. This alternative was chosen as it is less costly than any of the other alternatives while still meeting the project purpose and need.

The proposed action (previously identified as Alternative 2) is described in more detail below in three distinct project sections outlined above. Stormwater runoff within each segment will receive water quality treatment via shoulder infiltration trenches at the edge of both sides of the pavement which connect to underlying stone reservoir cells located below the structural road “box” of NH 12. Infiltration trenches will consist of an 18” deep stone reservoir capable of containing the water quality volume (WQV), and transverse overflow underdrains will be installed above the WQV elevation to protect the roadbed. These underdrains will be connected to existing or proposed drainage outlets, or if not located within the vicinity of the drainage, will have their own outlet. The increase in impervious area project wide is approximately 2.3 acres and the proposed BMPs provide treatment for approximately 7.3 acres of impervious surface.

**Southern Segment**

The southern segment begins near #150-200 Church Street (NH 12) in North Walpole, NH and continues approximately 4400’ (STA. 2003-2047) north on NH 12. Proposed work includes widening the road to accommodate two 11-foot travel lanes and two paved 4 to 5-foot shoulders by constructing a permanent 1.75H to 2H:1V (horizontal to vertical) armored slope with vegetation (*Exhibit E*) into the Connecticut River, with the toe of slope extending up to 75-feet horizontally beyond the ordinary high water mark (OHW). The upper portion of the reconstructed bank slope will be covered with 6” of humus and native plantings. A formal planting plan will be prepared for this area. The slope height sometimes exceeds 50” above the water through this segment and the slope
has been designed flat enough to allow the Contractor to construct the lower part of the slope from a temporary haul road or bench constructed within the upper limits of the proposed stone/slope work (above OHW). Road work will consist of phased full depth construction of a new road subbase (structural box) and surface pavement. Existing cross culverts and drainage which carry flows from east of the railroad and from the area between the railroad and the existing roadway will be extended to the face of the new slope. The cross culverts through this segment were previously analyzed and determined to not be subject to NH stream crossing rules due to lack of stream thread and/or flow east of the railroad or due to lack of stream thread or connectivity to the Connecticut River to the west of NH 12.

**Meany’s Cove Segment**

The middle or Meany’s Cove segment is approximately 4500’ long (STA. 2047-2092). Proposed work includes widening the road to accommodate two 11-foot travel lanes and two paved 4 to 5-foot shoulders by constructing a permanent 1.5H:1V (horizontal to vertical) armored slope with surface vegetation (*Exhibit E*) into the both localized wetland areas and portions of Meany’s Cove. The upper portion of the reconstructed bank slope will be covered with 6” of humus and native plantings. A formal planting plan will be prepared for this area. The height of slope is much smaller through this segment so it is possible to construct the slope work from the existing top of slope. Road work will consist of phased full depth construction of a new road subbase (structural box) and surface pavement. Existing cross culverts and drainage which carry flows from east of the railroad and from the area between the railroad and the existing roadway will be extended. Two cross culverts within this segment were previously analyzed and determined to not be subject to NH stream crossing rules due to lack of stream thread and/or flow east of the railroad or due to lack of stream thread or connectivity to the Connecticut River to the west of NH 12.

**Northern Segment**

The northern segment begins at the end of the Meany’s Cove segment in Charlestown, NH and continues approximately 5600’ (STA 2092-2148) north on NH 12 to the intersection of NH 12A. Proposed work includes widening the road to accommodate two 11-foot travel lanes and two paved 4 to 5-foot shoulders by constructing a permanent 1.5H:1V (horizontal to vertical) armored slope with surface vegetation (*Exhibit E*) into the Connecticut River, with the toe of slope extending up to nearly 30-feet beyond the OHW. The upper portion of the reconstructed bank slope will be covered with 6” of humus and native plantings. A formal planting plan will be prepared for this area. Construction of the slope can be completed from the roadway in this segment. There are also impacts to localized wetlands through this segment. Road work will consist of phased full depth construction of a new road subbase (structural box) and surface pavement. The cross culverts through this segment were previously analyzed and the crossing at STA 2121+27 was determined to be subject to NH stream crossing rules. However, since the railroad portion of the crossing cannot be impacted at all due to the daily train traffic (2 Amtrak and up to 6 freight) improvements will be limited to replacing (and extending) the reinforced concrete pipe located under the roadway. The crossing at STA 2105+68 was determined to not be subject to NH stream crossing rules due to the termination of the stream thread prior to the crossing (the culvert acts as an equalization culvert between the ponded area at the termination of Jabes Meadow Brook to the west of the road/rail embankment and the Connecticut River to the east).
In addition to the above, the proposed action will also include the following work performed throughout the approximate 2.8-mile project:

- Rehabilitation/reconstruction of the existing roadbeds.
- Relocation of utility poles
- Installation of updated guardrail where required to address safety concerns.
- Rehabilitation or replacement of existing roadway drainage systems, or installation of new drainage infrastructure as necessary.
- Adjustments to the turning lane dimensions and pavement markings at the NH Route 12/NH Route 12A intersection.

The proposed action was presented to the resource agencies during two meetings in January and March of 2016 with those present supporting the alternative. In addition, the PAC was updated in April of 2016 with this proposal, followed by a public information session held on June 8, 2016 and June 28, 2017 (June 28, 2017). This proposed action was recommended by the PAC as it avoids major impacts to the New England Central Railroad and avoids costly impacts and schedule delays from the necessary rock cut and rail relocations.

**Alternatives Considered**

**“No-Build” – Alternative 1**

The “No-Build” alternative does not address the deficiencies and safety concerns associated with the existing section of roadway. Selection of this alternative would require bicycles and pedestrians to continue to use the travel way and would allow for the continued deterioration of the existing roadway and drainage structures. Roadway conditions would continue to deteriorate and safety concerns would persist to a point where development of a future project would likely be necessary. This alternative was not chosen as it would result in unacceptable operational and safety problems and thus does not meet the project purpose and need.

**Western Alignment Shift- Alternative 2**

This alternative is the proposed action but it is repeated here and listed as Alternative 2 for the sake of reference for the hybrid alternatives. Please see the Proposed Action section for additional information.

**Eastern Alignment Shift – Alternative 3**

This alternative would require the roadway to be shifted a maximum of approximately 50 to 60 feet to the east, toward the railroad with the intention of avoiding all impacts to the Connecticut River and any other wetlands or properties to the west of the existing roadway. This alternative would require the complete reconstruction of the New England Central Railroad within the project area and would require substantial cuts into the Fall Mountain hillside to the east of the railroad. Rock excavation next to an active railroad which experiences a minimum of six trains per day (including Amtrak and freight) substantially reduces the available window for work, driving up the cost of removal. Due to the number and schedule of trains, two 4-hour windows would be available for blasting, clean-up, track inspection and repair if necessary. In addition, the railroad ballast is
considered a mildly contaminated material which requires special handling and disposal. This alternative also requires the relocation of power transmission lines to the east of the railroad. Because of these high cost items this alternative was estimated to cost approximately $32 million to $34 million. The PAC felt that this alternative was reasonable however, due to the aesthetic concerns with large hillside cuts, increased impacts to the railroad and high cost of blasting near the active railroad, the PAC did not recommend the selection of this alternative. Note that this alternative consisted of the majority of the previously proposed action. While this alternative would meet the project purpose and need it was not chosen as it would present additional constructability issues associated with moving the railroad and would be more costly than the proposed action.

**Eastern Bypass, Adjacent to Railroad – Alternative 4A**

This alternative involves relocating the existing roadway to the east of the railroad. The roadway would be constructed at approximately the same grade and as close to the eastern side of the existing railroad as possible. At the northern end of the project, the existing NH Route 12A overpass would be used to move NH Route 12 to the east of the railroad. At the southern end of the project, NH Route 12 would be relocated from Church Street to Main Street in North Walpole Village.

This alternative does not require the relocation of the existing railroad tracks; however, it does encroach into the existing railroad right-of-way. This alternative also requires large cuts into the hillside to the east of the railroad. Residential property acquisition would be necessary in the Old Ferry Road/Old State Road neighborhood adjacent to NH Route 12A in South Charlestown. Commercial property impacts at the LenTex Corporation in North Walpole would be necessary and its operations might be impeded through the introduction of a major state road between several of its buildings.

Currently, NH Route 12 passes along Church Street in North Walpole Village. This alternative would require NH Route 12 to be relocated to Main Street, a narrow, local road with low traffic volumes. Areas of North Walpole Village are eligible for the National Register of Historic places, including areas adjacent to both Church Street and Main Street. Selection of this alternative would result in increased impacts to one or more of these potentially eligible historic districts. As a result of these additional impacts, the NH Division of Historical Resources also expressed displeasure with this alternative at the March 5, 2009 Cultural Resource Agency Coordination meeting (CRAC). This alternative was also presented at a Public Informational Meeting on April 29, 2009, and was met with overwhelming disapproval by the residents of North Walpole Village.

This alternative was estimated to cost approximately $24 million to $29 million. It was determined that the cost, environmental, cultural and socioeconomic impacts associated with the selection of this alternative were too great. For these reasons the PAC did not recommend its selection. While this alternative would meet the project purpose and need it was not chosen as it would present additional constructability issues associated with moving the roadway to the opposite side of the railroad, was met with substantial public opposition, and would be more costly than the proposed action.
Eastern Bypass, Hillside Option – Alternative 4B

This alternative is similar to Alternative 4A however it shifts the alignment of the proposed roadway farther to the east, partway up the Fall Mountain Hillside, to avoid encroaching upon the railroad right-of-way. Similar to alternative 4A, alternative 4B would have similar property and socioeconomic impacts to the Old Ferry Road/Old State Road neighborhood, the LenTex Corporation and the North Walpole, Main Street neighborhood. Alternative 4B would require large cuts into the Fall Mountain Hillside, similar to alternative 4A, but it would also have large fill areas creating a balance between the necessary cuts and fills. As this alternative would require similar impacts to the Main Street area in North Walpole as alternative 4A, it was met with similar opposition from both the NH Division of Historical Resources and the general public.

This alternative was estimated to cost approximately $24 million to $29 million. The PAC felt that the environmental, cultural and socioeconomic impacts associated with the selection of this alternative were too great. For these reasons the PAC did not recommend its selection. While this alternative would meet the project purpose and need it was not chosen as it would present additional constructability issues associated with moving the roadway to the opposite side of the railroad, was met with substantial public opposition, and would be more costly than the proposed action.

Eastern Bypass, Church Street Connection – Alternative 4C

This alternative is essentially the same as alternative 4B however; it includes the installation of a grade separated railroad crossing in the southern section of the project area. This would involve the construction of a bridge over the railroad in order to return traffic from the new alignment to the east of the railroad, to its existing alignment along Church Street. This alternative would avoid the Main Street impacts associated with Alternatives 4A and 4B. This alternative would still require property impacts in the Old Ferry Road/Old State Road neighborhood in Charlestown and would still require large cuts into the Fall Mountain hillside. It would also require additional property impacts to the LenTex Corporation (Parcel 4). Although this alternative eliminates many of the North Walpole Village impacts associated with alternatives 4A and 4B, it was estimated to cost an additional $4 million more than alternative 4B (a total of approximately $28 million to $33 million). Given the increased costs, the PAC did not recommend this alternative. While this alternative would meet the project purpose and need it was not chosen as it would present additional constructability issues associated with moving the roadway to the opposite side of the railroad and would be more costly than the proposed action.

On Alignment with Retaining Walls – Alternative 5

This alternative involves widening the roadway along its existing alignment, through the use of retaining walls along one or both sides of the highway. The use of retaining walls and other geotechnical engineering would minimize direct impacts to both the railroad and the river. Although this alternative reduces many of the environmental impacts associated with other alternatives, it was estimated to cost between $23 million and $25 million for construction along both sides of the highway and would require the complete closure of NH Route 12 during the construction process. As a result of the impracticable constructability, the PAC felt this alternative was unreasonable. While this alternative would meet the project purpose and need it was not chosen as it would present
additional constructability issues associated with constructing retaining walls in proximity to an active roadway and would be more costly than the proposed action.

Hybrid – Alternative, 5-2-5

This alternative consists of constructing cast-in-place concrete retaining walls along a portion of the Connecticut River in the southern and northern project segments to allow expansion of the roadway to the west in place of the armored slope with surface vegetation proposed under Alternative 2 (and new proposed action). The use of retaining walls would minimize direct impacts to the river due to placement of fill, however will still involve disturbances to other environmental resources. Although this alternative reduces environmental impacts associated with other alternatives, it was estimated to cost approximately $26 million to $28 million, or approximately $10 million more than the armored slope with surface vegetation under the proposed action, and will have an increased construction duration. Additionally, the rock lined slope which has been incorporated into the design of the proposed action would require a shorter duration of construction, would require less long-term maintenance, would result in a more aesthetically pleasing view from the river, would provide more wildlife habitat and would be less costly. As part of the reevaluation process this alternative was reconsidered and although it would still meet the project purpose and need it was not selected as it would be more costly and would be more difficult to construct given the proximity of the roadway to the river.

Hybrid – Alternative 3-2-3

In this hybrid alternative and previously proposed action, the roadway would be shifted to the east in the southern and northern segments and to the west in the middle segment. In the southern and northern segments, the proposed shift in the roadway alignment will also require shifting the alignment of the existing railroad facility, requiring reconstruction within the project area and substantial cuts into the Fall Mountain hillside to the east of the railroad. The proposed adjustments to both the roadway and railroad for each section are as follows:

- Southern section: The alignments of both the roadway and railroad will be shifted approximately 50 to 60 feet to the east towards the railroad, and require the railroad to be realigned via substantial rock blasting.
- Middle section: The existing eastern edge of the roadway will be maintained and the western edge of the roadway will be shifted approximately 8 to 10 feet to the west. The existing railway will remain in its existing location throughout the majority of the middle section and will only be adjusted slightly at either end to tie the existing tracks into the proposed track alignments of the southern and northern sections.
- Northern section: The existing western edge of pavement will remain in approximately the same location and the eastern edge of the roadway will be shifted approximately 15 to 20 feet to the east. The railroad alignment will be shifted approximately 15 to 20 feet to the east of the existing alignment.

Rock excavation next to an active railroad with at least six trains per day reduces the available window for construction work to two 4-hour windows. During this time, contractors would need to blast, clean up rock, inspect the track, and perform any required repairs in order to
maintain train schedule. In part due to the reduced construction capacity during a given day associated with railroad work, this alternative is estimated to cost $32 million to $34 million, or approximately twice the cost of the new proposed action. Although this alternative does meet the purpose and need and was originally recommended by the PAC, it was not chosen due to the high cost, lengthy construction sequence, aesthetic concerns associated with the hillside cuts, and potential safety concerns associated with maintaining an active railroad during construction.

**Hybrid, Northern Segment Westward Shift – Alternative 3-2-2**

This alternative is similar to alternative 3-2-3, in that it involves a “hybrid” of alternatives 2 and 3. With this alternative, the roadway and subsequently the railroad would be shifted approximately 50 to 60 feet to the east in the southern segment. In the middle and northern segments, the roadway would be shifted 8 to 15 feet to the west, towards and into Meany’s Cove and the Connecticut River. This alternative avoids impacts to the railroad, the Jabes Meadow Brook wetland and several properties to the east of the railroad in the northern segment, but increases impacts to the Connecticut River.

Alternative 3-2-2 was estimated to cost approximately $32 million to $34 million. Although this alternative was found to be acceptable to the PAC and meets the project purpose and need, it was not chosen due to the high cost.

**NH Route 12/12A Intersection Reconfiguration – Alternatives 3-2-2A & 3-2-3A**

These alternatives involve similar designs to those of alternatives 3-2-2 or 3-2-3, however they include the relocation of NH Route 12 to the west of the existing NH Route 12A overpass and the reconfiguration of the NH Route 12/12A intersection at the northern end of the project.

The existing NH Route 12A overpass is approximately 68 feet wide and carries NH Route 12A over both NH Route 12 and the railroad. This width is slightly less than what is necessary to maintain the same roadway geometry that will be constructed throughout the length of the rest of the project. In order to avoid a costly reconstruction of this structure, all of the above alternatives will require a reduction in the proposed clear zone (obstruction free zone to either side of the roadway) beneath the NH Route 12A overpass. Throughout the rest of the project the proposed buffer between the two facilities will be approximately 39 feet. Given the constraints of the overpass, this buffer will be reduced to approximately 35 feet beneath the overpass. A concrete crash barrier will also be added adjacent to the western edge of pavement to protect and prevent collisions with the western pier of the existing NH Route 12 overpass.

The intent of alternatives 3-2-2A and 3-2-3A was to eliminate the space restrictions associated with the existing NH Route 12A overpass, allowing for uniform roadway geometry throughout the length of the project and permitting the railroad to be shifted freely beneath the overpass, as necessary. These alternatives would however, require additional impacts to at least one potentially archaeologically sensitive area, wetlands and floodplains as well as substantial property impacts to several active agricultural fields to the west of both NH Routes 12 and 12A. Both alternatives 3-2-2A and 3-2-3A are expected to cost an additional $700,000 beyond that of either alternative 3-2-2 or alternative 3-2-3. While both alternatives 3-2-2A and 3-2-3A meet the project purpose and need and were found reasonable by the PAC, they were ultimately not selected as they
required additional environmental, cultural, socioeconomic and monetary costs beyond that of the preferred action.

**Coordination and Public Participation**

Letters were sent to various Federal, State and local agencies and groups, as well as the general public, requesting input on this project on the following dates:

<table>
<thead>
<tr>
<th>Agency / Organization</th>
<th>Contact</th>
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Meetings have periodically been held throughout the development of this project, with various Federal, State and local agencies, as well as with the general public. Project review meetings were held on the following dates:

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<th>Date</th>
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Minutes for the Monthly Natural Resource Agency Coordination Meetings can be found at the following website:

https://www.nh.gov/dot/org/projectdevelopment/environment/units/project-management/nracrmeetings.htm

Minutes for the Monthly Cultural Resource Agency Coordination Meetings can be found at the following website:

https://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/crmmeetings.htm
Minutes for the Public Advisory Committee Meetings and Public Informational meetings can be found at the following website:


A Public Hearing was held on March 7, 2006. During the hearing and within the ten day comment period following, six individuals expressed minor concerns and requests regarding the project. These comments and the Department’s responses can be found in the attached Report of the Commissioner. The Department accommodated as many of these requests as possible throughout the design process. None of the above noted requests substantially altered the environmental impacts associated with this project.

**Evaluation of Environmental Effects**

The effects of the project relative to the following social, economic, natural and cultural resources/issues have been reviewed. Resources/issues, which are not discussed in the body of the report, were investigated, however no impacts were evident. As such, these resources/issues are omitted from this environmental documentation. The resources and issues deemed applicable for this project are indicated in **bold/underlined** type.

**Resources/Issues**

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<td>Construction Impacts</td>
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Discussions of the effects on resources/issues in **bold** follow.

**Safety/Transportation Patterns/Community Services**

The proposed project involves addressing the safety concerns and structural deficiencies associated with the existing roadway, by reconstructing, widening, and updating NH Route 12 within the project area. NH Route 12 through the project area is the main connection between not only the
Towns of Walpole and Charlestown, NH but also the Cities of Keene and Claremont, NH to the south and north, respectively. It also serves as an alternative north-south route to Interstate 91 and US Route 5 in Vermont. The Average Annual Daily Traffic (AADT) on this section of roadway in 2013 is projected to be 6,320 vehicles per day (vpd), with 8% trucks, and is expected to increase to 8,510 vpd by the year 2030. The speed limit within the project area is 50 mph, with the exception of approximately 1,000 feet at the southern end of the project, where the speed limit drops to 30 mph.

NH Route 12 is an important connection for such community services as school busses, emergency response vehicles and officials in both the towns of Walpole and Charlestown. Upon completion of the project, traffic patterns are expected to be similar to those which exist today. It is anticipated that through traffic will be maintained throughout construction. It is not expected that the local services of either municipality will be negatively impacted during the construction of this project.

**Air Quality**

Pursuant to the Clean Air Act Amendments (CAAA) of 1990, this project was examined for potential impacts to local and regional air quality. The proposed project is located within an area of the State that is in attainment for all the National Ambient Air Quality Standards (NAAQS) criteria pollutants (CO, Pb, NO₂, O₃, SO₂, PM₁₀ and PM₂.₅). The proposed project is consistent in design concept and scope to that which has been identified on page 88 of the Statewide Transportation Improvement Program (STIP) 2017-2020 approved February 6, 2017 and amended April 20, 2017. The proposed effort is not considered a “Regionally Significant Project” as defined in the final Transportation Conformity rules (40 CFR 93.101) or in those rules adopted by the New Hampshire Department of Environmental Services in accordance with the interagency consultation provisions required by 40 CFR 93.105.

Although the project involves permanent alterations to an existing intersection, when completed, the project is not expected to result in any meaningful changes in traffic volumes, vehicle mix, basic location of the existing facility, or any other factor that would cause an increase in emissions impacts relative to the no-build alternative or contribute to violations of the NAAQS. Consequently, this project is exempt from the conformity requirements of the CAAA.

For the above noted reasons, the Federal Highway Administration (FHWA) has determined that this project will generate minimal air quality impacts for CAAA criteria pollutants and has not been linked with any special mobile source air toxics (MSAT) concerns. Consequently, this effort is exempt from analysis for MSAT. Moreover, Environmental Protection Agency (EPA) regulations for vehicle engines and fuels will cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends, conducted by the FHWA using the EPA's MOVES2014 model, forecasts a combined reduction of over 90 percent in the total annual emission rate for the priority MSAT from 2010 to 2050, while vehicle-miles of travel are projected to increase by over 45 percent (Updated Interim Guidance on Mobile Source Air Toxin Analysis in NEPA Documents, Federal Highway Administration, October 12, 2016). This will both reduce the MSAT background level as well as the possibility of even minor MSAT emissions from this project.
Though exempt from the conformity requirements of the CAAA, the National Environmental Policy Act (NEPA) requires consideration of the project's impact on air quality. Of the NAAQS pollutants of concern in New Hampshire, only CO can generally be addressed at the project level. The proposed project does not involve any substantial changes to the existing traffic patterns of NH Route 12. Computer analyses of other projects (such as Portsmouth, 13455, Manchester, 10622A and Londonderry, 12704) with higher traffic volumes, flowing under more restrictive conditions, have consistently yielded maximum CO concentrations well below the one-hour NAAQS of 35 ppm and the eight-hour criteria of 9 ppm. As these projects were found not to have a detrimental impact on air quality, and for the reasons stated above, it can be concluded that this project will also not have an adverse impact on air quality. As a result, no further air quality review is warranted.

