Final Environmental Impact Statement

Spaulding Turnpike Improvements

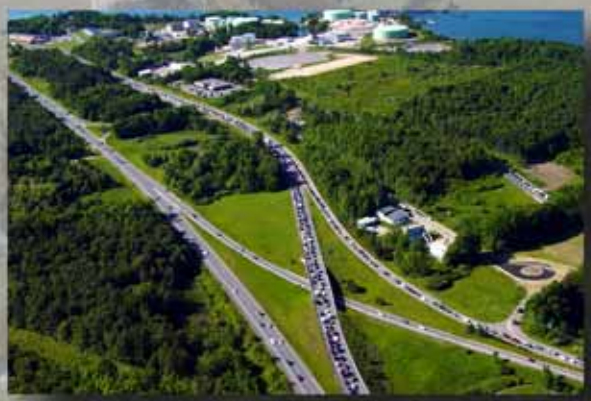
NHS-027-1(37), 11238

Newington to Dover

New Hampshire

December 2007

Volume 4



Federal Highway Administration

New Hampshire Department of Transportation

Spaulding Turnpike Improvements NHS-027-1(37), 11238

Newington to Dover, New Hampshire

Prepared for **New Hampshire Department of Transportation and Federal Highway Administration**

Prepared by ***VHB*/Vanasse Hangen Brustlin, Inc.**
Bedford, NH

December 2007

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1.0 Summary of Public Hearing Testimony

1.0 Summary of Public Hearing Testimony

On September 21, 2006, a Public Hearing was held at the Saint Thomas Aquinas School Gymnasium in Dover, NH. This was a joint Public Hearing involving the Federal Highway Administration (FHWA), the NH Department of Environmental Services (NHDES) and the US Army Corps of Engineers (USACOE). The purposes of the hearing were:

- to determine, in accordance with the provisions of RSA 230:45 and the Surface Transportation and Uniform Relocation Assistance Act of 1987, whether there is occasion for the laying out of alterations to the Spaulding Turnpike from Exits 1 through 6 to include the Little Bay Bridges in the Town of Newington and City of Dover;
- to receive testimony, in accordance with RSA 482-A and administrative rule Env-Wt 202.01, on NHDOT's permit application to dredge and fill wetlands associated with the alterations to the Spaulding Turnpike and Little Bay Bridges;
- to fulfill USACOE's responsibilities under Section 404 of the Clean Water Act, on NHDOT's permit application to impact waters of the United States associated with alterations to the Spaulding Turnpike and Little Bay Bridges;
- to comply with the FHWA's public involvement and NEPA regulations regarding the Draft Environmental Impact Statement.

The Special Committee appointed by the Governor and Executive Council to conduct the Public Hearing included Councilor Raymond Wieczorek and Councilor Peter Spaulding. Councilor Ruth Griffin, Chairperson of the Special Committee, was unable to attend the Hearing. Rene Pelletier, Assistant Director with the Water Division of NHDES, Richard Roach, Project Manager with the New England District of the USACOE and William O'Donnell, Environmental Program Manager with the FHWA, discussed their agencies' respective roles in the hearing and the project approval process. NHDOT and consultant staff provided presentations on the project purpose and need, range of alternatives, various components of the Preferred Alternative, as well as a detailed description of the Preferred Alternative, the associated environmental impacts, and proposed mitigation package.

Approximately 250 people attended the informal afternoon session (3:30 pm to 6:30 pm) and more formal evening meeting, which began at 7:00 pm. Plans were available for public viewing for the informal afternoon session. At that time, NHDOT and consultant personnel were available to informally answer questions and discuss various aspects of the project with interested individuals on a one-on-one basis. Following the presentations made during the formal evening meeting, the hearing was open to public comments. A total of 24 persons provided oral testimony. In addition, NHDOT received 46 letters during the public comment period, which extended to October 4, 2006. Following the comment period, NHDOT produced a transcript of the proceedings, compiled with all the written testimony received, and provided copies to NHDES, USACOE, and FHWA. A number of those who commented at the Public Hearing also followed up with written testimony. Several letters from different individuals addressing a similar topic were received. The majority of letters commented on more than one issue. A summary of the comments is noted in the table below:

Summary of Public Comments

4	Impacted Residential Property Owner
4	Impacted Business Property Owner
30	Concerned Citizen
3	Concerned Business
5	Concerned Group/Organization
14	Town / City Official
3	Regional Official
3	State Official
0	Other Government Official
66	***Total Comments (Public Hearing)***

46	Comments from Dover
14	Comments from Newington
2	Comments from Other Communities
4	Comments from Agencies / Others

26	Support Project
5	Oppose Project
4	3 Lanes on LBB not 4 Lanes
6	Rail/Mass Transit (Pro)
0	Rail/Mass Transit (Con)
3	Park and Ride (Pro)
0	Park and Ride (Con)
11	Soundwalls (Pro)
2	Soundwalls (Con)
6	GSB Rehabilitation (Pro)
1	GSB Rehabilitation (Con)
6	Other Noise Mitigation
13	Other Design Issues
2	Secondary Growth Impacts
17	Environmental Mitigation
9	Other Environmental Issues
4	Economic/Planning Mitigation
13	Property Acquisitions (Pro)
0	Property Acquisitions (Con)
8	Minimization of Landscaping Mitigation / Tree Clearing
7	Impacts to Individual Properties
2	Hilton Park Improvements
10	Toll Plaza Concerns
8	Sidewalk Requests/Concerns
27	Other Issues

A tally of the hearing comments indicates the following general aspects:

- Of the 66 comments received at the Public Hearing, approximately 40% expressed support for the project. Only 5 of the 66 stated an objection to the project as presented, noting concerns with various aspects of the design.
- Most of the comments (44 of 66) were made by concerned citizens (30) or Municipal Officials (14) residing in Newington and Dover. Forty-six comments were made by individuals or residents from Dover, 14 comments were from individuals or residents from Newington.
- Four impacted residential property owners and four impacted business property owners submitted testimony regarding the project.

The comments made at the Public Hearing or in written testimony that potentially have an affect on the Layout of the Preferred Alternative fall into the following general categories:

1. Several commenters (seven in total) expressed concern with the scale of the proposed improvements noting that the proposed widening to eight lanes would have an adverse impact on Dover Point and Hilton Park. They requested assurances that the number of lanes, width of the shoulders, and other elements that contribute to the Turnpike's expansion are needed.

   Response: The EIS evaluated a number of different alternatives including a 6-lane alternative (three basic travel lanes in each direction). Traffic projections for the design year of 2025 indicate that a 6-lane alternative, in conjunction with a combination of TSM and TDM measures, would not be sufficient to accommodate the future travel demands for the corridor. A sensitivity analysis of traffic growth on the Little Bay Bridges indicates that a 6-lane bridge would reach capacity and result in unacceptable traffic operations by 2017 (eight years prior to the design year). Furthermore, beyond the limits of the bridge, construction of six lanes between Exits 3 and 6 would result in congestion and system failure in 2017.

   In addition, widening the Turnpike to provide three lanes in each direction would result in a very similar footprint as widening to provide four lanes in each direction. The typical cross-sectional width for a 6-lane highway (122 feet) is nearly as wide as the 8-lane highway (146 feet). Additionally, the interchange configurations at Exits 3 and 6 are relatively the same under both 6- and 8-lane alternatives, with the exception that the length of acceleration and deceleration lanes would be longer under a 6-lane alternative in order to better accommodate traffic entering and exiting the Turnpike. With regard to environmental impacts, the difference between a 6-lane and 8-lane footprint is minor (less than 5 percent) when comparing impacts to wetlands, wildlife habitat, groundwater, noise (number of impacted receptors), and right-of-way (number of residential and business acquisitions).

   The Selected Alternative proposes three basic travel lanes and one auxiliary lane in each direction between Exits 3 and 6. The auxiliary lanes enable traffic to safely and efficiently enter, exit and switch lanes between Exits 3 and 6. Shoulder areas are

proposed to be 10 feet to 12 feet wide. Experience and safety studies of limited access facilities have demonstrated the safety benefits associated with providing adequate space for disabled vehicles. Narrow shoulder areas are deemed to be safety hazards and are not recommended as they give the appearance of being safe areas for stopping but are not due to their confining width and the relatively high traveling speeds along the Turnpike.

2. Several commenters (seven in total) expressed opposition to the proposed modification of the Exit 6W ramp from the existing free-flow condition to a diamond configuration under signal control. They felt that the proposed signals on Dover Point Road would operate inefficiently, resulting in congestion, traffic queues on the Turnpike and Dover Point Road, and potential traffic diversion onto City streets such as Spur Road and Boston Harbor Road.

   Response: The signalized diamond interchange configuration proposed for Exit 6, as part of the Selected Alternative, will provide for safe and efficient traffic operation for northbound traffic desiring to travel west on US 4. Other potential ramp types and interchange configurations were studied in detail and were found to be less desirable. Under the Selected Alternative, the storage lengths on the proposed diamond shaped northbound off-ramp will sufficiently accommodate the anticipated traffic queues without vehicles backing up onto the Turnpike. In addition, the traffic signals proposed along Dover Point Road and US 4 will be coordinated to process traffic flow efficiently, minimizing delays and vehicle queuing. Detailed studies conducted for all three intersections indicate that backups will not occur along Dover Point Road or on the Turnpike. All three signalized intersections are projected to operate at high levels of service during the peak hours in the design year (2025).

3. Mixed comments were received relative to the elimination of Exit 5. An attorney representing the Wentworth Terrace neighborhood expressed support for the elimination of Exit 5 noting the safety benefits, as well as the fact that the perpetuation of Exit 5 would require improvements that would have serious impacts on the neighborhood. A resident expressed concern that the proposed elimination would create a dead-end road and make truck egress difficult. Two other residents noted concern that eliminating Exit 5 would result in a loss of convenient access to Hilton Park and increase in traffic on Dover Point Road and Boston Harbor Road.

   Response: The elimination of Exit 5 (NB off and on ramps) is required from a safety and traffic operations standpoint due to its proximity to Exit 6 and the projected increase in traffic (2025 travel demand) along the Turnpike between Exits 3 and 6. Insufficient distance exists between the NB on-ramp from Exit 5 and the off-ramp to Exit 6 to safely accommodate the weave between vehicles entering the Turnpike at Exit 5 and vehicles exiting the Turnpike at Exit 6. Traffic safety and efficiency aside, reconstructing Exit 5 to minimum design standards would severely impact Hilton Park and the Wentworth Terrace neighborhood, and would preclude the opportunity to construct soundwalls to reduce existing and future traffic noise levels in the neighborhood.

