

**Rumney  
15609C  
X-A000(992)**



**Environmental Study  
Programmatic Section 4(f) Evaluation**

September 2011

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## LIST OF EXHIBITS

- Exhibit A: Project location map
- Exhibit B: Regional map
- Exhibit C: Wetland impact plan
- Exhibit D: Conservation Land Stewardship (CLS) Program correspondence
- Exhibit E: Land and Water Conservation Fund (LWCF) correspondence
- Exhibit F: NH Natural Heritage Bureau (NHNHB) correspondence
- Exhibit G: Rumney Planning Board summary of correspondence
- Exhibit H: Bridge Inspection Report and flat file card
- Exhibit I: Advisory Council on Historic Preservation correspondence
- Exhibit J: Section 106 Adverse Effect Memo
- Exhibit K: Section 106 Memorandum of Agreement
- Exhibit L: Photographs

## **PART I: ENVIRONMENTAL STUDY**

### **Introduction**

This Environmental Study/Programmatic Section 4(f) Evaluation documents the anticipated effects associated with this Categorical Exclusion project as detailed in 23 CFR 771.117(d)(3). This project will be funded through the Bridge Rehabilitation, Painting, Preservation, and Improvement (BRPPI) program.

### **Existing Conditions/Need**

The proposed project involves the repair of Bridge 138/075, a 1937 I-Beam Concrete bridge with concrete rail. The bridge is 32'-4" wide by 47'-0" long with a curb-to-curb width of 25'-4" and horizontal clearance of 29'-2". The bridge carries Quincy Road over Stinson Brook and is located a tenth of a mile east of Rumney Village. Quincy Road is a rural minor collector with an average of 800 vehicles per day. The posted speed limit is 30 miles per hour.

The bridge currently has an FSR rating of 69.6 out of 100 and was placed on the Department's Red List in 2010. The deck has deteriorated and is in poor condition. Temporary supports under the deck have delayed a load posting thus far, but if the deck is not replaced a posting cannot be avoided in the future.

### **Proposed Action**

The proposed action consists of replacing the bridge deck and rail. The existing concrete rail is supported by the concrete deck so it must be removed to allow for deck replacement. New aluminum bridge rail will be installed. Other work will include repairing a concrete wing wall, placing stone fill along one bank to prevent further erosion, and installing concrete toe walls to prevent undermining of the abutments.

The project's footprint is limited to the immediate vicinity of the bridge and will not extend beyond the existing right-of-way. Temporary staging will be placed in the stream during construction. The NHDOT Bureau of Bridge Maintenance will complete the project.

### **Alternatives to the Proposal**

#### **"No-Build"**

The "No-Build" alternative is not considered feasible and prudent as it does not address the deficiencies associated with the existing bridge. The FSR of this bridge is 69.6. Under this alternative, safety concerns would worsen and the bridge would continue to deteriorate. Temporary supports under the deck have delayed a load posting thus far, but if the deck is not replaced a posting cannot be avoided in the future. In addition, the impacts associated with the proposed action are not of a magnitude to warrant the selection of this alternative. As such, this alternative was not selected.

#### **Rehabilitation of the Existing Bridge with New Concrete Rail**

This alternative involves replacing the existing concrete rail with similar concrete rail. However, the construction and maintenance costs of concrete rail are higher than aluminum rail. Also, the bridge is located on a curve. New concrete rail would need to consist of a straight section of rail on a curve and the Department now prefers to avoid this situation for safety reasons. For these reasons, this alternative was not considered feasible or prudent and was therefore not selected.

## **New Location Alternatives**

These alternatives would relocate Quincy Road either upstream or downstream of its current location in order to bypass the existing bridge and eliminate impacts to this Section 4(f) resource. New location alternatives would likely result in impacts to probable National Register eligible properties along Quincy Road. Any new location alternative would have substantial impacts to undeveloped forestlands, farmlands, and wetlands, and would require an additional crossing of Stinson Brook. Moreover, any new location alternatives would substantially increase project costs, and the additional property and right-of-way impacts would likely raise public concern, especially since the substructure of the existing bridge is in good condition and does not warrant construction of a new structure. For these reasons, new location alternatives were not considered feasible or prudent and were therefore not selected.

## **Evaluation of Environmental Effects**

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

### **Resources/Issues**

#### **Social/ Economic**

**Safety**  
**Transportation Patterns**  
Air Quality  
Noise  
Displacements  
**Contaminated Properties**  
**Neighborhoods**  
**Business Impacts**  
Land Acquisition  
**Land Use**  
**Tax Base**  
Recreation  
**Public Lands**  
**Construction Impacts**

Farmlands  
**Community Services**  
Energy Needs  
Utilities  
Environmental Justice

#### **Natural**

**Water Quality**  
**Wetlands**  
**Surface Water**  
Groundwater  
**Floodplains**  
**Wildlife**  
**Fisheries**  
**Endangered Species**  
**Natural Communities**  
Wild & Scenic Rivers  
**Invasive Species**  
NH Designated Rivers  
Forest Lands  
Costal Zone

#### **Cultural**

**Historical**  
**Archaeological**  
Stonewalls  
Aesthetics

Discussions of the effects on resources/issues in **bold** follow.

### **Safety/Transportation Patterns/Community Services**

Quincy Road is a rural minor collector with an average of 800 vehicles per day. The posted speed limit through the project area is 30 miles per hour. No accidents were reported in the vicinity of the project area between 2002 and 2010.

Quincy Road runs parallel to the Baker River and is a major route through the Town of Rumney. A closure of the bridge over Stinson Brook would result in a lengthy detour of up to 10 miles for residents along Quincy Road traveling west to Rumney village. Such a detour would also substantially disrupt emergency services.

### **Neighborhoods/Land Use/Tax Base**

The project area is located at the edge of a typical rural New Hampshire community. There is a residence and veterinary clinic approximately 100 feet east of the bridge in the northeast quadrant, and multiple residences 200 feet or more to the west. The southeast quadrant is undeveloped and wooded, and the southwest quadrant is an open field. Rumney Common is located approximately 0.2 miles to the west.

Residents in the vicinity of the project area will experience temporary increases in noise and dust levels while the project is being constructed. These temporary impacts are expected to return to normal once the project is completed. At least one lane of traffic and access to all properties will be maintained at all times during construction.

This project will not cause a change in land use, nor is it expected to have an effect on the tax base of the Town of Rumney.

### **Public Lands**

The proposed action has been reviewed by the Office of Energy & Planning Conservation Land Stewardship (CLS) Program Coordinator, and it was determined on March 31, 2011 that there are no properties of concern within the project area (See Exhibit D).

Section 6(f) is an article of the Federal Land and Water Conservation Fund 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 under the Land and Water Conservation Fund (LWCF). 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 files, the Department of Resources and Economic Development (DRED) advised on March 29, 2011 that there are no Section 6(f) parcels present in the project area (See Exhibit E).

The Rumney Common is location approximately 0.2 miles to the west of the project area. The project as proposed will have no impact on this area.

### **Contaminated Properties**

A field review on June 3, 2011 did not reveal the visual presence of contaminated properties within the limits of the subject project. The Department of Environmental Services (DES) One-Stop GIS database does not list any contaminated properties in the vicinity of the project area.

### **Surface Waters/Wetlands/Water Quality**

The Department's Bureau of Environment (BOE) delineated all wetland resources within the limits of the project based on the 1987 *Federal Manual for Identifying and Delineating Jurisdictional Wetlands* produced by the US Army Corps of Engineers (ACOE) Wetlands Research Program. In addition, the wetlands were classified utilizing the *Classification of Wetlands and Deepwater Habitats of the United States*, Lewis M. Cowardin, US Department of the Interior, Fish and Wildlife Service. The only jurisdictional wetland area within the project limits is Stinson Brook, which is classified as R3UB1H – Riverine, Upper Perennial, Unconsolidated Bottom, Cobble-Gravel, Permanently Flooded.