Noise

The NH Department of Transportation’s Policy and Procedural Guidelines for the Assessment and Abatement of Highway Traffic Noise for Type I & II Highway Projects (Noise Policy) provides guidelines for assessing noise impacts and determining the need, feasibility, and reasonableness of noise abatement measures for proposed Type I highway construction and improvement projects. Although this project does involve several slight shifts in the alignment of the existing roadway, none of these shifts are anticipated to halve the distance between the travel lanes and any of the adjacent receptors. It is also not anticipated that the proposed improvements will remove shielding therefore exposing the line of sight between the roadway and any of the adjacent receptors. As such the proposed project does not involve alterations to the vertical or horizontal alignment of the existing roadway which would otherwise constitute a Type I highway project. Similarly, as this project does not involve the construction of a new highway or the addition of through traffic lanes the subject project is not a Type I highway project. Since this project is not a Type I highway project a noise impact assessment is not necessary.

The proposed project is not expected to result in any meaningful changes in traffic volumes, vehicle mix, location of the existing facility, or any other factor that would cause an increase in noise impacts. As a result, this project is not expected to cause a noticeable change in noise levels once construction is completed.

Construction activities will temporarily increase noise due to the use of heavy equipment, however these noise levels are expected to return to normal after the project has been completed. For the reasons stated above, this project is not expected to adversely affect noise levels at any of the adjacent receptors.

Contaminated Properties

An in-house database search of the New Hampshire Department of Environmental Services (NHDES) One-Stop Environmental Database indicated the presence of two (2) remediation sites, one (1) local potential contamination source, and one (1) hazardous waste generator within proximity to the approximate project area (Exhibit F). Both of the remediation sites have been listed by NHDES as “Closed.” Although remediation sites indicate the potential presence of hazardous materials, the issues associated with each site have been examined by NHDES and given their “Closed” status are considered to have been adequately addressed. Additionally, the hazardous waste
generator is labeled as “Inactive”, and the local potential contamination source is associated with auto repair with minimal potential for environmental impacts.

<table>
<thead>
<tr>
<th>Remediation Sites</th>
<th>Local Potential Contamination Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connecticut Valley Mobile Home Park</td>
<td>Route 12 Auto Sales</td>
</tr>
<tr>
<td>Site Number 198904020</td>
<td>Site number PCS00076</td>
</tr>
<tr>
<td>Route 12, Charlestown</td>
<td>22 Connecticut River Park, Charlestown</td>
</tr>
<tr>
<td>Project Type: LUST</td>
<td>Project Type: VSR</td>
</tr>
<tr>
<td>Status: Closed</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cota &amp; Cota Bulk Terminal</th>
<th>Hazardous Waste Generator</th>
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</thead>
<tbody>
<tr>
<td>Site Number 199501039</td>
<td>LenTex Corp</td>
</tr>
<tr>
<td>173 Main Street, Walpole</td>
<td>155 Church Street, Walpole</td>
</tr>
<tr>
<td>Project Type: LAST</td>
<td>RCRA Regulated</td>
</tr>
<tr>
<td>Status: Closed</td>
<td>Status: Inactive</td>
</tr>
</tbody>
</table>

Multiple field inspections between 2006 and 2017 did not indicate any obvious signs of hazardous material contamination within the project area. However, statewide analytical data collected by NHDOT, as well as nationwide information, indicates that roadside soils commonly contain metals and Polycyclic Aromatic Hydrocarbons (PAHs) at concentrations above background conditions. These “Limited Reuse Soils” (LRS) excavated from within the operational ROW shall be addressed in accordance with applicable NHDES rules and/or waivers. Soils that are anticipated to meet the definition of LRS may be subject to management through a Soils Management Plan (SMP). Roadside soils currently managed as LRS by the Department include all topsoil within the limits of the existing right-of-way, regardless of its depth and any ground or pulverized asphaltic materials. In those instances where there is no measureable topsoil, LRS will be measured from the top of ground to a depth of six inches. Limited Reuse Soils (LRS) excavated from within the operational ROW shall be addressed in accordance with applicable NHDES rules, waivers, and/or Soils Management Plans (Environmental Commitment 1).

**Land Acquisition/Easements/Neighborhoods/Tax Base**

There are thirty-six (36) properties (Exhibit G) located within the project area of which fifteen (15) will be impacted by this project. Construction of the proposed highway improvements will require the permanent acquisition of approximately 227,383 ft² (5.22 acres) outside the existing right-of-way. In addition to the proposed acquisitions, the project will also require approximately 212,250 ft² (4.87 acres) of permanent easements and 50,575 ft² (1.16 acres) of temporary easements outside the limits of the existing right-of-way.

This project will not require the removal of any residential or commercial structures. The temporary and permanent easements are mainly associated with slope reconfiguration/stabilization, drainage improvements and temporary construction needs and therefore are not expected to adversely affect their associated properties. The Department will obtain the necessary property acquisitions, easements and rights of entry prior to the commencement of construction SMP (Environmental Commitment 2).
There are two neighborhoods within the project area; the Old Ferry Road/Old State Road neighborhood and the Meany’s Cove neighborhood. The Old Ferry Road/Old State Road neighborhood (Parcels 19, 21, 22, 24, 25 & 28) is located to the east of the railroad, adjacent to the northern segment of the project. The Meany’s Cove neighborhood (Parcels 14, 15, 16 & 17) is located to the west of NH Route 12 adjacent to the middle segment of the project. It is anticipated that there will be no impacts to the Old Ferry Road/Old State Road neighborhood. The majority of the property impacts within the Meany’s Cove neighborhood are associated with slope reconfiguration/stabilization, drainage improvements and re-establishing the necessary right-of-way as a result of the proposed alignment shifts. The project will not require the removal of any residences within these areas. As a result, it is not anticipated that the functions and values of these neighborhoods will be negatively impacted by the proposed project.

The total land area in the Town of Walpole is approximately 22,848 acres. Total permanent impacts within Walpole are approximately 4.64 acres, 0.02% of the total land area in this town. The total land area in the Town of Charlestown is approximately 22,912 acres. Total permanent impacts within Charlestown are approximately 5.45 acres, 0.02% of the total land area in this town. Given that the total permanent impacts within each town are relatively low in comparison to their total land areas, it is not anticipated that this project will cause a substantial change on the tax base of either municipality.

**Land Use/ Public Lands/ Conservation Lands**

One conservation property, known as the Fall Mountain State Forest (parcel 12), has been identified within the project area. This undeveloped, 477-acre property is located in the towns of Charlestown and Langdon. The property is owned by the State of New Hampshire, Dept. of Resources and Economic Development (DRED); upon which The Nature Conservancy (TNC) holds a conservation easement, the US Fish & Wildlife Service (USF&WS) holds a grant agreement and the Land and Community Heritage Investment Program (LCHIP) has an executory interest. This parcel was placed in conservation through the efforts of the above noted agencies and organizations after the federally endangered *Scirpus ancistrochaetus* (Northeastern Bulrush) was found in interior portions of the property. The primary function of this property is for the management of State timber resources as well as the conservation of the Northeastern Bulrush. Since the roadway and railroad will not be shifting to the east under the latest proposed actions, there will be no impacts to the Fall Mountain State Forest (*Exhibit H*).

The Conservation Land Stewardship (CLS) Program is responsible for monitoring and protecting the conservation values of conservation easement lands in which the State of New Hampshire has invested. The proposed action has been reviewed by the Office of Energy & Planning, CLS Program Coordinator and it was determined that there are no CLS parcels, local or state-held, in close proximity to the project area (*Exhibit I*).

Section 6(f) is an article of the Federal Land and Water Conservation Fund (LWCF) Act of 1964, which provides financial assistance for the acquisition and development of public lands to create parks and open spaces; protect wilderness, wetlands and refuges; preserve wildlife habitat; and enhance recreational opportunities. Any land acquired or improved with these funds is subject to a body of federal regulations under the purview of the US Department of the Interior (USDOI). Pursuant to these regulations, any land subject to Section 6(f) cannot be “converted” to another use.
for purposes inconsistent with the Act without the approval of the USDOI and without being replaced with other land that is of equal use and value to the land proposed for conversion. Based upon a review of their LWCF files, the NH Department of Resources and Economic Development (DRED) has advised that there are no Section 6(f) parcels in the project area (Exhibit J).

Recreation

The subject section of NH Route 12 has been identified by local officials and the Upper Valley Lake Sunapee Regional Planning Commission as an important bicycle route for local residents and visitors. The NH Department of Transportation’s Bicycle and Pedestrian Section has also listed this section of roadway as a Statewide Bicycle Route. The existing roadway is narrow and does not have adequate shoulders for safe bicycle and pedestrian travel. In order to increase bicycle and pedestrian safety, the new roadway will be constructed with 11-foot travel lanes and 5-foot shoulders in each direction. As a result of these improvements this project is expected to have a positive effect on bicycle and pedestrian recreation throughout the region.

The National Scenic Byways Program was established under the Intermodal Surface Transportation Efficiency Act of 1991 and was reauthorized under the Transportation Equity Act in 1998. Under the program, the U.S. Secretary of Transportation recognizes certain roads as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities. This section of NH Route 12 has been officially recognized by Congress as a part of the Connecticut River National Scenic Byway. The Byway is a 500-mile long scenic route that runs along both sides of the Connecticut River between South Hadley, Massachusetts to the Canadian Border in Pittsburgh, New Hampshire. Matters pertaining to the Connecticut River National Scenic Byway are overseen by the Connecticut River Joint Commissions (CRJC). The CRJC has been involved with the development of the project and the selection of the project proposal. The CRJC has expressed full support for the proposed effort as reflected in a letter of support from 2010 (Exhibit K). More recently, a representative of the CRJC attending the April 12, 2016 PAC meeting and indicated continued support for the project. The CRJC previously requested that the Department examine the possibility of increased public recreational and scenic overlook opportunities within the project area incorporate them into the design of the project wherever possible. Subsequent to this request, the Department will enhance a small existing parking area in the Meany’s Cove area at Station 2074+78 LT. through the addition of gravel and improved roadway access.

Section 4(f) of the US Department of Transportation (US DOT) Act of 1966 (amended by 49 U.S.C. Section 303) provides protection for historic resources, wildlife refuges and publicly owned parks and recreational areas that are open to the public and are considered substantial recreational facilities. Consultation with the NH Division of the Federal Highway Administration has indicated that there are no recreational 4(f) resources within the project area. (See the Wildlife and Cultural Resources sections for additional information on other Section 4(f) resources.)

Business Impacts

The downtown areas of North Walpole and Charlestown, to the south and north of the project contain multiple small businesses. Traffic on NH Route 12 will be maintained throughout construction (Environmental Commitment 3).
During construction, local businesses may see a short-term increase in patronage due to the presence of on-site construction personnel. Upon completion of the project, traffic patterns will return to their pre-construction condition and therefore it is not anticipated that any of these businesses will be adversely impacted by construction.

Utilities

The proposed project requires the relocation of aerial and underground utility lines and power poles. Disruption to service, if any, will be kept to an absolute minimum. The following utility companies have been identified within the project area:

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Grid (Electric)</td>
<td>Aerial/Underground</td>
</tr>
<tr>
<td>FairPoint (Telephone)</td>
<td>Aerial/Underground</td>
</tr>
<tr>
<td>Comcast (Cable TV)</td>
<td>Aerial/Underground</td>
</tr>
<tr>
<td>US Sprint (Fiber Optic Communications Cable)</td>
<td>Underground</td>
</tr>
</tbody>
</table>

Environmental Justice

Executive Order 12898, enacted in 1994, requires that an Environmental Justice evaluation be conducted for all transportation projects that are undertaken, funded or approved by the Federal Highway Administration to avoid, minimize, or mitigate disproportionately high and adverse human health, environmental, social and economic effects on minority populations and low-income populations. The environmental justice review for the impacted area indicated there are no minority and low-income populations which are meaningfully greater than the surrounding area (Exhibit L).

Wetlands

Work associated with this project involves dredge and fill activities within the jurisdiction of the New Hampshire Department of Environmental Services (NHDES) Wetlands Bureau and the Army Corps of Engineers (USACE). Impacts consist of 172,801 square feet (3.97 acres) of permanent impacts to wetlands. The proposed project will incur impacts to the following wetland types as classified by the United States Fish and Wildlife Service:

1. PEM1E: Palustrine, Emergent, Persistent, Seasonally Flooded/Saturated
2. PEM1F: Palustrine, Emergent, Persistent, Semi-permanently Flooded
3. PFO1E: Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
4. POW: Palustrine, Open Water
5. PSS/PFO1E: Palustrine, Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
6. PSS1E: Palustrine, Scrub Shrub, Broad-Leaved Deciduous, Seasonally Flooded/Saturated
7. R4SB3: Riverine, Intermittent, Streambed, Cobble-Gravel
   R2UB3: Riverine, Lower Perennial, Unconsolidated Bottom, Mud
The project was reviewed by the USACE, NHDES, NH Fish and Game (NHF&G), US Environmental Protection Agency (EPA), the Federal Highway Administration (FHWA) and several other agencies/organizations at the April 18, 2007, May 20, 2008, August 20, 2008, October 20, 2009, April 21, 2010, June 16, 2010, January 20, 2016, and March 16, 2016 Natural Resource Agency coordination meetings. None of the agencies or organizations represented at these meetings objected to the proposed action as long as a mutually agreed mitigation package is provided for the proposed wetland impacts.

Per NHDES rules (Env-Wt 303.02) this project is classified as a “major impact” project. Per Env-Wt 302.03, the proposed wetland impacts will require mitigation. At the March 16, 2016 Natural Resource Agency Coordination Meeting, it was agreed that a payment will be made to the Aquatic Resource Mitigation Fund per Env-Wt 803.02 to provide compensation for lost natural resources. As the project will no longer relocate the roadway and railroad to the east, a previously discussed option of adding an undeveloped property to the Fall Mountain State Forest has been eliminated. The Department will continue to coordinate with the Natural Resource Agencies throughout the final design of the project to mutually develop an acceptable mitigation package (Environmental Commitment 4). Based on total wetland impact areas as part of the proposed action, the project will require an Individual Section 404 Permit Application through the USACE rather than qualifying under the State Programmatic General Permit. Permits will be obtained prior to construction within any areas under the jurisdiction of the NHDES Wetlands Bureau and the USACE (Environmental Commitment 5).

Surface Waters/ NH Designated Rivers/ Water Quality

The project is located adjacent to the Connecticut River. The proposed action’s impacts to the Connecticut River include alterations to the bank to provide enhanced stabilization and to provide additional horizontal topography in order to widen the alignments for the proposed safety improvements. The Department has been coordinating this effort with NHDES and NHF&G to ensure that the project not only meets transportation needs, but also is sensitive to this aquatic ecosystem.

The Rivers Management & Protection Act (RMPA) (NH RSA 483) provides additional protection for Rivers within the State of NH that have been determined to be outstanding natural and cultural resources by the Legislature and the Governor of the State of New Hampshire. This act also established the creation of the NHDES Rivers Management & Protection Program (RMPP) and allows for the creation of local advisory committees to oversee the protection of the State’s protected (designated) rivers. The Connecticut River is a designated river, managed by the Connecticut River Joint Commissions (CRJC). The CRJC is a non-profit organization which is comprised of two commissions and five sub-committees which work together to coordinate river protection efforts between the states of Vermont and New Hampshire. The former Director of the CRJC sat on the Public Advisory Committee (PAC) for the proposed project and was intricately involved in the proposed design. In addition, a representative of the CRJC attended the most recent PAC meeting on April 12, 2016 and voiced support of the updated proposed action. The Department has been and will continue to coordinate with the CRJC and the NHDES RMPP throughout the design of the project.
The Clean Water Act (CWA) of 1972 (33 U.S.C. 1251) regulates the discharge of pollutants into the waters of the United States and sets quality standards for surface waters. In accordance with the CWA, the surface waters of New Hampshire have been classified by the state legislature (RSA 485-A:8) as either Class A or Class B. Class A waters are considered to be of the highest quality and considered optimal for use as water supplies after adequate treatment. Class B waters are considered to be of slightly less quality than those designated Class A, however they are still considered adequate for wildlife habitat and recreational activity. The Connecticut River within the project area has been designated a Class B Water. Coordination with the NHDES Watershed Management and Alteration of Terrain Bureaus has indicated that the project should include stormwater treatment and infiltration, to the maximum extent practicable. The project will construct water quality treatment infiltration trenches located along both sides of the pavement connecting to an underlying stone reservoir cell located below the structural road “box”. The Department will continue to coordinate with NHDES throughout final design, to determine the appropriate water quality treatments within the project area (Environmental Commitment 6). The proposed BMP is designed to target nutrient reduction (through infiltration and filtering). In addition, it should be noted that there will not be any increase in salt load since the travel way will remain the same size.

In accordance with section 303(d) of the CWA, the State of NH Department of Environmental Services (NHDES) has designated the subject section of the Connecticut River as an impaired water for mercury and pH levels. As roadway runoff does not generally contain mercury levels beyond those contained within normal precipitation in the State, the proposed project is not expected to further impair the subject section of the Connecticut River. In addition, the TMDL specifies pollutant reductions through the Clean Air Act and typical stormwater BMPs do little to sequester mercury.

To minimize the potential for erosion and sedimentation increases in the Connecticut River and other downstream wetland systems during construction, the contractor responsible for the work will be required, as a contract provision, to prepare a Stormwater Pollution Prevention Plan detailing the pollution prevention measures which will be employed prior to the commencement of construction activities (Environmental Commitment 7).

Groundwater

The proposed project lies within the Cheshire County Complex Drinking Water Source Protection Area (ID#5765). The Department has coordinated with the NH DES – Drinking Water Source Protection Program to ensure that the proposed project will not adversely affect the Cheshire County Complex Drinking Water Source Protection Area. The Drinking Water Source Protection Program has requested that the project be designed in such a manner that it maximizes vegetative stormwater treatment and infiltration (Exhibit M). The Department will provide stormwater treatment and infiltration to the maximum extent practicable and will continue to coordinate with NH DES throughout the final design of the project (Environmental Commitment 6).

Farmlands

One active farmland is located within the project area on parcel 31, between stations 2123+00 lt. and 2130+00 lt. to the southwest of the NH Route 12A overpass. Another area which is not actively farmed but contains adequate soils and terrain for potential future farming activities is
located on parcel 34, between stations 2132+50 lt. to 2134+00 lt. Neither of these properties contain building structures. Localized drainage easements were obtained within each parcel, each approximately 40’ wide to allow for construction and future maintenance of proposed drainage pipes and outfalls, however will not substantially impact current and future farming capabilities (*Exhibit N*). The Department completed coordination with the United States Department of Agriculture, the property owner and the farm operator prior to the acquisition of any easements.

**Wildlife/ Endangered Species/ Fisheries/ Natural Communities/ Invasive Species**

The proposed action has been reviewed by the USF&WS and the NH Natural Heritage Bureau (NHNHB) for the presence of federal or state, listed or proposed, threatened or endangered species, or other species of special or exemplary status. A NH Natural Heritage Bureau search (NHB File ID: NHB16-3895, dated January 10, 2017) of rare species and exemplary natural communities within the current proposed action area has indicated the potential presence of Dwarf Wedgemussels (*alasmidonta heterodon*), grass-leaved mud-plantain (*Heteranthera dubia*), and Bald Eagle (*Haliaeetus leucocephalus*). This search also indicated the potential presence of one exemplary natural communities; Circumneutral rocky ridge (*Exhibit O*). Coordination with the NHNHB at the March 16, 2016 Natural Resource Agency Coordination Meeting indicated that since the proposed action stays relatively close to the footprint of the existing roadway/railway corridor and avoids extensive impacts to the slopes of Fall Mountain, the proposed project will not impact any of the rare plant species or exemplary natural communities which were identified under the previously proposed action (i.e. Fern-leaved False Foxglove (*aureolaria pedicularia var. intercedens*), Water Stargrass (*heteranthera dubia*), and Rich Appalachian oak rocky woods).

A USF&WS search (Consultation Code: 05E1NE00-2016-SLI-0800, Event Code: 05E1NE00-2016-E-01063, dated April 21, 2017) was performed to determine a list of threatened and endangered species that may occur within or be affected by the proposed project. The survey indicated the potential presence of Dwarf Wedgemussels (*alasmidonta heterodon*), Northeastern bulrush (*Scirpus ancistrochaetus*), and Northern long-eared Bat (*Myotis septentrionalis*) within the proposed project (*Exhibit P*). Note that there are no critical habitats within the project area.

Because of the potential impacts to the Connecticut River of the revised proposed action a freshwater survey was performed to determine the presence of Dwarf Wedgemussels on July 12, 2016 which did not locate any live individuals or shells present. Coordination with the USF&WS on July 13, 2017 indicated that based upon the 2016 survey results the proposed project is not anticipated to have an effect on the Dwarf Wedgemussel (*Exhibit Q & R*).

Additionally, an aquatic plant survey was conducted on August 6 and August 12, 2015 (*Exhibit S*) for aquatic bed plants previously identified by the NHB. The survey identified isolated habitat areas for grass-leaved mud plantain (*Heteranthera dubia*) and long-leaved pondweed (*Potamogeton nodosus*) within wetland areas along the Connecticut River. Coordination with the NHB is ongoing and if so required additional plant surveys will be performed in impacted likely habitat.

NHF&G had indicated that there are known populations of the Bald Eagle (*haliaeetus leucocephalus*) in the area surrounding the proposed project. The NHF&G had requested that the Department survey all 8-inch diameter or larger trees that will be removed to the east of the existing
roadway. During the summer of 2014 the Department had a tree inventory completed for trees over 12” d.b.h. (in this area pines) which was shared with NHF&G in August of 2014. As requested by NHF&G any observations of bald eagles carrying sticks or other nesting materials on the NH side of the Connecticut River will be reported to them. A follow-up survey performed during summer 2017 indicated the presence of a bald eagle next on the Vermont side of the project, approximately ½ mile northwest of the northern end of the project area. Based on its location on the opposite bank and well outside the project limits, NHA biologists did not see much potential for negative impacts from the project, other than occasional displacement, and thus no further action is required (Exhibit T). The Department will continue to monitor for the presence of Bald Eagle nests (Environmental Commitment 8).

