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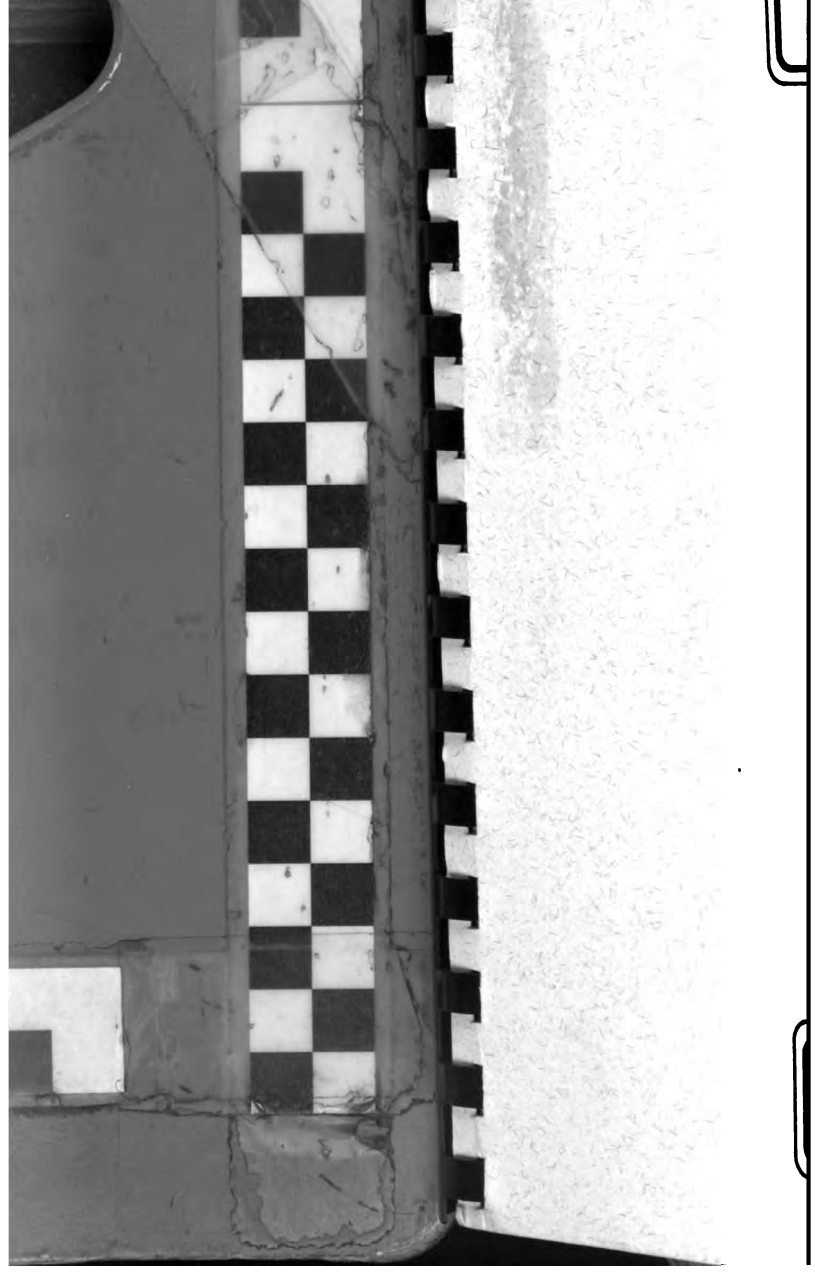

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CIRCUMFERENTIAL HIGHWAY

FINAL
ENVIRONMENTAL IMPACT STATEMENT
VOLUME II
DEIS COMMENTS AND RESPONSES

OCTOBER 1993

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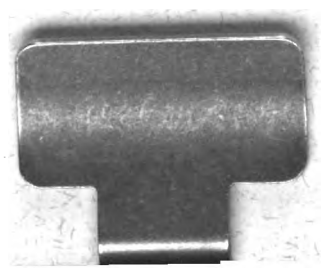

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NASHUA-HUDSON CIRCUMFERENTIAL HIGHWAY

FINAL ENVIRONMENTAL IMPACT STATEMENT

VOLUME II

DEIS COMMENTS AND RESPONSES

OCTOBER 1993

U.S. ARMY CORPS OF ENGINEERS
NEW ENGLAND DIVISION

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PREFACE

This volume of the Nashua-Hudson Circumferential Highway Final Environmental Impact Statement (FEIS) contains the transcript of the Public Hearing held on January 4, 1993, as well as written comments on the Draft EIS (DEIS) that was published and circulated in October 1992. Comments received from Federal agencies appear first, followed by those received from state, regional, and local agencies and/or organizations. The Public Hearing transcript and written comments from concerned citizens follow, completing this volume of the FEIS.

Original comment letters and the Public Hearing transcript are reduced and appear predominantly on the left side of each page. Comments within each letter are highlighted and consecutively numbered. To the right of each comment letter are numbered responses corresponding to the numbered comments contained in the letter. Paraphrasing was utilized when comments voiced similar concerns. In these instances, the original comment letter was omitted, but the agency, organization, or individual who submitted the comment is identified.

Where changes to the DEIS are necessitated, those revisions have been directly incorporated into Volume I of the FEIS. Many comments expressed concern that the analysis of the Transit/Transportation Demand Management (TDM) and Transportation Systems Management (TSM) alternatives was inadequate in the DEIS. A thorough analysis of this alternative has since been conducted and is presented in its entirety in Appendix B of the Traffic and Transportation Technical Report (Revised August 1993). The results of this analysis are summarized in the FEIS.

The initial closing date for comments was January 11, 1993. However, the Corps extended the comment period to January 25, 1993 at the request of several individuals.

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TABLE OF CONTENTS

		PAGE
1.1	**FEDERAL COMMENTS**	1-1
	United States Environmental Protection Agency	1-2
	United States Department of the Interior, Fish and Wildlife Service	1-54
	United States Department of the Interior, Office of the Secretary	1-57
	United States Department of the Interior, Bureau of Mines	1-60
	U.S. Department of Transportation, Federal Highway Administration	1-62
	Department of Health & Human Services	1-64
	United States Department of Commerce	1-66
	Federal Emergency Management Agency	1-67
	U.S. Representative Dick Swett (Letter #1)	1-69
	U.S. Representative Dick Swett (Letter #2)	1-70
2.1	**STATE COMMENTS**	2-1
	State of New Hampshire, Fish and Game Department	2-2
	State of New Hampshire, Department of Resources and Economic Development: National Heritage Inventory	2-5
	State of New Hampshire, Department of Resources and Economic Development: Office of the Commissioner	2-7
	State of New Hampshire, Office of State Planning	2-8
3.1	**REGIONAL COMMENTS**	3-1
	Nashua Regional Planning Commission	3-2
	Audubon Society of New Hampshire	3-5
	Conservation Law Foundation	3-9
	Pennichuck Corporation	3-23
	Paraphrased Insert Regarding Comments Related to the Nashua Fish and Game Association	3-24

Digitized by Google

TABLE OF CONTENTS

		PAGE
4.1	**LOCAL COMMENTS**	4-1
	Town of Hudson, Board of Selectmen	4-2
	Town of Merrimack, Planning Board	4-5
	Town of Merrimack, Town Hall	4-7
	Greater Nashua Chamber of Commerce	4-10
	Mayor Rob Wagner, City of Nashua	4-12
	City of Nashua, Conservation Commission	4-13
	City of Nashua, Community Development Division	4-15
	Paraphrased Comments: Town of Litchfield	4-17
5.1	**PUBLIC HEARING TRANSCRIPT**	5-1
6.1	**CITIZEN COMMENTS**	6-1
	David and Allison Annand	6-2
	Arthur Ansdell	6-4
	Patricia Ansdell	6-5
	Robert and Christine Brown	6-6
	Donald Buchanon	6-8
	Norman Cailler	6-10

		PAGE
6.1	**CITIZEN COMMENTS (continued)**	
	Joseph-David Carrabis	6-12
	Emile Chagnon	6-15
	Louise Collaid	6-16
	Philip Conte	6-18
	Cheryl Daniels	6-19
	Nathan Demers	6-20
	William Dempster, Jr.	6-23
	Edmond Durand	6-24
	Paul and Linda Felcyn	6-26
	Rocco and Margaret Femia	6-27
	H.R. and Dorothy Fulmer	6-28
	Curtis and Donella Graham	6-29
	Thomas and Judith Grilli	6-31
	Nathan Guyer	6-33
	Hubert and Lori Hein	6-35
	Stephen H. Kaiser	6-36

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TABLE OF CONTENTS

		PAGE
6.1	**CITIZEN COMMENTS (continued)**	
	Thomas Linell	6-45
	Dennise McCarthy	6-46
	Henry McElroy, Jr.	6-47
	James and Michelle McNeill	6-48
	Brent and Nancy Morrison	6-50
	John J. O'Neil	6-53
	Dick and Debbie Peterson	6-54
	Rina Petit (Testimony)	6-55
	Rina Petit (January 25, 1993)	6-58
	Rina Petit (January 22, 1993)	6-62
	Louis and Nancy Poulin	6-63
	William Ross	6-66
	Bethanne Rousseau	6-67

		PAGE
6.1	**CITIZEN COMMENTS (continued)**	
	John Rutherford	6-68
	Michael Schwed	6-70
	Peter and Sandra Silver	6-74
	Alan Simoneau	6-75
	Timothy and Linda Stanley	6-76
	Catherine Valley	6-78
	Marilyn Wade	6-79
	Richard Widhu	6-84
	Paraphrased Comments: Residents at the Village of Barretts Hill	6-86
APPENDIX A:	Nashua-Hudson Circumferential Highway Toll Plazas: Air Quality Effects Assessment	A-1

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LIST OF FIGURES

		PAGE
Figure 2-1	Location Map and Cross Section of Alternative 8 by the Pennichuck Reservoir	5-7

LIST OF TABLES

		PAGE
Table 23-1	Miles of Level of Service "F"	1-11
Table 31-1	Alternative Comparison: Miles of Unacceptable Level of Service and Acceptable Level of Service	1-17
Table 32-1	Comparison Between Existing (1990) and Design Year (2010) of Level of Service F and F' on all Roadways other than Central Business District Roads	1-19
Table 5-1	Candidate Noise Barriers	1-63
Table 2-1	Summary of Sensitive Receptors Affected by Project Alternatives	1-65
Table 43-1	Traffic Data Matrix	5-15

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GLOSSARY

DEIS	Draft Environmental Impact Statement
FEIS	Final Environmental Impact Statement
TDM	Transportation Demand Management
TSM	Transportation Systems Management
LEDPA	Least Environmentally Damaging Practicable Alternative
NHDOT	New Hampshire Department of Transportation
CAAA	Clean Air Act Amendments
TIP	Transportation Improvement Program
VMT	Vehicle Miles Traveled
LOS	Level of Service
CBD	Central Business Districts
TMA	Transportation Management Agency
FWS	Fish and Wildlife Service
FEMA	Federal Emergency Management Agency
SHPO	State Historic Preservation Office
MOA	Memorandums of Agreement
NHFGD	New Hampshire Fish and Game Department
NHNHI	New Hampshire National Heritage Inventory
NMHC	Nonmethane Hydro-carbons
NWI	National Wetland Inventory
SCS	Soil Conservation Service
AASHTO	American Association of State Highway and Transportation Officials
ADT	Average Daily Traffic

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1. Federal Comments

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1.1 FEDERAL

The following Federal agencies provided written comments on the DEIS:

United States Department of Environmental Protection Agency
United States Department of the Interior, Fish and Wildlife Service
United States Department of the Interior, Office of the Secretary
United States Department of the Interior, Bureau of Mines
United States Department of Transportation, Federal Highway Administration
Department of Health & Human Services
United States Department of Commerce
Federal Emergency Management Agency.

In addition to these agencies, two letters were received from U.S. Representative Dick Swett of New Hampshire.

Their written comments and the corresponding responses follow.

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March 2, 1993

Ms. Theresa Flieger
U.S. Army Corps of Engineers
New England Division (ATTN: CENED-OD-R)
424 Trapelo Road
Waltham, MA 02254-9149

re: Revised Draft Environmental Impact Statement, Nashua-Hudson Circumferential Highway

Dear Ms. Flieger:

The Environmental Protection Agency, in accordance with its responsibilities under the National Environmental Policy Act (NEPA), Section 309 of the Clean Air Act, and Section 404 of the Clean Water Act, has reviewed the revised Draft Environmental Impact Statement (rDEIS) for the proposed Nashua-Hudson Circumferential Highway.

The Circumferential Highway would be a limited access toll road in the City of Nashua and the Towns of Hudson, Litchfield and Merrimack in New Hampshire. The purpose of the project is to provide transportation improvement to assist east-west traffic movement and to reduce congestion on existing bridges and streets in and near the central business districts of Nashua and Hudson by adding new crossings of the Merrimack River. The project purpose includes the goal of improving and reducing traffic congestion in the design year of 2010 over the existing levels.

The Nashua-Hudson Circumferential Highway project has been the subject of intense scrutiny since proposed originally in 1959. In our response to the 1984 DEIS issued by the state and the Federal Highway Administration, we expressed our concern about the lack of consideration of alternatives for the southern segment of the highway, the crossing of the Pennichuck Reservoir in the northern segment, and the absence of a specific mitigation plan for unavoidable wetland impacts. Responding to a requirement by the U.S. Army Corps of Engineers that impacts on environmental resources be minimized, the New Hampshire Department of Transportation (NHDOT) initiated the revised DEIS evaluation of alternative alignments. EPA has participated as a cooperating agency in the preparation of the rDEIS, and has consistently advised the Corps and NHDOT that potential impacts to the Pennichuck Reservoir area, wetlands and other water resources must be reduced. Additionally, we have recommended that the rDEIS

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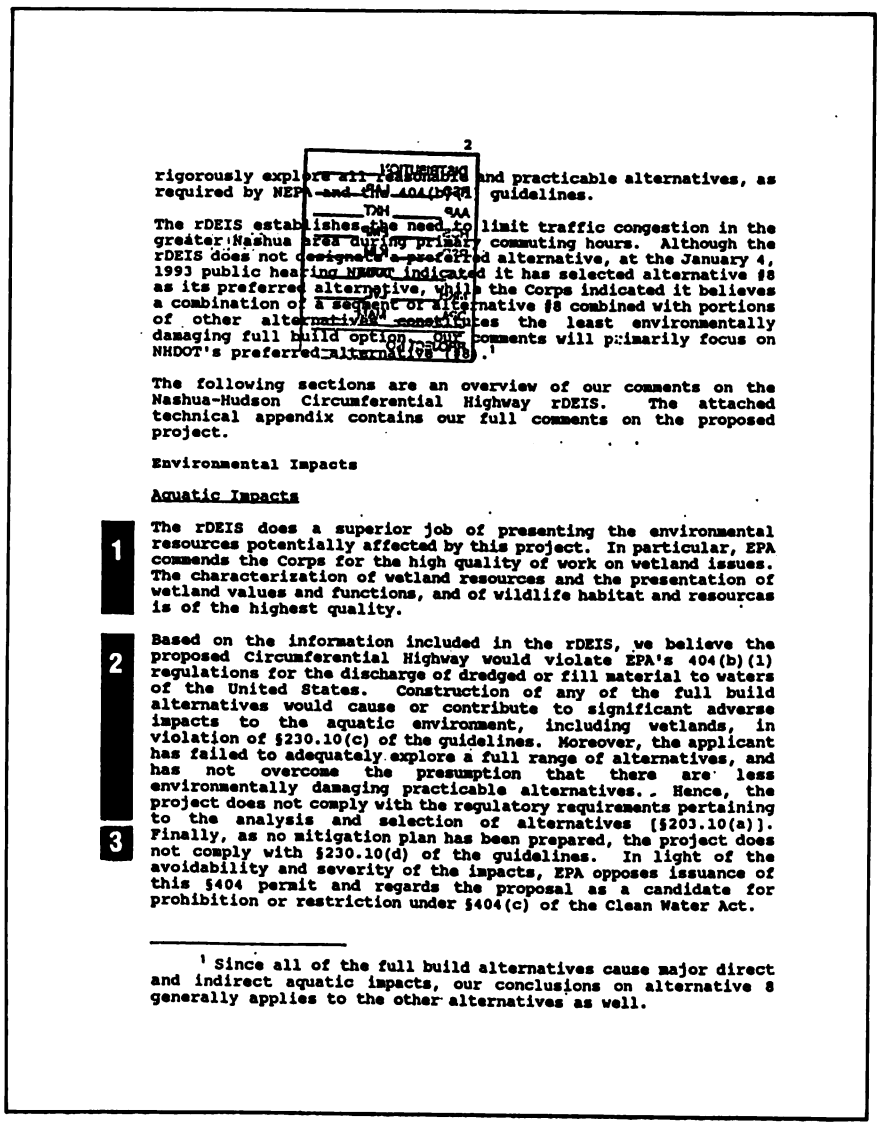

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rigorously explore all reasonable and practicable alternatives, as required by NEPA and the 404(b)(1) guidelines.

The rDEIS establishes the need to limit traffic congestion in the greater Nashua area during primary commuting hours. Although the rDEIS does not designate a preferred alternative, at the January 4, 1993 public hearing NHDOT indicated it has selected alternative #8 as its preferred alternative, while the Corps indicated it believes a combination of a segment of alternative #8 combined with portions of other alternatives constitutes the least environmentally damaging full build option. Our comments will primarily focus on NHDOT's preferred alternative (#8).[1]

The following sections are an overview of our comments on the Nashua-Hudson Circumferential Highway rDEIS. The attached technical appendix contains our full comments on the proposed project.

Environmental Impacts

Aquatic Impacts

1 The rDEIS does a superior job of presenting the environmental resources potentially affected by this project. In particular, EPA commends the Corps for the high quality of work on wetland issues. The characterization of wetland resources and the presentation of wetland values and functions, and of wildlife habitat and resources is of the highest quality.

2 Based on the information included in the rDEIS, we believe the proposed Circumferential Highway would violate EPA's 404(b)(1) regulations for the discharge of dredged or fill material to waters of the United States. Construction of any of the full build alternatives would cause or contribute to significant adverse impacts to the aquatic environment, including wetlands, in violation of §230.10(c) of the guidelines. Moreover, the applicant has failed to adequately explore a full range of alternatives, and has not overcome the presumption that there are less environmentally damaging practicable alternatives. Hence, the project does not comply with the regulatory requirements pertaining to the analysis and selection of alternatives [§203.10(a)].

3 Finally, as no mitigation plan has been prepared, the project does not comply with §230.10(d) of the guidelines. In light of the avoidability and severity of the impacts, EPA opposes issuance of this §404 permit and regards the proposal as a candidate for prohibition or restriction under §404(c) of the Clean Water Act.

[1] Since all of the full build alternatives cause major direct and indirect aquatic impacts, our conclusions on alternative 8 generally applies to the other alternatives as well.

1 Comment noted, no response required.

2 Comment noted. A full range of alternatives, including No-Build, Transit/Transportation Demand Management (TDM), Transportation Systems Management (TSM), Partial Build, and Full Build alternatives were analyzed in the Draft Environmental Impact Statement (DEIS). Based on comments received at the Public Hearing, a refinement of the analysis of Transit/TDM and TSM has been performed. This analysis is summarized in the Final Environmental Impact Statement (FEIS) and is further documented in Appendix B of the Revised Traffic and Transportation Technical Report. This range of alternatives is also sufficient for the regulatory requirements pertaining to the analysis and selection of alternatives found in 40 CFR §230.10(a).

The Corps will address the issue of significant degradation under the 404(b) (1) guidelines in coordination with other federal and state resource agencies, after the selection of the Least Environmentally Damaging Practicable Alternative (LEDPA) prior to any permit decision. The proposed mitigation measures and the degree to which they offset adverse impacts will be taken into consideration in this determination. Mitigation proposals and designs will be finalized and reviewed after the LEDPA has been selected.

2 Comment noted. Wetland mitigation plans are being prepared and will be finalized prior to a Corps permit decision so that compliance with 40 CFR §230.10(d) can be determined. The FEIS, although it does not contain final mitigation plans, does include more detailed plans of the primary compensatory mitigation site, the former Benson's Wild Animal Farm, Figure 4.15-5.

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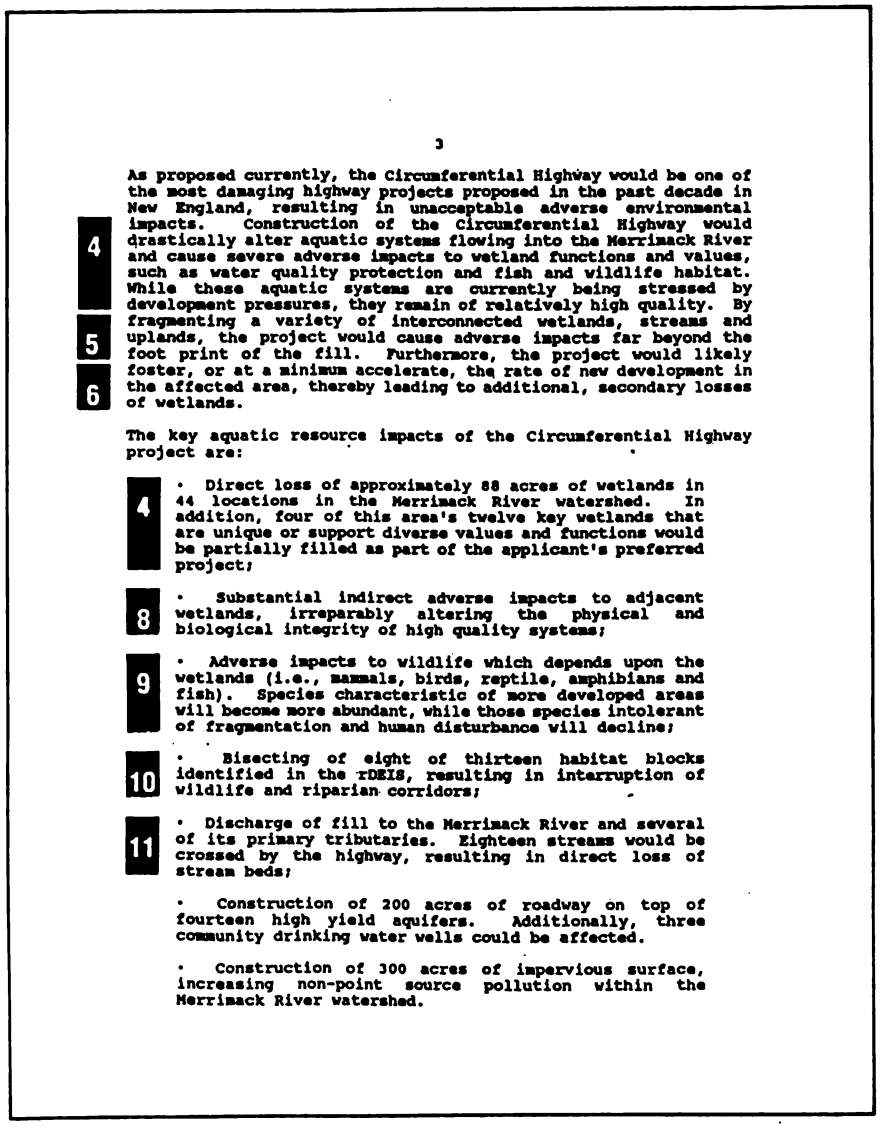

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As proposed currently, the Circumferential Highway would be one of the most damaging highway projects proposed in the past decade in New England, resulting in unacceptable adverse environmental impacts. Construction of the Circumferential Highway would drastically alter aquatic systems flowing into the Merrimack River and cause severe adverse impacts to wetland functions and values, such as water quality protection and fish and wildlife habitat. While these aquatic systems are currently being stressed by development pressures, they remain of relatively high quality. By fragmenting a variety of interconnected wetlands, streams and uplands, the project would cause adverse impacts far beyond the foot print of the fill. Furthermore, the project would likely foster, or at a minimum accelerate, the rate of new development in the affected area, thereby leading to additional, secondary losses of wetlands.

The key aquatic resource impacts of the Circumferential Highway project are:

- Direct loss of approximately 88 acres of wetlands in 44 locations in the Merrimack River watershed. In addition, four of this area's twelve key wetlands that are unique or support diverse values and functions would be partially filled as part of the applicant's preferred project;
- Substantial indirect adverse impacts to adjacent wetlands, irreparably altering the physical and biological integrity of high quality systems;
- Adverse impacts to wildlife which depends upon the wetlands (i.e., mammals, birds, reptile, amphibians and fish). Species characteristic of more developed areas will become more abundant, while those species intolerant of fragmentation and human disturbance will decline;
- Bisecting of eight of thirteen habitat blocks identified in the rDEIS, resulting in interruption of wildlife and riparian corridors;
- Discharge of fill to the Merrimack River and several of its primary tributaries. Eighteen streams would be crossed by the highway, resulting in direct loss of stream beds;
- Construction of 200 acres of roadway on top of fourteen high yield aquifers. Additionally, three community drinking water wells could be affected.
- Construction of 300 acres of impervious surface, increasing non-point source pollution within the Merrimack River watershed.

4 Comment noted. Values of potentially-impacted wetlands are variable throughout the study area, as is shown in the Wetlands Technical Report. Detailed and comprehensive information about the functions and values for each of the potentially impacted wetlands is contained in Appendix A of the Wetlands Technical Report.

5 Comment noted. Fragmentation of wildlife habitat is noted in the Wildlife Technical Report. Fragmentation of wetland systems will be considered during the development of a mitigation plan.

5 Comment noted. The degree of secondary development in this area as a result of the Circumferential Highway is addressed in the Socioeconomic Technical Report and in the Cumulative Development and Associated Impacts Technical Report. The degree of future wetland impact associated with secondary developments will largely depend on the enforcement of local and state regulations.

7 Comment noted, no response required.

4 Comment noted. Refer to the response provided for comment #4 of this letter. Not all wetland systems are of the same quality.

4 Comment noted, no response required.

10 Comment noted. Habitat blocks are a coarse tool used to place the project in perspective. They are not pristine or undeveloped. Corridor interruption is documented in the EIS and Wildlife Technical Report.

11 Other than erosion protection and bridge piers, no fill is proposed to be discharged into the Merrimack River. Minor fill is required for bridge abutments in the floodplain. Fill is proposed to be discharged into subtributaries (not primary tributaries) of the Merrimack River for necessary crossings. Some streams may be bridged, which would not result in a direct loss to stream beds.

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- Adverse impacts to wildlife which depends upon the wetlands (i.e., mammals, birds, reptile, amphibians and fish). Species characteristic of more developed areas will become more abundant, while those species intolerant of fragmentation and human disturbance will decline;
- Bisecting of eight of thirteen habitat blocks identified in the rDEIS, resulting in interruption of wildlife and riparian corridors;
- Discharge of fill to the Merrimack River and several of its primary tributaries. Eighteen streams would be crossed by the highway, resulting in direct loss of stream beds;
- Construction of 200 acres of roadway on top of fourteen high yield aquifers. Additionally, three community drinking water wells could be affected.
- Construction of 300 acres of impervious surface, increasing non-point source pollution within the Merrimack River watershed.

12 Comment noted. Approximately 200 acres will be affected. However, much of this acreage is underlain by stratified drift aquifers with a transmissivity of less than 2000 ft^2/day. High yield aquifers with a transmissivity of greater than 2000 ft^2/day are depicted by the darker shades of blue in Figure V-5 of the Wells and Aquifers Technical Report. Figure V-3 of that report shows the exact breakdown of acreage with respect to transmissivity classes. Much of the study area is underlain by one continuous aquifer associated with the Merrimack River.

Fourteen acres underlain by high yield aquifers are proposed to be affected, not fourteen high yield aquifers as stated in this comment.

The three community drinking water wells that are affected include wells H6, L19, and L21. The statistics on these and other wells can be found in Table V-4 of the Wells and Aquifers Technical Report.

12 Comment noted. The Circumferential Highway is not expected to cause a noticeable increase in non-point source pollution within the Merrimack River drainage basin. Travel routes will be shifted from the existing roadway network onto the new highway, which will be designed to mitigate the non-point source pollution that is placed on it by traffic. In order to maintain safe travel conditions along this new corridor during the winter months, salting will be required. This procedure will result in a slight overall increase in the amount of salt contained in area-wide runoff when compared to present conditions. However, the non-point source pollution baseline will continue to increase gradually regardless of the roadway as a consequence of continued development.

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14 • Increased potential for adverse impacts to the Pennichuck and Merrimack River water supply systems and to groundwater drinking wells from increased roadway runoff, point and non-point contamination sources, and secondary development triggered by highway construction.

15 EPA has long recognized the important environmental resources in this area. For several years, we have been working to implement a multi-million dollar initiative to protect the aquatic resources in the Merrimack River watershed. Population growth in the Nashua area over the last thirty years has made it one of the fastest growing areas in New England. This growth has resulted in large adverse cumulative impacts to wetlands and other critical habitats in the vicinity. EPA's Merrimack River Initiative was implemented in response to the potential threat to human health and the area's valuable environmental resources. The significant adverse impacts that would result from the proposed Circumferential Highway become even more troubling in light of the historic wetland losses that have occurred in this watershed. In particular, the proposed project would further diminish the area's value for wildlife, decrease the wetlands' groundwater discharge and recharge capacity, diminish the ability of the remaining wetlands to slow and store floodwater, reduce the wetlands' capacity to enhance water quality and remove water borne nutrients and sediments, as well as cause direct adverse impacts to water supply resources.

16 In addition to the adverse water quality impacts from the wetland losses associated with construction of the Circumferential Highway, the proposed project has the potential to cause substantial direct adverse impacts to water supply resources in the service area for Nashua/Hudson/Merrimack/Litchfield. Alternative alignments 7 and 8 pass through the Pennichuck Brook drainage Basin with alternative

17 alignment 7 passing directly over Bowers Pond, a part of the Pennichuck Brook. As the rDEIS states, the Pennichuck Brook and ponds serve as a public water supply reservoir for the City of Nashua. Furthermore, all of the full build alternatives would be in the watershed of the Merrimack River. The Merrimack River currently provides all or a portion of the public water supply for eight communities in Massachusetts and New Hampshire and is proposed as a future source of water supply for four other communities. Additionally, there are numerous private water supply

18 wells in the impact area of the proposed Circumferential Highway. EPA believes that without appropriate mitigation measures these valuable water supply resources could be degraded by project construction, roadway runoff, anticipated increases in point and non-point contamination sources, and the expected secondary development impacts promoted by construction of the highway.

Air Quality Impacts

The City of Nashua is in a nonattainment area for the National Ambient Air Quality Standards for both carbon monoxide and ozone.

14 Comment noted. Best Management Practices (BMP's) will be incorporated in final roadway design to mitigate any potentially adverse impacts. These BMP's are discussed in the Technical Reports entitled, "Stormwater Runoff Quality, Hazardous Materials Spills and Their Management" and "Wells and Aquifers".

15 Comment noted. The types and degree of environmental impacts are addressed in the various Technical Reports. Adverse impacts, as described, will be taken into consideration during the development of a mitigation plan once a Least Environmentally Damaging Practicable Alternative (LEDPA) is determined.

16 Comment noted. The Technical Reports entitled, "Wells and Aquifers" and "Stormwater Runoff Quality, Hazardous Materials Spills and Their Management" thoroughly address potential impacts to water resources as well as mitigation strategies. Refer to the response provided for comment #2 of the Public Hearing Testimony for information regarding a closed drainage system associated with Alternative 8 near the Pennichuck Reservoir.

17 Comment noted, no response required.

18 Comment noted. Private wells in the immediate vicinity of the roadway can be monitored at the request of the owner. Refer to the comment by Mr. Philip MacSweeney on page 199 of the Public Hearing Testimony and the subsequent response by New Hampshire Department of Transportation (NHDOT) Assistant Commissioner Leon Kenison on the same page. This topic is also addressed in the Wells and Aquifers Technical Report on pages VI-5 and VI-6.

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19 Any transportation projects proposed for this area should aim to provide significant improvements to congestion and to control vehicle miles travelled so that substantial air quality benefits are obtained. The proposed project fails to provide these transportation improvements to any significant degree, and consequently fails to result in significant air quality benefits, providing only minimal reductions in emissions in the design year of 2010 as compared to the no build scenario. Indeed, reduced emissions in the highway service area in the design year of 2010 are predominantly attributable to the mandatory federal motor vehicle exhaust emissions control program and the New Hampshire Inspection and Maintenance program and not to the construction of the Circumferential Highway.

The proposed project does not respond to the shift in transportation planning emphasis in the Clean Air Act (CAA) Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1991 from moving cars to moving people. The failure of the proposed Circumferential Highway to provide traffic congestion relief or meaningful air quality benefits underscores the failure of the applicant to adequately consider transportation demand management measures and smaller scale construction projects. The net benefit of the proposed transportation improvements should be the reduction of traffic congestion in the Nashua-Hudson service area while providing meaningful air quality benefits, and protecting other valuable environmental resources. The proposed project fails to provide these benefits.

Alternatives

In a letter to the Corps dated October 26, 1992, EPA expressed its concern that the Nashua-Hudson Circumferential Highway EIS include a forthright evaluation of project alternatives. EPA referenced both the Council on Environmental Quality's regulation implementing NEPA at 40 CFR §1502.14(a) which requires a rigorous exploration and evaluation of all reasonable alternatives, and the 404(b)(1) guidelines' provision that only the least environmentally damaging practicable alternative be permitted. Reasonable (NEPA) and practicable (§404) alternatives are those which are available and feasible from the technical and economic standpoint; they are not limited to those that are desirable from the standpoint of the applicant.

The rDEIS evaluates six full build alternatives (southern terminus connecting to the planned Exit 2 interchange of the F.E. Everett Turnpike at the existing Sagamore Bridge; northern terminus connecting to the F.E. Everett Turnpike at, or between, Exits 7 and 11). As discussed above, all of these full build alternatives cause severe environmental impacts. The rDEIS concludes that the Transit/TSM (transportation systems management), TDM (traffic demand management) and four partial build alternatives do not meet the project purpose, eliminating these alternatives from further

18 Comment noted. The proposed Circumferential Highway project meets the standards and requirements outlined in the Clean Air Act Amendments (CAAA) as they relate to transportation projects. EPA confirmed that New Hampshire's Fiscal Year 1993 Transportation Improvement Program (TIP), which includes the Nashua-Hudson Circumferential Highway, was in conformance with the present federally approved New Hampshire State Implementation Plan (SIP). This conformity determination is documented in an October 2, 1992 letter to Gerald Eller, Division Administrator of the U.S. Federal Highway Administration, 279 Pleasant Street Room 204, Concord, New Hampshire, 03301 from EPA's Linda M. Murphy, Director of the Air, Pesticides, and Toxics Management Division.

A reduction of vehicle miles traveled (VMT) is not a requirement of the CAAA. Compliance with air quality standards will be achieved in part through the relief of traffic congestion afforded by the construction of the Circumferential Highway and through increasingly stringent auto emissions inspections and maintenance programs, and through the implementation of both stationary and mobile source controls. Transit/ TDM and TSM measures that are expected to be implemented in conjunction with the highway will also lead to a reduction in emissions by reducing single occupant vehicular travel.

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Any transportation projects proposed for this area should aim to provide significant improvements to congestion and to control vehicle miles travelled so that substantial air quality benefits are obtained. The proposed project fails to provide these transportation improvements to any significant degree, and consequently fails to result in significant air quality benefits, providing only minimal reductions in emissions in the design year of 2010 as compared to the no build scenario. Indeed, reduced emissions in the highway service area in the design year of 2010 are predominantly attributable to the mandatory federal motor vehicle exhaust emissions control program and the New Hampshire Inspection and Maintenance program and not to the construction of the Circumferential Highway.

20 The proposed project does not respond to the shift in transportation planning emphasis in the Clean Air Act (CAA) Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1991 from moving cars to moving people. The failure of the proposed Circumferential Highway to provide traffic congestion relief or meaningful air quality benefits underscores the failure of the applicant to adequately consider transportation demand management measures and smaller scale construction projects. The net benefit of the proposed transportation improvements should be the reduction of traffic congestion in the Nashua-Hudson service area while providing meaningful air quality benefits, and protecting other valuable environmental resources. The proposed project fails to provide these benefits.

Alternatives

In a letter to the Corps dated October 26, 1992, EPA expressed its concern that the Nashua-Hudson Circumferential Highway EIS include a forthright evaluation of project alternatives. EPA referenced both the Council on Environmental Quality's regulation implementing NEPA at 40 CFR §1502.14(a) which requires a rigorous exploration and evaluation of all reasonable alternatives, and the 404(b)(1) guidelines' provision that only the least environmentally damaging practicable alternative be permitted. Reasonable (NEPA) and practicable (§404) alternatives are those which are available and feasible from the technical and economic standpoints; they are not limited to those that are desirable from the standpoint of the applicant.

The rDEIS evaluates six full build alternatives (southern terminus connecting to the planned Exit 2 interchange of the F.E. Everett Turnpike at the existing Sagamore Bridge; northern terminus connecting to the F.E. Everett Turnpike at, or between, Exits 7 and 11). As discussed above, all of these full build alternatives cause severe environmental impacts. The rDEIS concludes that the Transit/TSM (transportation systems management), TDM (traffic demand management) and four partial build alternatives do not meet the project purpose, eliminating these alternatives from further

20 Comment noted. Analysis of area-wide travel for this study starts with a determination of person-trips being made, both during the base year and projected to the design year of 2010. From this estimation of person-trips, an estimation of vehicular trips is generated based on estimates of usage of non-automotive modes of travel, and on estimates of auto occupancy. The results of the process of developing the estimates of vehicular trips reflects the prevalence of automotive travel in today's society. Attempts to accurately reflect the impacts of changes in travel incentives and behavior were made through analysis of the Transit/TDM and TSM alternatives. Further refinement of the analysis of these alternatives has been made since the DEIS and the results of the Transit/TDM and TSM alternatives indicate that with a very aggressive approach, only a 5.5 percent reduction of vehicle trips will occur, much of which is not within the control of the NHDOT. Consequently, these will not negate the need for the highway. The Transit/TDM and TSM analysis is summarized in the FEIS and is thoroughly documented in Appendix B of the Revised Traffic and Transportation Technical Report.

The DEIS documents the effectiveness of each of the studied alternatives in improving traffic conditions in the Nashua/Hudson area. While none of the alternatives in themselves will solve the traffic problems entirely, the Build Alternatives will reduce congestion in the downtown areas of Nashua and Hudson by providing alternative routes for motorists. This is in agreement with the stated project purpose and need. It is recognized that the full solution to the area's traffic problems do not lie with the Circumferential Highway and that additional local roadway improvements, improved transit service, and measures to reduce and control travel demand will also be required to ensure adequate travel service in the Nashua/Hudson area.

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Any transportation projects proposed for this area should aim to provide significant improvements to congestion and to control vehicle miles travelled so that substantial air quality benefits are obtained. The proposed project fails to provide these transportation improvements to any significant degree, and consequently fails to result in significant air quality benefits, providing only minimal reductions in emissions in the design year of 2010 as compared to the no build scenario. Indeed, reduced emissions in the highway service area in the design year of 2010 are predominantly attributable to the mandatory federal motor vehicle exhaust emissions control program and the New Hampshire Inspection and Maintenance program and not to the construction of the Circumferential Highway.

The proposed project does not respond to the shift in transportation planning emphasis in the Clean Air Act (CAA) Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1991 from moving cars to moving people. The failure of the proposed Circumferential Highway to provide traffic congestion relief or meaningful air quality benefits underscores the failure of the applicant to adequately consider transportation demand management measures and smaller scale construction projects. The net benefit of the proposed transportation improvements should be the reduction of traffic congestion in the Nashua-Hudson service area while providing meaningful air quality benefits, and protecting other valuable environmental resources. The proposed project fails to provide these benefits.

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21 Comment noted. The Corps implementing National Environmental Policy Act (NEPA) regulations state that only reasonable alternatives need to be considered in detail as specified in 40 CFR §1502.14. The regulations go on to further state that reasonable alternatives must be those that are feasible, and such feasibility must focus on the accomplishment of the underlying purpose and need. It is therefore consistent with the regulations to dismiss alternatives from detailed study that do not meet the purpose and need of the project. The regulations also acknowledge that alternatives not available to the applicant should be analyzed if reasonable. Such is the case with many TDM measures. These were evaluated and the results are summarized in the FEIS and are further documented in Appendix B of the Revised Traffic and Transportation Technical Report. In addition, the alternatives studied in the DEIS reflect those deemed to be feasible from both a technical and economic standpoint. These alternatives were agreed upon by the various cooperating agencies, including the Environmental Protection Agency (EPA). The determination that the Transit/TDM and TSM alternatives do not meet the project purpose and need was based on the determination that the regional reduction in automotive travel from implementing a realistic Transit/TDM and TSM improvement program would not be sufficient to alleviate the need for the Circumferential Highway. Partial Builds, at the request of the EPA, were also analyzed as part of the EIS. The analysis determined that these Partial Build Alternatives do not meet the stated project purpose and need. For additional information on the issue of Partial Builds, refer to the response provided for comment #31 of this letter.

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22 study. While the stated purpose of this revised DEIS is to ensure that all viable alternatives were considered, EPA believes that the framing of the project purpose and a preference by the applicant for construction of the full build circumferential highway served to thwart this goal.

23 The rDEIS revised project goal is based on an unusually specific standard: traffic in and near the central business district in the design year of 2010 must be reduced below 21.5 miles of Level of Service (LOS) F (the current miles of LOS F). Based on calculations in the rDEIS that forecast full build alternatives a. having 21.2 miles of LOS F (or only 0.3 miles less than the current level), the applicant, Corps and Federal Highway Administration (FHWA) state that the full build alternatives meet the project purpose. EPA disagrees with this determination. We do not believe the forecast methodology allows for differentiating between the current and design year LOS; the 0.3 mile difference, a difference of only 1.8%, falls within normal error calculations. In light of our concerns about the reliability of future LOS calculations, EPA does not believe the rDEIS demonstrates that any of the alternatives meets the project purpose in any meaningful way. Additionally, EPA is concerned that using the measure of 21.5 miles of LOS F in 2010 as the standard for evaluating individual alternatives, appears wholly arbitrary. This "bright line" cut off results in alternatives that are not meaningfully different in their ability to relieve traffic congestion, but which may be less environmentally damaging, receiving different levels of review in the rDEIS.

24 The rDEIS does not adequately address upgrade or build alternatives other than the full build option. While considering only two suggestions for improving the existing road network, the rDEIS does not discuss any other upgrade improvements. As the project purpose includes providing better access across the Merrimack River, we would anticipate that the rDEIS would have separately examined expanding the existing bridge network across the river coupled with local road improvements. Since the Circumferential Highway was originally conceived over thirty years ago, there have been many changes in transportation planning and environmental regulations that should have promoted a full and equitable consideration of approaches other than traditional highway construction. Indeed, the new requirements in the federal Clean Air Act (CAA) Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1992 (ISTEA) diminish the emphasis on highway construction and concentrate on more innovative transportation planning.

EPA strongly recommends that the applicant analyze what traffic benefits would result if serious TSM, TDM and mass transit programs were implemented and combined with improvements to the existing local road system. Such improvements could include, but are not limited to, expanding capacity of the existing road network, expanding the Sagamore Bridge, possible expansion of the Taylor

22 Comment noted. The project purpose is based on Legislative Directive as well as public input expressing the desire to improve east/west traffic movements across the Merrimack River. Presently, the two bridges spanning the Merrimack River (the Taylor Falls and Sagamore) are over capacity. The need for additional crossings of the river has been evident for quite some time as congestion in both the Nashua and Hudson Central Business Districts (CBD) has steadily increased. The traffic problem has prompted the New Hampshire Legislature to direct the NHDOT to alleviate the congestion. An added goal of the project purpose is to reduce traffic on the highway in the design year 2010 over existing levels, as today's levels are problematic. Incorporating this as a goal constitutes good planning.

23 Comment noted. The DEIS does not specify anywhere that Level of Service (LOS) "F" must be reduced below 21.5 miles. The 21.5 miles referenced is the existing (1990) miles of LOS "F" for all roadways within the study area. Table 23-1 lists conditions of LOS "F" for different roadway groups when considering different alternatives. As pointed out, the Full Build alternatives will result in a 0.3 mile reduction in LOS "F" roadway miles for all roadways within the study area. What is not pointed out is that there is a significant reduction in LOS "F" roadway miles within the CBD's of Nashua and Hudson as a consequence of the project. (refer to the column labeled Project Purpose and Need in the table). This reduction is from 5.3 miles of LOS "F" roadway (existing 1990) to 2.8 miles of LOS "F" roadway in the year 2010 with the Full Build. The project purpose and need is to reduce traffic congestion on existing bridges and streets in and near the CBD's of Nashua and Hudson and based on these figures, the project succeeds in meeting this purpose.

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TABLE 23-1

PROJECT PURPOSE AND NEED

	MILES OF LEVEL OF SERVICE F FOR ALL ROADS WITHIN THE IMMEDIATE STUDY AREA	MILES OF LEVEL OF SERVICE F FOR ROADS WITHIN THE CENTRAL BUSINESS DISTRICT ONLY	MILES OF LEVEL OF SERVICE F F.E. EVERETT HIGHWAY ONLY	MILES OF LEVEL OF SERVICE F FOR ALL ROADS EXCLUDING THE F.E. EVERETT AND CBD
EXISTING (1990)	21.5	5.3	7.2	9.0
FULL BUILD (2010)	21.2	2.8	8.9	9.5
NO BUILD (2010)	33.3	8.7	8.3	16.3
PARTIAL BUILD SOUTH TO 102 (2010)	34.2	7.4	11.0	15.8
PARTIAL BUILD NORTH TO 102 (2010)	30.8	6.2	11.0	13.6
PARTIAL BUILD NORTH TO 111 (2010)	34.6	7.2	8.8	16.6
PARTIAL BUILD W/O 111 TO 102 (2010)	35.3	7.0	11.0	17.3
TRANSIT/TDM (2010)	33.8	8.5	7.7	17.6

23

This table was derived from the Level of Service (LOS) by Alternative tables found in Appendix A of the Final EIS.
The table analyzes conditions of LOS "F" for different roadway groups in light of different alternatives.
Comparisons are made between the Existing (1990) condition and each 2010 Alternative.

The purpose of the table is to emphasize, once again, where the major improvements from the existing condition will occur. (See shaded boxes).
More importantly, the information in this table demonstrates that the No Build, Partial Builds, and Transit/TDM Alternatives fail to meet the project goals.

Although the focus is on the Full Build Alternatives, we feel that this other information should not be ignored.
Also, more emphasis should be placed on the fact that the comparison involves analyzing situations that differ temporally by 20 years.

24 Comment noted. Partial Build alternatives, Transit/TDM and TSM alternatives were studied in the DEIS to a level sufficient to determine their effectiveness in meeting the project purpose. Existing transit ridership, employment characteristics, and population densities were used to determine the potential effectiveness of improvements to transit and of measures to control travel demand. Further refinement of the analysis of these alternatives has been made since the DEIS. Results of the Transit/TDM and TSM alternatives is summarized in the FEIS and further documented in Appendix B of the Revised Traffic and Transportation Technical Report.

It has been recognized from the onset of this study that an Upgrade Alternative is not feasible or reasonable for purposes of NEPA. Refer

24 to Appendix D of the Revised Traffic and Transportation Technical Report for a summary of the reasons for this conclusion.

The Circumferential Highway is an integral part of the long-range transportation plan for the Nashua region and has been studied within the regional transportation context. As a study for a single project within this regional transportation plan, the DEIS did not attempt a comprehensive re-evaluation of the regional transportation plan as called for in this comment. The assumptions used in screening the alternatives were based on extensive study of this key element of the regional transportation plan.

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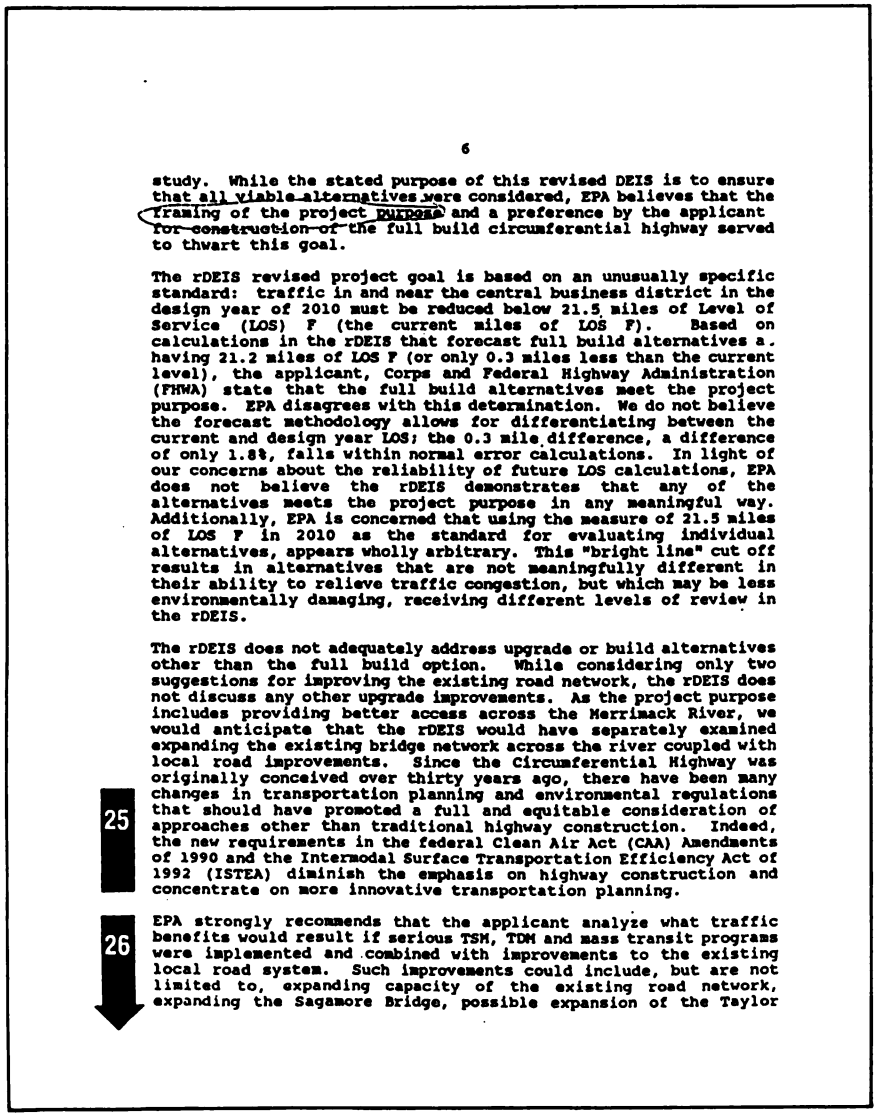

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study. While the stated purpose of this revised DEIS is to ensure that all viable alternatives were considered, EPA believes that the framing of the project purpose and a preference by the applicant for construction of the full build circumferential highway served to thwart this goal.

The rDEIS revised project goal is based on an unusually specific standard: traffic in and near the central business district in the design year of 2010 must be reduced below 21.5 miles of Level of Service (LOS) F (the current miles of LOS F). Based on calculations in the rDEIS that forecast full build alternatives a. having 21.2 miles of LOS F (or only 0.3 miles less than the current level), the applicant, Corps and Federal Highway Administration (FHWA) state that the full build alternatives meet the project purpose. EPA disagrees with this determination. We do not believe the forecast methodology allows for differentiating between the current and design year LOS; the 0.3 mile difference, a difference of only 1.8%, falls within normal error calculations. In light of our concerns about the reliability of future LOS calculations, EPA does not believe the rDEIS demonstrates that any of the alternatives meets the project purpose in any meaningful way. Additionally, EPA is concerned that using the measure of 21.5 miles of LOS F in 2010 as the standard for evaluating individual alternatives, appears wholly arbitrary. This "bright line" cut off results in alternatives that are not meaningfully different in their ability to relieve traffic congestion, but which may be less environmentally damaging, receiving different levels of review in the rDEIS.

The rDEIS does not adequately address upgrade or build alternatives other than the full build option. While considering only two suggestions for improving the existing road network, the rDEIS does not discuss any other upgrade improvements. As the project purpose includes providing better access across the Merrimack River, we would anticipate that the rDEIS would have separately examined expanding the existing bridge network across the river coupled with local road improvements. Since the Circumferential Highway was originally conceived over thirty years ago, there have been many changes in transportation planning and environmental regulations that should have promoted a full and equitable consideration of approaches other than traditional highway construction. Indeed, the new requirements in the federal Clean Air Act (CAA) Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1992 (ISTEA) diminish the emphasis on highway construction and concentrate on more innovative transportation planning.

25

EPA strongly recommends that the applicant analyze what traffic benefits would result if serious TSM, TDM and mass transit programs were implemented and combined with improvements to the existing local road system. Such improvements could include, but are not limited to, expanding capacity of the existing road network, expanding the Sagamore Bridge, possible expansion of the Taylor

26

25 Comment noted. The Circumferential Highway alone will not solve all of the transportation problems afflicting the Nashua region. The transportation planning process in the region recognizes this as evidenced by studies performed by NHDOT of carpool preferences on the F.E. Everett Turnpike and park-and-ride lots, ongoing studies of possible Transit/TDM measures through surveys being performed by the Nashua Regional Planning Commission (NRPC), and continuing discussion of the possibility of commuter rail service to Boston from the Nashua area. The Build Alternatives will include innovative TDM measures to extend the life of the Circumferential Highway and further reduce congestion within the CBD's of Nashua and Hudson.

26 Comment noted. The applicant did analyze what traffic benefit would result if Transit/TDM and TSM measures were implemented, and concluded that a 2% reduction in automotive travel would occur. In response to this comment, however, an expansion of this study was performed and documented using a much more aggressive approach, resulting in a 5.5% reduction in automotive travel. This documentation further explains the range of measures that can be put into effect, the opportunities and problems associated with implementing Transit/TDM and TSM measures, and the quantification of potential impacts. This refined analysis is summarized in the FEIS and is thoroughly documented in Appendix B of the Revised Traffic and Transportation Technical Report.

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26 Falls Bridge and/or building another bridge further north to tie into Route 3A and the Henri Burque Highway. EPA believes that the Final EIS should include a thorough evaluation of a broad
27 combination of alternatives to address the traffic needs of this area. Without this hard look at alternatives, EPA believes the EIS will fail to comply with the requirements of NEPA and the §404(b)(1) guidelines, and will not conclude in a permittable project.

27a Based on existing information, we believe the highway will cause severe adverse impacts to the aquatic environment, contrary to EPA's 404(b)(1) guidelines. Thus, EPA recommends project
28 modification or permit denial. As noted above, we consider the proposed project to be a candidate for a prohibition under EPA's §404(c) authority. We do not elect to initiate §404(c) proceedings at this time because of our confidence that the Corps will share our concerns and not grant a permit for this proposed projectr We do believe, however, that it is prudent to alert your office, NHDOT, and others of the depth of EPA's concerns about the proposal. Additionally, on the basis of the comments in this letter and the attached technical appendix, we rate this project "Environmental Objections - Insufficient Information" (EO-2). Please see the attached sheet for a full explanation of this rating.

As a cooperating agency, EPA will be available to the Corps and NHDOT to assist in the continuing discussion of alternatives to the proposed project. Although, as detailed in this letter and technical appendix, our concerns about project alternatives are substantial, we believe the Final EIS will provide an appropriate forum to address these concerns. EPA appreciates the willingness of the Corps to continue the scoping process on alternatives. We believe these ongoing productive discussions will help assure that the Final EIS identify options that nor only address traffic congestion in the Nashua-Hudson area, but will also comply with NEPA and §404 of the Clean Water Act and be consistent with the CAA Amendments and ISTEA. We are also available to the Corps and NHDOT to answer questions about any of other the concerns we've raised in our review of the rDEIS. Please contact Steven John of the Office of Environmental Review at 617/565-3426 or Mark Kern of the Wetlands Protection Section at 617/565-4426 if we can be of further help.

Sincerely,

Paul Keough

Paul G. Keough
Acting Regional Administrator

27 Comment noted. Refer to the response provided for comment #21 of this letter. Factual information for any of these alternatives exists and results can be combined for analysis if one chooses.

27a Comment noted, no response required.

23 Comment noted, no response required.

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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 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 potential 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 that 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 analysed 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.

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TECHNICAL APPENDIX

The environmental requirements which must be met by all proposals to obtain a 404 permit are contained in the EPA section 404(b)(1) guidelines (40 CFR 230). Three requirements are particularly important to the Nashua-Hudson Circumferential Highway. First, the guidelines prohibit projects which would "cause or contribute to" significant degradation of waters of the United States, including wetlands and the values and functions they provide. The guidelines make special reference to reviewing all cumulative impacts on the aquatic ecosystem in making this determination (§230.11[g]). Second, the regulations forbid issuance of a 404 permit whenever there is a less environmentally damaging practicable alternative to the project; for non-water dependent projects such as this proposal, the guidelines establish a presumption, which DOT must rebut, that such an alternative exists. Third, impacts must be minimized to the greatest extent practicable, including mitigating for the aquatic losses.

29 The rDEIS establishes the need to reduce traffic congestion in the greater Nashua area during primary commuting hours. NHDOT has evidently selected alternative #8 as the preferred alternative, while the Corps has apparently selected a portion of #8 and a portion of other alternatives as the least environmentally damaging of the full build options. None of this information is in the rDEIS; NHDOT and the Corps stated this at the January 4, 1993 public hearing. Our comments will primarily focus on NHDOT's preferred alternative (#8).[1]

Alternatives

30 The primary focus of the rDEIS is the construction of a new 12 mile divided highway to reduce the traffic problems in the greater Nashua area; the rDEIS only briefly considers and dismisses as not meeting the project purpose, the partial build, Traffic Demand Management (TDM), and Transit/Transportation Systems Management (TSM) alternatives. The rDEIS Technical Report entitled Traffic and Transportation, makes four basic assumptions in the initial screening of alternatives: 1. the alternative must satisfy the project purpose; 2. the southern terminus must end at exit 2 of the F.E. Everett Turnpike; 3. the northern terminus must tie in between exits 7 and 11 of the Turnpike; and 4. a semi-circular route to the east should connect these termini. These assumptions bias the analysis toward the full build construction alternatives, leading to the partial build, Transit/TSM and TDM alternatives not being examined with equal intensity.

[1] Since all of the full build alternatives cause major direct and indirect aquatic impacts, our conclusions with respect to alternative 8 apply to the other full build alternatives as well.