   The overall re-distribution of traffic associated with the Selected Alternative is anticipated to result in a modest increase in traffic along Dover Point Road in the vicinity

of Boston Harbor Road. Both Dover Point Road and Boston Harbor Road have adequate capacity to accommodate the projected traffic increases. A detailed capacity analysis conducted for the intersection of Boston Harbor Road/Dover Point Road and the proposed local connector road shows high levels of service through the 2025 design year.

Relative to commercial vehicles accessing and exiting the Wentworth Terrace neighborhood and Hilton Drive, the proposed improvements to Hilton Drive in the vicinity of Wentworth Terrace and Hilton Park (including the local connector roadway traversing under the Turnpike) will be designed to accommodate tractor-trailer trucks. Also, a portion of Hilton Drive extending north from the existing ramps to the pump station will be retained to create a loop road for trucks to more easily exit the neighborhood.

4. The Dover City Mayor, as well as several other City residents (four in total), requested a sidewalk be constructed on Dover Point Road, as well as other pedestrian and bicycle accommodation in Dover to mitigate for the projected traffic increases on the local roadways.

   Response: It is acknowledged that the section of Dover Point Road west of the Turnpike will see a moderate increase in traffic once the project is constructed and Exit 5 discontinued. To improve pedestrian safety and provide pedestrian connectivity between the proposed sidewalk at Hilton Park and the existing sidewalk opposite the Division of Motor Vehicles (DMV) property, a new sidewalk along the west side of Dover Point Road is proposed to be incorporated into the project, provided that the additional easements and/or property rights can be secured from the property owners; the additional impacts to wetlands will be permitted; and the City of Dover agrees to maintain the sidewalk in accordance with its accepted policies and practices.

   New sidewalks are proposed in the following locations: along the north side of Spur Road between the Bayview Park parking area and the Scammell Bridge; along the west side of the connector road between Spur Road and Boston Harbor Road; along the west side of Dover Point Road as described above; along the new two-way connector beneath the Little Bay Bridges; and along Hilton Drive connecting to the reconstructed walkway along Pomeroy Cove. Also as part of the project, 4-foot wide shoulder areas, which will accommodate bicycles, are proposed along the reconstructed segments of Dover Point Road, US 4, Spur Road, Hilton Drive, and the two connector roadways.

5. Newington Town Officials requested pedestrian and bicycle accommodations be provided in Newington to provide safe and convenient passage for those modes of travel to cross the Turnpike.

   Response: To improve pedestrian safety and provide pedestrians the ability to cross the Turnpike at Exit 3, new sidewalks are proposed on Woodbury Avenue within the limits of the reconstruction, as well as a sidewalk along the north side of the bridge crossing over the Turnpike and extending through the new Woodbury Avenue/Arboretum Drive/Exit 3 southbound ramps intersection, provided the Town of Newington agrees to accept maintenance responsibilities for the new sidewalks in accordance with its accepted

policies and practices. Also as part of the project, roadside shoulder areas (4 to 5 feet wide) to accommodate bicyclists are proposed within the limits of the project along Woodbury Avenue, the bridge over the Turnpike within the Exit 3 interchange area, and along the reconstructed sections of Arboretum Drive.

6. An attorney for an impacted business requested that a direct access be provided from the business to the southbound Exit 4 (Nimble Hill Road) Turnpike on-ramp, noting that this access would involve minimal changes to the Preferred Alternative.

   Response: Both of the existing driveway openings that presently service the property are proposed to be maintained. The present driveway on Nimble Hill Road is proposed to have direct access to and from the Turnpike on-ramp, but be restricted to right turns in and out, as a raised median will be constructed to separate the on- and off-ramp traffic. No direct access from the Turnpike off-ramp to this driveway is proposed. The second driveway from the Exxon Station that presently has direct access to the Turnpike is proposed to be connected to a new local connector roadway that is proposed south of the gas station and will intersect Nimble Hill Road opposite Shattuck Way Extension.

7. A Dover resident noted that the proposed road reconfigurations in Dover would change the means of access to the Division of Motor Vehicles (DMV) office on Boston Harbor Road and requested the intersection designs make accommodations for truck access to the facility.

   Response: The proposed improvements at the intersections (US 4/Spur Road, Spur Road/local connector and local connector/Boston Harbor Road) leading from US 4 to the DMV facility will be designed to safely and efficiently accommodate heavy commercial vehicles including tractor-trailer trucks.

Other comments made at the Public Hearing or in written testimony can be categorized in the following manner:

1. Several commenters (eight in total) expressed concern with the extent of tree clearing and requested that clearing, as well as the project setbacks be limited and mitigation plantings provided.

   Response: In recognition of the sensitive and scenic nature of the area, tree clearing and setback areas will be limited to the extent practicable. In addition, as part of the project's final design, a comprehensive landscaping plan will be developed showing new trees planted in select locations to mitigate for the mature trees that will be lost due to construction and to landscape other locations along the corridor, as appropriate.

2. Mixed comments were received on the General Sullivan Bridge with several commenters (6 in total) expressing support for the historic bridge's rehabilitation, one questioning the bridge's historicity due to its poor condition, and one objecting to the restoration and future maintenance as an undue burden on the taxpayers.

Response: The General Sullivan Bridge is proposed to be rehabilitated as an element of the Selected Alternative. The bridge, regardless of its present day condition, is a landmark structure, the second highest rated historic bridge in the state, and eligible for the National Register of Historic Places. The bridge offers a unique and important bicycle / pedestrian connection across Little Bay, as well as, other recreational activities, and is deemed a historic resource with protection under Federal (USDOT) law. The cost to rehabilitate the General Sullivan Bridge to a six-ton capacity is estimated at approximately $26 million dollars. This represents a net cost to the project of approximately $10 million dollars taking into account the cost that would be required to dismantle and remove the structure, along with the cost required to provide a replacement recreational connection across the Bay on the widened LBB.

3. A number of commenters (11 in total) expressed support for the installation of the proposed soundwalls, particularly in advance of the bridge and Turnpike construction. Two parties objected to the installation of the walls citing visibility and aesthetic concerns. Several others suggested other means of noise mitigation be pursued and/or aesthetic treatments be incorporated to mitigate the visual impact of the barriers.

   Response: As a result of the detailed noise analysis conducted for the project, four noise barriers totaling approximately 15,600 feet in length are proposed to be constructed in Dover. The barriers were evaluated as to their feasibility and cost-effectiveness, and will be of sufficient height and length to reduce noise levels (at least 5 decibels) at ground level locations for approximately 170 residential properties. The noise barrier along the west side of the Turnpike in Dover is proposed to end at the Little Bay Bridge, which will provide a feasible and cost-effective termination for the barrier while providing a noise reduction benefit to the Dover Point Road neighborhood. Noise barriers will not be constructed on the bridge.

   Additional meetings with the benefiting property owners will be held to discuss the noise barriers and ascertain whether the barriers are desired or not. In accordance with NHDOT Policy, a minimum of 75% of property owners, within the first row adjacent to a particular barrier, will need to support the installation of the barrier in order for it to be constructed. During these meetings with the neighborhoods, more detailed information on the type, height, special features, and length of the noise barriers will be discussed and input gathered. Barriers will be designed to be as low as possible while still achieving the necessary noise reductions. Various architectural treatments and landscaping will be considered during the final design phase of the project to help mitigate the visual impact of the barriers.

   The project's constructability will be reviewed during final design and the proposed noise barriers will be advanced in the construction schedule, where deemed appropriate and practicable. Also as part of the project's final design effort, the merits and feasibility of utilizing "quiet pavement" to reduce tire noise throughout the project area will investigated.

4. A number of commenters (ten in total) expressed toll-related concerns suggesting the existing toll plaza that is located just north of Exit 6 in Dover be eliminated or relocated.

They expressed concern that the plaza creates a large volume of diversion to local City streets and is partly responsible for the congestion of the local roads and downtown Dover.

Response: It has been consistently stated and acknowledged throughout the study and public participation process that the Dover toll facility and toll-related issues fall outside the project study area and scope of study. The project's study area was identified and established following the 1998 Route 16 Corridor Protection Study and the 2000 Newington-Dover Feasibility Study by determining that the current and future Turnpike traffic operating conditions north of the toll plaza were satisfactory. In contrast, the section of the Turnpike between Exit 1 and the Dover Toll Plaza operates at a poor level of service, both in the current and future design year. In addition, changes to the Turnpike toll system require State Legislative and Executive Council approval, and may have revenue impacts. These are state-level issues potentially affecting the entire Turnpike system, not project level matters.

The Department has reviewed the historic traffic data in the area. Since the early 1990s, the data shows an ever-increasing volume of traffic on the Turnpike, while traffic growth on Dover Point Road and US 4 has been relatively flat. This data, along with the regional travel demand projections demonstrate a greater regional use of the Turnpike over time as opposed to a large diversion of traffic to the secondary routes. The travel demand projections indicate that the design year (2025) volume of traffic between Exits 3 and 6 requires the type and scale of Turnpike improvements as reflected in the Selected Alternative.

5. Several commenters (five in total) requested more detailed information regarding stormwater management and water quality monitoring noting concerns with the water quality in Little Bay and risk associated with the potential for further degradation as a result of the project.

   Response: Additional details regarding the stormwater management system and treatment devices will be provided as the project progresses through the final design stages. The NHDOT has and is continuing to work with NHDES to develop the stormwater treatment needs and identify the available methods to assess the potential water quality impacts associated with roadway runoff. The NHDOT has also collaborated with the University of New Hampshire (UNH) Stormwater Center to explore the latest in innovative treatment measures, such as gravel wetlands and infiltration measures that can provide a high level of treatment for the various pollutants associated with highway runoff. As a result of this effort with the University and coordination with NHDES, the most current best management practices and design guidance will be incorporated into the water quality treatment measures. The NHDOT will coordinate with NHDES, and as practicable will assist with their water quality monitoring efforts in the area.

   Regarding the potential for water quality degradation, construction contractors will be required to provide detailed erosion control plans including contingency measures and periodic turbidity monitoring of site discharge during rain events. Contractors will also

be required to provide frequent inspections of construction sites to maintain compliance with permit conditions. Stringent requirements in the final design plans will be incorporated requiring contractors to minimize the movement of eroded sediment beyond the work area.