The Fall Mountain State Forest (see the Conservation Lands section for additional information) is known to contain a population of the federally endangered *Scirpus ancistrochaetus* (Northeastern Bulrush). Given the known existence of the Northeastern Bulrush in proximity to the proposed project, the NHNHB and the USF&WS requested that the project area be surveyed for its presence prior to the commencement of construction. The Department and the NHNHB conducted a review of the project area on September 1, 2010 and did not find any occurrences of the Northeastern Bulrush within those areas which would be impacted by the proposed project. During July and October of 2016 additional field survey was performed and no occurrences were found within the revised project areas (Exhibit U). Steep slopes and the presence of riprap yielding little chance for the possibility of herbaceous growth indicate a lack of likely habitat for the Northeastern Bulrush. In addition, during wetlands field updates accessible areas of Meany’s Cove were observed and determined to not be likely habitat for Northeastern Bulrush. In neither case were any Northeastern Bulrush plants located. Coordination with the USF&WS on July 13, 2017 indicated that based upon the 2016 survey results the proposed project is not anticipated to have an effect on the Northeastern Bulrush. (Exhibit R)

The NHF&G indicated the potential presence of Northern Long-Eared Bats within the project limits and surrounding area. An acoustic survey for the project area was completed in July of 2015 in accordance with the protocols outlined in the April 2015 USFWS Range-Wide Indiana Bat Summer Survey Guidelines (Summer Survey Guidelines). The initial Walpole-Charlestown Acoustic Survey Report indicated that there was probable presence of Northern Long Eared Bat (NLEB) reported by automated software for the calls collected in the surveyed project area. Therefore, in accordance with the Summer Survey Guidelines, high frequency sound files were sent to an USFWS approved contractor for qualitative analysis. The qualitative review resulted in no visual confirmation of NLEB. Therefore, in accordance with Step 7 of the USFWS Summer Survey Guidelines, no further surveys are needed and the result of the survey is considered to be negative for presence/absence (P/A) of NLEB (Exhibit V). Review of NH Fish and Game’s list of known hibernaculum and maternity roosts in NH did not include hibernaculum or roost trees in Walpole or Charlestown. In addition, the NHNHB search did not indicate NLEB. Because the proposed work will not occur further than 300’ from a rail/road and limited clearing of less than 20 acres the project qualifies for coverage under the FHWA Programmatic Consultation for NLEB. Due to the negative result of the P/A acoustic survey, the project has been determined to be Not Likely to Adversely Affect NLEB. A Project Submittal Form was submitted to the USFWS Field Office in accordance with the FHWA Programmatic Agreement and USFWS confirmed that the project adheres to the conditions and scope of the FHWA Programmatic Agreement and that no further coordination is necessary for NLEB. (Exhibit R) Sightings of dead or sick bats shall be immediately reported to the Bureau of
Environment by Construction and the NLEB flyer will be shared with Construction personnel. *(Environmental Commitments 9 and 10).*

The Magnuson-Stevens Fishery Conservation and Management Act requires the federal government to identify Essential Fish Habitat (EFH) and make conservation recommendations to agencies whose actions could affect it. The project is located along the Connecticut River. The Connecticut River is an EFH for Atlantic Salmon (*Salmo salar*). An Essential Fish Habitat (EFH) Study was prepared by the Department and was reviewed by the National Marine Fisheries Service (NMFS). The NMFS indicated on March 7, 2017 *(Exhibit W)* that the proposed project would have minimal adverse effect on EFH for Atlantic salmon. In addition, the project area will have minimal effects on other NOAA-trust resources, including those covered under the Fish and Wildlife Coordination Act. Therefore, NMFS has no EFH conservation recommendations pursuant to Section 305(b)(4)(A) of the Magnuson-Stevens Act.

In accordance with the NH Invasive Species Act (ISA), (HB 1258-FN) The NH Department of Agriculture, Markets and Food (DAMF), Division of Plant Industry is responsible for the evaluation, publication and development of rules on invasive plant species. The purpose of this oversight is to protect the health of native species, the environment, commercial agriculture, forest crop production and human health. DAMF rules, specifically AGR 3800, state that “no person shall knowingly collect, transport, sell distribute, propagate or transplant any living or viable portion of any listed prohibited invasive plant species including all of their cultivars, varieties and specified hybrids.” Pursuant to this rule, the project area was reviewed for invasive species during the initial phases of design, as well as during a follow-up field visit conducted on August 6, 2015 *(Exhibit X)*. Several occurrences of Spotted Knapweed, Purple Loosestrife, Japanese Knotweed, Glossy Buckthorn, Multiflora Rose, Garlic Mustard, Oriental Bittersweet and Morrow’s Honeysuckle were found within the project area. If these plants will be impacted during construction they shall be handled and disposed of in accordance with the NHDOT’s Best Management Practices for Roadside Invasive Plants manual *(Environmental Commitment 11)*. Fill materials brought onsite or transported within the site will be free of invasive species or treated in accordance with the above noted BMP manual to prevent the spread of such species *(Environmental Commitment 12).*

Section 4(f) of the US Department of Transportation (US DOT) Act of 1966 (amended by 49 U.S.C. Section 303) provides protection for historic resources, wildlife refuges and publicly owned parks and recreational areas that are open to the public and are considered substantial recreational facilities. Consultation with the NH Division of the Federal Highway Administration has indicated that there are no wildlife refuge 4(f) resources within the project area. (See the Recreation and Cultural Resources sections for additional information on other Section 4(f) resources.)

**Floodplains/ Floodways**

Walpole and Charlestown are communities that participate in the National Flood Insurance Program (both towns are listed as Community Number 330153). The project lies within areas delineated as Floodway Areas, Special Flood Hazard Areas, and Zone X on the Flood Insurance Rate Map *(Exhibit Y)*. The Floodway Area is defined by the Federal Emergency Management Agency (FEMA) as “the channel of the river plus any adjacent floodplain areas that must be kept free of encroachment so that the 100-year flood can be carried without substantial increases in flood heights.” Special Flood Hazard Areas are subject to inundation by the 100-year flood. Zone X areas
are those areas that are subject to the 500-year flood or areas that are subject to the 100-year flood but with average depths of less than one foot. As the project is a Federal action, expected to include impacts within both the floodplain and the floodway of the Connecticut River, the project is subject to Executive Order 11988. Executive Order 11988 indicates that “each [Federal] agency shall provide leadership and shall take action to reduce the risk of flood loss, to minimize the impact of floods on human safety, health, and welfare, and to restore and preserve the natural and beneficial values served by flood plains in carrying out its responsibilities.”

The proposed action will result in a total of 9.92 acre-feet (16,000 cubic yards) of fill in the floodway and an additional 23.55 acre-feet (38,000 cubic yards) between floodway and 100-year floodplain. Per recent Hydrologic Engineering Center River Analysis System (HECRAS) modeling, the above filling will result in a slight increase in base flood elevation of approximately 0.09-feet along sections of the Connecticut River impacted by the project. This minimal rise is not likely to cause adverse impacts from flooding, however NHDOT will be filing a Conditional Letter of Map Revision (CLOMAR) with FEMA to reflect the change in 100-year flood elevation (Environmental Commitment 13).

Historical/Archaeological

The Department has conducted architectural history and archaeological surveys and consulted with the NH Division of Historical Resources (NHDHR) and the Federal Highway Administration (FHWA) to locate and identify National Register of Historic Places listed, or eligible, properties or districts within the immediate area of the proposed project. The proposed project has been reviewed by the SHPO and FHWA based on the Section 106 review process set forth by the National Historic Preservation Act of 1966, as amended, and the Advisory Council on Historic Preservation’s Procedures for the Protection of Historic Properties (36 CFR 800). The proposed design was presented at Monthly Cultural Resource Agency Coordination Meetings held on May 10, 2007, March 5, 2009, November 12, 2009, December 3, 2009, March 11, 2010, April 8, 2010, and during additional discussions conducted as a result of the aforementioned design revisions which occurred in 2016 and 2017.

Section 106 regulations offer owners of historic properties directly affected by the project or agencies that possess a direct interest in the historical resources, an opportunity to request Consulting Party status. Consulting Parties become more involved in the project through meetings and commentary and provide advisory input throughout the design process. Although Consulting Party status was solicited by the Department, no such requests were received.

Following completion of a review of the architectural and historical resources present in the area, it was determined that the Sullivan County Railroad corridor, which runs through the towns of Walpole, Charlestown, Claremont and Cornish, is eligible for the State and National Register of Historic Places. Information on this rail is on file at the NH Department of Transportation’s Bureau of Environment as well as the New Hampshire Division of Historical Resources in Concord, New Hampshire.

The Sullivan County Railroad, constructed in 1849, consists of twenty-six miles of track that connect the communities of Walpole, Charlestown, Claremont and Cornish. This line is historically important for the connection the rail line created between these communities along the Connecticut
River. The Sullivan County Railroad provided a critical and convenient transportation route for local agricultural products, manufactured goods, passengers and mail. The line, now known as the New England Central Railroad, is still in use today by both freight and passenger trains. The revised proposed action does not impact this resource however the Department has committed to fabricating and erecting a double-sided state historic marker once construction is complete (Environmental Commitment 14).

In addition to the properties determined to be eligible for the National Register of Historic Places, the project also looked at four other individual properties potentially impacted by the relocation of NH Route 12, all of which were determined not eligible for the National Register by the FHWA in consultation with the NHDHR and the NHSHPO. Individual Inventory forms were completed for the following properties:

- **2496 Bellows Falls Road** (parcel number 15), is a late 18th century to early 19th century vernacular dairy farm, whose exterior has undergone substantial changes, diminishing its historical integrity.
- **2438 Bellows Falls Road** (parcel number 17), is a single family residence built in 1942, does not possess enough National Register-level significance to be considered eligible.
- **155 Church Street** (parcel number 4), is the former United Murray Wood Heel Company, constructed ca. 1950. Although this building continues to function as a factory, under the present name of Len-Tex Corporation, alterations and additions to this structure have made its original design difficult to discern. Despite the buildings unique arched-roof, it was determined that there were better and less altered examples in the immediate area.
- **59 Old Ferry Road** (parcel number 25) has undergone several changes that has hidden its original Greek Revival detailing. This structure was built early-mid 19th century, on what was once a busy road that provided access to the ferry that crossed the Connecticut River at this location. Research suggested that this property may have been used as a tavern when the ferry was running. In more recent years the windows have been replaced, vinyl siding added, and the front door removed. It was determined that this property is not eligible for the National Register.

Based on a review pursuant to 36 CFR 800.4, NHDHR, FHWA and the Department have agreed that the revised undertaking will no longer impact the Sullivan County Railroad, and that no additional above ground survey is necessary. As such the FHWA in consultation with NHDHR and the Department has determined that the revised project design would result in a No Historic Properties Affected finding (Exhibit Z).

Section 4(f) of the US Department of Transportation (US DOT) Act of 1966 (amended by 49 U.S.C. Section 303) provides additional protection for historic resources, wildlife refuges and publicly owned parks and recreational areas that are open to the public and are considered substantial recreational facilities. Consultation with the NH Division of the Federal Highway Administration has indicated that although there are several historic resources in proximity to the project area, the project as proposed would not result in the permanent incorporation, temporary occupancy or constructive use of any of these historic resources. As such the FHWA has determined the project as proposed would not result in a use of any section 4(f) historic sites. (See the Recreation and Wildlife sections for additional information on other Section 4(f) resources.)
In addition to architectural and historical resources, the project area was reviewed for archaeological resources. The topography of the area and the proximity of the project to the Connecticut River indicated a high potential for Native American Archaeological deposits within the project area. In order to determine if any archaeological deposits are located within the project area, a Phase 1A Archaeological Sensitivity Assessment and a Phase 1B Intensive Archaeological Investigation were conducted. These investigations included background research and visual inspections of the project area as well as shovel test pits in areas of particular concern. This investigation resulted in the identification of one area of archaeological sensitivity partially located within the project area. The one sensitive site, named Archaeology Area 10 (Smithsonian #: 27SU41), is located on parcel 10 and produced pre-contact Native American artifacts from twelve of the 28 shovel test pits that were excavated within the sensitive area. Artifacts included quartz flakes, a quartzite flake and a hearth feature. The proposed action has been designed to avoid impacts at this location, and therefore impacts are not anticipated. However, a Phase II archaeological investigation can be performed for the site if unavoidable impacts to this area are required during construction (Environmental Commitment 15). Following a recommendation in the former Archaeological Phase IA/IB study and in light of the current project design, a Phase IB Intensive Archaeological Investigation will be undertaken in Areas 1 and 12 and all necessary phases of archaeology will be completed. It is anticipated any archaeological sites that are identified can be avoided through careful project design, however should project plans change and any identified archaeological sites be impacted, NHDOT will notify FHWA and NHDHR and will complete all necessary phases of archaeology (Environmental Commitment 16).

Aesthetics

The project is located in a relatively rural area in proximity to the Connecticut River. Local property owners, officials and organizations have indicated that this resource and the natural feeling of the area are of particular importance. As such, the proposed project has been designed with these features in mind, and will include revegetation of the engineered stone slopes to improve aesthetics from the river. Additionally, this proposed action will not impact the hillside to the east of the railroad, and will leave the aesthetics associated with the existing forested areas intact. Although the proposed reconstruction of NH Route 12 will visually alter the area, these changes are not expected to negatively affect the aesthetically pleasing nature of the surrounding environment. Furthermore, coordination with the public, local officials and organizations did not indicate the presence of any aesthetic concerns associated with the proposed project. As such, this project is not expected to negatively impact the aesthetic value of the area (Exhibit AA).

Construction Impacts

Construction of this project is anticipated to cause temporary increases in noise and dust levels within the project area. All standard measures will be employed to ensure such increases are minimized to the extent practicable and limited to the construction period (Environmental Commitment 17).

The construction of this project will temporarily disrupt traffic patterns. Access to all occupied residences, businesses, recreational facilities and farmlands will be maintained throughout construction. Through traffic will be maintained during construction (Environmental Commitment 3).
The construction of this project may temporarily disrupt railroad traffic. Railroad operations will be allowed to continue throughout construction and any temporary railroad closures will be kept to a minimum. The Department will coordinate with the railroad operator to ensure that impacts to the operation of this facility have been minimized to the maximum extent practicable (Environmental Commitment 18).

To minimize the potential for erosion and sedimentation increases in the Connecticut River and other downstream wetland systems during construction, the contractor responsible for the work will be required, as a contract provision, to prepare a Stormwater Pollution Prevention Plan detailing the pollution prevention measures which will be employed prior to the commencement of construction activities (Environmental Commitment 7).

Construction plans are provided at the end of this document (Exhibit AB).

Summary of Environmental Commitments

The following environmental commitments have been made for this project.

1. Limited Reuse Soils (LRS) excavated from within the operational ROW shall be addressed in accordance with applicable NHDES rules, waivers, and/or Soils Management Plans. If required, the contractor shall prepare an implement a Project Operations Plan (POP) that describes the contractor’s means and methods to adhere to the provisions of the Soils Management Plan. (Highway Design, Construction, Environment)

2. The Department shall obtain the necessary property acquisitions, easements and rights of entry prior to the commencement of construction. (Right-of-Way, Environment)

3. The construction of this project will temporarily disrupt traffic patterns. Access to all occupied residences, businesses, recreational facilities and farmlands shall be maintained throughout construction. Through traffic shall be maintained during construction. (Construction)

4. It is anticipated that this “major impact” project will require wetland mitigation. The Department shall continue to coordinate with the Natural Resource Agencies throughout the final design of the project to develop a mutually acceptable mitigation package. (Highway Design, Right-of-Way, Environment)

5. A Wetlands and Non-Site Specific Permit will be obtained prior to construction within any areas under the jurisdiction of the NHDES Wetlands Bureau and the USACE. Based on total wetland impact areas as part of the proposed action, the project shall require an Individual Section 404 Permit Application through the USACE rather than qualifying under the State Programmatic General Permit. A permit shall be obtained prior to construction within any areas under the jurisdiction of USACE. (Highway Design, Construction, Environment)

6. Coordination with the NHDES Watershed Management and Alteration of Terrain Bureaus has indicated that the project should include stormwater treatment and infiltration, to the maximum extent practicable. The Department shall continue to coordinate with NHDES throughout final design, to determine the appropriate water quality treatments within the project area. (Highway Design, Environment)

7. To minimize the potential for erosion and sedimentation increases in the Connecticut River and other downstream wetland systems during construction, the contractor responsible for the
work shall be required, as a contract provision, to prepare a Stormwater Pollution Prevention Plan detailing the pollution prevention measures which shall be employed prior to the commencement of construction activities. (Highway Design, Construction, Environment)

8. The Department shall continue to monitor the project site for nesting of the American Bald Eagle. If nests appear on the west side of Route 12 in trees which may be impacted then the Department shall coordinate with NHF&G. (Highway Design, Construction, Environment)

9. All sightings of dead or sick bats shall be immediately reported to the Bureau of Environment (271-3226). (Construction)

10. The Northern Long-Eared Bat Flyer shall be shared with all operators, employees, and contractors working on the project and operators, employees, and contractors shall be made aware of all applicable environmental commitments. (Construction)

11. Several occurrences of Japanese Knotweed, Glossy Buckthorn, Multiflora Rose, Garlic Mustard, Oriental Bittersweet and Morrow’s Honeysuckle were found within the project area. If these plants will be impacted during construction they shall be handled and disposed of in accordance with the NHDOT’s Best Management Practices for Roadside Invasive Plants manual. (Highway Design, Construction, Environment)

12. Fill materials brought onsite or transported within the site shall be free of invasive species or treated in accordance with the NHDOT’s Best Management Practices for Roadside Invasive Plants manual, to prevent the spread of such species. (Construction)

13. Based on hydrologic modeling, the project will impact both the floodway and floodplain, and is anticipated to result in a slight increase in the base flood elevation. This minimal rise is not likely to cause adverse impacts from flooding, however NHDOT shall file a CLOMAR with FEMA to reflect this change in 100-year flood elevation. (Highway Design, Environment)

14. The NHDOT commits to fabricating and erecting the double-sided state historic marker once construction is complete. (Environment, Construction)

15. All necessary phases of archaeology and data recovery of National Register eligible archaeological resources shall be completed prior to the disturbance of any archaeologically sensitive areas within the project area. (Environment)

16. If impacts to Archeological sites 1 and 12 cannot be avoided through design, the Department shall consult with FHWA and NHDHR and shall complete all necessary phases of archaeology. (Environment)

17. Construction of this project is anticipated to cause temporary increases in noise and dust levels within the project area. All standard measures shall be employed to ensure such increases are minimized to the extent practicable and limited to the construction period. (Construction)

18. The construction of this project may temporarily disrupt railroad traffic. Railroad operations shall be allowed to continue throughout construction and any temporary railroad closures shall be kept to a minimum. The Department shall coordinate with the railroad operator to ensure that impacts to the operation of this facility have been minimized to the maximum extent practicable. (Construction)
Walpole-Charlestown
X-A000(487), 14747

Exhibits
Exhibit B:

Project Location Map
Exhibit C:

Project Alternative Maps
Alternative 322

Project Start

Project End

Roadway Reconstruction

Railroad Reconstruction

1 inch = 2,000 feet
Alternative 322A

1 inch = 2,000 feet
1:24,000

- Roadway Reconstruction
- Railroad Reconstruction
Exhibit D:

Project Segments
Project Segments

Southern Segment
Middle Segment
Northern Segment

1 inch = 2,000 feet
Exhibit E:

Slope Location Plan and Typical Details
WALPOLE CHARLESTOWN 14747
TYPICAL - SOUTHERN SLOPE
ARMORED SLOPE WITH SURFACE VEGETATION
STATION 815+50

South of Meany's Cove

Turf establishment along slope to 2' above OHW and plant local wetland fauna.

Class C stone fill (less than 6'')

Placed humus 6' deep along the slope over the Class B stone from 2' above OHW to top of bank.

Temporary platform for construction access.

Floating silt room turbidity curtain.

Class A stone fill (greater than 3 CF)
Place from 2' above OHW down at 1-5:1 slope to the toe of the existing grade and keyed in at 90° for a minimum of 3' and matched back to existing grade.
Meany's Cove and North of Meany's Cove
Exhibit F:

Hazardous Waste Property Mapping
Exhibit G:

Affected Parcels
### TABLE OF PROPERTY ACQUISITION

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Subject to change.
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*Duration of Temporary Easements Will Be For 48 Months - Beginning With the Commencement of Construction Activities.*

### Table of Revisions

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<td>The Temporary Drive Impact on Parcel 16 was Removed Due to a Redesign of the Southernmost Drive on Parcel 17. The Temporary Drive Impact to Parcel 17 was Revised Due to Redesign of Southernmost Drive. All Impacts to Parcel 31 were Revised Due to Elimination of Large Drainage Ditch. The Temporary Drive Impacts were Also Added to Parcel 31. The Temporary Retaining Wall Easement on Parcel 10 is Now Designated a Permanent Retaining Wall Easement.</td>
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**State Project No.:** 14747

**Counties of Cheshire & Sullivan**

**Towns of Walpole - Charlestown**

**N.H. Route 12**

**NHDOT:** 7/28/2017

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DATE: 7/28/2017

SUBJECT TO CHANGE
Exhibit H:

LCHIP Property Impacts
Hi Matt,

LCHIP has not assisted in the protection of any historic, natural, or cultural resources within the project area as described.

Paula

Paula S. Bellemore, Natural Resource Specialist
Land and Community Heritage Investment Program
13 West Street, Suite 3
Concord, NH 03301
603.224.4113
www.LCHIP.org

Hi Paula-

Please see attached. FYI the proposed project no longer impacts the Rail Corridor or anything to the east of the Rail Corridor- the project is proposed to widen Route 12 only to the west.