29 Comment noted, no response required.

30 Comment noted. Refer to the response provided for comment #24 of this letter.

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TECHNICAL APPENDIX

The environmental requirements which must be met by all proposals to obtain a 404 permit are contained in the EPA section 404(b)(1) guidelines (40 CFR 230). Three requirements are particularly important to the Nashua-Hudson Circumferential Highway. First, the guidelines prohibit projects which would "cause or contribute to" significant degradation of waters of the United States, including wetlands and the values and functions they provide. The guidelines make special reference to reviewing all cumulative impacts on the aquatic ecosystem in making this determination (§230.11[g]). Second, the regulations forbid issuance of a 404 permit whenever there is a less environmentally damaging practicable alternative to the project; for non-water dependent projects such as this proposal, the guidelines establish a presumption, which DOT must rebut, that such an alternative exists. Third, impacts must be minimized to the greatest extent practicable, including mitigating for the aquatic losses.

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31

[1] Since all of the full build alternatives cause major direct and indirect aquatic impacts, our conclusions with respect to alternative 8 apply to the other full build alternatives as well.

31

EPA believes focusing the rDEIS analysis primarily on the full build alternative as an approach to addressing the transportation needs of this area is inconsistent with the Clean Air Act Amendments of 1990 and the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). These new laws encourage using alternative methods other than new highway construction to address our transportation needs while providing protect for the environment from adverse impacts.[2]

The basic project purpose for the Nashua-Hudson Circumferential Highway evolved during the current NEPA process.[3] Because the project purpose criteria and the screening assumptions for alternatives were unusually specific, the focus of the analysis was unreasonably constrained. The result was an analysis that eliminated alternatives other than the full builds from further consideration even though these alternatives were only marginally different from the full build options in their ability to relieve traffic congestion.

The rDEIS includes the following traffic predictions (for Level of Service F and F') for the existing traffic network and the future build and no build options:

[2] For example, Senator John Chafee (R-Rhode Island), the ranking member on the Senate Committee on Environment and Public Works and a co-author of ISTEA wrote an article recently entitled Driving Home a New Transportation Policy (EPA Journal; Volume 18, Number 4; September/October 1992; pp 21-23). In this article, Senator Chafee writes, "The one-sided emphasis on building highways has to end. There must be a level playing field for all modss of transportation ... performance, not total lane-miles of pavement, must be the measure of success." Senator Chafee's article continues, stating that without turning our attention to other traffic control options such as demand management and mass transit, we face the likelihood of "leaving a legacy of gridlock, polluted air, and a scarred landscape for our children and grandchildren."

[3] In a September 18, 1990 letter to NHDOT, the Corps stated that the project purpose is to "provide a transportation improvement to assist in east-west traffic movements and to reduce congestion on existing bridges and streets in and near the central business district (CBD) of Nashua and Hudson by adding new crossings of the Merrimack River." In a May 8, 1992 letter to NHDOT, the Corps stated that the project purpose had been clarified to require that alternatives reduce traffic volumes for the CBD to a level less than exists currently.

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31 Comment noted. The analysis of the Partial Build alternatives and the Transit/TDM and TSM alternatives was not constrained by any assumption of the need for a specific roadway location (i.e., a Full Build roadway construction alternative connecting the F.E. Everett Turnpike from the planned Exit 2 to somewhere between Exits 7 and 11). These criteria only apply to the Full Build alternative design. The elimination of the Partial Builds, Transit/TDM and TSM alternatives was based solely on their effectiveness of meeting the project purpose and not whether or not they meet these criteria. Each of the Partial Build alternatives were fully modeled and an analysis was performed of roadway operations. The results of this analysis are incorporated in the FEIS and in the Revised Traffic and Transportation Technical Report. The differences between the Partial Build and Full Build alternatives were more than marginally different. In all instances, the Partial Builds were substantially worse than the Full Builds as they offered continued degradation along roadways throughout the study area. This degradation is most notable within the CBD's of Nashua and Hudson, which is the focal point of the project purpose along with the need for providing additional crossings of the Merrimack River. This is demonstrated in Table 23-1 in response to comment #23 of this letter under the column labeled, "Project Purpose and Need". Table 31-1 that follows shows how each alternative will affect Level of Service roadway miles along all roads within the study area. Refer to the response provided for comment #22 for additional information concerning the project purpose.

31

TABLE 31-1

	Miles * of Unacceptable Level of Service			Miles * of Acceptable Level of Service
	LOS F and F'	LOS E	Total	LOS D
Existing 1990	21.5	6.4	27.9	3.5
Full Build 2010	21.2	6.1	27.3	6.5
No Build 2010	33.3	6.4	39.7	3.0
Partial Build 2010 F.E. Everett South to NH Route 102	34.2	2.6	36.8	6.8
Partial Build 2010 F.E. Everett North to NH Route 102	30.8	1.1	31.9	5.8
Partial Build 2010 F.E. Everett North to NH Route 111	34.6	5.4	40.0	4.2
Partial Build 2010 Without NH Route 111 to NH Route 102	35.3	1.9	37.2	6.3
Transit/TDM 2010	33.8	4.5	38.3	3.1

* Roadway miles include all major roads within the study area. Residential streets and other minor roads are not included. It should be noted that the project purpose is to reduce traffic congestion on CBD roads as well as provide additional crossings of the Merrimack River. Refer to Appendix A of the FEIS for a complete analysis of Level of Service roadway miles.

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Traffic Network	Miles of LOS F or F' in the CBD	Miles of LOS of F or F' for CBD and nearby roads / nearby roads only
1990 existing	5.3	21.5 / 16.2
2010 no-build	8.7	33.3 / 24.5
2010 full-build	2.8	21.2 / 18.4

The rDEIS also provides an analysis of seven intersections in and near the central business district for the existing conditions, and the no build, partial build, and full build options:[4]

LOCATION	1990	2010 No-build	Alt. 8 full-build	Alt. 9 partial -build
HBW/Concord	B	F	F	F
HBW/Manchester	A	B	B	B
Lowell/Central	D	F	C	D
DWH/Spit Brook	F	F	F	F
Amherst/Concord	F	F	F	F
Main/Canal	F	F	F	F
Taylor Falls Br	F	F	D	F
TOTAL LOS F	4	6	4	5

32 For the Nashua-Hudson Circumferential Highway, the project purpose refers to traffic relief "in and near" the CBD of Nashua and Hudson. As stated in the rDEIS, 21.2 miles of LOS F would remain in or near the CBD following construction of the full build highway. While the full build alternatives provide a reduction of 2.5 miles of LOS F in the CBD (versus an increase of 3.4 miles of LOS F in the CBD for the no build alternative), road miles with LOS F conditions will actually increase for the remaining nearby road

[4] The rDEIS does not state whether the LOS study model includes the effect of tolls on traffic flow. For example, if a toll is placed on the Sagamore Bridge, what volume of traffic would be diverted to the Taylor Falls Bridge or into Massachusetts? Traffic numbers and LOS results could differ significantly if a large number of drivers opt for an alternate route to avoid toll charges.

32 Comment noted. The Full Build Alternatives for the Circumferential Highway will serve to improve traffic conditions in the CBD in 2010 as compared to both the No-Build and existing (1990) conditions. The number of roadway miles operating at LOS F or F' in the CBD would increase from 5.3 miles in 1990 to 8.7 miles in 2010 under the No-Build (an increase of 64%) whereas it would decrease to 2.8 miles under any Full Build Alternative (a decrease of 47%). Clearly, the Full Build Alternatives would reduce traffic congestion within the CBD. Refer to the table presented in response to comment #23 of this letter as well as the response to comment #31.

In transportation projects throughout the country, limited funding and project impacts result in transportation departments either catching up to congestion or simply keeping up with it, particularly in areas outside of the CBD, such as suburban areas. The figures cited in this comment point to the fact that the Nashua area is not an exception to this. On roadways near the CBD, travel demand is expected to increase well beyond the capacity of the existing roadway. Thus, the Full Build would result in a 13.6% (16.2 miles to 18.4 miles) increase in LOS F or F' roadway from existing conditions. However, the increase from existing conditions to 2010 No-Build would be substantially higher at 51.8% (16.2 miles to 24.6 miles) and also would be substantially higher for all Partial Build Alternatives as well as the Transit/TDM Alternative as shown in the following Table (32-1) which is derived from Table 23-1 of comment #23 of this letter.

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TABLE 32-1

ALTERNATIVES	CHANGE IN LOS F AND F' EXISTING 1990 / DESIGN YEAR 2010 (MILES) *	% CHANGE
Full Build 2010	16.2 / 18.4	+13.6%
No Build 2010	16.2 / 24.6	+51.8%
Partial Build 2010 F.E. Everett South to NH Route 102	16.2 / 26.8	+65.4%
Partial Build 2010 F.E. Everett North to NH Route 102	16.2 / 24.6	+51.8%
Partial Build 2010 F.E. Everett North to NH Route 111	16.2 / 27.4	+69.1%
Partial Build 2010 Without NH Route 111 to NH Route 102	16.2 / 28.3	+74.7%
Transit/TDM 2010	16.2 / 25.3	+56.2%

* This column compares miles of LOS F and F' on all roadways other than CBD roads between the Existing (1990) condition and the Design Year (2010).

As can be seen, the Full Build Alternative would clearly accommodate the substantial increases in travel on non-CBD roadways better than the No-Build, Partial Builds, and Transit/TDM alternatives.

The superior ability of the Full Build Alternatives to accommodate projected future traffic volumes as compared to the No Build, Partial Build, and Transit/TDM alternatives provides the basis for the assertion that the Circumferential Highway will meet the project goal of decreasing congestion in the Nashua CBD even below levels currently experienced and that traffic both inside and outside of the CBD would flow better than if the Circumferential Highway were not built or only partially built.

The individual intersection levels of service provide a similar basis for comparison. In all instances, intersection levels of service for the Full Build Alternatives are equal to or better than they are for the No Build, Partial Build and Transit/TDM alternatives. The reporting of level of service as discrete letter values (A through F) obscures some of the relative differences between intersection operations at several locations. Clearly, additional intersection improvements would be required in order for those intersections shown at LOS F to operate adequately under any of the alternatives. The lesser volumes of traffic passing through these intersections under the Full Build Alternatives as compared to the No Build, Partial Build, and Transit/TDM alternatives would result in smaller-scale improvements (with resulting cost and right-of-way savings) being required at these intersections.

The TSM Alternative consists of improvements to spot locations within the project area. TSM measures consist of low cost, limited impact improvements involving minimal construction. Such measures might include addition of a turn lane at a particular intersection, signal installation or timing changes, or interconnection of signal systems. While intersections are often the "pinch points" on a roadway system and TSM improvements would result in more efficient operations at individual intersection locations, the traffic volumes projected on study area roadways in 2010 are in excess of what could be accommodated along the roadway segments between intersections. Improvements would therefore require substantial roadway widening along entire corridors in order to be effective. Such large scale improvements would involve substantial costs, additional right of way, and cause considerable community disruption and would therefore no longer be considered TSM improvements.

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32 system. The full build alternatives result in a 2.2 mile increase in LOS F for nearby roads over the existing conditions (the no build alternative results in an increase of 8.3 miles of LOS F over the current conditions). For the CBD and the nearby roads, the full build alternatives result in a reduction of miles of LOS F from 21.5 to 21.2 miles, a difference of only 0.3 mile or 1.8%. Furthermore, the full build alternatives provide only modest improvement to the intersection level of service over the no build condition. Based on this information we believe that the full build alternatives do not provide a meaningful improvement over the existing traffic conditions, and that these full build alternatives scarcely meet the stated project purpose.

TDM, Transit/TSM Alternatives

33 The rDEIS does not thoroughly examine TDM, Transit/TSM; the rDEIS concludes that TDM would only reduce traffic 1% - 2% but does not explain or support this conclusion. This conclusion is especially surprising considering the opportunities that would be available by spending a commensurate amount of money on TDM options as would be required for the full build options. Studies in other parts of the country have suggested that TDM measures can result in traffic reductions of up to 40% in some locations.[5]

Mass transit and TDM alternatives are generally more effective when, as in the Nashua-Hudson service area, a large portion of the peak traffic consists of commuters traveling to and from work. Also, tables II-4 and II-5 in the rDEIS show that approximately 65% of the area residents commute within the greater Nashua area, including Hudson, Litchfield, Merrimack, and Londonderry. Commuter trips of these characteristics and the resulting level of service problems are amenable to mass transit and TDM solutions.

The principle behind TDM is to provide a system of incentives and disincentives designed to reduce the number of cars traveling on congested stretches of highway during peak commuter hours. A report entitled Peak-Period Traffic Congestion Options for Current Programs lists several different TDM techniques for managing and reducing peak demand, including: (1) implementing staggered work hours; (2) road pricing; (3) parking disincentives; (4) auto-free zones; (5) incentives to implement and utilize transit; (6) car-pooling and ride-sharing; (7) telecommunications in lieu of travel; (8) maximizing use of existing facilities; (9)

[5] Evaluation of Travel Demand Management Measures To Relieve Congestion, USDOT, Federal Highway Administration, Feb., 1990, FHWA-SA-90-005.

33 Comment noted. While there is certainly the potential for increasing transit usage and ridesharing within the Nashua area, the high level of traffic reductions as cited in some of the recent TDM research would be difficult to attain in the Nashua region. The 40 percent reduction cited in this comment is the reduction in the drive-alone rate at a single work location. This work location, in Hartford, Connecticut, had a large number of employees at a single site and had good walking access to an extensive transit system which can generally only be supported in a large metropolitan area such as Hartford. Spreading the impacts of TDM measures over an entire area where many employers are relatively small and access to public transportation is more limited, and taking into account the fact that the work trip generally accounts for only about half of the peak hour traffic on the roadway system, the effectiveness of TDM measures over an entire region is substantially diminished. While this does not take away from the need to aggressively pursue TDM actions, a realistic assessment of the potential impacts of TDM on the roadway system shows substantially less impact on peak hour and daily travel than is shown in some of the literature related to single work sites.

Implementation of an effective TDM program at the work place in the Nashua-Hudson area, either through a TDM ordinance or through voluntary efforts such as development of a Transportation Management Agency (TMA), could in a best case scenario, achieve a 20% reduction in peak period vehicular trips. Based on a recent survey of TDM techniques, such an optimistic reduction in daily vehicle trips may be possible if a broad ridesharing incentive program was instituted and substantial parking charges were levied. Many of the TDM studies showing such high reductions in vehicle trips also had transit service available to the employment sites. Further assuming that one-third of the workplace locations have 100 or more employees or are within an area with sufficient number of employees, and employers are cooperating through a TMA, the maximum peak hour trip reduction that could be achieved would be approximately 3.3% (20% reduction X 33% of employment X 50% of peak period travel). On a daily basis, the maximum trip reduction would therefore be approximately 1.65%.

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33 facilitating transit circulation; and (10) changes in land use.[6] Disincentives include such things as reducing the availability of free or low price parking in the central business district during prime commuting times. Incentives which have been successful in reducing traffic in other locations include encouraging local companies to provide employees with the opportunity to work at home through telecommuting, implementing flexible work schedules to stagger commuter traffic, and initiating employer-based transportation plans and various forms of ride-sharing.

An alternatives analysis for any large highway project should carefully examine the existing traffic network to determine if it can be made more efficient, modified, or expanded. For example, the analysis should determine if it is possible to add additional lanes for travel, passing, or turning to all the major road segments and intersections. Additionally, changing the timing of traffic lights or reconfiguring intersections should be evaluated. This important step of making the best use of existing traffic corridors was overlooked in the rDEIS. EPA recommends that the Final EIS thoroughly examine efficiency improvements and upgrade alternatives throughout the study area.

34 The rDEIS indicates that a limited number of crossings of the Merrimack River causes a large number of vehicles to enter the Nashua downtown area to use the Taylor Falls Bridge, especially during rush hour. Thus, this project attempts to reduce the traffic on the greater Nashua area in general and the Taylor Falls Bridge in particular. However, the rDEIS does not review the impact of expanding the existing bridges or adding new bridges to reduce the existing bottleneck. Although the full build alternatives expand the Sagamore Bridge and add another new bridge in the northern portion of the study area, the rDEIS does not evaluate the resulting traffic congestion relief provided from these specific actions alone. Similarly, the rDEIS does not consider a combination of alternatives, including improvements to the crossings of the Merrimack River coupled with improvements to the local road network. EPA recommends that the Final EIS carefully examine the benefits of bridge expansion in combination with other alternatives discussed above.

35 EPA recommends that the Final EIS engage in an in-depth evaluation of combinations of other alternatives, including TDM, modest build/existing roadway improvements and partial build alternatives. The NHDOT preferred full build alternative will cost $185 million, not including mitigation costs and a host of other indirect costs. EPA believes that these combinations of alternatives, at a similar

[6] Peak-Period Traffic Congestion Options of Current Programs. 1976. National Cooperative Highway Research Program Report #169. Transportation Research Board, National Research Council, Washington, DC 56 pp.

33 Long-range regional travel patterns are usually only minimally affected by spot TSM improvements. TSM actions have limited effectiveness in accommodating traffic volumes in excess of roadway capacity. Since TSM are less effective at over-capacity conditions, the Build Alternatives would allow TSM measures to be more effective by alleviating roadways in the region that would operate at over-capacity conditions. As a stand alone alternative, however, TSM would not be effective as the increase in roadway capacity resulting from TSM improvements such as spot intersection improvements or downtown corridor signal improvements would be negligible from a regional perspective.

34 Comment noted. The Partial Build alternatives incorporate new crossings of the Merrimack River, thus, the impact on traffic congestion resulting from a new crossing has been analyzed within the context of Partial Builds. The widening of the Taylor Falls Bridge alone is not a viable solution due to the inadequacies of approach roads and CBD roads in both Nashua and Hudson. Refer to Appendix B of the Revised Traffic and Transportation Technical Report which contains a complete analysis of Transit/TDM and TSM alternatives. In addition, refer to Appendix D of that same report for a full explanation as to why an upgrade would not be a feasible and prudent alternative.

33 Comment noted. While Transit/TDM and TSM measures appear to be considerably less costly than new road construction, they also tend to have less impact in terms of improving traffic congestion. Transit/TDM measures such as efforts to increase ridesharing and transit ridership involve substantial costs through construction of park-and-ride lots, extensive marketing efforts, ride matching services, ongoing subsidies, and other costs such as time and effort that are borne by employers and employees working toward decreasing single occupancy vehicle travel. Based on Transit/TDM efforts put in place throughout the country, these costs are borne with minimal impacts in changing travel behavior, particularly in areas with relatively low population densities. A full discussion of Transit/TDM techniques and those with the most potential in the Nashua area can be found in Appendix B of the Revised Traffic and Transportation Technical Report.

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35 level of funding as the full build alternatives, should be analyzed in the Final EIS.

Mass Transit Options

As the rDEIS reports, existing public transportation options in the study area are quite limited. Nashua provides city bus service for approximately 900 people per day and DOT has two park and ride facilities on the F.E. Everett Turnpike which accommodate 60 cars each. Additionally, some local companies, including Digital, Teradyne, and Sanders, provide modest transit options. CARAVAN, a non-profit van-pool operates seven vans and carries about 100 people a day.

For the 35% of traffic with destinations beyond the greater Nashua area few public transportation options are available. Concord Trailway makes only four daily trips to Boston while train service currently extends only from Boston to Lowell and North Billerica. In general, people currently have very few convenient transportation options available to them except for driving their cars.

36 TDM measures to discourage the number of single occupant vehicles should be coupled with efforts to provide convenient and economical mass transit alternatives. A mass transit option could include providing mini-van commuter service; purchasing a fleet of vans and implementing service to transport people between home and work would cost a fraction of the full build highway alternative, while potentially removing a number of commuter vehicles from the road system. Vans could also be made available for employer-based transportation programs. Additional transit alternatives include implementing a more comprehensive, frequent, and affordable bus service.

Summary

37 EPA believes that the rDEIS does not adequately evaluate alternatives to the preferred project, and therefore does not comply with the requirements of NEPA and the 404(b)(1) guidelines. Therefore, we recommend that the applicant include a thorough analysis of alternatives in the Final EIS. The recommendations we have made in the comment letter and this technical appendix should provide a basis for the applicant to complete a more thorough alternatives analysis.

35 SECTION 404/WETLAND ISSUES

The rDEIS thoroughly describes the existing functions and values of the wetlands in the study area. The photographs of the wetlands, the assessment methodology, and the graphic displays of information and location were especially well done. Since most of the full

36 Comment noted. Refer to the response provided for comment #33 of this letter. Additionally, the DEIS assumed that efforts to increase transit ridership would result in a doubling of this ridership over the next 20 years. This assumption is probably extremely optimistic since transit ridership on transit systems throughout the country including the Nashua CITYBUS system has, at best, decreased by one or two percent over the last 20 years. It was also assumed that the NRPC and the NHDOT would continue to aggressively pursue ridesharing by local businesses, and the addition of commuter park-and-ride lots and commuter buses as demand warranted.

Demand response transit service, often called paratransit, usually consists of minibuses or vans that provide service to individuals that cannot drive or be accommodated through traditional transit service. Patrons usually call the service one day prior to needing transportation. Once the full day of service needs is determined, van routings and schedules are then prepared to ensure that the vans operate on the most efficient route possible. Paratransit services are expensive to operate and the subsidy per trip is extremely high. Efforts to extend such a service to the general public have not been successful because the service is inconvenient to patrons and the subsidy requirements are high. The inconvenience is a factor because, as with any transit service, making routes longer and more circuitous so that a larger number of patrons can be captured results in longer travel times and a less convenient service. Generally, the inconvenience of the service results in demand only from those who are transit dependent and the level of subsidy is only acceptable because the service is specific to those elderly and handicapped persons in need of specialized transportation services.

37 Comment noted. Refer to the responses provided for comments #2,3,21,24, and 31 through 36 of this letter.

38 Comment noted, no response required.

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38 build alternatives impact 40 or more individual wetlands, EPA cannot field check all of the wetland impacts. The use of the principal functions and values greatly assisted EPA in the review of so much information. Additionally, the photographs of each specific wetland provided information about the basic characteristics of each of the wetland systems. The report also made important strides in identifying the large blocks of habitat which remain in the landscape.

The environmental requirements which must be met by all proposals to obtain a 404 permit are contained in the EPA section 404(b)(1) guidelines (40 CFR 230). Three requirements (§230.10) pertain directly to the Nashua-Hudson Circumferential Highway. First, the guidelines prohibit projects which would "cause or contribute to" significant degradation of waters of the U.S., including wetlands and the values they provide. The guidelines make special reference to reviewing all cumulative impacts on the aquatic ecosystem in making this determination (Section 230.11[g]). Second, the regulations forbid issuance of a 404 permit whenever there is a less environmentally damaging practicable alternative to the project; for non-water dependent projects such as this proposal, the guidelines establish a presumption, which DOT must rebut, that such an alternative exists. Third, impacts must be minimized to the greatest extent practicable, including mitigating for the aquatic losses.

Pursuant to the section 404(b)(1) guidelines, the analysis below presents our evaluation of the impacts of this proposal to the aquatic environment. Our comments on mitigation will be limited as the applicant has only presented information on some potential mitigation sites and no formal mitigation plan.

Description of the Site

All streams in the 100 square mile study area drain to the Merrimack River. Almost 70% of the wetlands in the vicinity are forested, but all different wetland classes exist, including streams and ponds (15%) and emergent and shrub habitat (15%). Some of the wetland systems are bottomland hardwood swamps, associated with the floodplain of the Merrimack River. Other wetlands, especially in Litchfield, are underlain by stratified drift deposits which allows active groundwater recharge and discharge interchanges with the wetlands. Most of the wetlands in the study area are riparian systems which lie adjacent to the Merrimack River, including Limit, Second, Merrill, Glover, Chase, and Pennichuck Brooks.

Wetlands comprise approximately 10% of the landscape in the 100 square mile study area. These relatively uncommon wetland community types provide numerous benefits. The rDEIS presents functional assessments on 65 individual wetlands that could be adversely affected by the proposed project in the study area. Each

38 Comment noted, no response required.

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full build alternative would directly impact approximately 40 of these wetlands. The assessment demonstrates that the vast majority of the wetlands provide a wide spectrum of functions and values. The rDEIS also identified the Principal Value Functions for each wetland, i.e., the functions that are most dominant or most important based on the overall evaluation. Wildlife habitat rated the highest at most of the sites. A majority of these wetlands also serve as wildlife corridors. Many sites also scored high for groundwater recharge/ discharge, floodflow alteration, sediment/nutrient/toxicant removal and transformation, and uniqueness/heritage values.

Most of the wetlands in the study area are riparian wetlands found along the numerous streams. These aquatic systems provide special values. The streams transport organic material from upstream areas in the watershed to the floodplain wetlands, supporting food web production for on-site and downstream biological communities. Riverine wetlands also assimilate nutrients and pollutants, store floodwater, and moderate flows. In addition to promoting productivity and energy flow in the system, these riparian corridors are particularly valuable because of their high productivity and travel use by wildlife. Animals regularly use riparian zones as travel corridors within habitat blocks and to adjacent habitat patches. The timing and duration of flooding produces a seasonal dimension to the landscape which allows a wide range of aquatic, semi-aquatic, and terrestrial species to utilize the site.

39

Wildlife Values

The study area contains valuable wildlife habitat, and includes over 200 different species of birds, mammals, amphibians and reptiles (rDEIS). The New Hampshire Heritage Program considers over 20% of these species uncommon, rare, threatened, or endangered in the state (see Tables at the end of the report). Over 75% of these species utilize or depend on wetlands or riparian systems for survival. The following table summarizes the more detailed information on species that use wetlands (see Tables).

Wetland/Riparian Use and Preference

	Species Preferring	Species Utilizing	Total
Mammals	17 (36%)	10 (21%)	36 (57%)
Amphibians/Reptiles	23 (74%)	3 (10%)	26 (84%)
Birds	62 (45%)	50 (36%)	112 (81%)

39 Comment noted. Species reported as "possible" inhabitants of an area (i.e. species that were not directly observed but habitat conditions are favorable for their occurrence) were quantified together with observed species, thus resulting in an exaggeration of impacts (i.e. higher percentages).

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39 The consultant observed 77 species of the 130 species of birds at the site, including great blue heron, American bittern, green-backed heron, red-tailed hawk, broad-winged hawk and kestrel. As reported above, the vast majority of these species regularly use and depend upon wetland habitat. Over 25% of the birds are uncommon or threatened, including observed species such as American bittern, green-winged teal, eastern screech owl, and cape may warbler (see Tables). Many of these species, such as northern waterthrush and belted kingfisher, need large tracts of land to survive; others, such as indigo bunting, great-crested flycatcher, and red-shouldered hawk, depend greatly on riparian wetland systems (see Tables).

Over forty species of mammals live in the study area; the rDEIS reports sightings of twenty-one of these species, including moose, deer, otter, mink and fisher. These species also require large blocks of habitat in which to forage and breed. Over 75% of these species use or depend on wetland systems to survive. Approximately 20% of these species, including fisher, hoary bat, and southern bog lemming, are considered uncommon or rare in the state.

Approximately thirty species of reptiles and amphibians also live at the project site based on the types of habitat found there (rDEIS). Almost all of the amphibians and reptiles at the site need wetlands for various life functions (see Tables). The Heritage Program considers over 10% of the species uncommon or infrequently seen, such as blue spotted salamander, blandings turtle, and eastern hognose snake.

Nearly all freshwater fishes are wetland dependent because they feed in wetlands or on wetland plants. Fish use wetlands as nursery areas and most important recreational fishes spawn in wetlands. Second Brook and Glover Brook are stocked with trout; the Merrimack River itself likely supports more than 30 fish species. Furthermore, anadromous fish, including American shad, alewife, and blueback herring, have returned to this portion of the Merrimack River. The U.S. Fish and Wildlife Service has spent a great deal of money and effort to restoring Atlantic salmon to the river.

40 The bald eagle, a federally endangered species uses this portion of the Merrimack River during winter for feeding, roosting and as a travel corridor. A peregrine falcon, also a federal endangered species, was observed at the Second Brook wetland complex during its migratory patterns. The New Hampshire Natural Heritage Inventory Program has identified four unique plant communities in the study area, one of which, the Inland Basin marsh community, would be impacted by any of the full build alternatives. Alternative 7 and 8 would also fill an area identified as having a historical record of Walking Fern Spleenwort (Camptosorus rhizophyllus), an state endangered plant. This plant species was not found during the rDEIS study.

41

40 Comment noted. The potential for Bald Eagles is known and is documented in the Biological Assessment, Wildlife Technical Report, and DEIS. The U.S. Fish and Wildlife Service (FWS) has concurred with the Corps findings of the Biological Assessment that Alternatives 1, 2, 7 and 8 will not adversely effect the Bald Eagle and that Alternatives 3-6 may adversely effect the Bald Eagle. Formal consultation with the FWS will be necessary if the northern Merrimack River crossing associated with Alternatives 3,4,5, or 6 is selected as the preferred alternative.

41 Comment noted. The comment that "the Inland Basin Marsh Community would be impacted by any of the Full Build Alternatives," is incorrect. Only Alignments 4 and 6 impact Inland Basin Marshes.

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The rDEIS.describes the habitat as "patchy" and somewhat altered by impacts over the last 30 years. For example, several small roads and homes are located near the full build alternatives. However, several large blocks of habitat remain that support secretive animals. These sites are generally associated with the large wetland complexes in the study area. While no longer pristine, these habitats are primarily undeveloped tracts of land and water with several corridors to allow free range of movement. The rDEIS identifies 13 blocks of habitat: two sites exceed 3,000 acres; six sites are between 400 and 3,000 acres; and five blocks of habitat are between 70 and 400 acres.

While under some stress, the study area still contains uncommon species which frequent wetlands in large forested blocks of habitat. As mentioned above, over 20% of the species in the study area are considered uncommon or threatened in the state. Furthermore, area-sensitive species such as mink and otter as well as forest interior birds, such as red-shouldered hawk, broad-winged hawk, northern waterthrush, Canada warbler, barred owl, and black and white warbler live in the study area. These species typically require large tracts for breeding and decline sharply with habitat fragmentation and reductions in forest patch sizes. The fact that such uncommon and area-sensitive species persist in the study area indicates to EPA that the ecosystem still supports valuable wildlife habitat. Comments by the U.S. Fish and Wildlife Service and the functional assessments in the rDEIS also support this conclusion.

Hydrological Values

Most forested wetland communities at the site are associated with small streams that drain to the Merrimack River. The forested wetlands support a complex mixture of shrub and herbaceous plants. Vegetated wetlands help maintain the quality of rivers and streams, including the Merrimack River by several means. First, wetlands help remove and retain nutrients, such as nitrogen and phosphorus, which can cause eutrophication of natural waters. Second, wetlands process chemical and organic waste products from the water. Third, wetlands trap sediment which can transport absorbed nutrients, pesticides, heavy metals and other pollutants. Much of this material is either stored in the sediment or converted to useable plant material. Given the high percentage of riparian wetlands in this study area, there is a high degree of interaction between waters draining to the Merrimack River and wetland soils and vegetation, which results in an enhancement of regional water quality.

These vegetated wetlands not only protect water quality in the streams that flow into the Merrimack River, they also add important beneficial nutrients to the system. Wetland plants break down to form detritus, the decayed plant material which forms the base of

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the aquatic food web. The streams transport the detritus to larger streams and then to the Merrimack River.

Wetlands help to slow the velocity of water during floods and storms, temporarily storing the water which otherwise could cause downstream damage, and then slowly releasing it. Thus, wetlands reduce peak flood levels, while and often augmenting flows and groundwater recharge when streams and aquifers need more water. This is especially true for the wetland systems underlain by stratified drift deposits. Wetlands recharge groundwater more readily into porous soils, such as the sand and gravel soils in the central and northern portions of the study area. These wetland systems are intimately connected with the large underground drinking water supplies near the proposed highway.

42 In summary, wetlands at the site provide a wealth of values and functions including providing fish and wildlife habitat, protecting water quality in the Merrimack River, and storing flood waters. While the natural habitat in this area has suffered from past adverse impacts, it still provides critical habitat for numerous important wildlife species. In particular, this area still provides critical habitat for the aquatic species that are becoming increasingly uncommon in southern New Hampshire.

Impacts to the Aquatic Environment

NHDOT's preferred alternative would directly fill 88 acres[7] of wetlands in a portion of the Merrimack River watershed which has already been stressed. Destruction of wetland acreage correlates with loss of functions and values including habitat destruction, reduced primary and secondary productivity and alteration of hydrological functions (e.g., flood storage, low flow maintenance, nutrient and toxicant transformation, sediment trapping, groundwater discharge and recharge). In addition to the direct loss of animals and wildlife habitat, local and regional populations of species intolerant of human disturbance could be reduced or extirpated.

43 In addition to the direct wetland loss, the proposed full build alternative would fill twelve acres of floodplain, including placing fill in the Merrimack River, cross eighteen streams, causing the direct loss of 3,000 feet of stream bed, and place 200

[7] The rDEIS refers to 88 acres of wetland. Acreage figures are based on results from the sum of the NWI maps and the SCS soils maps along the DOT preferred right-of-way. With some additional avoidance and bridging, we expect that the total wetland impact would be somewhat less - between 50 and 75 acres.

42 Comment noted. Wetland functions and values were determined for each of the potentially impacted wetlands, so that key areas could be highlighted, and more informed decisions could be made about wetland impacts. This detailed, site-specific information is presented in Appendix A of the Wetlands Technical Report.

43 Comment noted, no response required.

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43 acres of roadway on top of fourteen different high yield aquifers.[8] The roadway would also bisect numerous contiguous wetlands and interrupt important wildlife corridors.

All the full build alternatives cause large environmental impacts. Moreover, NHDOT has selected one of the worst full build alternatives as options 7 and 8 would: (1) cross the most streams - eighteen vs thirteen or fourteen for other alternatives; (2) have the highest wetland impact (88, 93 acres) vs alternative 6 (54 acres); (3) impact the largest number of wetlands with wildlife as a principal function (twenty-one vs fifteen or less); (4) impact 20% more undeveloped land (approximately 500 acres of wooded habitat); (5) have the largest amount of floodplain loss (twelve acres vs six or seven acres); and (6) impact the greatest number of key wetlands for wildlife habitat - five vs two for alternatives 3 and 5.[9]

SEGMENT	BETTER CHOICES	WORSE CHOICES
Southern segment	3-6	7,8
Central segment	5,6 (slightly)	7,8
Northern segment	8,5	4,6,7

44 Direct Impacts to Wildlife

Constructing NHDOT's preferred alternative would destroy 88 acres of herbaceous, shrub, forested, and open water wetland communities. The loss of most of the riparian wetlands would impact the diverse and abundant fish and wildlife communities that depend upon these resources. The removal of mast producing vegetation from the area would reduce the available food source for a broad range of wildlife species.

Clearing would also remove the standing dead trees and snags important to resting, nesting, denning, and feeding habitat for numerous wildlife species. Animals unable to escape the project area would not survive. More mobile species would attempt to relocate in adjacent areas. However, in all likelihood these

[8] The project would also eliminate 640 acres of undeveloped upland habitat, and seventeen acres of active farmlands; the Corps should consider these impacts in its public interest review. The project will also take seventeen homes and businesses, cross thirteen sensitive archeological sites, and cost a minimum of $185 million.

[9] NHDOT apparently plans to bridge some of the wetlands which could reduce some of these totals.

44 Comment noted. Species listed are "potential", and have not been actually "observed". It is important to note this since interpreting the species list as observed will result in an exaggeration of impacts. Regardless, the FWS will be consulted during the development of a mitigation plan to ensure that adverse impacts to wildlife will be avoided or minimized to the maximum extent practicable.

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44 nearby habitats are at or near carrying capacity and would not be able to accommodate refugee animals..

The project will destroy habitat which supports species uncommon in the state including 1) critically endsngered state species: black-crowned night heron, bald eagle, peregrine falcon, ring-billed gull; 2) state endangered species: pied-billed grebe, northern harrier, common loon, cooper's hawk; and 3) state threatened species: American bittern, green-winged teal, hooded merganser, virginia rail, sora,, herring gull, great black-backed gull, eastern screech owl, horned lark, marsh wren, cape may warbler.

A number of area-sensitive species will also be affected adversely by this project. These species typically require large tracts of land for breeding and generally decline with habitat fragmentation and reductions in forest patch sizes. Also, forest-interior birds do not nest or establish nesting territories on forest edges.[10] These species avoid disturbed and non-forested areas at a distance of 30 to 300 feet depending on the species.[11] Furthermore, many of these species breed in a manner which puts them at greater risk. Such behavior includes nesting only one time during the breeding season and building open nests close to the ground, making the nest vulnerable to predation and parasitism.

45 Because of continued urbanization and fragmentation of natural habitats throughout New England, many area-sensitive species adapted to these larger tracts of land continue to decline in both range and number. Area-sensitive birds most likely to be impacted by the proposed project include:

bald eagle	great-horned owl
long-eared owl	northern harrier
eastern screech owl	American kestrel
broad-winged hawk	red-shouldered hawk
barred owl	northern waterthrush
pileated woodpecker	black & white warbler
black-throated green warbler	hermit thrush
wood thrush	yellow-throated vireo
American redstart	ovenbird
Canada warbler	belted kingfisher
pileated woodpecker	

[10] Robbins, C.S. 1988. Forest fragmentation and its effects on birds. SAF Publication 88-04. Society of American Foresters, Bethesda, Md. 156 pp.

[11] Stauffer, D.F., and L.B. Best, 1980. Habitat selection by birds of riparian communities: Evaluating the effect of habitat alterations. J. Wildlife Management. 44(1): 1-15.

45 Comment noted. Fragmentation impacts, as described, will be considered in the development of a mitigation plan to offset and minimize these impacts. The FWS will be consulted during this time. Area Sensitive Birds, Riparian Edge Specialists, Forest Dwelling Riparian Birds, Mammals, Amphibians, and Fish are all addressed in the Wildlife Technical Report.

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45 Loss of extensive riparian wetlands in the proposed site will also adversely affect the bird species closely associated with riparian ecosystems, including forest and edge species, and others that are dependent on riparian forests. Because these species require aquatic habitat and have a more restricted distribution, they suffer seriously from alterations of streams and associated wetlands.[12] The riparian edge specialists and forest-dwelling riparian birds which will be most affected by this highway include:

American redstart	yellow warbler
rufous-sided towhee	northern oriole
indigo bunting	red-eyed vireo
wood thrush	ovenbird
wood duck	red-shouldered hawk
broad-winged hawk	yellow-billed cuckoo
downy woodpecker	hairy woodpecker
great-crested flycatcher	common yellowthroat
rose-breasted grosbeak	

Other birds which utilize wetlands would also be adversely affected by the proposed project. The highway will remove wetland tree species that provide a food source for a substantial population of herbivorous insects, which in turn are eaten by a diverse population of bird species. This is particularly important for the long-distance migratory species, usually referred to as neotropical migrants, such as the warblers, vireos, tanagers, and some of the flycatchers and thrushes, which utilize the rich insect fauna characteristic of these ecosystems during critical periods of their migration (see migratory status in the attached table). The U.S. Fish and Wildlife Service has documented long-term population declines of these species in areas of the United States undergoing rapid urbanization. Additional fragmentation of wetland forests will further impact the vast majority of the 60 neotropical species which occur at the site.

Loss of the extensive riparian wetlands and interior habitat in the proposed site will also adversely affect the mammal species which regularly use riparian wetlands. These mammal communities are important in riparian systems for their role in the food chain and for their ability to modify wetland communities (i.e., beaver). Mink, otter, ermine, weasel, moose, and fisher, all occur in the project area and are area-sensitive species.

46 Loss of the seasonally flooded riparian zones and small ponds will also reduce the availability of habitat for all amphibians and semi-aquatic reptiles. Most amphibians are unable to disperse more than 200 to 300 meters from their breeding ponds. Furthermore,

[12] Brinson, M., Swift, B., Plantico, R., and Barclay, J., 1981. "Riparian Ecosystems: Their Ecology and Status," FWS/OBS/-81/17, 155 pp.

46 Comment noted. Amphibian recruitment continues to be a subject of study, and it is still unclear as to the percentage that will relocate to other wetlands.

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46 several amphibian species exhibit a strong fidelity to their natal wetlands. Thus, in addition to direct mortality of those amphibians and reptiles, additional populations that inhabit areas adjacent to the highway may also be eliminated or significantly reduced. This is because loss of natal sites could indirectly extirpate many local populations due to lack of breeding sites and low recruitment.

47 The rDEIS does not address whether an attempt was made to identify vernal pools in the project area; however, a letter from the New Hampshire Heritage Program indicates that wetland BC2 and BC3 are possible vernal pools. Alternatives 3 through 6 would fill almost all of these wetland systems. The Final EIS should include an explicit evaluation of vernal pools.

Indirect Impacts to Wildlife

45 All the full build alternatives would cause additional indirect impacts extending beyond the footprint of the fill area. These include bisecting wetlands resulting in low value habitats on each side of the roadway, increased predation of uncommon species, fragmenting valuable riparian habitat, and preventing wildlife movement across the highway. Each of these impacts will ba discussed in more detail below. These severe indirect impacts are troublesome insofar as they are both far reaching and difficult to offset.

When a large highway fills part of a wetland it not only directly destroys habitat, it also reduces the values of the remaining wetland adjacent to the highway. Area-sensitive, forest interior, and other uncommon species in the remaining adjacent wetland habitat will suffer from noise and human disturbance, increased access for predators and direct kills of individuals trying to cross the highway. The impacts are usually greatest when the highway bisects a wetland or the remainder of the wetland lies adjacent to the highway.

For example, the preferred alternative would fill approximately two acres of wetland DFIA (a five acre wetland). Since the highway is adjacent to the remainder of wetland, this reduces wetland values for the entire wetland, especially for wildlife. In EPA's judgment the two acre fill would result in adverse impacts for area-sensitive, forest interior, and most of the neotropical migratory species for the entire five acres of wildlife habitat. This pattern of impacting adjacent wetland habitat occurs for numerous wetland systems along the alternative #8 route including wetlands AB2, BC1, AC4, AC5, AC6, ALT.BC2, EF2, EF3, EF5A, EF5C, GL1, GL3, GL4, GL6, GL7, GL8, HI4, HI5, HI7, as well as other unnamed wetlands. This causes immediate adverse effects to more than 100 additional acres of wetlands for uncommon species not adapted to human activity and noise.

47 Comment noted. Although the DEIS does not specifically reference vernal pools, an attempt was made to identify these areas during field assessments. Four possible vernal pools were found along the potential Build Alternative alignments: one in the southern section (BC2), and three in the northern section (NMI, LO1, and IJ2). The location of these areas was given to the New Hampshire Natural Heritage Program, for their information. National Wetland Inventory (NWI) mapping was found to be accurate and thorough in these areas. Even though two of these areas are small (0.45 acres and 0.53 acres) both were identified by the NWI. NWI mapping was used as a focus for the wetland field work; additional unmapped sites were identified as part of the field investigations. The NWI mapping identified all four possible vernal pools found along the alignments.

48 Comment noted, no response required.

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49 Building the Circumferential Highway through a large wetland and upland habitat block reduces the total size of the wetland habitat and apportions the remaining area into smaller habitat units. The rDEIS has identified thirteen different habitat blocks, including wetland ecosystems, which remain generally intact to support diverse wildlife populations. All full build alternatives bisect the majority of these habitat blocks, with alternative #8 bisecting eight blocks. For example, alternative #8 would split habitat block #12 (650 acres) into roughly two equal portions. The rDEIS has also identified twelve key wetlands (i.e., wetlands that are unique or support diverse functions and values) which closely correspond to the habitat blocks. All alternatives will fill portions of several key wetlands. NHDOT's preferred alternative would impact four of the key wetlands.

50 Several small roads and houses already exist in some parts of the landscape along the proposed highway route and in portions of the remaining habitat blocks. This development has caused some habitat fragmentation, possibly resulting in the extirpation of some species such as bobcat and bear. Nevertheless, the presence of uncommon species observed in the study area and the remaining undeveloped land indicate that the remaining habitat blocks and corridors are large enough to maintain a diverse wildlife population. Sensitive species, such as fisher and mink, remain. Most secretive mammals travel at night when small roads are empty and easy to cross. Also, the tree canopy extends over many of the small roads presenting an almost uninterrupted forest from the perspective of a bird. A large highway with fences, broken canopy, and vehicle activity throughout much of the night would present a greater barrier to the movement patterns of animals, resulting in increased direct mortality and avoidance behavior.

When a large highway fragments habitat blocks, common species proliferate at the expense of the more unusual wetland wildlife species. Such fragmentation results in increases in nest predation and parasitism to songbird populations.[13] Large highways can act as funnels moving some predators, such as red fox and crows, into previously buffered wetland interior areas. Additionally, splitting of habitats, as would occur with the proposed highway project, allows brown-headed cowbirds to more easily place their eggs in the nests of forest interior species. Aquatic mammals inhabiting the site which require large home ranges, such as fisher, weasel, and mink, would also be impacted adversely.

The 404(b)(1) guidelines emphasize impacts on travel corridors of aquatic species and effects which reach beyond the disposal site. Large highways restrict wildlife movement and interfere with the

[13] Robbins, C.S. 1988. Forest fragmentation and its effects on birds. SAF Publication 88-04. Society of American Foresters, Bethesda, Md. 156 pp.

48 Comment noted. This is a reinterpretation of the conclusions in the DEIS. The area is already fragmented (i.e.) in Blocks, but still is healthy according to the EPA.

The position of an Alternative relative to a Habitat Block is what is important. If an alternative impacts 50 acres of a 1000-acre Block, these 50 acres may be located in the middle of the Block, thus maximizing the fragmentation affect, or they may be located along the edge of a block, thus minimizing the fragmentation effect. Refer to the Wildlife Technical Report, pages IV-10 through IV-20. In addition to development, cover types (i.e. fields, barren, woods, etc.) should also be considered when analyzing the fragmentation effect.

50 Comment noted. Impacts to wildlife will occur; however, the roadway is not a barrier to movement as the comments infer. Herptofauna are likely to be most effected.

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51 natural exchange of genetic material. This highway will culvert and fill numerous streams and associated floodplains and riparian habitats. For example, the rDEIS indicates that the vast majority of the wetlands which alternative #8 will impact are part of a wildlife corridor. Riparian corridors help maintain viable wildlife populations by adding to the natural connectivity of habitats already fragmented by development. Because of its size and projected high traffic volume, this highway will likely act as a barrier to restrict the movement of numerous wetland species across the landscape, especially small mammals, reptiles, and amphibians. These impacts are likely to be greatest along the riparian corridors discussed above.

52 Hydrological Impacts

The wetlands loss will reduce the ecological benefits provided by the aquatic systems. Riparian wetland destruction will reduce primary and secondary productivity created by wetland vegetation and transported by runoff and flooding to streams and the Merrimack River. Less detrital mass would then be available for downstream food webs including the fish species in the Merrimack River.

The highway will also destroy wetlands which purify the waters of the Merrimack River. Greater amounts of sediment, nutrients, and other pollutants of urban runoff, such as lead, oil, and gas, would enter the tributary streams and flow into the Merrimack River. Sediment causes turbidity, which reduces aquatic life and can transport pesticides, heavy metals and other toxins into the streams. Sediment also causes long term problems for downstream reservoirs, rivers, harbors, and ports causing adverse impacts to aquatic life and expensive dredging operations.

Additionally, as the highway reduces the capacity of the natural cleansing action of the wetlands, it will increase the pollutant loadings in the watershed. The highway will place over 300 acres of impervious surfaces and add non-point source pollutants to the streams and Merrimack River. It will destroy wetlands that would otherwise remove some of this runoff of urban pollutants by storing and transforming chemicals such as nitrogen. For example, it has been shown that one 500-acre marsh in Pennsylvania removes, on a daily basis, 7.7 tons of biological oxygen demand, 4.9 tons of phosphorus, 4.3 tons of ammonia, and 138 pounds of nitrate; at the same time it adds 20 tons of oxygen to the water each day. The functional assessment in the rDEIS confirms that many of the wetlands perform these important functions for society. As the greater Nashua area becomes more developed these wetland functions continue to increase in importance.

The project will also destroy wetlands that help to slow the velocity of water during floods and temporarily store flood water, protecting downstream properties from damage. This function is especially important in areas becoming more urban, such as portions

51 Comment noted. Adverse impacts to wildlife corridors will be considered during the development of a mitigation plan. The FWS will be consulted at this time.

52 Comment noted. The protection of surface and groundwater will be considered during the development of a mitigation plan. Additionally, the loss of flood storage capacity will also be considered in this plan. The Federal Emergency Management Agency (FEMA) will be consulted concerning proposals to offset flood storage loss particularly within the 100 year floodplain.

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52 of the study area, since greater amounts of impervious surfaces increase the rate and volume of stormwater runoff. Approximately 12 acres of wetland in the 100-year floodplain will be filled. In addition, many other wetlands store floodwater in the study area and are not part of the mapped 100-year floodplain. The functional assessment in the rDEIS also supports this conclusion.

Finally, the proposed highway will fill wetlands that not only reduce peak flood levels, but often augment stream flows and groundwater aquifers. The wetland systems in the central and northern portions of the study area are closely aligned with large underground drinking water supplies. Wetland losses in this area would not only decrease the ability of the wetlands to reduce the levels of pollution reaching drinking water supplies, but will also reduce the groundwater recharge and discharge interactions between wetlands and aquifers.

53 Secondary and Cumulative Impacts

Construction of the highway will also encourage secondary development along the route, resulting in additional degradation of aquatic resources. The highway would allow quicker access to the region, encouraging greater development especially for certain types of projects. Location and access are major concerns for commercial and industrial development. These projects normally require reasonably large tracts of land, thereby increasing the prospects of adverse impacts to wetland habitat. It would be much easier, for example, to locate a few houses on a ten acre parcel of land and avoid direct wetland impacts than placing a retail facility with a large parking lot. This accelerated development must also be considered in light of the large historical impacts to the aquatic ecosystem.

Other large highways in this vicinity, such as the Manchester Airport highway and the Nashua southwest bypass, are currently in the planning stages. If built, these highways would result in additional cumulative impacts to the wetlands and streams that flow into the Merrimack River. NHDOT has stated that the Manchester Airport roadway, proposed a few miles north of the Circumferential Highway study area, will encourage secondary development in an otherwise undeveloped area which contains several outstanding wetland systems. Also, the town of Nashua plans to pursue a study of a southwest bypass highway of Nashua. If constructed, this highway would impact the largest remaining wetland system in Nashua and fill streams which flow into Pennichuck Pond, the drinking water supply for Nashua.

The EPA guidelines require an analysis of cumulative impacts, including previous wetland fills and likely future wetland losses (§230.11[g]). This information is particularly relevant for EPA and the Corps in determining the significance of the impacts. The rDEIS states that the effects of development (urbanization) during

53 Comment noted. The Cumulative Development and Associated Impacts Technical Report identifies those areas predicted to experience future development pressures as a consequence of the construction and operation of the Circumferential Highway. This report has been sent to Planning Boards to assist in future development decisions and resource protection goals.

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54 the last 20-30 years have caused a "patchy" or fragmented landscape. This development has taken a toll on wetlands as well. The rDEIS does not address this issue except by a general reference to a large amount of habitat loss. EPA recommends that historical wetland losses be more carefully evaluated in the Final EIS.

In summary, the project would cause a major disruption of high quality aquatic ecosystems already experiencing stress. The project would fill 88 acres of wetlands; additional wetlands would suffer both immediate and long term adverse impacts from fragmentation and secondary development. Eighteen watercourses would be adversely affected with the permanent loss of over 3000 feet of stream bed. These direct and indirect impacts would sharply reduce the wildlife and water quality protection values of the project area.

Mitigation

55 The current mitigation requirements are best articulated in the February 6, 1991 Memorandum of Agreement (MOA) between the Corps and EPA. The MOA reflects the clear requirement in the guidelines that an applicant must first avoid, then minimize impacts to the aquatic environment, and finally compensate for the unavoidable impacts. Compensation normally involves restoration or creation of wetlands and may entail preservation of upland and/or wetland habitat as a component.

56 NHDOT presents relatively little information on mitigation sites in the rDEIS. The rDEIS identifies several potential mitigation sites, but contains no formal plans or proposals. Nevertheless, EPA has had enough experience with mitigation to believe that it will be extremely difficult to mitigate for significant aquatic losses.

Wetland creation involves considerable scientific and technical uncertainty and risk. Moreover, any plan should also compensate for the indirect impacts arising from disruption of wildlife travel corridors, bisecting wetlands and the reduction of aquatic habitat values due to fragmentation. It is especially difficult to compensate for these indirect adverse impacts which may affect wildlife as much as the direct habitat losses.

The current science of mitigation simply cannot replace some of the lost riparian values that would be lost by construction of this project. To do so would require getting enough water - presumably pumped from the Merrimack River - to create new streams with adjacent riparian vegetation which would link to other blocks of habitat. We seriously question the ability to mitigate for the loss of high value wetlands. While examples of successful mitigation projects do exist, we are unaware of wetland creation projects in New England which have resulted in resources of outstanding calibre.

54 Comment noted. According to Ken Kettenring, Administrator of the New Hampshire Wetlands Bureau, the majority of wetland destruction in New Hampshire occurred prior to the passing of the wetlands legislation in 1969. Since then, less than 5 percent of New Hampshire's freshwater wetlands have been lost. Nashua has most likely experienced closer to 5 percent freshwater wetland loss over the last 20 years, since it is one of the more highly developed regions in the state. These figures are approximate. No definitive information exists for the Nashua area.

55 Comment noted, no response required.

56 Formal mitigation plans and proposals will be determined once a LEDPA is determined, and the types and amounts of wetland losses are known. The understanding of successful wetland creation techniques is an ongoing process. Important considerations for increasing the success of mitigation efforts (based on the most current state of understanding of wetland mitigation) are addressed in the Wetland Technical Report. All potential mitigation sites will be considered for this project. The former Benson's Wild Animal Farm is being thoroughly assessed in terms of its mitigation potential. A conceptual design is included in the FEIS (Figure 4.14-5) which shows the site, existing wetlands, and areas were the potential for the creation of additional wetlands is promising. In addition to the former Benson's Wild Animal Farm property, two additional sites are under consideration. One is a sand and gravel pit near the Nashua Fish and Game Association in the vicinity of the proposed interchange of the Circumferential Highway with the F.E. Everett Turnpike. The second is located northwest of Alvirne High School, in a cleared area along the Litchfield-Hudson Town Line. Groundwater monitoring is being conducted at these mitigation sites. The data will be used as an aid in mitigation design once that point is reached in the overall process.

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56 Compensatory mitigation has not worked well in New England or elsewhere at offsetting all adverse impacts to wetlands; it remains, by scientific consensus, an uncertain endeavor. Wetland creation projects are subject to many uncontrolled variables that influence ultimate success or failure. Even where wetlands appear to have been successfully created, relatively little work has been done to assess the long-term fate of these systems. Mitigation projects at best replace selected environmental attributes, not the full spectrum of values provided by many wetlands.

Significance of the Impacts Under the 404(b)(1) Guidelines

The 404 guidelines direct EPA and the Corps to protect wetlands in several important ways. These regulations articulate a clear national policy [§230.1(c)(d)]:

> From a national perspective, the degradation or destruction of special aquatic sites, such as the filling operations in wetlands, is considered to be among the most severe environmental impacts covered by these guidelines. The guiding principle should be that degradation or destruction of special aquatic sites may represent an irreversible loss of valuable aquatic resources.

To enforce this general policy, the guidelines impose specific restrictions at §230.10(c) which states, in part, that, "no discharge of dredged or fill material shall be permitted which causes or contributes to significant degradation of waters of the United States. Significant degradation includes, among other things, "significant adverse effects" to wildlife, drinking water supplies, special aquatic sites, and ecosystem diversity, productivity and stability. Subpart B also requires a review of the cumulative and secondary impacts.

As an example of significant impacts, the guidelines cite loss of fish and wildlife habitat or the capacity of a wetland to assimilate nutrients or purify water. In assessing the significance of the impact the guidelines require consideration of whether the project would change breeding and nesting areas, escape cover, travel corridors, and preferred food sources for resident and transient wildlife species associated with the aquatic ecosystem (§230.32).

The large direct loss of wetlands is a key factor in our determination of significance. All full-build alternatives studied in the rDEIS would directly destroy large numbers of productive and valuable wetlands. It would cause the death and displacement of wildlife, and reduce water quality functions. The wildlife community remaining after the project would be reduced in both number of individuals and diversity of species. Uncommon species would suffer the most, especially the area-sensitive and riparian species.

57 In addition, since the project would fragment a variety of interconnected wetlands, streams, and uplands, it would entail impacts well beyond the footprint of the fill. Numerous wetlands would be bisected, thereby altering the hydrology and movement of species and increasing predation of uncommon species. The project will likely foster new development which will in turn cause additional, secondary losses of wetlands. It will significantly add to the cumulative impacts experienced during the last 20 years, further altering aquatic systems flowing into the Merrimack River. By fragmenting a productive ecosystem already experiencing stress from cumulative losses, the project will reduce the productivity and diversity of the ecosystem.

Based on our current analysis, we conclude that the impacts of the proposed project, without mitigation, would be significant within the meaning of the 404(b)(1) guidelines. Even assuming that the project does not directly cause significant impacts, it contributes to them, an outcome the regulations also prohibit. We reach this conclusion after examining the quality and quantity of the affected aquatic habitat, the direct, indirect and secondary impacts of the fill, the persistence of the impacts and the difficulty of compensating for the lost habitat values.

We have not analyzed the significance of the impact in light of a mitigation plan as no plan has been presented in the rDEIS. However, we believe that it is unlikely that a mitigation plan 58 could reduce the total project impacts below the significance threshold because of the size of the direct and indirect impacts and difficulty of creating new riparian wetlands.

In summary, based on a careful review of the record in this case, we conclude that the impacts caused by the project as proposed would cause or contribute to significant degradation of the aquatic environment. Based on current information, we do not believe that a mitigation plan would sufficiently offset these impacts because of the extent and value of the resources impacted, the uncertainty of wetland creation projects, and the difficulty of compensating for indirect impacts caused by habitat fragmentation.

Public Interest Review

The highway will cause large direct and indirect impacts to high quality aquatic resources, including fragmenting wetlands and important wildlife corridors. It would fill floodplain habitat, impact the Merrimack River, alter eighteen stream beds, and impact fourteen high yield aquifers, totalling 208 acres. The project would also eliminate 648 acres of upland habitat, seventeen acres of active farmlands, take homes and businesses, cross thirteen sensitive archeological sites, and cost a minimum of $185 million, not including mitigation and other environmental impacts.

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59 In contrast to these impacts, this roadway would only provide modest traffic relief, since over 21 miles of roadway will remain at LOS F in the year 2010. Given the low traffic benefits and high environmental and construction costs, EPA question whether the project is in the public interest. We urge you to consider these factors carefully in conducting the public interest review required by Corps regulations.