Work associated with the proposed project involves dredge and fill activities within the jurisdiction of the NH Department of Environmental Services (DES) Wetlands Bureau and the US Army Corps of Engineers (ACOE).

Impacts associated with the proposed project consist of 423 ft<sup>2</sup> of permanent impacts and 2,500 ft<sup>2</sup> of temporary impacts necessary for the temporary placement of staging in the channel and the installation of concrete toe walls along the abutments. The proposed impacts meet the criteria established for a minor impact Wetlands Permit administered by the DES Wetlands Bureau, and an ACOE Programmatic General Permit (PGP).

In order to protect all surface waters, all appropriate erosion and sediment control measures will be in place during construction and will be left in place until the area is stabilized.

### **Floodplains/Floodways**

Rumney does not participate in the National Flood Insurance Program (NFIP). A review of the flood hazard boundaries identified that the project lies in a "Special Flood Hazard Area", which are areas subject to flooding by the 100-year flood. This project will install one-foot toe walls within the stream channel at the base of each abutment. No additional encroachment into the floodway or adjacent floodplain is proposed. Given the negligible impacts, this work is not expected to alter flooding dynamics at the bridge or along the stream.

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

The proposed action has been reviewed by the NH Natural Heritage Bureau (NHB) for the presence of federal and state threatened or endangered species and exemplary natural communities. In a letter dated April 1, 2011, the NHB responded that, while there is a record on file of a species or community in the vicinity of the project, there are no concerns with the project as proposed (*Exhibit F*). The project will not impact the passage of fish and other aquatic organisms through the bridge span.

### **Invasive Species**

Under the statutory authority of NH RSA 430:55, the NH Department of Agriculture, Markets & Food prohibits the spread of invasive plants listed on the NH Prohibited Species List. The project contains areas of Japanese Knotweed (*Polygonum cuspidatum*), a highly invasive plant that is listed on the Prohibited Species List.

If knotweed stems or the soil within a six-foot radius of the plants is disturbed by construction activities, Best Management Practices shall be utilized to appropriately contain and/or dispose of the knotweed and prevent it from spreading within or outside the project area. Appropriate BMPs for knotweed were discussed on-site with the Bureau of Bridge Maintenance on July 7, 2011.

### **Cultural Resources**

The Department has coordinated with the NH Division of Historical Resources (NHDHR) and Federal Highway Administration (FHWA) to locate and identify National Register of Historic Places listed or eligible properties within the project area and determine how they would be affected by the proposed project. The Department also established coordination with the Town of Rumney. The project was reviewed with NHDHR and FHWA at regularly scheduled Cultural Resource Agency Coordination Meetings on December 9, 2010, January 13, 2011, and February 10, 2011. It was determined at the February meeting that the impacts to the I-beam concrete bridge over Stinson Brook would result in an Adverse Effect. The project area also contains two extant historic granite block abutments located upstream of the existing bridge. These will not be impacted by the proposed action. A Memorandum of Agreement (MOA) was signed on July 14, 2011 (*See Exhibit K*).

### **Description of Historic Resources**

In June 2011, an Individual Inventory Form was completed for the Quincy Road bridge over Stinson Brook. As a result of this survey, the bridge was determined eligible for the National Register of Historic Places under Criterion C.

Quincy Road Bridge (138/075)

The bridge was constructed in 1937. It consists of a single span with steel I-beam stringers and reinforced concrete deck, rail, abutments, and wing walls. The overall length of the bridge is 47'-0", with a clear span of 40'-0". Its overall width is 32'-4" (25'-4" curb to curb) with two travel lanes. The reinforced concrete, open rail is 2'-3" high and consists of posts linked by arched spandrels, all capped with a continuous rail.

The bridge is eligible for the National Register under Criterion C, retaining a high level of integrity of location, design, materials, setting, workmanship, feeling, and association. The bridge is also a contributing resource within a potential village historic district. The district is centered on the village green, located 0.2 miles to the west, but extends some distance in all four directions. While a full evaluation of the village was beyond the scope of this project, the district appears to be eligible for the National Register.

Upstream Bridge Abutments

Just upstream (north) of the existing bridge are two granite block abutments associated with bridges that stood prior to 1897. Although no formal surveys were completed for these abutments, they are being treated as historical elements. The NE abutment remains relatively intact and only a few scattered granite blocks remain from the NW abutment.

**Effects on Historic Resources**

Effects on historic resources were determined by the NHDHR, FHWA, and NHDOT based on the Section 106 review process established by the National Historic Preservation Act of 1966 and outlined in 36 CFR 800.9. It was determined at the February 10, 2011 Cultural Resource Agency Coordination meeting that the impacts to the Quincy Road bridge (replacement of the deck and rail) would result in an Adverse Effect. A MOA was signed on July 14, 2011 (See Exhibit K).

**Mitigation of Historic Resource Impacts**

It was agreed among FHWA, NHDHR, and NHDOT that impacts to the historic resources are unavoidable and that an Individual Inventory Form would be completed to mitigate for these impacts. Impacts to the bridge would be minimized by retaining the remainder of the bridge.

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.

Access to all properties will be maintained throughout construction. Through traffic will be maintained during construction. Any temporary suspensions of through traffic will be held to a minimum.

Standard pollution prevention measures will be employed to assure all negative impacts are avoided and/or minimized to the maximum extent practicable.

Coordination & Public Participation

Meetings were held periodically with various Federal, State and local agencies throughout the development of this project. Project review meetings were held on the following dates:

<u>Date</u>	<u>Topic</u>
December 9, 2010	Cultural Resource Agency Meeting
January 13, 2011	Cultural Resource Agency Meeting
February 10, 2011	Cultural Resource Agency Meeting

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

<u>Agency / Organization</u>	<u>Contact</u>	<u>Date Sent</u>	<u>Reply Received</u>
Town of Rumney			
Board of Selectmen	Mark Andrews	1/24/2011	1/24/2011 (telephone)
Historical Society	Roger Daniels	1/12/2011 (telephone)	1/12/2011
Planning Board	Tom Grabiek	1/20/2011 (telephone)	1/20/2011
Advisory Council on Historic Preservation	LaShavio Johnson	4/21/2011	5/9/2011
NH DRED (LWCF)	Jane Carey	3/29/2011	3/29/2011
NH Natural Heritage Bureau	Melissa Coppola	4/1/2011	4/1/2011
NH Office of State Planning (CLS)	Steve Walker	3/29/2011	3/31/2011

**Summary of Environmental Commitments:**

The following environmental commitments have been made for this project.

1. Japanese knotweed, an invasive plant, is located throughout the project area. All appropriate Best Management Practices shall be utilized during construction to avoid the spread of this plant to new sites. (Bridge Maintenance/Environment)
2. All appropriate permits from the NHDES Wetlands Bureau and Army Corps of Engineers shall be obtained prior to working in jurisdictional areas (bank, channel, and wetlands). (Bridge Maintenance/Environment)
3. All appropriate erosion and sediment control measures will be in place during construction and will be left in place until the area is stabilized. (Bridge Maintenance)

## **PART II: PROGRAMMATIC SECTION 4(f) EVALUATION**

### **Introduction**

The proposed project involves a Programmatic Section 4(f) Evaluation to demonstrate that there is no prudent and feasible alternative to affecting Section 4(f) historic resources. This evaluation also outlines coordination that has occurred and the measures proposed to minimize harm to these resources.