Thanks,

Matt

Matt Lundsted, P.E.*, CFM
Principal
Comprehensive Environmental Inc.
Phone: 800.725.2550
225 Cedar Hill Street, Marlborough, MA 01752
1 Hartford Square, New Britain, CT 06052
21 Depot Street, Merrimack, NH 03054
*Licensed in Massachusetts and Connecticut
mlundsted@ceiengineers.com
www.ceiengineers.com
Matthew,
I am attempting to conduct the required review of NH DOT project 14747 in Walpole and Charlestown, but require a map of the proposed project area. Please send one at your earliest convenience.

Thank you,

Paula

Paula S. Bellemore, Natural Resource Specialist
Land and Community Heritage Investment Program

13 West Street, Suite 3
Concord, NH 03301
603.224.4113
www.LCHIP.org
October 8, 2010

Dear Jon —

Thank you again for taking time to present information about the proposed road reconstruction project along NH Route 12 in Walpole and Charlestown and its impact on the western edge of the Fall Mountain Conservation area.

The LCHIP Board of Directors passed the following motion during a meeting today:

The LCHIP Board of Directors approves the proposal from the New Hampshire Department of Transportation to acquire the LCHIP interest in 4+/- acres of the Fall Mountain Conservation area along NH Route 12 in Walpole and Charlestown, under the terms specified in RSA 227-M:13 with compensation to be at full fair market value of the property interest at the time of the department's acquisition, or as replacement land with conservation value within the Fall Mountain Conservation area, with a preference for land with conservation value.

Thank you for your good efforts to accommodate the interests of the conservation land and its holders in your highway reconstruction planning process and to provide LCHIP with a 60-day extension of the 15-day application decision period from the date of the Public Hearing on Thursday, July 29, 2010. We appreciate your patience in dealing with the repetition and minor slowdowns related to staff changes in the LCHIP office.

Please let me or Aaron know as the transfer unfolds or if you have further questions about LCHIP's position in this matter.

Sincerely,

Dijit Taylor
Interim Executive Director

Cc via email: Aaron Ferarro, LCHIP, Bill Carpenter, DRED, Krista Heimboldt, TNC, Tim Murphy, SWRPC
Exhibit I:

Conservation Land Stewardship (CLS) Correspondence
There are no LCIP interests in the project area.
Exhibit J:

DRED and LWCF Correspondence
STATE OF NEW HAMPSHIRE
INTER-DEPARTMENT COMMUNICATION

To: Jonathan A. Evans
   Senior Environmental Manager
   Department of Transportation
   Bureau of Environment

From: Jane Carey
   Dept. of Resources and Economic Development
   Division of Parks and Recreation

Date: December 2, 2009

Subject: Walpole – Charlestown, 14747, X-A000 (487)

This communication is in response to your memo dated December 1, 2009 regarding the reconstruction along NH Route 12 in the towns of Walpole and Charlestown, NH. From the Main St. intersection on North Walpole for approximately 2.5 miles along NH Route 12 to its intersection with NH Route 12A in Charlestown.

There presently are 3 Land and Water Conservation Fund 6 (f) projects in the towns of Walpole and Charlestown, New Hampshire. They are Project #’s

33-00441 – Walpole Recreation Park!
33-00101 – Charlestown Patch Park
33-00495 – Charlestown Pool

I have checked into our project files, and based on the map and description you have provided, it does not appear that there are any Land and Water Conservation 6 (f) projects in this area.

Feel free to contact me at 271-3556 or at Jane.Carey@dred.state.nh.us should you have any questions.
Exhibit K:

Connecticut River Joint Commission (CRJC) Correspondence
STATEMENT
from
SHARON F. FRANCIS, EXECUTIVE DIRECTOR
NH Route #12 Reconstruction
to
Natural Resource Agency Meeting
Concord, NH
April 21, 2010

The first official meeting I attended on improvements to NH Route #12 between Charlestown and North Walpole was in December, 2006. DOT’s Bill Oldenberg explained a new planning concept. It was called Context Sensitive Solutions, and replaced the old system under which highway engineers drew up plans, called a public hearing, and were berated by the public who had reasons to believe that they knew their segment of road better than the engineers might. Under this new CSS system, public preferences and local knowledge were going to drive the process. DOT’s resourceful personnel would help. Upper Valley Lake Sunapee Regional Planning Commission would convene meetings and keep us all informed and engaged in working through the many matters that need to be taken into consideration when a public road is “improved.”

I heartily commend the CSS process. It truly worked. People with widely different priorities - at the end - agreed on the final layout for Route #12. The fact that all agreed is the best recommendation you could receive.

Participants who took part in the CSS process were a diverse lot, representing local government, businesses, schools, and citizen organizations from both Charlestown and Walpole. A few of us represented wider concerns, New England Central Railroad, TransCanada Corporation, and in my case the New Hampshire and Vermont commissions entrusted by the legislatures and governors to safeguard the Connecticut River.

The Connecticut River Joint Commissions hold responsibility for developing the management plan for the Connecticut River, and for advising the Department of Environmental Services on any permit that affects the River. We have led the effort to address the widespread problems of riverbank erosion, and have raised funds and repaired several riverbanks where important public resources were at stake.

We also sponsor the Connecticut River Byway and have successfully gained national byway status for the roadways that border our lovely river. The motive for the byway is to lure visitors, bring tourism dollars, and preserve the villages and vistas that bring visitors in the first place.
The two-and-a-half mile roadway between Charlestown and Walpole is one of those special scenic places. At the north end of the segment, the river is close by, and drivers can appreciate the broad waters, look across to the wildlife sanctuary at Herrick’s Cove, and see glimpses of occasional Bald Eagles fishing for breakfast or supper from a snag tree beside the road. This segment is one of very few along the 500 mile byway where the River appears to be close enough to touch. Thus the scenic values in this area are very high.

By moving the railroad tracks eastward there will be room to refrain from introducing fill into the Connecticut River in the northern section. From our fluvial geomorphic assessments of the Connecticut River, we have learned that stone fill or riprap too often causes more problems than it solves; Thus we strongly urge NHDOT to apply bioengineering techniques when it is necessary to work adjacent to the River.

Mid-section is Meany’s Cove, an area of setbacks favored by fishermen who fish from the shore or use bob houses in the winter. The preferred alignment will result is some fill in this section, and CRJC supports this alternative because extensive impacts on the river are eliminated elsewhere. We suggest, additionally, that a pull off, with room for a few cars would be a valued asset in the Meany’s Cove area so fishermen can still access the river shore they have long enjoyed, and the occasional driver can pull over and enjoy the view.

In the southern section where the road is elevated above the River, the concern is not the road impacting the River, but the instability of the road because of inevitable erosion below. Everyone who has driven this section of roadway will benefit from DOT’s plan to move both railroad and Route #12 eastward and allow for badly-needed stabilization of the roadway’s foundation.

It is a pleasure to be able to convey support from the Connecticut River Joint Commissions for the preferred alternative proposed by the CSS planning group. The process was admirable and fair. Now, as the project goes into the design phase, it will be very important to give priority to aesthetic considerations, to remember that the endangered Bald Eagle is frequently seen in this area, that the River is home to Dwarfwedge mussels, and wherever possible apply bioengineering when the roadway comes close to New England’s Great River, the Connecticut.

Thank you.
Exhibit L:

Environmental Justice Memo
DATE: January 9, 2017

FROM: Jay Ankenbrock, Chief of Labor Compliance, Executive Office

TO: Jonathan Evans, Air & Noise Program Manager, Bureau of Environment

RE: Environmental Justice Population Analysis, Project: Walpole-Charlestown 14747

The attached analysis and recommendations are provided pursuant to Title VI of the Civil Rights Act of 1964 and Executive Orders 12898 & 13166. The intent of these statutes is to ensure fair and full participation and the equal receipt of benefits under Federally-assisted programs. Your efforts to accommodate and encourage participation by traditionally underserved groups, where significant, will ensure program access and minimize the potential for disproportionate project impacts on protected groups.

The table entitled “EJ Population Analysis” shows the presence of protected groups that might be impacted by the project. Personnel responsible for project planning/design and the coordination of public meetings/hearings should use this analysis to guide their outreach efforts under Title VI and in support of developing a context sensitive solution. Based on the availability of information and where appropriate, we have included specific outreach recommendations to facilitate public comment from underrepresented groups.

Please note that US Census Bureau, American Community Survey (ACS) 2010-2014 data is used to provide to an EJ Population analysis for the project. If you have questions regarding this analysis, please contact me @ 271-2467.

Encls: EJ Population Analysis

Cc: Michael O’Donnell, Bureau of Traffic
    Kevin Nyhan, Administrator, Bureau of Environment
    Jennifer Jack, Bureau of Right-of-Way
## EJ Population Analysis for Project: Walpole-Charlestown 14747

<table>
<thead>
<tr>
<th>STUDY AREA</th>
<th>AVG% Elderly Population</th>
<th>AVG% Minority Population</th>
<th>AVG% Low-income Household Population</th>
<th>AVG% LEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impacted Area – Cheshire &amp; Sullivan Counties, 1 mile radius of project area.</td>
<td>14.42%</td>
<td>7.01%</td>
<td>29.73%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Surrounding Area- Cheshire &amp; Sullivan Counties, 3 mile radius of project area.</td>
<td>15.20%</td>
<td>5.65%</td>
<td>29.44%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

**REMARKS:**
* The population percentage identified is meaningfully greater than the surrounding area and constitutes an EJ population. Characteristics of this particular study area indicate that targeted outreach efforts to solicit public participation should be taken.

LEP Definition: Where there is a population of people who speak English as a second language less than well (as indicated by the U.S. Census data). When a particular LEP language group constitutes 5% of the impacted population, the Department is required to translate public information meeting notices and take appropriate measures to ensure language access. If this requirement exists, the Project Manager should contact the Title VI Coordinator for further assistance.

Low-income defined as household income less than $25,000.

**Impacted Area:** The impacted area was defined by the project limits and a 1 mile radius the immediate vicinity.

**Surrounding Area:** The surrounding area was defined by a 3 mile radius of the project area.
**Special Considerations:** Special consideration should be given to any project features that affect pedestrian accessibility. This project constitutes an alteration in accordance with Title II of the Americans with Disabilities Act. As such, minimum ADAAG accessibility requirements apply, unless deemed technically infeasible.

ADAAG was adopted as the 2010 Standards for Accessible Design on July 23, 2010 by the DOJ.

http://www.ada.gov/reg3a.html#Anchor-Appendix-52467

For more information, I have provided a link to the Draft Public Rights-of-Way Guidelines (PROWAG)

The Draft PROWAG (Revised Draft Guidelines for Accessible Public Rights-of-Way) was released in November 2005 and has not been adopted by DOJ or FHWA.

In 2006, FHWA issued a statement that the Draft PROWAG is to be considered best practice for making public rights-of-way accessible.


The Draft PROWAG includes specifications for detectable warnings and gives detailed information regarding their installation on curb ramps and on blended curbs, including at street corners, at cut-through islands and medians, and in front of buildings. It also has sections on accessible pedestrian signals (APS), roundabouts, channelized turn lanes, protruding objects, channelizing devices and barriers, and tactile and print signs.

**Outreach Recommendations:** The analysis depicts a high percentage of people in the impact and surrounding area who are part of a low-income and/or elderly population. It is recommenced that outreach should consist of contacting the following organizations/services.

<table>
<thead>
<tr>
<th>Resident/Agency Address</th>
<th>Org/Housing Type</th>
<th>Contact Name/Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlestown Elderly Housing 107 Lovers Lane Road Charlestown, NH 03603</td>
<td>Elderly &amp; Low-income</td>
<td>603-352-7512</td>
</tr>
<tr>
<td>Charlestown Green 59 Woodrise Road Charlestown, NH 03603</td>
<td>Low-Income</td>
<td>603-836-5680</td>
</tr>
<tr>
<td>Peaceful Harvest 144 Paris Avenue Charlestown, NH 03603</td>
<td></td>
<td>603-826-4770</td>
</tr>
<tr>
<td>Charlestown PO Box 38 Charlestown, NH 03603</td>
<td>Debra Clark</td>
<td>603-826-5821</td>
</tr>
</tbody>
</table>
Silsby Public Library
PO Box 307
Charlestown, NH 03603
Holly Shaw
603-826-7793

US Postal Service Charlestown
26 Church Street
Charlestown, NH 03603
603-826-3611

VFW Post 8497
PO Box 1337
365 Lovers Lane Road
Charlestown, NH 03603
Tom St. Pierre
603-826-5186
cdpost8497@nh.vfwwebmail.com

Town of Walpole
PO Box 729
34 Elm Street
Walpole, NH 03608
Sara Downing
603-756-3672

Walpole Town Library
48 Main Street
Walpole, NH 03608
Justine Rogers
603-756-9806

North Walpole Public Library
70 Church Street
North Walpole, NH 03609-1720
603-445-5133

US Postal Service Walpole
47 Main Street Unit 1
Walpole, NH 03608
603-756-3363

American Legion
73 Main Street
Walpole, NH 03608
603-756-4712
Exhibit M:

NHDES Drinking Water Source Protection Program Correspondence
Kevin, our concerns are that effective erosion and sedimentation measures are in place during and after construction, and that stormwater management be designed to vegetatively treat and then infiltrate the first flush into the ground wherever possible, particularly since you are increasing the amount of impervious area (I assume the shoulder is compacted enough to make it much less pervious than the undisturbed soil. Maximizing the time and distance travelled by the runoff before it reaches surface water would help improve opportunities for vegetative treatment and infiltration. Thanks for the opportunity to comment.

Good morning,

The Department of Transportation is planning a project to reconstruct and widen NH 12 beginning in North Walpole at is intersection with Main Street and extending north approximately 2.7 miles to its intersection with NH 12A in Charlestown. The NH 12 reconstruction will widen the roadway by adding four-foot wide shoulders to improve the safety of motor vehicles, bicyclists and pedestrians. The roadway will also be shifted to the east to diminish the hazard that the unstable banks of the Connecticut River pose to NH 12 in the north and south segments of the project area. The road realignment will necessitate the relocation of approximately 2.2 miles of New England Central Railroad track.

The project lies within the Cheshire County Complex Drinking Water Source Protection Area (ID#5765) and over an aquifer with a transmissivity less than 1,000 ft2/day.

The Department's Bureau of Environment is in the process of preparing the environmental documentation necessary for this project. Any comments you or your staff can provide relative to potential impacts on or involvement with these water supply areas would be greatly appreciated.

Thank you,
Exhibit N:

Farmland Protection Policy Act (FPPA) Correspondence
## PART I (To be completed by Federal Agency)

1. **Name of Project**: Walpole-Charlestown, X-A000(487), 14747
2. **Type of Project**: Roadway & Railroad relocation

## PART II (To be completed by NRCS)

3. **Date of Land Evaluation Request**: 5/12/14
4. **Person Completing Form**: Peter Whitcomb
5. **Federal Agency Involved**: Federal Highway Administration
6. **County and State**: Cheshire, NH

### Farmable Land in Government Jurisdiction

- **Acres**: 277,085
- **%**: 59.3

### Amount of Farmland As Defined in FPPA

- **Acres**: 134,345
- **%**: 28.8

### Name Of Local Site Assessment System

- **Name**: N/A

### Date Land Evaluation Returned by NRCS

- **Date**: 5/23/14

## PART III (To be completed by Federal Agency)

- **Alternative Corridor For Segment**: Corridor A
- **Corridors**: 6

## PART IV (To be completed by NRCS) Land Evaluation Information

### Total Acres Prime And Unique Farmland

- **A.** 4.8

### Total Acres Statewide And Local Important Farmland

- **B.** 0.6

### Percentage Of Farmland In County Or Local Govt. Unit To Be Converted

- **C.** 0.01

### Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value

- **D.** 12

## PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Maximum Points</th>
<th>Points</th>
<th>Points</th>
<th>Points</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Area in Nonurban Use</td>
<td>15</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perimeter in Nonurban Use</td>
<td>10</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Percent Of Corridor Being Farmed</td>
<td>20</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Protection Provided By State And Local Government</td>
<td>20</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Size of Present Farm Unit Compared To Average</td>
<td>10</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Creation Of Nonfarmable Farmland</td>
<td>25</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Availability Of Farm Support Services</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. On-Farm Investments</td>
<td>20</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Effects Of Conversion On Farm Support Services</td>
<td>25</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Compatibility With Existing Agricultural Use</td>
<td>10</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL CORRIDOR ASSESSMENT POINTS</strong></td>
<td>160</td>
<td>29</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

## PART VII (To be completed by Federal Agency)

### Relative Value Of Farmland (From Part V)

- **Points**: 64.2

### Total Corridor Assessment (From Part VI above or a local site assessment)

- **Points**: 103.2

### Total Points (Total of above 2 lines)

- **Points**: 260

## PART VIII (To be completed by Federal Agency)

1. **Corridor Selected**: Corridor A
2. **Total Acres of Farmlands to be Converted by Project**: 150
3. **Date Of Selection**: 5/12/14
4. **Was A Local Site Assessment Used?**
   - **Answer**: YES

## Signature of Person Completing this Part:

**DATE**

**NOTE:** Complete a form for each segment with more than one Alternate Corridor
CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor-type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor-type site or design alternative for protection as farmland along with the land evaluation information.

1. How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
   - More than 90 percent - 15 points
   - 90 to 20 percent - 14 to 1 point(s)
   - Less than 20 percent - 0 points

2. How much of the perimeter of the site borders on land in nonurban use?
   - More than 90 percent - 10 points
   - 90 to 20 percent - 9 to 1 point(s)
   - Less than 20 percent - 0 points

3. How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
   - More than 90 percent - 20 points
   - 90 to 20 percent - 19 to 1 point(s)
   - Less than 20 percent - 0 points

4. Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
   - Site is protected - 20 points
   - Site is not protected - 0 points

5. Is the farm unit(s) containing the site (before the project) as large as the average-size farming unit in the County?
   - (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with $1,000 or more in sales.)
   - As large or larger - 10 points
   - Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

6. If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
   - Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
   - Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
   - Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

7. Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
   - All required services are available - 5 points
   - Some required services are available - 4 to 1 point(s)
   - No required services are available - 0 points

8. Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
   - High amount of on-farm investment - 20 points
   - Moderate amount of on-farm investment - 19 to 1 point(s)
   - No on-farm investment - 0 points

9. Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
   - Substantial reduction in demand for support services if the site is converted - 25 points
   - Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
   - No significant reduction in demand for support services if the site is converted - 0 points

10. Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
    - Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
    - Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
    - Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points
# Farmland Conversion Impact Rating for Corridor Type Projects

## PART I (To be completed by Federal Agency)

1. **Name of Project**: Walpole-Charlestown, X-A000(487), 14747

2. **Type of Project**: Roadway & Railroad relocation

3. **Date of Land Evaluation Request**: 5/12/14

4. **Federal Agency Involved**: Federal Highway Administration

5. **County and State**: Sullivan, NH

## PART II (To be completed by NRCS)

1. **Date Request Received by NRCS**: 5/12/14

2. **Person Completing Form**: Peter Whitcomb

3. **Acres Irrigated Average Farm Size**: 0

4. **Major Crop(s)**: corn silage, grass legume hay

5. **Acres**: 201,582, % 57

6. **Farmable Land in Government Jurisdiction**: 90,064, % 25.5

7. **Amount of Farmland As Defined in FPPA**: Sullivan County

8. **Name Of Land Evaluation System Used**: N/A

9. **Name of Local Site Assessment System**: Sullivan County

10. **Date Land Evaluation Returned by NRCS**: 5/23/14

## PART III (To be completed by Federal Agency)

A. **Total Acres To Be Converted Directly**: 16.5

B. **Total Acres To Be Converted Indirectly, Or To Receive Services**: 0

C. **Total Acres In Corridor**: 16.5

## PART IV (To be completed by NRCS) Land Evaluation Information

A. **Total Acres Prime And Unique Farmland**: 10

B. **Total Acres Statewide And Local Important Farmland**: 5

C. **Percentage Of Farm Unit Compared To Average**: 0.01

D. **Percent Of Corridor Being Farmed**: 7

## PART V (To be completed by NRCS) Land Evaluation Information Criterion Relative

value of Farmland to Be Serviced or Converted (Scale of 0 - 100 Points)

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area in Nonurban Use</td>
<td>15</td>
</tr>
<tr>
<td>Perimeter in Nonurban Use</td>
<td>10</td>
</tr>
<tr>
<td>Percent Of Corridor Being Farmed</td>
<td>20</td>
</tr>
<tr>
<td>Protection Provided By State And Local Government</td>
<td>20</td>
</tr>
<tr>
<td>Size of Present Farm Unit Compared To Average</td>
<td>10</td>
</tr>
<tr>
<td>Creation of Nonfarmable Farmland</td>
<td>25</td>
</tr>
<tr>
<td>Availability Of Farm Support Services</td>
<td>5</td>
</tr>
<tr>
<td>On-Farm Investments</td>
<td>20</td>
</tr>
<tr>
<td>Effects Of Conversion On Farm Support Services</td>
<td>25</td>
</tr>
<tr>
<td>Compatibility With Existing Agricultural Use</td>
<td>10</td>
</tr>
</tbody>
</table>

**TOTAL CORRIDOR ASSESSMENT POINTS**: 160

## PART VI (To be completed by Federal Agency) Corridor Assessment Criteria (These criteria are explained in 7 CFR 658.5(c))

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Maximum Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>13</td>
</tr>
<tr>
<td>B</td>
<td>10</td>
</tr>
<tr>
<td>C</td>
<td>0</td>
</tr>
<tr>
<td>D</td>
<td>0</td>
</tr>
<tr>
<td>E</td>
<td>0</td>
</tr>
</tbody>
</table>

## PART VII (To be completed by Federal Agency)

**Relative Value Of Farmland (From Part V)**: 100

**Total Corridor Assessment (From Part VI above or a local site assessment)**: 160

**TOTAL POINTS (Total of above 2 lines)**: 260

1. **Corridor Selected**: 

2. **Total Acres of Farmlands to be Converted by Project**: 

3. **Date Of Selection**: 

4. **Was A Local Site Assessment Used?**: 

5. **Reason For Selection**: 

### Signature of Person Completing this Part: 

**DATE**: 

**NOTE**: Complete a form for each segment with more than one Alternate Corridor
CORRIDOR - TYPE SITE ASSESSMENT CRITERIA

The following criteria are to be used for projects that have a linear or corridor-type site configuration connecting two distant points, and crossing several different tracts of land. These include utility lines, highways, railroads, stream improvements, and flood control systems. Federal agencies are to assess the suitability of each corridor-type site or design alternative for protection as farmland along with the land evaluation information.