Summary of Section 404/Wetland Recommendations

The 404(b)(1) guidelines prohibit avoidable or significant adverse impacts to the aquatic environment. Based on existing information in the rDEIS, EPA concludes that the preferred alternative does not comply with the key requirements of the 404(b)(1) guidelines. First, it would cause significant adverse impacts to the aquatic environment, including wetlands, in violation of section 230.10(c) of the guidelines. Second, as we believe other options besides full build scenarios have not been examined sufficiently, this project does not comply with the regulatory requirements pertaining to the analysis and selection of alternatives (§230.10(a)). Finally, since the mitigation plan has not advanced beyond the preliminary stage, it does not comply with §230.10(d) of the guidelines. For these reasons, EPA recommends that the Corps deny the permit. In addition, EPA considers this proposed project a candidate for action under our 404(c) authority. EPA recommends that NHDOT abandon the full build alternatives and pursue other alternatives which cause less damage to the aquatic environment.

WATER SUPPLY

60 EPA believes that the construction of a full build option for the Circumferential Highway could result in the degradation of water supply resources in the Nashua-Hudson area. Construction of a partial build alternative (from the planned Exit 2 interchange with the F.E. Everett Turnpike to either a connection with Route 111 or Route 102) would significantly avoid and minimize adverse water supply/drinking water impacts from project construction, roadway runoff, as well as the anticipated increase in point and non-point contamination sources. Based on these concerns, EPA encourages the applicant to implement other than the full build alternative to relieve traffic congestion is this service area. Notwithstanding EPA's objection to the environmental impacts from the proposed project, the following comments address the preferred full build alternative.

61 1. Although the various technical documents provide a more detailed discussion on conceptual mitigation measures necessary to protect water supply resources, additional stormwater runoff renovation and spill prevention/containment measures should be made in the Final EIS. Addition long-term water quality monitoring and operation and maintenance commitments, of which there is no mention

57 Comment noted, no response required.

58 Comment noted. Significant degradation will be addressed in combination with a completed mitigation plan after determination of the LEDPA and prior to a 404 permit decision.

59 Comment noted. Refer to the response provided for comment #32 of this letter.

60 Partial Build Alternatives were evaluated in the Traffic and Transportation Technical Report (original and revised) and FEIS. It was determined that they do not meet the stated Project Purpose and Need. Refer to the responses provided for comments #21, 23 and 31 of this letter.

61 General mitigation plans are defined in this EIS. Specific mitigation measures necessary to protect water supply resources will be considered during the development of a mitigation plan after the Corps determination of a LEDPA. EPA will be consulted for their expertise on these matters at that time. Complete coordination will continue with all agencies regarding any mitigation decisions. Refer to the response provided for comment #2 of the Public Hearing Testimony for additional information on water quality mitigation measures, especially with respect to the Pennichuck Reservoir.

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61 of in the rDEIS or in the technical reports, should be addressed in the Final EIS.

The rDEIS states that for any of the full build alternatives alignments within the Pennichuck watershed, all of the stormwater runoff will be diverted out of the watershed via a closed drainage system. Stormwater runoff renovation and spill prevention/containment measures (e.g. vegetative swales and a series of detention basins) are necessary to protect the Merrimack River.

62 NHDOT should commit to a long-term operations and maintenance plan to ensure that all stormwater mitigation structures are effective in minimizing contamination. At a minimum, NHDOT should evaluate all of its sedimentation/detention basins on an annual basis, remove debris, and remove any unnecessary vegetative growth which reduces the storage capacity and effectiveness of the basins.

NHDOT must commit to a long-term monitoring plan. This plan should include quarterly sampling of the influent and effluent at selected sedimentation basins for heavy metals, turbidity, and other appropriate water quality parameters. This monitoring will help assess the performance of the structural mitigation measures and will help determine whether additional mitigation measures are necessary.

63 2. EPA recommends that sensitive groundwater recharge areas, such as the one for the Weinstein well, warrant a closed drainage system to provide necessary protection to groundwater resources. The Final EIS should contain specific design criteria for these types of systems, and should include a commitment to include a requirement in the ROD and the permit for this type of system. NHDOT should implement a program diverting all stormwater runoff out of the delineated well head protection area for the Weinstein well into vegetative grass swales and into detention basins prior to discharge.

64 3. EPA believes that the mitigation for potential construction impacts, performance standards, as well as a water monitoring programs implemented prior to, during, and after construction, should be established. For example, turbid water entering Pennichuck Brook or any of its tributaries should not exceed 5 NTUs. By establishing such a goal and monitoring plan, it would offer the opportunity to evaluate existing erosion control mitigation measures, as well as to allow additional structural measures to be implemented in the event the existing measures are not adequate.

65 4. The Cumulative Development report concludes that the full build alternatives will accelerate the rate of development over the entire project area as compared to the slower rate of development with the no build scenario. The report concludes that the highway

62 Comment noted. The NHDOT has permanent maintenance crews whose full time job is to maintain the integrity of all highway facilities (i.e. road surfaces, drainage systems, R.O.W., bridges, and stormwater mitigation structures), depending on demands. Monitoring beyond these standard procedures will be considered as part of a mitigation plan only if deemed warranted. EPA will be further consulted on this matter.

63 Comment noted. Mitigation measures presented in the EIS can and have been proven effective in the protection of groundwater resources. Site specific measures will be examined once a LEDPA is determined and may be incorporated as conditions of the 404 permit.

64 Comment noted, no response required.

65 Comment noted. With respect to the Full Build Alternatives, traffic zone 138 will gain 180 new homes and approximately 402,000 square feet of commercial/industrial space over the No Build condition.. This commercial/industrial development increase equates to about eight 200 ft by 250 ft buildings. Traffic zone 263 will gain approximately 100 homes and 47,520 square feet of commercial industrial space, equivalent to one 200 by 250 building.

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65 will not induce further development, and that the same level of development will be reached either with or with out the proposed highway. However, in areas with water supply resources, 66 development is projected to be much higher with the full build alternative than with the no build alternative. For example, in traffic zone 263, where the Weinstein well is located, the projected increase in housing units under the full build alternatives is expected to be double that of the no build scenario. Also, in traffic zone 138, part of which appears to be within the Pennichuck watershed, the projected increase in residential and commercial development for the full build is double that for additional housing units and about 25% greater for 67 commercial development. EPA recommends that unless anticipated secondary development can be minimized, any build alignment should avoid these particular traffic zones.

5. The rDEIS, as well as the Cumulative Development report, assumes that a new highway will be constructed, and that whatever adverse impacts result from that action, they can be mitigated or minimized by local community zoning, structural controls or by other means. The construction of any new roadway will result in the introduction of new sources, and increased concentrations of, contaminants to surface and groundwater resources. For any of the 68 build alternatives, including the partial builds, mitigation measures must be designed, constructed, monitored and maintained. EPA is concerned that mitigation may not serve to minimize adverse drinking water supply impacts. Therefore, the avoidance of any potential impacts should be stressed and practiced.

6. The following are specific comments which pertain to the Stormwater Runoff Quality technical report:

59 a. Table II-2, pages II-3 and II-4 of the rDEIS should be revised in the Final EIS to indicate that the values reported are maximum contaminant levels (MCLs) under the Safe Drinking Water Act for some of the contaminants commonly detected in stormwater runoff. In addition, the Final EIS should explain how it converted the MCL of 7 million fibers per liter for asbestos in drinking water to 272 mg/L.

70 b. The technical report includes little discussion of Table III-2 (page III-3). EPA believes the presentation of this information could be misleading or subject to misinterpreted. For example, according to the same report (EPA's Results of the Nationwide Urban Runoff Program (NURP)) referenced by Table III-2, one of its conclusions states that heavy metals, especially lead, copper and zinc, are the most prevalent priority pollutant constituents found in urban runoff. However, the technical report does not reference where in EPA's NURP report the data formulating Table III-2 is derived. This information should be included in the Final EIS.

66 Comment noted. Refer to page IV-7 of the Cumulative Development and Associated Impacts Technical Report for a discussion on Zone 263 and the Weinstein Well.

67 Comment noted. The secondary and cumulative development impact assessment was conducted to bring attention to those areas predicted to see increased future development. Planners and regulators should use this information in order to prepare for potential development impacts in advance. The Cumulative Development and Associated Impacts Technical Report has been forwarded to Town Planning Boards for this purpose.

68 Comment noted, no response required.

69 Comment noted. Table II-2 of the EIS has been revised to indicate maximum contaminant levels. The conversion discussed in this comment is provided at the bottom of that table.

70 Comment noted. Table III-2 depicts pollutants found in urban runoff derived from sources other than streets or parking lots (i.e. from rooftops or other impervious surfaces not traveled upon by cars). This runoff does contain copper, lead and zinc, but only in trace amounts. These heavy metals are the most prevalent priority pollutant constituents of urban runoff when considering runoff from street surfaces and parking lots, as they are generated through vehicular operation. We apologize for the confusion. The statement, "Not significant in urban runoff due to low concentrations" is misleading.

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70 c. The report states (pages III-7 and III-8) that the communities of Hudson, Merrimack, and Nashua actively limit or do not use salt as a de-icing chemical in sensitive water resource areas. Although the report indicates that existing state policy is to salt all state-maintained roads during the winter months to ensure traffic safety, there is no discussion on utilizing alternative de-icing chemicals. The Final EIS should include a discussion on how these alternative de-icing agents, which are effective in ensuring traffic safety, but may be less environmentally damaging to water resources and vegetation, could be used in these areas.

72 d. The report should provide existing contaminant levels in the stormwater runoff for comparative purposes, as well as providing revised guidelines to improve stormwater quality. The guidelines provided on page III-21 may not be sufficient to meet Federal water quality or drinking water standards. For example, the drinking water action level for lead of 0.015 mg/L and the action level for copper of 1.3 mg/L should be reflected in Figures III-1 through III-6. The projected levels for lead from stormwater runoff are expected to exceed the action level in most instances by a factor of 100. NHDOT should implement mitigation measures such as construction of vegetative grass swales and detention basins to minimize the anticipated excessive lead levels in the stormwater runoff.

73 e. The construction of a new roadway will result in new truck traffic and introduces the risk of a hazardous material spill where there was no risk previously. Despite the risk analyses conducted in Section IV, a single spill of a hazardous material could result in the contamination of a water supply resource. EPA recommends that the Final EIS evaluate all opportunities to avoid introducing such truck traffic in this area, as well as evaluating mitigation measures such as constructing lined vegetative swales and a series of detention basins to contain potential hazardous spills.

74 f. Section V, Impact Mitigation, presents several concepts for stormwater renovation. However, other than some limited discussion for Alternative #7 (page V-13), a discussion of commitments on the part of the NHDOT to implement specific and detailed mitigation measures addressing roadway runoff and spill protection for the other build alternatives is deferred until the final highway design. EPA recommends that the Final EIS contain a more detailed discussion of specific mitigation measures necessary to address potential adverse impacts on waters supply resources. A presentation of these mitigation efforts in the Final EIS is consistent with the requirements of NEPA for public review of all project impacts and to allow discussion of whether proposed mitigation efforts will adequately address our concerns about the project impacts.

For specific mitigation measures, the goal is to provide the maximum protection to water supply and surface water resources.

71 Comment noted. The use of salt and other deicing agents by the NHDOT is an increasingly publicized topic that is being debated in the legislature. This policy may or may not change in the near future. However, through the 404 process, if the Corps or any other agency considers an area to be a sensitive resource area, then reduced use of salt will be considered as a condition of the 404 permit.

72 Comment noted. Existing contaminant levels do not exist. Specific mitigation measures will be considered upon determination of the LEDPA and may become conditions of the 404 permit.

73 Comment noted. Heavy trucks will not be restricted from the Circumferential Highway. They will be encouraged to travel along this higher Class roadway, thus removing them from lower Class roadways in the region that are potentially more hazardous. In this way, the potential for spills and contamination in the region is expected to be reduced. Construction of lined vegetated swales and retention basins to contain potential hazardous spills will be considered in the development of a mitigation plan. EPA will be consulted during this time.

74 Comment noted. Refer to the response provided for comment #61 of this letter.

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74 Any runoff diverted out of a watershed or an aquifer should be diverted to an adequately sized detention/retention/drainage control basin system for water quality renovation and spill control prior to discharge to an alternate surface waterbody.

75 g. During the scoping process for the rDEIS, EPA was involved in a discussion with NHDOT regarding improving the existing drainage conditions along the F.E. Everett Turnpike within the Pennichuck watershed, if the Circumferential Highway were to be constructed. Is there any formal commitment by the NHDOT to improve existing drainage conditions within the watershed? EPA recommends that this issue be discussed in the Final EIS.

76 h. On page V-9, the report states that the NHDOT uses calibrated sanding equipment along with operating personnel trained in established procedures to reduce salt use to a minimum. The Final EIS should discuss what these established procedures are, and which specific state roads NHDOT currently minimizes salt usage.

77 i. The Final EIS should discuss the need for a commitment to a long-term maintenance program to ensure that all stormwater drainage structures are properly functioning and maintained. Additionally, a long-term water quality monitoring program is necessary to ensure that these structures are efficiently removing contaminants from stormwater runoff. EPA recommends that NHDOT be required to commit to this type of program in the Record of Decision or permit prepared for this project.

10. The following are specific comments on the "Wells and Aquifers" technical report:

78 a. The report (page I-1) indicates that the objective is to allow a potable water supply to exist indefinitely adjacent to a limited access roadway. EPA believes the objective should be revised as follows: "To fully protect existing and future water supply resources and to prevent any degradation as a direct result of the construction of a new limited access roadway and the indirect result of increased secondary development with the introduction of a new or improved roadway".

79 b. While there is significantly more discussion on possible mitigation techniques in this technical report compared to the stormwater runoff quality technical report, the definitive commitment for specific detailed mitigation measures to protect groundwater resources for the various build alternatives is deferred until the final highway design is prepared. EPA recommends that the Final EIS discuss specific mitigation proposals and that a commitment be made to include these mitigation requirements in any ROD or permit prepared for the project.

80 c. Proposed mitigation measures are presented in Section VI to protect the identified six most sensitive groundwater resource

75 Comment noted. There is a commitment on the part of the NHDOT to upgrade the existing drainage conditions along the F.E. Everett Turnpike within the Pennichuck watershed. All highway runoff will be contained and filtered through vegetated swales, detention basins, or other stormwater renovation measures, as needed, prior to release into Pennichuck waters. This has been done within the Pennichuck watershed for other projects and will continue to be the policy of the NHDOT.

75 Comment noted. Individuals are trained by career employees through on the job experience. This is how they become familiar with the procedures that have been established over many years of roadway maintenance. There is no formal manual.

77 Comment noted. Refer to the response provided for comment #62 of this letter. Final design and the 404 permit process will determine whether or not site specific monitoring will be required in a sensitive resource area.

78 Comment noted, no response required.

75 Comment noted. Specific mitigation proposals for the protection of groundwater resources will be considered during the development of a mitigation plan. EPA will be consulted during this time. This is consistent with how other mitigation issues will be addressed.

80 Comment noted, no response required.

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80 areas within the project boundaries (page VI-2). EPA believes the concept behind these mitigation efforts should be to provide maximum protection to the groundwater resource areas rather than to minimize adverse impacts. Closed drainage to divert runoff out of the cone of influence, aquifer, or safely downgradient from existing wells should be one of the primary mitigation measures for all identified sensitive groundwater resource areas. For example, in protecting the Weinstein well the strategy should be to prevent all runoff from any of build alignments from infiltrating into the ground within the cone of influence, rather than "minimizing" stormwater or spill runoff infiltration (page VI-4).

81 d. NHDOT must implement spill prevention and spill control mitigation measures to protect sensitive groundwater resources within the project corridor; these measures should be incorporated into the stormwater drainage design. EPA recommends that the Final EIS discuss specific mitigation proposals and that a commitment be made to include these mitigation requirements in the ROD and permit prepared for the project.

AIR QUALITY IMPACTS

GENERAL

82 The rDEIS uses a generalized approach to evaluate the proposed project and concludes that none of the project build alternatives result in significant benefits to air quality; only minimal reduction of emissions can be attributed exclusively to the project. The City of Nashua is in nonattainment of the National Ambient Air Quality Standards for both Carbon Monoxide (CO) and Ozone (O3). Therefore, any highway projects proposed for the area should aim to provide significant improvements to congestion and to control Vehicle Miles Travelled (VMT) so that substantial air quality benefits are obtained. EPA recommends that if one of the build alternatives is selected as the LEDPA it should be combined with Transportation Demand Management (TDM) measures so that the overall project has meaningful air quality benefits.

The air quality and noise analyses presented in the Final EIS should be refined to more accurately describe the impacts/benefits associated with the LEDPA. It should also include the decision on financing by tolls. If tolls are enforced, the impacts associated with the placement of toll booths and the affect toll facilities would have on use of the Circumferential Highway and on other alternative route should be addressed in the Final EIS.

MESOSCALE ANALYSIS

1) Our review of the mesoscale analysis shows that the nonmethane hydrocarbon (NMHC) and CO emissions for the build case are slightly lower than for the no build case and therefore the project

81 Refer to the response provided for comment #79 of this letter.

82 Refer to the response provided for comment #19 of this letter.

Additional study has been conducted in order to determine the effect that the toll plazas have on both emissions and localized carbon monoxide (CO) impacts. The analysis consists of microscale or dispersion modeling analysis to estimate ambient CO concentrations at various receptor locations in the vicinity of the toll plazas. The analysis focused on two toll plaza locations - one at the northern terminus of the Circumferential Highway, and the other at the southern terminus. Potential air quality impacts were examined for Alternatives 7 and 8, for the completion (2000) and the design (2010) years.

Modeling Results

I. Traffic Volumes

Demand volumes for the north and south toll plazas, for Alternatives 7 and 8 in 2000 and 2010 are shown in Table 1 in Appendix A of this document. The demand volumes for Alternative 7 are generally higher than the corresponding volumes for Alternative 8 at the northern toll plaza. At the southern toll plaza, volumes associated with Alternative 8 are higher than the corresponding volumes for Alternative 7. The differences, however, are quite small (less than 4 percent).

Between 2000 and 2010, 24-hour volumes for Alternative 7 at the northern toll plaza were estimated to increase by over 21 percent (from 17,100 to 20,800). A very similar increase is expected for Alternative 8. The increase in traffic at the southern toll plaza between 2000 and 2010 was estimated at 22 percent for both Alternatives 7 and 8.

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82 II. Queues and Delays

During the peak hour in 2000, the northern toll plaza is expected to have five booths open for traffic on the mainline northbound lanes, and two booths for traffic from the on-ramp. Even though these booths are capable of operating at 600 vehicles per hour (VPH), a smaller capacity of 500 VPH was assumed in this analysis. With this smaller capacity, the average queue length (as measured by the number of vehicles in each queue) for the mainline was estimated at 3.0, and the average delay incurred by the vehicles in the queue was estimated at 38 seconds. The queue length and delay time for the on-ramp traffic are generally lower.

The same number of booths with the same capacity are assumed for the analysis of Alternative 8. Because of the lower demand volumes at the north plaza in 2000, the average queue length and delay times for Alternative 8 were estimated to be slightly less than the Alternative 7 counterparts. These results are summarized in Table 2 in Appendix A of this document.

Four toll booths , with 500 VPH capacity each, are assumed to be open for the mainline southbound lanes with four additional booths for the on-ramp traffic at the southern toll plaza in 2000. Because the demand traffic for Alternatives 7 and 8 are very close to one and other, the estimated queue length and delay times for these two alternatives is virtually the same.

Because of sufficient capacity, the same number of toll booths that is planned for 2000 is also assumed to be in place in 2010. However, the approximate 21 percent increase in traffic volumes is expected to result in an increase in the queue lengths and in the average delay. For instance, between 2000 and 2010, the average queue length for Alternative 7 is expected to increase from 3.0 to 5.6 vehicles, and the delay from 38 to 60 seconds.

82 III. CO Concentrations

From the peak hour volumes shown in Table 1 in Appendix A, and the average delay (from Table 2), emission rates for each of the queues were estimated using idle emission factors from EPA's MOBILE4.1 program. Superimposed on the queue lines, the emissions from the free-flowing traffic were also estimated using emission factors from EPA's MOBILE5A program. To estimate the potential air quality impacts, receptor locations were placed at the right-of-way line at regular intervals, on the side where the queues form. For more complete coverage, another receptor was placed at the right-of-way line at the other side of the highway, and at the toll plaza administration building. The locations of these receptors and the geometry of the roadways are shown in Figure 1 for the northern toll plaza and Figure 2 for the southern toll plaza. These figures are included in Appendix A of this document.

To estimate CO concentrations the emissions from the queues and the free-flow lines were modeled as line sources using EPA's PAL program. The meteorology parameters assumed in the modeling analysis include 1 meter per second for the wind speed, and D atmospheric stability. The wind directions were allowed to vary at 10-degree increments, and the highest concentration encountered during the 360-degree sweep was reported.

The maximum 8-hour CO concentrations expected in 2000 with Alternative 7 range from 2.4 to 2.8 parts per million (ppm) at he northern toll plaza. These concentrations include a CO background of 1.1 ppm. These concentrations are well below the state and federal 8-hour standard of 9.0 ppm. At the southern toll plaza, slightly higher CO concentrations are anticipated. But here again, the concentrations are well below the 9.0 ppm standard. Relative to Alternative 7, the CO concentrations associated with Alternative 8 are slightly lower at the northern toll plaza, and virtually the same at the southern toll plaza.

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82 Again, no violation of the 8-hour standard is expected with Alternative 8. The 8-hour results for these two alternatives are summarized in Table 3 in Appendix A of this document.

Between 2000 and 2010, traffic volumes and delay times are expected to increase. These increases, however, are offset to some extent by a decrease in the exhaust emission rates that are a result of the mandatory Federal Motor Vehicle Emissions Control Program (FMVCP) and the New Hampshire Inspection and Maintenance (I/M) Program. Consequently, as shown in Table 3 in Appendix A, the increases in CO concentrations between 2000 and 2010 are quite minimal. No violations of the 9.0 ppm standard are expected anywhere in 2010.

The maximum 1-hour CO concentrations for Alternative 7 in 2000 were estimated to range from 4.0 to 4.7 ppm at the northern toll plaza, and from 5.0 to 6.6 ppm at the southern toll plaza. These 1-hour results include a CO background of 2.1 ppm. These concentrations are well below the state and federal standard of 35 ppm. Differences in 1-hour CO concentrations between Alternatives 7 and 8 are very minimal. Consequently, no violations of the 1-hour standard are anticipated for Alternative 8.

With the peak hour condition, the effects of the FMVCP and the state I/M program are not sufficient to offset the increases in traffic and delay times between 2000 and 2010. Consequently, 1-hour CO concentrations in 2010 are expected to be higher than their 2010 counterparts by approximately 0.5 to 2.0 ppm. The highest concentration, estimated at 7.2 ppm for receptor R10 at the southern toll plaza under Alternative 8, is still well below the corresponding standard of 35 ppm.

The toll plazas are not expected to result in any new CO standards violations, or in exacerbating any existing violations. The toll plazas are, therefore, in conformance with the New Hampshire State Implementation Plan provisions to maintain the CO standards. Consequently, no mitigation measures are needed at this time.

areas within the project boundaries (page VI-2). EPA believes the concept behind these mitigation efforts should be to provide maximum protection to the groundwater resource areas rather than to minimize adverse impacts. Closed drainage to divert runoff out of the cone of influence, aquifer, or safely downgradient from existing wells should be one of the primary mitigation measures for all identified sensitive groundwater resource areas. For example, in protecting the Weinstein well the strategy should be to prevent all runoff from any of build alignments from infiltrating into the ground within the cone of influence, rather than "minimizing" stormwater or spill runoff infiltration (page VI-4).

d. NHDOT must implement spill prevention and spill control mitigation measures to protect sensitive groundwater resources within the project corridor; these measures should be incorporated into the stormwater drainage design. EPA recommends that the Final EIS discuss specific mitigation proposals and that a commitment be made to include these mitigation requirements in the ROD and permit prepared for the project.

AIR QUALITY IMPACTS

GENERAL

The rDEIS uses a generalized approach to evaluate the proposed project and concludes that none of the project build alternatives result in significant benefits to air quality; only minimal reduction of emissions can be attributed exclusively to the project. The City of Nashua is in nonattainment of the National Ambient Air Quality Standards for both Carbon Monoxide (CO) and Ozone (O3). Therefore, any highway projects proposed for the area should aim to provide significant improvements to congestion and to control Vehicle Miles Travelled (VMT) so that substantial air quality benefits are obtained. EPA recommends that if one of the build alternatives is selected as the LEDPA it should be combined with Transportation Demand Management (TDM) measures so that the overall project has meaningful air quality benefits.

The air quality and noise analyses presented in the Final EIS should be refined to more accurately describe the impacts/benefits associated with the LEDPA. It should also include the decision on financing by tolls. If tolls are enforced, the impacts associated with the placement of toll booths and the affect toll facilities would have on use of the Circumferential Highway and on other alternative route should be addressed in the Final EIS.

MESOSCALE ANALYSIS

83 1) Our review of the mesoscale analysis shows that the nonmethane hydrocarbon (NMHC) and CO emissions for the build case are slightly lower than for the no build case and therefore the project

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contributes to an area-wide reduction of NMHC and CO. These reductions are predominantly attributable to the mandatory federal motor vehicle exhaust emissions control program and the New Hampshire Inspection and Maintenance (I/M) program in the greater Nashua area. Comparison between the no build and the build Alternatives shows that there is less than a 1% reduction of NMHC and CO for all alternatives in the year 2000. In 2010 the reduction of CO emissions provided by the build alternatives is 1-1.5% while the reduction of NMHC emissions ramains below 1%.

2) The future emissions in 2000 and 2010, improve over the existing emissions primarily as a result of the Federal emission control program and the States existing I/M program. However, total daily vehicle trips increase 54.2% from 1990 to 2010 and the NMHC and oxides of nitrogen (NOx) emissions from this Vehicle Miles Traveled (VMT) increase will not be entirely offset by the existing programs. Therefore, NMHC and NOx emissions are greater in the year 2010 than in 2000. Since Hillsborough County is in serious nonattainment for ozone, the area is required to adopt enhanced I/M which will achieve additional reductions over the existing I/M program. However, to control the growth of VMT, the State should also consider TDM, and Transit/TSM measures with the preferred alternative.

3) The mesoscale analysis used MOBILE 4.1 to calculate NMHC emission factors rather than Volatile Organic Compound (VOC) emission factors. The NMHC emissions are acceptable for this analysis and will also be accepted in the Final EIS. However for future mesoscale analyses calculation of the hydrocarbon emission factors NHDOT should utilize the VOC option accessed through the NMHFLAG prompt of MOBILE 4.1/MOBILE 5. The VOC option excludes ethane which has negligible photochemical reactivity and includes aldehydes which are reactive; the NMHC option includes ethane and excludes aldehydes and is not as representative of the effects of ozone precursors.

MICROSCALE ANALYSIS

1) A comparison of the existing (1990) and future (2000 and 2010) CO concentrations shows that while local CO concentrations at some receptors increase for the build alternatives when compared to the no-build, the overall trend is for CO concentrations to decrease in the future. This is supported by the mesoscale analysis which shows a slight overall reduction in CO emissions.

Although the microscale analysis does not identify any violations of the National Ambient Air Quality Standards (NAAQS), EPA is concerned about the CO concentrations at the DW Highway/Spit Brook Road Intersection. Notwithstanding that the future year CO concentrations are less than the existing CO concentration (15.5 ppm - which is a violation of NAAQS), the year 2000 CO concentrations for the build alternatives (8.4-8.5ppm) exceed the

83 Comment noted, no response required.

64 Comment noted. Refer to the responses provided for comments #20, 21, 33, and 34 of this letter. Transit/TDM options will be considered in conjunction with Full Build Alternatives.

85 Comment noted, no response required.

66 Comment noted. Reasonable and feasible mitigation measures to demonstrate that no CO violations will occur with the Build Alternatives in 2000 will be examined.

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86 no-build concentration (8.0ppm) and are within ten percent of the NAAQS of 9ppm for an 8-hour concentration. The CO concentrations continue to decrease to levels below the NAAQS in the future year 2010 (6.8-7.0 ppm), however, NHDOT should consider reasonable and feasible mitigation measures to assure that no violation occurs with the build alternative in 2000.

87 2) In conducting the microscale analysis, 1-hour CO concentrations were derived from 8-hour CO concentrations using an inverse persistence factor of 1.91. The inverse persistence factor was based on the average of the highest 1-hour and 8-hour CO concentrations measured at the Main Street monitoring site in Nashua in 1990. Although this is not normal procedure, it will be accepted as it provides a more conservative approach. Standard practice recommends the development of 1-hour concentrations based on the modeling of original data with the 8-hour concentrations being derived from the application of a persistence factor to the 1-hour concentrations. The persistence factor should be developed from local monitoring data as a ratio of the second highest 8-hour concentration to the second highest 1-hour concentration. Region I has found that a violation of the 8-hour standard is more likely to occur than a violation of the 1-hour standard. Therefore, we recommend that the 8-hour analysis be performed and an inverse persistence factor applied to derive the 1-hour concentrations. The analysis presented in the rDEIS is consistent with this approach except that the inverse persistance factor was derived using the highest measured CO concentration as apposed to the second highest. The difference between the factor developed (1.91) and that derived using the second highest concentrations (1.68) will not affect the final outcome of the analysis as no violation of the 1-hour NAAQS occurred with the more conservative number.

88 3) The air quality section of the rDEIS states that the 8-hour traffic volumes were derived from the 24-hour volumes based on a factor supplied by the traffic consultant. It does not discuss what the factor is or where it was derived from.

The Final EIS should include a summary table of the 24-hour volumes with the 8-hour volumes and a brief discussion of the conversion factor used.

Finally, prior to publication of the final EIS, EPA would like to review any TDM measures being considered with the preferred alternative to control the growth of VMT, any discussion of reasonable and feasible mitigation measures to assure that violations of the NAAQS do not occur with the build alternative in 2000, and any discussion of the conversion factor used to derive 8-hour volumes from the 24-hour volumes. This will ensure that EPA has an opportunity to resolve any remaining air quality issues in a timely manner.

87 Comment noted. The use of an inverse persistence factor of 1.91 was based on the ratio of the highest 1- to the highest 8-hour CO concentrations. The choice of the highest levels, rather than the second highest, was the result of a meeting with EPA at the Corps office in Waltham, MA on 20 September 1991.

88 Comment noted. The scale factor used to estimate 8-hour volumes from 24-hour volumes is 0.53. This factor was developed by the consultant based on actual 1990 traffic counts from three monitoring stations. Thus, a simple multiplication step is required in order convert 24-hour volumes to 8-hour volumes. The presentation of this information in the form of a table is unnecessary.

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TABLE I. Nashua-Hudson Circumferential Highway

BIRDS

SPECIES NAME	HABITAT USE	SPECIES STATUS	MIGRATORY STATUS
Common Loon	W	ST/S3	
Pied-billed Grebe	W/(R)	SE/S2	
American Bittern	W/R	S3	
Great Blue Heron	W/(R)	S3 (Rookery)	
Green-backed Heron	W/(R)	S4	
Black-crowned Night Heron	W	S1	
Canada Goose	W/(R)	S4	
Wood Duck	W/R		
Green-winged Teal	W	S3	
Blue-winged Teal	W		
American Black Duck	W/(R)	S4	
Mallard	W/(R)		
Northern Pintail	W		
Hooded Merganser	W	S3	
Turkey Vulture	(W)	S4	
Bald Eagle	(W)	FE/SE/S1	
Northern Harrier	W	ST/S2	
Red-shouldered Hawk	W/R	S4/AS/FI	
Broad-winged Hawk	W/R	AS/FI	NEO
Cooper's Hawk			NEO
Red-tailed Hawk	W		NEO
American Kestrel	(W)	AS	NEO
Peregrine Falcon	(W)/(R)	FE/SE/S1	NEO
Merlin	(W)	SH	
Ruffed Grouse	(W)		
Wild Turkey		S4	
Ring-necked Pheasant			
Northern Bobwhite		SH	
Virginia Rail	W	S3	
Sora	W	S3	
Killdeer	(W)/(R)		
American Woodcock	W		
Spotted Sandpiper	(R)		
Ring-billed Gull	(R)	S1	
Herring Gull	(R)	S3	
Great Black-backed Gull	(W)	S3	
Mourning Dove			
Rock Dove			
Black-billed Cuckoo	(W)		NEO
Yellow-billed Cuckoo	R	S4/C3b	NEO
Eastern Screech Owl	W/R	S3	
Common Barn Owl			
Great Horned Owl	W/R	AS	
Barred Owl	W/R	AS/FI	
Long-eared Owl	(W)		
Northern Saw-whet Owl		S4	

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SPECIES NAME	HABITAT USE	SPECIES STATUS	MIGRATORY STATUS
Cliff Swallow			NEO
Barn Swallow			NEO
Blue Jay	(R)		
American Crow			
Black-capped Chickadee	(R)		
Tufted Titmouse	W/R	S4/AS	
Red-breasted Nuthatch	(W)	FI	
White-breasted Nuthatch	(R)	AS/FI	
Brown Creeper	(W)/(R)		
House Wren	(W)/(R)		NEO
Winter Wren	W/R		
Marsh Wren	W/(R)	S3	
Golden-crowned Kinglet	(W)		
Ruby-crowned Kinglet			NEO
Eastern Bluebird		S4	
Veery	W	AS/FI	NEO
Hermit Thrush	(W)	AS	NEO
Wood Thrush	(W)/R	AS	NEO
American Robin	(W)/(R)		NEO
Gray Catbird	W/R		NEO
Northern Mockingbird	W		
Brown Thrasher	(W)/(R)		

SPECIES NAME	HABITAT USE	SPECIES STATUS	MIGRATORY STATUS
Common Nighthawk	(W)/(R)	ST/S2	NEO
Whip-poor-will		S4/AS	NEO
Chimney Swift	(W)		NEO
Ruby-throated Hummingbird	(W)	AS	NEO
Belted Kingfisher	(W)/R		NEO
Yellow-bellied Sapsucker	(R)		NEO
Downy Woodpecker	R		
Hairy Woodpecker	(W)/R	AS/FI	
Northern Flicker			
Pileated Woodpecker	W/R	AS/FI	
Eastern Phoebe			NEO
Willow Flycatcher	(W)		NEO
Eastern Wood-pewee	(W)/R		NEO
Alder Flycatcher	W/R		NEO
Least Flycatcher	W/(R)		NEO
Great Crested Flycatcher	(W)/R	AS	NEO
Eastern Kingbird	(W)		NEO
Horned Lark		S3	
Purple Martin	(W)/(R)	ST/S2	NEO
Tree Swallow	W/(R)		NEO
Northern Rough-winged Swallow	(W)/R		NEO
Bank Swallow	(W)/(R)		NEO

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SPECIES NAME	HABITAT USE	SPECIES STATUS	MIGRATORY STATUS
Cedar Waxwing	W/(R)		
European Starling	(W)/(R)		
Yellow-throated Vireo	W	S4/AS	NEO
Solitary Vireo	(W)		NEO
Warbling Vireo	W/(R)		NEO
Red-eyed Vireo	(W)/R	AS	NEO
Yellow Warbler	W/R		NEO
Nashville Warbler	(W)		NEO
Chestnut-sided Warbler	(W)		NEO
Magnolia Warbler			NEO
Black-throated Blue Warbler	(W)	AS	NEO
Yellow-rumped Warbler	W		NEO
Black-throated Green Warbler	(W)	AS	NEO
Blackburnian Warbler	(W)		NEO
Pine Warbler			NEO
Black-and-white Warbler	(W)/(R)	AS/FI	NEO
Bay-breasted Warbler	(W)/(R)	S4	NEO
Cape May Warbler		S3	NEO
American Redstart	(W)/R	AS/FI	NEO
Canada Warbler	(W)	AS	NEO
Ovenbird	R	AS/FI	NEO
Northern Waterthrush	W/R	AS/FI	NEO

SPECIES NAME	HABITAT USE	SPECIES STATUS	MIGRATORY STATUS
Common Yellowthroad	W/R		NEO
Scarlet Tanager	(W)	AS/FI	NEO
Northern Cardinal	W/(R)		
Rose-breasted Grosbeak	(W)/R	AS	NEO
Indigo Bunting	(W)/R		NEO
Rufous-sided Towhee	(W)/R		NEO
American Tree Sparrow	W		
Field Sparrow	(W)		
Chipping Sparrow	(W)		
Song Sparrow	W/R		
Savannah Sparrow	(W)		NEO
Swamp Sparrow	W/(R)		
White-throated Sparrow	(W)		
Dark-eyed Junco	(W)		
Bobolink	(W)		NEO
Eastern Meadowlark			
Red-winged Blackbird	W/(R)		NEO
Common Grackle	W/(R)		
Brown-headed Cowbird	(W)/(R)		NEO
Pine Grosbeak			
Northern Oriole	(W)/R		NEO
Purple Finch	(W)		
House Finch			

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SPECIES NAME	HABITAT USE	SPECIES STATUS	MIGRATORY STATUS
American Goldfinch	W/R		
Evening Grosbeak			
House Sparrow			

WETLAND/RIPARIAN HABITAT USE KEY: (SOURCE: DeGraaf & Rudis, 1983, Brinson et. al., 1981)

(W) = Utilizes Wetland Habitat — W = Prefers Wetland Habitat
(R) = Utilizes Riparian Habitat — R = Prefers Riparian Habitat

SPECIES STATUS KEY: (Source: NH Natural Heritage Inventory, 1993)
RARITY IN STATE
S1 - Critically Imperiled because of Extreme Rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor of its biology making it especially vulnerable to extirpation from state. (Critically endangered in State)
S2 - Imperiled in State because of Rarity (6-20 occurrences or few remaining individuals or acres) or because of other factors demonstrably making it very vulnerable to extirpation from state. (Endangered in State)
S3 - Rare in State (on the order of 20+ occurrences). (Threatened in State)
S4 - Apparently secure in State
SH - Of Historical Occurrence, may be rediscovered
SX - Apparently Extirpated from State
SE - State Endangered per New Hampshire Statutes
ST - State Threatened per New Hampshire Statutes
FE - Federally Endangered per Endangered Species Act
FT - Federally Threatened per Endangered Species Act
C3b - Previously Considered as Candidate Species for Federal Listing per Endangered Species Act (taxonomic invalidity)

KNOWN SUSCEPTIBILITY TO FRAGMENTATION[1](Source: Whitcomb et al., 1981; Galli et al.(1976); Robbins, 1979)

FI = Forest Interior Species
AS = Area Sensitive Species

MIGRATORY STATUS (Source: Powell and Rappole, 1986; Finch, 1991)

NEO = Neotropical Migrant[2]

[1] Absence of confirmed area sensitivity or forest interior habitat preference should not be construed as evidence of tolerance to reduction in habitat by any species.

[2] Forest species that breed in the United States and generally migrate south of the US-Mexico border to winter in Middle or South America.

TABLE II. Nashua-Hudson Circumferential Highway

HERPETOFAUNA

SPECIES	WETLAND DEPENDENCE	SPECIES STATUS
AMPHIBIANS		
SALAMANDERS		
Blue Spotted Salamander	A	S4
Spotted Salamander	A	
Northern Dusky Salamander	A	
Northern Two-lined Salamander	A	
Four-toed Salamander	A	S4
Red-backed Salamander		
Red-spotted Newt	A	
FROGS and TOADS		
Eastern American Toad	A	
Fowler's Toad	A	
Bullfrog	A	
Green Frog	A	
Pickerel Frog	A	
Wood Frog	A	
Northern Spring Peeper	A	
Gray Treefrog	A	

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SPECIES	WETLAND DEPENDENCE	SPECIES STATUS
REPTILES		
TURTLES		
Common Snapping Turtle	A	
Eastern Painted Turtle	A	
Spotted Turtle	A	
Eastern Box Turtle	A	
Common Musk Turtle	A	
Blandings Turtle	A	S3
SNAKES		
Northern Black Racer	A	
Northern Ringneck Snake		
Eastern Milk Snake		
Northern Water Snake	A	
Northern Brown Snake	C	
Eastern Ribbon Snake	A	
Eastern Hognose Snake	C	S3
Northern Redbelly Snake	C	
Eastern Smooth Green Snake		
Eastern Garter Snake		

WETLAND DEPENDENCE

(Source: New England Transportation Consortium Study, 1992)

A = Species dependent on wetlands for survival of individuals or populations;
B = Species for whom wetlands provide optimum habitat; for some a given population(s) may be defined as dependent upon wetlands;
C = Species with a preference for wetland habitat but are found in other habitats OR species from other habitats with major food items that are wetland-dependent (in A or B above);

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TABLE III. Nashua-Hudson Circumferential Highway

MAMMALS

SPECIES	WETLAND DEPENDENCE	SPECIES STATUS
SHREWS, MOLES, VOLES, LEMMINGS, MICE & RATS		
Masked Shrew	C	
Water Shrew	A/WR	
Smokey Shrew	C	
Northern Short-tailed Shrew	C/WR	
Hairy-tailed Mole		
Star-nosed Mole	A	
Southern Red-backed Vole	B	
Meadow Vole	B	
Woodland Vole		S4
Southern Bog Lemming	B	S4
Meadow Jumping Mouse	B/WR	
White-footed Mouse	WR	
Norway Rat		
House Mouse		
BATS		
Keen's Myotis	C	
Little Brown Myotis	B	
Silver-haired Bat	B	S4
Eastern Pipistrelle	C	S2
Big Brown Bat		
Red Bat		S4
Hoary Bat		S3
RABBITS and HARES		
Eastern Cottontail		
New England Cottontail	WR	S3
Snowshoe Hare		
BEAVER, MUSKRAT, PORCUPINE, WOODCHUCK, SQUIRRELS & CHIPMUNKS		
Beaver	A/WR	
Common Muskrat	A/WR	
Porcupine		
Woodchuck		
Gray Squirrel	WR	
Eastern Chipmunk		
Red Squirrel		
Southern Flying Squirrel		
FOXES, COYOTE, BOBCAT		
Coyote		
Red Fox		
Gray Fox		
Bobcat		

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SPECIES NAME	WETLAND DEPENDENCE	SPECIES STATUS
WEASELS, OTTER, FISHER, RACCOON, OPPOSUM & SKUNK		
Long-tailed Weasel		
Ermine	B	
Mink	A/WR	
River Otter	A/WR	
Fisher		S4
Raccoon	B/WR	
Virginia Opposum		S4
Striped Skunk	WR	
BLACK BEAR, DEER, MOOSE		
Black Bear	B	
White-tailed Deer	B/WR	
Moose	B	

WETLAND DEPENDENCE

(Source: New England Transportation Consortium Study, 1992)

A = Species dependent on wetlands for survival of individuals or populations;
B = Species for whom wetlands provide optimum habitat; for some a given population(s) may be defined as dependent upon wetlands;
C = Species with a preference for wetland habitat but are found in other habitats OR species from other habitats with major food items that are wetland-dependent (in A or B above);

WETLAND/RIPARIAN HABITAT USE: (SOURCE: Brinson et. al., 1981)

WR = Prefers Wetland/Riparian Habitat

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Offices
400 Ralph Pill Marketplace
22 Bridge Street, Unit #1
Concord, New Hampshire 03301-4901

REF: 1988801828, Nashua-Hudson Circumferential Highway

January 22, 1993

Mr. William F. Lawless, Chief
Regulatory Division
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254

Dear Mr. Lawless:

This letter regards the application of the New Hampshire Department of Transportation (NHDOT) to place fill into 54-94 acres of wetlands depending on the alternative selected for construction of the Nashua-Hudson Circumferential Highway, located in the municipalities of Nashua, Hudson, Litchfield, and Merrimack, New Hampshire. The following comments are provided in accordance with the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661, et seq.).

1 The Corps has done an excellent job in the planning of this project. We would particularly like to single out the technical reports on wildlife, wetlands, and secondary and cumulative impacts as setting a standard for highway planning. The Fish and Wildlife Service (FWS) has actively participated in this project planning. However, there are still unresolved issues such as preferred alternative, avoidance and minimization of wetland impacts, and compensatory mitigation. In light of these unresolved issues, it is our opinion that it is premature to consider final action on this application. We suggest that the Corps and NHDOT continue to work with the concerned parties to resolve these issues.

Preferred Alternative

Impacts to wetlands and wildlife habitat would be large with any build alternative. Wetland impacts range from 54 to 88 acres, while wildlife habitat impacts range from 511 ro 641 acres. Secondary impacts due to accelerated development in the project area would further lead to additional wetland impacts and loss and fragmentation of wildlife habitat. These secondary impacts will most likely be more severe in the north of the study area in the Town of Litchfield. The study area has already lost a large percentage of its wetland and wildlife habitat. The cumulative effects of this project may indeed contribute to the significant degradation of these resources and should be investigated.

The NHDOT has announced Alternative 8 as their preferred alternative. This alignment is essentially the old EC alignment and appears to ignore the information gathered by the Corps in their Highway methodology. Alternative

1 Comment noted. The Corps and the NHDOT will continue to work with concerned parties relative to unresolved issues. Every effort to avoid high quality wetlands and wildlife habitats will be made during the determination of a LEDPA. Following the determination of a LEDPA, the Corps and NHDOT will continue efforts to minimize impacts as required by 404(b)(1) guidelines.

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8 is the worst alignment in terms of wetland and wildlife impacts (88 and 641 acres, respectively). The impacts are particularly severe in the southern section to two important wetland systems, Upper Limit Brook and Second Brook. These wetlands and surrounding uplands exhibit excellent habitat for mammals, migratory birds, reptiles and amphibians as described in the technical reports.

The Corps has proposed an alignment by combining segments of other alternatives to address the wetland impacts associated with Alternative 8. This alignment would impact 53 acres of wetland habitat. The loss of wildlife habitat is not quantified at this time. While this alignment has merit and reduces overall impacts, particularly in the southern segment, it still results in large direct and secondary impacts.

2 The stated project purpose is to reduce traffic congestion in the central business districts of Nashua and Hudson, New Hampshire. However, the project documentation states that only a 22 percent improvement in Levels of Service (LOS) in the Central Business District will be attained with any build alternative. In fact, because of the remaining areas with LOS of F or E there would likely still be gridlock in the Central Business District. We do not feel that this small gain in LOS is justified based on the large costs in environmental impacts (88 acres of wetlands, 641 acres of wildlife habitat and secondary impacts). Therefore, we recommend the no action alternative.

Avoidance and Minimization

3 All the build alternatives have substantial impacts to valuable wetlands and wildlife habitat. The NHDOT's preferred alternative would be the most damaging to these resources. The Corps has made an honest attempt at avoiding wetland impacts with their proposed alternative. Once the impacts become unavoidable, further reductions could be achieved through minimization efforts such as bridging, reducing side slopes and reducing median widths. However, as stated above, we feel that the environmental costs of any build alternative far outweigh the small benefits to traffic that would result from the project.

Mitigation

4 We have participated with the Corps and NHDOT in the mitigation planning for this project. The planning has not progressed much further than site identification and acquisition, therefore, we will reserve comment and continue to work on this phase of the project. However, if Alternative 8 is selected, we do not believe that the identified sites could provide adequate mitigation. More acreage would be needed. In addition, the Corps is

4a presently involved with consultation with FWS on the American Bald Eagle and the results of this consultation could result in additional mitigation requirements.

Cultural Resources

The National Park Service submits the following comments on cultural resources:

2 Comment noted, no response required.

3 Comment noted. Minimization measures are being reviewed and will be implemented where considered appropriate.

4 Mitigation planning has progressed through the acquisition of the former Benson's Wild Animal Farm property, which is proposed as the primary wetland mitigation site. Refer to Figure 4.15-5 in the FEIS. Also, evaluation of existing wetlands functions and values and relative disturbances at the site have been completed. Groundwater data has been collected over a one year period and is ongoing from multiple wells throughout the property. Additional mitigation sites are also being similarly evaluated (Refer to the response provided for comment #56 of the EPA's March 2, 1993 letter). Preliminary wetland restoration and/or enhancement and creation designs will be developed in coordination with federal and state resource agencies.

4a The results of consultation relative to the Bald Eagle are presented in "Nashua-Hudson Circumferential Highway-Biological Assessment-Bald Eagle Impacts Associated with the Nashua-Hudson Circumferential Highway", and in the FWS letter dated June 2, 1993 to William F. Lawless, Chief of Regulatory Division, New England Division of the U.S. Army Corps of Engineers. Refer to the response provided for comment #40 of the EPA's March 2, 1993 letter for additional information.

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5 The substance of impact analysis for the alternatives of this highway project is presented in the Corps of Engineers' draft environmental impact statement (DEIS) which is referred to in this Public Notice. It is clear to us that matters of cultural resource preservation are not yet completed or resolved. It has been indicated that more information on cultural resources will be presented in a public meeting to be conducted in early January on this project, and that full and due consideration will be given to cultural resource preservation to the extent of influencing the selection of the least environmentally damaging project alternative (LEDPA).

We urgently recommend resolution through coordination with the State Historic Preservation Officer (SHPO), and proper completion of resource protection procedures which can and should be demonstrated in the final environmental impact statement and before permit issuance.

Summary

There still are unresolved issues with this permit application. The most important issue is the preferred alternative. At this time, we feel that the environmental costs of any build alternative far outweigh the small benefits to traffic that would result. Therefore, at this time, we recommend that the application be denied. The proposed discharge may have a substantial and unacceptable impact on aquatic resources of national importance. If a build alternative is permitted, the issues of minimization and compensation have not been adequately addressed at this time. Please continue coordination as further project planning progresses. If you have any questions, please contact Bill Neidermyer (603-225-1411). Thank you.

Sincerely yours,

Gordon E. Beckett

Gordon E. Beckett
Supervisor
New England Field Offices

CC: RO/FWE Reading File
Mark Kern, EPA
Bill Roy, NHDOT
Rod Cyr, NHDOT
Kirk Stone, NH Audubon
Emily Bateson, CLF
FWE: BNeidermyer:jd:1-22-93:603-225-1411

5 Comment noted. Coordination with the State Historic Preservation Office (SHPO) is ongoing in order to ensure completion of resource protection measures. The additional information on cultural resources was presented at the January 4, 1993 Public Hearing.

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United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

ER-92/1083

JAN 29 1993

Colonel Brink P. Miller, Division Engineer
Department of the Army
New England Division
Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254-9149

Dear Colonel Miller:

This responds to the request for the Department of the Interior's comments on the revised draft environmental statement for Nashua-Hudson Circumferential Highway, Hillsborough County, New Hampshire.

1 The Department of the Interior and its bureaus have been involved with this project since the early 1980's. The revised draft environmental impact statement is a major improvement over the original 1985 document. The Corps of Engineers can be commended for their efforts in insuring that the document adequately addresses the pertinent issues. We would particularly like to single out the sections and technical reports on wildlife and wetlands, and secondary and cumulative impacts as setting a standard for highway planning.

HISTORIC AND ARCHEOLOGICAL RESOURCES COMMENTS

We understand that critical supplemental information is to be presented at the Corps' upcoming public meeting in January, 1993, with respect to project impacts on historic and archeological resources. We further understand and share the State Historic Preservation Officer's (SHPO) expectation that the Corps will consider the cultural preservation concerns and will select the least environmentally damaging alternative to historic and archeological resources. Continued coordination with the SHPO is essential to protect historic and archeological resources. 2 If any of these resources are going to be impacted, there should be compliance with Section 106 of the National Historic Preservation Act of 1966 (P.L.89-665), as amended, including the preparation of a Memorandum of Agreement (MOA) to mitigate impacts. A signed copy of the MOA should be included in the final statement.

1 Comment noted, no response required.

3 Comment noted. Memorandums of Agreement (MOA's) will be included as conditions in the 404 permit. The Corps regulations do not require that signed MOA's be included in the FEIS.

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FISH AND WILDLIFE RESOURCES COMMENTS

The U.S. Fish and Wildlife Service (FWS) advises that impacts to wetlands and wildlife habitat would be large with any build alternative. Wetland impacts range from 54 to 88 acres while wildlife habitat impacts range from 511 to 641 acres.

3 While the document does not state a preferred alternative, the New Hampshire Department of Transportation (NHDOT) has announced its preferred alternative subsequent to the release of the revised statement. Their preferred alternative (Alternative 8) will severely impact wetlands and wildlife habitat. In fact, it is essentially the preferred alternative from the flawed draft statement of 1985. We are concerned that the additional time, money, and information gathered for the revised draft statement is apparently being ignored by the NHDOT and is counter-productive to the excellent efforts involved in the Corps' revised draft statement.

4 All build alternatives have substantial impacts to valuable wetlands and wildlife habitat. The NHDOT's preferred alternative would be the most damaging to these resources. If a build alternative were selected, further avoidance of wetlands could be achieved through combining various segments from different alternatives. Once the impacts became unavoidable, further reductions could be achieved through minimization efforts such as bridging, reducing side slopes, and reducing median widths. However, as stated above, we feel that the environmental costs of any build alternative far outweigh the small benefits to traffic that would result from the proposed project.

5 The stated project purpose is to reduce traffic congestion in the central business districts of Nashua and Hudson, New Hampshire. The revised draft statement states that the build alternatives provide a 22 percent improvement in traffic Levels of Service (LOS) in the Central Business District. In fact, because of the remaining intersections with LOS of F or E there would still be gridlock in the Central Business District. We do not feel that this small gain in LOS is justified based on the large costs in environmental impacts (88 acres of wetlands and 641 acres of wildlife habitat).

6 The FWS has participated with the Corps and NHDOT in the mitigation planning for their project. The planning has not progressed much further than site identification; therefore, the FWS will reserve comment and continue to work on this phase of the project. However, if Alternative 8 is selected, the FWS does not believe that the identified sites could provide adequate mitigation. In addition, the Corps is presently involved in consultation with the FWS on the American Bald Eagle and the results of this consultation could require additional mitigation measures.

7

FISH AND WILDLIFE COORDINATION ACT COMMENTS

8 In light of the above comments, the FWS recommends that the Corps deny the application for this project. Alternative 8 would not satisfy the requirements of the least damaging practicable alternative. We expect and encourage continued coordination on these issues between FWS, NHDOT, and the Corps.

3 Comment noted. Refer to the response provided to comment #1 of Cheryl Daniel's letter.

4 Comment noted, no response required.

5 Comment noted. Refer to the responses provided for comment #10 of the Public Hearing Testimony, and #32 and #33 of the EPA's March 2, 1993 letter.

6 Comment noted. Refer to the response provided for comment #4 and #4A of the U.S. Department of Interior Fish and Wildlife Service letter.

7 Comment noted. Refer to the responses provided for comment #40 of the EPA's March 2, 1993 letter.

6 Comment noted, no response required.

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MINERAL RESOURCES COMMENTS

9 The Bureau of Mines reports that they provided comments to you on this project on July 17, 1990; however, their concerns were not addressed in the subject statement.

The records of the Bureau of Mines show that the most abundant mineral resources present in the area of consideration are foundry sand and construction materials, primarily sand and gravel. Other minerals and commodities present in the surrounding area, which also may be present in the areas of consideration, include titanium, which has been mined a few miles west of Litchfield, and silica, found in the Merrimac area. Pegmatites and other intrusions in the proposed project area should be evaluated and described as possible sources of crushed aggregate, quartz, feldspar, mica, garnet, dolomite, and other industrial and/or collectible commodities. Impacts and necessary mitigation measures also should be discussed in the subject document. If no impact to mineral resources or mineral production facilities would occur, then a statement to that effect should be included in the final statement.

SUMMARY COMMENTS

In view of our continued interest in this project, we would be willing to provide technical assistance for further project evaluation and development. For matters dealing with historic and park and recreation resources, please contact the Regional Director, North Atlantic Regional Office, National Park Service, 15 State Street, Boston, Massachusetts 02109 (Telephone: (617) 223-5141). For matters dealing with fish and wildlife resources, please contact the Supervisor, New England Field Offices, U.S. Fish and Wildlife Service, Ralph Pill Marketplace, 22 Bridge Street- Unit #1, Concord, New Hampshire 03301-4901 (Telephone: (603) 271-3483). And for matters dealing with mineral resources, please contact the Bureau of Mines, Intermountain Field Operations Center, P.O. Box 25086, Building 20, Denver Federal Center, Denver, Colorado 80225 (Telephone: (303) 236-3400).

We appreciate the opportunity to provide these comments.

Sincerely,

for Willie R. Taylor

Jonathan P. Deason
Director
Office of Environmental Affairs

cc:
Mr. E. William Roy, Coordinator
Environmental Impact Evaluations
Bureau of Environment, Room 109
John O. Morton Building
Hazen Drive, P.O. Box 483
Concord, New Hampshire 03302-0483

9 Comment noted. Foundry sand and construction materials, namely sand and gravel, are abundant in the area. These materials are extracted along with aggregate for pavement by Brox Industries, one of the major industries in the study area. Brox is currently excavating these materials from their property in areas that lie in the path of the proposed corridor. Due to the abundance of these materials within the study area, impacts are not seen as significant. In addition, these materials, if excavated during roadwork, can be used to supplement the materials needed for roadway construction. As for the other minerals and commodities mentioned in the comment, no significant impacts are anticipated.

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K.D.

United States Department of the Interior

BUREAU OF MINES
Intermountain Field Operations Center
P.O. Box 25086
Building 20, Denver Federal Center
Denver, Colorado 80225

December 17, 1992

Memorandum

To: Regional Director, National Park Service, North Atlantic Region, 15 State Street, Boston, Massachusetts 02109

From: Supervisory Physical Scientist, Intermountain Field Operations Center

Subject: Review of Draft Environmental/Sections 4(f)/6(f) Statement for Nashua-Hudson Circumferential Highway, Hillsborough County, New Hampshire (ER 92/1083)

As requested by the Director, Office of Environmental Affairs, personnel of the U.S. Bureau of Mines reviewed the subject document to determine whether mineral resources or mineral-production facilities would be adversely impacted by the proposed project. The document pertains to impacts of the proposed Nashua-Hudson Circumferential Highway, a limited access toll road in the City of Nashua and the Towns of Hudson, Litchfield, and Merrimack, Hillsborough County, New Hampshire. The proposed highway would link all major arterial roadways in the region. Six alternative alignments are under consideration.

1 This office commented on the Federal Register Notice of Intent to prepare the Environmental Impact Statement (ER 90/554, copy enclosed). Our comments were not addressed in the subject document. Because of the potential impact of project implementation to mineral resource deposits and on the available supply of construction materials to producers and other consumers in the region, we request that our comments concerning potential impacts be discussed in future versions of the document.

If you have questions concerning this review, please contact Jeanne Zelten at (303) 236-3400.