6. Several commenters expressed support for the early implementation of all proposed TDM and TSM measures identified in the DEIS to mitigate the existing traffic congestion. They encouraged the project incorporate aggressive transit alternatives and commit to fund and implement those alternatives. While supporting the transit-related recommendations, concern was also expressed that transit travel demand may have been underestimated. A number of comments noted concern that the bus expansions proposed as part of the project, particularly the local fixed-route transit services, would not be sustainable without State funding, and recommended the NHDOT commit to funding the transit operations through the project's design year of 2025. A few others noted a need for added transit funding for additional services or a need for innovative TDM measures to reduce the volume of traffic crossing the Little Bay Bridges.

   Response: The NHDOT acknowledges the support for the early implementation of the TDM and TSM elements of the Selected Alternative and will strive to implement these elements prior to or in the early stages of construction. These TDM elements, which are intended as mitigation for the potential for increased congestion during construction, will provide a more balanced transportation system in the seacoast region and travel opportunities other than single occupant vehicles (SOV). These elements include new park-and-ride facilities in Rochester, Dover and Lee, expansion of bus and rail service, and support for employer-based measures. Also proposed, as part of the Selected Alternative, is funding for the seacoast area Transportation Management Association (TMA), known as Seacoast Commuter Options, for the duration of the Turnpike's construction or a maximum five-year period to work with and encourage employers to promote employee travel by means other than SOV's. In addition to area-wide ride-sharing and guarantee-ride-home programs, Seacoast Commuter Options is educating area employers and employees about the availability of employee-paid, pre-tax transportation benefits and employer-paid transportation benefits programs, such as incentives to not driving alone.

   With respect to transit travel demand, the methodology and assumptions which form the basis of estimating future transit ridership have been updated and are presented in the FEIS and include recent ridership data, recent modeling enhancements and updated costs for parking, fuel and travel time.

   Developing and maintaining a sustainable funding source for the preservation and improvement of the area's transportation system, including transit, is a challenge that transcends the project. The need for sustainable funding has been recognized as an issue by both the NHDOT during development of the New Hampshire Transportation Business Plan and by the State Legislature. The NHDOT has proposed a maximum five-year commitment to fund the transit-related elements of the Selected Alternative as mitigating elements to the potential for increased levels of congestion during construction and overall dependency on SOV travel in the region.

7. The Seacoast MPO expressed secondary growth concerns noting that the secondary growth projected by the modeling proved to be relatively negligible. They noted anecdotal evidence suggesting that study area congestion has been influencing development decisions for years. They also noted concern regarding some of the assumptions used in estimating the percentage of wetlands within the socio-economic study area and potential wetland impacts that could be caused by the induced growth.

   Response: While the delay associated with traffic congestion in the project area is certainly a factor in determining regional economic trends, the results of the Regional Economic Model, Inc. (REMI) suggest that other factors also influence growth in the area. Individuals and businesses make decisions based upon a complex set of factors related to economic benefit and quality of life. Thus, while anecdotal evidence may suggest that the chronic congestion on the bridges plays a role in people's economic decisions, traffic congestion is just one of a number of factors, which plays a role in determining regional growth patterns. It is also important to note that nearly all of the growth in the study area is expected to occur regardless of whether the Turnpike is improved or not, in response to other influences (such as the cost of housing) involving overall quality of life and continued economic prosperity found in New Hampshire. Further, it is not clear whether the additional growth that has been identified by the REMI model, and the associated land conversion, is growth that otherwise would not occur, or growth that would simply occur later in time if the project were not completed. Thus, the NHDOT and FHWA stand by the assertion that the project will not induce substantial growth. This is corroborated by the fact that growth has and continues to occur in the communities north of the Little Bay Bridges without regard for the congestion levels within the project area.

8. A fair number of comments (17 in total) were received with regard to the proposed mitigation package for the project. The majority of the comments expressed support for the proposed mitigation components in Dover, particularly the expedited acquisition of a conservation easement on the Tuttle Farm.

   Response: In response to the property owner's request, the NHDOT, in partnership with the City of Dover, has expedited the acquisition of a conservation easement on the Tuttle Farmstead to permanently preserve the 120-acre farm. The preservation was consummated on January 29th, 2007 with the conservation easements executed and property rights transferred to the City, the NHDOT, and Strafford Rivers Conservancy.

   The NHDOT is also working closely with the City to permanently protect a 105-acre parcel located in the Blackwater Brook watershed that is undergoing the threat of development. Should an agreement with the City and developer to acquire the parcel or large portion thereof not be reached, the EIS identified several other parcels in the Blackwater Brook area that are deemed worthy of preservation and permanent protection, which the NHDOT will then pursue to fulfill the mitigation requirements of the project in Dover.

The NHDOT will also continue to coordinate the restoration and preservation elements, as identified in the EIS, with the Pease Development Authority, the Town of Newington, and the property owners of the mitigation parcels to finalize the mitigation requirements of the project in Newington.

9. A number of comments were received with requests for actions relating to individual or specific property impacts including drainage, quality of life, loss of privacy, vegetative screening, physical impact, changed traffic pattern, etc.

   Response: Requests for added investigations, design changes or mitigation measures to minimize the impacts to specific properties were considered to the extent practicable within the context of the project layout and level of design data. In some cases, the comment was positively addressed with minor design modifications. Most of the comments will be considered and addressed during the development of more detailed plans during the final design phase of the project. Unavoidable impacts will be addressed, as appropriate, as elements of the right of way acquisition process.

Individual responses to issues related to the layout or property impacts associated with the project are addressed in the Report of the Commissioner, which is included in Section 3.1 of this Volume. All correspondence received during the Public Hearing process and pertaining to the DEIS is contained in the following section with the associated responses.

2.0 Comments and Responses on DEIS

Federal
(F)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
1 CONGRESS STREET, SUITE 1100
BOSTON, MASSACHUSETTS 02114-2023

OFFICE OF THE
REGIONAL ADMINISTRATOR

October 2, 2006

William F. O'Donnell, P.E.
Environmental Program Manager
Federal Highway Administration
19 Chenell Drive, Suite One
Concord, New Hampshire 03301

Christine Godfrey, Chief
Regulatory Division, Operations Directorate
U.S. Army Corps of Engineers
New England Division
696 Virginia Road
Concord, MA 01742

RE: Draft Environmental Impact Statement for Newington-Dover Spaulding Turnpike Improvements, Stafford and Rockingham Counties, New Hampshire (CEQ# 20060335)

Dear Mr. O'Donnell and Ms. Godfrey:

The Environmental Protection Agency-New England Region (EPA) has reviewed the Federal Highway Administration's (FHWA) Draft Environmental Impact Statement (DEIS) for the improvements to the Spaulding Turnpike/NH Route 16 in Newington and Dover, New Hampshire. We submit the following comments on the DEIS in accordance with our responsibilities under the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act and Section 404 of the Clean Water Act. In addition to our NEPA comments, this letter also responds to an Army Corps of Engineers Public Notice, dated August 22, 2006.

1 The DEIS describes work necessary to reconstruct and widen a 3.5 mile section of the Spaulding Turnpike to improve safety, reduce congestion and better accommodate anticipated increases in traffic demand. EPA complements the efforts of the FHWA and New Hampshire Department of Transportation (NHDOT) to coordinate with the EPA and other federal agencies during the development of the EIS.

2 The attachment to this letter highlights comments and concerns about the DEIS related to wetlands impacts, the secondary and cumulative impacts analysis and air quality for you to consider as you develop the Final Environmental Impact Statement (FEIS) for the proposed project. We appreciate the opportunity to comment on the DEIS for the Spaulding Turnpike Improvements project and look forward to continuing to work with

your agency and NHDOT on this project. Based on our review of the DEIS we have rated the DEIS "EC-2—Environmental Concerns-Insufficient Information" in accordance with EPA's national rating system, a description of which is attached to this letter. Please contact Timothy Timmermann (617-918-1025) of EPA's Office of Environmental Review with any comments or questions about this letter. 2

Sincerely,

for

Elizabeth A. Higgins, Director
Office of Environmental Review

Attachment

Summary of Rating Definitions and Follow-up Action

Environmental Impact of the Action

LO--Lack of Objections
The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC--Environmental Concerns
The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO--Environmental Objections
The EPA review has identified significant environmental impacts that must be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU--Environmentally Unsatisfactory
The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potentially unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1--Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2--Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3--Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

Additional Detailed Comments
Spaulding Turnpike Improvements
Draft Environmental Impact Statement
Stafford and Rockingham Counties, New Hampshire

Wetland Issues

The New Hampshire Department of Transportation (NHDOT) plans to expand the Spaulding Turnpike (Turnpike) for 3.5 miles in Newington and Dover, New Hampshire from 2 lanes in each direction to 4 lanes. This expansion would also take place on Little Bay Bridges and several interchanges will be reconfigured. The total project would impact 23 acres of wetlands, 290 linear feet of stream, and 2.7 acre-feet of 100-year floodplain.

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NHDOT and Corps staffs have done a good job of coordinating with the federal agencies on this project. We have had the chance to view the likely impact areas, nearby landscape, and some of the proposed mitigation sites. We understand the project purpose and we have reviewed the alternatives analysis, the impacts, and the proposed mitigation.

Wetland Resources in Project Area

The wetlands to be filled by the proposed project drain to several tributaries that flow into the Bellamy River, Piscataqua River, and Little Bay. The Piscataqua River then drains to the Atlantic Ocean. Having recognized the exceptional value of the estuary system, EPA and the State of New Hampshire have spent millions of dollars to protect the integrity of the watershed via the EPA sponsored National Estuary Program (NEP) and other related watershed protection programs.

4

Wetlands within the study area provide valuable wildlife habitat and function to maintain water quality. Much of the study area remains forested despite considerable nearby development. Most of the larger wetland / upland systems lie in Newington to the west of the Turnpike and a part of the former Pease Air Force base. More than 60% of the wetlands are forested, but important amounts of shrub/scrub and emergent wetlands are also present.

The applicant has identified and mapped vernal pools. However, it is difficult to match the potential vernal pools listed in Table 3.6.2 of the DEIS with those mapped on Figure 3.6.3. According to the DEIS no vernal pools will be directly impacted as a result of the project. However, it is less clear if indirect and secondary impacts to other vernal pools can be expected once the road is expanded. The FEIS should produce a map and label each of the pools (PVP 1, PVP2, etc.). If any of the productive vernal pools will be within 200' of the new paved area, indirect impacts should be documented, especially from road salt.