This Programmatic Section 4(f) Evaluation is for Federal Highway Administration (FHWA) projects that necessitate the use of Historic Bridges. The approval for its use is subsequent to design studies that have determined that there are no feasible and prudent alternatives to the use of certain historic bridge structures to be replaced or rehabilitated with Federal funds and that the project includes all possible planning to minimize harm resulting from such use.

Pursuant to Section 4(f) of the Department of Transportation Act of 1966, 49 U.S.C. 303(c), and Section 18(a) of the Federal-Aid Highway Act of 1968, 23 U.S.C. 138 (as amended by the Federal-Aid Highway Act of 1983), the Secretary of Transportation may approve a program or project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of an historic site of national, State, or local significance (as determined by Federal, State, or local officials having jurisdiction over the park, area, refuge or site) only if:

1. There is no prudent and feasible alternative to using that land, and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife or waterfowl refuge, or historic site resulting from the use.

Coordination was established with local and state officials, and it was determined that there would be no publicly owned public parks, recreation areas, or wildlife or waterfowl refuges impacted by the proposed project.

The Department has coordinated with the NH Division of Historical Resources (NHDHR) and FHWA to locate and identify National Register of Historic Places listed or eligible properties within the area and determine how they would be affected by the proposed project. The project was reviewed with NHDHR and FHWA at regularly scheduled Cultural Resource Agency Coordination Meetings on December 9, 2010, January 13, 2011, and February 10, 2011. A Memorandum of "Adverse Effect" was signed on April 14, 2011.

### **Existing Conditions/Proposed Action**

The proposed project involves the repair of Bridge 138/075, a 1937 I-Beam Concrete bridge with concrete rail. The bridge is 32'-4" wide by 47'-0" long with a curb-to-curb width of 25'-4" and horizontal clearance of 29'-2". The bridge carries Quincy Road over Stinson Brook and is located a tenth of a mile east of Rumney Village. Quincy Road is a rural minor collector with an average of 800 vehicles per day. The posted speed limit is 30 miles per hour.

The bridge currently has an FSR rating of 69.6 out of 100 and was placed on the Department's Red List in 2010. The deck has deteriorated and is in poor condition. Temporary supports under the deck have delayed a load posting thus far, but if the deck is not replaced a posting cannot be avoided in the future.

The proposed action consists of replacing the bridge deck and rail. The existing concrete rail is supported by the concrete deck so it must be removed to allow for deck replacement. New aluminum bridge rail will be installed. Other work will include repairing a concrete wing wall, placing stone fill along one bank to prevent further erosion, and installing concrete toe walls to prevent undermining of the abutments.

The project's footprint is limited to the immediate vicinity of the bridge and will not extend beyond the existing right-of-way. Temporary staging will be placed in the stream during construction. The NHDOT Bureau of Bridge Maintenance will complete the project.

### **Description of Historic 4(f) Resources:**

In June 2011, an Individual Inventory Form was completed for the Quincy Road bridge over Stinson Brook. As a result of this survey, the bridge was determined eligible for the National Register of Historic Places under Criterion C.

#### **Quincy Road Bridge (138/075)**

The bridge was constructed in 1937. It consists of a single span with steel I-beam stringers and reinforced concrete deck, rail, abutments, and wing walls. The overall length of the bridge is 47'-0", with a clear span of 40'-0". Its overall width is 32'-4" (25'-4" curb to curb) with two travel lanes. The reinforced concrete, open rail is 2'-3" high and consists of posts linked by arched spandrels, all capped with a continuous rail.

The bridge is eligible for the National Register under Criterion C, retaining a high level of integrity of location, design, materials, setting, workmanship, feeling, and association. The bridge is also a contributing resource within a potential village historic district. The district is centered on the village green, located 0.2 miles to the west, but extends some distance in all four directions. While a full evaluation of the village was beyond the scope of this project, the district appears to be eligible for the National Register.

#### **Upstream Bridge Abutments**

Just upstream (north) of the existing bridge are two granite block abutments associated with bridges that stood prior to 1897. Although no formal surveys were completed for these abutments, they are being treated as historical elements. The NE abutment remains relatively intact and only a few scattered granite blocks remain from the NW abutment.

### **Impacts to Section 4(f) Properties**

Effects on historic resources were determined by the NHDHR, FHWA, and NHDOT based on the Section 106 review process established by the National Historic Preservation Act of 1966 and outlined in 36 CFR 800.9. It was determined at the February 10, 2011 Cultural Resource Agency Coordination meeting that the impacts to the Quincy Road bridge (replacement of the deck and rail) would result in an Adverse Effect. A Memorandum of Agreement (MOA) was signed on July 14, 2011 (See Exhibit K).

### **Alternatives That Avoid and/or Minimize Impacts to Section 4(f) Properties**

#### **"No-Build"**

The "No-Build" alternative is not considered feasible and prudent as it does not address the deficiencies associated with the existing bridge. The FSR of this bridge is 69.6. Under this alternative, safety concerns would worsen and the bridge would continue to deteriorate. Temporary supports under the deck have delayed a load posting thus far, but if the deck is not replaced a posting cannot be avoided in the future. In addition, the impacts associated with the proposed action are not of a magnitude to warrant the selection of this alternative. As such, this alternative was not selected.

#### **Rehabilitation of the Existing Bridge with New Concrete Rail**

This alternative involves replacing the existing concrete rail with similar concrete rail. However, the construction and maintenance costs of concrete rail are higher than aluminum rail. Also, the bridge is located on a curve. New

concrete rail would need to consist of a straight section of rail on a curve and the Department now prefers to avoid this situation for safety reasons. For these reasons, this alternative was not considered feasible or prudent and was therefore not selected.

**New Location Alternatives**

These alternatives would relocate Quincy Road either upstream or downstream of its current location in order to bypass the existing bridge and eliminate impacts to this Section 4(f) resource. New location alternatives would likely result in impacts to probable National Register eligible properties along Quincy Road. Any new location alternative would have substantial impacts to undeveloped forestlands, farmlands, and wetlands, and would require an additional crossing of Stinson Brook. Moreover, these alternatives would substantially increase project costs, and the additional property and right-of-way impacts would likely raise public concern, especially since the substructure of the existing bridge is in good condition and does not warrant construction of a new structure. For these reasons, new location alternatives were not considered feasible or prudent and were therefore not selected.

**Measures to Minimize Harm/ Mitigation**

It was agreed among FHWA, NHDHR, and NHDOT that impacts to the historic resources are unavoidable and that an Individual Inventory Form would be completed to mitigate for these impacts. Impacts to the bridge would be minimized by retaining the remainder of the bridge.

**Coordination & Public Participation**

Coordination meetings have been held among NHDHR, FHWA, and NHDOT to discuss alternatives and measures to minimize harm to the Section 4(f) properties. The measures that were considered feasible and prudent were evaluated and incorporated into the design of the project. A Determination of Effects memo was prepared that addresses unavoidable impacts to the historic properties and appropriate mitigation (*See Exhibit J*). Pursuant to the provisions of Section 106 of the National Historic Preservation Act (36 CFR 800), a MOA addressing the Proposed Action was developed (*See Exhibit K*).