Mark H. Hibpshman

Enclosure

jez/plt

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(664506)

United States Department of the Interior

BUREAU OF MINES
INTERMOUNTAIN FIELD OPERATIONS CENTER
P.O. BOX 25086
BUILDING 20, DENVER FEDERAL CENTER
DENVER, COLORADO 80225

July 17, 1990

Mr. Richard Roach, Senior
Project Manager, New England Division
Corps of Engineers, 424 Trapelo Road
Waltham, MA 02254-9149

Dear Mr. Roach:

Subject: Notice of Intent to Prepare an Environmental Impact Statement for Nashua-Hudson Circumferential Highway, Hillsborough County, New Hampshire (ER 90/554)

Jonathan P. Deason, Director, Office of Environmental Affairs, Department of the Interior, forwarded a copy of the subject Federal Register announcement to our office for comment. We reviewed the announcement and would like to provide the following comments for your use during preparation of the draft environmental impact statement.

1 Our records show that the most abundant mineral resources present in the area of consideration are foundry sand and construction materials, primarily sand and gravel. Other minerals and commodities present in the surrounding area, which also may be present in the area of consideration, include titanium, which has been mined a few miles west of Litchfield, and silica, found in the Merrimac area. Pegmatites and other intrusions in the proposed project area should be evaluated and described during the upcoming environmental impact study as possible sources of crushed aggregate, quartz, feldspar, mica, garnet, dolomite, and other industrial and/or collectible commodities. Impacts and necessary mitigation measures also should be discussed in the planned document. If no impact to mineral resources or mineral production facilities would occur, then a statement to that effect should be included in the draft environmental impact statement.

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2 A gas pipeline, connecting Concord with Boston, passes near or through the area. Our information, however, is not sufficiently detailed to pinpoint its exact location. Plans for relocating or protecting the pipeline, if it passes through the project area, should be discussed in the draft environmental impact statement. If no adverse impact to the pipeline is identified, a statement to that effect should be included.

William Cochran

1 Comment noted. Refer to the response provided for comment #9 of the Department of Interior Office of the Secretary's letter.

2 Comment noted. A gas pipeline exists to the east of the immediate study area. It is not impacted.

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U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION ONE
279 PLEASANT STREET, ROOM 204
CONCORD, NEW HAMPSHIRE 03301

January 6, 1993
IN REPLY REFER TO:

Mr. William F. Lawless, P.E.
Chief, Regulatory Division
Operations Directorate
US Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02154

Attention: Ms. Theresa Flieger, Project Manager

Subject: Nashua-Hudson Circumferential
Draft Environmental Impact Statement

Dear Mr. Lawless:

In response to the distribution of the DEIS, we have reviewed this document and offer the following comments for your consideration:

1. The document appears to accurately reflect the conclusions, which we developed from our review of the traffic model and projections used on this project. This review was conducted in response to a request from your agency last fall.

2. Page 3-42 Noise (5th par.) - The FHWA regulations on Traffic Noise (23 CFR772) include Noise Abatement Criteria Levels, which if approached or exceeded, require that noise abatement measures be considered. The 67 dBA (Exterior Hourly Leq) level for the uses described are correct. This criteria does not "limit" noise levels, particularly "ambient noise levels" which usually refer to the noise condition without the proposal. Also, please correct "FHWA".

3. Page 4-43 Historic and Archeological Resources - We were surprised by the limited detail in the discussion of historic resources in light of the requirements of Section 106 of the National Historic Preservation Act, which mandates that sites eligible for the National Register be identified and that impacts to them be avoided or minimized.

4. Page 4-56 Noise-Mitigation Measures (1st par.) - FHWA does not have "absolute criterion". If the noise abatement levels are approached or exceeded, then abatement

1 Comment noted, no response required.

2 Comment noted. These editorial changes have been incorporated into Volume I of the FEIS.

2 Comment noted. The Historical and Archeological Technical Report contains information on the historic sites, much of which is also being supplemented as a result of continued studies. This additional information on historic resources has been incorporated into the FEIS.

4 Comment noted. These editorial changes have been incorporated into the FEIS.

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4 must be considered.

5 5. Page 4-57 Noise Barriers - Normally, noise impacts are treated, similarly to other impacts, where the proposed mitigation is included in the EIS. FHWA regulations require that the FEIS identify noise abatement measures which are reasonable and feasible and which are likely to be incorporated in the project. This normally includes some preliminary dimensions of the proposed noise barrier, estimated costs, and benefits to the receptors. Also, where abatement is not reasonable, it should be made clear.

6 6. We found your presentation of wetland impacts in the DEIS, the Wetlands Technical Report and Appendix A, to be very well done. Also, the treatment of Cumulative Impacts was interesting. This is a difficult subject to address.

Thank you for the opportunity to comment.

Sincerely yours,

Gerald L. Eller, P.E.
Division Administrator

5 Comment noted. For each of the noise barrier locations identified in Figure I-2 of the DEIS, Table 5.1 that follows contains the approximate barrier length, height, and area. Although these locations have been identified as preliminary candidate sites for noise barriers, certain other considerations relating to the feasibility of constructing each noise barrier will be addressed once a LEDPA is determined. For a summary of the total number of receptors expected to benefit from these noise barriers for each of the Alternative Alignments, refer to Table 2-1 submitted in response to comment #2 of the Department of Health and Services' letter.

5

TABLE 5-1

CANDIDATE NOISE BARRIERS

BARRIER LOCATION	APPROXIMATE BARRIER LENGTH (FT)	APPROXIMATE BARRIER HEIGHT (FT)	APPROXIMATE BARRIER AREA (SQ. FT)
1	2000	15	30,000
2	1600	15	24,000
3	2000	15	30,000
4	2300	15	34,500
5	2000	15	30,000
6	2100	15	31,500
7	2200	15	33,000
8	2000	15	30,000
9	1800	15	27,000
10	4000	15	60,000
11	2000	15	30,000
12	2500	15	37,500
13	3300	15	49,500
14	2100	15	31,500
15	2300	15	34,500
16	2700	15	40,500

6 Comment noted, no response required.

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DEPARTMENT OF HEALTH & HUMAN SERVICES Public Health Service

Centers for Disease Control
Atlanta GA 30333

January 11, 1993

Ms. Theresa Flieger
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, Massachusetts 02254-9149

Dear Ms. Flieger:

We have completed our review of the Revised Draft Environmental Impact Statement (DEIS) for the Nashua-Hudson Circumferential Highway. We are responding on behalf of the U.S. Public Health Service.

1 We share the concern expressed in the DEIS regarding potential impacts to the Pennichuck water supply and/or watershed. Since a preferred alternative is not identified in this document, we believe an alignment that least affects the drinking water resources and is protective of public health should be a high priority in the decision making process. Because there appears to be no major concerns involving relocations, and the differences in traffic volume between the build alternatives are not significant, potential environmental and public health impacts should significantly influence selection of a preferred alignment for the proposed project.

2 Our review did not reveal the number of homes that would remain exposed to excessive noise after the noise barriers deemed feasible are constructed. Alternative mitgation measures for these homes should be discussed.

3 It is stated that it is impossible to locate the environmental risk sites precisely on the property lists without performing a field survey (page 4-96). It seems reasonable to expect that results of a field survey would be essential to adequately compare potential impacts between proposed alignments and in selecting a preferred alternative.

4 The construction mitigation measures listed on pages 4-104 and 105 appear to be adequate, however, we urge the need to carefully monitor these activities to ensure they are adequately implemented and are effective in protecting the environment after completion.

Page 2 - Ms. Flieger

Thank you for the opportunity to review and comment on this draft document. Please ensure that we are included on your mailing list to receive a copy of the Final EIS, and future DEIS's which may indicate potential public health impacts and are developed under the National Environmental Policy Act (NEPA).

Sincerely yours,

Kenneth W. Holt

Kenneth W. Holt, M.S.E.H.
Special Programs Group (F29)
National Center for Environmental Health

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1 Comment noted, no response required.

2 Comment noted. Table 2-1 shows the number of receptor sites that exceed the FHWA (> 67 dBA) and NHDOT (> +15 dBA above the existing ambient noise levels) noise criteria both with and without noise barriers. Although alternative noise mitigation measures are discussed in the EIS, the analysis only addresses the use of noise barriers as an appropriate noise mitigation measure.

3 Comment noted. Field survey will be done on the LEDPA once it has been determined. The data presented in the EIS and the Environmental Risk Sites Technical Report is of an accurate nature to evaluate the study alternatives.

4 Comment noted. Water quality monitoring is an ongoing process during the construction of the project. The permit issued through the 404 process may include conditions that call for post construction monitoring if it is determined to be a necessary measure for a particular location.

2

TABLE 2-1

SUMMARY OF SENSITIVE RECEPTORS AFFECTED BY PROJECT ALTERNATIVES

	Number of Receptors > 67 dBA (1)		Number of Receptors > 15 dBA (2)		Total Adversely Impacted	
	w/o barriers (3)	w/ barriers	w/o barriers	w/ barriers	w/o barriers	w/ barriers
1990 Existing	22	NA (4)	0	NA	22	NA
2010 No-Build	31	NA	0	NA	31	NA
Alternative 3	39	37	34	3	73	40
Alternative 4	43	37	45	5	88	42
Alternative 5	41	40	28	4	69	44
Alternative 6	44	39	39	6	83	45
Alternative 7	41	34	82	15	123	49
Alternative 8	41	34	83	15	124	49

(1) These are receptors experiencing hourly Leq equal to or greater than 67 dBA.

(2) These are receptors which are expected to have an increase of greater than 15 dBA over the existing conditions.

(3) 'w/o barriers' and 'w/barriers' mean without and with noise barriers, respectively.

(4) 'NA' means not applicable.

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northeast Region
One Blackburn Drive
Gloucester, MA 01930

January 14, 1993

William F. Lawless
Chief, Regulatory Division
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Dear Mr. Lawless:

The National Marine Fisheries Service has reviewed the Revised Draft Environmental Impact Statement (RDEIS) for the Nashua-Hudson Circumferential Highway project. Depending on the alternative chosen, the project would involve either one or two new crossings of the Merrimack River, and could adversely affect anadromous fish.

1 According to the RDEIS, each river crossing would entail temporary disruptions of sediments and increases in turbidity, use of cofferdams to facilitate bridge pier construction, and a permanent incremental loss of riverine habitat. However, the document presents few details of the proposed construction techniques, number and type of piers which would be used for each bridge, descriptions of affected habitat, or quantification of expected habitat losses. We recommend that you address each of these points in the final Environmental Impact Statement.

2 The Merrimack River in the Nashua area supports anadromous fish including American shad, alewives, and blueback herring. Additionally, the U.S. Fish and Wildlife Service operates an extensive Atlantic salmon restoration program in the Merrimack including a ssa-run broodstock holding facility in Nashua. To protect these species from adverse impacts resulting from increased turbidity and sedimentation, we recommend that you prohibit in-water work between April 15 and July 15, and between September 15 and October 31, of the year in which bridge construction is scheduled.

If you have any questions regarding this letter, please contact Jonathan Kurland at 508/281-9204.

Sincerely,

Chris Mantzaris
Habitat Program Coordinator

cc: USFWS, Concord
EPA, Boston
NH Office of State Planning
NH Fish & Game

1 Comment noted. Not all construction details of the Merrimack River crossings will be available for inclusion in the FEIS. It is known, however, that cofferdams will be used during construction of piers and footings, and each bridge will be constructed with solid shaft piers which are standard for river crossings. The number of piers used at each crossing will be determined in the Final Design of the selected alternative, but that number will be kept to a minimum. Additionally, piles will be used which will minimize footings. Preliminary designs include 3 piers per crossing, affecting approximately 4050 square feet of river bottom. Actual quantifications of habitat loss can be accurately determined upon Final Design, but based on prelimimary designs, these impacts are anticipated to be small. The Corps and NHDOT will coordinate with the National Marine Fisheries Service (NMFS), the New Hampshire Fish and Game Department (NHFGD), and the FWS relative to restriction of construction activities during critical periods for anadramous fish. If deemed appropriate, restrictions would be included as conditions of the 404 permit and New Hampshire Wetlands Board permit.

2 Comment noted, no response required.

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Federal Emergency Management Agency
Region I
J.W. McCormack Post Office &
Courthouse Building, Room 442
Boston, MA 02109

December 18, 1992

David H. Killoy, P.E., C.P.G.
Chief, Permits Branch
Regulatory Division
U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Attention: Theresa Flieger

RE: Public Notice on File No. 198801828
Nashua, Hudson, Litchfield and Merrimack, New Hampshire

Dear Mr. Killoy:

We are responding to your request for comments on the referenced Public Notice, a request by the New Hampshire Department of Transportation for a Section 10 permit and a Section 404 permit to place fill material and perform other work in connection with the construction of the Nashua-Hudson Circumferential Highway, located in the referenced municipalities.

1 Since parts of this work are proposed in Special Flood Hazard Areas (SFHAs) designated on the Flood Insurance Rate Maps (FIRMs) for several of the communities through which the highway will pass, the work is subject to the provisions of Executive Order 11988 and the minimum requirements of the National Flood Insurance Program (NFIP). The minimum requirements of the NFIP are in place to protect both lives and property from the potential dangers of flooding. Proper enforcement of these requirements will, over a period of time, reduce the burden on the taxpayer for flood relief payments. Compliance with these requirements is both mandated by law and in the interest of every flood-prone property owner. We suggest therefore that the Corps of Engineers should consider noncompliance with the standards of the NFIP as a very serious matter in evaluating Section 404 permits.

There are specific NFIP regulations affecting the proposed alteration of the watercourses in the SFHAs for the various communities. NFIP regulations Sections 60.3(b)(6)&(7) state that the community shall:

(6)Notify, in riverine situations, adjacent communities and the State Coordinating Office prior to any alteration or relocation of a watercourse, and submit copies of such notifications to the Administrator;

1 Comment noted. After the determination of the LEDPA and prior to a 404 permit decision, FEMA will be consulted to ensure the project is in compliance with the provisions outlined in Executive Order 11988 and the minimum requirements of the National Flood Insurance Program (NFIP).

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(7)Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintainod.

If the project involves work which will be within the adopted regulatory floodway of any watercourse, paragraph (d)(3) of NFIP Section 60.3 states that the affected community shall:

(3) Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway that would result in any increase in flood levels within the community during the occurrence of the base flood discharge.

Consequently, the applicant should show that the "no-rise" criteria of 60.3(d)(3) will be met within an adopted floodway after the project is constructed. If the applicant cannot satisfactorily demonstrate that the proposed work will not result in any rise in base flood level, the applicant can ask the community to appeal to the Federal Insurance Administrator directly through a process outlined in NFIP regulations Section 65.12. Otherwise, the proposed work should not be permitted.

In the case of projects such as these, involving substantial development within floodplain areas, there is also a concern for compensating for the loss in natural valley storage. Executive Order 11988 requires the Corps to employ the eight-step decision-process outlined in Further Advice on Executive Order 11988 Floodplain Management, prior to filling. Given the potential loss of natural valley storage that could result from this project, we strongly recommend that the E.O. 11988 process be followed closely and completely, especially with regard to the discussion of practicable alternatives and the creation of compensatory storage.

We recommend that the applicant not receive a 404 Permit for this project until the above concerns are addressed where applicable.

For further information concerning the NFIP, you can contact the State Coordinator for the Flood Insurance Program, Mr. George Musler (with the Governor's Office of Emergency Management), at (603) 271-2231. Should you have any questions regarding specific recommendations and requests made in this letter, please contact Mr. David Knowles of this office at (617) 223-9561. Thank you for your continued support of the National Flood Insurance Program.

Sincerely,

Albert A. Gammal, Jr., Chief
Natural & Technological Hazards Division

cc: State Coordinator
Community Coordinators (copy to each affected comm.)

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DICK SWETT

PUBLIC WORKS AND TRANSPORTATION COMMITTEE

SCIENCE, SPACE AND TECHNOLOGY COMMITTEE

SELECT COMMITTEE ON AGING

Congress of the United States
House of Representatives
Washington, DC 20515-2002

January 5, 1993

Theresa Flieger
Army Corps of Engineers
New England Division
Att: CENED-OD-R
424 Trapelo Road
Waltham, Massachusetts 02254-9149

Dear Ms. Flieger,

1 I am writing on behalf of including bicycle and pedestrian access in the plans for the northern bridge of the Nashua-Hudson Circumferential Highway.

2 As I have indicated under separate cover, I strongly support this necessary project and the N.H. Department of Transportation's preferred alignment, Build Alternative 8.

1 The provision of bicycle and pedestrian access on the northern bridge would be a significant enhancement to a project that I believe will bring important environmental, quality-of-life and economic benefits to southern New Hampshire.

3 As a member of the Public Works and Transportation Committee of the House of Transportation, I was a strong supporter of those provisions of the Intermodal Surface Transportation Efficiency Act of 1991 which expanded opportunities for alternative transportation options like bicycling and walking. Although the Circumferential is not a federally funded project, I believe it should reflect these new priorities by incorporating bicycle and pedestrian paths into the plans for the northern bridge.

Thank you for your consideration of my comments.

With warmest regards,

Dick Swett
Member of Congress

JAN 08 1993

WASHINGTON OFFICE | CONCORD DISTRICT OFFICE | NASHUA DISTRICT OFFICE | LITTLETON DISTRICT OFFICE

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1 Comment noted. Refer to the response provided for comment #47 of the Public Hearing Testimony.

3 Comment noted, no response required.

3 Comment noted, no response required.

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FEDERAL

DICK SWETT

PUBLIC WORKS AND TRANSPORTATION COMMITTEE

SCIENCE, SPACE AND TECHNOLOGY COMMITTEE

SELECT COMMITTEE ON AGING

Congress of the United States
House of Representatives
Washington, DC 20515-2902

January 5, 1993

Theresa Flieger
Army Corps of Engineers
New England Division
Att: CENED-OD-R
424 Trapelo Road
Waltham, Massachusetts 02254-9149

Dear Ms. Flieger,

1 As the Congressman for New Hampshire's Second Congressional District -- in which the towns of Hudson and Litchfield, as well as the City of Nashua, are located -- I am writing in strong support of the New Hampshire Department of Transportation's preferred alignment, Build Alternative 8, for the Nashua-Hudson Circumferential Highway.

Alternative 8 enjoys very broad support as a fair and balanced approach to the always-difficult task of alignment. It is endorsed by the communities and planning agencies through whose jurisdiction it will pass, and it represents a consensus reached through the diligent efforts of the State Department of Transportation over an extanded period of time.

I believe Alternative 8 represents the best opportunity we have for moving forward to the construction phase of this badly needed project. Pressing environmental and quality-of-life issues will remain unresolved until this road is built, which is why I wish to add my voice to the many you have already heard in support of Alternative 8 and the Nashua-Hudson Circumferential Highway.

Thank you.

With warmest regards,

Dick Swett
Member of Congress

JAN 08 1993.

WASHINGTON OFFICE | CONCORD DISTRICT OFFICE | NASHUA DISTRICT OFFICE | LITTLETON DISTRICT OFFICE

1 Comment noted, no response required.

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2. State Comments

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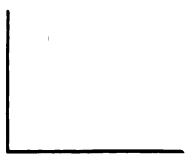

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2.1 STATE

The following state agencies provided written comments on the DEIS:

State of New Hampshire, Fish and Game Department
State of New Hampshire, Department of Resources and Economic Development: Natural Heritage Inventory
State of New Hampshire, Department of Resources and Economic Development: Office of the Commissioner
State of New Hampshire, Office of State Planning

Their written comments and the corresponding responses follow.

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STATE

State of New Hampshire
Fish and Game Department
2 Hazen Drive, Concord, NH 03301
TDD Access: Relay NH 1-800-735-2964
(603) 271-3421

Donald A. Normandeau, Ph.D
Executive Director

February 12, 1993

Theresa Flieger
Dept. of the Army
New England Division Corps of Engineers
424 Trapelo Rd.
Waltham MA 02254-9149

Dear Ms Flieger:

The New Hampshire Fish and Game Department has reviewed the Revised Draft Environmental Impact Statement for the Nashua-Hudson Circumferential Highway (DEIS) undertaken by the Army Corps of Engineers (ACE). The Department is filing comments pursuant to the Fish and Wildlife Coordination Act (48 Stat. 401 as amended; 16 U.S.C. 661 et seq.), NH RSA 206:9 and 206:10, NH RSA 212, and as a cooperating agency under the National Environmental Policy Act. The DEIS is also an application to fill wetlands under Section 404 of the Clean Water Act.

The New Hampshire Department of Transportation has determined that the purpose and need of the project is to provide transportation improvement of east-west traffic movements and to reduce congestion on existing bridges in and near the central business district of Nashua. The proposed highway will be a limited access toll road beginning at the Sagamore Bridge in Nashua, pass through the towns of Hudson and Litchfield, and end in the vicinity of Interchange 10 of the Everett Turnpike in Merrimack. Interchanges will be constructed at Rts. 3A, 111, 102, and 3. The DEIS discusses the impacts of 6 full build alternatives, partial build alternatives, a no-build alternative, transportation system and transportation demand management alternatives. Any of the full or partial build alternatives would be constructed on new right-of-way.

The impacts from the build alternatives would range from 54 to 88 acres of wetlands and 511 to 641 acres of wildlife habitat. Other impacts would be increased development which would lead to additional wetland/wildlife losses and further fragmentation of those habitats, particularly near the proposed interchanges. In particular, habitats in and adjacent to Limit Brook, Second Brook, Pennichuk Brook or Chase Brook would be adversely impacted.

Discover Wild New Hampshire

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STATE

Theresa Flieger
page 2
February 11, 1993

Specific Comments

Revised Draft Environmental Impact Statement (DEIS)

1 Page 2-26. The DEI states that "most (wildlife) species occupying the study area will continue to occupy the study region even with the addition of the new roadway". That statement is only partially correct. Although the existing species will occupy the same region after a new roadway is built, they will do so in less numbers due to a reduction in habitats.

2 Pages 4-122 through 4-123. Reference is made that both the towns of Hudson and Merrimack are inventorying their wetlands which may lead to designation of Prime Wetlands. The ACE should update any such designations in the Final EIS.

3 Page 4-71. In the section on mitigation, purchase of undeveloped open space as buffer for wetlands or the purchase of higher value habitat areas for preservation should be a priority. Compared to the other listed mitigation, protection of open space should be first and foremost when considering mitigation for a highway project which has the potential of accelerating secondary development impacts.

4 The DEIS does not adequately review the impacts to water quality, subsequent impacts on aquatic resources, and mitigation. Increased storm water runoff from a new highway will lower, and could violate, existing water quality standards of surface waters which the highway might cross.

Technical Report-Wildlife Species

1 Page VI-6. In the paragraph on the Pocket Wetland, it is stated that "it is believed that the overall block of habitat is too small to support a year-round moose population". Investigations by Regional Wildlife Biologist, Eric Orff (NHFGD) has determined that 10-20 moose occupy the Pocket Wetland and adjacent habitats, year-round.

6 Page VI-6. The DEIS states that no fragmentation will occur to the Anhauser-Busch swamp from Alternatives 3 and 5 even though the alternatives will cross the northernmost end, and an interchange is proposed within the swamp's boundary. Why is that not considered fragmentation?

7 Figure VI-12. Block 13 is not highlighted on the adjacent map.

4 This statement is in agreement with that found in the documents.

3 The towns of Hudson and Merrimack were contacted to determine if any recent prime wetland designations have been made. According to Jim Barnes of the Hudson Conservation Commission, and Tim Dutton of the Merrimack Conservation Commission, no new designations have been made in either town.

3 In accordance with the Section 404 mitigation MOA between the Corps and the EPA, the first priority of wetland mitigation efforts is to restore previously degraded wetland systems, followed by on-site and then off-site wetland creation. However, the preservation of open space is a very important element when considering secondary impacts of a highway project. That aspect will be considered during the development of a comprehensive mitigation plan.

4 Water quality concerns are addressed in the Technical Report entitled, "Stormwater Runoff Quality, Hazardous Materials Spills and Their Management".

3 Signs of moose were noted during field investigation of this pocket wetland and surrounding habitat, thus indicating their utilization of the area. The statement on page VI-6 of the Wildlife Technical Report does not deny that moose frequently occupy this habitat block and its associated wetlands.

6 Fragmentation in this context refers to splitting the wetland into smaller pieces separated by the roadway. In the literal sense of the word, fragmentation means to break into pieces. Crossing one end of the wetland will result in loss of habitat, reducing the size of the remaining wetland. The roadway will not split the wetland into pieces in this area, it will disrupt one end of the wetland.

7 Figure VI-12 (Block #13) is highlighted, but is too small to be clear. It occurs along Alternatives 7 and 8 on the west bank of the Merrimack River. Refer to previous figures or to the detailed sheets in Appendix A of the Wildlife Technical Report

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General Comments and Recommendations

3 The ACE has done an excellent job in assessing and describing the impacts to wildlife from the various alternatives. The technical sections on wildlife, wetlands, and secondary impacts to those diverse habitats, are thorough and in depth. The Wetland Resources Technical Report revealed that of all the wetland functions for each wetland that would be directly impacted from a new highway, wildlife habitat function would be affected the most.

9 The Level of Service (LOS) analysis (Page 2-5 DEIS) reveals that with the full build and partial build alternatives there would be very little improvement in the level of service by the year 2010. Based on that projection and the projected adverse impacts to wildlife, the USACE must decide if the slight LOS improvements outweigh the environmental impacts of the build alternatives.

10 The DOT has chosen Alternative 8 as the preferred. This alternative, compared to all the other alternatives, would have the greatest impact on the number of acres of wetlands and wildlife habitats. Even without consideration of secondary cumulative impacts, the preferred alternative would have an adverse impact on the wildlife resources since most of the right-of-way is undeveloped.

Based on the above, the Fish and Game Department recommends that the Build Alternatives be dropped from further consideration.

If you have any questions please contact Ecologist, William Ingham, Jr. at (603) 271-2501.

Sincerely,

Donald A. Normandeau, Ph.D.
Executive Director

DAN/WCI
cc: William Ingham, Jr.
John Nelson
Gordon Beckett
William Hauser
James Bieber

6 Comment noted, no response required.

9 Project benefits versus detriments will be evaluated through the Corps public interest review procedure prior to making a 404 permit decision. The project must be found not contrary to the public interest for a permit to be issued. In addition, for further information on LOS improvements for Partial Builds and Full Builds, refer to the responses provided for comments #23 and #31 through #33 of the EPA's March 2, 1993 letter.

10 The principal reason the right-of-way in Alternative 8 is undeveloped is because it was purchased by the NHDOT and preserved for future highway use.

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STATE OF NEW HAMPSHIRE
DEPARTMENT of RESOURCES and ECONOMIC DEVELOPMENT
NATURAL HERITAGE INVENTORY
172 Pembroke Road P.O. Box 856 Concord, New Hampshire 03302-0856

603-271-3623
FAX: 603-271-2629

STEPHEN K. RICE
Commissioner

DAVID MOORE
Coordinator

December 29, 1992

Theresa Flieger
Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

RE: Revised DEIS for Nashua-Hudson Circumferential Highway; NH DOT Project #10644

Dear Ms. Flieger,

Thank you for forwarding the Nashua-Hudson DEIS to the Natural Heritage Inventory (NHI) for review. We have reviewed the DEIS and two accompanying Technical Reports (Wetlands and Wildlife) with regard to potential impacts on rare species and unique natural communities.

Although we do not wish to formally endorse a particular alignment, we will provide the following technical comments:

1. The terminology and identification of the "pocket wetlands," which would be altered by Alternatives 4 and 6, should be made consistent within the document. These two wetlands are referred to as "LO1 and NM1" in most of the document but are referred to as "LO1" and "MP1" on pages VI-31 and VI-32 of the Wildlife Technical Report.

2. Similarly, these wetlands are correctly referred to as "Inland Basin Marshes" is much of the document. However, they are labeled "Southern New England Basin Swamps" on page ES-3 of the Wetlands Technical Report. In our nomenclature, "swamps" and "marshes" indicate different wetland types; i.e, swamps are forested wetlands and marshes are dominated by shrubs or herbaceous vegetation. Based on the descriptions provided, these wetlands are likely to fall in the "Inland Basin Marsh" category. However, a site visit by NHI staff would be necessary to make a definitive judgement on their type and quality.

3. The acreage of wetland NM1 is unclear. On page IV-12 of the Wetlands Technical Report the acreage is listed as 4.7; the Appendix A of the Wetlands Tech. Report lists the acreage as 0.47.

4. The Natural Heritage Inventory letter and ranking system are twice referenced as Appendix D of the Wildlife Technical Report - this is actually Appendix C. In addition, the Inland Basin Marsh natural community type should be added to Appendix C to make this list consistent with that presented in Table V-2 of the Wildlife Technical Report.

5. The date last observed for Prunus americana in Appendix C is 1965 rather than 1865.

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NATURAL HERITAGE INVENTORY 603-271-3623

1 Comment noted. This is a typing mistake in need of correction. The designation should be LO1 and NM1 on pages VI-30 and VI-31 of the Wildlife Technical Report.

2 Comment noted. On page ES-3 of the Wetlands Technical Report, Southern New England Basin Swamp is an incorrect designation. Inland Basin Marsh is the correct description.

2 Comment noted. The total wetland acreage stated on page IV-12 of the Wetlands Technical Report should read 0.47 acres, not 4.7 acres.

4 Comment noted. The New Hampshire National Heritage Inventory (NHNHI) letter is in Appendix C of the Wildlife Technical Report. The reference in the report is incorrect. Regarding Inland Basin Marshes, refer to Page V-3 in the Wildlife Technical Report, and page 3-49 of the DEIS.

5 Comment noted, no response required.

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6. Spotted turtles (Clemmys guttata) have recently been documented near Chase Brook in Litchfield. Although spotted turtles are not formally listed as Threatened or Endangered by the state, they are relatively rare and declining in New Hampshire due to habitat loss and fragmentation. Spotted turtles have an NHI rank of S2S3. Spotted turtles use both wetland and upland habitat, and may occur in the same areas as Blanding's turtles.

7. Based on our field results from 1992, the large wetland complex just east of Alternatives 3 and 4 and north of Glover Brook in Hudson (Wetlands GH2, GN1, GH3A, GH3B) may qualify as an Inland Basin Marsh. Further field investigations are needed to determine if this wetland meets all the criteria of an exemplary natural community.

8. On page 4-64, the State-Threatened burgrass (Cenchrus longispinus) should also be listed as occurring in the vicinity of one or more Alternative. Information previously provided by the NHI indicates that this species was found in 1984 near Route 3 and the northern end of Alternatives 3, 5, 4, and 6.

9. Also on page 4-64, "planting similar species" is implied as possible mitigation for the destruction of rare plant species. The planting of "similar" species should not be considered a viable option for mitigating losses of rare species. In addition, transplanting rare species should be a last resort only, since the likelihood of successfully transplanting a rare species is questionable at best.

I hope these comments are helpful in preparing the Final EIS. Please contact us if you have further questions.

Sincerely,

Andy Cutko
Data Manager/Biologist

6 Comment noted, no response required.

7 Based on field work for the DEIS, wetlands GH2, GH3A and GH3B are not Inland Basin Marshes. GN1 was not field evaluated since it is not impacted by any of the Alternatives. The following is a brief description of the identified sites:

GH2 - This wetland no longer exists. It is buried under an asphalt waste pile.

GH3A - This wetland no longer exists. It occurs in a heavily-travelled area.

GH3B - This wetland is heavily impacted and has been reduced to a wet swale across an access road.

6 Comment noted. Reference should be made in the FEIS to the 1984 sighting of Burgrass (*Cenchrus longispinus*) in the area of the northern interchange for Alternatives 3, 4, 5, and 6. If this species occurs in the Inland Basin Marsh(also listed by the NHNHI as an area of special concern) it should not be affected, since the wetland is not impacted by any of the Build alternatives.

9 Comment noted. Where the roadway is projected to impact a rare plant, instead of eliminating it completely, an attempt will be made to transplant that species and duplicate its original habitat conditions. These efforts will be coordinated with the NHNHI and FWS as necessary.

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STATE OF NEW HAMPSHIRE
DEPARTMENT of RESOURCES and ECONOMIC DEVELOPMENT
OFFICE of the COMMISSIONER
172 Pembroke Road P.O. Box 856 Concord, New Hampshire 03302-0856

STEPHEN K. RICE
Commissioner

January 12, 1993

603-271-2411
FAX: 603-271-2629

Lt. Colonel James K. Hughes
Department of the Army
New England Division, Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Dear Lt. Colonel Hughes:

1 I am writing to endorse the recommendation of the Department of Transportation that Alternative 8 is the preferred route for the Nashua-Hudson circumferential highway.

This project is a key component in the future economic development of the State. The Department of Transportation solution will provide improved access to already congested commercial and industrial areas, reducing traffic through existing residential areas. Impacts from future growth will be reduced by the implementation of this alternative.

Route 3 is one of the main highways for tourists with destinations in central and northern New Hampshire. The reduced congestion during peak tourism seasons is critical to the health of our vacation and tourism industry. Without continued, strong economic impact from tourism, our ability to maintain our scenic and natural beauty is lessened.

2 The National Heritage Inventory office of this department has reviewed the alternatives and has found that Alternative 8 does not appear to have any potential impacts on rare species and unique natural communities.

We believe that the Department of Transportation's recommendation best balances vital environmental and economic needs. We urge your strongest consideration of the department's recommendation.

Sincerely yours,

Stephen K. Rice
Commissioner

SKR:k

TDD ACCESS: RELAY NH 1-800-735-2964 recycled paper
OFFICE OF THE COMMISSIONER 603-271-2411

1 Comment noted, no response required.

2 Comment noted, no response required.

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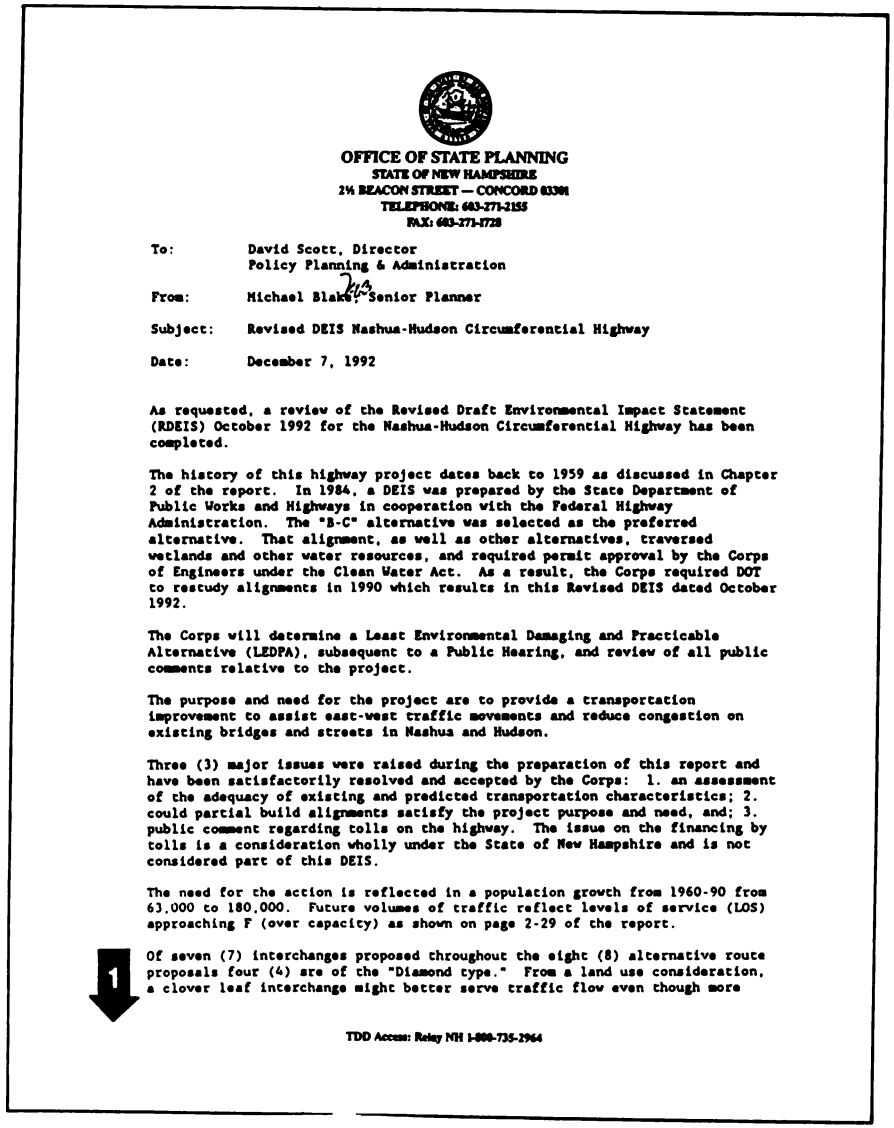

OFFICE OF STATE PLANNING
STATE OF NEW HAMPSHIRE
2½ BEACON STREET — CONCORD 03301
TELEPHONE: 603-271-2155
FAX: 603-271-1728

To: David Scott, Director
Policy Planning & Administration

From: Michael Blake, Senior Planner

Subject: Revised DEIS Nashua-Hudson Circumferential Highway

Date: December 7, 1992

As requested, a review of the Revised Draft Environmental Impact Statement (RDEIS) October 1992 for the Nashua-Hudson Circumferential Highway has been completed.

The history of this highway project dates back to 1959 as discussed in Chapter 2 of the report. In 1984, a DEIS was prepared by the State Department of Public Works and Highways in cooperation with the Federal Highway Administration. The "B-C" alternative was selected as the preferred alternative. That alignment, as well as other alternatives, traversed wetlands and other water resources, and required permit approval by the Corps of Engineers under the Clean Water Act. As a result, the Corps required DOT to restudy alignments in 1990 which results in this Revised DEIS dated October 1992.

The Corps will determine a Least Environmental Damaging and Practicable Alternative (LEDPA), subsequent to a Public Hearing, and review of all public comments relative to the project.

The purpose and need for the project are to provide a transportation improvement to assist east-west traffic movements and reduce congestion on existing bridges and streets in Nashua and Hudson.

Three (3) major issues were raised during the preparation of this report and have been satisfactorily resolved and accepted by the Corps: 1. an assessment of the adequacy of existing and predicted transportation characteristics; 2. could partial build alignments satisfy the project purpose and need, and; 3. public comment regarding tolls on the highway. The issue on the financing by tolls is a consideration wholly under the State of New Hampshire and is not considered part of this DEIS.

The need for the action is reflected in a population growth from 1960-90 from 63,000 to 180,000. Future volumes of traffic reflect levels of service (LOS) approaching F (over capacity) as shown on page 2-29 of the report.

1 Of seven (7) interchanges proposed throughout the eight (8) alternative route proposals four (4) are of the "Diamond type." From a land use consideration, a clover leaf interchange might better serve traffic flow even though more

TDD Access: Relay NH 1-800-735-2964

1 The decision as to the type of interchange to be used at a particular location is based on a number of variables. Engineering studies examine the traffic capacities that need to be supported at a particular location, critical movements, land-use, costs, and a number of other factors. Based on this information, the best practicable and feasible interchange design is employed. The interchanges proposed along the Circumferential Highway alternatives are appropriate for their locations.

Weaving problems are usually encountered with clover leaf interchanges when no collector roads are used. Also, a modification to a clover leaf interchange to accommodate higher traffic capacities is much more difficult and costly than a modification to a diamond interchange. Diamond interchanges are warranted where they have been identified along the proposed alternatives.

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Dave Scott 2 December 7, 1992

1 land is consumed. Experience has shown that diamond interchanges contain many traffic movements and small storage areas which have lead to failures and ultimate rebuilds. We recommend a more thorough review of these interchange designs be considered.

2 Figure 2-2 shows the eight (8) alignment alternatives proposed at a 1990 revised scoping meeting. Public/6(f) lands and institutional resources as shown on page 4-39 should be avoided from the impacts of this project.

MB:am

2 Comment noted, no response required.

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3. Regional Comments

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3.1 REGIONAL

The following regional agencies, organizations, corporations, and associations provided written comments on the DEIS:

Nashua Regional Planning Commission
Audubon Society of New Hampshire
The Conservation Law Foundation
The Pennichuck Corporation
The Nashua Fish and Game Association

Comments provided by the Nashua Fish and Game Association were echoed by a number of individuals. For this reason, the Association's comments and individual comments were paraphrased and grouped together. Groups or individuals who provided comments on issues related to the Nashua Fish and Game Association are identified in this section. Written comments and the corresponding responses follow.

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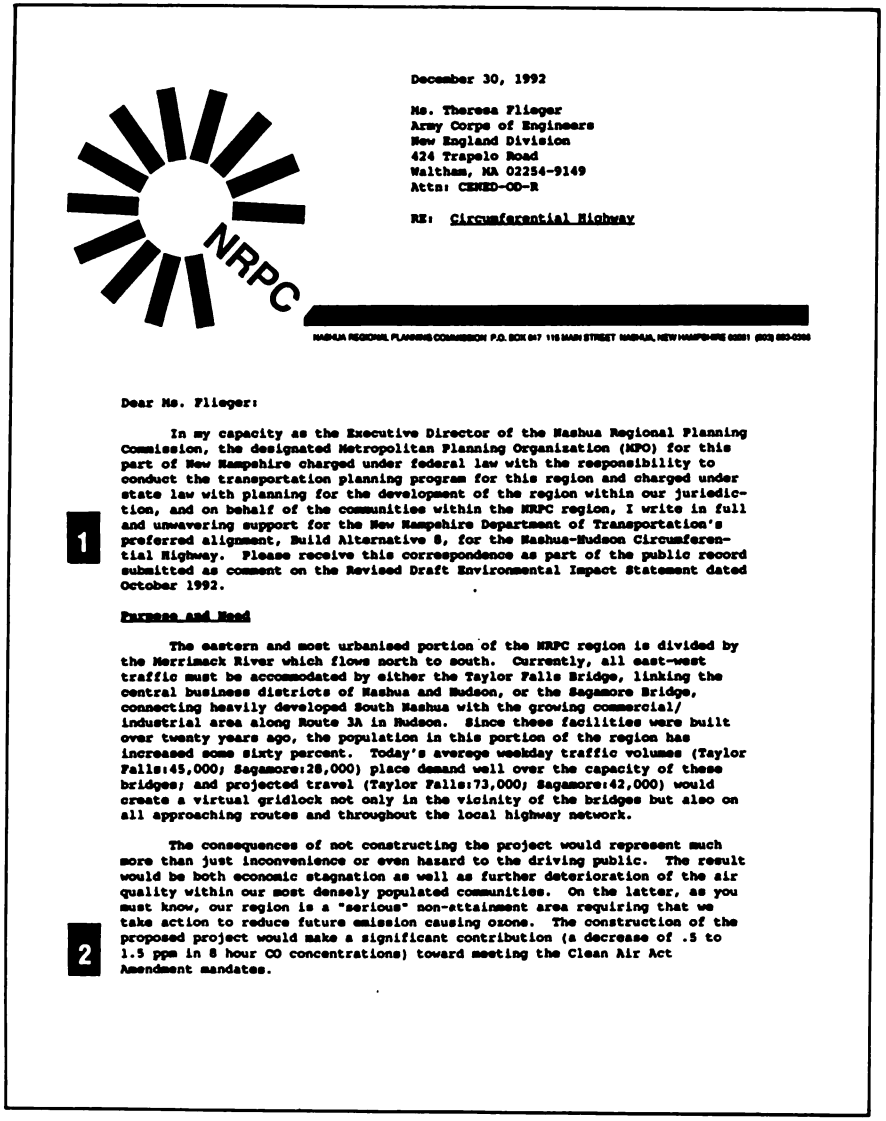

December 30, 1992

Ms. Theresa Flieger
Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, MA 02254-9149
Attn: CENED-OD-R

RE: Circumferential Highway

NRPC

NASHUA REGIONAL PLANNING COMMISSION P.O. BOX 847 115 MAIN STREET NASHUA, NEW HAMPSHIRE 03061 (603) 883-0366

Dear Ms. Flieger:

In my capacity as the Executive Director of the Nashua Regional Planning Commission, the designated Metropolitan Planning Organization (MPO) for this part of New Hampshire charged under federal law with the responsibility to conduct the transportation planning program for this region and charged under state law with planning for the development of the region within our juriedic-tion, and on behalf of the communities within the NRPC region, I write in full and unwavering support for the New Hampshire Department of Transportation's preferred alignment, Build Alternative 8, for the Nashua-Hudson Circumferen-tial Highway. Please receive this correspondence as part of the public record submitted as comment on the Revised Draft Environmental Impact Statement dated October 1992.

1

Purpose and Need

The eastern and most urbanized portion of the NRPC region is divided by the Merrimack River which flows north to south. Currently, all east-west traffic must be accommodated by either the Taylor Falls Bridge, linking the central business districts of Nashua and Hudson, or the Sagamore Bridge, connecting heavily developed South Nashua with the growing commercial/ industrial area along Route 3A in Hudson. Since these facilities were built over twenty years ago, the population in this portion of the region has increased some sixty percent. Today's average weekday traffic volumes (Taylor Falls:45,000; Sagamore:28,000) place demand well over the capacity of these bridges; and projected travel (Taylor Falls:73,000; Sagamore:42,000) would create a virtual gridlock not only in the vicinity of the bridges but also on all approaching routes and throughout the local highway network.

The consequences of not constructing the project would represent much more than just inconvenience or even hazard to the driving public. The result would be both economic stagnation as well as further deterioration of the air quality within our most densely populated communities. On the latter, as you must know, our region is a "serious" non-attainment area requiring that we take action to reduce future emission causing ozone. The construction of the proposed project would make a significant contribution (a decrease of .5 to 1.5 ppm in 8 hour CO concentrations) toward meeting the Clean Air Act Amendment mandates.

2

1 Comment noted, no response required.

2 Comment noted, no response required.

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3 While an upgrade of the existing transportation network, including the expansion of transit service and the implementation of Transportation System Management measures, certainly merits aggressive pursuit - and the DEIS should have provided a more thorough analysis of this alternative complete with a quantification of its potential contribution to demand reduction - it is quite evident that these efforts no matter how successful would be insufficient to meet the need for the proposed project.

I do want to acknowledge and compliment the Corps, as well as the Federal Highway Administration, for recognizing that only the Full Build alternative alignments address the purpose of the Circumferential Highway.

Land Use Impacts

4 As I am sure you are aware, the proposed project has long been viewed as an essential addition to this region's transportation network. You should also know that the Circumferential Highway exists as a key component in our local and regional development plans. The Town of Litchfield, for example, has not only incorporated the Build Alternative 8 alignment into its recently updated master plan, but it also has rezoned for high intensity industrial and commercial uses that portion of their municipality through which the proposed highway would pass. Conversely, the other build alternatives would effectively bisect this small community that is predominantly residential, sever its town center and virtually destroy its community cohesiveness. Furthermore, it

5 is no coincidence that Build Alternative 8, in particular, affects the smallest number of developed parcels and, therefore, results in impacts on open land and wildlife habitat. The Town of Hudson, through which the majority of the length of the proposed project is aligned, has been planning for the construction of a Circumferential Highway for almost three decades; thus growth has been directed away from this corridor.

6 While I agree with the position stated in the DEIS that the proposed project in and of itself will not induce growth, I cannot accept its conclusion that an expected adverse effect of project implementation would be an "acceleration by ten years of anticipated land development." With the possible exception of Litchfield, where improved highway access is essential to that community's economic development articulated by its master plan, and where that growth is anticipated by sound land use regulations and would be well managed, there is no evidence to support this acceleration potential in the other jurisdictions in the region.

Furthermore, I have a fundamental quarrel with another alleged adverse impact, were the proposed project implemented: "continued fragmentation of the urbanizing environment of southern New Hampshire." First of all, the construction of the Circumferential Highway is sympathetic to our urban centers by significantly reducing through traffic and its attendant congestion, hazards and emissions. Also, please be mindful of the fact that this is a beltway project not a new linear arterial; and by their very nature beltways serve to consolidate urbanization and to encourage infill development. Were it not for a Circumferential Highway, the current pattern of highway strip development and suburban sprawl would be sustained along the region's existing road network.

3 Comment noted. In addition, refer to the responses provided for comments #10 of the Public Hearing Testimony, and #23 and #31 through #33 of the EPA's March 2, 1993 letter.

4 Comment noted, no response required.

5 Comment noted, no response required.

6 Comment noted. Refer to the responses provided for comment #59 of the Public Hearing Testimony.

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Ms. Theresa Flieger
Army Corps of Engineers Page 3.

Resource Impacts

3 There is no question that Build Alternatives 7 and 8, with their alignments passing through the Pennichuck basin, engender the greatest water quality concerns. While we conclude that Alternative 7 poses too great a risk of hazardous material spill directly into a waterbody, Bowers Pond, we are confident that runoff from Alternative 8 can be adequately diverted from the Pennichuck water regime to prevent adverse impacts from salt and other potential contaminants.

8 As the primary federal permitting agency, with your authority derived from Section 404 of the Clean Water Act and your approval based upon Section 404b(1) guidelines, your most keen attention no doubt is focused on potential wetland encroachment. While Build Alternative 8 is not the most benign in terms of gross wetland impacts, neither in the number of wetlands nor the total acres affected, it does require the least alteration to key wetlands; and it does, as the DEIS accurately points out, rank number one by no trivial degree when the number of homes and the total property value to be affected are considered. The overwhelming majority of NRPC's municipal, corporate and individual constituents hope that the Corps of Engineers shares their desire to strike a balance for the greatest public good.

To conclude, I ask you to consider this assertion: few public works projects of any magnitude enjoy broader support -- at the state, regional and local levels from government officials to business leaders -- address a greater need, have been better incorporated into community development plans, and have less significant adverse impact on the total human and natural environments than the proposed Nashua-Hudson Circumferential Highway. Please be assured that extraordinary analysis, contemplation and debate formed our consensus opinion that Build Alternative 8 is the least environmentally damaging and most practicable.

Sincerely,

NASHUA REGIONAL PLANNING COMMISSION

Don E. Pizzi,
Executive Director

DEI

cc: Robert Greer, NHDOT
Director of Project Development

#NRB-46

1 Comment noted. Refer to the response provided for comment #2 of the Public Hearing Testimony.

8 Comment noted, no response required.

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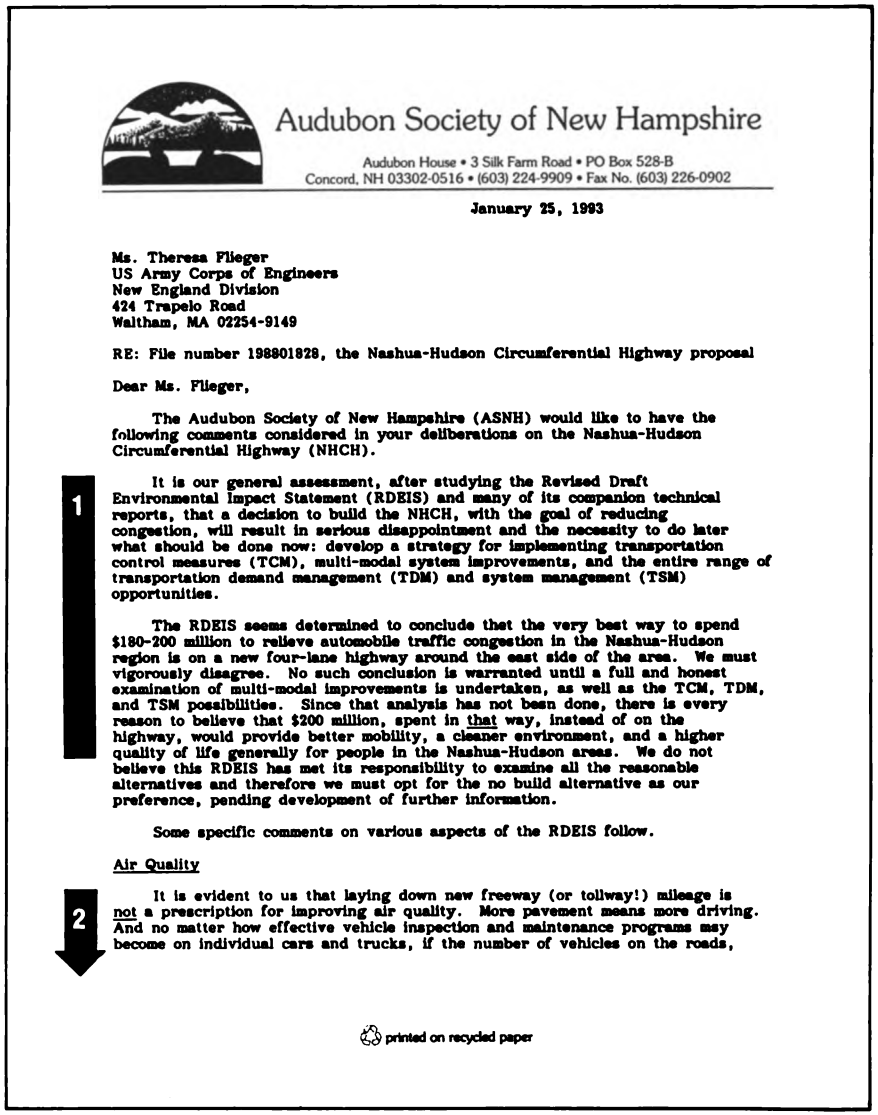

Audubon Society of New Hampshire

Audubon House • 3 Silk Farm Road • PO Box 528-B
Concord, NH 03302-0516 • (603) 224-9909 • Fax No. (603) 226-0902

January 25, 1993

Ms. Theresa Flieger
US Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, MA 02254-9149

RE: File number 198801828, the Nashua-Hudson Circumferential Highway proposal

Dear Ms. Flieger,

The Audubon Society of New Hampshire (ASNH) would like to have the following comments considered in your deliberations on the Nashua-Hudson Circumferential Highway (NHCH).

1 It is our general assessment, after studying the Revised Draft Environmental Impact Statement (RDEIS) and many of its companion technical reports, that a decision to build the NHCH, with the goal of reducing congestion, will result in serious disappointment and the necessity to do later what should be done now: develop a strategy for implementing transportation control measures (TCM), multi-modal system improvements, and the entire range of transportation demand management (TDM) and system management (TSM) opportunities.

The RDEIS seems determined to conclude that the very best way to spend $180-200 million to relieve automobile traffic congestion in the Nashua-Hudson region is on a new four-lane highway around the east side of the area. We must vigorously disagree. No such conclusion is warranted until a full and honest examination of multi-modal improvements is undertaken, as well as the TCM, TDM, and TSM possibilities. Since that analysis has not been done, there is every reason to believe that $200 million, spent in that way, instead of on the highway, would provide better mobility, a cleaner environment, and a higher quality of life generally for people in the Nashua-Hudson areas. We do not believe this RDEIS has met its responsibility to examine all the reasonable alternatives and therefore we must opt for the no build alternative as our preference, pending development of further information.

Some specific comments on various aspects of the RDEIS follow.

Air Quality

2 It is evident to us that laying down new freeway (or tollway!) mileage is not a prescription for improving air quality. More pavement means more driving. And no matter how effective vehicle inspection and maintenance programs may become on individual cars and trucks, if the number of vehicles on the roads,

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1 Comment noted. Refer to the responses provided for comments #10 of the Public Hearing Testimony, and #32 and #33 of the EPA's March 2, 1993 letter.

2 Comment noted. Refer to the response provided for comment #19 of the EPA's March 2, 1993 letter. With respect to the Audubon Society's concern for NO_x, the NHDOT recognizes NO_x as an important element of the ozone problem. However, the State Implementation Plan (SIP) in place at the time of the publication of this FEIS continues to focus on nonmethane hydro-carbons (NMHC) as the principal way of achieving ozone standard compliance. This focus is reflected in the analysis contained in the DEIS and Air Quality Technical Report.

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2 and the number of vehicle miles travelled (VMTs), keeps rising, air quality will keep deteriorsting. The answer is not more highways, but fewer vehicles travelling fewer miles emitting fewer pollutants. The Nashua-Hudson Circumferential Highway is an invitation to expanded single occupant vehicle miles travelled, greater urban sprawl, and the demonically concomitant secondary development which spreads people out further, making future design and use of multi-modal, multi-occupant vehicles even more difficult. And the air quality will continue to go down.

There is, we believe, a real question about the conformity of this proposed highway with the Clean Air Act Amendments of 1990, and with the 1991 ISTEA legislation. The Nashua area is already a non-attainment area for ozone standards and therefore has an obligation to do its part to reduce both VOCs and NOx -- maybe especially NOx. Recent modelling in the ozone transport region, of which New Hampshire is a part, indicates that the NOx component of ozone may be far more important than was thought at the time the original regulations were promulgated. NOx reductions will likely be more necessary than initially thought, making the NOx conclusions on pages 4-47 and 4-49 of the RDEIS very significant, and calling into serious question the concluding sentence of the first paragraph on page 4-49: "Because the increase in NOx emissions for the Build cases is small, and because the main focus of the ozone control strategy is on NMHC, no further mitigation measures are recommended for NOx at this time." It is now entirely possible that that analysis is wrong and that considerable NOx mitigation will be required to meet the 1999 ozone compliance deadline. Any project, including this highway, which increases NOx in the atmosphere, will be properly subject to increased scrutiny and possible delay under the Clean Air Act.

Wetlands

3 The wetlands inventory and analysis has been well done in this RDEIS. We applaud the serious respect for the importance of wetlands which is being demonstrated in this document and other documents dealing with proposed highways in New Hampshire. There does appear, however, to be a reluctance to likewise respect the sequencing hierarchy when it actually comes to selecting possible highway routing. Avoidance and minimization of impacts are too often passed over for the mitigation opportunity. And the quantity of wetland impacts seems excessive given the length of the proposed highway. We will withhold judgement on mitigation plans until a specific route is being discussed and the precise wetlands impacts are known.

But it is our feeling that none of this need be discussed yet, anyway. The Corps need not, in our view, address wetland losses until it has more adequately dealt with its failure to do even a minimal analysis of alternate modes of transportation, and other ways of relieving congestion without building a new road -- the ultimate wetlands avoidance analysis, which we think has yet to be done (see final section below).

-2-

2 Comment noted. Avoidance of wetland habitats whenever possible was an integral part of the planning stages during the selection of alternate routes. Further minimization of wetland impacts can occur during Final Design stages. (e.g. through the use of retaining walls and steep slopes). Further analysis of Transit/TDM and TSM measures was conducted as a consequence of the level of interest exhibited regarding these topics during the January 4, 1993 Public Hearing. This analysis is summarized in the FEIS, and is completely documented in Appendix B of the Revised Traffic and Transportation Technical Report.

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Wildlife

3a Like the wetland section, the wildlife analysis in the RDEIS has been well done. ASNH has been pleased to participate in the work on bald eagle wintering habitat, and we will continue our involvement as long as it is useful. We have a long organizational history with threatened and endangered species work, and represent an educated constituency with a deep interest in that work. We will remain closely involved with the US Fish and Wildlife Service as it evaluates the various wildlife impacts of this proposed highway.