1. How much land is in nonurban use within a radius of 1.0 mile from where the project is intended?
   - More than 90 percent - 15 points
   - 90 to 20 percent - 14 to 1 point(s)
   - Less than 20 percent - 0 points

2. How much of the perimeter of the site borders on land in nonurban use?
   - More than 90 percent - 10 points
   - 90 to 20 percent - 9 to 1 point(s)
   - Less than 20 percent - 0 points

3. How much of the site has been farmed (managed for a scheduled harvest or timber activity) more than five of the last 10 years?
   - More than 90 percent - 20 points
   - 90 to 20 percent - 19 to 1 point(s)
   - Less than 20 percent - 0 points

4. Is the site subject to state or unit of local government policies or programs to protect farmland or covered by private programs to protect farmland?
   - Site is protected - 20 points
   - Site is not protected - 0 points

5. Is the farm unit(s) containing the site (before the project) as large as the average-size farming unit in the County?
   (Average farm sizes in each county are available from the NRCS field offices in each state. Data are from the latest available Census of Agriculture, Acreage or Farm Units in Operation with $1,000 or more in sales.)
   - As large or larger - 10 points
   - Below average - deduct 1 point for each 5 percent below the average, down to 0 points if 50 percent or more below average - 9 to 0 points

6. If the site is chosen for the project, how much of the remaining land on the farm will become non-farmable because of interference with land patterns?
   - Acreage equal to more than 25 percent of acres directly converted by the project - 25 points
   - Acreage equal to between 25 and 5 percent of the acres directly converted by the project - 1 to 24 point(s)
   - Acreage equal to less than 5 percent of the acres directly converted by the project - 0 points

7. Does the site have available adequate supply of farm support services and markets, i.e., farm suppliers, equipment dealers, processing and storage facilities and farmer's markets?
   - All required services are available - 5 points
   - Some required services are available - 4 to 1 point(s)
   - No required services are available - 0 points

8. Does the site have substantial and well-maintained on-farm investments such as barns, other storage building, fruit trees and vines, field terraces, drainage, irrigation, waterways, or other soil and water conservation measures?
   - High amount of on-farm investment - 20 points
   - Moderate amount of on-farm investment - 19 to 1 point(s)
   - No on-farm investment - 0 points

9. Would the project at this site, by converting farmland to nonagricultural use, reduce the demand for farm support services so as to jeopardize the continued existence of these support services and thus, the viability of the farms remaining in the area?
   - Substantial reduction in demand for support services if the site is converted - 25 points
   - Some reduction in demand for support services if the site is converted - 1 to 24 point(s)
   - No significant reduction in demand for support services if the site is converted - 0 points

10. Is the kind and intensity of the proposed use of the site sufficiently incompatible with agriculture that it is likely to contribute to the eventual conversion of surrounding farmland to nonagricultural use?
    - Proposed project is incompatible to existing agricultural use of surrounding farmland - 10 points
    - Proposed project is tolerable to existing agricultural use of surrounding farmland - 9 to 1 point(s)
    - Proposed project is fully compatible with existing agricultural use of surrounding farmland - 0 points
Peter,

Thank you very much for your help with this. I have completed parts VI and VII for both and attached the completed forms for your records. The total Farmland Conversion Impact Ratings were 103.2 for the Cheshire County portion of the project and 106 for the Sullivan County portion of the project. Based upon these findings and the information you provided below, it appears that this project is in compliance with the FPPA. Please let me know if you agree with this finding or if you need any additional information.

Thank you again for your assistance.

Sincerely,

Jon Evans

Jonathan Evans
Air & Noise Program Manager
NH Department of Transportation
Bureau of Environment
7 Hazen Dr., PO Box 483
Concord, NH 03302-0483
Email: jevans@dot.state.nh.us
Phone: (603)271-4048  M-F 7AM-3PM
Fax:(603)271-7199

Jon,

I had to separate the project into two parts – Sullivan and Cheshire Counties, in order to generate the Impact Rating. Parts II, IV, and V of each Form CPA-106, the Farmland Conversion Impact Rating, have been completed for each county (attached). I estimated that 6 of the 22.5 acres were in Cheshire and 16.5 were in Sullivan (see Part III). The relative values are: 64.2 for the Cheshire portion and 75.0 for the Sullivan portion.

Please review and fill out Parts VI and VII. If the total point score is 160 or less, then the project is in full compliance with (FPPA) and no further action is required. If the total point score is above 160 points, then alternative design or location should be considered that might reduce the total point score. If this is not possible, then an explanation should be provided in Block 5 at the bottom of the form. Additional information about completing the form and the Farmland

Please provide a final copy of the completed AD-1006 to me for NRCS records and retain a copy for your records regardless of the total point score.

If you have any questions, please feel free to contact me.

Peter

---

**Peter Whitcomb**
Natural Resources Conservation Service
U.S. Department of Agriculture
The Concord Center, 10 Ferry St, Suite 211
Concord, NH 03301
Phone: 603-223-6024
peter.whitcomb@nh.usda.gov

---

From: Jonathan Evans [mailto:JEvans@dot.state.nh.us]
Sent: Monday, May 12, 2014 11:38 AM
To: Whitcomb, Peter - NRCS, Concord, NH
Cc: Jamie.sikora@dot.gov
Subject: FPPA Coordination - NHDOT project; Walpole-Charlestown, 14747

Mr. Whitcomb,

I am contacting you at the direction of the NH Division of the Federal Highway Administration regarding a Federally funded project being prepared by the NH Department of Transportation along NH Route 12 in the Towns of Walpole and Charlestown, NH. This project involves the relocation of NH Route 12 and the New England Central Railroad away from the Connecticut River. The basic intent of this project is to shift the existing unstable and narrow roadway away from the River. The environmental documentation as well as numerous other documents that have been prepared for this project are available here: [http://www.nh.gov/dot/projects/walpole14747/index.htm](http://www.nh.gov/dot/projects/walpole14747/index.htm)

As you can see from the attached farmland soils map, this project is almost completely located within areas of prime farmland or farmland of local/statewide importance. The vast majority of the farmland soil impacts are located either within the existing roadway/railroad right-of-way or along relatively steep slopes that would likely not be conducive to agricultural activity. However, this project will require a 50,000 s.f. permanent easement to be obtained on one property (parcel 31) which is actively being farmed near the NH Route 12/NH Route 12A intersection in Charlestown. The project will also require a 69,000 s.f permanent easement on one property (parcel 34) which shows signs of somewhat recent farm activity. Both of these properties appear to be owned by TransCanada Hydro for the purposes of floodplain storage. The proposed easements are necessary for the implementation of the necessary water quality treatment measures. (Both easements are shown on the attached public hearing plans found here: [http://www.nh.gov/dot/projects/walpole14747/documents/draft_public_hearing_planlr.pdf](http://www.nh.gov/dot/projects/walpole14747/documents/draft_public_hearing_planlr.pdf)
Attached you will find the Farmland Conversion Impact Rating for Corridor Type Projects which I prepared for this project. Please let me know if you feel that further coordination with NRCS is necessary under the FPPA? If you need additional information please let me know. I appreciate your assistance and look forward to hearing from you.

Sincerely,
Jon Evans
~~~~~~~~~~~~
Jonathan Evans
Air & Noise Program Manager
NH Department of Transportation
Bureau of Environment
7 Hazen Dr., PO Box 483
Concord, NH 03302-0483
Email: jevans@dot.state.nh.us
Phone: (603)271-4048 M-F 7AM-3PM
Fax:(603)271-7199

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Exhibit O:

NH Natural Heritage Bureau (NHNHB) Memo
Memo

To: Matthew Lundsted, Comprehensive Environmental Inc
   21 Depot Street
   Peterborough, NH 03054

From: Amy Lamb, NH Natural Heritage Bureau

Date: 1/10/2017 (valid for one year from this date)

Re: Review by NH Natural Heritage Bureau

NHB File ID: NHB16-3895  Town: Charlestown, Walpole  Location: Route 12
Description: Reconstruction of Route 12 beginning at its junction with Main Street in North Walpole continuing approximately 2.7 miles to the
NH Route 12A junction in Charlestown including CT River bank stabilization, reconstruction and bank erosion repairs. (Follow-up
to NHB15-1868)
cc: Kim Tuttle

As requested, I have searched our database for records of rare species and exemplary natural communities, with the following results.

Comments: Some plant surveys have already been conducted for grass-leaved mud-plantain, but additional surveys would be requested if additional
work is proposed in the Connecticut River (such as stabilization that would require work or placement of riprap in the river). Contact NH Fish &
Game regarding wildlife concerns.

<table>
<thead>
<tr>
<th>Invertebrate Species</th>
<th>State¹</th>
<th>Federal</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwarf Wedge Mussel (Alasmidonta heterodon)</td>
<td>E</td>
<td>E</td>
<td>Contact the NH Fish &amp; Game Dept and the US Fish &amp; Wildlife Service (see below).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Natural Community</th>
<th>State¹</th>
<th>Federal</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circumneutral rocky ridge*</td>
<td>--</td>
<td>--</td>
<td>Threats would primarily be trampling by recreational hikers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plant species</th>
<th>State¹</th>
<th>Federal</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>grass-leaved mud-plantain (Heteranthera dubia)*</td>
<td>T</td>
<td>--</td>
<td>Threats to aquatic species include changes in water quality, e.g., due to pollution and stormwater runoff, and significant changes in water level.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Vertebrate species</th>
<th>State¹</th>
<th>Federal</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bald Eagle (Haliaeetus leucocephalus)</td>
<td>T</td>
<td>--</td>
<td>Contact the NH Fish &amp; Game Dept (see below).</td>
</tr>
</tbody>
</table>

¹Codes: "E" = Endangered, "T" = Threatened, “SC” = Special Concern, "--" = an exemplary natural community, or a rare species tracked by NH Natural Heritage that has not yet been added to the official state list. An asterisk (*) indicates that the most recent report for that occurrence was more than 20 years ago.

Contact for all animal reviews: Kim Tuttle, NH F&G, (603) 271-6544.
A negative result (no record in our database) does not mean that a sensitive species is not present. Our data can only tell you of known occurrences, based on information gathered by qualified biologists and reported to our office. However, many areas have never been surveyed, or have only been surveyed for certain species. An on-site survey would provide better information on what species and communities are indeed present.
New Hampshire Natural Heritage Bureau - Animal Record

**Dwarf Wedge Mussel (Alasmidonta heterodon)**

**Legal Status**

<table>
<thead>
<tr>
<th>Federal:</th>
<th>Listed Endangered</th>
</tr>
</thead>
<tbody>
<tr>
<td>State:</td>
<td>Listed Endangered</td>
</tr>
</tbody>
</table>

**Conservation Status**

<table>
<thead>
<tr>
<th>Global:</th>
<th>Critically imperiled due to rarity or vulnerability</th>
</tr>
</thead>
<tbody>
<tr>
<td>State:</td>
<td>Critically imperiled due to rarity or vulnerability</td>
</tr>
</tbody>
</table>

**Description at this Location**

<table>
<thead>
<tr>
<th>Conservation Rank:</th>
<th>Not ranked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comments on Rank:</td>
<td></td>
</tr>
</tbody>
</table>

**Detailed Description:**

2004: Rockingham: 2 live mussels observed.

**General Area:**

2004: Rockingham: Mussels within 3m of the riverbank, in depths of about 0.5m, in sandy substrate, and near beds of submerged vegetation.

**General Comments:**

**Management**

**Location**

**Survey Site Name:** Herricks Cove, south of

**County:** Sullivan

**Town(s):** Charlestown

**Size:** 30.8 acres

**Elevation:**

**Precision:** Within (but not necessarily restricted to) the area indicated on the map.

**Directions:** 2004: Rockingham: Near western shore of Connecticut River, Charlestown, just north of border with Walpole.

**Dates documented**

**First reported:** 2004-09-16

**Last reported:** 2004-09-16

The U.S. Fish & Wildlife Service has jurisdiction over Federally listed species. Please contact them at 70 Commercial Street, Suite 300, Concord NH 03301 or at (603) 223-2541.
New Hampshire Natural Heritage Bureau - Community Record

Circumneutral rocky ridge

<table>
<thead>
<tr>
<th>Legal Status</th>
<th>Conservation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal: Not listed</td>
<td>Global: Not ranked (need more information)</td>
</tr>
<tr>
<td>State: Not listed</td>
<td>State: Critically imperiled due to rarity or vulnerability</td>
</tr>
</tbody>
</table>

**Description at this Location**

| Conservation Rank: | Historical records only - current condition unknown. |
| Comments on Rank: | Full complement of serpentine plants not present. |

**Detailed Description:**
1985: Xeric ledge dominated by Woodsia ilvensis (rusty woodsia), Deschampsia flexuosa (common hairgrass), and Diervilla lonicera (bush honeysuckle). Acidic except for Cerastium arvense (field chickweed), Agalinis tenuifolia (slender gerardia) dominated area, which may be mafic. Steep, open slopes with very thin soil over bedrock.

**General Area:**
1985: Grassy, rocky glade at top of steep western slope of Fall Mountain.

**General Comments:**
1985: Selaginella rupestris (rock spikemoss) uncommon and occurs here. Revisit needed. Lacks complement of species to be classified as serpentine.

**Location**

Survey Site Name: Fall Mountain
Managed By:
County: Sullivan
Town(s): Charlestown
Size: 7.4 acres
Elevation: 700 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Charlestown, Fall Mountain, across the Connecticut River from Bellows Falls, VT. This site is at northern extreme of the Fall Mountain ridge.

**Dates documented**

First reported: 1985
Last reported: 1985-09-25
New Hampshire Natural Heritage Bureau - Plant Record

**grass-leaved mud-plantain** (*Heteranthera dubia*)

<table>
<thead>
<tr>
<th>Legal Status</th>
<th>Conservation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal: Not listed</td>
<td>Global: Demonstrably widespread, abundant, and secure</td>
</tr>
<tr>
<td>State: Listed Threatened</td>
<td>State: Imperiled due to rarity or vulnerability</td>
</tr>
</tbody>
</table>

**Description at this Location**

Conservation Rank: Historical records only - current condition unknown.

Detailed Description: 1985: Rawinski specimen TJR85-1207.

General Area: 
General Comments: 
Management Comments: 

**Location**

Survey Site Name: Fall Mountain Marshes

Managed By: 
County: Sullivan
Town(s): Charlestown
Size: 2.8 acres  Elevation: 500 feet

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions: Charlestown. Fall Mountain marshes.

**Dates documented**

First reported: 1985-09-25  Last reported: 1985-09-25
New Hampshire Natural Heritage Bureau - Animal Record

Bald Eagle (Haliaeetus leucocephalus)

<table>
<thead>
<tr>
<th>Legal Status</th>
<th>Conservation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal: Not listed</td>
<td>Global: Demonstrably widespread, abundant, and secure</td>
</tr>
<tr>
<td>State: Listed Threatened</td>
<td>State: Imperiled due to rarity or vulnerability</td>
</tr>
</tbody>
</table>

**Description at this Location**

Conservation Rank: Not ranked

Comments on Rank:


General Area:

General Comments: 2009: Nest in Vermont, but breeding territory probably extends into New Hampshire.

Management Comments:

**Location**

Survey Site Name: Upper Meadows

Managed By:

County: Sullivan

Town(s): Charlestown

Size: 4.3 acres

Elevation:

Precision: Within (but not necessarily restricted to) the area indicated on the map.

Directions:

**Dates documented**

First reported: 2009  Last reported: 2015

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.
New Hampshire Natural Heritage Bureau - Animal Record

**Bald Eagle (Haliaeetus leucocephalus)**

<table>
<thead>
<tr>
<th>Legal Status</th>
<th>Conservation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal: Not listed</td>
<td>Global: Demonstrably widespread, abundant, and secure</td>
</tr>
<tr>
<td>State: Listed Threatened</td>
<td>State: Imperiled due to rarity or vulnerability</td>
</tr>
</tbody>
</table>

**Description at this Location**

Conservation Rank: Not ranked  
Comments on Rank: 


General Area:  
General Comments:  
Management Comments: 

**Location**

Survey Site Name: Upper Meadows  
Managed By:  
County: Sullivan  
Town(s): Charlestown  
Size: 216.5 acres  
Elevation: 

Precision: Within (but not necessarily restricted to) the area indicated on the map.  
Directions:  

**Dates documented**

First reported: 2009-01-10  
Last reported: 2012-02-25 

The New Hampshire Fish & Game Department has jurisdiction over rare wildlife in New Hampshire. Please contact them at 11 Hazen Drive, Concord, NH 03301 or at (603) 271-2461.
Exhibit P:

USFWS Information for Planning and Consultation (IPaC) Correspondence
In Reply Refer To:
Consultation Code: 05E1NE00-2016-SLI-0800
Event Code: 05E1NE00-2017-E-02715
Project Name: Walpole-Charlestown 14747

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the
human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:
http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm;
http://www.towerkill.com; and

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541
**Project Summary**

Consultation Code: 05E1NE00-2016-SLI-0800

Event Code: 05E1NE00-2017-E-02715

Project Name: Walpole-Charlestown 14747

Project Type: TRANSPORTATION

Project Description: This project involves the reconstruction and associated improvements to NH Route 12 beginning at Main Street in North Walpole, continuing to NH Route 12A in Charlestown. The project proposes to widen NH Route 12 and is anticipated to require widening towards and into the Connecticut River. The project is approximately 4.5 km in length. The project will require clearing of trees, including trees with diameters larger than 3” at breast height.

Project Location: Approximate location of the project can be viewed in Google Maps: [https://www.google.com/maps/place/43.17079901669031N72.44346946651372W](https://www.google.com/maps/place/43.17079901669031N72.44346946651372W)

Counties: Cheshire, NH | Sullivan, NH
Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Mammals

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Long-eared Bat (<em>Myotis septentrionalis</em>)</td>
<td>Threatened</td>
</tr>
</tbody>
</table>

No critical habitat has been designated for this species.
Species profile: [https://ecos.fws.gov/ecp/species/9045](https://ecos.fws.gov/ecp/species/9045)

Clams

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dwarf Wedgemussel (<em>Alasmidonta heterodon</em>)</td>
<td>Endangered</td>
</tr>
</tbody>
</table>

No critical habitat has been designated for this species.
Species profile: [https://ecos.fws.gov/ecp/species/784](https://ecos.fws.gov/ecp/species/784)

Flowering Plants

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeastern Bulrush (<em>Scirpus ancistrochaetus</em>)</td>
<td>Endangered</td>
</tr>
</tbody>
</table>

No critical habitat has been designated for this species.
Species profile: [https://ecos.fws.gov/ecp/species/6715](https://ecos.fws.gov/ecp/species/6715)

Critical habitats

There are no critical habitats within your project area.
Exhibit Q:

Dwarf Wedge Mussel Survey Report
REPORT
Dwarf Wedgemussel Survey in the Connecticut River for the Route 12 Expansion Project (Walpole, New Hampshire)

INTRODUCTION

Biodrawversity completed a freshwater mussel survey in the Connecticut River along a section of Route 12 in Walpole, New Hampshire, where the New Hampshire Department of Transportation (NHDOT) is proposing to widen the roadway to accommodate safety concerns. The survey was required as part of the environmental review and permitting for the proposed road project. The target mussel species included the Dwarf Wedgemussel (*Alasmidonta heterodon*), which is listed as Endangered in New Hampshire and by the U.S. Fish and Wildlife Service (USFWS). The study had three objectives:

1. Determine if Dwarf Wedgemussels occur in the Connecticut River along the portion of the Route 12 embankment where construction is proposed.
2. Collect information on Dwarf Wedgemussel population size and habitat quality/availability to determine the possible effects of construction.
3. If Dwarf Wedgemussels were found, provide recommendations for a relocation and monitoring plan that is consistent with protocols used by the USFWS and New Hampshire Fish and Game.

METHODS

The survey was conducted on July 12, 2016. At the time of the survey, the river levels, water temperature, and water clarity were all conducive for finding mussels with visual searches. Qualitative mussel surveys were conducted along the length of the embankment where construction is proposed.
(~650 meters) in water depths ranging from 3-20 ft, and generally within 30-40 meters of the shoreline. The area was surveyed by SCUBA diving; two biologists spent approximately 12 person-hours searching for mussels in this reach. Biologists recorded mussel density, water depth, and habitat. Biologists planned to collect additional data on Dwarf Wedgemussels, but this was not necessary because Dwarf Wedgemussels were not detected during the survey.

RESULTS

Mussels: Neither live individuals, nor shells, of Dwarf Wedgemussels were found. Live individuals of three native mussel species were found: Eastern Elliptio (Elliptio complanata), Eastern Lampmussel (Lampsilis radiata), and Eastern Floater (Pyganodon cataracta). Eastern Elliptio was very dense, exceeding 100/m² in some areas, especially in the 5-12 ft depth range, and outnumbering Eastern Lampmussels by at least 20:1. Only one Eastern Floater was found.

Habitat: Shallow areas (<2 ft) were very rocky, with large angular boulders (riprap) and very few mussels. Farther offshore, the riprap was embedded in silt, with varying amounts of detritus and coarse wood. Tapegrass (Vallisneria sp.) was common in depths of 2-8 ft, and diminished in abundance in deeper water. The steep bank, with riprap and silt, extended down to a maximum depth of 17-20 ft. Most of the survey area was part of a large backwater area, thus there was no noticeable flow.

RECOMMENDATION

Based on these survey results, and results of similar surveys conducted in the lower impoundment of the Bellows Falls Dam for TransCanada in 2011, it does not appear the Dwarf Wedgemussels occur in this area of the Connecticut River. Thus, the proposed road construction project should have no effect on Dwarf Wedgemussels, and we do not recommend any further mussel surveys or monitoring.
Hi Jon,

Thanks for sending me more information on the potential wetland impacts from the reconstruction of Rt. 12 in Walpole. I don't think dwarf wedgemussels will be an issue, the habitat clearly is not DWM habitat. However, there is a possibility that the Northeastern bulrush could be present in Meany Cove, I base this on the locality, (i.e. very close to known sites) and the habitat as shown in the photos (it looks like there are some other rush species in the photos). I believe that Meany Cove was surveyed in 1993 and no plants were found. However, I don't know how much of the cove was surveyed and if water levels were optimal for finding this species. The report I have doesn't go into great detail about sites that were surveyed and no plants were found. As a first step, a habitat review should be conducted to see if other species that are generally associated with the bulrush are present (is there a "sedge meadow") and and an idea of where to focus survey efforts could be developed. If suitable habitat is present, then Meany's Cove should be surveyed in August to determine whether the bulrush is present.

I do not believe that there is suitable habitat at the fill area of Jacob's Meadow, I've never seen the bulrush in riprap. What I don't know is how the rest of the wetland would be affected by the fill. If there is a potential that the hydrology of that wetland would be affected, then it should also be surveyed for the suitable bulrush habitat. If the hydrology is not anticipated to change, then no further surveys are required at this point for the Jacob's Meadow wetland.

NHNHB may have more information in there files regarding the Meany Cove site, I don't think that Jacob's Meadow was previously surveyed, but I'm not sure.

A site visit this early in the season may not be sufficiently informative to tell us whether or not we need to survey later in the season. Melissa and Sara what do you think? If you think it is worthwhile, I will try to make the field trip, but will drive separately and limit my review to those two wetlands.

Susi

~~~~~~~~~~~~~~~~~~~~~~~~~~
Susi von Oettingen
Endangered Species Biologist
US Fish and Wildlife Service
70 Commercial St., Suite 300
Concord, NH 03301
603-223-2541 ext. 22
603-491-8219 (cell)
http://www.fws.gov/newengland

"Sometimes the questions are complicated and the answers are simple." - Dr. Seuss
Hi Susi,

Attached you will find a topographic map, photographs and a set of plans showing the wetland impacts associated with the "backwater" areas of the CT River. The existing roadway has two 11-foot wide travel lanes with no shoulders. The proposed project involves widening and shifting the roadway and railway to accommodate for two 11-foot travel lanes and two 4-foot shoulders.