Project review meetings were held on the following dates:

<b>Date</b>	<b>Topic</b>
December 9, 2010	Cultural Resource Agency Meeting
January 13, 2011	Cultural Resource Agency Meeting
February 10, 2011	Cultural Resource Agency Meeting

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

<b>Agency / Organization</b>	<b>Contact</b>	<b>Date Sent</b>	<b>Reply Received</b>
Town of Rumney			
Board of Selectmen	Mark Andrews	1/24/2011	1/24/2011 (telephone)
Historical Society	Roger Daniels	1/12/2011 (telephone)	1/12/2011
Planning Board	Tom Grabiek	1/20/2011 (telephone)	1/20/2011
Advisory Council on Historic Preservation	LaShavio Johnson	4/21/2011	5/9/2011
NH DRED (LWCF)	Jane Carey	3/29/2011	3/29/2011
NH Natural Heritage Bureau	Melissa Coppola	4/1/2011	4/1/2011
NH Office of State Planning (CLS)	Steve Walker	3/29/2011	3/31/2011

### **Programmatic Applicability**

This project meets the criteria for Programmatic Section 4(f) Evaluations for Federal Aid highway projects that necessitate the use of historic bridges:

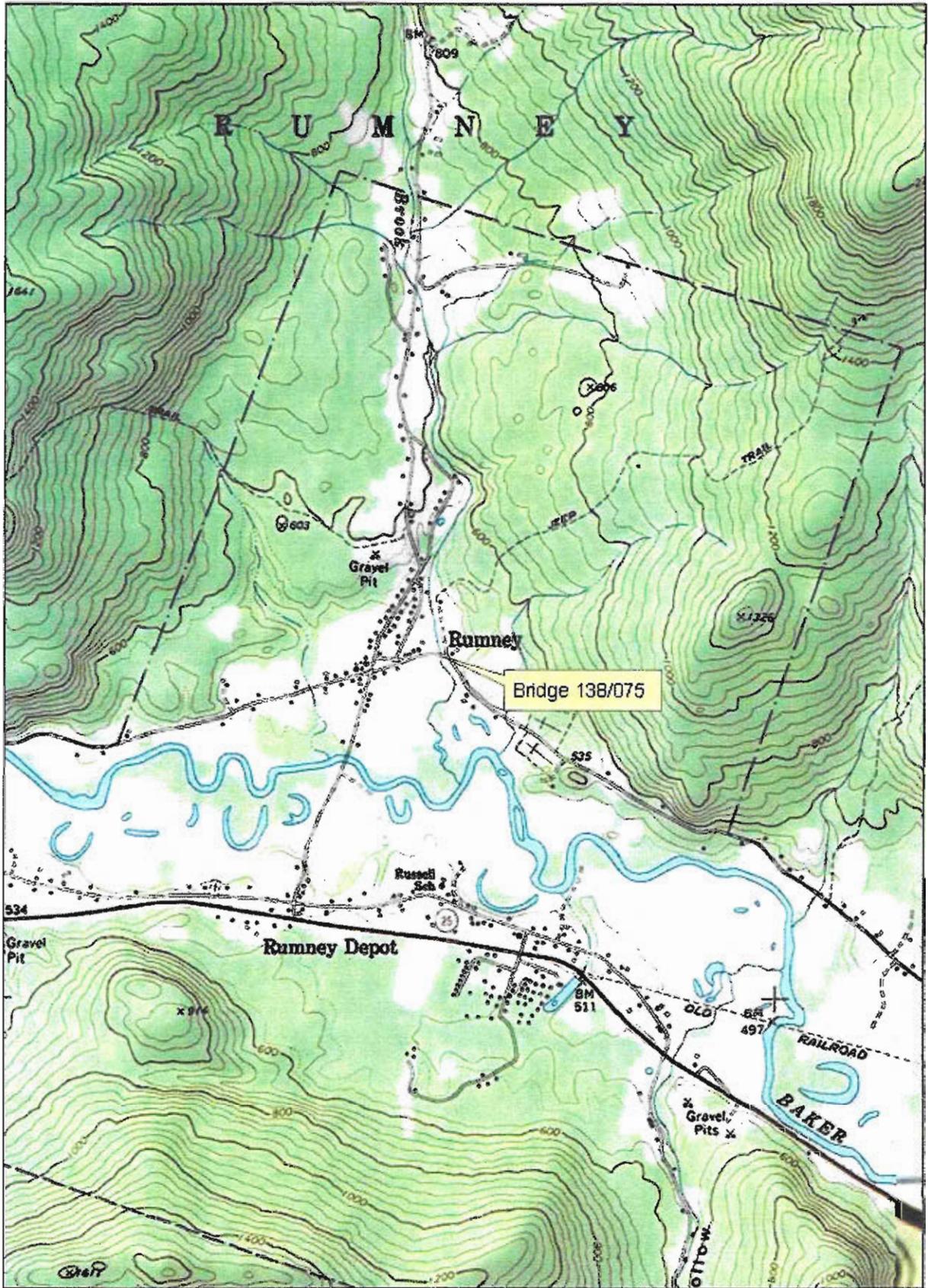
- The bridge will be rehabilitated with Federal funds.
- The project will require the use of a historic bridge structure, which is eligible for listing on the National Register of Historic Places.
- The bridge is not a National Historic Landmark.
- The FHWA Division Administrator has determined that the facts match those set forth in the sections of this document labeled Alternatives, Findings, and Mitigation.
- Agreement among the SHPO and FHWA has been reached through the Section 106 review process.
- The bridge will be appropriately documented with an Individual Inventory Form as agreed upon through consultation with the SHPO and FHWA.

### **Summary Statement**

Based on the above considerations, there are no feasible and prudent alternatives to the use of this historic bridge and the proposed action includes all planning to minimize harm to the 4(f) resource resulting from such use.