4 As a general observation, it is apparent that this highway, like others, will further fragment the landscape and various wildlife habitats within that landscape, and will make future fragmentation from additional development more likely. As in other areas under discussion here, our preference would be for a thorough analysis of the contribution to reduced congestion that could be made by a multi-modal transportation demand modification effort.

Transportation Efficiency Measures

5 It is not clear what the appropriate over-all rubric should be for referring to the multitude of traffic improvement opportunities available to transportation planners. For the purposes of this comment we will refer to them as "transportation efficiency measures" (TEMs). TEMs encourage people to get out of single occupant vehicles; they direct people toward the full variety of transportation modes; they make it easy for people to use mass transit; and they serve to reduce congestion on existing highways. So TEMs include all the measures and management techniques so often discussed these days -- and so blatantly ignored in this RDEIS (transportation demand management, transportation control measures, transportation system management, mass transit, etc).

The RDEIS fails miserably to address the contribution that TEMs could make to achieving the project purpose. This is a viable and practical alternative which did not receive any significant attention, and its omission, in our view, makes the RDEIS wholly inadequate, a condition that cannot be remedied by simply doing a quick study and inserting a section in the FEIS. The Corps, we believe, must begin again and take seriously the possibility that a variety of TEMs, properly and timely implemented, could do more -- or at least as much for far less cost -- to relieve Nashua area traffic congestion than any of the "full build" alternatives. Many combinations of TEMs implemented in various parts of the country can be cited as examples of how to reduce traffic congestion, reduce air pollution, and create an improved quality of life for area residents.

We can envision an energy-efficient, fully integrated transportation and land use management system for the Nashua area, a regional system with extensive greenways, bicycle and pedestrian pathways, scenic and efficient roadways, and a rail and bus transit component second to none. That vision is not achieved by

-3-

3a Comment noted, no response required.

4 Comment noted, no response required.

5 Comment noted. Refer to the responses provided for comment #10 of the Public Hearing Testimony, and #23 and #31 through #33 of the EPA's March 2, 1993 letter.

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5 building the Nashua-Hudson Circumferential Highway. It will only be achieved by implementing proven transportation improvement measures like:

-improved public transit
-high occupancy vehicle lanes
-convenient park and ride facilities
-traffic flow enhancements
-vehicle use limitations/restrictions
-bicycle and pedestrian facilities
-employee/employer trip reduction and management programs
-ride share incentives
-trip reduction ordinances
-parking management and driving disincentives
-accelerated vehicle retirement

This is nowhere near an exhaustive list, and should be augmented with longer term measures related to growth management and land use planning, such as the "Urban Growth Boundaries" program in Portland, OR, where new development is directed within a prescribed area, allowing cities to achieve the dual success of a thriving, compact downtown surrounded by relatively open space. This brings jobs and housing closer together and makes alternatives to automobile transportation viable and attractive.

It is our belief that these TEMs should be fully explored before any consideration is given to building another highway. Perhaps there can be established a sequencing hierarchy of analysis, similar to that undergone when wetlands are to be impacted. TEMs could be implemented first, beginning with the lower cost system changes and progressing up to facilitation of alternative modes of transportation. Then might come expansion of existing road systems, to be followed -- as a last resort -- by construction of a new highway.

6 In conclusion, ASNH believes that this RDEIS has failed to address the most significant alternative available to the Nashua area for meeting the project purpose. The analysis must go back and fully incorporate a review of the contribution TEMs, such as those mentioned above and many others, could make to bringing Nashua and the surrounding region a first-class transportation system, able to serve for the long term. The Nashua-Hudson Circumferential Highway is a short-term fix which barely meets the project purpose on its own terms. Nashua deserves better. The Clean Air Act requires better. Moving toward a multimodal, efficient transportation system is better.

Thank you for the opportunity to comment. We stand ready to assist your analysis in any way we can.

Sincerely yours,

Kirk Stone

Kirk Stone
Environmental Affairs Director

5 Comment noted, no response required.

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CLF Conservation Law Foundation

21 East State Street
Suite 301
Montpelier, Vermont
05602-2152
(802) 223-5992
Fax: (802) 223-0060

January 21, 1993

Ms. Theresa Flieger
Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Dear Ms. Flieger:

The Conservation Law Foundation, Inc. ("CLF") appreciates the opportunity to comment on the Draft Environmental Impact Statement for the Nashua/Hudson Circumferential Highway ("DEIS"). However, we believe the DEIS fails to adequately examine a transportation demand management alternative to the proposed highway and fails to comply with the conformity requirement of the Clean Air Act. We also believe the proposed alternative selected by the New Hampshire Department of Transportation does not meet the objective purpose of the project.

It is unfortunate that the public hearing for this project occurred during the holiday period as the timing may have prevented meaningful and full public comment. We were unable to attend the January 4th public hearing but instead submit the enclosed written comments on the proposed project.

CLF hopes both NHDOT and the Corps will rethink their support of this highway-build alternative since pursuing the proposal would violate federal law and further worsen New Hampshire's air quality and transportation problems.

Thank you for your consideration of these comments. Please add them to the record of responses to the DEIS. Any references

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Maine Office: 60 Ocean Street, Rockland, Maine 04841 • (207) 594-8107
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1 Comment noted. Refer to the response provided for comment #33 of the EPA's March 2, 1993 letter.

2 Comment noted. Refer to the response provided for comment #19 of the EPA's March 2, 1993 letter.

2 The required notification period was given regarding the date of the public hearing. In addition, the comment period was extended to accommodate individuals that could not attend the public hearing. Oral and written comments are given equal weight in terms of evaluation.

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may be made available upon request.

Sincerely,

Mark Sinclair
Staff Attorney

Susan Minter
Staff Scientist

cc: Charles O'Leary, NHDOT
E. William Roy, NHDOT
Chairman of the Special Committee
William Lawless, Army Corps of Engineers
Federal Highway Administration
William Varney, NHDES
Mark Kern, EPA
Regional Administrator, EPA, Region 1
Don Zizzi, Nashua Regional Planning Commission
Paul Smith, Strafford Regional Planning Commission
Monie Sharma, Manchester Regional Planning Commission
Cliff Sinnot, Rockingham Regional Planning Commission
NH Audubon Society
NH Clean Water Action
Society for the Protection of NH Forests
Bruce Hill, Appalachian Mountain Club
Bob Brailie, Boston Globe
Richard Stradling, Concord Monitor
Rina Petit
Bob Backus

COMMENTS OF THE CONSERVATION LAW FOUNDATION, INC.
ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE NASHUA/HUDSON CIRCUMFERENTIAL HIGHWAY

January 21, 1993

INTRODUCTION

The Conservation Law Foundation, Inc. ("CLF") provides these comments on the Revised Draft Environmental Impact Statement for the Nashua-Hudson Circumferential Highway (October 1992) ("DEIS"). The DEIS violates the requirements of the National Environmental Policy Act ("NEPA"). Furthermore, the United States Army Corps of Engineers' ("Corps") issuance of a Section 404 permit for the proposed project would violate both the Clean Water Act, NEPA, and the Clean Air Act, as detailed herein.

The New Hampshire Department of Transportation's ("NHDOT") proposal to construct a new highway in the Nashua/Hudson area reflects that Department's engineering/highway bias and unwillingness to advance into a new era of transportation policy and planning. In past decades, highways were built without regard for their enormous environmental and human consequences. City neighborhoods were sacrificed to the highway's illusion of progress through unlimited personal mobility. Wetlands were filled for highway construction. Degradation of waterbodies by toxic runoff from payment continues. As highways have allowed traffic to reach further into suburban and rural areas, patterns of housing and commercial development have been dispersed,

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resulting in the loss of forests, wetlands and wildlife habitat.

The greatest irony of tha highway era was that it defeated itself: it is now recognized that "more highways do not bring mobility -- new highways tend to generate new congestion."[1]/ Highways have attracted development away from cities and created new and longer vehicle trips, which in turn has generated ever-increasing traffic, air pollution, greenhouse emissions, and an apparent needed for more highways.

However, transportation planning has entered a new era in the United States. The federal government and many state officials recognize that "[w]e can no longer build our way out of traffic congestion."[2]/ New requirements in the federal Clean Air Act Amendments of 1990 ("CAA"), 42 U.S.C. §7401 et. seq., and the Intermodal Surface Transportation Efficiency Act of 1991 redirect ("ISTEA") Pub. L. No. 102-240, redirect the focus of transportation planning to moving people, not cars. And a growing body of evidence demonstrates that mass transit and strategies to reduce single-occupant automobile use are better -- and often more cost-effective -- at relieving congestion than expansion of highways.

With such a backdrop, the Nashua DEIS has come as an

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1 Senate Committee on Banking, Housing, and Urban Affairs, Federal Transit Act of 1991, S. Rep. No. 79, 102d Cong., 1st Sess. 4-5 (June 11, 1991).

2 Thomas M. Downs, Transportation Commissioner for the State of New Jersey, quoted in New York Times, "New York Region Concludes: Don't Expand Transit; Fix It."

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unpleasant surprise to many in the environmental and transportation planning communities. The environmental impacts of this project would be enormous. While creating only a temporary, minor relief to traffic congestion, this new highway would encourage more dispersed development, more vehicle trips, and greater levels of ozone smog, thus frustrating state and federal policies to reduce vehicle use and clean New Hampshire's air. NHDOT's preferred alternative (Alternative #8) also would permanently eliminate 87.5 acres of wetland, including 43 "discrete" wetlands and 4 "key" wetlands.[3] DEIS at Figure 4.14-1. Waters of the state including these important wetlands would receive polluted runoff from the new roadway. Moreover, the project entails significant displacement of homes and businesses. Under NHDOT's preferred alternative, 24 homes, 2 duplexes, and 6 businesses would be displaced. DEIS at 4-30.

4 Nor does the project offer a permanent solution to the traffic problem it purports to address. Although the stated purpose of the project is to relieve congestion in the Nashua and Hudson central business districts and improve east-west movement, it fails to significantly improve traffic in the long run. At the seven intersections analyzed for level of service ("LOS") improvements, NHDOT's preferred alternative slightly improves the LOS at only two intersections when compared with the no-build scenario. DEIS at Table 4.1-6.

[3] The NHDOT has selected Alternative #8 as their preferred alternative according Mr. Bill Hauser, of NHDOT (phone conversation 12/31/92).

3

4 Comment noted. Refer to the responses provided for comments #23 and #32 of the EPA's March 2, 1993 letter.

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The approach to transportation planning displayed in the DEIS is not only outdated and harmful, it is illegal. The preferred alternative alignment selected by NHDOT does not meet the project's purpose. Because the DEIS does not meaningfully examine all feasible transportation control measures ("TCM") and transit-based alternatives to the project, it violates the National Environmental Policy Act, 42 U.S.C. §4321 et seq.; section 4(f) of the Department of Transportation Act, and Section 404 of the Clean Water Act, 33 U.S.C. §1344. The DEIS also violates the federal Clean Air Act and NEPA because it fails to consider adequately the project's air pollution and water quality impacts and, in particular, project conformity with the state implementation plan, as defined by Section 176 of the CAA, 42 U.S.C. §7506(c).

The DEIS clearly is inadequate. Therefore, under NEPA, the Corps must not permit the proposed build alternative under Section 404 of the Clean Water Act until a new EIS is completed which fully analyzes the feasibility of transit and transportation demand management alternatives. Furthermore, under the Clean Air Act, the Corps simply cannot issue approvals for the NHDOT-proposed build alternative because the highway project comes from a nonconforming Transportation Improvement Plan ("TIP").

I. THE PREFERRED ALTERNATIVE FAILS TO MEET THE PROJECT PURPOSE

The DEIS states that "the purpose and need of this project

4

5 Comment noted. Refer to the response provided for comment #19 of the EPA's March 2, 1993 letter.

5 Comment noted. Refer to the response provided for comment #33 of the EPA's March 2, 1993 letter.

7 The predicted increases in travel projected in the Nashua area are the result of extension of the growth patterns experienced within the region. The traffic analysis in the DEIS documents the relative ability of various alternatives in accommodating this expected growth. The results of this analysis indicate that the Full Build alternatives will result in decreased congestion levels as compared to the No Build on a regional level. Nationwide, suburban congestion is growing more rapidly than congestion in CBD's and the Nashua area is not expected to be an exception to this. While under all alternatives, including the No Build, traffic congestion is expected to increase in areas outside of the Nashua CBD, the Full Build alternatives will result in 25 percent less roadway operating at LOS F or F' than under the No Build scenario (24.6 miles at LOS F or F' under the No Build as compared to 18.4 under the Full Build).

For the Nashua CBD, the Full Build alternatives do result in substantial improvements in congestion levels over even existing conditions. There are currently (1990) 5.3 miles of roadway in the CDB operating at LOS F or F'. This number would increase by 64 percent to 8.7 miles if the Circumferential Highway were not built, while it would decrease by 47 percent to 2.8 miles under the Full Build alternatives.

Refer to the responses provided for comment #23 and #31 through #33 of the EPA's March 2, 1993 letter for additional information.

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7 is to provide a transportation improvement to assist east-west traffic movements and to reduce congestion on existing bridges and streets in and near the central business districts of Nashua and Hudson by adding new crossings of the Merrimack River." DEIS at S-2. Unfortunately, the circumferential highway, and particularly the build alternative selected by NHDOT, fails to meet this stated purpose.

As the traffic forecasts in the DEIS make clear, congestion, which is already problematic in the Nashua/Hudson area, is predicted to dramatically increase over the next twenty years (54% increase in total daily vehicular trips by 2010. DEIS at 4-13.). 8 However, the preferred build alternative selected by NHDOT to relieve the traffic congestion problem would not solve the mobility problem, and would worsen New Hampshire's current ozone smog problem.

8a Table 4.1-6 of the DEIS (p.4-20) describes intersection Level of Service Analyses for the eight alternatives described in the DEIS, including two intersections in Hudson and five intersections in Nashua. Under build alternative #8, the two Hudson intersections improve slightly over the no-build scenario. The Taylor Falls Bridge/NH 102 intersection improves from LOS F in the no-build scenario to LOS D in the 2010 build scenario. At the Lowell/Central intersection, LOS improves from LOS F in the No- Build to LOS C in the 2010 build scenario.

The Nashua intersections examined, however, demonstrate NO improvement whatsoever in 2010 from the no-build scenario. All

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7 Comment noted. Refer to the responses provided for comments #23 and #31 through #33 of the EPA's March 2, 1993 letter. For information concerning project impacts on air quality refer to the responses provided for comment #19 and #82 of the EPA's March 2, 1993 letter as well as #2 of the New Hampshire Audobon Society's letter.

8a Comment noted. Refer to the response provided for comment #32 of the EPA's March 2, 1993 letter for information regarding intersection level of service.

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8a five Nashua intersections examined result in the same level of service in the 2010 build scenario as under the no-build scenario. Indeed, four of the five intersections would experience a LOS F in 2010. As the DEIS describes, LOS F designates a condition "where volume exceeds capacity by more than 150%". DEIS at 4-3.

Out of all of the intersections examined, only one intersection is predicted to achieve above a LOS D, which, according to the DEIS is "generally accepted as the minimum design level for urban street systems." DEIS at 3-7. (Emphasis added.) Clearly, the project would not effectively meet the project's purpose of reducing congestion when all the intersections examined would experience little if any improvement in level of service under the 2010 build scenario.

II. THE DRAFT ENVIRONMENTAL IMPACT STATEMENT FAILS TO ADEQUATELY EXAMINE TRANSPORTATION CONTROL MEASURES AND TRANSIT-BASED ALTERNATIVES TO THE PROPOSED CIRCUMFERENTIAL HIGHWAY

9 The DEIS ignores enactment of the Intermodal Surface Transportation Efficiency Act of 1991 which explicitly favors transportation alternatives to new highway construction. The congressional policy expressed in ISTEA calls for major changes in the federally-supported transportation system and for expansion of those transportation modes that are more efficient and environmentally sound. The Declaration of Policy in ISTEA states: "The National Intermodal Transportation System shall include significant improvements in public transportation

9 necessary to achieve national goals for improved air quality [and] energy conservation. . . ." Pub. L. No. 102-240, § 2; see also S. Rep. No. 79, at 8. The Senate Report which accompanied the bill that became Title III of ISTEA -- the Federal Transit Act of 1991 -- makes it clear that both Title III and the entire ISTEA legislative package were designed to "close the gap" in "the unmet need for modern, efficient public transit." Id. at 4. According to the Report,

> In our major economic and population centers, more highways do not bring mobility -- new highways tends to generate new congestion.... The costs of highway construction are far greater than the $129 billion in direct spending on the interstate system.... We pay the cost through increasingly intolerable traffic congestion in the nation.... We pay the cost through over-reliance on foreign oil... Continuing with a narrow-viewed highway policy will lead the country up a blind alley. The Senate must find a better path. Improved and expanded public transit must be a larger part of the country's transportation.

Id. at 4-5.

However, in violation of federal law and policy, the Nashua Circumferential Highway DEIS does not present a reasonable transit and transportation demand management (TDM) alternative to the highway expansion alternatives it describes in great detail. In spite of the fact that federal policy explicitly emphasizes transportation management over new highway construction, the "Transit/TSM Alternative" in the DEIS is merely dismissed in two paragraphs. The DEIS briefly considers a minor program to offset automobile demand by expanding existing bus service and employer-based van pooling slowly over the next 20 years. It lists a travel demand management program involving land-use policies,

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9 parking supply management, regional carpool/van pool matching programs, and tax incentives for preferential carpool parking facilities, to be implemented on a "longer-term basis." DEIS at 2-5. However, this cursory discussion includes no detail or analysis of the potential impact of such a program. It simply concludes, without any supporting documentation, that "these programs could reduce overall period traffic volumes by one percent, and in major commuter travel corridors by two percent." DEIS at 2-5. The DEIS later dismisses this alternative completely, concluding that the Transit/TSM Alternative is "essentially the same as the No Build option, which would result in a substantial increase of traffic volumes and congestion levels on virtually all roadway segments." DEIS at 2-15.

The discussion of the "TSM/Transit alternative" is short-sighted, unambitious, and inadequate. Given the inability of the proposed highway to actually relieve traffic congestion in the long run, a thorough examination of demand-side management of the transportation system within the Nashua/Hudson area is obligatory to fulfillment of the project purpose.

Rather than expanding the supply of roads for automobile use, transportation demand management measures are designed to affect the demand for highway use by influencing the actions of individuals, so that they travel less often, shorter distances, at different times, and in multiple-occupancy modes. TDM strategies fall into three broad categories: (1) Travel pricing and incentives programs, to level the playing field between

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9 alternative transportation modes, through parking charges, transit and ridesharing subsidies, employee travel allowances, tolls, and trip-reduction ordinances (TROs); (2) Congestion mitigation measures, to improve traffic flow and reduce peak-hour congestion, through alternative work schedules by employers, as well as transportation system management (TSM) strategies such as signalization and channelization improvements; (3) Growth management and land-use planning strategies, to encourage more compact, higher-density, mixed-use development patterns to limit development sprawl, bring jobs and housing closer together, and make alternative modes such as transit, ridesharing, bicycling, and walking more viable and attractive alternatives to Single Occupant Vehicles ("SOVs").

TDM measures can successfully reduce SOV use. An evaluation of TDM performed by the Federal Highway Administration reviewed eleven different areas in the U.S. encompassing a variety of different TDM programs.[4] The study concluded that "[d]emand management is capable of having a significant impact on controlling the demand for low-occupancy vehicle travel and thereby reducing or postponing the need to add additional capacity to the highway system." Report at 27. The study demonstrated that TDM programs have been successful at reducing vehicle trips by as much as 40 percent in some areas. Id. at 28.

[4] Evaluation of Travel Demand Management Measures To Relieve Congestion, USDOT, Federal Highway Administration, February, 1990, Report No. FHWA-SA-90-005.

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9 In Los Angeles, Regulation 15, a mandatory employer-based ride sharing program, is projected to reduce commuter miles travelled by 25 percent. A study undertaken in Montgomery County, Maryland, which examined potential land-use and alternative transportation strategies, concluded that by combining a variety of TDM measures the county could accomodate twice as many houses and jobs over the next thirty years without unacceptable traffic congestion.[5]

The DEIS must be revised substantially to seriously examine the TDM alternative. It must include an analysis of the congestion mitigation potential of a variety of transportation control strategies. The analysis should evaluate a resource commitment to this alternative on par with the resources being planned for the proposed highway. At a minimum TDM strategies should include: a serious investment in public transit -- including the reopening of the existing (though dormant) commuter rail line that extends from the Boston, Massachusetts, through Nashua and northward to Concord; expanded bus service in and around Nashua, Hudson and Litchfield; high occupancy vehicle shared ride programs (CARAVAN); employer-based transportation management plans (requiring all employers of a certain size to develop and implement transportation management plans designed to

[5] From remarks by Sarah Siwek, Director of Transportation Programs in South Coast Air Quality Management District and Micheal Replogle, Transportation coordinator for Montgommery County, Md, presented at symposium, "Automobiles and Their Alternatives: An Agenda For The 1990s" sponsored by the Energy Foundation and the Conservation Law Foundation.

9 reduce automobile trips per employee); flexible or variable work schedules; telecommuting; establishing parking freezes or parking disincentives in central business districts (increasing parking fees, setting short time limits on parking, making employee parking benefits taxable); establishing trip reduction ordinances; supporting bicycle and pedestrian transport with bike and pedestrian lanes and bicycle storage facilities; congestion pricing strategies; zoning changes to reduce sprawl; and increase accessibility of transit services in and out of the business areas.

The failure to adequately evaluate any of these options is demonstrative of the frivolous effort directed toward considerstion of the transit/TDM potential for solving the area's transportation mobility problems. The DEIS ignores the potential for investing the tremendous funds budgeted for the build scenario on non-highway TDM alternatives. If the DEIS considered transit/TDM alternatives on a level playing field with build alternatives in terms of public investment, the success of an ambitious TDM program in reducing congestion (and air pollution) in the long term would be plain. In light of the fact that the build project would not measurably improve traffic congestion in Nashua, failure to seriously consider transportation demand management is a glaring oversight. In fact, transit and TDM appear to be the only alternatives which would actually reduce travel demand in the long run.

Under NEPA, the examination of alternatives to a proposed

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9 federal action is the heart of an environmental impact statement ("EIS"). 40 C.F.R. § 1502.14 (1991); see also Natural Resources Defense Council v. Callaway, 524 F.2d 79, 93 (2d Cir. 1975); Association Concerned About Tomorrow v. Dole, 610 F. Supp. 1101, 1112 (N.D. Tex. 1985). Regulations of the Council on Environmental Quality require agencies to "rigorously explore and objectively evaluate all reasonable alternatives." 40 C.F.R. § 1502.14(a).

The Corps of Engineers must fairly evaluate all genuine alternatives and their impacts, giving alternatives more than lip service or cursory consideration and providing sufficient data for a reasoned conclusion to be drawn. Natural Resources Defense Council v. Callaway, 524 F.2d at 93-94; Association Concerned About Tomorrow v. Dole, 610 F. Supp. at 1112; Massachusetts v. Clark, 594 F.Supp. 1373, 1379-81 (D. Mass. 1984); I-291 Why? Ass'n v. Burns, 372 F. Supp. 223 (D. Conn. 1974), aff'd per curiam, 517 F.2d 1077 (2d. Cir. 1975); see also Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228-29 (9th Cir. 1988). The complete lack of analysis of non-highway-based alternatives falls far short of meeting NHDOT's and the Corps' burden of demonstrating that no feasible and prudent alternatives to the build alternatives exist. The TSM/Transit Alternative described in the DEIS is far from the "rigorous explor[ation]" required by law. 40 C.F.R. § 1502.14(a). The Nashua DEIS is a relic of the pre-ISTEA past when state transportation infrastructure choices were shaped by a federal funding framework with an overwhelming

12

9 Transit/TDM and TSM alternatives were studied in the DEIS to a level sufficient to determine their effectiveness in meeting the project purpose. Existing transit ridership, employment characteristics, and population densities were used to determine the potential effectiveness of improvements to transit and of measures to control travel demand. Transit/TDM measures, consisting of a full range of strategies to reduce the amount of travel made in single occupant vehicles, involve a large number of players including federal, state, and local governments; large and small employers; as well as individual citizens that make residential and workplace locational decisions and travel mode decisions. In assessing the potential for reducing traffic congestion of Transit/TDM measures, it must be recognized that the issue is complex and implementation of these measures is fraught with uncertainties with respect to impetus for shifts in direction. While favorable economic conditions may make pressures to enforce carpool requirements on businesses acceptable at one time, a downturn and competition among localities for businesses may make such pressures unacceptable. Any analysis of the effects of Transit/TDM therefore need to focus on measures that have a reasonable probability of being implemented and being workable. These measure, as studied in the DEIS, include a doubling of transit ridership and continuation of the efforts of the NRPC to encourage carpooling, support of park-and-ride facilities and commuter bus by the NHDOT, and continued study of the extension of commuter rail from Boston to Nashua. Refer to the response provided for comment #33 of the EPA's March 2,1993 letter for additional information regarding traffic reductions as a consequence of implementing Transit/TDM measures.

While the construction of the Circumferential Highway involves substantial costs, it will serve between 30,000 and 60,000 vehicles per day. Assuming an auto occupancy of 1.1, portions of the new highway would serve up to 66,000 persons per day. Efforts to increase ridesharing within the region could raise the auto occupancy resulting in higher numbers of trips being served by the highway. While other transportation modes that could be supported by the expenditure of the

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bias toward highway expansion. To satisfy NEPA, to serve the needs of southern New Hampshire for enhanced mobility, efficiency and environmental quality, and to reflect the new reality of ISTEA, the Corps and NHDOT must take an entirely new look at the potential for improved mobility in the Nashua region through aggressive investment in expanded mass transit and TDM.

III. THE DEIS DOES NOT DEMONSTRATE CONFORMITY WITH THE STATE IMPLEMENTATION PLAN OR SATISFY SECTION 176 OF THE CLEAN AIR ACT

NEPA regulations, 40 C.F.R. Parts 1500-1508, expressly require that an EIS provide information on whether a project will comply with other environmental statutes.

> Environmental impact statements shall state how alternatives considered in it and decisions based on it will or will not achieve the requirements of sections 101 and 102(1) of the Act and other environmental laws and policies.

40 C.F.R. §1502.2(d) (emphasis added).

The DEIS is inadequate because it fails to explain that Corps approval of a §404 permit would violate the specific provisions of the Clean Air Act.

Section 176 of the Clean Air Act prohibits any department, agency, or instrumentality of the Federal Government from engaging in, supporting in any way, providing financial assistance to, licensing, permitting, or approving any transportation project which does not come from a transportation plan and transportation improvement program that conform to the requirements of the Clean Air Act. 42 U.S.C. § 7506(c)(1)(2),

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9 amount of funds proposed to be spent on the highway would be less costly (assuming such funds could be procured since the proposed highway would be a toll facility), the numbers of people and trips serviced are quite small as compared to the trips served by the highway. Transit/TDM measures such as efforts to increase ridesharing and transit ridership involve substantial costs through construction of park-and-ride lots, extensive marketing efforts, ride matching services, ongoing subsidies, and other costs such as time and effort that are borne by employers and employees working toward decreasing single occupancy vehicle travel. Based on Transit/TDM efforts put in place throughout the country, these costs are borne with minimal impacts in changing travel behavior, particularly in areas with relatively low population densities. Even in areas with much higher levels of traffic congestion than Nashua such as Southern California, a recent study showed that the cost of efforts to encourage (and, indeed, to mandate) carpooling were approximately $12 per trip taken off the road per day. Further details on Transit/TDM alternatives are summarized in the FEIS and are thoroughly documented in Appendix B of the Revised Traffic and Transportation Technical Report.

10 Comment noted. Refer to the response provided for comment #19 of the EPA's March 2, 1993 letter.

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(3). The proposed Nashua-Hudson Circumferential Highway is a transportation project which comes from a transportation plan and transportation improvement program that do not conform to the Clean Air Act. As such, the Corps is barred from approving the project.

Under the Clean Air Act, the Administrator of the U.S. Environmental Protection Agency ("EPA") has established National Ambient Air Quality Standards ("NAAQS") for ozone at levels necessary to protect the public health and welfare.[6] See 42 U.S.C. § 7409; 40 C.F.R. §§ 50.8, 50.9. EPA designates areas where ozone exceeds the NAAQS as "nonattainment areas." 42 U.S.C. § 7407(d). Much of southern New Hampshire including Nashua is a nonattainment area for ozone. Hudson and Nashua are located in a "serious" ozone nonattainment area. FY 1992 Conformity Determination for Transportation Improvement Programs in New Hampshire, August 25, 1992, NHDOT, p. 2 ("NHDOT TIP

[6] Ground-level ozone forms in the atmosphere when volatile organic compounds (hydrocarbons or HC) and nitrogen oxide (NOx) emissions, known as ozone "precursors," react in the presence of heat and sunlight. Ozone is the major constituent of smog and a powerful respiratory irritant which is fatal at high levels and, at relatively low levels of exposure, causes reduced lung function and the deterioration of lung tissue, and which has been linked to increased susceptibility to respiratory infection. Ozone is particularly harmful to people with pre-existing respiratory conditions such as asthma, bronchitis and emphysema, to children, and to elderly people. Ozone causes long-term, potentially permanent lung damage beginning in the early years of life and contributes to more serious effects with increased exposure. Symptoms resulting from ozone exposure include eye irritation, headaches, coughing, chest discomfort, shortness of breath and difficulty in breathing. Ozone also reduces the productivity of forests and other crops.

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Conformity Determination").

The 1990 Clean Air Act Amendments set new deadlines for attainment of the ozone NAAQS. 42 U.S.C. § 7511(a)(1). Serious ozone nonattainment areas such as New Hampshire must attain ozone NAAQS "as expeditiously as practicable but not later than" November 15, 1999. Id.

To ensure that nonattainment areas do not fail to meet the attainment deadline, as they did throughout the 1970s and 1980s, the Clean Air Act Amendments require states to establish schedules for achieving certain interim emission reductions throughout the years before the attainment deadline. These "reasonable further progress" provisions of the Amendments specify that serious nonattainment areas such as Hudson-Nashua must,

> no later than 3 years after November 15, 1990, ... submit a revision to the applicable [state] implementation plan to provide for volatile organic compound emission [HC] reductions, within 6 years after November 15, 1990, of at least 15 percent from baseline emissions, accounting for any growth in emissions after 1990. Such plan shall provide for such specific annual reductions in emissions of volatile organic compounds and oxides of nitrogen [NOx] as necessary to attain the national primary ambient air quality standard for ozone by the attainment date applicable under this chapter.

42 U.S.C. § 7511a(b)(1)(A)&(C).

Because motor vehicles are a major source of hydrocarbons and nitrogen oxide emissions (which cause ozone pollution), the Clean Air Act Amendments impose stringent new requirements on federal, state and municipal agencies to ensure that transportation investments promote rather than thwart the

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attainment of air quality standards. One of these requirements is that, during the period between enactment of the Amendments and the approval by EPA of a revision to the state implementation plan (including criteria and procedures for assessing the conformity of transportation projects and an "emission budget" for motor vehicle emissions), transportation projects must "come from a conforming transportation plan and program as defined in [42 U.S.C. § 7506(c)(3)(A)]." 42 U.S.C. § 7506(c)(3)(B)(i).

The Clean Air Act specifies that, during this period between enactment of the Amendments and the approval by EPA of a revision to the state implementation plan, long range transportation plans adopted for metropolitan areas and the transportation improvement programs ("TIPs") developed each year by metropolitan planning organizations ("MPOs") must "with respect to ozone nonattainment areas, contribute to annual emissions reductions consistent with" the overall emission reduction schedule and emission accounting method referred to above. 42 U.S.C. §7506 (c)(3)(A)(iii) (emphasis added). The emission reduction schedule requires, inter alia, a fifteen percent reduction in emissions from 1990 baseline levels by 1996. 42 U.S.C.§7511a(b)(1)(A)&(c).

The Nashua Regional Planning Commission ("NRPC") is the MPO designated for the Nashua Urbanized Area. As such, it is required to develop a long-range transportation plan and TIP for the Nashua area. On June 10, 1992, the NRPC adopted its TIP for 1992-1997. The Nashua Circumferential Highway is a transportation project listed within the TIP. However, the MPO

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did not make a determination that the plan "would contribute to annual emissions reductions consistent with" the overall emission reduction schedule and emission accounting method required by law.

The 1992-1997 Nashua TIP will not, in fact, contribute to such emissions reductions as required by law and is an illegal, nonconforming TIP. The Nashua TIP itself makes no mention of the "annual emission reduction" requirement under the Clean Air Act. The TIP does include a section of the NHDOT TIP Conformity Determination of August 25, 1992 for the purposes of making its conformity findings. However, this one page emissions summary concludes that

> In all areas the 1996 Build emissions are less than or equal to the 1996 No Build levels. In all areas except the Nashua MPO area, the 1999 Build levels are less than or equal to 1999 No Build levels for CO, NMHC [hydrocarbons], and NOx. The Build levels are greater than No Build for Nox in the Nashua MPO area.... This quantitative analysis has shown that in each of the MPO regions and within each non-attainment area, the level of emissions will be generally lower with the projects proposed. This analysis then demonstrates that the TIP's meet the Interim Conformity Guidelines of the 1990 Clean Air Act Amendments.

Nashua Area Transportation Improvement Program 10/1/92 - 9/30/97 (emphasis added).

The Nashua TIP conformity determination fails to meet the legal standard required under the Act. It is both incomplete and wholly inadequate. As noted above, to conform with the Clean Air Act, a TIP must contribute to annual emissions reductions of hydrocarbons and NOx consistent with the schedule of the Act. Moreover, the analysis must be assessed from a baseline of the

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attainment of air quality standards. One of those requirements is that, during the period between enactment of the Amendments and the approval by EPA of a revision to the state implementation plan (including criteria and procedures for assessing the conformity of transportation projects and an "emission budget" for motor vehicle emissions), transportation projects must "come from a conforming transportation plan and program as defined in [42 U.S.C. § 7506(c)(3)(A)]." 42 U.S.C. § 7506(c)(3)(B)(i).

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did not make a determination that the plan "would contribute to annual emissions reductions consistent with" the overall emission reduction schedule and emission accounting method required by law.

The 1992-1997 Nashua TIP will not, in fact, contribute to such emissions reductions as required by law and is an illegal, nonconforming TIP. The Nashua TIP itself makes no mention of the "annual emission reduction" requirement under the Clean Air Act. The TIP does include a section of the NHDOT TIP Conformity Determination of August 25, 1992 for the purposes of making its conformity findings. However, this one page emissions summary concludes that

> In all areas the 1996 Build emissions are less than or equal to the 1996 No Build levels. In all areas except the Nashua MPO area, the 1999 Build levels are less than or equal to 1999 No Build levels for CO, NMHC [hydrocarbons], and NOx. The Build levels are greater than No Build for Nox in the Nashua MPO area.... This quantitative analysis has shown that in each of the MPO regions and within each non-attainment area, the level of emissions will be generally lower with the projects proposed. This analysis then demonstrates that the TIP's meet the Interim Conformity Guidelines of the 1990 Clean Air Act Amendments.

Nashua Area Transportation Improvement Program 10/1/92 - 9/30/97 (emphasis added).

The Nashua TIP conformity determination fails to meet the legal standard required under the Act. It is both incomplete and wholly inadequate. As noted above, to conform with the Clean Air Act, a TIP must contribute to annual emissions reductions of hydrocarbons and NOx consistent with the schedule of the Act. Moreover, the analysis must be assessed from a baseline of the

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10 total amount of actual hydrocarbon or NOx emissions from all anthropogenic sources in the area during 1990. Therefore, SIP conformity can no longer be determined through merely a comparison of the "build" versus "no-build" options as performed by NHDOT, but rather must be a thorough analysis of whether a TIP and its transportation projects will indeed contribute to annual hydrocarbon and NOx emissions reductions from the 1990 baseline.

Because the Nashua TIP fails to ensure or in any way indicate that it will contribute to annual reductions from 1990 baseline levels of motor vehicle emissions, much less to a 15 percent reduction in such emissions required by the CAA by 1996, the TIP does not conform to the state implementation plan within the meaning of the Clean Air Act. In fact, the NHDOT TIP Conformity Determination actually states that ozone precursor emissions in Nashua will increase under a Build scenario. And therefore "[n]o department ... of the Federal Government shall ... approve" a transportation project that comes from the Nashua TIP. 42 U.S.C. §7506(c)(1).

The Nashua/Hudson Circumferential Highway is one of the projects within the Nashua area nonconforming TIP. Federal permits must be issued for this project by the Corps in compliance with both section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act. The Corps thus has "an affirmative responsibility" to ensure that the project conforms with the state implementation plan within the meaning of the Clean Air Act, 42 U.S.C. §7506(c). By issuing permits for this

18

10 project, the Corps would approve an activity that does not conform to the New Hampshire state implementation plan within the meaning of 42 U.S.C. §7506(c)(1) and (c)(3)(B)(i). Any permits issued would violate an emission standard or limitation under the Clean Air Act.

The DEIS does include an air quality assessment of the project, but erroneously concludes, without any supporting documentation, that the NRPC transportation programs and the proposed project are in conformance with New Hampshire's State Implementation Plan. DEIS at 4-49.

CONCLUSION

In summary, the Nashua DEIS violates NEPA in several respects. First, the DEIS fails to adequately examine the TCM/TDM/transit alternative to the proposed project. Second, the DEIS ignores the fact that the proposed build alternative comes from a nonconforming TIP and therefore does not comply with the Clean Air Act conformity requirement. Finally, and most significantly, the build alternative selected by NHDOT wholly fails to meet the project's purpose of reducing traffic congestion in the area. This DEIS is too badly flawed to be rehabilitated in a final EIS. NHDOT and the Corps instead must undertake a new review of the alternatives -- especially non-highway-based alternatives -- to this costly, environmentally damaging, and illegal new highway.

19

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Pennichuck Corporation

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To Robert Greer	From T. McAleer
Co.	Co.
Dept.	Phone #
Fax #	Fax #

January 14, 1993

Mr. Robert W. Greer
Director of Project Management
New Hampshire Department of Transportation
John O. Morton Building
Hazen Drive
P.O. Box 483
Concord, NH 03302-0483

VIA FAX

Re: Circumferential Highway
Land Takings Issues

Dear Mr. Greer:

Our comments herein are based on the plans presented at the January 4, 1992 public hearing.

Based on our review of the plans presented at the January 4, 1993 Public Hearing and subsequent discussions with NHDOT staff we have the following comments:

1. The Southwood Corporation parcel 183 shown on the Hearing plans is isolated on the north side of the proposed alignment. Given the commercial zoning of this parcel and its intended future office use, we are not willing to accept access to the parcel via an underpass from the adjoining Southwood parcel on the south side of the alignment. We look forward to discussion with NHDOT regarding its plans to either provide acceptable access or condemn the entire parcel 183.

2. There was extensive testimony at the January 4, 1993 hearing regarding the relocation of the Nashua Fish and Game Club. We have met with Mr. Rod Cyr regarding availability of Pennichuck Corporation lands for this purpose immediately south of the proposed alignment. We look forward to exploring this possibility further with the NHDOT.

Pending the approval of the proposed Alignment B, we are prepared to work with the NHDOT Right of Way section towards the resolution of the above issues and early acquisition of the impacted Pennichuck Corporation lands.

Please advise should you or the NHDOT staff require any information regarding the above matters.

Sincerely,

Thomas J. McAleer, P.E.
V.P. Engineering

cc: M. Arel, Pennichuck Corporation
C. Murray, NHDOT
R. Cyr, NHDOT

Pennichuck Corporation, [illegible] Street, PO Box [illegible], Nashua, New Hampshire 03061, (603) [illegible], Fax (603) [illegible]

1 Comment noted. Access or appropriate compensation will be provided.

2 Comment noted. Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to the paraphrased comments related to the Nashua Fish and Game Association. This can be found at the end of the section entitled, "Regional".

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REGIONAL

Comments related to the potential impact on the Nashua Fish and Game Association

Following the Public Hearing for the Nashua Hudson Circumferential Highway on January 4, 1993, eleven written comments were received expressing concerns regarding impacts of the proposed highway on the Nashua Fish and Game Association's property. The original letters are part of the Public Hearing record. Their comments are summarized below:

1 to 11

1. Town of Merrimack Board of Selectmen (Jan. 20,1993): "Relocation is not assured."

2. Leslie Chunn, President of the Nashua Fish and Game Association (January 4,1993): "Relocation might be impossible... Deer concentrations are present... alternative 7 and 8 have more wildlife impacts... alternative 8 would destroy more wetlands, thus more impacts...cost more money and could not be considered as the best practicable alternative."

3. Philip A. Conte, 38 Seminole Drive, Nashua: "Only high power (600 yard) rifle range in New Hampshire... a safe and responsible place to shoot for members and the community."

4. William J. Miller, 5 Tuckerwood Circle, Nashua: "A unique and irreplaceable facility... game preserve... a tremendous asset to the local area."

5. Rick P. Minshull: "Property is revered by members... open to the general public... safe, responsible firearm handling... hospitable environment for wildlife... an irreplaceable area asset."

6. Richard Widhu, 23 Syracuse Road, Nashua: "Support for saving the Fish and Game land."

7. Timothy and Linda Stanley, 53 Brinton Drive, Nashua: "Nashua Fish and Game Association is impossible to replace."

8. Nathan Guyer, 4 Cimmaron Drive, Nashua: "Unique and irreplaceable facility... wildlife refuge and preserve...safe recreational facility for shooting sports."

9. Allen J. Whitney, 36 Fairfield Street, Nashua: Highway should not be placed over the property of the Nashua Fish and Game Association."

10. Robert Suomala, 2 Buck Ridge Drive, Amherst: "Land has unique features... essential for continued operation of principal activities... isolated from residential areas... large hill provides a safe area for a 600 yard rifle range... easily reached by most members... one of two civilian 600 yard rifle ranges in New England."

11. Town of Merrimack, Robert Brundidge (January 22, 1993): "Invitation to attend the Nashua Fish and Game Association open house to become familiar with the association's facilities in order to better understand the potential impacts from alternative 8."

12

12. In addition to these issues, wildlife concerns were raised by Leslie Chunn in her January 4, 1993 letter. In particular was her comment regarding a statement on page 3-55 of the DEIS which reads, "no over-wintering concentrations or deer yards have been reported in the area of the proposed highway corridor". According to Ms. Chunn, "This statement is incorrect. Deer concentrations are present in the vicinity of the Pennichuck Reservoir, including the Nashua Fish and Game Association property, particularly in the winter. The DEIS falls short of evaluating the increased importance that these remaining habitats have for wildlife. They essentially serve as sanctuaries, or island habitats, as development expands in the region".

Other wildlife issues discussed in her letter are answered in response to her oral testimony at the January 4, 1993 Public Hearing. Responses to these comments are found in the section entitled, Public Hearing Transcript, #95 through #100.

1 to 11 Comments noted. Refer to the letter from NHDOT Assistant Commissioner Leon Kenison which appears on the following pages. The letter addresses concerns raised by the Nashua Fish and Game Association and its members.

12 The DEIS uses the terms deer yard and overwintering concentrations interchangeably. The DEIS does not state that deer are not present during winter as the commenter has interpreted. It does state that, "white tailed deer appear to be very abundant in the Pennichuck Reservoir area". The Pennichuck Reservoir and its surrounding area was identified as a notable wildlife habitat in the DEIS, and in the Wetlands and Wildlife Technical Reports. These conclusions are based on field work conducted from 1990-1992.

It is likely that the white tailed deer population in the vicinity of the Pennichuck Reservoir inhabits the area year-round and does not migrate there during the winter from surrounding areas.

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1 to 11

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION

CHARLES P. O'LEARY, JR.
COMMISSIONER

April 16, 1993

Ms. Leslie A. Chunn, President
Nashua Fish & Game Association
P.O. Box 28
Nashua, New Hampshire 03061

Re: Nashua-Hudson 10644

Dear Ms. Chunn:

This letter will confirm the past discussions and conceptual agreements between representatives of the Nashua Fish and Game Club and the State of New Hampshire, Department of Transportation. All agreements and statements of intent are contingent upon the Department of Transportation receiving all necessary permits for the Circumferential Highway alignment presented at the January 4, 1993 Public Hearing. Should that proposed alignment or one substantially similar to it not be constructed the agreements outlined in this letter are void.

The Department of Transportation will pursue the design of an alteration to the alignment shown at the Public Hearing. In the area of the Nashua Fish and Game Club the Highway Center Line will move Westerly away from Sanders as shown on the attached preliminary concept plan. This is being developed to allow the six hundred (600) yard range to remain. It is recognized that the range may need to be modestly reconfigurated. This proposed change involves negotiation with Sanders Corporation for a portion of their property.

To provide property needed for the Fish and Game Club to replace their facilities which are impacted by the proposed highway, the Department of Transportation will purchase property from Digital Equipment Corporation and Pennichuck Water Works.

The subject properties owned by Sanders, Digital Equipment and Pennichuck are identified on the attached conceptual plan which is part of this letter. The Department of Transportation will pursue these acquisitions through all legal means.

Structures on the Nashua Fish and Game Club property which are directly impacted by the proposed highway will be replaced in kind by the project. Any upgrades or betterments are at the Fish and Game Club's expense. The in kind replacements will meet all applicable current codes, laws, zoning regulations and reasonable prevailing standards for the type of facility being replaced.

JOHN O. MORTON BUILDING - HAZEN DRIVE - P.O.BOX 483 - CONCORD, N.H. 03302-0483 - TELEPHONE 603-271-3734
FAX 603-271-3914 - TDD ACCESS: RELAY NH 1-800-735-2964

1 to 11

Any expenses related to the design and construction of the replacement facilities must receive prior approval from the Department of Transportation. Engineering or architectural firms that are proposed to be used must be reviewed by the Department's Consultant Committee. Expenses incurred without the Department's approval will not be eligible for reimbursement.

In exchange for the replacement land and structures, the Nashua Fish and Game Club will donate the property needed for the highway to the State.

During the final design of the highway project, the Department will work with the Fish and Game Club on items such as visual screening between the highway and the shooting range.

I trust this accurately reflects our discussions. Thank you for working with us to reach a mutually satisfactory agreement.

Sincerely,

Leon S. Kenison
Assistant Commissioner

LSK/CAM/dje

cc: R. Cyr
C. Murray

Administration
John O. Morton Building - Room 102
Telephone: (603) 271-3734

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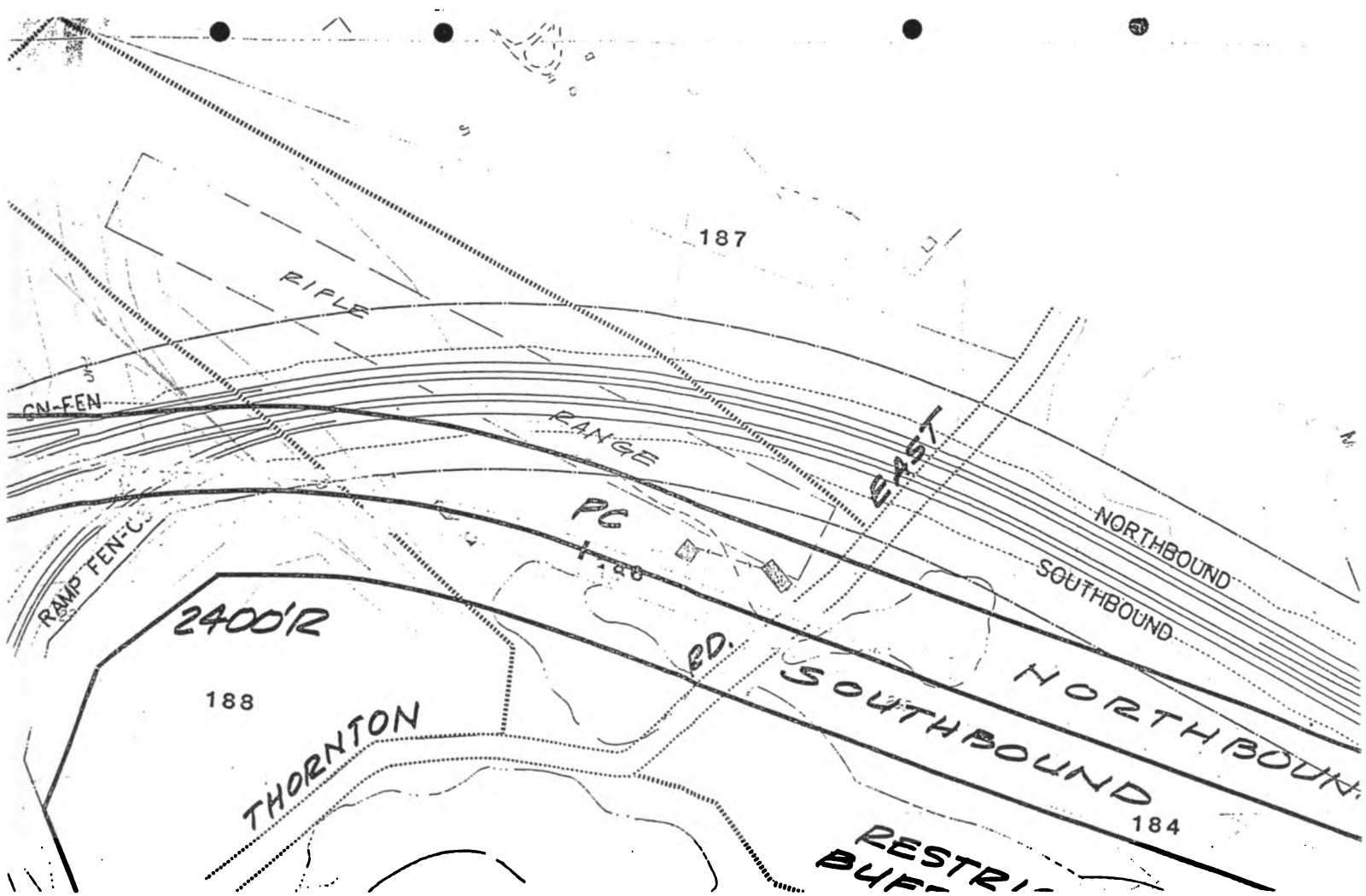
1 to 11



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4. Local Comments

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4.1 LOCAL

The following local agencies provided written comments on the DEIS:

Town of Hudson, Board of Selectmen
Town of Merrimack, Planning Board
Town of Merrimack, Town Hall
Greater Nashua Chamber of Commerce
City of Nashua, Conservation Commission
City of Nashua, Community Development Division
Town of Litchfield

In addition to these comments, Mayor Rob Wagner of the City of Nashua also submitted written comments on the DEIS.

Comments from the Town of Litchfield were paraphrased because the comments were written directly into a copy of the DEIS. Many of their comments were also provided at the Public Hearing Testimony on January 4, 1993.

Written comments and the corresponding responses follow.

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LOCAL

TOWN OF HUDSON
Board of Selectmen

12 School Street Hudson, New Hampshire 03051 603/886-6024

December 22, 1992

Theresa Flieger
US Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, MA 02254-9149

Reference: File #198801828 Nashua-Hudson Circumferential Highway

Dear Ms. Flieger:

The following information is submitted pursuant to the Public Notice dated November 24, 1992 relative to File Number 198801828, the Nashua-Hudson Circumferential Highway. This notice provides for written public comment by January 11, 1993.

The Board of Selectmen and the Planning Board of Hudson, New Hampshire have authorized the Chairmen of the Boards to provide the following comments and recommendations to the US Army Corps of Engineers and the NH Department of Transportation.

The following comments are intended to address alignment issues. These comments do not address funding issues, (ie, tolls). Project financing is considered to be under the purview of the NH Department of Transportation and the State Legislature.

These comments are a result of a review and analysis of the October 1992 Revised Draft Environmental Impact Statement produced by the US Army Corps of Engineers.

1 Pages S-2 & S-3, under Beneficial effects, there are three additional benefits not mentioned, which are:

1) Improved safety of vehicular and pedestrian traffic on the local roads of Hudson.

2 2) Improved quality of life for the residents of Hudson that live on or near the local corridors currently being used to move traffic east-west.

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3 3) The Draft Regional Transportation Study that was performed this past summer by the Nashua Regional Planning Commission indicates that approximately 60% of the traffic that enters Hudson from the east continues through to destinations west of Hudson. Therefore, an additional benefit will be lessening the impact of this traffic on the local roadways by providing an efficient east-west transportation network.

The Board of Selectmen and the Planning Board of Hudson, NH fully support the project purpose and the need for action.

4 On Page S-24 under Historical Resources, it is stated that Alternatives 5 & 6 will displace the Hudson Historical Society and Cultural Center (commonly referred to as the Hills House). This structure is on the National Register of Historical Places. What is not stated is that Dr. Hills has left a lasting legacy to the community that he and his family came to love. We submit that pursuing Alternatives 5 & 6 goes beyond the irreplaceable loss of a building, and includes the loss of a significant piece of Hudson's history.

5 On Page 2-24, under Historical Resources, there is no mention of the loss of agricultural lands of the Alvirne High School. This land is part of the continuing legacy of the gifts given to Hudson by Dr. Hills.

6 On Pages 2-26 & 2-27, it is stated that Alternatives 7 & 8 will impact more undeveloped land than the other alternatives under consideration. Although this is true, it must be taken into consideration that a great deal of this undeveloped land exists, due to the long-range planning of the state and local communities. This planning resulted in obtaining the right-of-way that would be required to construct this roadway. We submit to you that if there had been no long-range-planning, the amount of undeveloped land would be substantially less.

7 On Page 2-28, it is stated that Alternatives 5 & 6 will require the taking of a well (Well H10). All other alternatives will not require the taking of wells.

8 On Pages 2-29 & 2-30, it is stated that Alternative 6 impacts the least amount of wetlands and Alternative 7 impacts the most. However, Alternative 8 impacts the least number of "key wetlands." It should be noted that Alternative 6 impacts 25% more of the "key wetlands."

9 On Page 2-31, it is stated that Alternatives 3 through 6 would impact a known asbestos site (Site 21, 4 Gregory Street). Alternatives 7 & 8 do not impact any known asbestos sites. We believe that disturbing this asbestos site is contrary to the public good.

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LOCAL

Theresa Flieger 3. December 22, 1992

10 Figure 3.1-2 on Page 3-8 indicates that the level of service existing in 1990 is, for the most part, in a failure condition (level of service F). While Figure 2-6 on Page 2-17 indicates that, with full build, the level of service is greatly improved at the 20-year benchmark. We believe that the improved level of service translates directly to improved safety of vehicular and pedestrian traffic in these corridors.

11 In Section 3-2 that begins on Page 3-15, it is stated that the pattern of development within Hudson is of a radial nature. Further, it is stated that the commercial development within the Town has occurred along the primary roadways of NH Routes 102, 111 and Lowell Road. We believe that this illustrates and supports our position that the Town of Hudson has been planning its future in accordance with the previously described B/C corridor.

12 On Pages 3-19 and 3-21, there are comments related to the Zoning Regulations of the community. These comments do not reflect the fact that the Planning Board has worked for the last 2-1/2 years on a complete rewrite of our Zoning Ordinance. This effort will result in changes being forwarded to Town Meeting in March 1993.

13 Pages 3-31 and 3-32 present comments on farmlands. It should be noted that Alternatives 5 & 6 will have the greatest impact on farmlands, while Alternatives 7 & 8 have the least. It must be pointed out that Alternatives 5 & 6 will impact the Alvirne High School farmlands and the agricultural program of the school. Further, it must be noted that this is the only program of its kind in the state of New Hampshire. This program has received national recognition and is considered to be one of the ten best agricultural programs in the country.

14 Pages 3-57 through 3-60 comment on threatened or endangered wildlife species. We must point out that Alternatives 5 & 6 will impact the feeding areas of potential roosting habitats of the bald eagle. Alternatives 7 & 8 are least likely to have adverse impacts on our national symbol, the bald eagle.

Therefore, in recognition of all the elements that are required as part of the Environmental Impact Statement, as well as assessing the Least Environmentally Damaging and Practicable Alternative project alignment (LEDPA), the Board of Selectmen and Planning Board of the Town of Hudson, New Hampshire endorse Alternative 8. This alternative serves the project purpose and is the least environmentally damaging alternative, when all elements of the Environmental Impact Statement are reviewed.

1 to 14 Comments noted. This letter reiterates the issues raised in oral testimony by Mr. Robert Brown, Chairman of the Hudson Planning Board. Refer to the responses provided to comments #12 through #26 of the Public Hearing Testimony.

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Theresa Flieger 4. December 22, 1992

We ask that these written comments be included as part of the public record. Should you have any questions regarding these comments, please address them to the Chairman of the Planning Board, 12 School Street, Hudson, NH 03051.

Sincerely,

HUDSON BOARD OF SELECTMEN

Ralph Scott, Chairman

HUDSON PLANNING BOARD

Robert W. Brown, Chairman

cc: Board of Selectmen
Planning Board Members
Commissioner Charles P. O'Leary, NH DOT
Rod Cyr, NH DOT
Don Zizzi, Nashua Regional Planning Commission
David Feng, Chairman, Hudson School Board

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LOCAL

Town of Merrimack, New Hampshire 03054

Planning Board, P.O. Box 940
Town Hall, West Wing, 8 Baboosic Lake Road

603/424-3531
603/424-3931
FAX 603/424-1760

January 19, 1993

Chairman of the Commission
c/o Robert W Greer, Director
NH Department of Transportation
P O Box 483
Concord NH 03302-0483

Re: Nashua-Hudson Circumferential Highway

Dear Mr Chairman:

As the Department of Transportation is well aware the Merrimack Planning Board has worked closely with the department since August 1983 to protect the corridor now identified as Alternate 7 in the plan for the Nashua-Hudson Circumferential Highway. Developers have been required by the Town's Planning Board to work with the department and in some cases have been required to set aside major tracts of land for this purpose.

1 As citizens of our community responsible for its future planning we wish to express our extreme dissatisfaction with the process employed by the NH Department of Transportation in selecting a recommended preferred corridor (Alternate 8) for the Nashua-Hudson Circumferential Highway through the Town of Merrimack. We believe that the process of obtaining accurate and complete local information is inseparable from good highway route planning. The examination of local land uses, land use policies, property lines, environments, and current land uses is necessary to proper road siting.

In addition, we have found through experience that an open and public discussion of a planned route and its alternatives will improve the planning process and enable selection of a route which produces the greatest benefit to the traveling public with minimum impact to existing established land uses.

We find these essential elements of good planning to be absent in the selection of the Alternate 8 corridor for the Nashua-Hudson Circumferential Highway through Merrimack. There were no public hearings held in Merrimack on the alternative routes. According to the testimony of NH Department of Transportation officials at the January 4, 1993 hearing, there was no consideration given to current land uses impacted by the Alternate 8 corridor.