5

Alternatives

The 404(b)(1) guidelines generally prohibit the discharge of dredged or fill material if there is a practicable alternative to the discharge which is less environmentally damaging to the aquatic environment. 40 C.F.R. §230.10(a). An alternative is practicable if it is available and capable of being done in terms of cost, technology, and logistics in light of
6 the basic project purpose.

We have worked carefully with NHDOT over the last two years to develop a reasonable range of alternatives to be considered in the DEIS. We are satisfied with the effort NHDOT has made to avoid aquatic impacts and we believe that they have complied with the alternatives test required by the guidelines.

Aquatic Impacts

According to the DEIS, the project would result in the loss of 23 acres of wetlands and 290 linear feet of stream in an existing highway corridor where there has been historical land disturbance. Much of the existing highway alignment traverses wetland areas that
7 have already been degraded and fragmented by past land use activities. The proposed project would increase the extent of this fragmentation but the impacts would be far less when compared to the likely impacts of a new alignment through intact wetland/habitat areas. Consequently, EPA does not believe that the proposed project would cause or contribute to significant degradation of waters of the U.S., provided that an adequate compensatory mitigation plan can be developed (see discussion below).

The project will directly impact streams, flood storage, water quality, and wildlife habitat functions of the affected aquatic systems. The wider roadway (roughly double in width) would substantially increase barriers to wildlife movement and will indirectly impact additional aquatic resources by placing the road much closer to other unfragmented
8 wetlands. In particular, the proposed Exit 3 would extend 1000' off the Turnpike into one of highest quality unfragmented wetland/habitat blocks in the study area (near Railway Brook). Salt laden stormwater runoff and other non-point source pollution impacts will likely degrade aquatic systems that are currently buffered by distance from the existing roadway.

Secondary impacts are also a concern. The DEIS discussion of secondary impacts is informative and it predicts that approximately 1,865 new people will move to the area due to the project—resulting in 408 acres of additional development—with 44 of these developed acres being wetland. However, we believe that several assumptions have been made in the analysis of secondary wetland impacts that will likely underestimate overall impacts. First the DEIS assumes a modest land consumption rate per person, when recent
9 trends lead us to believe that larger land consumption rates (see discussion in secondary and cumulative impacts which follow) are appropriate. Second, the analysis assumes that National Wetland Inventory (NWI) maps would provide the base map for wetlands in the
10 area. NWI maps can underestimate the actual wetlands percent on the ground by 25%.

10 Absent field data, NWI map information combined with soils maps provides a more complete basis for determining wetland limits.

11 The document states that all wetlands in New Hampshire are protected under state and federal laws and that future projects (those that will cause secondary impacts) will provide the necessary mitigation. In addition to illegal fills that may occur, we note that mitigation is often not required under existing laws for smaller wetland impacts in New Hampshire. Moreover, wetland regulatory programs at the state and federal levels are not well suited to track and consider cumulative impacts and fragmentation effects from smaller projects—making it increasingly difficult to pursue appropriate mitigation for impacts realized in the future. Thus, likely future development from this project remains a concern.

Mitigation

12 The proposed mitigation plan consists of the following:

(1) Improving up to 2,700 linear feet of Railway Brook

(2) Preservation of the following properties:

a) Watson (35 acres)
b) Tuttle Farm (part of a 120 acre protection effort)
c) Blackwater Brook (30 – 40 acres)

Overall the NH DOT and its consultants have spent a good deal of time with the agencies on the selection of possible mitigation sites. All of the sites listed above have potential. Also, two alternative sites (Knight Brook and Bellamy River) appear promising. We offer the following thoughts and suggestions on the mitigation plan presented in the DEIS:

13 1) The DEIS states that Railway Brook was the best restoration option available, but it does not provide a full accounting of the list of potential restoration options and why other options were rejected. We believe that the mitigation package should include more restoration. However, we do not want NHDOT to pursue restoration projects that would have little long-term ecological value. EPA encourages NHDOT/FHWA to identify additional restoration opportunities and discuss them in the FEIS. If this proves impractical, that should be explained as well. EPA is willing to assist in that effort.

14 2) The Railway Brook enhancement/restoration proposal offers a range of issues that should be more fully discussed. On the positive side existing concrete structures could be removed from the brook and some limited curves could be added to the stream. Unfortunately, even with these changes, much of the remaining brook (downstream from the restoration) will remain straight and adjacent to developed areas before it reaches the estuary. We encourage NHDOT to continue to work with the Corps, EPA and Fish and Wildlife Service to determine if this segmented stream restoration effort is wise

14 ecological investment. If it is, the FEIS should provide additional information to document that finding and to explain the size of the necessary restoration easement and who will be responsible for the restoration over the long-term.

15 3) We support NHDOT's efforts to work with conservation groups to help protect the Tuttle Farm (120 acres). This farm contains extensive wetlands and key tributary to the Bellamy River, and protection is a very high priority to the Town of Dover. The FEIS should explain whether NHDOT will provide the necessary financial support to protect this area. If NHDOT will be not be the sole contributor, the FEIS should explain how much will they contribute toward conservation of the parcel.

16 4) While we agree that the loss of 2.7 acre-feet of 100-year floodplain would not be a large impact, efforts should be made to explore mitigation options to replace the floodplain loss. If a site is not found, the FEIS should document the search process.

17 5) EPA expects to offer refined comments on the mitigation package/proposal for the project once additional information is provided in response to our comments above. We stand ready to participate in interagency discussions regarding mitigation as appropriate in the future.

Secondary and Cumulative Impacts

18 As you know, EPA and other natural resource agencies commented on the scope of work for the socio-economic analysis prepared for the DEIS, as well as on an early draft of the results. We appreciate having had the opportunity to coordinate with NHDOT and FHWA on this important analysis. Most of the issues and concerns that we raised to date have been answered in the DEIS. We do, however, have some remaining comments that can be found below.

19 In the comments we submitted in November 2005 on the draft socio-economic report, we recommended that the DEIS include a discussion of the major factors that can influence locational decisions of residents, since the method used to forecast population and employment changes (the REMI model) focuses on projecting changes in businesses, with the assumption that these business changes influence where people live. Certainly changes in businesses have a large influence on population (and vice versa), but there are additional factors that influence where people decide to live, such as cost of housing, quality of schools, and general quality of life. We recognize that all models are limited in what can be forecast quantitatively, and although the REMI model cannot numerically incorporate factors such as these, we recommend that the FEIS include a broader *qualitative* discussion of such factors and how they might interact with shorter commuting times along this stretch of roadway. The time savings, particularly in the 8-lane alternative, are significant, and in combination with these quality of life factors may influence the ultimate results of where people decide to live. The DEIS mentions some of these other factors in passing, but they merit some discussion, at least qualitatively.

Although we reviewed a draft of the socio-economic report earlier, this is the first time that we have seen the analysis of the environmental impacts of changes in population and employment. We believe the general approach taken in the DEIS is reasonable, but we question whether the most appropriate land consumption rate is used in the calculations of additional land that will be developed by 2025 under an 8-lane alternative. The confidence levels in the regression analyses shown in Exhibits 4.3-5 and 4.3-6 are not very high, which raises the question of whether a straight line regression best fits the data. That is, we question whether .23 acres of land consumed per capita in Strafford County and .19 acres of land consumed per capita for Rockingham County are the appropriate rates on which to base the calculations. Using a different approach, Table 4.3-5 suggests historic land consumption rates of either .42 acres per capita for the 2-county region (total amount of developed land in the two counties divided by total population) or .64 acres per capita (average rate across the 34 communities). (These calculations also could be done for each county rather than a 2-county region.) We recommend examining the issue of what historic rate to use in the FEIS.

20 In addition, we are concerned whether it makes sense to only use what amounts to a historic average, and believe it would be more appropriate to use recent rates of land consumption per person. Almost all recent studies in New Hampshire and elsewhere have shown that the amount of land consumed per capita has risen far more rapidly than population growth, with most new residential development taking place on larger lots, and much new commercial development on large sites with significant amounts of parking. One relevant study by the Rockingham Planning Commission in 2000 in which they found that development between 1975 and 1982 was consuming more than 1.5 acres per person, as compared with less than .5 acres per person prior to 1953. We recognize that recent land consumptive patterns of development may not necessarily be predictive of the future if towns adopt smart growth policies that encourage compact, pedestrian-friendly development. Nevertheless, we recommend that the FEIS present the results of an analysis that is based on recent land consumption rates. This could either be in addition to or in place of an analysis based on historic rates (see comments above on the appropriate historic rate to use). This analysis could be accomplished by comparing the most recent land cover dataset (which is what was used in the DEIS) with a prior land cover dataset (e.g., from 10-15 years earlier). This would provide an upper bound for how much land might be developed in the future, assuming the land consumption rate doesn't continue to increase.

21 We also note that the impacts to wetlands from future growth may be greater than predicted since threats come not only from direct, permitted filling, as described in the DEIS, but also from illegal, unpermitted filling and from indirect impacts. One example of an indirect impact is stormwater runoff from nearby development that may degrade wetlands and impair their functions and values. As mentioned in our wetlands comments above, we recommend that the FEIS include a caveat that wetlands can be impacted by more than direct, permitted filling.

Air Quality

Construction Impacts

The NHDOT does not commit to either diesel retrofits or the use of low sulfur fuel as mitigation as EPA has requested in our scoping comments of April 5, 2004 and in our February 11, 2005 comments on the Rationale Report for the project.

Instead, the DEIS indicates that both of these measures will be considered through the "final design process with input from the contracting community at large." (DEIS page 4-135)

22

In light of the proven air quality and health benefits derived from the use of retrofit pollution control equipment and low-sulfur diesel fuel, EPA continues to strongly encourage NHDOT to require the use of retrofits and low sulfur fuels through the project's construction contract specifications. Retrofit pollution controls such as oxidation catalysts or particulate filters installed on the exhaust of the diesel engine equipment would reduce particulate matter, hydrocarbon and carbon monoxide emissions on this roadway project as well as on any future construction project where this equipment was used.

Modeling

The MOBILE6.2 modeling for the DEIS (described in Appendix H – Air Quality Technical Information – MOBILE6.2 Input Files) uses an incorrect Reid Vapor Pressure (RVP) value of 6.8 (the summertime gasoline modeling factor) for the winter carbon monoxide modeling runs resulting in a slight under prediction of the actual carbon

23

monoxide emission factors. The correct winter RVP value is 13.0. EPA believes that correcting the RVP will not change the overall conclusion of the microscale carbon monoxide analysis. Therefore, at this time EPA does not require the existing microscale air quality analysis to be corrected unless there is some other reason for re-doing the analyses. Any future emission factor modeling must use the correct RVP value.