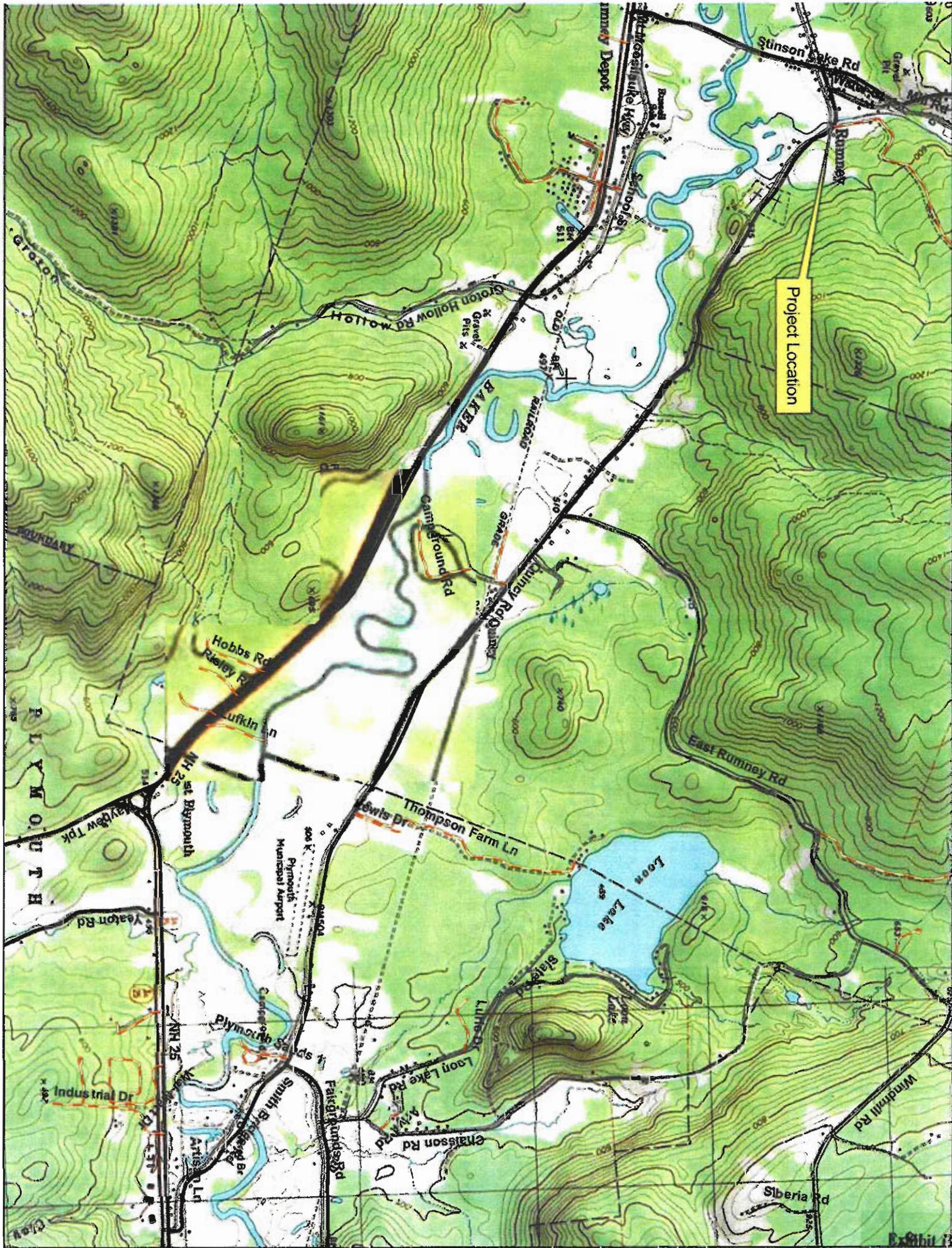
## Exhibits

Rumney 99411Z, Bridge 138/075, Quincy Road over Stinson Brook



1:24,000

1 inch = 2,000 feet





## Christine Perron

**From:** Walker, Steve [Steve.Walker@nh.gov]  
**Sent:** Thursday, March 31, 2011 7:43 AM  
**To:** Christine Perron  
**Subject:** RE: NHDOT project, Rumney 99411Z

Hi Christine, There are no LCIP properties in the project area. Cheers Stephen

-----Original Message-----

**From:** Christine Perron [mailto:CPerron@dot.state.nh.us]  
**Sent:** Tuesday, March 29, 2011 3:14 PM  
**To:** Walker, Steve  
**Subject:** NHDOT project, Rumney 99411Z

Steve,

The NH Department of Transportation is planning a project that will rehabilitate the bridge that carries Quincy Road over Stinson Brook in Rumney. All work is expected to take place within the existing right-of-way. A location map is attached.

The Department's Bureau of Environment is conducting an environmental study for the subject project. In an effort to ensure that all issues/resources associated with the project are appropriately evaluated, we request your agency's input. Any comments you may have concerning this project, or resources within the project area, will assist in the preparation of the environmental document.

Thank you for your assistance.

Christine

Christine Perron  
Senior Environmental Manager  
NH Department of Transportation  
Bureau of Environment  
7 Hazen Drive, Concord, NH 03302  
Ph: (603) 271-3717  
Fax: (603) 271-7199  
cperron@dot.state.nh.us  
<<location.jpg>>

**Christine Perron**

**From:** Jane Carey [Jane.Carey@dred.state.nh.us]  
**Sent:** Tuesday, March 29, 2011 3:20 PM  
**To:** Christine Perron  
**Subject:** RE: NHDOT project, Rumney 99411Z

Christine,

I have checked our Land and Water Conservation Fund (LWCF) property files and there are no LWCF properties in Rumney, NH. If your project changes or you have additional questions, please contact me.

Sincerely,

*Jane Carey*  
Program Specialist  
Division of Parks & Recreation  
172 Pembroke Road, PO Box 1856  
Concord NH 03302-1856  
Phone (603) 271-3556 Fax (603) 271-3553  
[Jane.Carey@dred.state.nh.us](mailto:Jane.Carey@dred.state.nh.us)

-----Original Message-----

**From:** Christine Perron [mailto:CPerron@dot.state.nh.us]  
**Sent:** Tuesday, March 29, 2011 3:15 PM  
**To:** Jane Carey  
**Subject:** NHDOT project, Rumney 99411Z

Jane,

The NH Department of Transportation is planning a project that will rehabilitate the bridge that carries Quincy Road over Stinson Brook in Rumney. All work is expected to take place within the existing right-of-way. A location map is attached.

The Department's Bureau of Environment is conducting an environmental study for the subject project. In an effort to ensure that all issues/resources associated with the project are appropriately evaluated, we request your agency's input. Please review this information and comment on the need for further analysis regarding Land and Water Conservation Funds that may have been utilized within the project area. Any comments you may have concerning this project, or resources within the project area, will assist in the preparation of the environmental document.

Thank you for your assistance.  
Christine

Christine Perron  
Senior Environmental Manager

3/29/2011

**Exhibit E**



**To:** Christine Perron, NHDOT Bureau of Environment  
7 Hazen Drive  
Concord, NH 03302

**From:** NH Natural Heritage Bureau

**Date:** 4/1/2011 (valid for one year from this date)

**Re:** Review by NH Natural Heritage Bureau of request submitted 3/30/2011

**NHB File ID:** NHB11-0626

**Applicant:** Christine Perron

**Location:** Rumney  
Bridge 138/175 on Quincy Road over Stinson Brook

**Project Description:** Project will involve brick deck and rail replacement. Temporary staging will be placed in the stream during construction. Work will be within the existing right-of-way.

The NH Natural Heritage database has been checked by staff of the NH Natural Heritage Bureau and/or the NH Nongame and Endangered Species Program for records of rare species and exemplary natural communities near the area mapped below. The species considered include those listed as Threatened or Endangered by either the state of New Hampshire or the federal government.

It was determined that, although there was a NHB record (e.g., rare wildlife, plant, and/or natural community) present in the vicinity, we do not expect that it will be impacted by the proposed project. This determination was made based on the project information submitted via the NHB Datacheck Tool on 3/30/2011, and can not be used for any other project.

**From:** Steve Johnson  
**Sent:** Thursday, January 20, 2011 5:40 PM  
**To:** Douglas Gosling  
**Cc:** Christine Perron; Anthony Weatherbee  
**Subject:** Rumney - Quincy Road over Stinson Brook

I spoke with the Planning Board Chairman, Tom Grabiek, to hear his concerns. We discussed the following:

- he noted that they had received information from the SHPO office about the project and had no idea what was happening
- we are in the initial phase of looking to replace the deck on the bridge and any structure over 50 years needs to have coordination with SHPO which is why they received the information
- the deck is in poor condition, temporary supports under the deck allow us not to post the bridge at this time; however, if not fixed, it will eventually be load posted.
- the concrete rail is supported by the concrete deck so it will be removed to allow deck replacement.
- we would like to do some minor widening of the deck and match the curvature of the roadway
- we intend to maintain alternating 1-way traffic during the construction
- we are in the process of putting our schedule together, but hope to do the work this year
- he noted that the Groton wind farm project may cause traffic problems on NH 25 (they are assuming closures of 1/2 hour to 1 hour multiple times, but have no idea)
- he noted that the historic commission would have the say on the concrete rail - I said we had discussed this Roger Daniels and he had no concerns
- I told him that we would send a letter to SelectBoard with information.