1 The scoping process of this revised EIS began on 5/9/90 and continued through the comment period which followed the Public Hearing on January 4, 1993. Public meetings were conducted on June 28, 1990, April 10, 1991, and July 6, 1992. In addition, more than 70 overall coordination meetings were held during the scoping process as listed in the EIS under Community and Agency Coordination.

The scoping process for this project was open, comprehensive, unbiased, and fully supportive of the objectives of good land-use planning. Considerations of land use information is documented in the EIS and represents the basis of judgment. The process has provided full opportunity on several occasions for any interested organizations or individuals to register questions, concerns, or other project related information.

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2 The Draft Environmental Impact Statement contains several significant inaccuracies particularly in representing wetland boundaries and environmentally sensitive areas. Many people in our community believe that the Alternate 8 selected route poses a greater environmental threat than the Alternate 7 route, previously endorsed by the Merrimack Planning Board.

3 We therefore request that the NH Department of Transportation re-examine its choice of corridor within the Town of Merrimack and after public hearing and examination of current and planned land uses in the community, reconsider the previous recommendation by the Merrimack Planning Board to site the Nashua-Hudson Circumferential Highway on corridor Alternate 7 within the Town of Merrimack.

Sincerely,

NELSON R DISCO, CHAIRMAN

cc: US Army Corps of Engineers, Waltham, MA
Members, State Legislature, Merrimack
Bernard A Streeter, Jr, Executive Councilor
Planning Board Members
Conservation Commission
Board of Selectmen
J Pitts, Acting Town Manager
E Chesley, Director of Public Works
C Watson, Planning Director

403

2 Wetland boundaries represented at this stage of the planning process are based on National Wetland Inventory (NWI), Soil Conservation Service (SCS) information and general field observations. This is consistent with the intent of the Corps Highway Planning Methodology to evaluate all options equally and determine approximate impact acreage within a reliable range of accuracy. Exact wetland boundary delineations will occur when a LEDPA is determined in order to determine exact acreage impacts. The main difference between Alternative 7 and 8 is that Alternative 8 avoids the Pennichuck Reservoir. In this respect it is difficult to see how Alternative 7 is less environmentally damaging than Alternative 8.

2 Comment noted. Current and planned land uses, as supplied by the town of Merrimack, are presented in the Socioeconomics Technical Report and utilized in the analysis.

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LOCAL

Town of Merrimack, New Hampshire
TOWN HALL
P.O. Box 940
Merrimack, New Hampshire 03054
6 Baboosic Lake Road
TEL: 603/424-2331
FAX: 603/424-1760

January 20, 1993

Chairman of the Commission
c/o Robert W. Greer
Director of Project Development
N.H. Department of Transportation
P.O. Box 483
Concord, New Hampshire 03302-0483

Re: Public comment on the Nashua-Hudson Circumferential Highway -Merrimack

Dear Mr. Chairman:

1 As has been stated in the past by the Board of Selectmen, the Town of Merrimack recognizes the critical need of this highway as an important component of the regional transportation network. The Planning Board and the Conservation Commission concur with the Selectmen in this position. After considerable thought and discussion with these boards and other officials of the town however, the Board of Selectmen finds that it is not possible to support Commissioner O'Leary's preferred route, Alternate 8, as it pertains to the Town of Merrimack. There are physical routing reasons and there are procedural reasons. Our objections are outlined as follows:

2 1. The routing of Alternate 8 in Merrimack places the highway in the Pennichuck watershed area for a greater distance than does Alternate 7. If one considers the environmental impact of the highway on the water supply, then Alternate 8, based upon the information presented, is of greater potential impact to the water supply than is Alternate 7. Alternate 7 as it crosses the Pennichuck Brook is designed to have a closed drainage system; Alternate 8 is not designed to have a closed system.

3 2. Alternate 8 in Merrimack causes the relocation of the 56-year old Nashua Fish and Game Association's recreation area. If the obtaining of the necessary permits to relocate this unique facility could be reasonably assured, then the Town would not likely have this objection. It is not possible however, for anyone to give such advanced assurances; therefore, the Town objects to Alternate 8 for this reason also.

4 3. The location of Alternate 8 in Merrimack is an extremely tight fit between the Pennichuck Brook and Interchange 10. According to the drawings shown at the January 4, 1993 public hearing, there is only about 0.75 of a mile from the center of Exit 10 to the center of proposed Exit 9. We consider this fit to be too tight to be a safe alternative.

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1 Comment noted, no response required.

2 Alternative 7 crosses the Pennichuck Reservoir directly, whereas Alternative 8 was designed to avoid crossing the Pennichuck water supply. Refer to the response provided for comment #2 of the Public Hearing Testimony concerning the closed drainage system for Alternative 8.

2 Comment noted. Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to the paraphrased comments regarding the Nashua Fish and Game Association. This can be found at the end of the section entitled, "Regional".

4 Comment noted. Refer to the response provided for comment #7 of the Public Hearing Testimony.

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LOCAL

5 4. Several years ago, after participating in a number of meetings, the Town of Merrimack endorsed the B-C alignment. Since that time, the Planning Board has made several significant land use decisions in good faith regarding sites adjacent to this corridor. In the interests of sound and consistent land use planning, we recommend that Alternate 7 be re-examined.

As a result of these physical routing problems with Alternate 8 in our community, the Town of Merrimack requests that a more extensive evaluation of Alternate 7 in our community be undertaken to determine if Alternate 7 is indeed a less harmful, safer, and more socially and economically acceptable alternate than 8. At the present time and with the information available, the Town of Merrimack recommends to the U.S. Army Corps of Engineers that Alternate 8 in our community be denied in preference to Alternate 7.

The Town of Merrimack objects to the preferred route offered by the N.H. Department of Transportation not only for reasons of routing, but also for reasons of procedure, as noted herein.

6 5. An important reason to object to Alternate 8 in Merrimack is that there has never been a public hearing on this alternate held in Merrimack and limited to a discussion of this alternate as it affects Merrimack land, homes, businesses, and a major public water supplier as well as the natural environment. The N.H.D.O.T. scheduled one "public officials" meeting in Merrimack with very short notice and during the time of a previously scheduled Planning Board meeting. Town officials requested additional information, especially pertaining to maps of the corridor in relation to property ownership, but the information was never forthcoming until January 4, 1993, and then only for the preferred route. A problem with officials' meetings is that they preclude public input, and leave the acquisition of public input to the towns which by definition do not have either the authority or the information to hold such a meeting. It is often not possible for local officials to recognize serious problems associated with a given alternate without informed public input and cooperation from the N.H.D.O.T.

7 6. In the past, when significant state highway work was contemplated in Merrimack, officials from the N.H.D.O.T. met with local officials, shared important data, and assisted in holding public hearings. This kind of cooperation was not forthcoming during the development of Alternate 8 in Merrimack. In part because of this lack of cooperation, the Town of Merrimack is not able to support the Commissioner's preferred route.

8 7. We reiterate our previous objections to Alternates 3, 4, 5 and 6 in Merrimack as creating too serious a detriment to an already established large industry in our community and creating potentially serious difficulties in obtaining necessary access to Route 3 (Daniel Webster Highway) and/or Industrial Drive.

5 Comment noted. A full range of impacts associated with Alternative 7 have been identified in the EIS along with the other reasonable alternatives. In addition, EPA objects to Alternative 7 due to potentially adverse water quality impacts.

5 Comment noted. Refer to the response provided for comment #2 of the Town of Merrimack Planning Board's letter.

1 Extensive coordination was conducted throughout the process and public informational meetings were held at Alvirne High School and Hudson Memorial School. Area residents were notified of these meetings in advance. Refer to the response provided for comment #1 of the Town of Merrimack Planning Board's letter.

4 Comment noted, no response required.

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9

8. The Town of Merrimack also finds fault with the D.E.I.S. and the large display maps; there are inaccuracies and dated material in the documents which lead us to believe that the work is not reliable. We formally request that the N.H. Department of Transportation undertake additional analysis of the relative environmental and safety impacts of Alternate 7 and demonstrate the attributes of 7 in comparison to 8 in Merrimack. We also formally request that the N.H.D.O.T. conduct a public hearing in Merrimack on the relative merits of Alternates 7 and 8. Only after these efforts by the N.H.D.O.T. will the Town of Merrimack consider endorsing the Commisisoner's proposed routing of the Nashua-Hudson Circumferential Highway in Merrimack.

Thank you for your attention to these matters which the citizens of the Town of Merrimack feel to be of utmost importance to this process. We look forward to working closely with the Department of Transportation in bringing to completion this project which is so vital to the economic wellbeing of our region.

Sincerely,

The Merrimack Board of Selectmen:

Robert W. Brundige, Chairman

John M. Francis

Edward J. Silva

Richard E. Dumont

Leonard C. Worster

cc: U.S. Army Corps of Engineers
Merrimack's State Representatives
J.C. Pitts, Acting Town Manager, Merrimack
C.F. Watson, Planning Director, Merrimack
E.M. Chesley, Director of Public Works, Merrimack
Merrimack Conservation Commission
Merrimack Planning Board

9 There are no known inaccuracies and none were identified in this letter. All of the material and data used for this DEIS was up to date at the time the Technical Reports were written (1990-1992). All alternatives are examined equally in the DEIS. As for the request for a Public Hearing to be held in the Town of Merrimack, refer to the response provided for comment #1 of the Town of Merrimack Planning Board's letter.

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LOCAL

GREATER NASHUA CHAMBER OF COMMERCE

THE CHAMBER

CITY PLAZA
000 MAIN STREET
NASHUA, NEW HAMPSHIRE 03060
603/000-0000 FAX 603/000-0000

January 4, 1993

Ms. Theresa Flieger
Regulatory Division-Operations Directorate
Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road ATTN: CENED-OD-R
Waltham, MA 02254-9149

RE: Policy Statement in Support of Nashua/Hudson Circumferential Highway

Dear Ms. Flieger:

1 On behalf of the Greater Nashua Chamber of Commerce, a regional business association which represents business interests in Nashua and the surrounding nine towns, we would like to stand before you and reaffirm, in the strongest possible terms, the nearly ten year old position of the Chamber of Commerce in support of the Circumferential Highway.

We carry with us a certain sense of deja vu in this process as we have repeatedly stood in support of this highway in the many aspects of its consideration. However, with due respect to the regulatory process, the business community feels very strongly that state and federal officials should move this highway project forward at all possible speed. It is an element of our regional economic infrastructure that is long overdue.

As the region faces the challenges of global competition and the restructuring of our regional economy, it is clear that we must have a highway system that will build a basis for mobility and access for all of our citizens and businesses in the region. It is on this basis that we can hope to build for the jobs of the future. This highway is pivotal in the economic rebirth of the Nashua region.

The Chamber's Board fully endorses the position of the State Department of Transportation and the towns now supporting the recommended route.

Sincerely,

Peter McArdle, Local Affairs Chair

STATEWIDE PUBLIC AFFAIRS GROUP
THE NEW HAMPSHIRE ASSOCIATION
OF COMMERCE AND INDUSTRY

1 Comment noted here as well as in comment #27 of the Public Hearing Testimony.

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LOCAL

POLICY STATEMENT
GREATER NASHUA CHAMBER OF COMMERCE
DECEMBER 22, 1992

1 At their regular meeting of December 16, 1992, the Board of Directors of the Greater Nashua Chamber of Commerce voted unanimously to reaffirm, "in the strongest possible terms", the nearly 10 year old position of the Chamber in support of the Circumferential Highway.

The Chamber Board underlined in the motion leading to the vote that State and Federal officials should move this highway project forward "at all possible speed" in that it is "long overdue" as an element of the region's economic infrastructure.

A representative of the Chamber's Local Affairs Committee will appear at the public hearing on Monday, January 4, 1993 scheduled by the U.S. Army Corps of Engineers, and present the Chamber's position to the federal agency which is in a lead position for permitting the project.

The Board "did not wish to engage in any debate" on the route of the highway or its northern terminus. "Time is of the essence here", in the words of the discussion on the motion. The Board fully endorses the position of the State Department of Transportation and the towns now supporting the recommended route.

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LOCAL

City of Nashua
City Hall
229 Main Street
Nashua, NH 03061-2019
(603) 594-3341

Rob Wagner
Mayor

December 22, 1992

Mrs. Theresa Flieger
Regulatory Division-Operations Directorate
Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road ATTn:CENED-od-r
Waltham, MA 02254-9149

Dear Ms. Flieger:

1 On behalf of the City of Nashua, I would like to express my strong support for the construction of the Circumferential Highway and a Full-Build alternative.

The circumferential Highway is a vitally important element of Nashua's transportation infrastructure. In view of the rapid expansion of our City during the past ten years, and the probable continued growth in this region, it is absolutely necessary that we mitigate the current traffic congestion with a responsible, effective highway system. The Circumferential Highway provides a significant first step in solving existing transportation problems both in Nashua and the surrounding communities. I am certain that the Corps of Engineers will select an option that is the most environmentally benign.

This project represents responsible planning, an opportunity for effective land use and improved air quality, and mitigation of current gridlock situations in Nashua. For these reasons, the Circumferential Highway Project has my full support.

Best regards,

Rob Wagner
Mayor

RW:ck

DEC 28 1992

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1 Comment noted, no response required.

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LOCAL

City of Nashua
Conservation Commission
229 Main Street, Nashua, NH 03061-2019 (603)594-3411

January 15, 1993

Chairman of the Commission
% Robert W. Greer
New Hampshire DOT
P.O. Box 483
Concord, NH 03302-0483

RE: Nashua-Hudson Circumferential Highway Draft EIS

Dear Sir:

The Nashua Conservation Commission wishes to extend its appreciation to your department and to the Army Corps of Engineers for providing this opportunity to comment on the subject document.

1 We wish to acknowledge the need for improved transportation facilities in the southern part of the state and encourage all efforts to provide a well planned and environmentally sensitive set of solutions to the increasing congestion and failure of existing facilities. Such planning should take into consideration all transportation modes and options.

2 We are, of course, concerned with the extent of environmental impacts that are visited upon Nashua's wetlands, surface waters, water supplies, and animal habitats as a result of the proposed alternative 8 including salt and other pollutant bearing runoff. We note that there are two areas of potential major wetland impacts which could serve to reduce the extent and quality of critical wetland resources. These are the construction activities proximate to Pennichuck Brook in the vicinity of Concord St., and the impacts in the vicinity of Bowers Pond as a result of the new interchange #9. Both of these wetland areas have been identified by Nashua as of great importance based upon many factors including wetland quality, extent, and wildlife values. We request that these wetlands be given there due status during future deliberations and that all reasonable efforts be made to avoid these impacts.

Should it be the decision of your department and the Army Corps of Engineers to develop the highway along the alternative #8 corridor, we strongly believe that you should mitigate wetland losses as close to their occurrence as possible. We note that there are no proposals presented for mitigation within Nashua or the Pennichuck Brook watershed. We strongly object to any mitigation proposal

1

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1 Comment noted, no response required.

2 Comment noted. Both the Pennichuck Reservoir and Pennichuck Brook have been identified in this report as key wetland sites. This is consistent with Nashua's prime wetland designation. Key wetland areas are flagged so that they are given special consideration. All wetland losses that result from the proposed project will be considered in the development of a mitigation plan regardless of the municipality they are located in.

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2 that does not recognize the losses in Nashua and this highly significant watershed.

It is recognized that the decision to proceed at this point must be made on the basis of planning level documents. Damage to Nashua's environment will be more clearly evident at the detailed engineering and then construction stages. Accordingly, we urge that this Commission be kept abreast of all engineering and related project developments throughout the process. We must impress upon you that from this point forward, every decision, not just the section 404 permit, must be cognizant of the need to minimize and, preferably, avoid environmental degradation and losses.

3

4 We note, for example, that section 4 of the DEIS presents stormwater runoff mitigation concepts. On page 4-80 there is a discussion of 1 ft/sec flows and treatment options. This is followed by the a statement that if 1 ft/sec can not be achieved, lined swales will be used. Recall that the reason for lined swales is to protect groundwater resources and to trap and hold toxic or hazardous spills. Lined swales will not effectively work at velocities greater than 1 ft/sec. Thus, the logic for environmental protection fails in this latter case. It is not our intent to critique the DEIS points specifically, but it is our intent to underscore that each of these design decisions must be made and reviewed on the basis of environmental protection.

Please feel free to contact us for further clarification of these points and to allow us to work with you toward the protection of Nashua's environment.

Sincerely;
Nashua Conservation Commission

Fred A. Elkind
Commissioner

cc: Theresa Flieger, NE Div. Corps of Engineers

2

2 Comment noted. The Corps will continue to work with NHDOT and federal and state resource agencies during the design process to minimize impacts.

4 Page 4-80 of the EIS states that lined swales prevent the infiltration that would normally occur at velocities less than 1 ft/sec. Unlined vegetated swales can be used where runoff flow is maintained at or higher than 1 ft/sec because infiltration is much less likely to occur at these faster speeds. Thus, lined swales are unnecessary in the latter condition.

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City of Nashua
Community Development Division
229 Main Street, Nashua, NH 03061-2019

December 21, 1992

Ms. Theresa Flieger
Regulatory Division-Operations Directorate
Department of the Army
New England Division, Corps of Engineers
424 Trapelo Road Attn: CENED-OD-R
Waltham, MA 02254-9149

Re: DEIS for Nashua-Hudson Circumferential Highway

Dear Ms. Flieger:

1 The City of Nashua has historically and continues to support the construction of the Circumferential Highway. From its original conception in the late 1950's, this roadway has been viewed as a vital element in the region's transportation infrastructure. Much of the community planning that has been done and relied upon for local decision-making is in anticipation of, and inextricably linked to, this roadway. The City's own comprehensive Master Plan and the region's Transportation Plan both underscore further the importance of this facility.

Since the Corps of Engineers assumed lead agency responsibility in 1990, the City has closely monitored and actively participated every step along the way. We have anxiously awaited completion of the environmental assessment process. Having reviewed the Draft EIS prepared, we concur that only a so-called Full Build alternative will adequately address the stated purpose and need for the project. We are satisfied with the completeness of the evaluations conducted, and believe the Corps and other relevant reviewing agencies have sufficient information and analyses upon which to base decisions and grant necessary permits.

2 Unlike our neighbor towns, the direct impacts on the City of Nashua do not appreciably vary from one alternative to another. The southern, Sagamore Bridge terminus is common to all and has been planned for many years. The northern terminus alternatives represent only slight variations in how Nashua is affected. Depending on the alignment ultimately chosen, the incorporation of various mitigation measures into final design preparation can effectively ameliorate the impacts resulting on neighboring properties and connecting, feeder roadways.

For additional clarity and by way of official comment, let us offer to you the following observations:

The notion of a "Circumferential Highway" has been around now for generations. As such, it has largely been taken for granted by many if not most residents. Local land use and transportation planning has been done with the expectation that a "beltway" would supplement and compliment our existing road network. Without an additional Merrimack River crossing and improved north-south as well as east-west circulation, already congested areas will worsen, the central business districts of Nashua and Hudson would incur gridlock, and mobile source air pollution would be exacerbated.

Congestion mitigation requires a systematic network or "systems" approach. TDM and TSM efforts are being developed, but are grossly inadequate either by themselves or taken

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Division Director 594-3379	Planning and Zoning 594-3360	Urban Programs 594-3380	Code Department 594-3314

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1 Comment noted, no response required.

2 Comment noted, no response required.

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together. A "circumferential highway" is vital to take pressure off existing roads forced to serve both origin-destination functions and as through-routes. Convenient connections to the Circumferential Highway are an integral part of the overall strategy and essential to making the total system operate more efficiently.

The construction of new highway facilities inevitably and unavoidably result in direct, indirect, and cumulative effects. Impacts on environmental resources are ultimately weighed against impacts on man's built environment; and tradeoffs are calculated, using the proverbial "do-nothing" option as a baseline measure. In this case, the do-nothing/no-build alternative is not a realistic option at all. The environmental consequences of not addressing traffic congestion are more severe and even more untenable than the unavoidable impacts resulting from any of the six (6) build alternatives evaluated in great detail. Yet a balance, however elusive, can be found: And, creative, constructive compromises must be made.

3 The Commissioner of the NHDOT, Charles O'Leary, recently made his preference known. Alternative "B" was endorsed as the Department's preferred alignment. Though not the least impacting alignment from strictly a wetland impact point of view, it represents an alignment that is apt to get both Hudson's and Merrimack's endorsement. Without such local support, the likelihood of any road getting built becomes remote. Herein lies the dilemma, should the Corps or other resource agencies be unable to accept a balanced perspective or approach. From our point of view, the choice of an alternative that can meet local political muster, and for which measures can be devised to minimize and mitigate or compensate for impacts created, is the logical conclusion to this rigorous evaluation process. I believe this is what guided the Commissioner in his decision-making: An appreciation for the importance of this project, an understanding of and respect for the EIS process, a desire to find a workable solution, and the need for a balanced approach.

Let me close by reiterating the City's position that a Circumferential Highway is essential to the environmental well-being and future prosperity of the entire region. Growth in southern New Hampshire is inevitable. This vital road project represents an opportunity for effective land use and transportation planning to occur jointly, simultaneously, and inter-locally.

Sincerely,

David S. Boesch, Director
Community Development Division

DSB/lg

cc: Mayor Wagner
Nashua City Planning Board

2 Comment noted, no response required.

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Comments from The Town of Litchfield

The Town of Litchfield submitted comments on the Nashua Hudson Circumferential Highway DEIS in the form of a marked up copy of the DEIS. This copy is part of the Public Hearing record. The town of Litchfield's comments are summarized below:

1 1.) The traffic volumes and level of service that are presented for NH Route 3A north of the Hudson-Litchfield border are inaccurate in that they are not consistent with each other.

2 2.) Impacts to farmstands from alternatives 3,4,5 or 6 are more important than is reflected in the DEIS.

2 3.) Table 3.1-5 on page 3-12 of the DEIS reports that 211 people work in Litchfield. The Town of Litchfield feels that these numbers are inflated.

1 4.) The town states that some of the bikeway/walkway provisions that are discussed on page 3-13 of the DEIS have already been implemented.

5 5.) On page 3-30 of the DEIS, it is stated that the, "Town of Litchfield operates neither a municipal water nor sewer system. Water is supplied from private wells and sewage is treated by individual septic systems." The town points out that this statement is incorrect in that water is provided to approximately half of Litchfield's residents and many of Hudson's residents by the Weinstein Well which is owned and operated by the Southern New Hampshire Water Company (SNHWC). The rest of the population obtains its water from private wells.

2 6.) The town reports that 2 moose were sighted and killed in Litchfield in 1992. One of them was in the area of alternatives 4 and 6.

In addition to these concerns, the town of Litchfield pointed out a number of editorial changes that are needed in the DEIS. These editorial changes have been incorporated into the FEIS.

Concerns of the Town of Litchfield are also presented in the oral testimony of Thomas Levesque and Steve Robinson of the Litchfield Board of Selectmen at the January 4,1993 Public Hearing. These comments are presented in the Public Hearing Testimony transcript on pages 65-73.

1 Comment noted. Refer to the response provided for comment #43 of the Public Hearing Testimony.

2 If not mitigated, we agree that the loss of farmstands is a major impact. However, farmstands can and will be given the opportunity to relocate and continue operation.

9 The figures in Table 3.1-5 on page 3-12 of the EIS were provided by the NRPC, and were estimated in 1989.

4 Comment noted, no response required.

5 Comment noted. The statement is incorrect in this section of the DEIS and has been corrected in the FEIS. The Wells and Aquifers Technical Report accurately assesses Litchfield's water supply.

6 Comment noted, no response required.

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5. Public Hearing Transcript

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5. Public Hearing Transcript

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5.1 PUBLIC HEARING TESTIMONY

The following is a reduced version of the actual Public Hearing transcript from the January 4, 1993 Public Hearing that was held at Hudson Memorial School in Hudson, New Hampshire. Many of the issues raised at the Public Hearing were also discussed in numerous written comments received both before and after the hearing.

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PUBLIC HEARING TESTIMONY

In The Matter Of:

Joint Public Hearing of the N.H. Dept. of Transportation & U.S. Army Corps of Engineers

January 4, 1993

FRITZ & SHEEHAN ASSOCIATES, INC.
295 DEVONSHIRE STREET
BOSTON, MA 02110
(617) 423-0500

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Word Index included with this Min-U-Script®

Page 1

DEPARTMENT OF THE ARMY
NEW ENGLAND DIVISION, CORPS OF ENGINEERS
424 TRAPELO ROAD
WALTHAM, MASSACHUSETTS 02254-9149
JOINT PUBLIC HEARING
OF THE
NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
AND THE
U.S. ARMY CORPS OF ENGINEERS,
ON
NASHUA-HUDSON CIRCUMFERENTIAL HIGHWAY
Monday, January 4, 1993
Memorial School
Hudson, New Hampshire

SPECIAL COMMITTEE:
Bernard Streeter, Chairman
Earl A. Rinker

ALSO PRESENT:
U.S. ARMY CORPS OF ENGINEERS
Lt. Col. James Hughes, Deputy Division Engineer
David Killoy, Regulatory Division
Terry Flieger, Regulatory Division
NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION
Leon Kenison, Assistant Commissioner
Carol Murray, Administrator of the Bureau of Right-of-Way
Dick Flynn, Chief Relocation Assistance Section
Red Cyr, Chief Project Manager

Page 2

INDEX

STATEMENT BY	PAGE
Lt. Col. James K. Hughes, Deputy Division Engineer, U.S. Corps of Engineers	6
PRESENTATION BY:	
Leon kenison, assistant commissioner, New Hampshire Department of Transportation	11
Dr. Robert De Santo, Parson De Leuw, Inc.	13
Carol Murray, Administrator, Right-of-Way Bureau, New Hampshire Department of Transportation	27
Dick Flynn, Chief, Relocation Assistance Section, New Hampshire Department of Transportation	30
Red Cyr, Chief Project Manager, New Hampshire Department of Transportation	32
STATEMENT BY:	
Commissioner Charles O'Leary	40
Senator Barbara Baltizar	42
Stephen Kaiser	48
Ralph Scott, Chairman, Hudson Board of Selectmen	52
Robert Brown, Chairman, Hudson Planning Board	52
Peter McArdle, Greater Nashua Chamber of Commerce	59
David Beesch, Director of Community Development, City of Nashua	61

Page 3

INDEX (Continued)

STATEMENT BY	PAGE
Charles A. Coughlin	63
Thomas Levesque, Chairman, Litchfield Board of Selectmen	66
Steve Robinson, Litchfield Board of Selectmen	67
Joan McKibben, Litchfield Conservation Commission	74
Lee Fleury	77
Don E. Zizzi, Nashua Regional Planning Commission	86
Kirk Stone, Audubon Society of New Hampshire	90
Albert E. Kashulines	97
Richard K. M. Callahan, Hudson Chamber of Commerce	100
Chip Chesley, Director, Merrimack Public Works	101
Tom Grilli	103
Leslie Chunn, Nashua Fish & Game Association	108
Steven Chunn, Nashua Fish & Game Association	114
Representative Shawn Jasper	121
John Walsh, Granite State Wheelmen Bicycling Club	124
Joseph Carabis	128
Jane R. Morrissey	130

Page 4

INDEX (Continued)

STATEMENT BY	PAGE
David Hardy	136
Representative Leonard A. Smith	138
Susan Carrabis	141
Nathan Goyer	147
Rina Petit	151
David A. Gerhardt, Brox Industries	159
Roy K. Hallman, Nashua Fish & Game Association	152
Mary Beth Lewis, Nashua Fish & Game Association	165
David Burns, Nashua Fish & Game Association	167
Howard Dilworth, Jr., President, Hudson Historical Society	169
Richard Widhu	173
Philip MacSweeney	175
Jim Barnes, Hudson Conservation Commission	177
Abbott Rice	180
Stephen J. Densberger, Pennichuck Water Works, Inc.	185
Kathleen Coakley, Concerned Students of Alvirne High School	189
Richard N. Gagnon	193
G. Allen Oldham, Nashua Fish & Game Association	196

Page 5

MR. STREETER: I'd like to call the hearing to order. I think there are a few empty seats. If there is an empty seat beside anyone, please raise your hand. There are a few seats up front. That's where all the action is going to be.

It's 6:11. I'd like to call this reconvened hearing to order. My name is Bernard Streeter. I live in Nashua. I'm the Chairman of the Special Committee appointed by the Governor and Council to hold this reconvened hearing. On my immediate left is Councilor Earl Rinker, who represents Hudson-Litchfield and town in and around the Manchester area. On his left is Lt. Col. James K. Hughes, the U.S. Corps of Engineers. He's the Deputy Division Engineer. Welcome, Col. Hughes.

COL. HUGHES: Thank you.

MR. STREETER: This reconvened hearing is concerned with the layout of the Circumferential Highway in the towns of Nashua and Litchfield and Merrimack and is being held pursuant to RSE 230.45.

The purpose of this reconvened

Page 6

hearing is to determine the necessity of the occasion of the layout and to hear evidence of the economic and social effects of such a location, its impact on the environment, and its consistency with the goals and objectives of such urban planning as has been undertaken by the towns. It's a joint public hearing to also receive comments on the Department of Transportatio's application for an Army Corps permit.

Col. Hughes will now make a brief statement. Col. Hughes.

STATEMENT BY LT. COL. JAMES K. HUGHES, DEPUTY DIVISION ENGINEER, U.S. CORPS OF ENGINEERS

COL. HUGHES: Thank you, Councillor Streeter. I'm Lt. Col. James K. Hughes, Deputy Division Engineer of the New England Division, U.S. Army Corps of Engineers New England.

The New England Division is responsible for all civil works activities of the Corps of Engineers within New England. Our Division Headquarters are located in Waltham, Massachusetts.

Page 7

I have some staff members with me tonight. Dave Kolloy and Terry Flieger from our Regulatory Division, Ed O'Leary from our Environmental Office, and Sue Douglas from our Public Affairs Office.

As this hearing is being conducted in part to fulfill the requirements of the Corps of Engineers regulatory program, I would like to briefly review our roles and responsibilities. The Corps jurisdiction in this case is Section 404 of the Clean Water Act which regulates the discharge of dredged or fill material in the United States waters, including wetlands. In addition, work within the Merrimack River may require authorization under Section 10 of the Rivers & Harbors Act of 1899, which regulates work in, under or over navigable waters of the United States.

The detailed regulations that explain the procedure for evaluating permit applications and unauthorized work is Title 3, Code of Federal Regulations Parts 320 through 330, which was published in the November 13, 1986 Federal Register.

Page 8

The Corps decision whether to grant or deny a permit the is based in part on a public interest review of the probable impacts of the project and of its intended use. The review takes into consideration all comments received and other relevant factors. Benefits and detriments are balanced by considering effects on such factors.

In addition to the public interest review, the project will been evaluated for compliance with the 404(B)(1) guidelines. These guidelines prepared by the Environmental Protection Agency in consultation with the Corps are the federal environmental regulations for evaluating the filling of waters and wetlands. They are designed to avoid the unnecessary filling of waters and wetlands and only allow the least environmentally dam-

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PUBLIC HEARING TESTIMONY

aging practical [19] alternative to be permitted. If a project is [20] determined by the Corps not to be in complaince [21] with the guidelines, the permit cannot be issued [22] regardless of the public interest review [23] outcome.

[24] Based on the environmental

Page 9

[1] documentation prepared to date, the Corps has [2] made a preliminary determination on what [3] alternative constitutes the least damage to the [4] aquatic environment. This alternative differs [5] somewhat from the New Hampshire DOT's preferred [6] alignment and will be pointed out by the State [7] later in this hearing.

[8] The Corpos will consider all [9] comments and information obtained from this [10] hearing on all potential alternatives, however, [11] before a final permit decision is made concerning [12] the least environment damaging practical [13] alternative.

[14] To allow further opportunity for [15] input, the record of this hearing will be [16] extended and will remain open an additional two [17] weeks until January 25th, 1993. Written comments [18] submitted tonight or by mail prior to this date [19] will receive equal consideration with oral [20] statements made this evening.

[21] A transcript of this hearing is [22] being made to assure a detailed review of all the [23] comments. A copy of the transcript will be [24] available at our Waltham office for review, and I

Page 10

[1] also understand it will be available up at the [2] DOT in Concord. Thank you, Counsillor Streeter.

[3] **MR. STREETER:** Thank you, Colonel. [4] Councillor Rinker, before we [5] continue, do you have any comments?

[6] **MR. RINKER:** No.

[7] **MR. STREETER:** Following the [8] hearing, this Special Committee, consisting of [9] Councillor Rinker and myself, will evaluate all [10] matters brought to our attention, and we'll make [11] definite decisions relative to the layout. It [12] is, therefore, important that everyone desiring [13] to make suggestions do so tonight. I would also [14] remind you that you have ten days from tonight to [15] submit written testimony or other material you [16] would like considered by the Special Committee or [17] the Army Corps of Engineers.

[18] In the interest of saving the time [19] of all of you who have come here this evening, I [20] will first ask Assistant Commissioner of the [21] Department of Transportation, Mr. Leon Kenison, [22] to present in a formal the matter of the layout [23] which he and his department has proposed; and [24] after this I will then open the floor to anyone

Page 11

[1] who wishes to address the Special Committee, and [2] all who have registered at the information table [3] who would like to speak — and these are the [4] cards — will be called in order for their turn [5] to address the Special Committee. I will also [6] ask local officials, chairmen, boards of [7] selectmen and so forth to appear at that time [8] also.

[9] In an effort to allow everyone [10] time to speak, we will ask that each person keep [11] their testimony to three minutes or so or less. [12] The Assistant Commissioner of the New Hampshire [13] Department of Transportation, Mr. Leon Kenison, [14] will now present the project. Before you start, [15] Leon, approximately how much time will the [16] Department take in its presentation?

[17] **MR. KENISON:** We're hoping to do [18] that in about 15 or 20 minutes.

[19] **MR. STREETER:** Okay.

[20] **PRESENTATION BY LEON KENISON, ASSISTANT COMMISSIONER, [21] NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION [22] MR. KENISON:** Thank you, Chairman [23] Streeter and Councillor Rinker, Col. Hughes.

[24] Just a brief overview. The

Page 12

[1] Nashua/Hudson circumferential project has a long [2] history, as most of you know, with planning and [3] studies going back to at least 1959. Many [4] informational All meetings have been held and [5] several public hearings have been conducted, with [6] the most recent being in February of 1985 and [7] September of 1988. These last two hearings [8] basically addressed what was known then as the BC [9] corridor. In the meantime, laws have changed, [10] regulations have changed, additional requirements [11] have come into being which has directed the [12] Department to prepare a revised draft [13] environmental impact statement which essentially [14] is a complete new environmental impact statement [15] studying corridors which have been developed [16] right from scratch.

[17] In 1985 the Governor's Highway [18] Advisory Committee also determined that the [19] Circumferential Highway would become part of the [20] New Hampshire Turnpike system to enable [21] financing. The construction cost would be funded [22] by the State's bond issues and repaid by tolls. [23] In 1986 the New Hampshire Legislature passed [24] House Bill 586, which concurred with the Highway

Page 13

[1] Advisory Committee and authorized issuance of [2] those bonds.

[3] The purpose of this project is, [4] first of all, to improve the east/west flow of [5] traffic in this region; and secondly, to reduce [6] traffic congestion in the central business [7] districts of Nashua and Hudson. We feel the [8] proposal to be presented does accomplish the [9] purpose of the project.

[10] With this as a general overview, [11] I'll ask Dr. Robert De Santo of Parsons De Leuw, [12] Inc., to summarize the alternatives which have [13] been considered in the environmental impact of [14] each of these alternatives.

[15] Bob, are we prepared to do that? [16] And Bob is overhere at our our left, at the very [17] front board in the front of the room. Go ahead, [18] Bob.

[19] **PRESENTATION BY DR. ROBERT DE SANTO**

[20] **MR. DE SANTO:** Assistant [21] Commissioner Kenison, ladies and gentlemen, I am [22] this project's technical director responsible for [23] preparation of the environmental impact [24] assessment.

Page 14

[1] In May of 1990 we were directed by [2] the New Hampshire Department of Transportation to [3] prepare a revised draft environmental impact [4] statement for and under the direction of the [5] United States Corps of Engineers. The Corps then [6] directed us to define alternative highway [7] alignments for this Circumferential Highway and [8] to assess all relevant environmental impacts [9] which might be associated with one or more of [10] those alternative alignments.

[11] As a result of our study we [12] published on behalf of the Corps a revised draft [13] environmental impact statement in October of [14] 1992, a copy of which I have here on this front [15] table. We simultaneously published 12 separately [16] bound technical reports. Each technical report [17] describes all details of our air quality [18] analysis, cumulative development and associated [19] impacts, environmental risk sites, farmland and [20] agricultural resources, historical and [21] archaeological resources, noise impacts, [22] socio-economics.

[23] The 8th report deak with storm [24] water runoff qualify and hazardous material

Page 15

[1] spills and their management. The 9th, traffic [2] and transportation resources. The 10th, wells [3] and aquifers. The 11th, wetlands. The 12th, [4] wildlife resources.

[5] The revised draft environmental [6] impact statement is a 350-page document which [7] cross references, describes and summarizes all [8] data, methods, technical reports, coordination [9] activities and the conclusions which we were able [10] to draw. It complies with all National [11] Environmental Policy Act requirements. This work [12] results in the written and oral evidence that we [13] hereby enter this evening into the official [14] record of the public hearing.

[15] Based on our work, we present [16] eight alternative to this project. These [17] alternatives and their impacts are more fully [18] summarized in the Executive Summary and the [19] Public Notice which are available to the public [20] here this evening, and which we ask be made part [21] of this evening's record. I trust everyone has [22] gotten a copy or can get a copy from the two [23] table in the rear of the room.

[24] The first alternative which we

Page 16

[1] considered is the so-called no-build alternative, [2] and it assumes that the existing roadway system [3] will be maintained in its current condition and [4] that only the F.E. Everett Turnpike widening [5] between Exits 3 and 7 and the F. E. Everett [6] Turnpike Exit 2 and the Camp Sergeant Road bypass [7] would be completed by the design year of 2010.

[8] The second alternative, which we [9] considered is the so-called Transit Traffic [10] System Management Alternative, and it is focused [11] on increasing vehicular occupancy and low-cost [12] traffic engineering measures to improve traffic [13] flow.

[14] The 3rd through the 6th [15] alternatives are all so-called build [16] alternatives. Each build alternative is proposed [17] to be a limited-access expressway with 400-foot [18] wide right-of-way in most areas. Each [19] alternative would consist of two 12-foot wide [20] lanes in each direction with a varying median [21] divider. Grade separated interchanges would be [22] provided at six locations. Existing roads would [23] be either grade separated, relocated or [24] terminated at this new facility.

Page 17

[1] To help me point out to the [2] audience and for the hearing officers these [3] different alternatives on the front boards you [4] see here, our Project Manager and Chief Engineer [5] Richard Kerry Brown will help, so that I don't [6] have to juggle both my notes, my microphone and a [7] pointer. And I'd like to begin by describing for [8] you the layout of the first build alternative, [9] which is No. 3, and would cross adjacent to the [10] existing Sagamore Bridge and interchange with [11] Lowell Road, that is Route 3A, in the south. It [12] then crosses Colson Road, Gregory Street, Wason [13] Road, Mark Street, Burns Hill Road and Wason Road [14] again. It then swings northerly, crossing first [15] Bush Hill Road, where it intersects with Caldwell [16] Road, then Speer Road, Kimball Hill Road and [17] Route 111 where there is an interchange.

[18] We consider this segment of the [19] project the southern segment. The study area [20] amounts to approximately 110 square miles that [21] you see depicted on these illustrations.

[22] The central segment of Alternative [23] 3 begins at the Route 111 interchange where [24] Alternative 3 turns northwesterly as it crosses

Page 18

[1] Bartlett Hill Road, crossing Old Derry Road and [2] then turning further westward to interchange with [3] Route 102, Derry Road, adjacent, by the way, to [4] the Tabernacle Baptist Church. We considered [5] this aspect of the study area the central [6] segment.

[7] The northern segment of the study [8] area begins at this interchange where Alternative [9] 3 turns northerly to cross Cutler Road, swinging [10] westerly to interchange with Route 3A, the [11] Charles Bankroft Highway. This is the [12] intersection of Page Road. It then interchanges [13] with Route 3 adjacent to the northern side of [14] Sanders Associates after crossing the Merrimack [15] River, and it ends at the F. E. Everett Turnpike [16] at the existing interchange 10 which would have [17] to rebuilt to accommodate the interchange.

[18] The second build alternative is [19] No. 4, and it follows the same alignment as No. 3 [20] to the vicinity of Amsterdam Circle in Litchfield [21] where this alternative swings more northerly [22] crossing Page Road, then Talent Road to [23] enterchange with 3A near the existing [24] intersection of Broadview Drive with Route 3A.

Page 19

[1] Upon crossing the Merrimack River, it the [2] Budweiser Brewery property and interchanges with [3] Route 3, and then it connects with F. E. Everett [4] Turnpike at existing interchange 10, which would [5] require reconstruction.

[6] The third build alternative is No. [7] 5, and it follows the same alignment as No. 3 and [8] No. 4 to their crossing of Glover Brook, which is [9] at the Brox Company property. At that point, No. [10] 5 swings southerly, crossing Greeley Street. It [11] interchanges with 102 immediately to Alvirne High [12] School. It continues northwesterly, and it [13] rejoins alternative No. 3 to follow that same [14] alignment across the Merrimack River to [15] interchange with the F. E. Everett at existing [16] interchange 10, which again would required [17] reconstruction to accommodate the interchange.

[18] The fourth build alternative is [19] No. 6, and it follows the same alignment as No. 3 [20] and No. 4 and No. 5 to their mutual crossing of [21] Glover Brook by Brox. At that crossing No. 6 [22] follows the alignment of No. 5 until they rejoin [23] No. 3 and No. 4 near Amsterdam Circle in [24] Litchfield. At that point, No. 6 joins No. 4 to

Page 20

[1] cross Page Road and then Talent Road before [2] interchanging with Route 3A above the existing [3] interchange of 3A and Broadview Drive. It then [4] follows alignment No. 4, which interchanges with [5] Route 3 after crossing the Budwieser parcel and [6] joins the F. E. Everett at existing interchange [7] 10, which again would be rebuilt.

[8] The 5th alternative is No. 7, and [9] this is coincident with all other alignments in [10] the south; that is, it crosses the Merrimack [11] River at the existing Sagamore Bridge and it [12] interchanges with Lowell Road; that is, 3A. It [13] then swings southerly crossing Musquash Road, [14] then turns northerly to cross Trigate Road, then [15] Bush Hill Road, then Speer Road, and Kimball Hill [16] Road where it turns westerly to interchange with [17] Route 111. It passes through the central segment [18] of the the study area. No. 7 crosses Bartlett [19] Hill Road and runs more or less parallel to [20] Greeley Street, then turning westerly to cross [21] Old Derry Road before it interchanges with 102, [22] Derry Road, and that is coincident with [23] alignments Nos. 3 and 4. It continues westerly [24] parallel to the Hudson-Litchfield town line to

Page 21

[1] its interchange with Route 3A. It continues [2] across the Merrimack River to interchange with [3] Route 3, that's Concord Street at that location, [4] then crossing Manchester Street, Harris Pond and [5] interchanges the F. E. Everett at a newly [6] constructed interchange 9, which is just south of [7] the Pennichuck Brook. This alignment is [8] coincident with the historical so-called BC [9] alignment.

[10] The sixth build alternative is No. [11] 8 and the final alignment. It's coincident with [12] No. 7 as far as its interchange with Route 3 in [13] Merrimack. No. 8 then swings northerly around [14] Harris Pond rather than crossing it. It does [15] cross Manchester Street and East Thornton Road, [16] and it connects with the F. E. Everett at a newly [17] constructed

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PUBLIC HEARING TESTIMONY

interchange route 9, which is just [10] north of existing Pennichuck Brook.

[11] That describes the eight [20] alignments, and with respect to our assessment of [21] each alternative — that is, the environmental [22] assessment — I can summarize the work detailed [23] in the draft environmental impact statement and [24] in the supporting technical documents as follow:

Page 22

[1] First of all, No. 1, you remember is the no-build [2] alternative. That serves as a baseline against [3] which other alternatives can be compared.

[4] No. 2, the transit TSM, or [5] transportation system management analysis, is [6] based on a greatly expanded transit system, on [7] the assumption of a greatly expanded system, [8] aggressive van pool programs and travel low cost [9] intersection and street segment improvements. We [10] estimated that this alternative would reduce [11] allover peak-period traffic volumes by [12] approximately 1 percent. Therefore, we concluded [13] that this transit TSM alternative and the [14] no-build alternative would not adequately meet [15] the basic project purpose and need. That purpose [16] and need is to assist east/west traffic movement, [17] to reduce congestion on existing bridges and [18] streets in and near the central business district [19] of Nashua and Hudson by adding new crossings of [20] the Merrimack River.

[21] An important part of our analysis [22] evaluated effectiveness of completing only parts [23] of the proposed highway in order to determine if [24] a partially built highway could adequately serve

Page 23

[1] the purpose of this project. We considered four [2] partial-build alternatives, and we found that [3] they would not reduce traffic volumes over the [4] existing levels in the central business [5] district.

[6] The Corps of Engineers invited the [7] Federal Highway Administration to review the [8] models and procedures we relied upon to conduct [9] the partial-build alternatives analysis in order [10] for us to determine that they did not meet the [11] project purpose and need, and the Federal Highway [12] Administration conclude that partial-build [13] alternatives would not meet the project purpose [14] and need. Therefore, with their review of our [15] procedures and findings, we dismissed partial-[16] build alternatives from further consideration. [17] The more detail analysis of that consideration is [18] given in the technical reports that I mentioned [19] before.

[20] I can summarize the environmental [21] impacts of the full-build alternative based on [22] Table 5, which appears on page 23 of the [23] Executive Summary that I think most of you have. [24] I think it's necessary and appropriate for the

Page 24

[1] record that I go through it quickly.

[2] And therefore beginning with [3] alternative No. 3, we analyze the effects caused [4] by the direct impact of No. 3 and found that 78 [5] acres of wetlands, of which four wetlands are [6] define by you are key. There are 511 acres of [7] wildlife habitat that are impacted, 10 acres of [8] high yield aquifer, 6 acres of floodplain, one [9] community well, 16 water crossings, 15 acres of [10] active farmland would be taken, 8 sensitive [11] archaeological sites would be disrupted, 5 [12] environmental risk sites, 51 residences and two [13] businesses, with an estimate construction cost of [14] $180 million.

[15] No. 4, in comparison, effects by [16] direct impact 67 acres of wetlands of which five [17] wetlands are defined by is as key, 527 acres of [18] wildlife habitat, 16 acres of high yield [19] acquifers, 7 acres of floodplains, one community [20] well, 17 water crossings, 23 acres of active [21] farmlands, 8 sensitive archeological sites, 4 [22] environmental risk sites, 53 residences and 3 [23] business, with an estimated construction cost of [24] $183 million.

Page 25

[1] No. 5 affects by direct impact 66 [2] acres of wetlands of which 4 wetlands are define [3] by us as key, 513 acres of wildlife habitat, 13 [4] acres of high yield acquifers, 6 acres of [5] floodplains, no community wells are impacted by [6] this alignment, 17 water crossings, 37 acres of [7] active farmland, 8 sensitive archaeological [8] sites, 5 environmental risk sites, 50 residences [9] and two businesses, and the estimated [10] construction cost of this alignment is $177 [11] million.

[12] No. 6 affects by direct impact 54 [13] acres of wetlands of which 5 wetlands are defined [14] as key 529 acres of wildlife habitat, 19 acres of [15] high yield acquifers, 7 acres of floodplain, no [16] community wells are impacted, 18 water crossings, [17] 45 acres of active farmland, 8 sensitive [18] archeological sites, 4 environmental risk sites, [19] 51 residences and 3 businesses, with an estimated [20] construction cost of $181 million.

[21] No. 7 affects by direct impact 94 [22] acres of wetlands of which 6 wetlands are defined [23] by us as key, 641 acres of wildlife habitat, 14 [24] acres of high yield acquifers, 13 acres of

Page 26

[1] floodplain, 3 communities wells, 19 water [2] crossings, 17 acres of active farmland, 11 [3] sensitive archaeological sites, 2 environmental [4] risk sites, 11 residences and 3 businesses. The [5] estimate construction cost of No. 7 alternative [6] is $183 million.

[7] And finally No. 8 affects by [8] direct impact 88 acres of wetlands of which four [9] wetlands are defined by us as being key, 641 [10] acres of wildlife habitat, 14 acres of high yield [11] acquifers, 12 acres of floodplains, 13 community [12] wells are affected by taking, 19 water crossings, [13] 17 acres of active farmland, 11 sensitive [14] archeological sites, 2 environment risk sites, 14 [15] residenced and 3 businesses, and the estimated [16] construction cost is $185 million.

[17] In conclusion, I would like to [18] point out that there are issues of potential [19] impact from these alignments on historical and [20] archaeological sites. I've mentioned the [21] archeological sites. These are being [22] investigated with the Corps of Engineers in [23] conjuction with the New Hampshire Division of [24] Historical Resources. The identification and the

Page 27

[1] mitigation of impacts will be resolved with a [2] memorandum of agreement with Federal Advisory [3] Council on Historical Preservation.

[4] Issues dealing with rare and [5] threatened species, should any arise, will [6] similarly be resolved and are being investigated [7] by agreement with the Fish and Wildlife Service [8] of the Federal Department of the Interior. And [9] therefore, I have not dealt in any detail with [10] these two topics in my comments this evening.

[11] That's all I have to say, [12] gentleman, and I'd be happy to try and answer any [13] questions that may arise. Thank you.

[14] **MR. KENISON:** Thank you, Dr. De [15] Santo.

[16] I will now ask Carol Murray, [17] Administrator of the Department's Right-of-Way [18] Bureau, to address the right-of-way impact and the [19] acquisition process.

[20] **STATEMENT BY CAROL MURRAY, ADMINISTRATOR, RIGHT-OF-WAY BUREAU, [21] NEW HAMPHSIRE DEPARTMENT OF TRANSPORTATION [22] MS. MURRAY:** Thank you, Leon. [23] Good evening, Councillors. Good [24] evening, ladies and gentlemen. Before I do go

Page 28

[1] into the right-of-way procedures that the [2] Department utilizes when they purchase [3] properties, there are a couple of things I'd like [4] to mention. First

off, this hearing handout map [5] has an address on the bottom where you can send [6] written testimony up to ten days from this [7] evening's hearing. It will be included as part [8] of the record just as if you spoke this evening. [9] These are available at the information desk at [10] the back of the room.

[11] Secondly, the Army Corps of [12] Engineers has asked that everyone fill out an [13] attendance card whether or not they wish to [14] speak, just so they know who was here this [15] evening. So if you would, please, fill one of [16] these out, they would certainly appreciate it.

[17] If after reviewing the information [18] received at this hearing and during the 10-day [19] comment period, Chairman Streeter and the Special [20] Committee find necessity for this project, [21] several things will happen. A layout commission [22] of three people will be appointed by the Governor [23] and the Executive Council to make the layout and [24] negotiate for the property rights needed for this

Page 29

[1] project.

[2] Next the Department will be [3] preparing appraisals for each of the properties [4] affected by the proposed construction you see on [5] those plans. A staff appraiser from our [6] Department or a fee appraiser hired from private [7] industry will contact each owner to appraise [8] their property. The appraisals will reflect the [9] damages by the needs of this construction.

[10] **Prior to beginning negotiations,** [11] the appraisals are reviewed separately to see [12] that they are accurate and have taken into [13] account all applicable approaches to value. Once [14] this review is complete, these appraisals are [15] given to the Commission to begin negotiations. [16] The Commission will visit each property owner and [17] discuss each acquisition separately. We urge [18] owners at this time to ask questions and bring up [19] concerns that they feel should be considered.

[20] If the property owner is satisfied [21] with the offer, deeds are prepared. If the owner [22] is not happy with the figure the Commission [23] offers, they can appeal to the New Hampshire [24] Board and Tax Appeals and argue for additional

Page 30

[1] damages there. Either party can appeal the [2] Board's decision to Superior Court if they are [3] unsatisfied.

[4] There are relocations involved in [5] this project, and Dick Flynn, our Chief [6] Relocation Advisor, will quickly explain those [7] benefits to you. Thank you very much for your [8] patience.

[9] **MR. KENISON:** Thank you, Carol. [10] And I will now ask Dick Flynn, Chief of the [11] Department's Relocation Assistance Section, to [12] explain the relocation assistance program and [13] related procedures.

[14] **STATEMENT BY DICK FLYNN, CHIEF, RELOCATION ASSISTANCE SECTION, [15] NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION [16] MR. FLYNN:** Thank you, Leon. [17] Ladies and gentlemen, members of [18] the Special Committee, whenever a proposed [19] highway project requires the acquisition of [20] homes, businesses and farms and not profit [21] organizations, relocation assistance is offered [22] to all affected persons. If you qualify, some of [23] the entitlements are moving expense [24] reimbursement, replacement housing payments,

Page 31

[1] closing costs and increased interest payments. [2] Also last resort housing will be made available [3] if the need presents itself.

[4] These benefits, as well as the [5] acquisition process, is explained in a booklet [6] available at the rear of the room entitled [7] "Public Highways and Your Property." It's a [8] yellow booklet available at the information [9] table.

[10] We recognize that 13 residences, [11] two business will have to be acquired. One [12] business and one nonprofit organization will be [13] severely impacted. Our statistics have shown [14] that there are ample replacement sites available [15] in the area for the residences and businesses [16] being acquired.

[17] I will be available after the [18] hearing to answer any questions you may have [19] concerning relocation assistance. Thank you very [20] much.

[21] **MR. KENISON:** Thank you, Dick. [22] And I'll now ask our Chief Project [23] Manager Rod Cyr, who has been with this project [24] for some period of time, to describe the

Page 32

[1] department's preferred alternative in detail, and [2] Rod will be working off the board to our right, [3] your left, and everybody who is now standing at [4] that board, we would appreciate if you could find [5] another place to be in this meeting for a few [6] minutes while Rod explains and works from those [7] graphics. Thank you.

[8] **PRESENTATION BY ROD CYR, CHIEF PROJECT MANAGER, [9] NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION [10] MR. CYR:** Thank you, Commissioner [11] Kenison, Councillors, Colonel.

[12] First I'd like to get people [13] oriented. This thousand scale plan shows the [14] project as it's oriented. As you can see, it's a [15] semicircle. That made it difficult to present [16] the enlargements so that they can be seen.

[17] This portion here down by the [18] Sagamore Bridge, running up to Windham Road, is [19] represented by this segment over here. The far [20] plan, with this end being the F. E. Everett [21] Turnpike and this being just north of Route 111, [22] Windham Road, is represented by the upper part. [23] You also see on here two pink sections. These [24] sections are the Corps of Engineers possible,

Page 33

[1] least environmental damaging, practicable [2] alternative. It's a mouth full, but that's the [3] decision that they have to make as a result of [4] this hearing. This lower one is depicted up [5] here, and the upper one is depicted on the lower [6] part over here.

[7] The colgr codes, we have a legend [8] up here, generally the new roadway is shown in [9] yellow, the cut slopes are shown in a brown, the [10] fill areas in green, the houses are in red. If [11] they have crossed lines through them, it means [12] the property is to be taken. The red dash lines [13] on the side indicate limited access right-of-way, [14] which we currently own. If that line is solid, [15] it would be a proposed, similar to this would be [16] a proposed limited access right-of-way. The [17] dashed green is controlled access right-of-way, [18] which we currently own. Solid green is proposed, [19] and dashed blue is existing, convention [20] right-of-way for a roadway, and the solid blue is [21] where we propose to acquire additional [22] right-of-way on a conventional roadway.

[23] In addition to that, you will see [24] on these plans several little dots with numbers

Page 34

[1] in them. These are the access points that were [2] granted at the previous hearing. The dashed [3] brown line represents the property lines, as best [4] we can depict them, and the little numbers on [5] each one is just to identify the property owner. [6] That number coincides with these charts [7] throughout here to indicate the property owners.

[8] The Department's preferred [9] alternative begins at Sagamore Bridge over the [10] Merrimack River at Nashua, crosses over to Lowell [11] Road, Route 3A, continues on crossing must [12] Musquash Road, crossing Bush Hill, crossing [13] Speare Road, Kimball Hill Road and Route 111. In [14] this area, the right-of-way for the highway is [15] entirely owned by the State, with the exception

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[16] of one parcel on Lowell Road, and that is the [17] Rice Oil Company.

[18] As we proceed northerly from [19] Windham Road, or Route 111, the road goes up [20] through the Barretts Hill Estates in a [21] right-of-way that was set aside by the developer [22] of Barretts Hill Estates when the project was [23] built. It continues down, crosses over Barretts [24] Hill Road, and through Hudson Sand & Gravel or

Page 35

[1] Brox property; and that area, the land that they [2] have is on both sides of the road, and the [3] Department is committed to an access to that [4] property either via an underpass down by the [5] existing access or a bridge over the highway by [6] another existing access road they currently [7] have.

[8] The road proceeds northerly up to [9] Old Derry Road, crosses through Sanders property [10] to the intersection of Route 102. In the Route [11] 102 area, there are several properties that would [12] be acquired. There's the Hines residence, the [13] Kenville residence, Buchanan residence and the [14] Jewett Burns residence. Those are four [15] properties here, right on existing Route 102.

[16] From this point we proceed [17] westerly, parallel the Hudson-Litchfield town [18] line, over to Route 3A in Litchfield. At this [19] point there are several properties which have to [20] be acquired. There's the Fleury residence. [21] There's the Dalton, which is a business and a [22] residence. There is Burgess and Mulborn.

[23] In addition, there is parcel 165, [24] which I believe is Johnstone or Johnson —

Page 36

[1] Johnston. At his request there is a commitment [2] to relocate his house on his property.

[3] The project then continues across [4] the Merrimack River, up to interchange with the [5] Daniel Webster Highway in Merrimack. In this [6] area the right-of-way essentially — large tracts [7] of the properties are owned, a right-of-way from [8] Harris Pond Estates and from Guttiers Development [9] over here, are currently owned by the State.

[10] The project then would turn [11] northerly go through properties of Southward [12] Corporation and Pennichuck Water Works, Nashua [13] Fish and Game, Sanders Associates, Digital [14] Corporation and interchange with the F. E. [15] Everett Turnpike. The interchange with the [16] Turnpike would affect five houses on West Thornton [17] Road in Merrimack. They are the last five houses [18] on that road — Proventure, Henderson, Tassey, [19] Boulier, Sullivan property, and Tombolyn.

[20] That is the Department's preferred [21] alternative.