Response to Comments Made by
Elizabeth Higgins, Director, Office of Environmental Review
U.S. Environmental Protection Agency, Region 1 –
1 Congress Street, Suite 1100, Boston, MA 02114-2023
Letter dated October 2, 2006

1. The NHDOT and FHWA appreciate USEPA's recognition of the effort undertaken to coordinate with the USEPA and other federal agencies during the development of the EIS.

2. While the NHDOT and FHWA are disappointed in USEPA's EC-2 rating, we hope that the responses below and in the Final EIS will allow the USEPA to find the Final EIS as satisfying your agency's concerns. As noted in comment #1, there has been extensive coordination with USEPA related to the identification of alternatives, efforts to minimize impacts and develop of a mitigation plan for impacts associated with this project.

3. The NHDOT and FHWA appreciate USEPA's acknowledgement of the coordinating efforts expended on this project. Several field reviews and meetings were held to review all the potential mitigation sites and USEPA along with other natural resource agencies (both federal and state) were invited to participate.

4. So noted.

5. Potential vernal pools (PVPs) are more clearly identified in Figure 3.6-3 of the Final EIS to allow USEPA to match that figure with Table 3.6-2. To clarify, there will be no direct impacts to active vernal pools, nor will there be any indirect impacts (using the 200 ft. setback suggested in USEPA's comment).

   Although eight potential vernal pools were identified within the Study Area as described in the EIS, only two of these areas meet the NHF&GD vernal pool criteria (Vernal Pool 4 and Vernal Pool 8). None of the other six potential vernal pools meet these criteria, because no indicator species or evidence of indicator species (*i.e.*, egg masses, calls) were observed during field verification upon multiple field investigations. Further description of these potential vernal pools can be found in the EIS document.

   Vernal Pool 4 is located just west of the Newington Branch of the Guilford Railroad and approximately 1,600 feet north of Patterson Lane. Vernal Pool 8 is located approximately 200 feet west of Arboretum Drive and approximately 1,800 feet south of the existing Exit 3 interchange. Neither Vernal Pool 4 nor Vernal Pool 8 is located in the vicinity of proposed work. Vernal Pool 4 and Vernal Pool 8 are more than 2,000 feet and 800 feet, respectively, from any highway construction. Therefore, it is expected that there will be no direct or indirect impacts to these resources, thus no mitigation will be necessary.

6. NHDOT and FHWA acknowledge USEPA's finding that the Draft EIS considered a reasonable range of alternatives and that the alternatives test as required by the 404(b)(1) guidelines has been met.

7. NHDOT and FHWA agree with the USEPA's finding that the project would not cause or contribute to the significant degradation of waters of the US, and have developed a mitigation plan that has been determined to be acceptable to USEPA and other state and federal resource agencies involved in planning and reviewing the proposed project. NHDOT and FHWA believe that there is consensus among the resource agencies for the final proposed mitigation package, which is outlined in the Final EIS.

   To clarify, the Spaulding Turnpike Improvements will cause a loss of an estimated 20.4 acres of tidal and freshwater wetlands. The mitigation package, as has become common practice in New Hampshire, also proposes to compensate for approximately 2.4 acres of wetland impact associated with other smaller highway projects within the region. A table outlining these impacts is included in the EIS as Table 4.6-2.

8. USEPA's comment that the Proposed Action would roughly double the width of the Turnpike and substantially increase barriers to wildlife movement, as well as indirectly impact additional unfragmented wetlands is not entirely accurate. South of Exit 3 and north of Exit 6, the Turnpike is proposed to be widened from four lanes to six lanes. Between Exits 3 and 6 (less than a 2-mile section), the Turnpike is proposed to be widened from four lanes to eight lanes. However, as shown in Figure 2.3-1 of the EIS, the width of Turnpike in the Exit 5 area is approximately 100 feet wide. The corresponding pavement width under the 8-lane Alternative will be approximately 142 to 146 feet in width. Further, as documented in the EIS (Table 2.5-5), the difference between a 6-lane and 8-lane footprint is relatively minor with regard to the environmental impacts (typically less than 5 percent). For example, wetland impacts will be approximately 20.4 acres as a result of the 8-lane alternative in comparison to 19.7 acres (3.5 percent difference) under the 6-lane alternative. Wildlife/impacts to unfragmented lands range between approximately 9.0 acres (8-lane) and 8.7 acres (6-lane), or 3.4 percent difference. Groundwater impacts range between approximately 15.2 acres (8-lane) and 14.6 acres (6-lane), or 4.1 percent. Noise and right-of-way impacts would be relatively the same. The relatively small difference in impacts is primarily due to the fact that the cross-sectional width for a 6-lane highway is nearly as wide as the 8-lane highway and the 6-lane highway would need extensive acceleration/deceleration lanes at the closely spaced interchanges.

   NHDOT and FHWA recognize that impacts to natural resources would result from the proposed reconfiguration of Exit 3 in Newington, but believe that these impacts must be viewed relative to the overall habitat quality of the area. That is, while these impacts may be relatively greater than other project-related impacts, it must be recognized that the wildlife and aquatic resources impacted by this project are of low to moderate value when viewed alongside other habitats in the seacoast region. Impacts to the large wetland associated with the Exit 3 interchange have been minimized by all means practicable, and further measures to reduce impacts will be an important part of the final design effort.

   Additionally, the project mitigation plan proposes to restore Railway Brook in this area, which will mitigate these impacts. This restoration effort would reconnect the stream to its floodplain, and would substantially improve the hydrologic and biologic function of Railway Brook as well as enhance/expand an adjacent existing wetland system. A variety of natural

rock/boulder structures would be incorporated to ensure long term stability of the proposed channel as well as creation and maintenance of aquatic habitat features. Details of this restoration effort are provided in Section 4.6 of the Final EIS.

With regard to the USEPA's concerns about water quality impacts to aquatic resources, it should be noted that the Selected Alternative will incorporate BMPs for water quality treatment within the highway drainage system, where presently minimal treatment exists. The anticipated pollutant removal efficiency for grassed swales and extended detention basins designed for water quality treatment can generally range between 20 and 80 percent depending on the type of pollutant and the various features included in the BMP design. Advances in the design of stormwater BMPs are occurring rapidly as this issue comes to the forefront. Thus, it is expected that additional stormwater treatment would greatly reduce and potentially offset any increased pollutant loading associated with the increased roadway area.

With regard to USEPA's comment regarding salt impacts on the aquatic resources adjacent to the proposed Exit 3 interchange, it is important to note that there are no stream resources directly impacted in this area. And, of the streams that are crossed by the project, none are impaired by chloride. Potential water quality impacts will be minimized by appropriate measures during final design, including directing the majority of the runoff from Exit 3 to the in-field area where it should infiltrate. Additionally, we note that the project mitigation package includes a substantial restoration effort at Railway Brook, with the intent of providing a net benefit to aquatic resources in this area.

9. In response to the USEPA's concerns regarding the land consumption rate, a new analysis of historical land cover classification data was undertaken to better understand trends in the relationship between population growth and land development in the socio-economic study area. Section 4.3.3 of the Final EIS contains this additional information, which supports the approach used in the Draft EIS to estimate secondary growth impacts. Additional information on this issue is provided in Response #20.

10. NHDOT and FHWA acknowledge that the National Wetlands Inventory (NWI) may underestimate the amount of jurisdictional wetland on the landscape. Based on this comment, as well as comments from the Rockingham Planning Commission, a new wetlands dataset was examined, and the estimated amount of wetlands in the study area was revised to include hydric soils data and more refined wetlands mapping from the NHF&GD Wildlife Action Plan (2007). With this change, NHDOT and FHWA feel that the approach used to estimate the potential natural resource impact resulting from secondary growth is extremely conservative (basic assumption that future development will occur in a "spatially random" pattern regardless of the occurrence of environmental resources) and likely substantially overstates the actual amount of potential future wetland loss due to the project.

11. NHDOT and FHWA agree that in addition to permitted filling of wetlands, illegal fills, as well as fills into smaller wetlands where mitigation is often not required, may result. However, as reported in the EIS, the socio-economic study area is expected to grow to 275,029 people by 2025 for the No-Build condition. The area is projected to grow to 276,894 people by 2025 with the Selected Alternative implemented. This results in an

increase in the future population of approximately 1,865 people, or approximately 0.68%, attributed to the Selected Alternative. Although USEPA notes that future development from this project remains a concern, the NHDOT and FHWA believe that the large majority of future development is attributed to economic and social factors well outside the project's influence.

12. So noted. NHDOT and FHWA appreciate USEPA's recognition of the coordination efforts expended during the development of the proposed mitigation package.

13. The NHDOT and FHWA agree that restoration is perhaps the most cost-effective and ecologically meaningful mitigation strategy, which is why the Railway Brook component of the mitigation package was retained even though some resource agency personnel had recommended abandoning this measure in favor of additional land protection. During development of the mitigation package, the NHDOT, FHWA and their consultants conducted a review of published materials, maps and reports and contacted numerous persons and agencies familiar with restoration on the seacoast. Informational sources included:

- *Freshwater Wetland Mitigation Inventory for Nineteen Coastal Communities,* (New Hampshire Estuaries Project, September 2003)
- *Evaluation of Restorable Salt Marshes in New Hampshire,* (Natural Resource Conservation Service, October 1994, Reissued October 2001)
- *Pease International Tradeport: Development Plan Update*, (Vanasse Hangen Brustlin, Inc., et al., June 1995, Revised September 1995)
- *Coarse Filter Analysis of Potentially Significant Wildlife Habitat*, GIS data, (New Hampshire Fish & Game Department, 2005)
- Historical Aerial Photographs and USGS Topographic Maps (University of New Hampshire)
- Discussion with impacted municipalities (Newington and Dover Conservation Commissions)
- Discussions with non-profit land protection specialists such as the Nature Conservancy and local land trusts
- Resource Agency review and commentary (NHDES, NHF&G, USACOE, USFWS, USEPA)

Review of these data sources and consultations generated a long list of potential mitigation sites as reported to the resource agencies in a memo from the NHDOT's and FHWA's consultant in November, 2005. Each was visited in the field in order to gain information on resources present and the current conditions of the sites. The following potential restoration sites were evaluated:

- Unnamed Coastal Ponds, near Sprague Property, Newington
- Hodgson Brook, Portsmouth
- Stubbs Pond, Newington
- Varney Brook, Invasive Species Removal, Dover
- Varney Brook, Fish Passage (Culvert Modification), Dover
- Flagstone Brook Restoration, Newington

- Drive-in Theater, Upland Habitat Restoration, Newington
- McIntyre Brook Restoration, Newington
- Paul Brook, Newington
- Unnamed Perennial Stream, Newington

Each of the potential creation/restoration sites was ranked using the following criteria determine their suitability:

- Restoration sites are preferred to creation sites;
- The site must have a suitable geomorphic setting;
- The restoration/creation must not conflict with existing infrastructure or private properties;
- Preference should be given to restoration/creation sites that would involve only one or a small set of land owners;
- For restoration, the impairments to the system to be restored should be clearly understood and should be of relatively recent origin; and
- The site should be related to the wetland systems impacted by the project.