Steve Johnson, P.E.  
Senior Engineer  
Bureau of Bridge Maintenance  
New Hampshire Department of Transportation

(603) 271-1551

TOWN *Rumney* NO. *138/075* BRIDGE OVER *Stinson Brook* SPAN NO.  
 RATING *H-15* MEMBER DESIGN LOAD *H-15* REQUIRED LIVE LOAD POSTED LOAD YEAR BUILT *1937*

NO. AND TYPE SPANS *1-Rein. conc. slab on I beam strgs* TOTAL LENGTH *47'-0" o.o. slab*  
 SKEW *25° right ahead* SUPERELEVATION *1/2" per ft.* CROWN APPROACH PAVEMENT *STG. 21*

GENERAL	ALIGNMENT	GRADE	SIGHT DISTANCE	SPAN LENGTH	WIDTH	CLEARANCE		
BRIDGE	<i>ton</i>			C. C. BEARINGS <i>41-6</i>	BETWEEN CURBS <i>25-4</i>	ROADWAY	RAILROAD	HIGH WATER
REAR APPROACH	<i>se</i>	<i>1 1/4%</i>	<i>225'</i>	O. O. FLOOR <i>47-0</i>	BETWEEN RAILS <i>29-6</i>	HORIZONTAL <i>29-2</i>		
FORWARD APPROACH	<i>16° curve</i>	<i>1 1/2%</i>	"	CLEAR SPAN <i>40-0</i>	WALKS <i>2 @ 1-11</i>	VERTICAL <i>open 4-0</i>		

DESIGNED BY HIGHWAY DEPT. *CONG. ENG.* BUILT BY *NHHD*  
 MAINTAINED BY STATE  RAILROAD  PLANS ON FILE  NOT ON FILE  TOLL OR FREE

PROJECT NO. *SAB 1937* CONTRACTOR *1-12-3-4*  
 TOTAL COST STEEL COST FLOOR SLAB COST

TRAFFIC SURVEY DATA A B C D F G H I  
 WATERWAY ELEVATION LOW BRIDGE ELEVATION MAXIMUM HIGH WATER AREA BRIDGE OPENING *370'*

ALIGNMENT AND CHARACTER CHANNEL *D.A. 13,520 acres, wooded mtn slopes*  
*Fin. Gr. to str. bed = 14'-4" Cl. water Ht = 11'-0" D.S. Water depth 2'-6" 1/11/41*

REMARKS *Waterway is adequate*

SUBSTRUCTURE	MATERIAL	TYPE	HEIGHT	SUPPORTING MATERIAL	PILES—TYPE	NO.	SIZE	LENGTH	CAPS
REAR ABUTMENT	<i>Conc.</i>	<i>mass</i>	<i>13-0</i>	<i>Fine sand</i>					
FORWARD ABUTMENT	"	"	<i>13-0</i>	<i>+ boulders</i>					

PIERS OR BENTS  
 WINGS *mass conc.*  
 REMARKS *condition good. Horizontal cracks in top of wings S.E. abut. No exp. material between wing & superstructure*

*Patented PAT. APR. 3, '23 FEB. 8, '27 U.S. C. 7398-14*

SUPERSTRUCTURE MATERIAL *Struct steel + conc.* SPAN TYPE *Slab on I's* \*  
 GRADE TO BRIDGE SEAT *2-8 3/8* GRADE TO LOW STEEL *3'-4"*

DEPTH	PANELS AT PAINT <i>Aluminum (1937)</i>				BEARINGS	
	WEARING COURSE	FLOOR	CURBS	ROAD RAIL	WALK RAIL	
MATERIAL		<i>Rein Conc</i>	<i>Rein Conc</i>		<i>Rein Conc.</i>	EXPANSION
TYPE		<i>Flat slab</i>	<i>mono</i>		<i>Open</i>	FIXED
HEIGHT		<i>0-8 1/2"</i>	<i>0-8 1/2"</i>		<i>2-3"</i>	<i>Sliding S.E. abut.</i>
THICKNESS			<i>3' 6" wide</i>		<i>1-2" wide</i>	<i>Brq tks both ends 9x12x3/4"</i>
FASTENINGS					<i>1/6" end post</i>	<i>slotted holes in brm flg</i>

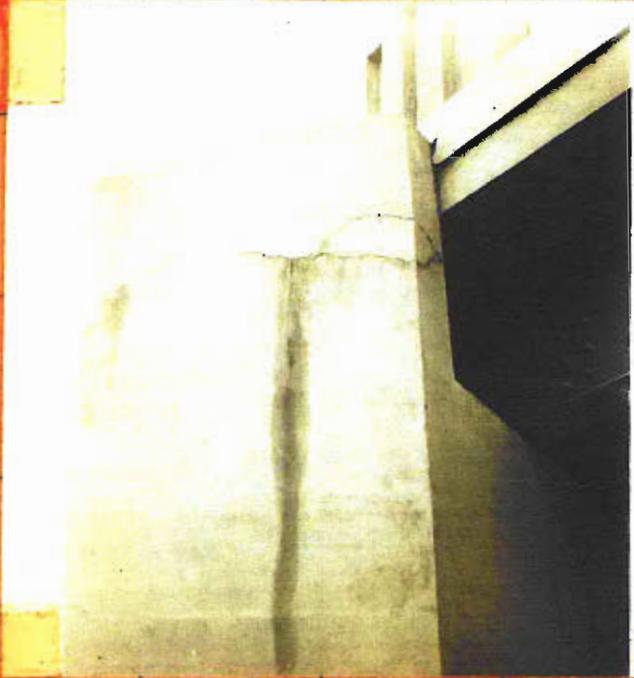
FLOOR DRAINAGE *4" Diam std W.I. Pipe 3 on dnstr. side*  
 REMARKS *General condition good*

\* *8-lines 24"W x 74" @ 4'-0" c.c. 43'-0" lg. Diaphragms 8x4x1/16 L*  
*1992 → Clean Paint and install BRIDGE APPROACH RAIL*

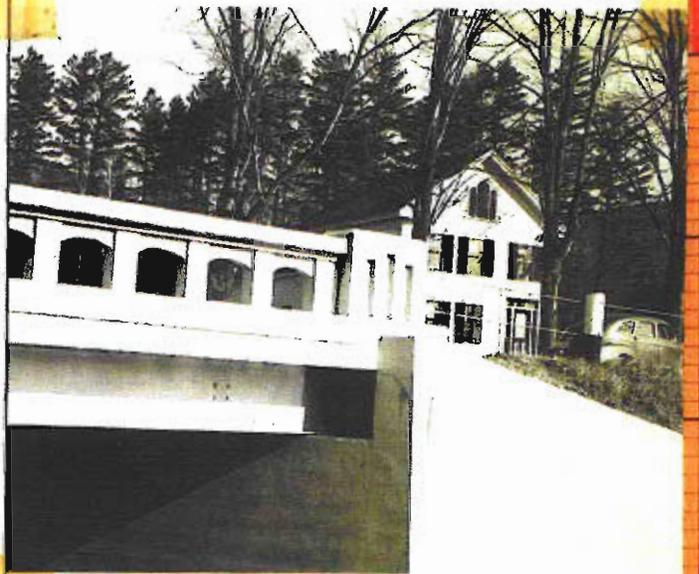
*Bridge should have bit wearing course*

*In Rumney Village . 19 mi. east of Jct. Stinson Lake Rd Quincy Rd.*

TOWN	BRIDGE NO.	ROUTE	STRENGTH						CLEAR ROADWAY				VERTICAL CLEARANCE						
<i>Rumney</i>	<i>138/075</i>	<i>SAO 41</i>	H8	H8	H10	H12	H12	H20	14'-10"	15'-3"	14'-8"	15'-3 1/2"	10'	11'	12'	13'	14'	14'+	DC