[22] The Corps of Engineers possible, [23] least environmental damaging, practicable [24] alternative varies in the south. It shifts north

Page 37

[1] of the Department's proposed alternative, crosses [2] existing Wason Road, crosses Burns Hill Road, [3] crosses Wason Road again, crosses the [4] Department's preferred alternative, and then [5] rejoins the Department's preferred alternative in [6] the area of Bush Hill Road. This would cause a [7] major relocation to Wason Road, bringing it up in [8] this location. It also requires the taking of a [9] considerable number of homes.

[10] In the north end, the least [11] environmental damaging, practical alternative [12] departs from the Department's preferred [13] alternative in the vicinity of the Brox property [14] just north of Barretts Hill, crosses Greeley [15] Street, and just below Melba Drive through the [16] Hill property, through part of the agricultural [17] fields and agricultural buildings of Alvirne [18] High, the end of Adams Drive Estates and then [19] rejoins the Department's preferred alternative in [20] the vicinity of Olson's Trailer Park.

[21] In addition, I'd like to point out [22] shown on this plan there are mitigation sites. [23] No matter which alternative is selected to try to [24] build a highway, you are going to impact some

Page 38

[1] wetlands and some wildlife areas. In order to [2] mitigate the impacts we have on those, the [3] Department is considering several alternatives. [4] Our primary site is a 160 acre site, which was [5] the Benson's property. This is located here. [6] This parcel has been acquired by the State. We [7] believe that there is adequate space on this [8] parcel to mitigate all of our wetland impacts. [9] But there are other sites that are being [10] considered that may possibly come into play.

[11] The second site is a site that was [12] a pond. It's near Oliver Drive. It was a beaver [13] pond and that's one area being considered to [14] reestablish. The third parcel is a disturbed [15] area up just north of Alvirne High. That was [16] part of an industrial site, and that part of that [17] may still be used for wetland. The fourth [18] possible site is a parcel that is known as [19] Blackberry Run. It has been proposed for [20] development down near an existing development [21] just off of 3A. And the last possible site is a [22] disturbed area off of Burns Hill Road behind what [23] used to be the town dump. There's a disturbed [24] area down there that's also being considered as a

Page 39

[1] potential wetlands mitigation area.

[2] That concludes our presentation.

[3] MR. KENISON: Thank you very much, [4] Rod.

[5] Chairman Streeter, Councillor [6] Rinker, Col. Hughes, this concludes the [7] Department's formal presentation, and I do [8] request that you, the Special Committee, find for [9] the occasion the layout as it has been [10] described. Thank you very much.

[11] MR. STREETER: Thank you, Leon. [12] Before we let you go, would you introduce the [13] people from staff who are here?

[14] MR. KENISON: We do have a number [15] of people to assist us tonight. On my immediate [16] left is Carol Murray, who heads up our [17] Right-of-Way Bureau; and Dick Flynn, who was [18] introduced as an earlier speaker; his relocation [19] assistant, Rod, who just finished, is Project [20] Manager. We have Louie Bisette behind us here to [21] take care of the sound and the greetings. We [22] have another member of the staff here and another [23] member or two out front at the desk, and we have [24] several in around the audience area. I best not

Page 40

[1] stop there. We do, in fact, have Commissioner [2] O'Leary with us tonight.

[3] MR. STREETER: Maybe we should [4] hear from him at this point.

[5] Commissioner O'Leary, do you have [6] some words of wisdom?

[7] Are you going to adhere to the [8] 3-minute rule, Commissioner?

[9] MR. O'LEARY: Yes, sir. [10] STATEMENT BY COMMISSIONER O'LEARY.

[11] MR. O'LEARY: Honorable [12] Councillors, Col. Hughes, the project we have [13] before you tonight is long over due. It's a [14] project that the State of New Hampshire has [15] planned for for over 30 years. You'll hear [16] testimony tonight from elected officials from [17] each of the towns and region stating their [18] support for a transportation project in this [19] area. But, Col. Hughes, you and I have agreed to [20] disagree tonight, and I have three minutes to [21] make my pitch.

[22] Unlike all the other projects that [23] my Department has brought before the Army Corps [24] of Engineers, we brought a different alignment to

Page 41

[1] the final hearing than has been recommended, [2] indicated, preferred as the alignment that would [3] most probably be the path for the highway that [4] could be permitted. Tonight I've chosen to [5] recommend an alignment that will be difficult for [6] you to permit, but I think you can permit it. I [7] think you'll find support from testimony tonight [8] to enable you to exercise your authority to allow [9] the Department's preferred alignment to be the [10] successful alignment.

[11] The Clean Water Act is a just and [12] a popular law, and it should remain that way. [13] But it should be taken in context with history [14] and with other aspects of man's time on this [15] earth. I've chosen to bring to you a path that [16] is more difficult to permit under the Clean Water [17] Act, but I believe you can, but it's a path that [18] protects neighborhoods that were built after the [19] State many years ago announced its desire to [20] build a road and after the local elected [21] officials and their commissions enacted planning, [22] zoning and thought about how their town should [23] grow and thrive. And as the neighborhoods grew [24] in anticipation of the alignment that I brought

Page 42

[1] forward tonight, we find ourselves in a quandry.

[2] I want to build a road that will [3] enable citizens to prosper into the future. [4] You're forced to consider taking neighborhoods [5] out so that we can build this road. I think you [6] can make a decision in my favor.

[7] In another section of the [8] alignment I want to build a road that avoids [9] history in this area. Some of the oldest [10] buildings and a historical society. I want to [11] avoid taking those. You're forced to consider [12] taking them. I want to avoid taking the most [13] unique aspect of Alvirne High School, it's voc-ed [14] program, it's emphasis on agricultural industry. [15] You're forced to considering putting the road [16] through there.

[17] I think you can find that we can [18] build this road because the environmental impact [19] statement has documented that we comply with [20] purpose and need and that a full-build is [21] necessity. I think you can find for the [22] Department's alignment because I believe it's [23] your responsibility to balance all aspects of [24] this project and to keep in mind that so far the

Page 43

[1] Clean Water Act is a just and a popular law. And [2] it will remain that way if common citizens can [3] understand its purpose.

[4] You know that the Department of [5] Transportation, along with your agency and other [6] federal agencies, will mitigate and replace all [7] the purposes and uses of all the wetlands that we [8] unavoidably impact. We will protect that which [9] is protected under the Clean Water Act. But let [10] us have our school, our historical society and [11] the neighborhoods that have grown up under [12] effective land-use planning in anticipation of [13] the Department's preferred alignment. Thank you, [14] sir.

[15] MR. STREETER: Thank you, [16] Commissioner.

[17] Do you care to respond, Colonel?

[18] COL. HUGHES: I would just like to [19] say that we are here to listen tonight and to [20] take all the factors that the Commissioner [21] mentioned into consideration and make a decision [22] that's in the best interest of the public.

[23] MR. STREETER: Thank you, Colonel. [24] It's customary at this point that

Page 44

[1] we ask local elected officials to speak. [2] However, since we do have such a large number of [3] individuals representing the public, I'm going to [4] intersperse them. I am going to ask for a local [5] official, then someone who has filled out a [6] card. Up to this point we have 52 cards of [7] individuals who wish to speak.

[8] The first speaker representing our [9] Senate district is Senator Barbara Baldizar. Is [10] Senator Baldizar here? She requested to speak [11] because she has another engagement.

[12] Just introduce yourself. We would [13] appreciate it if you would speak to the table, [14] not the crowd, and try to keep your testimony [15] within three minutes or less.

[16] STATEMENT BY SENATOR BARBARA BALLIZAR

[17] MS. BALLIZAR: I just want to say [18] that your idea of interspersing elected official [19] with the public is a good idea given the size of [20] this crowd, and I certainly think it's a gesture [21] of fairness and I appreciate that.

[22] Before I begin my remarks, and I [23] will leave a copy with you, Councillors Streeter, [24] and also one with the Department of

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PUBLIC HEARING TESTIMONY

Page 45

[1] Transportation so that you may have them for your [2] file. Before I begin, it's a brief written [3] remark, a letter I received from some [4] constituents. I just wanted to say that I [5] certainly support building a highway. I read [6] some remarks by former Mayor Jim Donchess last [7] week in the paper, and he said this idea has been [8] around longer than he's been alive. And since [9] I've a year older than Jim Donchess, I wanted to [10] tell you that I certainly hope that we get moving [11] and get this thing build.

[12] There are some objections and [13] concerns from people who live in Nashua, [14] specifically the Briton Landing area, and I was [15] contacted December 30th in a letter and asked to [16] represent some of their views, and I will take [17] just a minute to do that. Their objections are, [18] Alternative 8, while not skirting the holding [19] ponds for Pennichuck Water Works, instead of [20] transversing them directly, still lies well [21] within the watershed, posing a grave danger in [22] the event of a toxic spill. Even without a [23] spill, over several years the proximity of fuel [24] exhaust will deteriorate the water supply of

Page 46

[1] Pennichuck's 60,000 plus customer.

[2] At some point I'm sure they would [3] like responses to their objections. They feel [4] that Alternative 8 does approximately 30 percent [5] more damage to wetlands than does some of the [6] other alternatives. It still transverses [7] Pennichuck Pond which has been designated a prime [8] wetland by the City and accepted as such by the [9] State of New Hampshire Board of Wetlands.

[10] They go on with some information [11] to document the fact that Nashua, and certainly [12] the State, supports saving the City's wetlands.

[13] Alternative 8 would necessitate [14] the construction of a new exit configuration at [15] the Tunpike at a considerably higher cost than [16] riding the highway at Exit 10, which already [17] exists and is already large enought to handle the [18] connection with the Circumferential. And that is [19] certainly one of their concerns.

[20] Alternative 8 would impact ten [21] homes while another alternative would impact six [22] or seven. Alternative 8 contains a sharp curve [23] to the north that the State DOT said in 1984 was [24] too dangerous for highway traffic, and that was

[1] the Department's defense for crossing the holding [2] ponds.

1 Comment noted, no response required.

1 Drainage from Alternative 8 will be routed away from the Pennichuck Reservoir and holding ponds through a closed drainage system. The system's design will convey runoff along the corridor to the southeast, where it will be discharged near the confluence of the Pennichuck Brook and the Merrimack River. Figure 2-1 is a cross section of the roadway which shows the drainage system in this area.

At the interchange with the F.E. Everett Turnpike, runoff will pass through a retention basin prior to entering the Pennichuck's water supply downstream of the interchange.

1 Alternative 8 was designed specifically to avoid the Pennichuck Reservoir and holding ponds. It crosses near the confluence of the Pennichuck Brook and Merrimack River downstream of the water supply. The Pennichuck Brook has been designated as a prime wetland by the City of Nashua.

4 Considerable reconstruction of existing Exit 10 would be required to include the Circumferential Highway connection. Very few elements of the current Exit 10 interchange would be utilized in this connection. Many undesirable design elements would be incorporated into the retrofit of Exit 10 due to the number of access points required to service the area, the concentration of heavy traffic volumes in one central location, and the close proximity of U.S. Route 3 to the Industrial Interchange. Signing and toll collection would be very difficult and confusing to unfamiliar motorists. Undesirable design elements, a high concentration of traffic, and confusing signing breeds accidents.

5 Alternative 8 will impact 14 residences, while Alternative 3 will impact 51, Alternative 4 will impact 53, Alternative 5 will impact 50, Alternative 6 will impact 51, and Alternative 7 will impact 11.

4 The curve meets American Association of State Highway and Transportation Officials (AASHTO) design standards for a 60 MPH expressway.

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PUBLIC HEARING TESTIMONY

2

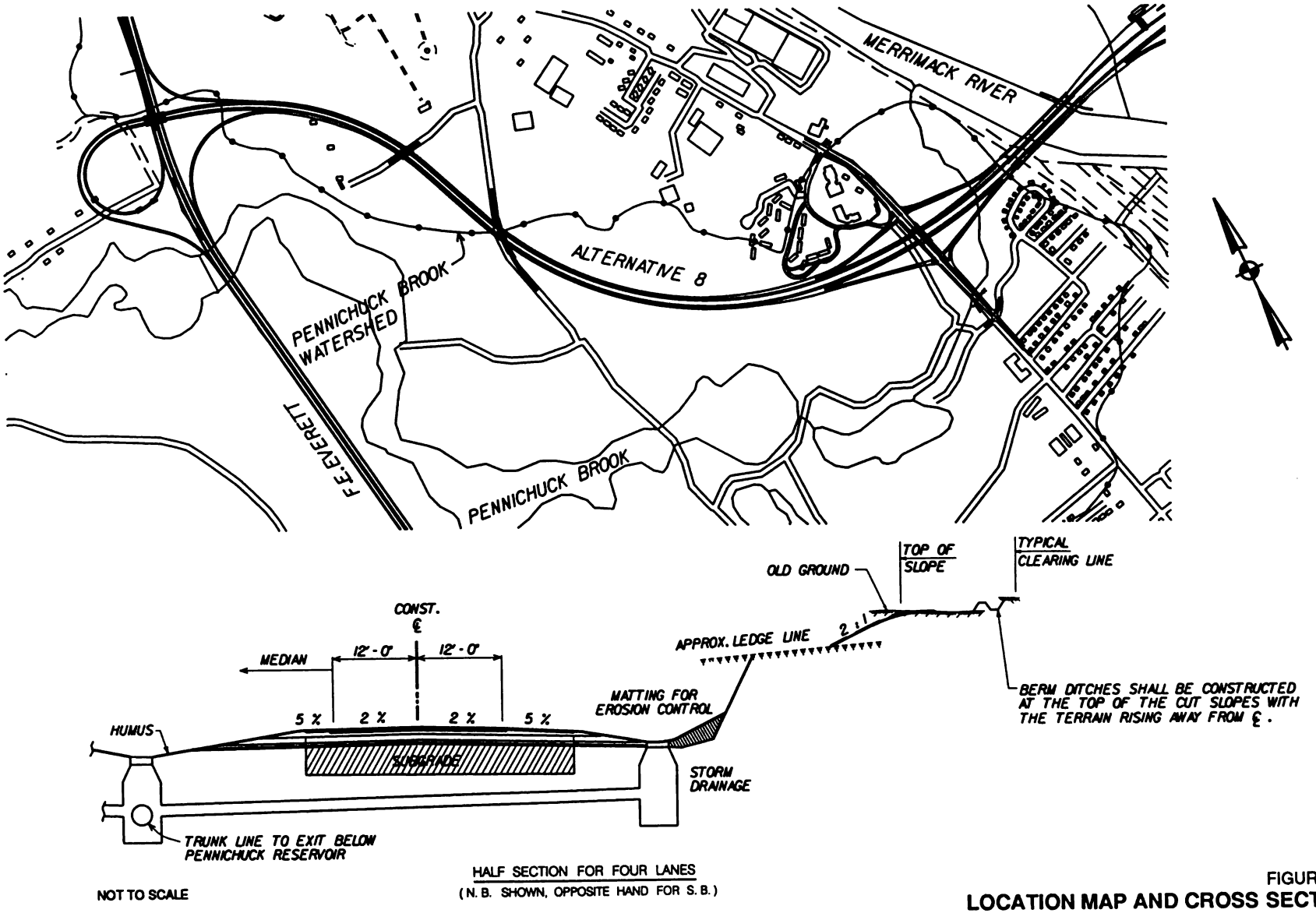

FIGURE 2-1
LOCATION MAP AND CROSS SECTION OF ALTERNATIVE 8 BY THE PENNICHUCK RESERVOIR

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PUBLIC HEARING TESTIMONY

Page 47

[3] There's two other objections and [4] I'll be brief. Alternative 8 would bring Exit 9 [5] within a mile of Exit 10, creating another [6] traffic safety problem similar to the current [7] Exit 6-Exit 7 proximity problem. I haven't [8] looked at that on a map, but I live at Exit 6 and [9] I can tell you that it's not pleasant getting on [10] and off Exit 6 sometimes, namely traffic entering [11] and exiting.

[12] And their last objection, [13] Alternative 8 provides no common terminus for the [14] Route 101A bypass, which the Legislature required [15] in its legislation calling for the [16] Circumferential's construct.

[17] I will leave copies with you. I [18] want their objections publicly read into the [19] record, but I would also certainly like to [20] restate my position that I support the building [21] of this highway, and the time certainly has come [22] for us to move on this. Thank you.

[23] **MR. STREETER:** Thank you, [24] Senator. Leon, do you want to repond?

Page 48

[1] **MR. KENISON:** No.

[2] **MR. STREETER:** Okay. The first [3] person to complete a card is Steven Kaiser from [4] Cambridge, Massachusetts. Mr. Kaiser.

[5] **STATEMENT BY STEPHEN KAISER**

[6] **MR. KAISER:** My name is Stephen [7] Kaiser. I live at 191 Hamilton Street in [8] Cambridge. I have submitted written testimony [9] which I think will say what I believe and —

[10] **MR. STREETER:** Do you want to make [11] sure that the Committee members receive it.

[12] **MR. KAISER:** Yes, I have seven [13] copies I handed out up here.

[14] I should note I have a disclaimer [15] on the front of the statement that the comments [16] in there are my own. I should also note in [17] candor that I wear another hat. I am the chief [18] design engineer for the Citizens Transportation [19] Action Coalition in Boston which is supporting [20] significant rail improvements in Massachusetts, [21] Maine and New Hampshire. Let me just say I'm [22] going to focus my comments on the environmental [23] impact statementy and its dealing will the issue [24] of traffic.

Page 49

[1] Very quickly, I'm going to focus [2] on those plans over there on the far right and [3] the amount of red on those plans. Red represents [4] level of service which is failure service. We [5] will note and the EIS notes that there is [6] east/west improvements in traffic flow which [7] solves some of those red problems. The most [8] obvious thing that jumped out at me reading the [9] EIS is the continued and the worsening congestion [10] north/south on the Tunpike and the very peculiar [11] result which I found to be —

[12] **MR. STREETER:** Mr. Kaiser, are you [13] familiar with the history of this project and the [14] reasons why it's being built.

[15] **MR. KAISER:** Yes, I have read the [16] EIS.

[17] **MR. STREETER:** But are you [18] familiar with more than just the EIS? Are you [19] familiar with the 21-, 22-year history of this [20] project?

[21] **MR. KAISER:** It goes back 34 [22] years, doesn't it?

[23] **MR. STREETER:** The first real [24] public hearings were conducted in '71.

Page 50

[1] **MR. KAISER:** Let me just note this [2] that in the EIS if you look at the traffic [3] volumes between the no-build and the build, [4] there's a rather strange result that the effect [5] of the Circumferential is to increase the traffic [6] on the Tunpike between Exits 2 and 4 by about 12 [7] percent, from 119,800 vehicles per day to 134,700 [8] vehicles per day. That is the most heavily [9] loaded segment of the Tunpike. It is the [10] bottleneck of the Tunpike. Hence the peculiar [11] result of this project is to make the bottleneck [12] of the Tunpike worse. It's an extraordinary [13] result which comes out of this EIS and this [14] traffic analysis.

[15] There are some reductions [16] elsewhere in traffic on the Tunpike. But if you [17] take traffic away from other places that are not [18] the bottleneck, it does not alter the [19] bottleneck. A chain is no stronger than its [20] weakest link.

[21] Led me just jump very quickly to [22] what will be, I think, absolutely necessary for [23] Nashua to resolve its north/south problem. If [24] this project makes the north/south problem worse,

7 Like Exits 6 and 7, Exits 9 and 10 will be less than one mile apart, but the actual separation between Exits 9 and 10 is nearly twice that of Exits 6 and 7. Although less than one mile apart, engineering studies indicate that the Exit 9 design will work safely.

8 Plans for the connection of NH Route 101A to the F.E. Everett Turnpike and Circumferential Highway have been dropped due to severe environmental impacts associated with the NH Route 101A alignment west of the F.E. Everett Turnpike.

9 Based on traffic modeling which assesses the incorporation of Exit 2 on the F.E. Everett Turnpike, the results contained in the Revised Traffic and Transportation Technical Report, Appendix C demonstrate that the bottleneck problem discussed in this comment is somewhat reduced.

In addition, refer to the responses provided for comments raised by Stephen Kaiser in his written testimony.

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PUBLIC HEARING TESTIMONY

Page 51

[1] what must we do? I think it must be a [2] comprehensive list of a whole bunch of little [3] things. No single big thing will work. [4] Everything from improved bus service, local and [5] regional rail service, ride sharing, shuttle [6] buses, flex time, 4-day weeks, traffic signal [7] improvements — I've seen some traffic signals in [8] Hudson which are very embarrassing — [9] improvements, minor widening, transportation [10] management networks, parking freeze, even zoning [11] controls based on traffic generation. A whole [12] series of things need to be done.

[13] I would note that if rail service [14] is significantly improved and maybe runs north of [15] here, every person that rides rail and does not [16] take a car or take a ride down the Tunpike is [17] additional north/south capacity which is [18] available to the local interests of Nashua and [19] Hudson. So I would suggestion that in the long [20] range for the number one problem in Nashua [21] region, which is north/south, that things like [22] rail offer a much better alternative. Thank [23] you.

[24] **MR. STREETER:** Thank you, Mr.

Page 52

[1] Kaiser.

[2] Are either State Senators [3] Columtuno or Pignatelli here? If not, I'll now [4] entertain a representive of the Water Selectmen [5] of Hudson. Is the Chairman of the Board or [6] someone who like to speak for the Board?

[7] STATEMENT BY RALPH SCOTT, CHAIRMAN, HUDSON BOARD OF SELECTMEN

[9] **MR. SCOTT:** Good evening. My name [10] is Ralph Scott. I'm Chairman of the Board of [11] Selectmen of Hudson. The Board of Selectmen, the [12] Conservation Committee and the Planning Board all [13] endorsed plan buildable route 8. At this time we [14] had written that, put that in letter form to the [15] Army Corps of Engineers. I'd like to bring forth [16] Bob Brown who is Chairman of the Planning Board [17] who would like to read that letter into the [18] record if we may.

[19] **MR. STREETER:** Very good.

[20] **STATEMENT BY ROBERT BROWN, CHAIRMAN, HUDSON PLANNING BOARD**

[22] **MR. BROWN:** Good evening, [23] Honorable Councillors and Col. Hughes. The [24] follow information is submitted pursuant to

10 The traffic analysis performed for the Circumferential Highway recognizes that the Circumferential Highway *alone* will not solve all of the traffic problems in the study area, but it does meet the project purpose and need defined in Chapter 1 of the DEIS. The Circumferential Highway is a part of the regional transportation plan that includes programs to increase transit usage and encourage ridesharing. The NRPC is currently performing an extensive survey to find ways to improve on the rate of ridesharing in the region. Extension of commuter rail service to the Nashua area has been studied in the past and continues to be the subject of interest by the NRPC and the NHDOT. NHDOT continues to work toward increased use of carpools and commuter buses through construction and maintenance of park-and-ride facilities.

It is clear that a full range of measures will be required to address the transportation issues in the Nashua area. The study of Transit/TDM and TSM measures in the DEIS determined that these types of measures could be expected to reduce overall peak travel by one to two percent and traffic operations could be improved in Nashua through improvements to several intersections. An aggressive Transit/TDM and TSM approach has estimated that overall travel could be reduced by as much as 5.5 percent. Realistically, one could expect actual reductions to be between 2 and 5 percent. It was concluded that the Transit/TDM and TSM Alternatives *alone* would not reduce volumes sufficiently or improve operations sufficiently to take away the need for the Circumferential Highway. Additional study of the Transit/TDM and TSM Alternatives was conducted in response to concerns raised since the publication of the DEIS. This additional analysis, which is summarized in the FEIS and further documented in Appendix B of the Revised Traffic and Transportation Technical Report, covers a wide range of Transit/TDM and TSM techniques and quantifies the potential impacts of those most likely to be implemented in the Nashua area. The recommendations of this analysis are that, in addition to the Circumferential Highway, substantive efforts to encourage and implement measures to reduce travel in single occupant vehicles (including transit, ridesharing, and commuter bus and rail), continue to be pursued by the State and localities.

11 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 53

[1] public notice dated November 24, 1992 relative to [2] File No. 198801828, the Nashua-Hudson [3] Circumferential Highway.

[4] The Board of Selectmen and the [5] Planning Board of Hudson, New Hampshire, have [6] authorized the Chairman of the Boards to provide [7] the follow comments and recommendations to the [8] U.S. Army Corps of Engineers and the New [9] Hampshire Department of Transportation. The [10] following comment are intended to address [11] alignment issues. These comments do not address [12] funding issues, i.e., tolls. Project financing [13] is considered to be under the purview of the New [14] Hampshire Department of Transportation and the [15] State Legislature.

[16] These comments are a result of a [17] review and analysis of the October 1992 Revised [18] Draft Enviromental Impact Statement produced by [19] the U.S. Army Corps of Engineers.

12 [20] Pages S-2 and S-3, under [21] Beneficial Effects, there are three additional [22] benefits not mentioned, which are:

[23] 1. Improved safety of vehicular [24] and pedestrian traffic on the local roads of

Page 54

[1] Hudson.

13 [2] 2. Improved quality of life for [3] residents of resident Hudson that live on or near [4] the local corridors currently being used to the [5] move traffic east and west.

[6] 3. The draft environmental [7] transporation study that was performed this past [8] summer by the Nashua Regional Planning Commission [9] indicates that approximately 60 percent of the [10] traffic that enters Hudson from the east [11] continues through to destinations west of Hudson.

13 [12] Therefore, and additional benefit will be a [13] lessening of the impact of this traffic on the [14] local roadways by providing an efficient [15] east/west transportation network.

15 [16] The Board of Selectmen and the [17] Planning Board of Hudson, New Hampshire, fully [18] supoort the project purpose and the need for [19] action.

16 [20] On page S-24 under Historical [21] Resources, it state that Alternatives 5 and 6 [22] displace the Hudson Historical Society and [23] Cultural Center, commonly referred to as the [24] Hills home. This structure is on the National

[1] Register of Historical Places. What is not [2] stated is that Dr. Hills has left a lasting [3] legacy to the community that he and his family [4] came to love. We submit that pursuing [5] Alternatives 5 and 6 goes beyond the [6] irreplaceable loss of a building, and includes [7] the loss of a significant piece of Hudson's [8] history.

Page 55

17 [9] On page 2-24, under Historical [10] Resources, there is no mention of the loss of [11] agricultural lands of the Alvirne High School. [12] This land is part of the continuing legacy of the [13] gifts given to Hudson by Dr. Hills.

18 [14] On pages 2-26 and 2-27, it is [15] stated that Alternatives 7 and 8 will impact more [16] undeveloped land than the other alternatives [17] under consideration. Although this is true, it [18] must be taken into consideration that a great [19] deal of this undeveloped land exists, due to the [20] long-range planning of the State and local [21] communities. This planning resulted in obtaining [22] the right-of-way that would be required to [23] construct this roadway. We submit to you that if [24] there had been no long-range planning, the amount

Page 56

[1] of undeveloped land would be substantially less.

19 [2] On page 2-28, it is stated that [3] Alternatives 5 and 6 will require the taking of a [4] well, Well H10. All other alternatives will not [5] require the taking of wells.

20 [6] On pages 2-29 and 2-30, it is [7] stated that Alternative 6 impacts the least [8] amount of wetlands and Alternative 7 impacts the [9] most. However, Alternative 8 impacts the least [10] number of key wetlands. It should be noted that [11] Alternative 6b impacts 25 percent more of the key [12] wetlands.

21 [13] On page 2-31, it is stated that [14] Alternatives 3 and 6 would impact a known [15] asbestos site, Site 21, 4 Gregory Street. [16] Alternatives 7 and 8 do not impact any known [17] asbestos sites. We believe that disturbing this [18] asbestos site is contrary to the public good.

[19] Figure 3.1-2 on page 3-8 indicates [20] that the level of service existing in 1990 is, [21] for the most part, in a failure condition, level [22] of service F. While figure 2-6 on page 2-17 [23] indicates that with full build, the level of [24] service is greatly improved at the 20-year

12 Comment noted, no response required.

12 Comment noted, no response required.

14 Comment noted, no response required.

15 Comment noted, no response required.

16 Comment noted, no response required.

12 Comment noted, no response required.

15 Comment noted, no response required.

15 This comment refers to wells in the vicinity of NH Route 102 only. For a complete analysis of well impacts, refer to the Wells and Aquifers Technical Report, pages V-21 through V-37.

20 Comment noted, no response required.

21 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 57

[1] benchmark. We believe that the improved level of [2] service translates directly to improved safety of [3] vehicular and pedestrian traffic in these [4] corridors.

[5] In Section 3-1 that begins on page [6] 3-15, it is stated that the pattern of [7] development within Hudson is of a radial nature. [8] Further, it is stated that the commercial [9] development within the Town has occurred along [10] the primary roadways of New Hampshire Routes 102, [11] 111 and Lowell Road. We believe that this [12] illustrates and supports our position that the [13] Town of Hudson has been planning its future in [14] accordance with the previously described the BC [15] corridor.

[16] On pages 3-19 and 3-21, there are [17] comments related to the zoning Regulations of the [18] community. These comments do not reflect the [19] fact that the Planning Board has worked for the [20] last 2 and a half years on a complete rewrite of [21] our zoning ordinance. This effort will result in [22] changes being forwarded to a town meeting.

Page 58

[23] Pages 3-31 and 3-32 present [24] comments on farmlands. It should be noted that

[1] Alternatives 5 and 6 will have the greatest [2] impact on farmlands, while Alternatives 7 and 8 [3] have the least. It must be pointed out that [4] Alternatives 5 and 6 will impact the Alvirne High [5] School farmlands and the agricultural program of [6] the school. Further, it must be noted that that [7] is the only program of its kind in the State of [8] New Hampshire, and this program has received [9] national recognition and is considered one of the [10] ten best agricultural programs in the United [11] States.

[12] On pages 3-57 through 3-60 comment [13] on threatened or endangered wildlife species. We [14] must point out that Alternatives 5 and 6 will [15] impact the feeding areas of potential roosting [16] habitats of the bald eagle. Alternatives 7 and 8 [17] are least likely to have adverse impacts on our [18] national symbol, the bald eagle.

[19] Therefore, in recognition of all [20] elements that are required as part of the [21] environmental impact statement, as well as [22] assessing the least environmentally damaging and [23] practicable alternative project alignment, the [24] Board of Selectmen and Planning Board of the town

Page 59

[1] of Hudson, New Hampshire, endorse Alternative 8. [2] This alternative serves the project purpose and [3] is the least environmentally damaging alternative [4] when all elements of the EIS are reviewed.

[5] We ask that these written comments [6] be included in the record, and should you have [7] any questions, we will be glad to answer them. [8] Thank you.

[9] MR. STREETER: Councillor, any [10] questions? Okay. Thank you very much.

[11] A person who has requested to [12] speak, Peter McArdle.

[13] STATEMENT BY PETER McARDLE, GREATER NASHUA CHAMBER OF COMMERCE

[15] MR. McARDLE: Thank you and good [16] evening Councillor. Peter McArdle, and I'm [17] Chairman of the Local Affairs Committee for the [18] Greater Nashua Chamber of Commerce.

[19] On behalf of the Greater Nashua [20] Chamber of Commerce, a regional business [21] association which represents business interests [22] in Nashua and the surrounding nine towns, we [23] would like to stand before you and reaffirm in [24] the strongest possible terms the nearly 10-year

Page 60

[1] old position of the Chamber of Commerce in [2] support at the Circumferential Highway.

[3] We carry with us a certain sense [4] of deja vu in this process, since we have [5] repeatedly stood in support of this highway and [6] the many aspects of its consideration. However, [7] with due respect to the regulatory process, the [8] business community feels very strongly that State [9] and federal officials should move this highway [10] project forward at all possible speed.

[11] It is an element of regional [12] economic infrastructure that is long overdue. As [13] the region faces the challenges of global [14] competition and the restructuring of our regional [15] economy, it is clear that we must have a highway [16] system that will build a basis for mobility and [17] access for all or our citizens and businesses in [18] the region. It is on this basis that we can hope [19] to build for the jobs of the future. This [20] highway in pivotal in the economic rebirth of the [21] Nashua region.

[22] The Chamber's Board fully endorses [23] the State Department of Transportation and the [24] towns now supporting the recommended route.

22 Comment noted, no response required.

23 Comment noted, no response required.

24 Comment noted, no response required.

23 Comment noted. The impact on Alvirne High School farmlands is reported on page 2-24 and 4-42 of the DEIS, and in the Farmland Technical Report. The description of the Alvirne program as being the only one of its kind in New Hampshire and one of the 10 best in the United States was not included in the DEIS but is now recognized.

26 Alternatives 4 and 6 cross prime eagle feeding habitat as reported on page 4-69 of the DEIS. Refer to the response provided for comment #40 of the EPA's March 2, 1993 letter for additional information.

27 Comment noted, no response required.

26 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 61

[1] I have copies of my statement as [2] well as a a policy statement of the Chamber of [3] Commerce. Thank you very much.

[4] **MR. STREETER:** Thank you, Peter. [5] Going back to either local or city [6] officials, David Boesch, are you representing the [7] City of Nashua? Would you like to give us your [8] testimony at this point?

[9] **STATEMENT BY DAVID BOESCH,** DIRECTOR OF COMMUNITY DEVELOPMENT, [10] CITY OF NASHUA [11] MR. BOESCH: Thank you and good [12] evening. My name is Dave Boesch. I'm Director [13] of Community Development for the City of Nashua. [14] I'm here on behalf of Mayor Wagner, who had a a [15] conflict that prevented himself from attending [16] this evening.

[17] For reference, I will mention two [18] letters previously submitted to the Corps, one [19] under the Mayor's signature, which I will read, [20] another under my signature, which I will not [21] because it tends to be somewhat lengthier and [22] gets into more detail.

[23] The Mayor's letter to Mrs. Flieger [24] is dated December 22nd and read as follows:

Page 62

29 [1] "On behalf of the City of Nashua, I [2] would like to express my strong support for the [3] construction of the Circumferential Highway full- [4] build alternative. The Circumferential Highway [5] is a vitally important element of Nashua's [6] transportation infrastructure.

[7] "In view of the rapid expansion of [8] our City during the past 10 years and the [9] probable continued growth in this region, it is [10] absolutely necessary that we mitigate the current [11] traffic congestion with a responsible, effective [12] highway system. The Circumferential Highway [13] provides a significant first step in solving [14] existing transportation problems in both the [15] Nashua and surrounding communities. I'm certain [16] that the Corps of Engineers will select an option [17] that is the most environmentally benign.

30 [18] "This project represents [19] responsible planning and opportunity for the [20] effective land use and improved air quality and [21] mitigation of current gridlock situations in [22] Nashua.

[23] "For these reasons, the [24] Circumferential Highway project has my full

Page 63

[1] support.

[2] Best regards, Rob Wagner, Mayor of [3] Nashua."

[4] I will just reference my letter [5] again for the record dated December 21st and have [6] additional copies for your use.

[7] **MR. STREETER:** Thank you, David. [8] Inasmuch the Circumferential does [9] impact two towns in Councillor Rinker's district, [10] Hudson and Litchfield, I will ask him to do the [11] testimony for the member of the public [12] representing these two communities, and here's [13] your next speaker.

[14] **MR. RINKER:** Charles Coughlin.

[15] **STATEMENT BY CHARLES A. COUGHLIN**

[16] **MR. COUGHLIN:** Thank you. My name [17] is Charlie Coughlin. I live at 72 Gowing Road, [18] Hudson.

[19] I'm here on rather a subsidiary [20] point compared to the more generic routing that [21] you're talking about today, but I think it is [22] pertinent. I have also talked with several [23] people in the hall tonight who have the same type [24] of objections that I have. In order to save some

Page 64

[1] time, maybe we can cut the 53 speakers down. [2] Maybe those who are, as I am, in favor of [3] relocation of the toll booths at the Sagamore [4] Bridge area, if they'd please stand up.

[5] There were several others that I [6] did speak to.

31 [7] I object to the present [8] positioning of this toll booth plaza. This is [9] the one approaching from Hudson to the new [10] construction across the Merrimack River. I [11] object to it on three bases, that the increase in [12] pollution that's going to be caused by having a [13] toll booth plaza at that point. It's the [14] certainly going to adversely affect the [15] environmental factors in Hudson. It has been [16] stated here previously that the main rationale [17] for this whole project was the relief of the [18] traffic on the central business district.

[19] I also submit to you, by having [20] the plaza on the westerly side of Route 3 or [21] Lowell Road is going to cause a tremendous backup [22] onto 3A, which is known as Lowell Road.

[23] Also I would cite that there will [24] be an adverse economic impact to the people both

[1] of Hudson, who are going to have to pay that [2] toll, and also to the business people on the [3] Nashua side of the river, who obviously are going [4] to have a diminished flow from Hudson to their [5] business establishments.

29 Comment noted, no response required.

30 Comment noted, no response required.

31 The toll plaza at this site will provide for effective collection of revenues. However, revenue issues are not subject to comment in this EIS as stated on page S-4 of the DEIS. The plaza will be designed to pass peak traffic flows with minimal delays. Final design will also allow for possible future expansion of the facility. Environmental impacts associated with the positioning of this toll plaza were preliminarily assessed in the document and associated Technical Reports based on the level of design provided at the time of the analysis. Refer to the response provided for comment #2 of Stephen Kaiser's written comments.

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PUBLIC HEARING TESTIMONY

Page 65

[6] We object strenuously to the fact [7] that the citizens of Hudson are going to be kept [8] as captives in order to pay for the tolls and pay [9] for the construction of a large portion of this [10] road, where other sections of the Tunpike [11] intersection are going to to scott free. I [12] believe there'll be five entrances or exits in [13] Nashua that will not have to pay a toll. Thank [14] you all very much.

[15] **MR. RINKER:** Thank you, Charlie. [16] I don't care which, maybe we only [17] need one, but I know both Steve Robinson and Tom [18] Levesque filled out a card. Would one of you [19] want to come up and represent the Board of [20] Selectmen in Litchfield, please. That doesn't [21] mean that Steve can't speak if he wants to. I'll [22] call him as citizen later.

[23] **STATEMENT BY THOMAS LEVESQUE, CHAIRMAN, LITCHFIELD BOARD OF SELECTMEN**

Page 66

[1] **MR. LEVESQUE:** I'd just to go for [2] just about one minute, and then Steve will pick [3] up from there.

[4] My name is Thomas Levesque, [5] Chairman of the Board of Selecmen, Town of [6] Litchfield.

32 [7] The Town of Litchfield [8] wholeheartedly supports the proposal as presented [9] by the State at this time. Any further north [10] would have a very adverse affect on the Town of [11] Litchfield, and we would vigorously oppose any [12] route that took it any further north into our [13] Town.

[14] The Town of Litchfield Planning [15] Board has undertaken the rezoning of the land in [16] the southern portion of the Town, which lead to [17] the establishment of part of the Circumferential [18] Highway coming into the Town. Because of the [19] Circumferential Highway, the [20] commercial/industrial zone with its transitional [21] zones to buffer the residential areas of that [22] section of Town, the establishment of the [23] Albuqquerque Highway, which picks up from the [24] intersection with the new toll booth was

Page 67

[1] proposed, and take the people up to the north and [2] south ends of Town following the same thinking.

[3] And at this time I'd like to yield [4] to Steve Robinson to finish up the rest of the [5] Town's comments.

[6] **MR. RINKER:** Steve.

[7] **STATEMENT BY STEVE ROBINSON, LITCHFIELD BOARD OF SELECTMEN**

[9] **MR. ROBINSON:** Steve Robinson. [10] I'm also a selectman from the Town of [11] Litchfield. We're actually holding an official [12] meeting here since there's a majority of the [13] Board here tonight.

[14] I did want to point out some [15] detailed concerns that Litchfield had in looking [16] at —

[17] **MR. STREETER:** Steve, excuse me a [18] minute. It's getting pretty noisy in here. [19] Could I ask you to try to keep the noise level [20] down, everybody, so that we can hear what's [21] Selectman Robinson has to say? Thank you.

[22] **MR. ROBINSON:** There are some [23] specific things that we found in looking at the [24] EIS and the technical reports that we wanted to

Page 68

[1] bring to your attention that were of particular [2] concern if you seriously considered any other [3] alternative rather than Alternatives 7 or 8, and [4] 8 is the route that is recommended. Litchfield [5] has no problem with that.

33 [6] If you were to consider the [7] northern routes, the most drastic concern we [8] would have in Litchfield is the fact that it cuts [9] the Town right in half, and we have consistently [10] fought against any more northerly route just for [11] that purpose alone. But if you go beyond that [12] and look at the details of those routes, you find [13] some significant impacts to both the environment [14] and the Town water supply, which also happens to [15] be Hudson's water supply.

34 [16] In the EIS in one section it says [17] that the Town of Hudson gets its water from [18] municipal wells, some wells from — Southern New [19] Hampshire Water Company actually owns the water [20] system. The wells that it gets most of its water [21] from are in Litchfield. And in fact, the biggest [22] producer or the largest producing well is in fact [23] within 1650 feet of the center line of [24] Alternatives 3, 4, 5 and 6.

35

32 Comment noted, no response required.

33 Comment noted, no response required.

34 Comment noted, no response required.

33 Comment noted. This information is presented in the Wells and Aquifers Technical Report on page V-35.

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PUBLIC HEARING TESTIMONY

Page 69

[1] Let me just point those out for [2] you so you get a reference. Right here, I don't [3] know if you can see this, this well is called the [4] Weinstein Well. It produces a million gallons of [5] water a day. It is within, according to the EIS [6] and the technical reports, 1650 feet of the [7] center line of Alternatives 3, 5 and 4 and 6 [8] follow that path.

[9] More significantly is that in that [10] study, it also states correctly that the only [11] other source for additional water supplies in the [12] Hudson-Litchfield area, other than to go and [13] connect with Pennichuck, the Nashua water system, [14] is in fact right in the center line of these [15] Alternatives 3, 4, 5 and 6. So we thought that [16] it was important that you consider the fact that [17] if 3, 4 5 or 6 were to be considered, you'd be [18] not only possibly impacting the largest well we [19] ever for our water supply right now, but also [20] eliminating the possible alternate site for any [21] other source of water. I think this is very [22] significant.

[23] There's also several other factors [24] in that route. If you take the 3 and 5 route, 3

Page 70

[1] and 5 route crosses right through what is none as [2] Rodonis' Farm Stand, their retail outlet. If you [3] eliminate the retail outlet, even though you [4] haven't taken a lot of farmland, you've probably [5] eliminate their farm. Because they would then [6] have to make a major time investment, even if you [7] paid them for taking their facility, to replace [8] it. And they would probably make the decision, [9] Hey, we'll sell off the land, that's easy to sell [10] off, and forget that farmland being farmed in [11] this whole area here.

[12] If you go on the northern route, 4 [13] and 6, it turns out you're going right through [14] Wilson's Farm Stand. These are the two largest [15] farm stands for the two largest — there's only [16] four commercial farms really, four or five in [17] Litchfield, and you've just eliminated by either [18] one route or the other one of the largest farms [19] in Litchfield. And we thought that was very [20] significant yet not pointed out in the technical [21] report or the EIS.

[22] There are other things, like this [23] crossing happens to be right in a particular spot [24] that has a natural waterfall — it's not really a

[1] waterfall, breakwater. It's the beginning of the [2] historic canal area. Actually a canal runs along [3] this section

Page 71

here, and it has some impacts on the [4] — well, actually bald eagles, we believe, are in [5] that area. It's a feeding area.

[6] In terms of wildlife impact, over [7] in this section, in fact, we don't have to worry [8] about the fact that they didn't come across any [9] deer or moose in that area when they did the [10] walk-around, because we know — because a moose [11] was in fact killed in this rough area here this [12] year, of course improperly — that there are [13] moose and deer in that area and very plentiful.

[14] So we find that these routes, 4 [15] and 6 or 3 and 5, would have a major impact on [16] Litchfield. Although it's going to have an [17] impact on Litchfield in terms of significant [18] development, when you put a highway in, [19] Litchfield understands the need for the region to [20] solve its traffic problems, and therefore, we [21] have supported the route 7 or 8, and 8 is the [22] recommended route, and we have gone along with [23] what's necessary to, in fact, get the route [24] designed in such a way that Litchfield can, in

Page 72

[1] fact, grow with the highway, to the extent that [2] Litchfield has, in fact, rezoned the southern [3] portion of Litchfield, taking into consideration [4] the highway being in this route, this section [5] here, causing the traffic from this commercial [6] and industrial development to be concentrated as [7] close to the highway as possible. So we don't [8] create other traffic problems.

[9] I would ask, though, that there be [10] particular attention paid to the studies, the [11] traffic studies. There are some inconsistent [12] numbers in the traffic study in that in these [13] partial builds, which are actually lower counts, [14] it shows a level of service of D, at a level of [15] service E for some of the alternatives. These [16] counts are in fact lower — this is for 3A now — [17] after the build. These numbers are actually [18] lower in the technical reports than in the — if [19] you take the full-build, which is this one, this [20] count here is 14,100. Those counts are like [21] 12,000 and 13,000. So it's the same road. So, [22] therefore, there's an error here, and so [23] therefore, we believe that, in fact, this section [24] of road 3A should be indicated as level of

[1] service F. And you'll note that Route

36 — 37 — 18 — 33 — 40 — 41 — 42 — 43

34 Comment noted. Refer to the Wells and Aquifers Technical Report, page V-37 second paragraph.

37 Alternatives 3 and 5 do not cross through Rodonis Farm outlet stand, but do take a portion of active fields to the northeast.

38 If not mitigated, the loss of farmstands will be a major impact. However, farmstands can and will be given the opportunity to relocate and continue operations.

29 Comment noted, no response required.

40 Potential impacts to Bald Eagles are known and documented in the Biological Assessment, Wildlife Technical Report, and DEIS.

41 Deer and moose are reported in the study area, but each specific sighting has not been reported in the document. See Wildlife Technical Report Species List on page IV-12.

42 Comment noted. This is reflected in the Socioeconomic Technical Report.

42 The comment involves an apparent inconsistency in the traffic volumes and Level of Service (LOS) analysis presented in the DEIS. The comment states that the Average Daily Traffic (ADT) volumes for a portion of NH Route 3A in three of the Partial Build Alternatives appeared to be less than the corresponding volume for the Full Build Alternative, while the LOS as presented in the DEIS was worse for Partial Build scenarios.

Figure III-10 (Traffic Volumes - Alternative 8 - 2010) in the DEIS is slightly inaccurate in that the locations shown are not truly comparable, because of the different alignments assumed for the Circumferential Highway. The ADT estimate of 14,100 for the Full Build Alternative, shown on Figure III-10, represents the volume on a roadway link which is located directly north of the Circumferential Highway/NH Route 3A interchange near the Hudson/Litchfield Town Line. The location of this link is actually south of the roadway link that was tested as part of

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PUBLIC HEARING TESTIMONY

43

TABLE 43-1

TRAFFIC DATA MATRIX

Scenario	Link	Location	Volume	LOS	Capacity (veh/hr)	v/c
2010 Full Build	1302 - 1324	NH 3A south of Page Road	13,700	F	524	1.09
2010 Partial Build to NH 111	1302 - 1324	NH 3A south of Page Road	9,150	C	522	0.73
2010 Partial Build from Exit 10 - NH 102	1324 - 1345	NH 3A north of Circumferential Highway (south of Page Road)	13,600	B	977	0.58
2010 Partial Build w/o NH 102 - NH 111	1324 - 1345	NH 3A north of Circumferential Highway (south of Page Road)	13,200	B	982	0.56

43 the Partial Build Alternatives. Figure III-10 in the DEIS represents the Full Build volume as occurring north of its true location. A more accurate placement for this volume figure is shown in the revised Figure III-10 which is included in the FEIS.

The ADT volumes of 9,150, 13,350, and 12,950 for the Partial Build Alternatives, shown in Figures III-11, III-13, and III-14 of the DEIS, are placed in their proper location near Page Road in Litchfield, north of the Full Build location. The apparent inconsistency in the LOS measures and traffic volumes between the three Partial Build locations near Page Road and the Full Build location to the south, reflects the differences in the roadway characteristics which exist between these two portions of NH Route 3A.

43 Table 43-1 that accompanies this response provides information on the traffic volume data for the location reported for the Partial Build Alternatives. It identifies the corresponding link number and location for the link directly north of the Circumferential Highway in the Full and Partial Build scenarios discussed in this response. The corresponding LOS, capacity, and V/C ratios for these locations are also shown. This table indicates that the difference in LOS for the 1302-1324 link of the Partial Build to NH Route 111 Alternative and the Full Build Alternative is the result of increased volumes in the Full Build Alternative. However, in the other Partial Build Alternatives, there is an improvement in LOS resulting from the increased capacity assumed for the 1324-1345 link. Along this link, capacity numbers for NH Route 3A are approximately twice that of link 1302-1324 because an upgrade of NH Route 3A would be required in order to accommodate the new interchange associated with the Circumferential Highway.

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PUBLIC HEARING TESTIMONY

Page 73

[1] service F. And you'll note that Route 102 is [2] level of service F. So one thing we caution the [3] State is, if they're going to put in this [4] Circumferential Highway, is to take some serious [5] considering of solving the problems that are [6] created when you increase and actually overload [7] some existing roads in solving Nashua's traffic [8] problems. And you're causing this problem in two [9] sections of Litchfield. This traffic count [10] probably goes all the way through Litchfield to [11] the Manchester-Litchfield border.

44 [12] Basically when you get done, we [13] believe long term that this highway will, in [14] fact, have a beneficial effect on Litchfield, [15] because it will provide an opportunity for [16] Litchfield to develop commercial and industrial [17] sites which really we don't have right now. This [18] will, of course, require Hudson and Nashua to [19] take the same attitude of helping the region and [20] give us access to their sewer treatment plant and [21] their sewer pipeline, so we can have some [22] develop.

[23] We do have one more speaker, but [24] maybe you'll want to call her later on. Joan

Page 74

[1] McKibbens is going to touch on the environmental [2] impact and the Conservation Commission's report.

[3] **MR. STREETER:** Does she represent [4] the official position of the Town?

[5] **MR. ROBINSON:** Yes.

[6] **MR. RINKER:** Let's get it now so [7] there's no break in the testimony.

[8] **STATEMENT BY JOAN McKIBBEN,** LITCHFIELD CONSERVATION COMMISSION

[10] **MS. McKIBBEN:** Good evening. I'm [11] Joan McKibben from the Litchfield Conservation [12] Commission.

45 [13] If we are to have this highway at [14] all that will forever change the atmosphere and [15] character of Litchfield, then I would go along [16] with Commissioner O'Leary's choice of route 8. [17] The Litchfield Conservation Commission would [18] oppose any route that is more northerly of the [19] proposed alignment because of the detriment to [20] critical habitat that has been in the draft EIS,, [21] specifically the wintering bald eagle and [22] reptiles that are listed as a special concern to [23] the State.

46 [24] We also oppose any thought of a [1] more northerly route because of the disturbance [2] of active, prime farmland in Litchfield.

47 Page 75

[3] Secondly, I would like to have an [4] item corrected in the draft environmental impact [5] statement, corrected for the final EIS. It's [6] stated in the EIS that the New Hampshire DOT will [7] build nonvehicle access over the northern bridge [8] in Litchfield if Litchfield's trail system is [9] constructed to the bridge at the time New [10] Hampshire DOT is preparing for construction of [11] the bridge. That's what's already stated in the [12] DEIS.

[13] On December 15th at the DOT press [14] conference in Hudson, Commissioner O'Leary [15] informed Roland Bergeron and myself that New [16] Hampshire DOT would engineer the nonvehicle [17] access from Route 3A in Litchfield across to the [18] Merrimack River into Merrimack. In addition, the [19] Commissioner agreed New Hampshire DOT would build [20] the nonvehicle access from Route 3A to the toll [21] plaza, leaving Litchfield to build the section [22] from the toll plaza to the bridge. The New [23] Hampshire DOT would also engineer and construct [24] nonvehicle access across the northern bridge.

Page 76

[1] The access is critical for [2] commuters, bicycling public to get across the [3] bridge, access to the New Hampshire heritage [4] trail for both Litchfield and Merrimack residents [5] many. I'm sure that Merrimack would concur with [6] the idea of pedestrian and bicyle access across [7] the northerly bridge.

[8] I will be sending my comments in, [9] writing to the Councillors and to the Army [10] Corps.

[11] **MR. RINKER:** Thank you, Joan. [12] Can we have Leon or somebody from [13] the Department just respond and get this for the [14] record?

[15] **MR. KENISON:** Well, I believe that [16] what she has stated to be fact and it will be [17] necessarily a joint effort that I think the [18] Department's position always has been that we [19] have been willing to construct those nonvehicular [20] facilities providing the Town provides an access [21] to them so that they are in use and not [22] essentially a pathway to nowhere. If the Town [23] does that, we will be designing it and will [24] construct in congestion with the Town.

44 Comment noted, no response required.

45 Comment noted, no response required.

46 Comment noted, no response required.

47 Response to this comment is provided by NHDOT Assistant Commissioner Leon Kenison on page 76 of the Public Hearing Testimony.

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PUBLIC HEARING TESTIMONY

Page 77

[1] **MR. RINKER:** Joan and Steve and [2] Tom, are we in agreement on that? Okay. Thank [3] you.

[4] Leo, is it Fleury? [5] STATEMENT BY LEO FLEURY.

[6] **MR. FLEURY:** My name is Leo. [7] Fleury I live at 300 Webster Street in Hudson, [8] right on the Hudson-Litchfield town line. And [9] the reason I'm making these inquiries is so I can [10] make a decision to move my home or not. Because [11] the exit ramp is going to go right through my [12] garage, right through my house.

[13] **MR. RINKER:** That will be [14] convenient. You'll be able to get on and off [15] real easy.

[16] **MR. FLEURY:** Yah, I can sell [17] popcorn and stuff.

[18] (Laughter.)

[19] **MR. RINKER:** I don't mean to make [20] light of it.

[21] **MR. FLEURY:** That's okay. At this [22] time my father has two rights-of-way to get in on [23] the property on Route 3A. Where my house is [24] located, my father has a 50-foot right-of-away on

Page 78

[1] the Hudson side, a 50-foot right-of-way on the [2] Litchfield side. That because that piece of [3] property is right on Hudson-Litchfield line. [4] There's land in both towns.

48

[5] Okay, with the loss of both of [6] these rights-of-way to the back acreage, the [7] current land value is really going to drop on [8] this, number one. And we're supposed to have a [9] right-of-way to get to the back acreage. I would [10] like to know where this is going to be. I have [11] no idea. That's preventing from knowing whether [12] I should move my house or not.

[13] I'd like to know how wide this [14] right-of-way will be. Will it be public or [15] private going on to my property? Let me continue [16] now for a seocnd, okay, sir?

[17] **MR. RINKER:** I'm not going to shut [18] you off. I'm going to give you a chance to go to [19] the map and take the microphone. See if we can [20] get some answers for you.

[21] **MR. FLEURY:** I have asked Mr. [22] Cyr. I couldn't get an answer. I went to the [23] Highway Department in Town here, and I can't get [24] an answer. There's supposed to be a right-of-way

Page 79

48

[1] going down to the Merrimack River with a boat [2] ramp. Now off that, I'm supposed to get a [3] right-of-way to go onto our property. But where [4] on this right-of-way going to the boat ramp is [5] our right-of-way going to be, if any?

[6] I'm going to ask you something [7] else. Anybody here from the Fish & Game [8] Department here tonight?

[9] **MR. RINKER:** Nashua Fish & Game or [10] State Fish & Game?

[11] **MR. FLEURY:** State Fish & Game.

[12] **MR. RINKER:** I see a hand up [13] there. Are you State Fish & Game? I can see. [14] No.

[15] **MR. FLEURY:** Where do they propose [16] to put the boat ramp? I don't know if you're [17] aware of it, that river goes up and down with the [18] rainfall we've got.

[19] **MR. RINKER:** The river?

[20] **MR. FLEURY:** Yes, sir. Draws many [21] feet in depth. If you want to use power boats [22] out there in the months of July and August, [23] you're not going to be able to launch and run [24] them there There's not enought depth.

Page 80

[1] There's a natural shoal that's there. Further up [2] river there's more depth to the river, but you're [3] channel is on the Nashua side. You can run a [4] power boat further north toward the Litchfield [5] line but you can't go southward where that brook [6] is. You're going to run aground. They'll be [7] selling a lot of props. It's impossible to [8] navigate there in the months of July and August. [9] At this time of year you can.

[10] I guess that's about it. That's [11] all I have to say. I'd like to have some answers [12] from the Board.

[13] **MR. RINKER:** Don't go away. First [14] of all, could I ask the Department to touch base [15] with Fish & Game and make sure they're aware of [16] his testimony, unless you want to comment.

[17] **MR. KENISON:** We'll certainly [18] check that out. We have provided that feature at [19] the request of the Fish & Game people, I think as [20] you know, going back to '88. If in fact there [21] are some restrictions that need to be posted due [22] to fluctuations, those certainly will be done. [23] There are also uses aside from power boats. [24] There are certainly a lot of us who canoe, and we

48 The boat access road will be a Class V road and access to that road will be made available. The road will provide access to Mr. Fleury's father's land. There will be no access to Mr. Fleury's home, therefore, his parcel will be acquired by the State through their standard condemnation process.

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PUBLIC HEARING TESTIMONY

Page 81

would hope that that might be available for very shallow draft boats.

MR. FLEURY: I realize that, but if you're going to spend the money to put a ramp in and pave it, I mean somebody's going to be in for a hell of a surprise down there.

MR. KENISON: Well, no matter whether they have a boat launch there or not, we would certain put up the appropriate public warnings or Fish & Game would. We'll work with them. Thanks for alert us.

MR. FLEURY: Another think I'd like to say, gentlemen, if this is going to fly, let it fly this year. I'm going on 11 years waiting for you people.

MR. RINKER: We'd have liked it to fly five years ago or 25 years ago.

MR. FLEURY: Well, so would have I, sir. Do you realize the type of mental hardship you're putting on these people here in this room, sir?

MR. RINKER: Well, write a letter to the Federal Government. The problem has been environmental and that type of thing. We're

Page 82

going to go through the steps that they require us to go through.

I want you to take the roving mike and go to the board, find your property. I want to ask Rod or somebody to address the concerns that you raise. I don't know if we can give you answers tonight. At least we can be sure we know what the question is, and then we'll respond to you, if not tonight in writing or something. Do it out loud so we can all hear.

MR. CYR: The Fleury parcel access is cut off completely from Route 3A.

MR. RINKER: That's the way it is currently? That's how he gets in his driveway?

MR. CYR: Both Mr. Flurry here and his father's parcel, which surrounds his. They are both cut off from 3A. The only access remaining to the remainder of the parcel will be via the boat access road, and that, I assume, will be very limited access.

MR. RINKER: Does that mean that the Deparment might be considering buying him out?