During prioritization, it was determined that the highly altered Railway Brook and the drive-in theater properties would be the most suitable for restoration in Newington. Feedback (lack of support from the resource agencies and local officials) prior to and during the public hearing process led the NHDOT and FHWA to the decision to abandon the Drive-in Theater property as a potential restoration site. In Dover, only two small potential restoration sites (both on Varney Brook) were identified, but neither was considered a strong candidate.

It is important to note that this information was previously provided to all resource agencies by way of a technical memorandum dated November 1, 2005, and was discussed prior to and following this memorandum. The discussion of the evaluation of restoration opportunities in the region is updated in Section 4.6.5 of the Final EIS.

14. Since publication of the Draft EIS, the NHDOT and FHWA and their consultants have continued to develop the conceptual plans for the restoration of Railway Brook. As discussed during a meeting with the resource agencies on March 21, 2007, where concurrence on the mitigation components was reached, the NHDOT and FHWA are proposing to move forward with "Restoration Alternative A" as documented in the Draft EIS and in previous written materials submitted to the resource agencies. The NHDOT and FHWA believe that the evaluation of restoration opportunities in the region was thorough and that the Railway Brook project will result in substantial environmental benefits. The EIS has also been updated to include the size of the preservation easement (and interest holders) that will be procured to protect the Railway Brook restoration area in perpetuity.

15. The NHDOT and FHWA acknowledge and appreciate the USEPA's support for the preservation of the Tuttle Farm. In response to the property owner's request, the NHDOT and FHWA, in partnership with the City of Dover, expedited the acquisition of a conservation easement on the Tuttle Farmstead to permanently preserve the 120-acre farm. The preservation was finalized on January 29, 2007 with the conservation easements

executed and property rights on 109.1 acres transferred to the City, the NHDOT, and Strafford Rivers Conservancy (SRC). A second conservation easement on 11.0 acres was secured on September 14, 2006 through the Farm and Ranch Land Protection Program with the easement rights held by the City, SPR and US Department of Agriculture (USDA).

16. Floodplain impacts were evaluated during development of the project and are documented in the DEIS and Final EIS. The Selected Alternative would affect a total of 3.9 acre-feet of 100-year floodplain volume. The majority of this impact (2.7 acre-feet) is associated with the expansion of the bridge piers.

    The floodplain impacts are considered inconsequential in the context of the tremendous volume of Little Bay and will have a negligible effect on the base flood elevations in the area. Likewise, changes to the hydraulic characteristics in the channel would have negligible effects on tidal flooding.

    A hydrodynamic model was built to analyze the potential effects of the project on the estuary and provided information on tidal heights throughout the estuary. The model compared the existing condition with the Selected Alternative and predicted that the pier extensions may change tidal maxima on the order of 0.1 to 0.2 inches, depending on the tidal condition and the location in the estuary. Similarly, current velocities and directions are expected to change only minimally. Thus, effects on local and regional flooding resulting from the additional fill in the Little Bay are considered to be negligible.

    The NHDOT and FHWA have and will continue to coordinate the project with both Dover and Newington and will seek to further minimize floodplain impacts during the project's final design, to the extent practicable.

17. The NHDOT and FHWA discussed the components of the proposed mitigation package with the natural resource agencies including a representative from the USEPA at a meeting on March 21, 2007. The main objective of the meeting was to present the recommended components of the mitigation package and gather final comments from the resource agencies prior to finalizing the FEIS. Meeting participants agreed that the overall mitigation plan is acceptable. In addition, the mitigation package is reflective of the feedback received from all of the state and federal natural resources agencies throughout the NEPA process. Additionally, public comment at the Joint Public Hearing conducted with USACOE and NHDES supported the proposed mitigation.

18. The NHDOT and FHWA appreciate the USEPA's participation in developing and commenting on the analysis of secondary and cumulative effects.

19. The Regional Economic Model, Inc. (REMI) used in this analysis is not a business model. As discussed in Section 4.3.3.2 of the EIS, REMI Policy Insight is an interactive policy model that is used to project economic and demographic changes related to potential policy change or public investment. A key element of the model is the concept of economic geography that is used to evaluate policy variables such as highway infrastructure

investments. In addition to a wide variety of economic impacts, the model also projects numerous social impacts such as:

- Population Changes
- Employment by Occupation
- Migration
- Wages and Salaries
- Values of Imports and Exports
- Labor Force Participation
- Income
- Unemployment Rates

It is recognized, as noted in the comment, that a number of factors "such as cost of housing, quality of schools and general quality of life" influence where people live. A great deal of discussion was included in the "Revised Draft of the Socio-Economic Baseline Conditions Technical Report for the Newington-Dover, Spaulding Turnpike Widening Project" (August 1, 2004) that addressed a variety of housing indicators including:

- Past housing growth by communities within the region
- Housing characteristics
- Residential construction trends (not included in the DEIS)
- Housing price trends (not included in the DEIS)
- Property values (not included in the DEIS)
- Commuting patterns (not included in the DEIS)

While a descriptive narrative of various qualitative factors might be informative, the procedure for linking this type of subjective form of analysis to the project has unique limitations. For example, there are no generally accepted criteria for the evaluation of individual school systems within the 33-community socio-economic study area. This issue becomes even more problematic for school districts that involve more than one community, or communities that operate a primary school system, but send children to neighboring communities for secondary education. Similarly, attempts to develop objective measures of quality of life are extremely difficult. It is not clear what characteristics are the most important in preparing this type of evaluation – *e.g.*, natural resources, cultural activities, sense of community, recreation alternatives. While all of these factors may play a role in location and employment decisions by individuals, linking this type of qualitative analysis to travel time and congestion was determined to be impractical and speculative. Once again, as noted in the EIS, a key factor that results in the congestion of the Little Bay Bridges is primarily due to economic and social factors relating to business and residential locations within the study area that then influence the commuting patterns outlined in the EIS.

20. This comment expresses USEPA's concern that the methodology used to develop land consumption rates, and therefore estimates of secondary impacts on natural resources, may result in an underestimation of these effects. However, NHDOT and FHWA continue to believe that the methodology is appropriate and provides conservative results, which likely over-estimates the effects of the impacts.

First, it is important to note that nearly all of the growth in the study area is expected to occur regardless of whether the Turnpike is improved or not. Growth is expected to occur, even without the project, in response to other influences (such as the cost of housing) involving the overall quality of life conditions and continued economic prosperity found in New Hampshire. In addition, it is not clear whether the additional growth that has been identified by the REMI model, and the associated land conversion, is growth that otherwise would not occur, or growth that would simply occur later in time if the project were not completed.

In response to USEPA's comment that the *"confidence levels"* associated with the regression analysis "are not very high", the regressions reported a *correlation coefficient*, which is a measure of the strength of the relationship between two variables. A *confidence level* or *statistical significance,* on the other hand, is an expression of the uncertainty involved in a statistical relationship and can be thought of as the amount of evidence or support for the relationship in the dataset. Having said that, the correlation coefficients presented in the DEIS are considered quite high, given the number of factors involved in determining land consumption rates. However, a variety of regression types were, in fact, performed during the development of the analysis presented in the Draft EIS. In addition to the linear regression reported in Exhibits 4.3-5 and 4.3-6 of the Draft EIS (now Exhibits 4.3-7 and 4.3-8 of the Final EIS), a number of other regression forms were also examined (*e.g.,* polynomial, exponential, logarithmic). It was determined that a simple linear regression provided the best fit to the data, with statistical significance ("confidence") levels exceeding 90% for both the Strafford and Rockingham County data.

The regression methodology is preferred over the approach of calculating a simple rate. Regression has the advantage that it accounts for the fact that the communities in the study area range from very urbanized to very rural, have varying degrees of commercial and industrial development, and have grown at different rates. For example, Portsmouth has developed at a much different rate than Newington and New Castle. Similarly, Rochester and Dover have grown differently than Middleton or New Durham and the regression approach accounts for these variances.

In response to USEPA's concerns regarding the land consumption rate, a new analysis of historical land cover classification data was undertaken to better understand trends in the relationship between population growth and land development in the socio-economic study area. Section 4.3.3 of the Final EIS contains this additional information, which supports the approach used in the Draft EIS to estimate secondary growth impacts. A new Table 4.3-6 was added to the FEIS to identify the historical land consumption trends. Data from 1962, 1974 and 1998 was examined to estimate the land consumption rates in each of these years. Incremental rates, representing the periods from 1962 to 1974 and 1974 to 1998, were also calculated. These new data do not support the conclusion that land consumption rates have increased in Rockingham and Strafford counties. Further discussion of this analysis is presented in detail in Section 4.3.3.3 of the Final EIS.

21. NHDOT and FHWA recognize that some amount of wetland is lost each year to unpermitted (illegal) fills. However, the analysis presented in the EIS takes this element into account.

The EIS cites the NH Wetlands Bureau data on permitted impacts simply as a check on the predictions developed by the methodology. Note that the methodology predicts a wetland impact rate that is almost three times the amount of documented wetland impacts.

22. The NHDOT and FHWA will require the contractors involved with the reconstruction of the Spaulding Turnpike to include air pollution control devices on heavy diesel construction equipment in accordance with applicable state and federal laws at the time of construction. The merits and practicality of more stringent specification measures will be considered, possibly through a voluntary incentive program, during the final design process and discussed with the contracting community at large.