*Upstr. wing*



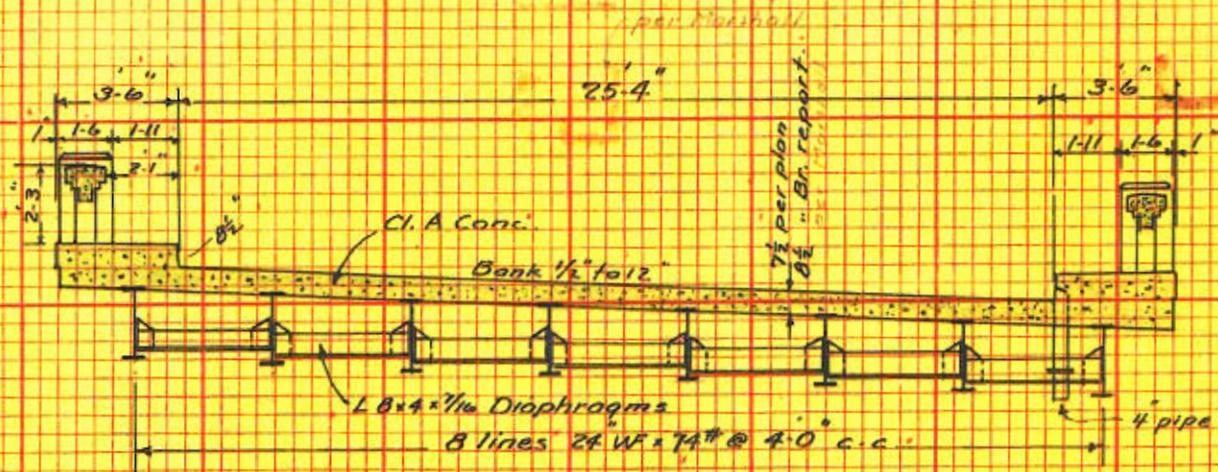
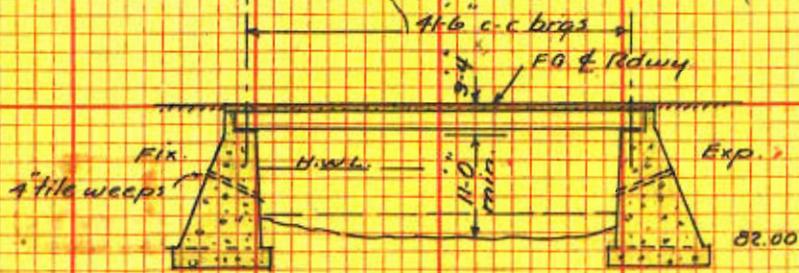
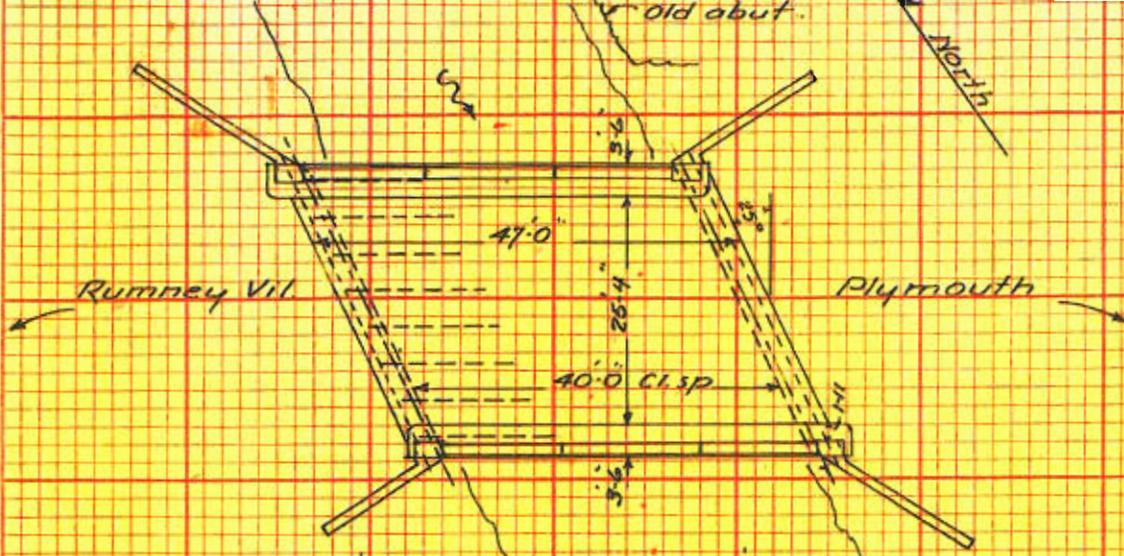
*Dnstr. wing*



*S.E. approach looking toward Rumney Vil.*

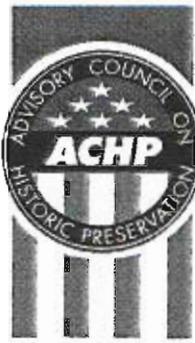


*Downstream side*



CROSS SECTION  
Scale  $\frac{1}{16} = 1'-0"$

Rumney 138/075



Preserving America's Heritage

May 9, 2011

Jamison S. Sikora  
Environmental Programs Manager  
Federal Highway Administration  
New Hampshire Division  
19 Chenell Drive, Suite One  
Concord, NH 03301

Ref: *Proposed Replacement of the Quincy Road Bridge over Stinson Brook  
Rumney, New Hampshire*

Dear Mr. Sikora:

On April 26, 2011, the Advisory Council on Historic Preservation (ACHP) received your notification and supporting documentation regarding the adverse effects of the referenced undertaking on a property or properties listed or eligible for listing in the National Register of Historic Places. Based upon the information provided, we have concluded that Appendix A, *Criteria for Council Involvement in Reviewing Individual Section 106 Cases*, of our regulations, "Protection of Historic Properties" (36 CFR Part 800), does not apply to this undertaking. Accordingly, we do not believe that our participation in the consultation to resolve adverse effects is needed. However, if we receive a request for participation from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer, affected Indian tribe, a consulting party, or other party, we may reconsider this decision. Additionally, should circumstances change, and it is determined that our participation is needed to conclude the consultation process, please notify us.

Pursuant to 36 CFR §800.6(b)(1)(iv), you will need to file the final Memorandum of Agreement (MOA), developed in consultation with the New Hampshire State Historic Preservation Office (SHPO), and any other consulting parties, and related documentation with the ACHP at the conclusion of the consultation process. The filing of the MOA, and supporting documentation with the ACHP is required in order to complete the requirements of Section 106 of the National Historic Preservation Act.

Thank you for providing us with the notification of adverse effect. If you have any questions or require further assistance, please contact Ms. Najah Duvall-Gabriel at 202-606-8585 or at [ngabriel@achp.gov](mailto:ngabriel@achp.gov).

Sincerely,

LaShavio Johnson  
Historic Preservation Technician  
Office of Federal Agency Programs

ADVISORY COUNCIL ON HISTORIC PRESERVATION

1100 Pennsylvania Avenue NW, Suite 803 • Washington, DC 20004  
Phone: 202-606-8503 • Fax: 202-606-8647 • [achp@achp.gov](mailto:achp@achp.gov) • [www.achp.gov](http://www.achp.gov)

Exhibit I



THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION



GEORGE N. CAMPBELL, JR.
COMMISSIONER

JEFF BRILLHART, P.E.
ASSISTANT COMMISSIONER

Rumney
99411Z
Maintenance Project

Adverse Effect Memo

Pursuant to meetings and discussions on December 9, 2010 and January 3 and February 10, 2011, and for the purpose of compliance with regulations of the National Historic Preservation Act, as amended, and the Advisory Council on Historic Preservation's Procedures for the Protection of Historic Properties (36 CFR 800), the NH Division of Historical Resources and the NH Division of the Federal Highway Administration have coordinated the identification and evaluation of historic and archaeological properties with plans to replace the deck and concrete rail of a 1937 I-Beam concrete bridge carrying Quincy Road over Stinson Brook in Rumney, New Hampshire.