The "backwater" areas of the CT River which will be impacted are marked on the topo map. These impacts are all associated with moving and reconstructing the roadway/railway embankments to accommodate for the proposed roadway widening.

The road and railroad will be shifted slightly to the east in the area of the Jabes Meadow Brook wetland requiring approximately 4,958 s.f. of wetland impacts. This wetland is classified as palustrine, open water and is connected to the CT River by a 66-inch, concrete box culvert beneath roadway/railway corridor. This wetland is approximately 5-6 feet deep and the shoreline/bank of the impacted area consists mostly of class A or B rip-rap with some vegetation.

The road will be shifted slightly to the west in the Meany's Cove area. This area has two wetlands which will be affected by the project, both of which are classified as palustrine, open water. These wetlands have been identified on the topo map as the northern and southern Meany's Cove wetlands. The project is expected to require wetland impacts of approximately 3,617 s.f. to the northern wetland and 2780 s.f. to the southern wetland. Both wetlands are approximately 3-4 feet deep with a mucky substrate. Meany's Cove is hydraulically connected to the river via the southern end of the cove.

As I mentioned before, the entire project is expected to require approximately one acre (43,607 s.f.) of wetland impacts, most of which are associated with small intermittent streams, draining water off of Fall Mountain, beneath the roadway/railway corridor.

Please review this information and let me know if you feel further coordination with the USF&WS regarding dwarf wedgemussels is necessary and if you have any objections to processing the wetlands permit under the NH Programmatic General Permit. Also, should you have any questions or would like to perform a field review of the project please let me know.

Thanks again.

-Jon

-----Original Message-----
From: Susi_vonOettingen@fws.gov [mailto:Susi_vonOettingen@fws.gov]
Sent: Monday, April 26, 2010 1:07 PM
To: Jonathan Evans
Cc: Rich Roach (E-mail)
Subject: RE: Walpole-Charlestown 14747 LCHIP and NHNHB/USF&WS Field Review

Hi Jon,

Thanks for the information about the dwarf wedgemussel. I am very interested in the impacts to the Connecticut River because DWM are present. However, I'm not sure what you mean about "backwater". Can you send me location information for these areas - do you have photos, habitat descriptions? Once I have a better understanding about that, I can assess whether or not I need to do a more thorough review or participate in a site visit (the visit would be most productive under low flow conditions if we think mussels may be impacted).

Susi

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Susi von Oettingen
Endangered Species Biologist
US Fish and Wildlife Service
70 Commercial St., Suite 300
Concord, NH 03301
Susi, 

Thank you for getting back to me. Both DRED and the NHNHB have also indicated that they do not believe the Northeastern bulrush is present on the subject portion of the property and therefore will not be impacted. NHNHB plans to check this area and the rest of the project to make sure that this species will not be impacted. Should the results of this investigation turn up any potential impacts the Department will contact you for further review.

Also, we did get a hit for dwarf wedgemussels in the area. We will be impacting several backwater areas of the CT River, but will not be impacting the main channel. I plan to do a field review with EPA, the Army Corps, NHDES and possibly NHF&G. Would you like to be included in this review, or should I ask NHF&G to take the lead for the wedgemussels?

We need to determine if an individual Army Corps permit will be necessary. The overall project has been reviewed extensively with the public, local officials and the Connecticut River Joint Commissions. Over the last several years these individuals and organizations have assisted us in developing the preferred alternative. We expect that approximately 1 acre of wetlands will be impacted as a result of this project. Most of these wetlands are small intermittent streams which drain water off Fall Mountain beneath the railroad and the roadway. The Department is confident that the chosen alternative is one with substantial public support that adequately addresses the project purpose and need while still taking into account the environmental and cultural resources which are, or may be present within the project area.

Rich Roach has indicated that he would like to know if the USF&WS has any concerns that would necessitate an individual Army Corps permit or if the project could be covered by the NH Programmatic General Permit. Please let me know if the USF&WS has any objections to PGP coverage.

Should you have any questions, please let me know.

Thanks,
Jon

Jonathan Evans
Senior Environmental Manager
NH Department of Transportation
Bureau of Environment
Phone: (603)271-4048
Fax:(603)271-7199

-----Original Message-----
From: Susi_vonOettingen@fws.gov [mailto:Susi_vonOettingen@fws.gov]
Sent: Monday, April 26, 2010 11:36 AM
To: Bob Spoerl; Bill Carpenter; dturcott@lchip.org; Jonathan Evans; Krista Helmboldt; Melissa L. Coppola; rilg@lchip.org
Subject: RE: Walpole-Charlestown 14747 LCHIP and NHNHB/USF&WS Field Review

Hi,
I reviewed the site plans and it appears that no endangered species or endangered species habitat will be affected by the proposed reconstruction of Rt. 12. Therefore, I do not believe my participation at the site visit is necessary at this time. The wetlands that host the endangered Northeastern bulrush are in the interior of the TNC property. If however, wetlands along Rt 12 may be affected, they should be checked just incase there is an unknown population. I am available for technical assistance if needed, but given my schedule and the dates provided below, my attendance at the site visit isn’t possible (or necessary).

Thank you for providing me the information and opportunity to review the project.

Susi

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Susi von Oettingen
Endangered Species Biologist
US Fish and Wildlife Service
70 Commercial St., Suite 300
Concord, NH 03301
603-223-2541 ext. 22
603-491-8219 (cell)
http://www.fws.gov/newengland

"Sometimes the questions are complicated and the answers are simple." - Dr. Seuss

"Bob Spoerl"
<Robert.Spoerl@dred.state.nh.us>

04/22/2010 10:27 AM

The 13th works for me also

bob

Robert Spoerl
Land Agent
Land Management Bureau, NH Forests and Lands
603-271-2214
bob.spoerl@dred.state.nh.us
-----Original Message-----
From: Bill Carpenter
Sent: Wednesday, April 21, 2010 1:39 PM
To: 'Krista Helmboldt'; Jonathan Evans; Bob Spoerl; dturcott@lchip.org; Melissa L. Coppola; rilg@lchip.org; Sussana von Oettingen (E-mail)
Subject: RE: Walpole-Charlestown 14747 LCHIP and NHNHB/USF&WS Field Review

At the moment I can make the 10th, 13th or the 17th...the 13th is most desirable for me.

Thanks..Bill
-----Original Message-----
From: Krista Helmboldt [mailto:khelmboldt@TNC.ORG]
Sent: Tuesday, April 20, 2010 12:56 PM
To: Jonathan Evans; Bob Spoerl; dturcott@lchip.org; Bill Carpenter; Melissa L. Coppola; rilg@lchip.org; Sussana von Oettingen (E-mail)
Subject: RE: Walpole-Charlestown 14747 LCHIP and NHNHB/USF&WS Field Review

Hello, Jon ~

I am available on all days, but on the 13th, I would not be able to leave Concord until 9:45. Also, given another project I am working on, I have a preference for the later dates rather than the earlier dates.

Thank you.

~ Krista

From: Jonathan Evans [mailto:JEvans@dot.state.nh.us]
Sent: Friday, April 16, 2010 11:01 AM
To: Bob Spoerl; dturcott@lchip.org; Krista Helmboldt; bcarpenter@dred.state.nh.us; Melissa L. Coppola (E-mail); rilg@lchip.org; Sussana von Oettingen (E-mail)
Subject: Walpole-Charlestown 14747 LCHIP and NHNHB/USF&WS Field Review

Ladies and gentleman,

As most of you already know the NH Department of Transportation (NHDOT) is planning the reconstruction of NH Route 12 in the Towns of Walpole and Charlestown, NH. This project begins at the Main Street intersection in North Walpole and proceeds north approximately 2.5 miles along NH Route 12 to its intersection with NH Route 12A in Charlestown. This project is expected to impact approximately 3.7 acres of a 477 acre property owned by the State of NH Dept. of Resources and Economic Development, with a conservation easement held by the Nature Conservancy, on which the USFWS holds a Grant Agreement to protect the federally endangered Scirpus ancistrochaetus and LCHIP has an executory interest.

Please find the attached plan sheets highlighting the property in question (identified as parcel 12). Our records indicate that the tax map and lot number for this property is 1505/230 261-1.

At the request of several of you, I would like to set up a field review of this property. I am looking at the following dates for this review: Friday May 7th, Monday May 10th, Thursday May 13 or Monday May 17th.

I can provide transportation from the NHDOT headquarters in Concord, to the site for anyone interested. I anticipate leaving at 9AM and returning no later than 2PM.

Please let me know if you would like to attend this field review and if so, which (if any) of the above dates would work.

Thank you,

Jon

~~~~~~~~~~
Jonathan Evans
Senior Environmental Manager
NH Department of Transportation
Bureau of Environment
Phone: (603)271-4048
Fax:(603)271-7199

Exhibit R:

United States Fish and Wildlife Service (USFWS) Correspondence
Hello Susi,

Thank you for your email. I will ask Jon to keep a copy of this email to document USFWS concurrence with the determination that the new Walpole project design is anticipated to have no effect on the Northeastern bulrush and no effect on the Dwarf wedgemussel. The project has been determined to be not likely to adversely affect NLEB (in accordance with the FHWA Programmatic Agreement), as the acoustic survey resulted in likely absence of NLEB in the survey area.

I uploaded the NLEB, Northeastern bulrush and the Dwarf wedgemussel surveys to IPaC under the project documents. The upload tool is easy to use. I will spread the word here that uploading documents (like habitat surveys) is helpful.

Thank you,

Rebecca

Hi Rebecca,

This responds to your request for review of the 2015 NLEB survey with regards to the revised project location. Thank you for clarifying the project description and your request in our telephone conversation this morning.

The 2015 acoustic survey covered the area that would be affected by the revised project. I would agree, that no further survey is necessary since NLEB was not detected. Given the low population of this species, we would not anticipate that NLEB would have moved into the project area subsequent to the survey. Currently, we assume survey results are good for up to 5 years.

No further consultation on this project is necessary. Thank you for the updated information and your cooperation.

Sincerely,

Susi von Oettingen
On Thu, Jul 13, 2017 at 7:57 AM, Martin, Rebecca <Rebecca.Martin@dot.nh.gov> wrote:

Good morning Susi,

I am writing to inquire if you have had an opportunity to review the determination of Not likely to adversely affect (based on a negative P/A survey) Northern long-eared bat, No Effect for Northeastern bulrush and No effect for Dwarf wedgemussel for the new Walpole-Charlestown 14747 scope? This new design is in the same general area as the previous, but proposes to widen the roadway to the west, away from the railroad and into the area adjacent to the Connecticut River and in some locations impacting the Connecticut River. The previous design was similar in the middle section, but in the northern and southern had moved the road away from the River.

Thank you,

Rebecca Martin

Environmental Manager

NH DOT Bureau of Environment

7 Hazen Drive

Concord, NH 03302

(603)271-6781

Rebecca.Martin@dot.nh.gov
Hello Susi,

You and I had previously corresponded in regards to the Walpole-Charlestown Project (14747) for review of project activities with potential to impact the Northern Long-Eared Bat. You may remember that this project involves the reconstruction and associated improvements to NH Route 12 beginning at Main Street in North Walpole, continuing to NH Route 12A in Charlestown. According to IPaC (Consultation Code: 05E1NE00-2016-SLI-0800), there are three threatened or endangered species with potential for presence in the proposed action area (Northern Long-eared Bat (*Myotis septentrionalis*), Dwarf Wedgemussel (*Alasmidonta heterodon*), and Northeastern Bulrush (*Scirpus ancistrochaetus*)). My colleague, Jon Evans, has previously coordinated with you for this project in regards to Dwarf Wedgemussel and Northeastern Bulrush.

The proposed project design has changed since our previous coordination, and so, I am writing to request to update the USFWS consultation for the 14747 project for the species noted in the Official Species List. The new project design is to widen the roadway to the west, away from the railroad to obtain the necessary additional pavement width to accommodate two 12-foot travel lanes and two 4-foot shoulders. The new preferred alternative involves shifting the roadway to the west, towards and, in some locations, into the Connecticut River to allow for the increased roadway width and to stabilize the riverbanks/roadway embankments. The project also proposes to fix the failing slopes between the Connecticut River and NH Route 12 in the southern portion of the project. This differs from the previous proposed design, which was communicated to USF&W in 2010 and 2016, and entailed shifting the roadway and the railroad to the east in the southern and northern portions of the project and slightly to the west within the middle portion. The need and purpose of the project (widening the roadway and adding shoulders) has not changed, but the project area has shifted to include more of the area west of NH Route 12 near the Connecticut River.

A set of wetland impact plans detailing the proposed work can be found here:
https://www.nh.gov/dot/org/projectdevelopment/environment/units/program-management/wetland-applications.htm

The area where the current project impacts are proposed was included in the linear acoustic survey completed in the summer of 2015, the results of which were previously submitted. The project was previously submitted in accordance with the Range-wide Programmatic Informal Consultation for NLEB as NLAA. The NLAA determination was based on the negative outcome of manual vetting for the acoustic survey data that was
completed by Northern Stewards resulting in assumed absence of NLEB (submitted 1/15/2016). Since the current project impacts are within the linear project area previously surveyed, the results of the survey (negative) continue to pertain. Please find the attached NLEB project submittal form indicating that the proposed project is not likely to adversely affect (NLAA) the NLEB.

You may recall previous coordination with Jon Evans in regards to the previous project scope and potential impacts to northeastern bulrush and the dwarf wedgemussel. Please find attached the results from the most recent mussel and northeastern bulrush studies, which were conducted last summer (2016) under the current proposed design. The survey for dwarf wedgemussels found neither live individuals, nor shells, of dwarf wedgemussels and recommended that dwarf wedgemussels do not appear to occur in the area. Therefore, the new project design is expected to have no effect on the dwarf wedgemussel. The survey for the northeastern bulrush found that the proposed project design impact area does not seem to include the preferred habitat of the northeastern bulrush. Further, when the potential habitat in the impacted area was investigated, no northeastern bulrush populations were observed. Therefore, no effects to the northeastern bulrush are anticipated to result from the project as proposed. We have also attached some past coordination with USF&W regarding the northeastern bulrush and the dwarf wedgemussel.

Can you please review these materials and let me know if you have any questions or concerns? Please let me know if you would like all of the attachments to be submitted in paper copy or perhaps only the NLEB Project Submittal Form?

We appreciate your assistance and look forward to your response.

Regards,

Rebecca Martin
Environmental Manager
NH DOT Bureau of Environment
7 Hazen Drive
Concord, NH 03302
(603)271-6781
Rebecca.Martin@dot.nh.gov
Good afternoon Susi,

Please find attached the Acoustic Survey Report and Project Submittal Form for the Walpole-Charlestown 14747 project. Qualitative Analysis, completed by Northern Stewards, concluded that NLEB are not considered likely to be present in the survey area (no visual confirmation). Since the qualitative analysis did not yield visual confirmation of NLEB, according to the USFWS Survey Guidelines, probable absence of NLEB is assumed and no further summer surveys are necessary. Based on the survey results, the project has been determined to be Not Likely to Adversely Affect NLEB even without implementation of conservation measures in accordance with the Federal Highway Administration (FHWA) and Federal Railroad Administration (FRA) Range-wide Programmatic Informal Consultation for NLEB.

NLEB, Dwarf Wedgemussel, and Northeastern bulrush are listed on the Official Species List (attached). Previous coordination with USFWS (attached) has determined the project will have no effect on Dwarf Wedgemussel, and Northeastern bulrush. Please let me know if you have any questions.

NH DOT is aware that the Final 4(d) rule will likely alter the way that projects are reviewed for NLEB in the future. However, on a teleconference presented yesterday by USFWS the attendees were informed that the Federal Highway Administration (FHWA) and Federal Railroad Administration (FRA) Range-wide Programmatic Informal Consultation for NLEB is still in effect.

Thank you,

Rebecca Martin

Environmental Manager

NH DOT Bureau of Environment

7 Hazen Drive

Concord, NH 03302
Hi Rebecca and Jon,

The final acoustic survey report is attached for Walpole-Charlestown. Let me know if you need anything else for this project.

Best,

Christine
Hi Christine,

Thank you for the draft Acoustic Survey Report for Walpole-Charlestown, it includes all of the USFWS required elements and is well written. We have a few comments, which are attached. Some of these are similar to the Newington-Dover comments regarding comparing available habitat to home range to roosting habitat. Please let me know if you have any questions.

Thank you,

Rebecca Martin
Environmental Manager
NH DOT Bureau of Environment
7 Hazen Drive
Concord, NH 03302
(603)271-6781
rmartin@dot.state.nh.us

From: Christine J. Perron [mailto:CPerron@mjinc.com]
Sent: Friday, November 20, 2015 11:38 AM
To: Rebecca A. Martin; Jonathan Evans
Cc: Kevin Nyhan; Ronald Crickard; Jed S. Merrow
Subject: Walpole-Charlestown 14747 - Draft acoustic survey report

Good morning,

The draft Acoustic Survey Report is attached for Walpole-Charlestown. I look forward to your comments!

Thank you,
Christine
Christine Perron • Senior Environmental Analyst

McFarland Johnson

53 Regional Drive • Concord, NH 03301
OFFICE: 603-225-2978 ext. 128

www.mjinc.com
Exhibit S:

Aquatic Plant Survey Report
August 18, 2015

Mr. Jonathan Evans
Project Manager
NH Department Of Transportation
P.O. Box 483
7 Hazen Drive
Concord, NH 03302-0483

Re: NH DOT Project No. 14747
NH Route 12 Walpole to Charlestown
Aquatic Plant Survey

Dear Mr. Evans,

Stoney Ridge Environmental LLC (SRE) is submitting this letter report to document the results of field surveys for two aquatic bed plants which the New Hampshire Natural Heritage Bureau records indicated could be present within the immediate vicinity of the project area surrounding NH Route 12. Record of grass-leaved mud plantain (Heteranthera dubia) and long-leaved pondweed (Potamogeton nodosus) occurs in areas of the Connecticut River and Wetlands within the vicinity of the project area. SRE conducted a survey for these plants on August 6 and 12, 2015 in the general vicinity of the survey areas highlighted on the NH DOT aerial photo mapping provide to SRE by you. Suitable habitat and potential locations of these plants were identified during a land-based survey on August 6, 2015. Based on the observations of this survey and the project mapping provided by NH DOT a water-based survey, from kayaks, was conducted for specific locations on August 12, 2015. The survey occurred at the height of the grass-leaved mud plantain flowering period (early August) and within the flowering period of long-leaved pondweed (July through early September).

Suitable habitat for grass-leaved mud plantain is described as submerged shore, mudflat or sediment bar habitats in 0-4 feet of water. It is easily recognized as having aquatic leaves without mid-veins and yellow flowers. Suitable habitat for long-leaved pondweed is described as four or more feet of water over a mucky, soft bottom.

No grass-leaved mud plantain plants or communities were observed on either day of surveys. All areas with the appropriate water depth range were established with water celery (Vallisneria americana), yellow water lily (Nuphar lutea), elodea (Elodea sp.) and white water lily (Nymphaea alba) and in shallower water by arrow arum (Peltandra virginica), pickerelweed (Pontederia cordata) and duck potato (Sagittaria lancifolia). Areas 1, 2 and 3 were of an
appropriate depth however, yellow water lily was dominant and so numerous as to the point of shading the aquatic bed. The emergent and aquatic bed wetlands in areas 5 and 7 had appropriate water depths for grass-leaved mud plantain however; these areas were dominated by pickerelweed, duck potato and broad-leaved cattail (*Typha latifolia*). The Connecticut River adjacent wetlands from Area 4 and 6 were suitable habitat for long-leaved pondweed. Several hours were spent surveying this area from the water and two other species of pondweed bassweed (*Potageton amplifolius*) and floating pondweed (*Potamogeton natans*) were observed however, no long-leaved pond weed was observed.

![A view of Area 4 from atop the concrete headwall. Note aquatic bed plants are present in the area, particularly tape grass (*Vallisneria Americana*).](image1)

The floating leaves of pondweeds as observed from the western roadway embankment on August 6, 2015.
In the vicinity of Area 6. Note the floating pondweed leaves in the foreground. These were identified as bassweed.

Areas 1, 2, 3, 5 and 7 were surveyed but none of the protected species were observed and the plant communities present were not consistent with described suitable habitat of either grass-leaved mud plantain or long-leaved pondweed.

If there are any additional questions regarding this project, please feel free to contact us at (603) 776-5825.

Sincerely,
Stoney Ridge Environmental, LLC

Cynthia M. Balcius CSS, CWS, CPESC
Senior Project Manager

Richard Bolton
Project Manager
Exhibit T:

Bald Eagle Correspondence
From: Matt Lundsted  
Sent: Friday, August 4, 2017 10:31 AM  
To: Matt Lundsted  
Subject: FW: Walpole-Charlestown, 14747, Field Review (Bald Eagles) NHB14-3112, NHB16-3895

From: Tuttle, Kim  
Sent: Tuesday, August 01, 2017 3:16 PM  
To: Evans, Jonathan  
Cc: Henderson, Carol  
Subject: RE: Walpole-Charlestown, 14747, Field Review (Bald Eagles) NHB14-3112, NHB16-3895

Hello Jonathan,

There is a bald eagle nest located on the VT side about 1/2 mile NW of the northern end of the project area. I consulted with NHA eagle biologist Chris Martin, who didn't see much potential for negative impacts on eagles from this project other than some occasional displacement from day perch sites in spots where the road and river are closest to one another. Retaining mature river-edge trees (dead or alive) as much as possible is our recommendation. We concur with the finding of no anticipated impact to dwarf wedgemussel based on the Biodrawversity freshwater mussel survey conducted on July 12, 2016 in the Connecticut River along the portion of the Route 12 embankment where construction is proposed.

Regards,

Kim Tuttle  
Wildlife Biologist  
NH Fish and Game  
11 Hazen Drive  
Concord, NH 03301  
603-271-6544

-----Original Message-----
From: Evans, Jonathan  
Sent: Tuesday, August 1, 2017 2:05 PM  
To: Tuttle, Kim  
Cc: Henderson, Carol  
Subject: RE: Walpole-Charlestown, 14747, Field Review (Bald Eagles) NHB14-3112

Hi Kim,

As you may recall we coordinated back in 2014 regarding a project along NH Route 12 in Walpole and Charlestown (please see the below e-mail chain). As you may recall, this project previously involved shifting the New England Central Railroad (an active Amtrak line) and several Sections of NH Route 12 away from the CT River and into the hillside of Fall Mountain. Since that time through refinements during final design, the Department realized that this alternative was no longer feasible due to the extensive costs and constructability of removing the large quantities of rock along the Fall Mountain hillside adjacent to an active railroad line. As such we were forced to redesign the project to shift slightly
away from the railroad to accommodate for the necessary roadway widening and to address the existing slope stability issues between the CT River and NH Route 12.

As you may recall there were some concerns regarding the presence of Bald Eagles along the CT River throughout this region. As such back in 2014 we conducted an inventory of all pine trees over 12" d.b.h. along the western edge of the roadway. Attached you will find a plan showing the locations of these trees (green dots) as well as the approximate limits of construction based upon the earlier design (in orange) and the new approximate project limits (in Red). As you can see, it appears that there are only one or two additional pine trees greater than 12" d.b.h. that would be impacted as a result of the updated project design.

Also, attached, please find the most recent NHB search, the results from the updated Dwarf Wedge Mussel survey for the new project design as well as coordination from USF&W indicating that no further coordination is necessary.

I have cc'd Carol Henderson on this e-mail as she has been involved with the resource agency coordination meetings regarding this project and the recent redesign and might be able to assist you with some of the details.

Could you please review all of this information and let me know if NHF&G has any concerns regarding the updated project design?

Thank you. Should you have any questions or need any additional information, please do not hesitate to ask.

-Jon

Jonathan Evans, Air & Noise Program Manager NH Department of Transportation, Bureau of Environment
7 Hazen Dr., PO Box 483, Concord, NH 03302-0483
Email: Jonathan.Evans@dot.nh.gov
Phone: (603)271-4048 M-F 7AM-3PM

-----Original Message-----
From: Tuttle, Kim [mailto:Kim.Tuttle@wildlife.nh.gov]
Sent: Wednesday, August 27, 2014 1:52 PM
To: Jonathan Evans
Subject: Walpole-Charlestown, 14747, Field Review (Bald Eagles) NHB14-3112

Jonathan,

The NHFG Nongame and Endangered Wildlife Program has reviewed NHB14-3112 for the proposed relocation of the New England Central Railroad and NH Route 12 between the towns of Walpole and Charlestown, NH. The NHB database check indicated the state and federally endangered dwarf wedgemussel and the state threatened bald eagle in the vicinity of the project. We concur with the 2010 finding by Susi von Oettingen, USFWS, of no expected impact to dwarf wedgemussel as habitat does not appear to be present. The situation with eagle use in that section has not changed much, with one exception. Evidently the nest located on the VT side of the river just above Roundy's Cove has fallen from the tree. It is unclear at this point where the resident pair of bald eagles will construct a new nest. They have used 4 separate locations since the mid-2000s. There is a possibility they might select a tree located on the NH side of the river and nearer to Rte 12, which could create some issues. Just be aware of this as a possibility - any bald eagles carrying sticks or other nesting materials on the NH side of the river should be immediately reported to us so that we can follow up.

Please feel free to call me if you have any questions regarding this review.

Sincerely,
Kim Tuttle  
Certified Wildlife Biologist  
NH Fish and Game  
11 Hazen Drive  
Concord, NH 03301  
603-271-6544

-----Original Message-----
From: Jonathan Evans [mailto:JEvans@dot.state.nh.us]
Sent: Monday, August 25, 2014 12:13 PM
To: Tuttle, Kim
Cc: Henderson, Carol
Subject: RE: FW: Walpole-Charlestown, 14747, Field Review (Bald Eagles)

Hi Kim,

Attached is an aerial photo showing the maximum extent of the proposed right-of-way and/or drainage/construction easements necessary to construct the subject project. It is unlikely that this project will require disturbance of this entire area, however this outline should hopefully give you an idea of the maximum possible extent of impact. This aerial photo also shows the results of the tree inventory conducted on 8/18/14. Per our discussion several weeks ago, this inventory includes all pines over 12" d.b.h. adjacent to the western side of the roadway. Several of the trees were inaccessible to the surveyor as they were located on private property or in an area that was unsafe to access. The approximate location of these trees are noted on the map.

Also attached, please find an updated NHHNB search as well as the original 2009 NHB search and some subsequent coordination with the USF&WS.

To answer your below question, yes, the project location/design has not changed from that which we looked at during our site walk a few years ago. The only changes that have been made are to further refine the drainage within the footprint that was previously reviewed.

Please take a look at this information and let me know if you have any further questions or concerns regarding any of the species highlighted in the updated NHB search.

Thanks,
Jon