23. The Reid Vapor Pressure (RVP) and corresponding mobile file were obtained from the NHDES *via* email correspondence in January 2004. The RVP in the mobile file obtained was set at 6.8 for the winter condition. We agree with USEPA that this value should be 13.0 and any future modeling will use an RVP of 13.0. However, we also agree that changing the RVP value will not affect the DEIS conclusions.

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Christopher Waszczuk

From: Marc Laurin
Sent: Wednesday, October 04, 2006 7:51 AM
To: Christopher Waszczuk
Cc: Bill O'Donnell (E-mail); Gino Infascelli (E-mail)
Subject: FW: Spaulding Turnpike - DEIS comments

Comments on the Newington-Dover DEIS from the ACOE
-----Original Message-----
From: Roach, Richard A NAE [mailto:Richard.A.Roach@nae02.usace.army.mil]
Sent: Tuesday, October 03, 2006 8:52 AM
To: Marc Laurin
Subject: FW: Spaulding Turnpike - DEIS comments

From: Rogers, Catherine J NAE
Sent: Monday, October 02, 2006 3:31 PM
To: Roach, Richard A NAE
Cc: Rogers, Catherine J NAE
Subject: Spaulding Turnpike - DEIS comments

Rich,

Please find below my comments on the Draft EIS for the Spaulding Turnpike Improvements.

General Comments:

1) Although the DEIS includes a list of current and proposed projects in the Cumulative Impacts Section, there is no conclusion or analysis of the projects' cumulative impacts on the environment.

2) Section 4.6.5.4 - The DEIS states that a more detailed mitigation plan will be available in the FEIS. The amount of wetlands to be created and/or restored and their functions should be included in those details as well as the details on the preservation properties and how they meet the goals of the mitigation plan.

3) Section 4.10.7, last sentence - A description of the proposed mitigation if the sampling and testing plan shows the potential for significant contaminant release should be provided.

Editorial Comments:

4) Section 3.10.1, last sentence - delete the word "dredge". Section 404 of the Clean Water Act authorizes the Corps to regulate the discharge of dredged or fill material into all waters of the United States.

5) The last paragraph of Section 2.5.5.1 states that further consideration of the 6-lane option is not warranted yet the following section 2.5.6 states that the six or eight lane highway alternatives were evaluated in more detail.

Thanks,
Catherine J. Rogers
Environmental Resources Section
U.S. Army Corps of Engineers
696 Virginia Road
Concord, MA 01742
Phone - (978) 318-8231; Fax - (978) 318-8560
catherine.j.rogers@usace.army.mil

Response to Comments Made by
Catherine Rogers, Environmental Resources Section
U.S. Army Corps of Engineers
696 Virginia Road, Concord, MA 01742
Letter dated October 2, 2006

1. Section 4.3 of the Final EIS has been reorganized and updated to better address the issue of cumulative effects.

2. The mitigation plan has been developed in consultation with the Mr. Richard Roach of the USACOE, as well as other state and federal resource agency personnel. Based on discussions among the resource agencies on March 21, 2007, it appears that a consensus has emerged in favor of the NHDOT's and FHWA's preferred mitigation package, which is detailed in Section 4.6.5 of the Final EIS.

3. The NHDOT and FHWA recognize the risk posed by the suspension of potentially contaminated marine sediments and intend to develop a sediment sampling and characterization program in consultation with the NHDES, the USACOE and other agencies. This sampling would typically occur in conjunction with the geotechnical investigations during the final design phase. Even if the sediments are determined to not pose a contamination risk, stringent requirements will be incorporated into the final design plans to require the selected contractor to minimize any movement of sediment beyond the work area. It is anticipated that all work on the bridge piers will be conducted behind sealed cofferdams, which will substantially limit the movement of suspended sediments. The NHDOT and FHWA will conduct regular inspections of the measures designed to minimize this risk. Additional measures will be developed if contaminants in the marine sediments exceed NOAA thresholds for ecological or human health risk (also see Figure 4.10-16). These requirements are typically a condition of the USACOE and NHDES Wetlands Bureau permits, as well as part of the 401 Water Quality Certificate that will be required for the project.

4. & 5. The suggested editorial revisions have been made to clarify the Final EIS.

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O'Donnell, William F

From: Mike Johnson [Mike.R.Johnson@noaa.gov]
Sent: Tuesday, November 21, 2006 2:10 PM
To: Mike Johnson
Cc: O'Donnell, William F; CWaszczuk@dot.state.nh.us; Chiarella, Lou ; Scott, Marcy
Subject: Re: Newington-Dover, Spaulding Turnpike, DEIS
Attachments: Mike.R.Johnson.vcf

Bill,

1 As per our telephone conversation today, a shortage of manpower at our regional office in Gloucester precludes us from providing detailed comments. However, my quick review of the EFH Assessment today supports my previous determination that the proposed widening of the Spaulding Turnpike should have only minimal impact to subtidal and intertidal habitats within the Piscataqua River. The EFH Assessment for the proposed project was very thorough and comprehensive regarding potential effects to EFH from the action. NMFS concurs with the assessment in the DEIS and EFH Assessment that, because of the highly dynamic current and tide conditions at the project site, there should be minimal adverse effects to benthic fauna and flora and EFH. While some suspended sediment plumes will be created during construction, the tidal current regime should preclude any permanent impacts to EFH.

Please let me know if you have any questions.

Thanks,

Mike

Mike Johnson wrote:

> Bill,
>
> Due to a shortage in manpower at this time, NMFS will not be providing comments on the DEIS for the Spaulding Turnpike project. Thank you for your consideration about our comments.
>
> Thanks,
>
> Mike
>
> O'Donnell, William F wrote:
>
> > Mike: The Federal Register noted the deadline for comments as Oct 2, 2006, that was why I was contacting you. I knew you had a strong interest in the project area and wanted to make sure we addressed your concerns. So if you or Marcy are going to submit comments, please do so soon.
> >
> > **From:** Mike Johnson [mailto:Mike.R.Johnson@noaa.gov]

Sent: Thursday, October 26, 2006 9:06 AM
To: O'Donnell, William F
Cc: Scott, Marcy
Subject: Re: Newington-Dover, Spaulding Turnpike, DEIS

Bill,

Marcy Scott, here in Gloucester, will be assuming responsibilities for NH projects and I have asked her to review the EIS. What is the due date for comments on this?

Mike

O'Donnell, William F wrote:
Mike,

Did you folks have any comments on the subject DEIS that we distributed in early August?

Response to Comments Made by
Michael R. Johnson, National Marine Fisheries Service
Northeast Region Office
1 Blackburn Drive, Gloucester, MA 01930-2298
Letter dated November 21, 2006

1. So noted. The NHDOT and FHWA appreciate NMFS concurrence with the findings of the DEIS and EFH Assessment that there should be minimal adverse effects to benthic flora and fauna and that there would be no permanent impacts to EFH.

U.S. Department of Homeland Security
United States Coast Guard

Commander
First Coast Guard District

408 Atlantic Avenue
Boston, MA 02110-3350
Staff Symbol: dpb
Phone: (617) 223-8364
Fax: (617) 223-8026
Email: john.w.mcdonald@uscg.mil

55

16594
Little Bay/0.1H/NH
November 30, 2006

Mr. Marc G. Laurin
Senior Environmental Manager
New Hampshire Department of Transportation
7 Hazen Drive
P.O. Box 483
Concord, NH 03302-0483

Dear Mr. Laurin:

This letter is in regard to the Draft Environmental Impact Statement for the Newington-Dover 112238 NHS-027-1(37) Spaulding Turnpike improvements project dated July 2006.

1 At this time we see no adverse impacts on present navigation resulting from the proposed bridge project. We do suggest, however, that present and future uses of the waterway and the project's impacts be addressed in the environmental documentation. We may have future comments should new information be brought to our attention and once the bridge design and construction methodology are clear.

2 Construction impact on navigation is the predominant issue of concern to the Coast Guard. I have attached a copy of our standard construction requirements as enclosure (1) entitled "**General Construction Requirements.**" All stipulations in enclosure (1) must be followed in their entirety for all work on, over, or affecting the waterway in any manner. We suggest these conditions be included in the contract requirements when the project is opened up for construction bids.

3 Over the past several years we have advised NHDOT that the abandoned General Sullivan Bridge should be removed as it no longer served a transportation purpose. However, it still remains. The present plan is to rebuild that structure for new uses. A clear and reasonable rationale must be presented for retaining or rebuilding the structure. The bridge permit application to be submitted to this office must address the need to retain or rebuild the General Sullivan Bridge and, if the old bridge is to be removed, should include complete removal of all parts not utilized in the new structure.

4 Keep in mind that our normal permit process takes between nine months and one year and includes a formal public review process. You should anticipate that many of the issues raised during the EIS process will resurface during our public notice phase and must be addressed again in our permit process. Depending upon how far along the design phase has progressed we suggest a meeting to review the Coast Guard's bridge permit procedures. Please contact Mr. John McDonald at our Boston office at 617 223-8364 to discuss appropriate timing of such a meeting.

Please contact me at (212) 668-7021 if you have any questions.

Sincerely,

Gary Kassof
Bridge Program Manager
First Coast Guard District
By direction of the District Commander

Encl: 1) Construction requirements

Copy: CG Sector Northern New England-Waterway Management
FHWA, NH Division, Att: Bill O'Donnell

U.S. Coast Guard Bridge Administration

GENERAL CONSTRUCTION REQUIREMENTS

1. All bridge closures, or bridge operating schedule changes, must be requested in writing, 60 days in advance, from the First Coast Guard District Bridge Branch Office. No channel restrictions, or vertical clearance reductions may be made without written approval from the above office. Waterway closures or safety zones must also be requested 60 days in advance.

2. All submissions to the Coast Guard for review and approval must first be approved by the *owner of the bridge or their authorized agent*. All submission of plans, scope of work, and schedules of operation must be sent to the First Coast Guard District, Bridge Branch Office.

3. At least 30 days prior to commencement of any work, we must have for our review, a copy of the construction plans, contractor' schedule, preferably depicted in a time line graphic format, and the contractor's daily hours of operation. The construction plan package must show the following: **(1)** a plan of the entire waterway area in the vicinity of the project. **(2)** The location of work barges and any anchor lines during working and off-hours. **(3)** In addition, a drawing must be included, if applicable, depicting any scaffolding or containment used indicating the location and the total vertical or horizontal channel reduction. All vertical clearance reductions below low steel or concrete under the bridge as a result of the use of scaffolding must be clearly detailed on the drawings shown in total feet. **(4)** Emergency 24 hour telephone numbers for all responsible individuals for this project must be submitted to this office before any phase of construction begins in case of an emergency situation during off-hours.