Based on a review pursuant to 36 CFR 800.4 of the architectural and/or historical significance of resources in the project area, we agree that the bridge is potentially eligible for listing on the National Register of Historic Places.

Applying the criteria of effect at 36 CFR 800.5, we have determined that the project will have an adverse effect on the bridge because of the removal of the concrete rail. These impacts will be mitigated through the documentation of the bridge using an individual inventory form and minimized through the retention of the remainder of the bridge structure.

In accordance with the Advisory Council's regulations, consultation will continue, as appropriate, as this project proceeds.

Handwritten signatures and dates: Patrick Bauer, Administrator, Federal Highway Administrator, dated 4/14/11; Joycc McKay, Cultural Resources Manager, dated 4/14/11.

Concurred with by the NH State Historic Preservation Officer

Handwritten signature: Linda Ray Wilson, DSHPO, dated 4/14/2011. Elizabeth H. Muzzey, State Historic Preservation Officer, NH Division of Historical Resources.

c.c. Jamie Sikora, FHWA; Christine Perron, NHDOT; Christine St. Louis, NHDHR; Steve Johnson, NHDOT

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**MEMORANDUM OF AGREEMENT  
SUBMITTED TO THE ADVISORY COUNCIL ON HISTORIC PRESERVATION  
PURSUANT TO 36 CFR PART 800.6(a)**

WHEREAS, the New Hampshire Division of the Federal Highway Administration (FHWA) has determined that the replacement of the deck and concrete rail on the Quincy Road Bridge over Stinson Brook (138/075) in Rumney, New Hampshire, will have an adverse effect on the bridge, which is eligible for the National Register of Historic Places, and has consulted with the New Hampshire Division of Historical Resources (NHDHR) pursuant to 36 CFR Part 800, regulations implementing Section 106 of the National Historic Preservation Act (16 USC. 470f); and

WHEREAS, the New Hampshire Department of Transportation (NHDOT) has participated in the consultation process by contacting property abutters, the Town of Rumney, and the Historical Society following the consulting party procedures with the FHWA as stated in 36 CFR 800 (2), and is invited to concur in this Memorandum of Agreement (MOA); and

NOW, THEREFORE, FHWA and the NHDHR agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

**Stipulations:**

FHWA will ensure that the following measures are carried out:

Documentation

Prior to removing the concrete deck and rail, NHDOT shall prepare a New Hampshire Individual Inventory Form with its digital photography. NHDOT shall ensure that all documentation is completed and accepted by NHDHR prior to any disturbance of the structure, and that copies of this documentation are made available to the NHDHR, FHWA, and the Rumney Historical Society.

Minimization

The NHDOT will minimize the impact by retaining the remainder of the bridge.

FHWA shall also ensure that the following terms and conditions are implemented.

I. Dispute Resolution:

Should the NHDHR object within 30 days to any plans or specifications provided for review or action proposed pursuant to this agreement, FHWA shall consult with the objecting party to resolve the objection. If FHWA determines that the objection cannot be resolved, FHWA

shall request the further comment of the Council pursuant to 36 CFR Part 800.6(b). Any Council comment provided in response to such a request will be taken into account by FHWA in accordance with 36 CFR Part 800.6(c)(2) with reference only to the subject of the dispute; FHWA's responsibility to carry out all actions under this agreement that are not the subject of the dispute will remain unchanged.

II. Termination of Agreement

If any signatory determines that the terms of the MOA cannot be executed, the signatories shall consult to seek amendment of the agreement. If the agreement is not amended, any signatory may terminate the agreement. If the terms of this agreement have not been implemented by June 1, 2012, this agreement shall be considered null and void. In such event, the agency shall notify the parties to this agreement, and if it chooses to continue with the undertakings, shall reinstate review of the undertaking in accordance with 36 CFR 800.

III. Amendment

Any party to this agreement may propose to the agency that the agreement be amended, whereupon the agency will consult with the other parties to this agreement to consider the amendment. 36 CFR 800.6 (c)(1) shall govern the execution of this amendment.

Execution of this MOA by FHWA, NHDHR, and NHDOT, its subsequent acceptance by the Council, and implementation of its terms are evidence that FHWA has afforded the Council an opportunity to comment on this project, and that FHWA has taken into account the effects of the undertaking on historic properties.

New Hampshire Division of the Federal Highway Administration

By: *Scott Lemoine* Date: 8/8/11  
or Division Administrator

NEW HAMPSHIRE DIVISION OF HISTORIC RESOURCES

By: *Elizabeth H. Murphy* Date: 7/12/11  
NH State Historic Preservation Officer

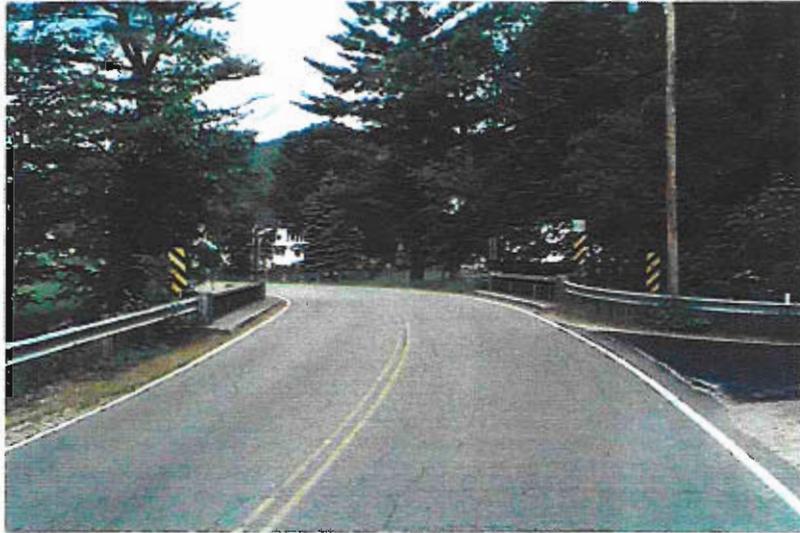
NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION

By: *Lyle W. Knowlton* Date: 8/1/11  
Director of Operations  
Lyle W. Knowlton, P.E.  
Director of Operations  
NHDOT

**RUMNEY 138/075**  
QUINCY ROAD over STINSON BROOK

Tuesday, June 13, 2000

EAST APPROACH.



A084 13

Tuesday, June 13, 2000

UPSTREAM ELEVATION.



A084 14

Tuesday, June 13, 2000

RUST STAINING, LEAKING,  
MEDIUM SPALLS AND  
ELAMINATIONS IN  
UNDERSIDE OF DECK.  
MODERATE RUST ON I-  
BEAMS IN LEAKING AREAS.



A084 15

**RUMNEY 138/075**  
**QUINCY ROAD over STINSON BROOK**

Friday, September 24, 2010

OVERALL CRACKS AND SPALLS ALONG MEAN WATERLINE SE WING AND EAST ABUTMENT. (RED LIST)

A286 48



Friday, September 24, 2010

HEAVY SPALLS AT MEAN WATERLINE IN WEST ABUTMENT. (RED LIST)

A286 49



Friday, September 24, 2010

MODERATE TO HEAVY DELAMINATIONS, RUSTS STAINS AND LEAKING EVIDENCE IN UNDERSIDE OF DECK MAINLY BETWEEN STRINGERS #2,3 AND 4. (RED LIST)

A286 50



**RUMNEY 138/075**  
QUINCY ROAD over STINSON BROOK

Wednesday, May 21, 2008

HEAVY SPALLS WITH LIGHT  
LEAKING AND RUSTED  
REBARS IN DECK UNDER  
CENTERLINE NEAR EAST  
END.

A235 18