~~~~~~~~~~
Jonathan Evans  
Air & Noise Program Manager  
NH Department of Transportation  
Bureau of Environment  
7 Hazen Dr., PO Box 483  
Concord, NH 03302-0483  
Email: jevans@dot.state.nh.us  
Phone: (603)271-4048 M-F 7AM-3PM  
Fax:(603)271-7199

-----Original Message-----
From: Tuttle, Kim [mailto:Kim.Tuttle@wildlife.nh.gov]
Sent: Friday, August 22, 2014 11:53 AM
To: Jonathan Evans
Subject: RE: FW: Walpole-Charlestown, 14747, Field Review (Bald Eagles)
Hi Jon,

Can you clarify for me if the project location /tree clearing, etc. is basically the same as what we looked at on our site walk a few years ago? Has the job shifted further to the east vs what we looked at back then?

Thanks,
Kim

-----Original Message-----
From: Tuttle, Kim [mailto:Kim.Tuttle@wildlife.nh.gov]
Sent: Wednesday, August 13, 2014 1:55 PM
To: Jonathan Evans
Cc: Henderson, Carol
Subject: RE: FW: Walpole-Charlestown, 14747, Field Review (Bald Eagles)

Jonathan,

Do you have an updated NHB file number? I'll also need an aerial view of the site. I will then send it out to the eagle biologist and see if we will still require the inventory. The eagle nest and roosting sites in this area may have changed in the last 4 years.

Kim

Kim Tuttle
Certified Wildlife Biologist
NH Fish and Game
11 Hazen Drive
Concord, NH 03301
603-271-6544

-----Original Message-----
From: Jonathan Evans [mailto:JEvans@dot.state.nh.us]
Sent: Wednesday, August 13, 2014 1:49 PM
To: Tuttle, Kim
Cc: Henderson, Carol
Subject: RE: FW: Walpole-Charlestown, 14747, Field Review (Bald Eagles)

Hi Kim,

Hopefully you may recall the subject project which involves relocation of the New England Central Railroad and NH Route 12 between the towns of Walpole and Charlestown, NH. If you need a refresher there is quite a bit of information on the project's website at: http://www.nh.gov/dot/projects/walpole14747/index.htm A plan showing the proposed project can be found here: http://www.nh.gov/dot/projects/walpole14747/documents/draft_public_hearing_planlr.pdf

As you may recall, you indicated that due to the presence of Bald Eagle activity along the CT River in this area, we need to do a tree inventory of any trees over 8" d.b.h. that will be removed from the west side of the existing roadway. Fortunately the majority of the work involved in this project will require a shift of the railroad and roadway to the east of their existing locations, so there shouldn't be much clearing to the west. Now that we have a good handle on the limits of any necessary clearing, the Department plans on completing this inventory in the near future.
My question to you is what exactly are you looking for in this inventory and how would you like this information relayed? I envision using GPS to locate each tree over 8" d.b.h. and then providing this in a ArcMap GIS file. Is this acceptable to you? Would you like any other information on these trees (i.e. species, tree condition, etc.)?

Thank you very much for your help.

-Jon

Jonathan Evans
Air & Noise Program Manager
NH Department of Transportation
Bureau of Environment
7 Hazen Dr., PO Box 483
Concord, NH 03302-0483
Email: jevans@dot.state.nh.us
Phone: (603)271-4048 M-F 7AM-3PM
Fax:(603)271-7199

-----Original Message-----
From: Tuttle, Kim [mailto:Kim.Tuttle@wildlife.nh.gov]
Sent: Thursday, May 06, 2010 3:44 PM
To: Jonathan Evans
Cc: Henderson, Carol; Marchand, Michael
Subject: RE: FW: Walpole-Charlestown, 14747, Field Review (Bald Eagles)

Jon,

Thank you for the additional information. I will be attending the site walk on May 18th to evaluate for potential eagle impacts. The Vermont nesting pair is known to use the Connecticut River shoreline trees on the NH side throughout the whole length of the proposed project. We will need an inventory of any trees over 8" d.b.h. proposed to be removed west of the existing roadway. Tree removal should be kept to an absolute minimum here as any large trees along the shoreline may be used by the state threatened bald eagle for perching, roosting or future nest trees.

Sincerely,

Kim Tuttle
Wildlife Biologist
NH Fish and Game
Nongame and Endangered Species Program
603-271-6544

-----Original Message-----
From: Jonathan Evans [mailto:JEvans@dot.state.nh.us]
Sent: Thursday, May 06, 2010 2:56 PM
To: cmartin@nhaudubon.org
Cc: Henderson, Carol; Tuttle, Kim
Subject: RE: FW: Walpole-Charlestown, 14747, Field Review (Bald Eagles)

Chris,
Thank you for providing the below information regarding potential Bald Eagle impacts. I noticed that you were under the impression that the areas highlighted on the sheet were our only wetland impacts. The map was developed for the purposes of identifying potential impacts to dwarf wedgemussel habitat and northeastern bulrush habitat. The entire project is expected to require approximately 1 acre of wetland impacts, most of which are associated with intermittent or perennial streams carrying water off the hillside to the east and beneath the existing corridor. So, the wetland impacts associated with the project will be those highlighted on the map as well as to those associated with intermittent and perennial streams and some forested wetlands to the east of the tracks.

Please note that there will be a substantial amount of clearing to the east of the tracks (on the hillside) along the southern 1/3 of the project and to some degree along the northern 1/3. Clearing to the west of the existing roadway will be mostly limited to the Meany's Cove area.

This is required as we need to first construct a new railroad adjacent to the existing tracks, relocate the railroad operations to the new track, remove the old track and then move the existing roadway. A set of plans showing this is available on the departments website at:


The areas on this plan highlighted in green indicate areas of slope work which will require clearing.

Do your records indicate the presence of any documented nesting or roosting trees which may potentially impacted by the proposed project.

I realize that this is a rather difficult assessment to make from the office. If this is the case, we will be conducting a field visit on May 18th which I welcome you to attend. I am unsure if Kim will be attending, but if she is, she may also be able to offer her advice.

Thank you again for your assistance.

Sincerely,
Jon Evans
~~~~~~~~~~~~
Jonathan Evans
Senior Environmental Manager
NH Department of Transportation
Bureau of Environment
Phone: (603)271-4048
Fax:(603)271-7199

-----Original Message-----
From: Henderson, Carol [mailto:Carol.Henderson@wildlife.nh.gov]
Sent: Thursday, May 06, 2010 1:52 PM
To: Jonathan Evans
Subject: FW: FW: Walpole-Charlestown, 14747, Field Review

Hi Jon:

FYI

Carol Henderson
NH Fish and Game Department
11 Hazen Drive, Concord, NH 03301
603-271-3511
carol.henderson@wildlife.nh.gov

-----Original Message-----
From: Tuttle, Kim  
Sent: Thursday, May 06, 2010 1:16 PM  
To: Henderson, Carol  
Subject: FW: FW: Walpole-Charlestown, 14747, Field Review  

FYI. Kim  

-----Original Message-----  
From: Christian Martin  
Sent: Thursday, May 06, 2010 11:16 AM  
To: Tuttle, Kim  
Subject: Re: FW: Walpole-Charlestown, 14747, Field Review  

Kim -  

The area is within (but not at the core of) an documented active bald eagle breeding territory. The pair has nested at several different locations (all in VT) for 6 consecutive years since 2005. If the impacts to wetlands are truly limited to just the 3 spots described (limited encroachment at Jabes, Meany N, and Meany S wetlands), then there should be no issues for bald eagles.  

As usual, my biggest concerns are that large dbh perch/roost/potential nest trees are preserved in all cases.  

Please let me know if this is sufficient detail, or if I can offer any more info that would assist.  

- Chris  

Chris Martin, Senior Biologist, Conservation Department New Hampshire Audubon, 3 Silk Farm Road, Concord, NH 03301  

Phone: 603/224-9909 x317; Fax: 603/226-0902;  
E-mail: cmartin@nhaudubon.org; Web: www.nhaudubon.org  


>>> "Tuttle, Kim" <Kim.Tuttle@wildlife.nh.gov> 05/04/2010 11:22 AM >>>  
Any eagle issues here? Big road realignment along the Connecticut River.  

______________________________  

From: Jonathan Evans  
Sent: Tuesday, May 04, 2010 7:54 AM  
To: Tuttle, Kim  
Cc: Henderson, Carol  
Subject: RE: Walpole-Charlestown, 14747, Field Review  

Hi Kim,  

Attached are both NHNHB checks (2007 & 2009). I have also attached my most recent correspondence with Susi as well as the information which I provided to her for her determination. She indicated that she did not feel that the project would impact any suitable dwarf wedgemussel habitat.
Please let me know if you have any other questions.

-Jon

Jonathan Evans
Senior Environmental Manager
NH Department of Transportation
Bureau of Environment
Phone: (603)271-4048
Fax:(603)271-7199

-----Original Message-----
From: Tuttle, Kim [mailto:Kim.Tuttle@wildlife.nh.gov]
Sent: Monday, May 03, 2010 3:32 PM
To: Jonathan Evans
Subject: FW: Walpole-Charlestown, 14747, Field Review

Jon,

Is there a NHB file number for this one? For some reason, I have a very hard time querying for jobs in multiple towns on the Data Base Check Tool.

Thanks,
Kim
Kim Tuttle
Wildlife Biologist
NH Fish and Game
Nongame and Endangered Species Program
603-271-6544

________________________________

From: Henderson, Carol
Sent: Friday, April 30, 2010 9:43 AM
To: Tuttle, Kim
Subject: RE: Walpole-Charlestown, 14747, Field Review

That was what I told them as well. Yes, I plan on attending and I have invited Gabe as well for a fisheries perspective.

Carol Henderson
NH Fish and Game Department
11 Hazen Drive, Concord, NH 03301
From: Tuttle, Kim  
Sent: Friday, April 30, 2010 9:07 AM  
To: Henderson, Carol  
Subject: RE: Walpole-Charlestown, 14747, Field Review

It is probably a must that the USFWS be present as it is federally endangered species and we usually follow their lead on the project. Are you planning to attend?

Kim

From: Henderson, Carol  
Sent: Thursday, April 29, 2010 2:06 PM  
To: Tuttle, Kim  
Subject: FW: Walpole-Charlestown, 14747, Field Review

Kim:

Please see e-mail below. This field visit is to review the potential impacts to the dwarf wedge mussel. USFWS have been invited in attending, would you be interested as well?

Carol Henderson  
NH Fish and Game Department  
11 Hazen Drive, Concord, NH  03301  
603-271-3511  
carol.henderson@wildlife.nh.gov
All,

As was discussed at the April Natural Resource Agency Coordination Meeting, I would like to set up a field review of the Walpole-Charlestown NH Route 12 reconstruction project. In the interest of keeping the project moving I would like to shoot for sometime in early to mid May. I anticipate that we would leave Concord at approximately 9AM and return no later than 3PM. Please let me know if you would like to attend this field review and if so, your availability during this time frame.

Thank you for your assistance.

-Jon

~~~~~~~~~~~~~~~~~~
Jonathan Evans
Senior Environmental Manager
NH Department of Transportation
Bureau of Environment
Phone: (603)271-4048
Fax:(603)271-7199
Exhibit U:

Northern Bulrush Correspondence
RE: Walpole Charlestown NHDOT #14747/A; Northeastern Bulrush Survey

Field Report: Northeastern Bulrush Survey (*Scirpus ancistrochaetus*), Route 12, Walpole/Charlestown, NH

Introduction: The proposed project involves the expansion of Route 12 for approximately 3 miles to improve safety. The proposed expansion includes the widening of the roadway along the eastern bank of the Connecticut River. The survey summarized below was required as part of the environmental review and permitting for the proposed project.

Purpose: The Northeastern Bulrush (*Scirpus ancistrochaetus*) is a federal and state listed Endangered Species by the New Hampshire Natural Heritage Bureau and the U.S. Fish & Wildlife Service. As of 2013 there were 7 known sites in New Hampshire. CEI completed this survey of *S. ancistrochaetus* to identify potential habitat and document the existence of any populations present along the proposed impact route.

Field Methods: CEI staff investigated potential habitat along the proposed Route 12 impact route adjacent to the Connecticut River eastern shoreline on several occasions in July and October of 2016. Potential *S. ancistrochaetus* habitat was observed. Additionally, wetland resource delineations and invasive species mapping completed previously along the proposed impact route were reviewed and confirmed or adjusted based on current field observations. The map included in this field memo identifies the main route observed.

Species: *S. ancistrochaetus* is a federal and state listed endangered perennial sedge that has documented populations in the northeastern states of NH, VT, MA, MD, PA, VA and WV. It is tall and can grow to over one meter in height with narrow leaves and a drooping inflorescence. The species has a distinct achene with six bristles. It prefers a well inundated wetland habitat with fluctuating water levels.

Results: The proposed impact route included the peripheral border of freshwater emergent, scrub shrub and forested wetland. Although varying water levels may be present in some of these areas as a result of the Connecticut River, it is unlikely that preferred *S. ancistrochaetus* habitat exists immediately along the proposed impact route, although habitat may exist in nearby areas. No *S. ancistrochaetus* populations were located along the study route during the CEI field visits.
**Conclusions:** It is unlikely that *S. ancistrochaetus* populations exist along the impact route as none were documented during the study period. As a result, the proposed construction along Route 12 should have no impact on *S. ancistrochaetus* and no additional survey is recommended. Should the proposed impact area be expanded or relocated to other nearby points, CEI recommends additional consideration with possible survey take place.
Hi Jon,

Thank you for providing the information regarding the LCHIP property and the Northeastern bulrush survey. Based on the survey results, no further consultation is necessary since there are no federally listed species that may be affected by the project. If you need a letter stating this, please send me a request. Otherwise, I would consider this email sufficient for the administrative record.

Please call or email if you need further assistance.