4. Scaffolding used under ANY span of the bridge must be lighted with constant burning red lights every 50 feet and on all corners. The placement of scaffolding must not interfere with the ability of a moveable bridge to open for vessel traffic. Moveable bridges must continue to operate according to their normal schedule unless special drawbridge operation regulation changes have been requested. Warning signs must be posted on both sides of the bridge, visible for a 1-mile range, to warn mariners of the vertical clearance reduction. The signs shall face upstream and downstream so as to draw the mariner's attention to the fact that the clearance has been reduced.

5. All barges placed in the waterway must be lighted with constant burning white lights on all four corners of the barge. The contractor is required to comply with all provisions of the Navigation Rules International-Inland, regarding the use of work barges or floating equipment in the waterway. Copies are available from the U.S. Government Bookstore, Room 110, Federal Building, 26 Federal Plaza, New York, NY 10278. Telephone (212) 264-3825.

6. Placement of construction barges in the navigable channel shall be done so as to provide a minimum horizontal clearance reduction. Only one navigation channel of a swing bridge may be blocked by work equipment at anytime. Barges must be moved out of the navigable channel after working hours unless approved in writing by this office.

7. Barges held in place by anchor lines must be marked by anchor buoys, which should be lighted.

ENCLOSURE (1)

8. An as built survey must be taken upon completion of this project, approved by a professional engineer or land surveyor verifying the bridge clearances.

9. The on-scene contractor must have a VHF-FM marine radio set to the bridge communication channels 16/13 or the designated channel for the bridge. Additional marine radios monitoring the above channels must also be maintained at the main control of any floating equipment or barges on station.

10. Preventive measures must be taken to prevent any hot work, debris, or construction material from entering the waterway. This includes sandblasting material, paint, and any concrete work by-products. Welding and burning must cease upon approach of a vessel and shall not start again until the vessel has passed the bridge.

11. The project manager must contact the Coast Guard Sector Northern New England via marine radio before commencement of any and after completion of any Hot Work. A cell phone back-up may be used to contact the above Coast Guard Unit at (207) 780-3251.

12. If permanent bridge navigational lighting cannot be maintained operational during any phase of this project, temporary battery/power lights must be installed at the same locations. These temporary lights must be visible for a distance of 2,000 yards on 90% of the nights of the year. Generally, a lamp of 20 footcandles will meet these requirements. Plans for temporary lighting shall be submitted to this office for written approval. Deviations from the approved temporary lighting shall be permitted only upon written authorization from this office. **All newly constructed bridge piers, or in the process of demolition, must be lighted with red constant burning lights as well as all four corners of any cofferdams used during construction.**

13. Bridge protective fenders shall not be constructed or rebuilt with any metal surfaces on the rubbing face of the fender system. All bolts, spikes, or other metal fastening devices must be countersunk. Metal splicing plates, if used, shall be mounted on back of outer wales.

14. All piles including those previously damaged or broken that are not being used in the new or repaired fender shall be extracted rather than cut off at the mud line. Upon completion of all fender repairs a bottom sweep is required to determine if any piles or debris are present in the waterway. A wire-drag sweep or side-scan sonar is the preferred method.

15. During the progress of work should any debris or equipment enter the waterway and become a hazard to navigation, immediate notice shall be given to the Coast Guard and the object removed as soon as possible. Until removal can be effected, the obstruction shall be properly marked.

16. Spillage of oil and hazardous substances is specifically prohibited by the **Federal Water Pollution Control Act**, as amended. Approved spill containment equipment and absorbent material must be located at the project site in the event of a spill into the waterway or the shoreline. The Coast Guard must be notified immediately at (800) 424-8802.

Response to Comments Made by
Gary Kassof, U.S. Coast Guard
U.S. Department of Homeland Security
408 Atlantic Avenue, Boston, MA 02110-3350
Letter dated November 30, 2006

1. The NHDOT and FHWA appreciate the Coast Guard's concurrence that no adverse impacts to present navigation will result from the proposed widening of the Little Bay Bridges. The NHDOT and FHWA are not aware of any future use of the waterway that would change this conclusion and therefore believes its analysis is complete.

2. The NHDOT and FHWA appreciate the Coast Guard's guidance and will incorporate the requirements of the "General Construction Requirements, NH & ME," into the appropriate final design plans and construction bid/contract documents.

3. The NHDOT and FHWA propose to progress the rehabilitation of the General Sullivan Bridge as an element of the Selected Alternative identified for the project. The General Sullivan Bridge, regardless of its present day condition, is a landmark structure, the second highest rated historic bridge in the state, and eligible for the National Register of Historic Places. The bridge offers a unique and important bicycle / pedestrian connection across Little Bay, as well as other recreational activities, and is deemed a Section 4(f) resource with protection under Federal (USDOT) law. The NHDOT and FHWA have estimated the cost to rehabilitate the General Sullivan Bridge to a six-ton capacity, which will be able to accommodate pedestrians, bicycles, recreational activity, and emergency vehicles, at approximately $26 million dollars. This represents a net cost to the project of approximately $10 million dollars taking into account the cost that would be required to dismantle and remove the structure, as well as the cost required to provide a replacement recreational connection across the Bay.

4. So noted. The NHDOT and FHWA will contact Mr. McDonald during the project's final design to discuss the Coast Guard permitting process.

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, D.C. 20240

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ER 06/789

Ms. Kathleen O. Laffey
Division Administrator
Federal Highway Administration
19 Chenell Drive, Suite One
Concord, New Hampshire 03301

Dear Ms. Laffey:

This responds to a request for the Department of the Interior's (Department) review and comment on the Draft Environmental Impact Statement/Section 4(f) Evaluation for **Newington-Dover Spaulding Turnpike Improvements**, US Route 4 and NH Route 16, Stafford and Rockingham Counties, New Hampshire.

Section 4(f) Evaluation

1 We note that there are five historic properties and two public parks/recreation areas to be affected by the Preferred Alternative (Chapter 5, Pages 5-1 thru 5-15). Pursuant to the National Historic Preservation Act, Advisory Council on Historic Preservation rules (36 CFR 800), and current practices of consultation between the Federal Highway Administration (FHWA), State Historic Preservation Officer (SHPO), and the New Hampshire Department of Transportation (NHDOT) as relating to Section 4(f) Evaluation, an Adverse Effect Memorandum (AEM) concerning the five historic properties and uncompleted status of archeological investigation was signed February 9, 2006 (Appendix G – Historic Resource Documentation).

2 The presentations on each property included mitigation measures for adverse effects, as well as commitment of NHDOT to completion of ongoing archeological investigations prior to the commencement of physical project work. The AEM also indicated continuance of consultation with the SHPO throughout the progress of the project. The Measures to Minimize Harm, and Coordination Sub-sections (Chapter 5, Pages 5-12 thru 5-14), clearly embrace the terms of the AEM in a spirit of commitment. However, there seems to be lesser assurance to the measures described for impacts to the two park areas. We would encourage the project to provide a level of assurance closer to that of cultural resource protection, perhaps itemization of specific efforts that will be positively acceptable to the parties of management of the recreation use resources of those public parks subject to impact by this essential highway improvement.

3 Based on the project compliance information provided, we concur that there are no feasible and prudent alternatives to the Preferred Alternative selected in the document, and agree to the measures mentioned above to minimize harm to project resources.

Draft Environmental Impact Statement

Cultural and Recreational Resource Considerations

4 We reiterate our commentary above.

Natural Resource Considerations

5 We offer no comment.

We appreciate the opportunity to provide these comments and look forward to receiving the final documentation.

Sincerely,

Willie R. Taylor
Director, Office of Environmental
Policy and Compliance

cc: Mr. James A. Moore
Director, Project Development
New Hampshire Department of Transportation
Post Office Box 483
Concord, New Hampshire 03302-0483

Response to Comments Made by
Willie R. Taylor, Director, Office of Environmental Policy
U.S. Department of the Interior
Office of the Secretary, Washington, D.C. 20240
Letter dated November 28, 2006

1. So noted.

2. The NHDOT and FHWA understand that mitigation of impacts to the recreational properties affected by the project is important. One of the two such resources, Hilton Park is owned, maintained and managed by the NHDOT. Impacts to the park are negligible. However, NHDOT and FHWA will work with NHDHR to develop and erect an informational sign that explains the history of the GSB and significance of the park. Additionally, reasonable efforts will be made to minimize impacts to the park during construction, including preventing unnecessary disturbance of areas outside the existing right-of-way, and maintaining safe access to the park.

   Impacts to Bayview Park are similarly negligible and present no discernable impact to the recreational experience provided by this property. However, in order to benefit the park, a sidewalk will connect the park's parking area with the sidewalk network on the Scammell Bridge and to provide pedestrian connectivity to the Dover Point Road/Boston Harbor Road neighborhood. This would enhance pedestrian accessibility to the park. Parking at Bayview Park would also be expanded from eight to 12 spaces, which will benefit users of the park as well as citizens using the Scammell Bridge to fish.

3. – 5. The NHDOT and FHWA appreciate USDOI's concurrence with the provisions of Section 4(f).

Christopher Waszczuk

From: richard.doucette@faa.gov
Sent: Tuesday, December 05, 2006 9:25 AM
To: O'Donnell, William F
Cc: Christopher Waszczuk; donna.witte@faa.gov
Subject: Newington-Dover, 11238

The FAA has following comments on the Spaulding Turnpike EIS:

1 The EIS is satisfactory to the FAA New England Region. We appreciate the hard work by all parties.
Upon issuance of the Final EIS, we request one hardcopy of the document and plans. The plans (or a separate plan) should clearly show (a) the proposed land takings from Pease Development Authority and (b) a brief narrative describing the current and proposed condition/use of the land to be taken.

Richard Doucette, Environmental Protection Specialist
FAA New England Region
12 New England Executive Park
Burlington MA 01803
phone: 781-238-7613

Response to Comments Made by
Richard Doucette, Federal Aviation Administration
New England Region
12 New England Executive Park
Burlington, MA 01803

1. So noted. The NHDOT and FHWA appreciate FAA's recognition of the EIS. As requested, a hard copy of the Final EIS will be sent to FAA upon its completion. A set of plans showing the proposed land takings from the Pease Development Authority (PDA) will be developed and forwarded during the ROW negotiation process. The plans will be accompanied by a narrative describing the current and proposed conditions and uses of the land to be taken.