Susi von Oettingen

~~~~~~~~~~~~~~~~~~~~~~~~~~
Susi von Oettingen
Endangered Species Biologist
US Fish and Wildlife Service
70 Commercial St., Suite 300
Concord, NH 03301
603-223-2541 ext. 22
603-491-8219 (cell)
http://www.fws.gov/newengland

All,

I wanted to provide all of you with an update on the status of the proposed LCHIP property acquisition in Charlestown. As you may remember this property is part of the Fall Mountain State Forest; of which interior portions are known to contain the northeastern bulrush.

Deb Turcott-Young recently left LCHIP and Aaron Ferraro recently joined LCHIP. Aaron is trying to get up to speed on this project and the proposed impacts to the Fall Mountain State Forest. As I indicated previously, the hearing was held on July 29. We are planning on presenting the project at the September 20, 2010 meeting of the LCHIP Board of Directors for a decision on the proposed LCHIP impacts. This meeting will be at the NH Office of Energy and Planning sometime between 10AM and noon. If any of you would like to attend this meeting that would be great, but not required. Please let me know if you plan to attend so I can give you a more definitive time once I have it. Once we have
the Board's decision we can begin working on the property appraisal and the final compensation package.

Melissa Coppola and I reviewed the entire project area on Wednesday Sept. 1, 2010 for the presence of the northeastern bulrush. During this review Melissa did not find this species to be present within any areas that will be impacted by the project. She indicated that there is a possibility that the bulrush is located in unaffected portions of the wetlands adjacent to the project area, but again, no occurrences of the bulrush were found within the wetland areas that will be impacted by this project.

Should you have any questions, please feel free to let me know.

-Jon

Jonathan Evans
Senior Environmental Manager
NH Department of Transportation
Bureau of Environment
Email: jevans@dot.state.nh.us
Phone: (603)271-4048
Fax: (603)271-7199

-----Original Message-----
From: Jonathan Evans
Sent: Tuesday, August 10, 2010 9:05 AM
To: 'Bob Spoerl'; Deborah Turcott Young (E-mail); Krista Helmboldt (E-mail); Bill Carpenter; Sussana von Oettingen (E-mail)
Subject: RE: Walpole-Charlestown 14747 - NH Route 12, LCHIP, Fall Mountain State Forest

Hi Bob,

Sorry, you are right, I attached the old plans, not the new ones. The new ones are attached and are what appear on the hearing plans and in the environmental document.

Again, sorry for any confusion.

-Jon

-----Original Message-----
From: Bob Spoerl [mailto:Robert.Spoerl@dred.state.nh.us]
Sent: Tuesday, August 10, 2010 8:48 AM
To: Jonathan Evans; Deborah Turcott Young (E-mail); Krista Helmboldt (E-mail); Bill Carpenter; Sussana von Oettingen (E-mail)
Subject: RE: Walpole-Charlestown 14747 - NH Route 12, LCHIP, Fall Mountain State Forest

Jon
The attached plan still shows the easement area as two separate areas. While on site, I thought that I made it clear that DRED felt that it would be inefficient to do it that way and it should be one contiguous area.

Your thoughts?

Bob

Robert Spoerl
Land Agent
Land Management Bureau, NH Forests and Lands
603-271-2214
bob.spoerl@dred.state.nh.us
-----Original Message-----
From: Jonathan Evans [mailto:jevans@dot.state.nh.us]
Below you will find links to the environmental document, environmental document exhibits and the hearing plans for the Walpole-Charlestown NH Route 12 reconstruction project. I have also attached a copy of the requested action letter and the LCHIP property impact plans sent to Deb on July 14th. I apologize for not having sent this out earlier.

The hearing was held on July 29, 2010 and went relatively well. We received one comment during the hearing from State Representative McClammer regarding the LCHIP property impacts. He basically wanted to ensure that we have minimized our impacts and that LCHIP and the other easement holders would be adequately compensated for the impacts. We will address his comments and any additional written comments received during the two week comment period as part of the Report of the Commissioner.

Deb and I will coordinate on the responses to all the LCHIP comments. Once we have the report of the commissioner, Deb will bring the requested action to the LCHIP Board of Directors at their late September meeting. Once we have the board’s decision, we will proceed from there.

Please feel free to provide me with any comments you may have on the document (the LCHIP impacts are highlighted in the "Land Use/ Public Lands/ Conservation Lands" section of the document on page 15). This is a draft document, so any comments I receive can be addressed in the final document.

Also, if you would like a hard copy of this documentation, please let me know. If so, please let me know if you would prefer a CD with these files or if you would prefer a paper copy (keeping in mind that it is approximately 200 pages long).

Thanks again for your assistance.

Sincerely,

Jon Evans

Jonathan Evans
Senior Environmental Manager
NH Department of Transportation
Bureau of Environment
Email: jevans@dot.state.nh.us
Phone: (603)271-4048
Fax:(603)271-7199


Exhibit V:

Northern Long Eared Bat (NLEB) Correspondence
Hello Jon,

Yes I believe you will be able to use the FHWA Programmatic Consultation.

I looked through the Walpole-Charlestown Survey Report and found that there was probable presence of NLEB reported from the acoustic analysis software. The potential MYSE calls (high frequency) were sent for qualitative analysis by Northern Stewards. Of the twenty-nine files resulted in no visual confirmation of MYSE. Therefore, in accordance with Step 7 of the USFWS Summer Survey Guidelines, no further surveys are needed. We consider this a Negative P/A survey.

The FHWA Programmatic Consultation covers projects that are:

- Transportation activities > 0.5 miles of NLEB hibernacula
- All tree removal is >0.25 miles from NLEB roosts
  - The list I have from NH F&G does not include NLEB hibernacula or roost trees in Walpole or Charlestown- so as long as NLEB did not show up in your NHB search, you are all set.
- Within 300 feet of existing road/rail surfaces, unless negative P/A survey- which you have if the new project area is the same or within the boundaries of the old project.

I looked at the BO and the wording is that the Programmatic Consultation covers “Transportation activities >0.5 miles from a Indiana bat and/ or NLEB hibernaculum AND within 300 feet (ft.) of existing road/rail surfaces” with few exceptions. So it seems that project activities (not clearing) must be within 300’ unless negative P/A survey.

I should mention in case this applies to future projects- that the BO does cover a limited set of transportation activities >0.5 miles from a NLEB hibernaculum that are outside 300 ft. of existing road/rail surfaces that:

- Have **negative** presence/absence (P/A) summer surveys;
- Involve maintenance of existing facilities (e.g., rest areas, stormwater detention basins) (no new ground disturbance and no tree removal);
- Involve wetland or stream protection activities associated with compensatory wetland mitigation without any suitable habitat clearing; or
- Involve slash pile burning.

Since there was a negative result to the acoustic survey, if the project area is the same as what was originally surveyed (or shorter), you can fill out the Project Submittal Appendix B as NLAA: NLAA – project(s) are inside the range and suitable bat habitat is present, but negative bat presence/absence (P/A) surveys; must also be greater than 0.5 miles from any hibernaculum. As you will notice on the Project Submittal Appendix B this category indicates NLAA without AMMs. However, I think this was an oversight because the following AMMs are listed as required (one of the inconsistencies I mentioned):

**General AMM 1.** Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all Transportation Agency environmental commitments, including all applicable AMMs.

**Tree Removal AMM 3.** Ensure tree removal is limited to that specified in project plans. Install bright
colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits. Ensure that contractors understand clearing limits and how they are marked in the field.

Tree Removal AMM 4. Do not cut down documented Indiana bat or NLEB roosts (that are still suitable for roosting) (or trees within 0.25 miles of roosts) or documented foraging habitat any time of year.

AMM 5 and AMM6 only apply to Indiana Bat.

If you have a consultation code from IPaC you can complete the Appendix B (I can help, if you have questions) as NLAA and submit to USFWS. After 14 days you can assume concurrence.

If the project is not within the bounds of the acoustic survey, since all project activities are within 300’, the project will still be covered under the FHWA Programmatic Consultation. If they want to clear during the summer, the project would be a LAA project. The same Appendix B will be completed as LAA, but this will require a USFWS response (30 days).

Thank you for checking on the NLEB! Please let me know if you have any questions.

Rebecca Martin
Environmental Manager
NH DOT Bureau of Environment
7 Hazen Drive
Concord, NH 03302
(603)271-6781
Rebecca.Martin@dot.nh.gov

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From: Evans, Jonathan
Sent: Monday, November 28, 2016 2:14 PM
To: Martin, Rebecca
Subject: FW: Walpole-Charlestown, 14747 - Bats

Rebecca,

As a follow up to our conversation earlier, all work for the subject project will be located within 300’ of the existing roadway and preliminary clearing estimates are around 4.5 acres and are not expected to change much if at all, so they should be well below the 20 acre limit we discussed.

So, based upon this as well as your review of the previous investigations and check on whether or not the area has any known hibernacula/roosting trees, please let me know if you think this project can be covered under FHWA’s programmatic consultation process.

Again, no big rush, whenever you get a chance to take a look is fine. Thanks!

-Jon

---

From: Fifield, Samantha
Sent: Monday, November 28, 2016 1:50 PM
To: Evans, Jonathan
Subject: RE: Walpole-Charlestown, 14747 - Bats

Hi Jon,

To answer the questions below:
1) No; work will most definitely be located within 300 feet of the existing roadway.
2) No; the preliminary quantity calculation for clearing is at 4.5 AC and I seriously doubt that that quantity will jump by over 400% of the prelim quantity.

It’s nice to know that at least one issue may go away😊

Please do not hesitate to let me know if you need more information.

Best regards,
Sam
Exhibit W:

National Marine Fisheries Service Correspondence
From: Mike R Johnson - NOAA Federal [mailto:mike.r.johnson@noaa.gov]
Sent: Tuesday, March 07, 2017 8:59 AM
To: Evans, Jonathan
Cc: Sikora, Jamie (FHWA)
Subject: Re: Walpole-Charlestown, 14747 - EFH assessment worksheet

Jon,

Based upon the information in the EFH assessment, we have determined that the proposed project would have minimal adverse effect on EFH for Atlantic salmon. In addition, the project area will have minimal effects on other NOAA-trust resources, including those covered under the Fish and Wildlife Coordination Act. Therefore, we have no EFH conservation recommendations to provide to you for this action pursuant to Section 305(b)(4)(A) of the Magnuson-Stevens Act.

Thanks,
Mike

On Thu, Mar 2, 2017 at 2:48 PM, Evans, Jonathan <Jonathan.Evans@dot.nh.gov> wrote:

Mike,

Please find the attached cover letter, and EFH assessment worksheet for a proposed project along NH Route 12 in the Towns of Walpole and Charlestown NH. This project will require impacts within the Connecticut River which has been designated an EFH for Atlantic Salmon. The Department previously coordinated with your office regarding a somewhat different project design for this area back in 2010 but that was subsequently altered due to unforeseen circumstances. As such, I have also attached the 2010 EFH assessment and response from your office for your reference.

Please let me know if you have any questions. I look forward to your response.

Sincerely,

Jon Evans

~~~~~~~~~~~~
Jonathan Evans, Air & Noise Program Manager
Michael R. Johnson  
U.S. Department of Commerce  
NOAA Fisheries  
Greater Atlantic Regional Fisheries Office  
(formerly, Northeast Regional Office)  
Habitat Conservation Division  
55 Great Republic Drive  
Gloucester, MA 01930  
978-281-9130  
mike.r.johnson@noaa.gov  
http://www.greateratlantic.fisheries.noaa.gov/
Exhibit X:

Invasives Species Report
September 4, 2015

Mr. Jonathan Evans
NH Department Of Transportation
P.O. Box 483
7 Hazen Drive
Concord, NH 03302-0483

Re: NH DOT Project No. 14747
NH Route 12 Walpole to Charlestown
Invasive Plant Survey

Dear Mr. Evans,

Stoney Ridge Environmental LLC (SRE) is submitting this letter report to document the presence and distribution of plants listed as invasive by the New Hampshire Department Of Transportation (NH DOT) Best Management Practices For Roadside Invasive Plants (2008) within the surveyed area of NH DOT Project No. 14747. The surveyed area includes areas 25 feet from the toe of the roadway embankment along NH Route 12 from just south of Main Street in Charlestown to Bowen Crossing Road in Walpole. An invasive plant species map is included with this report. The location of individual invasive plants and small clusters of invasive plants are shown as points within a circle with a 15-foot radius. The larger shapes are indicative of an area where one or more invasive species is distributed throughout and is common within the plant community. The invasive species survey was conducted on August 6, 2015. The following listed invasive species were observed within the survey area:

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>tree of heaven</td>
<td>Ailanthus altissima</td>
</tr>
<tr>
<td>garlic mustard</td>
<td>Alliaria petiolata</td>
</tr>
<tr>
<td>Oriental bittersweet*</td>
<td>Celestrus orbiculatus</td>
</tr>
<tr>
<td>spotted knapweed*</td>
<td>Centurea biebersteinii</td>
</tr>
<tr>
<td>pale swallow-wort</td>
<td>Cynanchum rossicum</td>
</tr>
<tr>
<td>Morrow’s honeysuckle</td>
<td>Lonicera morrowii</td>
</tr>
<tr>
<td>purple loosestrife*</td>
<td>Lythrum salicaria</td>
</tr>
<tr>
<td>Japanese knotweed*</td>
<td>Polygonum cuspidatum</td>
</tr>
<tr>
<td>common buckthorn</td>
<td>Rhamnus cathartica</td>
</tr>
<tr>
<td>glossy buckthorn</td>
<td>Rhamnus frangula</td>
</tr>
<tr>
<td>multiflora rose</td>
<td>Rosa multiflora</td>
</tr>
</tbody>
</table>

*NH DOT Priority Invasive Plant Specie
Photo 1: Purple loosestrife is a common, but not dominant, constituent in most of the emergent wetlands throughout the northern portion of the project area particularly near the Route 12A overpass.

Photo 2: Morrow’s honeysuckle and Glossy buckthorn were pervasive throughout most of the site and in particular areas with a narrow buffer to the Connecticut River shoreline.
Four NH DOT Priority Invasive Plant Species were observed. Two of these species, Japanese knotweed and purple loosestrife are known to sprout from plant fragments. Attention to time of year and adherence to the prescribed Best Management Practices are crucial to the control of these species.

If there are any additional questions regarding this project, please feel free to contact us at (603) 776-5825.

Sincerely,

Stoney Ridge Environmental, LLC

Cynthia M. Balcius CSS, CWS, CPESC
Senior Project Manager

Richard Bolton
Project Manager
Legend
- Autumn Olive
- Glossy Buckthorn
- Japanese Knotweed
- Morrow's Honeysuckle
- Multiflora Rose
- Pale Swallow-wort
- Purple Loosestrife
Exhibit Y:

NH Office of Energy and Planning Memo and Flood Insurance Rate Maps (FIRM)
MEMORANDUM

TO: Jonathan Evans
    DOT Bureau of Environment

FROM: Jennifer Gilbert, Assistant State Coordinator
    National Flood Insurance Program

DATE: February 26, 2007

SUBJECT: Walpole-Charlestown, 14747, X-A000(487)

I am writing in reference to your letter dated February 15, 2007 regarding the above-referenced project.

I have reviewed and attached the Flood Insurance Rate Maps for the proposed project. It appears that the proposed project runs adjacent to and crosses through Zone AE of the Connecticut River and through a portion of its associated floodway. The Flood Insurance Study for both Cheshire and Sullivan counties can be found at: http://www.granit.sr.unh.edu/dfirms/FIS.html.

The towns of Walpole and Charlestown are participating communities of the National Flood Insurance Program (NFIP). Therefore, if any development takes place within the special flood hazard area, the towns should be contacted to assure that the proposed project meets the NFIP requirements contained in the towns’ floodplain ordinances. Development is defined under NFIP as “any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.”

Another applicable NFIP regulation contained in a community’s floodplain ordinance is language regarding development in a designated regulatory floodway. This language states:

Along watercourses with a designated Regulatory Floodway no encroachments, including fill new construction, substantial improvements, and other development are allowed within the floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practices that the proposed encroachment would not result in any increase in flood levels within the community during the base flood discharge.

TDD Access: Relay NH 1-800-735-2964
OEP is not authorized by the Federal Emergency Management Agency (FEMA) to make final determinations on the impacts of floodplain development. The NH Department of Transportation (DOT) should use its best judgment in determining if further study is necessary. If DOT feels that the proposed construction will have a negligible effect on flooding dynamics then additional coordination with FEMA is likely not necessary.

If you need further assistance, please contact me at 271-2155 or jennifer.gilbert@nh.gov.

Thank you.
Floodplains (DFIRM): Walpole-Charlestown, 14747 (Map 2)

Map Produced: June 10, 2010

Location Map

Map Produced: June 10, 2010

University of New Hampshire

http://mapper.granit.unh.edu/printportrait.jsp
Data Sources

All data are maintained and/or distributed by NH GRANIT. See www.granit.unh.edu for detailed documentation on individual data layers.

Digital data in NH GRANIT represent the efforts of the contributing agencies to record information from the cited source materials. Complex Systems Research Center, under contract to the NH Office of Energy and Planning, and in consultation with cooperating agencies, maintains a continuing program to identify and correct errors in these data. OEP, CSRC, and the cooperating agencies make no claim as to the validity or reliability or to any implied uses of these data.
Exhibit Z:

No Historic Properties Affected Memo
No Historic Properties Affected Memo

Pursuant to Cultural Resources Coordination meetings on April 8, 2010, March 11, 2010, December 3, 2009, November 12, 2009, March 5, 2009, and May 10, 2007, and more recent discussions in 2017, and for the purpose of compliance with regulations of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Procedures for the Protection of Historic Properties (36 CFR 800), the NH Division of Historical Resources (NHDHR) and the NH Division of the Federal Highway Administration (FHWA) have coordinated the identification and evaluation of historical and archaeological resources with plans to reconstruct approximately 2.7 miles of NH Route 12 between Main Street in North Walpole and NH Route 12A in Charlestown, New Hampshire.

Project Description
The intent of this project is to address existing safety issues associated with the narrow, substandard section of roadway which contains two 12-foot wide travel lanes and no shoulders, as well as to address existing stability issues associated with the roadway embankments adjacent to the Connecticut River. The proposed project involves fully reconstructing NH Route 12 within the project area to stabilize the roadway embankments and construct two 11-foot travel lanes and two 5-foot shoulders. In order to gain the additional 8 feet of roadway surface, the eastern edge of the existing roadway is to be maintained and the roadway widened to the west throughout the majority of the project corridor. This western shift in the alignment requires permanent impacts, including to the east bank of the Connecticut River in various locations as well as to several other wetland systems and private properties located to the west of the existing roadway.

Analysis
Based on a review pursuant to 36 CFR 800.4 of the architectural and/or archaeological significance of resources in the APE, we agree on the following:

- The New England Central Railroad, historically known as the Sullivan County Railroad, is eligible for listing on the National Register of Historic Places.
- A Phase IA/IB Investigation was undertaken and identified fourteen areas that were archaeologically sensitive and recommended additional survey for the potentially impacted areas.
- A Phase II investigation was completed on the Meany's Cove site. It was determined to be eligible for the National Register and Phase III recovery was recommended if the site could not be avoided.
- North Walpole Village Historic District Area, was determined eligible for the National Register of Historic Places in the 1970s and confirmed again in 1996. The proposed undertaking will not impact any resources within the historic district, however should impacts occur, an updated historic district area form may need to be completed.

An Adverse Effect Memo was signed for the project on May 6, 2010 due to previous project plans that proposed the easterly relocation of approximately 2.2 miles of the Sullivan County Railroad.
Agreement was signed on April 14, 2011. Several mitigation actions were completed, including the preparation of a New Hampshire Historical Property Documentation Form for the proposed affected portion of the Sullivan County Railroad and its contributing resources and the completion of the sign text for a State Historic Marker.

However, design revisions in 2016 and 2017 have necessitated additional review of impacts to cultural and natural resources.

Public Consultation
The revised project design was reviewed at a public information meeting on June 8, 2016 and an additional public information meeting will be held June/July 2017. Previous public information meetings were held on January 13, 2010 and April 29, 2009. A public hearing occurred on July 29, 2010. Participants have included former State Representative James McClammer, members of the Walpole Historic Society, as well as Charlestown and Walpole town officials, historical society members and residents. No consulting parties have been identified.

Determination of Effect
Based on a review pursuant to 36 CFR 800.4, we agree that the revised undertaking will no longer impact the Sullivan County Railroad, and that no additional above ground survey is necessary. Following a recommendation in the former Archaeological Phase IA/IB study and in light of the current project design, a Phase IB Intensive Archaeological Investigation will be undertaken in Areas 1 and 12 and all necessary phases of archaeology will be completed. It is anticipated any archaeological sites that are identified can be avoided through careful project design, however should project plans change and any identified archaeological sites be impacted, NHDOT will notify FHWA and NHDHR and will complete all necessary phases of archaeology. The current proposed undertaking will result in a No Historic Properties Affected finding.

The NHDOT commits to fabricating and erecting the double-sided state historic marker once construction is complete. The text for the state historic marker has been approved by NHDOT, FHWA and NHDHR.

This No Historic Properties Affected memorandum supersedes the above mentioned Adverse Effect memo, and terminates the previously signed MOA.

<table>
<thead>
<tr>
<th>Section 4(f) (to be completed by FHWA)</th>
<th>There Will Be:</th>
<th>☒ No 4(f);</th>
<th>☐ Programmatic 4(f);</th>
<th>☐ Full 4(f); or</th>
</tr>
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<tbody>
<tr>
<td>☐ A finding of de minimis 4(f) impact as stated:</td>
<td>In addition, with NHDHR concurrence of no adverse effect for the above undertaking, and in accordance with 23 CFR 774.3, FHWA intends to, and by signature below, does make a finding of de minimis impact. NHDHR’s signature represents concurrence with both the no adverse effect determination and the de minimis findings. Parties to the Section 106 process have been consulted and their concerns have been taken into account. Therefore, the requirements of Section 4(f) have been satisfied.</td>
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In accordance with the Advisory Council's regulations, we will continue to consult, as appropriate, as this project proceeds.

Patrick Bauer, Administrator
Federal Highway Administration

Jill Edelmann
Cultural Resources Manager

Concurred with by the NH State Historic Preservation Officer:

Elizabeth H. Muzzey
State Historic Preservation Officer
NH Division of Historical Resources

C.C. Chris St. Louis, NHDHR
Don Lyford, NHDOT
Edna Feighner, NHDHR
Jamie Sikora, FHWA
Jon Evans, NHDOT
Laura Black, NHDHR
Ron Crickard, NHDOT
Exhibit AA:

Photographs
NH Route 12 looking north at the southern end of the project.

NH Route 12 looking south at the southern end of the project
NH Route 12 looking north at the southern end of the project.
NH Route 12 looking south near the Walpole/Charlestown line.

NH Route 12 looking north near the Walpole/Charlestown line.
NH Route 12 looking north in the middle section of the project.

NH Route 12 looking south in the middle section of the project.
NH Route 12 looking north near Meany’s Cove.
Meany’s Cove southern wetland looking north.

Meany’s Cove southern wetland looking south.
Meany’s Cove northern wetland, southern impact area.

Meany’s Cove northern wetland, southern impact area.
Meany’s Cove northern wetland, northern impact area.
NH Route 12 looking south, north of Meany’s Cove, northern segment of the project.

NH Route 12 looking north, north of Meany’s Cove, northern segment of the project.
NH Route 12 looking north, northern segment of the project.

NH Route 12 looking north, northern segment of the project.
Jabes Meadow Brook wetland, east side of road, northern segment of the project.
Northern segment of the project.

Northern segment of the project.
Northern segment of the project.

Northern segment of the project looking south from the Route 12A overpass.
Northern segment of the project looking south from the Route 12A overpass.

Northern segment of the project looking south towards the Route 12A overpass.
Northern segment of the project looking north from the Route 12A overpass.

Northern segment of the project looking south from the Route 12A intersection.
Wetland east of NH Route 12 adjacent to the Route 12A intersection.

Intersection of NH Routes 12 and 12A
NH Route 12 looking south from the northern end of the project.

NH Route 12 looking north from the northern end of the project.
Exhibit AB:

Project Plans