MR. CYR: I'm sure it will reflect

Page 83

in the appraisals whether it's an economic thing to buy the entire parcel or pay substantial severance damage.

MR. RINKER: Or he might have an option?

MR. CYR: Yes.

MR. RINKER: What about his father? That primarily for his father. His parcel basically is landlocked and gone.

MR. RINKER: Oh, it is? So if this route finally got approval and permitted, he should kiss his property good by and the Department will pay him and all that stuff? And father, they'll either work something out or give damage?

MR. CYR: Yes. But he'd like to say something first.

MR. FLEURY: If there's going to be access to this piece of property, this is what I'm considering, moving my house back, further back on this land and buying some land off my parents.

MR. RINKER: That's all an option if it works. Can it work, Rod?

Page 84

MR. FLEURY: If it's feasible.

MR. RINKER: Might he — I'm sorry.

MR. CYR: It is feasible. The only thing they have to bear in mind is the access is going to be off of the boat access road, and I'm not sure what class road that will be, whether the town would maintain it as Class 6 or Class 5 road.

MR. RINKER: Well, I'd like to ask the Department to work with him and stay in touch with him, and at your earliest possible time try to give him some idea whether he should hang on a lot longer or not.

MR. CYR: We will.

MR. RINKER: Thank you. I'll turn this over to Councillor Streeter. He's going to call on somebody from the Nashua area.

MR. STREETER: Someone from the Nashua Regional Planning Commission? Don Zizzi? Is Don here? I notice your counterpart from Manchester is here. Mony, do you want to testify at some point you'll support whatever. You'll support whatever Don says. All right? You have

Page 85

your marching orders, Don.

STATEMENT BY DON E. ZIZZI, NASHUA REGIONAL PLANNING COMMISSION

MR. ZIZZI: Good evening. My name is Don Zizzi. I'm the Executive Director of the Nashua Regional Planning Commission.

I have already transmitted written comments. I'd like to summarize them for you at this time.

49 I speak tonight in full and unwaivering support of the Department's of Transportation preferred alignment to build Alternative 8 and for the Nashua-Hudson Circumferential Highway.

First I would like to address the purpose and need of the project. The eastern and most urbanized portion of this region is divided by the Merrimack River which flows north to south. Currently all east/west traffic must be accommodated by either the Taylor Falls Bridge linking the central business districts of Nashua-Hudson or the Sagamore Bridge connecting heavily developed South Nashua with growing commercial industrial areas along Route 3A in

Page 86

Hudson.

Since these facilities were built over 20 years ago, population in this region, this portion of the region has increased some 60 percent. Today's average weekday traffic volumes, some 45,000 vehicles on Taylor Falls Bridge and some 28,000 vehicles a day on the Sagamore, place demands well over the capacities of these bridges, and projected travel in the future, some 73,000 vehicles a day on Taylor Falls and some 32,000 on the Sagamore, would create a virtual gridlock, not only in the vicinity of the bridges but also on all approaching routes and throughout the entire highway network.

51 The consequences of not constructing the project would represent more than just inconvenience or even hazard to the driving public. The result would be both economic stagnation as well as further deterioration of the air quality within our most densely populated communities.

On the ladder, as you must know, our region is a serious nonattainment area

49 Comment noted, no response required.

50 Comment noted, no response required.

51 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 87

[1] requiring that we take action to reduce future [2] emission causing ozones. The construction of the [3] proposed project would make a significant [4] contribution towards meeting the Clean Air Act [5] Amendment mandates. While an upgrade of the [6] existing transportation network, including the [7] expansion of transit service and the [8] implementation of transportation systems [9] management measures certainly merits agressive [10] pursuit. It is quite evidence that these [11] efforts, no matter how successful, would be [12] insufficient to meet the needs for the proposed [13] project.

[14] I'd also like to take this [15] opportunity to acknowledge and compliment the [16] Corps as well as the Federal Highway [17] Administration for recognizing that only the [18] full-build alternative addresses the purpose and [19] need for the Circumferential Highway.

[20] Next the land-use impacts. As I [21] am sure you are aware, the proposed project has [22] long been viewed as an essential addition to this [23] region's transportation network. You should also [24] know that the Circumferential Highway exists as a

Page 88

[1] key component in our local and regional [2] development plans. The Town of Litchfield, for [3] example, has not only incorporated the Build [4] Alternative 8 alignment into its recently updated [5] master plan, but it has also rezoned for high [6] intensity industrial and commercial uses that [7] portion of the municipality through which the [8] proposed highway would pass.

[9] Conversely, the other build [10] alternatives would effectively bisect this small [11] community that is predominantly residential, [12] sever its town center and virtually destroy its [13] community cohesiveness. Furthermore, it is no [14] coincidence that Build Alternative 8 in [15] particular affects the smallest number of [16] developed parcels and therefore results in [17] impacts on open lands and wildlife habitat. The [18] Town of Hudson, through which the majority of the [19] length of the proposed project is aligned, has [20] been planning for the construction of a [21] Circumferential Highway for almost three decades, [22] thus growing has been directed away from this [23] corridor.

[24] While I agree with the position

Page 89

[1] stated in the DEIS that the proposed project in [2] and of itself will not induce growth, I cannot [3] accept its conclusion that an expected adverse [4] affect of project implementation would be an [5] acceleration by ten years of anticipated land [6] development. With the possible exception of [7] Litchfield where improved highway access is [8] essential to that community's development [9] articulated by its master plan and where that [10] growing is anticipated by sound land-use [11] regulations, there is no evidence to support this [12] acceleration potential in the other jurisdictions [13] of the region.

[14] Furthermore, I have a fundamental [15] quarrel with the another alleged adverse impact [16] were the proposed project implemented, and I [17] quote from the EIS, "The continued fragmentation [18] of the urbanizing environment of Southern New [19] Hampshire." First of all, the construction of [20] the Circumferential Highway is sympathetic to our [21] urban centers by significantly reducing through [22] traffic and its attendant congestion hazards and [23] emissions. Also please be mindful of the fact [24] that this is a beltway project, not a lineal

Page 90

[1] arterial, and by the very nature of beltways [2] served to consolidate urbanization and to [3] encourage in-fill development. Were it not for a [4] circumferential highway, the current pattern of [5] highway strip development and suburban sprawl [6] would be sustained along the region's existing [7] road network.

[8] Finally, the resource impacts of [9] the project. There's no question that Build [10] Alternative 7 and 8 with their alignments passing [11] through the Pennichuck Basin engender the [12] greatest water quality concerns. While we [13] conclude that Alternative 7 poses too great a [14] risk of hazardous materials spilled directly into [15] a water body — that is, Bowers Pond — we are [16] confident that run off from Alternative 8 can be [17] adequately diverted from the Pennichuck water [18] regime to prevent adverse impacts from salt and [19] other potential contaminants.

[20] As the primary federal permitting [21] agency with authority derived from Section 404 of [22] the Clean Water Act and your approval based on [23] Section 404(B)(1) guidelines, the Corps' [24] attention is no doubt most closely focused on

52 Comment noted, no response required.

53 Comment noted, no response required.

53 Comment noted, no response required.

55 Comment noted, no response required.

53 Comment noted, no response required.

57 Comment noted, no response required.

58 Comment noted, no response required.

55 The fragmentation cited concerns the unavoidable segmentation of open space (e.g. blocks of relatively natural habitat) as a consequence of community land development. It does not relate to the urban environment. This statement has been clarified in the FEIS.

58 Comment noted, no response required.

61 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 91

[1] potential wetland encroachment. While Build [2] Alternative 8 is not the most benign in terms of [3] gross wetland impacts, neither in the number of [4] wetlands not the total acres affected, it does [5] require the least alteration to key wetlands, and [6] it does, as the DEIS accurately points out, rank [7] Number One by no trivial degree when the number [8] of homes and the total property value to be [9] affected are considered.

62 [10] The overall majority of NRPC's [11] municipal, corporate and individual constitutents [12] hope that the Corps of Engineers shares their [13] desire to strike a balance for the greatest [14] public good.

63 [15] To conclude, I ask you to consider [16] this assertion. Few public works projects of any [17] magnitude enjoy broader support at the State, [18] regional and local level, from government [19] officials to business leaders, address a greater [20] need, have been better incorporated into [21] community development plans and have less [22] significant adverse impact on the total human and [23] natural environment than the proposed [24] Nashua-Hudson Circumferential Highway. Thank

Page 92

[1] you.

[2] **MR. STREETER:** Thank you. Don. [3] Did you want to ask Mony?

[4] **MR. RINKER:** Mony, inasmuch as the [5] Southern New Hampshire regional planning covers [6] an area that abuts the towns that are affected by [7] the Circumferential, and I know — where are you [8] Mony — I know you're familiar with this [9] project. If you'd like to go on the record, I'd [10] love to have you as far as your support and would [11] your support be of Alternate 8.

[12] For the record and publicly, do [13] you support the project and Alternate 8?

[14] **FROM THE FLOOR:** Yes, and we are [15] coordinating with Regional Planning Commission [16] and the DOT.

[17] **MR. RINKER:** On the airport access [18] road along with the Circumferential, coordinating [19] the two. Okay, thank you.

[20] **MR. STREETER:** At this point for [21] the sake of the stenographer, we going to take a [22] 2-minute recess.

[23] (A recess was taken.)

[24] **MR. STREETER:** Okay, Kirk.

Page 93

[1] **STATEMENT BY KIRK STONE, AUDUBON SOCIETY OF NEW HAMPSHIRE**

[3] **MR. STONE:** Thank you very much, [4] Mr. Chairman. My name is Kirk Stone. I'm the [5] Environmental Affairs Director of the Audubon [6] Society of New Hampshire in Concord. We're [7] primarily a wildlife habitat organization, but [8] because of that we've become recently much more [9] involved in transportation issues because of [10] their great impact on wildlife and habitat.

[11] We certainly acknowledge the [12] congestion problem in Nashua and the greater [13] Nashua area and by all means acknowledge the [14] necessity to do something. We haven't yet [15] completely finished our analysis of this DEIS, [16] and we understand there are ten more days at [17] least to get in our written comments, and we will [18] do that. But our initial response is one of [19]

64 serious concern that this proposal does not [20] adequately address the congestion problem that [21] we've talk about tonight. We just have to look [22] at all that red ink over there on those maps.

[23] We also fear that this may [24] exacerbate the air quality problem in the Nashua

Page 94

65 [1] area. It seems to ignore the contribution that [2] could be made from effective transportation [3] demand management and system improvements. There [4] seems to be very little attention paid to that. [5] And we're concerned that it

66 further fragments [6] habitat and makes future fragmentation from [7] additional development more likely.

[8] Just briefly, the congestion [9] question seems to me to be key here. The Nashua [10] area is clearly in a gridlock situation too much [11] of the time. But the level-of-service maps that [12] are displayed on the board over there are [13] indications that this proposal simply doesn't [14] address them adequately. There is a lot of level [15] of service that remains after these build [16] proposals are done. Our feeling is that just not [17]

67 enough cars are being removed from the roadways. [18] There needs to be more effort, as the first [19] speaker tonight indicated, on the rails and buses [20] and van pools and park-and-ride situations.

[21] With air quality, our organization [22] has recently been negotiating with the Public [23] Service Company of New Hampshire regarding NOX [24] reductions from utility boilers, and we've

62 Comment noted, no response required.

53 Comment noted, no response required.

64 Comment noted. Refer to the diagrams depicting Level of Service by Alternative and the tables of LOS improvements that are included as part of these diagrams. These are located in Appendix A of the FEIS.

65 Refer to the responses provided for comment #10 of the Public Hearing Testimony and comments #23 and #31 through #33 of EPA's March 2, 1993 letter.

66 Fragmentation impacts are addressed in the Wildlife Technical Report, pages VI-33 through VI-36 and in the Cumulative Development and Associated Impacts Technical Report.

67 Refer to the responses provided for comment #10 of the Public Hearing Testimony and comments #23 and #31 through #33 of EPA's March 2, 1993 letter.

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PUBLIC HEARING TESTIMONY

Page 95

68 [1] learned that NOX is a very important component of [2] the ozone problem that we're dealing with here in [3] the Nashua area. The DEIS seems to indicate that [4] NOX will not be a problem. I think that it [5] probably will be a problem, and we should give [6] much more attention to that.

[7] **MR. STREETER:** What are NOX.

[8] **MR. STONE:** Nitrous oxide. It's [9] one of the components of ozone and needs to be [10] dealt with.

[11] **MR. STREETER:** I have thought you [12] meant engines that were knocking.

[13] **MR. STONE:** No, N-O-X, I'm sorry. [14] Regarding transportation demand [15] management, I think that the assertion 69 in the [16] DEIS that a one percent improvement in congestion [17] can be realized from transportation demand [18] management and system improvement is simply [19] giving up, throwing up one's hands before really [20] trying. It's a surprising number to me, and I [21] found nowhere in the document that it was [22] justified or rationalized. I couldn't find a [23] justification for it.

[24] I think that some real effort

Page 96

[1] should be made to relieve the congestion problem [2] by doing some serious demand management and [3] system improvements. I just have to ask, what [4] 70 sort of improvement could we get in the [5] congestion problem if we spent the $200 million [6] really focusing on that question of getting cars [7] off the road and helping people get around with [8] other means of transportation.

[9] In general, we're concerned that [10] this an attempt to do something which certainly [11] must be done. Something has to be done to adress [12] the problem, but what's being proposed here will [13] turn out to be a disappointment. It appears that [14] there's not enough attention being given to the [15] real problem. We certainly, at the Audubon [16] Society, are interest interested in seeing people [17] get around more efficiently, and we believe that [18] the long-term economic interest of this area will [19] be better served by a more creative investment [20] investment in the area's transportation.

[21] I will have written comments by [22] the deadline. Thank you very much.

[23] **MR. STREETER:** Thank you, Kirk.

[24] **MR. RINKER:** Al Kashulines.

Page 97

[1] **STATEMENT BY ALBERT E. KASHULINES**

[2] **MR. KASHULINES:** My name is Al [3] Kashulines I'm from Hudson, New Hampshire, 7 [4] Harwood Road.

[5] You've heard a lot of nice [6] testimony here, but some of the facts didn't come [7] out. I'd just like to walk over to this board. [8] I know a lot of you aren't aware where these [9] tollbooths are going, and this project is [10] starting. They're not even on the map, folks. [11] So if you'll bear with me, I'll make it brief but [12] I'll let you know how it is.

[13] **MR. STREETER:** Al, let me remind [14] you that this not a hearing on tolls. This is a [15] hearing on the highway. Listen to what I'm [16] saying. If you want to comment briefly on the [17] location of the tollbooth, fine, but we're not [18] here to discuss the toll issue. That's law. The [19] Legislature enacted that in 1986.

[20] **MR. KASHULINES:** Well, I think [21] there are a couple of bills to do away with [22] that.

[23] Right here, folks, as your cross [24] the Merrimack River, you see, they only go to the

Page 98

[1] Daniel Webster Highway. The heart of this whole [2] project is right here, the Everett Turnpike. [3] They are going to take and divert all the traffic [4] that's going up north here, they're going to take [5] skiing, you're going to the mountains, you're [6] going to Lake Winnipesaukee, it's going around to [7] Hudson, folks. That's why they want that toll [8] bridge right here.

71 [9] I suggest that if they want these [10] people to pay for the toll, where we've already [11] paid for it for many, many times, and this is [12] going to be a toll bridge, not a toll highway. [13] So move the tolls across between the old Topspin [14] and the church. That will eliminate all our [15] tolls that we've been paying for, and we own [16] these bridges. Don't forget, we are the people [17] here. We are the taxpayers, and I don't care if [18] you listen to Corps of Engineers or these [19] Commissioners, they're trying to —

[20] **MR. RINKER:** There goes that [21] battery again.

[22] **MR. KASHULINES:** No, it's still [23] on. Believe it or not, folks, we are the [24] taxpayers in this town and in this State. I've

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66 NO_x is recognized as an important element of the ozone problem and is receiving increased attention with respect to its control. However, as of the publication of the FEIS, there are no standards set by the EPA for NO_x emissions. The New Hampshire State Implementation Plan (SIP) focuses on nonmethane hydrocarbons (NMHC) as does the mesoscale analysis that was utilized in this DEIS. Refer to the response provided for comment #19 of EPA's March 2, 1993 letter for information regarding project compliance with the SIP and therefore the Clean Air Act Amendments (CAAA).

69 Comment noted. Refer to the responses provided for comment #10 of the Public Hearing Testimony and comments #23 and #31 through #33 of the EPA's March 2, 1993 letter.

70 Comment noted. Refer to the response provided for comment #69 above.

71 Comment noted. Refer to the response provided for comment #31 of the Public Hearing Testimony regarding toll booth placement. In addition, refer to the last paragraph on page S-4 of the DEIS regarding the issue of project financing by tolls.

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PUBLIC HEARING TESTIMONY

Page 99

been here for 64 years. I was 32 when they started, and I hope I'm 96 when they finish it. I won't have to worry too much about it. But we have to stick together. We've got to call Bernie. we've got to call Rinker and keep their that phones busy. They are the ones who appropriate the money.

72 The allocation for all the highways went up north where all the politicians are, and these guys get left bare. They won't take federal funds because they wanted to make it a toll road, and you can't make a toll road on a federal highway. It's just aas short as that, folks. Don't let these people kid you.

The Corps of Engineers went down in Florida. They spent $280 million building a canal across Florida. They're going to spend $280 million putting it back the way it was. So they make mistakes too.

Let's stick together and when you get out of the meeting, there will be petitions around.

MR. RINKER: Thank you, Al. Richard Callahan.

Page 100

STATEMENT BY RICHARD K. M. CALLAHAN, HUDSON CHAMBER OF COMMERCE

MR. CALLAHAN: Richard Callahan, 93 Pelham Road, Hudson.

I've heard a lot said tonight about many factors. I would hope that the Corps of Engineers can take these many factors into account when they come to balance the books. And aside from that, I would like to see no **73** disturbance of the Alvirne High School and Hills House properties. Thank you.

MR. RINKER: Are you generally in favor of the project, Mr. Callahan?

MR. CALLAHAN: YES.

MR. RINKER: Is that the country club that you represent as well?

MR. CALLAHAN: No, I represent the Hudson Chamber of Commerce.

MR. STREETER: Next speaker, Ryan Teeboom, representing the Nashua Conservation Commission. Is Ryan here?

(No response.)

MR. STREETER: Any official of the Town of Merrimack here who would like to address

Page 101

the Commission? Merrimack is a town that is impacted by this project.

STATEMENT BY CHIP CHESLEY, DIRECTOR, MERRIMACK PUBLIC WORKS

MR. CHESLEY: Thank you very much. Good evening, Honorable Councillors, Colonel, Commissioner. Unfortunately our Board of Selectmen have a —

MR. STREETER: Just identify yourself.

MR. CHESLEY: My name is Chip Chesley. I'm director of Public Works, and our Board of Selectmen unfortunately cannot attend tonight because of a previously schedule meeting.

What I'd like to do is to read briefly from a letter that they had sent to Commissioner O'Leary on September 17th.

74 "Dear Commissioner O'Leary: Our community has long recognized the critical need of the Nashua-Hudson Circumferential Highway as an integral component of our transportation and regional infrastructure. Since the highway's inception in 1959, our community has adopted and implemented a massive plan of land use ordinance

Page 102

consistent with the region's proposed transportation system, so that our Town may develop in an orderly fashion that is compatible with the region.

As you very well know and appreciate, our community, as well as our neighbors', has grown significantly during the period this highway has been discussed, and given our location, we will continue to grow. It is important as a community and as a region that we have a transportation system which affords us the ability to grow in an orderly, socially, economically and environmentally sound manner.

75 As a highway directly affects our community, we believe the southern alternative, Alternative 7, should be considered. Of the two southern alternatives, Alternative 7 and Alternative 8, Alternative 7 has less social and recreational impact than Alternative 8 since it does not infringe upon the Nashua Fish & Game Club.

We understand the Highway Department has voiced concerns regarding the viability of permitting Alternative 7. However,

72 Comment noted. Refer to the response provided for comment #31 of the Public Hearing Testimony.

73 Comment noted, no response required.

74 Comment noted, no response required.

75 Comment noted. Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to the paraphrased comments related to the Nashua Fish and Game Association. This can be found at the end of the section entitled "Regional".

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PUBLIC HEARING TESTIMONY

Page 103

[1] we request that the Department and the Corps of [2] Engineers carefully evaluate this option in [3] Merrimack. In any case, we cannot support [4] Alternatives 3, 4, 5 or 6 as practicable [5] alternatives because of their dramatic and severe [6] impacts on the planned land use and the [7] industrial base of the community the project [8] intends to serve. Thank you very much.

[9] **MR. STREETER:** Thank you. [10] The next speaker, Tom Grilli. [11] Just identify yourself and your address.

[12] **STATEMENT BY TOM GRILLI**

[13] **MR. GRILLI:** I'm Tom Grilli. I'm [14] from Brinton Drive in Nashua.

[15] **MR. STREETER:** You wish to go to [16] the map?

[17] **MR. GRILLI:** Yes, please. Thank [18] you.

[19] We're located right about here. [20] And I wanted to basically counter what was said [21] by Don Zizzi of the Nashua Regional Planning [22] Commission and I believe it was Selectman [23] Robinson of Litchfield. Actually what I'd like [24] to do is point a few things.

Page 104

[1] As Selectman Robinson said, this [2] is the Weinstein Well, if I'm correct. [3] Alternative 3, 5 goes through here. If you look [4] at an aquifer map, the drainage of groundwater [5] from the Weinstein Well goes this way. So even [6] if there were a toxic spill or any kind of [7] contaminant, the water if it seeped through the [8] soil would run away from the well.

[9] Over here where we have Pennichuck [10] Pond, Bowers Pond and the rest of the chain that [11] serves Pennichuck Water Works, if you look at the [12] groundwater and there were a spill, the [13] groundwater goes this way, right into the water [14] supply.

[15] Right here is what is considered a [16] prime wetland. Those of you that have been [17] following this, I'm sure, are well aware 67 [18] percent at the people in Nashua passed a [19] referendum to protect their wetlands. The [20] Aldermen alter man by a vote of 12 to 2 [21] designated this area and this whole chain of [22] brooks as prime wetland. It's been accepted by [23] the State Wetlands Board, and as I read the law [24] — and bear with me for one second — according

Page 105

[1] to the Director of the State Wetlands Board, "If [2] highway officials demonstrate a public need for a [3] road and an alternative route is unavailable" — [4] those are the key words — "the Board would [5] approve a highway in a prime wetlands."

[6] Obviously this is an alternate [7] route that is acceptable, as you are well aware [8] from reading all these statistics that they [9] narrowed it from 33 to 8, so therefore, I would [10] imagine any of the 8 are considered a viable [11] alternative. If the Army Corps is indeed going [12] to pick a least damaging alternative, it would [13] have to be this one.

[14] Something else that Mr. Robinson [15] didn't tell you is that this part here, 3, 5, [16] also falls within what has been zoned as [17] commercial for Litchfield. Effectively all from [18] this area down is all commercial. So either one [19] of these routes goes through a commercial area. [20] So it really doesn't make any difference which [21] route you go as far as industry is concerned.

[22] I believe it was Mr. O'Leary who [23] said that he wanted to protect historic sites, [24] and I see that this route right here goes through

Page 106

[1] 1, 2, 3, 4, 5 historic sites as well as one [2] that's nearby affected. It goes directly over [3] two wells, directly over not near, but directly [4] over two wells, and again goes through a prime [5] wetland area, which is also a bald eagle nesting [6] area, and from what I understand is a spawning [7] ground for Atlantic salmon.

[8] Obviously, there are many [9] alternatives to go. This here, too, also brings [10] this within one mile, right here, is less than a [11] mile, which I believe is the State's criteria for [12] safety. It also create an enormously jutting [13] curve, which I believe isn't safe going 60 miles [14] an hour, at least I wouldn't want to do it. And [15] the other alternative is that this, from what has [16] been done in the past, will not be able to [17] co-terminate with a route going the other way.

[18] If you go up here, it can keep [19] going, connect to Camp Sergeant Road and take [20] people going east to west, which is, I believe, [21] the whole idea of this to get you across the [22] river. Take you east to west and get you all the [23] way to the other side of Amherst Street, which we [24] all know what a nightmare that is, and get you

76 Comment noted, no response required.

77 The pumping rate of the Weinstein Well, one million gallons per day, can alter groundwater flow patterns in the immediate vicinity of the well. The cone of depression of this well may be quite extensive, as evidenced by the noticeable drawdown of the Chase Brook located 1650 feet north of the well. Refer to pages V-35 through V-37 in the Wells and Aquifers Technical Report for an in-depth analysis of the alignments with respect to the Weinstein Well.

78 Comment noted. Refer to the response provided for comment #2 of the Public Hearing Testimony which discusses drainage along Alignment 8 in the vicinity of the Pennichuck Reservoir.

79 Comment noted. This comment refers to the Pennichuck Brook wetland.

80 Comment noted, no response required.

81 Comment noted, no response required.

82 Refer to the responses provided for comments #6 and #7 of the Public Hearing Testimony.

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PUBLIC HEARING TESTIMONY

Page 107

[1] all the way out to Amherst by the McDonald's.

[2] Now, I know this is to alleviate [3] traffic north and south, but as the traffic [4] studies indicate, it's not going to do that. So [5] essentially what the idea of the highway is as [6] far as I can determine is to get people east and [7] west, not necessarily north and south. And if [8] you're going to get people east and west, then I [9] think you want them to be able to continue going [10] east and west as opposed to terminating on the [11] Turnpike and going south and north one exit in [12] order to continue on their way.

[13] If you look at all these things, I [14] can't see how you would pick that alternative. [15] If you look at all these alternatives, and I'm [16] talking mainly to the Army Corps, I think that [17] you can't find Alternatives 3 and 5 would be more [18] environmentally damaging. Frankly, it's safer, [19] it's cheaper and it just makes more sense. Thank [20] you very much.

[21] **MR. STREETER:** Thank you, Tom. [22] Next two speakers share the same [23] last name, Leslie and Steven Chunn. Would you [24] like to appear jointly or separately?

Page 108

[1] **MS. CHUNN:** Separately.

[2] **MR. STREETER:** Separately? Okay. [3] Leslie.

[4] **STATEMENT BY LESLIE CHUNN, NASHUA FISH & GAME ASSOCIATION**

[6] **MS. CHUNN:** I'm probably the [7] smallest person that's going to address you this [8] evening. My name is Leslie Chunn. I'm a [9] resident of Merrimack, and I'm also the President [10] of the Nashua Fish & Gam Association.

[11] Nashua Fish & Game Association has [12] been in place, established since 1937, 55 years. [13] We have 40 acres in South Merrimack, which I [14] believe actually at some point in time was [15] actually Nashua. We preserve this area as open [16] land. We have 600 members and their families, [17] which use the Nashua Fish & Game as a [18] recreational resource. Something that's becoming [19] harder and harder to find here in Southern New [20] Hampshire as development increases.

[21] We are a unique and irreplaceable [22] facility. The reason I say that is primarily due [23] to the 600-yard rifle range that runs down the [24] outside, the right-hand side of our facility.

Page 109

[1] This is the only such government-permitted rifle [2] range in the State of New Hampshire and only one [3] of two in the New England region.

[4] I understand that the Army Corps [5] of Engineers, at least one department or another, [6] was very instrumental in helping us create that [7] many years ago.

[8] My husband is going to address [9] several other areas regarding the EIS, but [10] primarily I wanted you to understand the impact [11] of Alternative 8 is to Nashua Fish & Game. As I [12] said, we have 40 acres of open area. The [13] northern part of our property is all of our open [14] outdoor ranges. The indoor facilities are in the [15] southern part.

[16] The route of Alternative 8 [17] effectively bisects our ranges and essentially [18] puts us out of business, because we no longer [19] will have access to the facilities at the north [20] end of the area.

[21] We also have a large mountain of [22] the end of our facility, and what this does for [23] us is provide a safety backstop to keep us a safe [24] organization.

Page 110

[1] The other thing that's important [2] to note is that — actually I wish you'd come [3] take my house, because moving and relocating a [4] residence or business is significantly easier [5] than relocating a fish and game association. [6] Today we are surrounded by industrial land and [7] conservation land. It essentially becomes [8] conservation land at the Pennichuck for wildlife [9] habitat. The other industrial neighbors are [10] Sanders Associates and Digital Equipment. And it [11] provides us with a nice buffer where we're not [12] annoying and disrupting the residential lives and [13] peace and quiet piece of our neighbors.

[14] In doing so, we were able to enjoy [15] our shooting sports and other outdoor activities, [16] such as fishing, camping, education programs, [17] hunter education and training of young people in [18] marksmanship, civilian marksmanship and [19] competition. In fact, we've had some of our [20] folks go on to national competition.

[21] The problem in moving us today [22] really has to do with space. We really don't [23] know what available land there is in Southern New [24] Hampshire these day within driving distance of

83 Comment noted, no response required.

84 Comment noted, no response required.

85 Comment noted, no response required.

86 Comment noted, no response required.

87 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 111

88 [21] The problem in moving us today [22] really has to do with space. We really don't [23] know what available land there is in Southern New [24] Hampshire these day within driving distance of

[1] the membership, where we could relocate the [2] facilities as we have them today.

[3] And secondarily, even if there is, [4] we have to go through the same types of public [5] hearings that you folks are doing now, and the [6] State has told us that there is no guarantee that [7] they can help us obtain the permits require to [8] reestablish.

89 [9] I think that Nashua Fish & Game [10] contributes a lot to the community. Particularly [11] in the area of safe firearms handling and [12] responsible ownership of firearms. This is [13] important because in our society, unfortunately a [14] lot of people do own firearms. We would rather [15] provide a safe haven for their use in an area [16] where it's a controlled environmental. We can [17] provide the training necessary and the [18] understanding of responsible firearm use.

[19] The permitting process, we think, [20] is going to be very, very difficult, and as a [21] nonprofit organization run primarily by [22] volunteers — quite frankly, I don't know how [23] we're going to get the money to proceed in that [24] area. And I'd like you to really consider that

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Page 112

[1] and the destruction of the recreational resource [2] that we have here in Nashua Fish & Game. Thank [3] you.

[4] **MR. STREETER:** Just a couple of [5] questions. What's the acreage involved?

[6] **MS. CHUNN:** Nearly 40 acres. [7] However, please realize that in order to locate a [8] facility like that today, you probably would need [9] somewhere in the order of 400 to 500 acres to [10] provide noise buffer and — primarily noise [11] buffer and safety reasons.

[12] **MR. STREETER:** What about the [13] Benson site, Commissioner?

[14] **MR. KENISON:** Our staff have been [15] working with the people from the Fish & Game [16] Club. We'll continue to do that. It's not that [17] we can't guarantee to assist them. We're [18] obligated to assit them. We're can't guarantee [19] that a particular town will extend a welcome and [20] necessary approvals for such a facility. But we [21] are obligated to give all the assistance that we [22] reasonably can to find a new location.

[23] We have tried to shift alignments, [24] and we simply can't do that to salvage the

Page 113

[1] facility. So in fact, we with the Fish & Game [2] people are, in fact, looking around at [3] properties, and the President quite correctly [4] describes the special nature of the facility.

[5] We will look at Benson's but also [6] that's in the neighborhood of some residential [7] buildup on the periphery. We will be recreating [8] wetlands on an aspect of it, and I believe we're [9] going to talk with the Town about town facilities [10] on some part of it. We have a problem of [11] compatibility and also safety. So we'll continue [12] to work with those.

[13] **MR. STREETER:** We know that there [14] are other state owned properties in the area?

[15] **MR. KENISON:** That is correct, and [16] we're going through that inventory as well we're [17] getting a lot of help from the private sector at [18] the moment.

[19] **MS. CHUNN:** One last thing in [20] closing is that we believe that using Exit 10 — [21] I live in Merrimack. In fact I live right off [22] Exit 11 itself. I see very little traffic on [23] Exit 10. It is not anywhere near to carrying the [24] loads of traffic that it was designed to do. And

91

Page 114

[1] quite frankly, we believe that, for the same [2] reason that Tom Grilli said, hey, if you want to [3] provide good east-west access for this community, [4] then take it out through Exit 10, cross over to [5] Continental Boulevard and carry on over to the [6] 101A bypass.

[7] Thank you very much. I would like [8] to turn over to Steve Chunn.

[9] **MR. STREETER:** Sure. Thank you.

[10] **STATEMENT BY STEVEN CHUNN, NASHUA FISH & GAME ASSOCIATION**

[12] **MR. CHUNN:** My name is Steve [13] Chunn. I'm here representing the Nashua Fish & [14] Game, and I like to read to you a letter that [15] we're submitting to you tonight.

[16] **MR. RINKER:** Will you be able to [17] make a copy of that letter available to her when [18] you get through?

[19] **MR. CHUNN:** Yes, I will.

[20] "We are writing to comment on the [21] Revised Draft Environmental Impact Statement, [22] Nashua-Hudson Circumferential Highway. The [23] Nashua Fish and Game Association was formed in [24] 1937, currently has 604 members, and is located

88 Comment noted, no response required.

89 Comment noted, no response required.

90 Comment noted, no response required.

91 Comment noted. Refer to the responses provided for comments #4 and #8 of the Public Hearing Testimony.

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PUBLIC HEARING TESTIMONY

Page 115

[1] in Merrimack, New Hampshire. The Association [2] conducts numerous activities, including [3] conservation awareness, young people's education, [4] shooting sports, and many public events. In [5] addition to having indoor and outdoor shooting [6] ranges, we provide southern New Hampshire with [7] its only government permitted extremely long [8] distance rifle range. This unique range allows [9] target shooting at distances of up to 600 yards.

92 [10] "It is our opinion that the draft [11] Environmental Impact Statement falls short of its [12] primary purpose of providing the decision maker [13] with a full and complete understanding of the [14] environment consequences of the various [15] alternative presented. Our concerns with the [16] DEIS involve socio-economic, wildlife, wetland and [17] secondary and cumulative issues.

93 [18] "As proposed, Alternative 8 would [19] traverse our 38.6 acres, destroying the club's [20] facilities and ranges. We find no evidence that [21] this impact has been evaluated in the DEIS. The [22] loss of our facilities would not only directly [23] affect our 600 members, but would also directly [24] affect the thousands of people who use the

Page 116

[1] facilities during our many public events each [2] year. Please recognize that it should not be [3] assumed that the club could be relocated as can [4] residences. The safety and permitting [5] requirements for a 600-yard rifle range are [6] considerable, and relocation in the relatively [7] populated regions surrounding Nashua might be [8] impossible. We feel that without a feasibility [9] study on the relocation of the facilities and [10] ranges, a decision maker would be denied [11] information that would be critical before making [12] an informed decision to choose Alternative 8.

94

95 [13] "The feasibility study on [14] relocation would, at a minimum, have to evaluate [15] land, sociological, noise and permitting issues. [16] If it were to be concluded that the facility [17] could feasibly be relocated, then a financial [18] study would need to be conducted to evaluate and [19] its impacts on the overall cost of Alternative [20] 8. These total costs would be necessary when [21] evaluating financial differences between [22] alternatives.

96 [23] "The DEIS clearly states that [24] Alternatives After 7 and 8 would have a greater

Page 117

96 [1] impacts to wildlife than would other [2] alternatives. It falls short of providing [3] adequate qualitative and/or quantitative [4] analyses. On page 3-55 the DEIS states that 'no [5] over-wintering concentrations or deer yards have [6] been reported in the area of the proposed highway [7] corridor.' The authority given for this [8] assertion is Nowell from 1984. First, the [9] statement is incorrect. Deer concentrations are [10] present in the vicinity of the Pennichuck [11] Reservoir, including the Nashua Fish & Game [12] Association property, particularly in the [13] winter. The DEIS falls short of evaluating the [14] increased importance that these remaining [15] habitats have for wildlife. They esssentially [16] serve as sanctuaries, or islands habitats, as [17] development expands in the region. Second, we [18] question the current validity of conclusions on [19] habitat use based on a study conducted about ten [20] years ago. Habitat use by wildlife species in [21] southern New Hampshire dramatically changed in [22] the past ten years due to the considerable [23] development that has occurred. We were unable to [24] evaluate the merit of the study ourselves, since

Page 118

[1] it is not listed in the reference and therefore [2] could not be located. The study must be made [3] available for cross examination. Regardless, we [4] suggest that the proponent not rely on 10-year [5] old data, but conduct an appropriate study of [6] their own. The study should not only document [7] the species and numbers of individuals using the [8] important island habitats, it should evaluate the [9] impact to the region's species population if the [10] habitats were lost and the accompanying impact to [11] recreational values to people. Without [12] up-to-date information on these issues, the [13] decision maker would not be properly informed on [14] the consequences of choosing Alternative 7 or 8.

[15] Finally, the DEIS in its [16] comparison of alternatives on page 2-30 summarily [17] dismisses the importance of the fact that [18] Alternatives 7 and 8 have significantly can more [19] wildlife impacts. The reasoning given was this [20] was a result of the State of New Hampshire's [21] early land acquisition for the highway. While it [22] may be true that the land was not developed [23] because it was State owned, it is not [24] justification to dismiss the wildlife or habitat

[1] on the property. Simple purchase of land is not [2] an irretrievable commitment of the resources on [3] the land. Ownership can be changed again. These [4] resources must be evaluated regardless of land [5] ownership. This DEIS does not accomplish that.

92 Comment noted, no response required.

93 The Nashua Fish and Game Association was incorrectly identified as the Merrimack Gun Club in the DEIS and supporting documents. The impact on the Association is noted in the Socioeconomic Technical Report. Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to the paraphrased comments related to the Nashua Fish and Game Association. This can be found at the end of the section entitled "Regional".

94 Comment noted, no response required.

95 Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to the paraphrased comments related to the Nashua Fish and Game Association. This can be found at the end of the section entitled "Regional".

96 Dr. Lee Alexander was a contributing wildlife specialist to this DEIS. Having worked with H. Nowell (past Chief of Wildlife Resources Division, New Hampshire Fish and Game Department) a reference was made of fugitive literature as a personnel communication based on work with Nowell in 1984. That information was augmented by our DEIS specific field work from 1990-1992, and augmented further by information gathered from New Hampshire Fish and Game Department biologists Eric Orff, Steve Weber, and Bob Calvert.

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PUBLIC HEARING TESTIMONY

Page 119

[1] on the property. Simple purchase of land is not [2] an irretrievable commitment of the resources on [3] the land. Ownership can be changed again. These [4] resources must be evaluated regardless of land [5] ownership. This DEIS does not accomplish that.

97 [6] "The DEIS clearly states that [7] Alternatives 7 and 8 would affect the most [8] wetlands. It is our opinion selection of an [9] alternative that would destroy significantly [10] more wetlands has significantly more impacts on [11] most issues, and would cost significantly more [12] money could not be considered as the best [13] practical alternative. To overlook these issues [14] would, in our opinion, violate at least the [15] spirit of the Clean Water Act and its Section 404 [16] requirement to only fill wetlands when there is [17] no practical alternative. Finally, the [18] justification on these wetland impacts based upon [19] the fact that many of them fall within the [20] property purchased by the State is not valid for [21] the same reasons given above for wildlife. [22] Ownership of land does not constitute a [23] commitment of the resource.

98 [24] "The DEIS largely claims that most

Page 120

[1] secondary and cumulative impacts would be the [2] same without the highway. The proposed project [3] would simply accelerate an inevitable [4] consequence. This reasoning is faulty. While we [5] agree that the development of the towns east of [6] the Merrimack River will continue in the future, [7] we feel the type of development would be markedly [8] different if the proposed highway were built. [9] Without the increased access the highway would [10] provide, the development would likely be [11] residential. Development associated with the [12] highway would largely be commercial and [13] industrial. Impacts associated with each of [14] these types of development are significantly [15] different. Residences typically have relatively [16] small footprints as compared to the land owned, [17] leaving a large proportion of the land in varied [18] natural status. Commercial and industrial [19] development would be associated with a much high [20] portion of lands disturbance with its large [21] buildings and paved parking lots. It also [22] results in increased potential for pollution from [23] nonpoint runoff. The difference between the [24] impact to all resource areas from the two types

Page 121

98 [1] of development would be considerable and must be [2] fully evaluated before an informed decision could [3] be made. The rationalization that many of the [4] towns have rezoned the corridors to commercial [5] and industrial is again not a commitment of the [6] resources. Zoning can be changed. Zoning will [7] not itself result in the commercial or industrial [8] development of land. As any business person [9] would tell you, access is the most important [10] aspect of the business. This highway would [11] provide access to those areas that is presently [12] missing. Thank you.

[13] **MR. RINKER:** Thank you. [14] Representative Shawn Jasper?

[15] **STATEMENT BY REPRESENTATIVE SHAWN JASPER**

[16] **MR. JASPER:** Thank you. My name [17] is Shawn Jasper from Old Derry Road in Hudson.

[18] This project is as old as I am [19] now, older.

[20] **MR. STREETER:** Are old are you?

99 [21] **MR. JASPER:** 33. 1959, same year [22] this was first brought up. I'm in support of the [23] route that Commissioner has chosen.

[24] The Town of Hudson has planned for

Page 122

[1] many years, since at least 1985, on the northern [2] portion of it. I believe the southern portion [3] was chosen and most of the rights-of-way bought [4] back in the early '70. So as we've grown as a [5] town, we've grown considerably since that time.

[6] Much of our planning and zoning [7] has been built around that. People have been [8] relocated as a result of that, and businesses [9] have moved. A lot of things have happened, all [10] as a result of this beltway. I believe that we [11] need it, and we believe that this is the best [12] route for a number of reasons.

[13] It's very difficult when you're [14] impacting as many acres and as many people as you [15] are here to get everyone to agree on where you [16] should go. But this has been studied and studied [17] and studied, and I think for a lot of good [18] reasons, which I'm not going to sit here and try [19] to enumerate to you this evening. This is the [20] route that serves everyone's best interest. By [21] everyone I don't mean each individual but I mean [22] everyone as a community and as a group.

100 [23] This route that has been chosen [24] impacts my family. We've be out on the Old Derry

97 Comment noted. The NHDOT's preferred alternative is not necessarily the permitted alternative. Under the Clean Water Act (CWA), the Corps in coordination with the EPA will ultimately determine compliance with the CWA through the 404 process. It is nowhere stated or intended that ownership by the State is justification for wetland impact.

96 Comment noted. Refer to the Cumulative Development and Associated Impacts Technical Report.

99 Comment noted, no response required.

100 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 123

[1] Road since 1916, and this route is coming through [2] the middle of our property. In part it was [3] chosen because we had kept about half mile open [4] for all those years, and it impacted less [5] people. Now I'm certainly not happy with it [6] going through the middle of our property and [7] changing our way of life, and it certainly will. [8] But I recognize that for the benefit of the [9] community, this is the best thing to do.

[10] Had the route that was first [11] planned on, had it gone through in the 60's, it [12] would have been south of of Alverne which would [13] have much suited my tastes and preferences, but [14] that didn't happen because of the delays that [15] have gone along on this project, and it's been [16] delayed enough. We need not impact more people [17] and we need not impact more business, we need to [18] move forward. And the Department has done [19] considerable work in trying to come up with the [20] best route that they can, and they certainly have [21] done it with this route, and I hope that it will [22] be approved. Thank you.

[23] **MR. RINKER:** Thank you, John. [24] John Walsh.

Page 124

[1] **STATEMENT BY JOHN WALSH, GRANITE STATE WHEELMEN BICYCLING CLUB**

[3] **MR. WALSH:** Good evening. I'm [4] John Walsh, 14 Alvirne Drive, Hudson, New [5] Hampshire. I'm also here representing the [6] Granite State Wheelmen Bicycling Club, which is a [7] thousand member bicycling club that has members [8] throughout the State.

[9] As a member of the bicycle club, [10] I'd like to endorse the inclusion of the New [11] Hampshire Department's of Transportation [12] pedestrian and bicycle access into their planning [13] and their access for nonvehicular use on the [14] Sagamore Bridge that is currently being used as a [15] bicycle commuter path.

[16] To reflect and amply on the [17] Litchfield Conservation Commission's comments, [18] the Granite State Wheelmen would also ask that [19] the Department accelerate or at least not put a [20] stopgap on the northern bridge pedestrian [21] access. If they make it conditional, it may not [22] happen. If it doesn't happen when its built, it [23] may never happen. This will serve to isolate [24] Litchfield and Merrimack with cross recreational

Page 125

[1] use for both recreational riders, family cycling [2] — that's parent and children together — and [3] with commuting cyclists. So I'd would ask that [4] the nonvehicular access to the northern bridge be [5] included and be mapped in as part of it.

[6] Changing hats slightly, as a [7] resident of Hudson, a 10-year resident, by the [8] way, I've been attending these meetings since [9] about 1982 or so. On the proposed alternate for [10] the Corps of Engineers, I'd like to express [11] concern about the possible bisection of the [12] Alvirne High School property and the voc-tech or [13] the voc-ag. My daughter has already attended the [14] agricultural program and is now away at college [15] and found it very useful. This impacts more than [16] just Hudson. Alvirne is also the high school for [17] the neighboring community of Litchfield, and [18] although they have plans to build their own high [19] school in the future, it will remain their [20] agricultural education center. And destroying [21] that resource will ample remove that from the [22] people of both Hudson and Litchfield. It may be [23] incredibly difficult to replace or replicate in [24] whatever field might be nearby.

Page 126

[1] But within Hudson, as an [2] individual and as a member of a 3-person car [3] pool, I endorse whatever accelerated building you [4] can do to put in route 8 on the Hudson side. [5] Thank you very much.

[6] **MR. STREETER:** Thank you. [7] Joseph, looks like it's Carrabis, [8] Brinton Drive, 49 Brinton Drive. Did I pronounce [9] it correctly?

[10] **STATEMENT BY JOSEPH CARRABIS**

[11] **MR. CARRABIS:** I am Joseph [12] Carrabis from 49 Brinton Drive.

[13] I'd like to say that I'm here [14] representing a wide variety of people. I'm not. [15] I can't even say that I'm representing my wife. [16] She has her own mind. If you wish her opinion, [17] you can ask her.

[18] I do agree a great deal with what [19] Mr. Grilli said. And then I have my own [20] comments. You're planning along here to put in [21] extra tolls. I have a friend who commutes from [22] Concord to Waltham to work. He makes it a point [23] to go on 93 all the way, mainly because he [24] doesn't like to have to pay the tolls he has to

[1] pay already. He and I commute to Cambridge once [2] a month, sometimes twice a month to attend a [3] conference, and just to come pick me up at [4] Brinton Drive, he still comes down 93 to come [5] over. So I'm not sure that doing that with the [6] tolls would be useful.

101 Comment noted, no response required.

102 Comment noted, no response required.

102 Refer to the response provided for comment #47 of the Public Hearing Testimony.

104 Comment noted, no response required.

104 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 127

pay already. He and I commute to Cambridge once a month, sometimes twice a month to attend a conference, and just to come pick me up at Brinton Drive, he still comes down 93 to come over. So I'm not sure that doing that with the tolls would be useful.

I also wish to point out that it takes a lot of time to establish a natural habitat. I personally don't like to see any of them taken away. I also want to point out that I'm very selfish for coming tonight. As I said, I'm not representing anybody else but myself. My primary interest is to having air to breath and water to drink. I'm concerned about putting in all this extra road, and I understand that it seems to be the main belief that we all do need that road, and that's a worthwhile opinion. But I've never known any roads to be built that incur less traffic. You know? It's an amazing thing. You put tar down on something, and somebody wants to drive on it. It's amazing how that happens.

You put a lot more roads through here, and you know, I'm willing to bet that the sale of cars will go up. And that a lot more

Page 128

people will say, Hot dang, I want to see if I can burn a few more fuels. That's just the nature of roads. That's the way things happen. Route 128 and 495, try driving them sometime. They were designed to make life a lot easier. I'm not sure for who.

It's already been pointed out that the major concerns are north to south travel. I'm not sure why you can't use existing structures to improve that. I'm concerned about the current cost as depicted as versus the real end cost. I did consult to the Army and to NASA a number of times, and it was amazing that whatever we decided was the cost going in, we managed to multiply it by 2 and add 10. If we told them it was going to be $10 million, it ended up being 30 million by the time you were done. So that's a concern.

I haven't had a chance to read through all of the environmental study, but I'm very curious to know about the thermal transfer that's going to occur over Nashua if you put this in. A lot of people probably off handedly are aware when we had a normal weather patterns in

Page 129

this area, we haven't for a while yet, but when we had normal weather patterns, the snow belt was 495. Prior to that the snow belt was 128. It snowed north of 128 but not in it. Then it snowed north of 495 but not in it. That's because of thermal transfer. Those beltways create little caldrons of hot air. Again, affecting the air qualify. That's my concern. Because, as I say, I'm more concerned about being able to breath the air and drink the water.

Other than that, that's really it. I do think that it's better to put in more public transit, make use of those types of avenues. It seems to make more sense to me again because if you put those roads in, they're going to get used. I mean, that's the purpose. That's why you're putting them in, to get used. But if they are being used to excess, as your maps over there show, you're creating more problems, I think, than you're solving. Thank you very much.

MR. RINKER: Thank you. I would like to ask that we try to keep somewhere near within the 3-minute time

Page 130

frame, or we're going to be here until tomorrow morning. Could I call on Jane Morrissey, please. Did she leave?

STATEMENT BY JANE R. MORRISSEY

MS. MORRISSEY: My name is Jane Morrissey. I live at 302 folks Run in Hudson, and I'm concerned about the little overpass on that map.

MR. RINKER: Do you want to grab that microphone and go show us?

MS. MORRISSEY: I can point to it.

MR. CYR: Yes, it's a pedestrian overpass at Village of Barrett Hill, a condominium development.

MS. MORRISSEY: That evidently comes as a result of an original developer wanting to have access from one part of his property to another. And there is an easement that was originally granted to the Barrett Hill partnership through some sort of an arrangement or an agreement made between the State and these five individuals at the time, which I gather are no longer five, they are three.

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102 Comment noted, no response required.

102 Comment noted, no response required.

108 There is no evidence at this time that this project will create a micro-climate, and therefore this issue cannot be analyzed. There is insufficient evidence that this would occur, thus there is no reason to believe that a micro-climate would create notable impacts.

108 It was assumed in the DEIS that efforts to increase transit ridership in Nashua would be implemented. These efforts were assumed to result in a doubling of transit ridership on the Nashua CITYBUS system. Such efforts as well as concentrated efforts to increase ridesharing in the region will be key elements of a plan to ensure adequate transportation service in the region. Refer to the responses provided for comment #10 of the Public Hearing Testimony and comments #23 and #31 through #33 of the EPA's March 2, 1993 letter for additional information.

110 Response to this comment is provided by NHDOT Chief Project Manager Roderick Cyr on page 132 of the Public Hearing Testimony, and is further discussed by Assistant Commissioner Leon Kenison on page 133 and 134.

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PUBLIC HEARING TESTIMONY

Page 131

[1] The only time that overpass would [2] have any meaning, number one, is if that large [3] second section were ever to be built. At this [4] point it has not been touched. But I have some [5] very basic questions regarding that.

[6] At the hearing where the State [7] announced the route for this highway, the State [8] claims that they will own that structure, and [9] that yes, they will maintain the physical [10] structure, but it would be become the [11] responsibility of what is now the Village at [12] Barrett Hill Condominium Association to do things [13] like plow it. I don't see how a State can expect [14] a private entity to be responsible for the care [15] of its structure. And we also have certainly [16] some very deep concerns about liability. What [17] happens if somebody breaks his neck up there? [18] It's your building. It's your structure.

[19] **MR. RINKER:** You want me to try to [20] get an answer to that before you go on to the [21] next one?

[22] **MS. MORRISSEY:** I'd like an answer [23] at some point.

[24] **MR. RINKER:** Somebody want to

Page 132

[1] respond to her question?

[2] **MS. MORRISSEY:** Whose liability is [3] it?

[4] **MR. CYR:** The Department made a [5] commitment to the Town of Hudson and the [6] developer at the time. They set aside [7] right-of-way for the road on the condition that [8] we provide a pedestrian overpass and the ability [9] to carry water and sewer from one side of the [10] highway to the other. That is our commitment. [11] We will provide a structure. We will own the [12] structure over the highway. We want ot make sure [13] it's structurally sound. On the other hand, we [14] believe it's in the public interest for the [15] Department of Transportation to shovel off the [16] structure in the winter for use by a private [17] condominium.

[18] **MR. RINKER:** How do you deal with [19] the liability and all of that that she raises a [20] question about?

[21] **MR. KENISON:** I would say this. [22] Somewhat with some reservation but we would [23] certainly discuss it further with our Attorney [24] General's office, Councillor, but we have the

Page 133

[1] same problem whenever we have a town highway [2] over. And the maintainer of the surface has the [3] liability if in fact any incident is attributable [4] to surface conditions. If we maintained a [5] deficient structural member of some sort, [6] obviously it would the the State's problem [7] solely. But surface maintenance is typically [8] that of those who sponsor the particular [9] facility's use, and in this case I guess it would [10] be the Association.

[11] **MR. RINKER:** So there is a way of [12] dividing the responsibility.

[13] **MR. KENISON:** That is correct, and [14] that would be by agreement, as I'm sure we would [15] develop.

[16] **MS. MORRISSEY:** I throw this back [17] to ask you to check this further. If that second [18] portion were not developed, then how can the [19] Village at Barrett Hill be responsible for the [20] surface of this thing, so to speak, when we don't [21] even own all of it. We wouldn't even be [22] responsible for the entire thing. I think there [23] could be some really sticky issues there if the [24] thing were really pursued.

Page 134

[1] **MR. KENISON:** If we build it, [2] there won't be any sticky issues, because we'll [3] define that before we build. I think we have to [4] talk to your Association with the Town and with [5] the owners, if it is not the Association on both [6] sides of the highway obviously.

[7] **MS. MORRISSEY:** We would certainly [8] appreciate that. What I personally see here, and [9] I am on the Board there, is that, you know, we [10] have the Army Corps of Engineers, they're [11] building the State structure on an easement [12] granted to a private developer in some [13] arrangement with the State, and we can't get the [14] paperwork on it as of the moment, and this is [15] absolutely not necessary for the neighborhood.

[16] **MR. KENISON:** No. No. Let's set [17] the record straight. The Army Corps of Engineers [18] is not building anything.

[19] **MS. MORRISSEY:** The State is.

[20] **MR. KENISON:** All right. They may [21] permit something, but it would be the State of [22] New Hampshire engaging with the abutting [23] landowner and in conjunction with a prior [24] arrangement or agreement reached with the Town of

Page 135

[1] Hudson and your Association —

[2] **MS. MORRISSEY:** No, and the [3] developer.

[4] **MR. KENISON:** And the developer, [5] okay, for this facility. Now, if we can't get

[6] agreement as was once reached, then obviously the [7] structure won't happen.

[8] **MS. MORRISSEY:** Okay. Thank you.

[9] **MR. RINKER:** Thank you. David [10] Hardy.

[11] **STATEMENT BY DAVID HARDY**

[12] **MR. HARDY:** Good evening. My name [13] is David Hardy from 45 Rangers Drive in Hudson, [14] and I want to talk a little bit about the [15] intersection of the proposed highway with Route [16] 111 and it's impact on Windham Road in Hudson.

[17] Currently residents of Windham [18] Road, Barrett Hill Road, Rangers Drive, Dugout [19] Road, et ceter, use Windham Road westbound to [20] access Route 111 at the intersection of Greeley [21] Street. To facility safe traffic flow, there are [22] currently traffic control signals at this [23] intersection so people can enter 111 safely. The [24] proposed highway will deadend Windham Road at the

■ No comments.

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PUBLIC HEARING TESTIMONY

highway, requiring traffic wishing to access the Route 111 east and west and to the proposed highway to gain access by going west on Windham Road to the intersection with Route 111.

111 My concern is with this traffic trying to enter and exit Route 111. Currently there are many accidents on Route 111 because of traffic trying to enter and exit the highway. I believe that the propose highway will increase traffic flow in this area because it will offer a better alternative to the Lowell-Burlington area than currently exists. As such, consideration should be given to installing traffic control signals and building left access turn lanes along Route 111 at intersections like Windham Road and Lawrence Road. Thank you.

MR. RINKER: Does anyone want to comment? Do you want to comment on that?

MR. KENISON: Rod, would you point out those locations and show what we plan to do.

MR. CYR: The current access from Windham Road he describes is at the intersection of Windham Road and Route 111. They come down here toward where the is highway proposed, then

can go on Barrett Hill Road or can continue straight. Windham Road also has further access to Route 111 further to the east beyond the limits of our work.

We propose to connected Barrett Hill Road to Windham Road, and all that traffic will exit to the east. It is at a location beyond the limits of the project. It's something that we'll have to continue to watch to make sure there isn't a problem.

MR. KENISON: We will provide an analysis for left-turn lanes, and if they're warrented, construct them out there, will we not?

MR. CYR: We can. They have not been addressed at this point in time beyond the scope of the project.

MR. KENISON: Now, on the other side of the Circumferential, is that taken care of?

MR. CYR: This side here, yes. Windham will be deadended. This will just remain a short residental street.

MR. KENISON: As it is today?

MR. CYR: Yes.

MR. RINKER: Thank you. Representative Leonard Smith.

STATEMENT BY REPRESENTATIVE LEONARD A. SMITH

MR. SMITH: Good evening, Commissioner, Colonel. I'm State Representative, member of the Planning Board, Alvirne Trustee and Chairman of the Transportation Planning Commission.

112 I certainly endorse the route 8 that the State picked out as the preferred route. It is about the only feasible route there is. Now, we worried about crossing wetlands, and **106** starting at Sagamore Bridge, if we head northeast, we come to a prime wetland. However, that wetland can be bridged and do less environmental harm with a closed-circuit road than taking the route 4 and 5 that the Corps had proposed. And you figure the difference, as I said, there'd be less environmental impact if you take the route 8 and bridge it with a closed circuit.

114 Now, moving up to 111, you will bear northwest and north of Alvirne. It's hard

to believe that the Corps would even consider taking a hundred acres from the school that is practicing or teaching the protection of the environment. And they need these acres to do that teaching, because they use them for wood and various other projects that they are working on. So this is very hard to conceive them doing that.

115 If they took 5 and 6 and went up through Litchfield instead of going straight across west as 8 would, they would again cross over a watershed that the Southern New Hampshire Water Company is using. Yes, the well is north of there but there are other wells that they are using that is downstream from the drift, and the soil, as you know, is very fine, and this is a transmission of the water.

Now, you can continue across the Merrimack River with 8 to the Tunpike. Now, I do empathize with the people, the 600 members of the Fish & Game, but I also have empathy for the people along the routes that 50,000 cars a day now travel on Bridge Street and Canal Street and the streets in Hudson. **116**

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111 Response to this comment is provided by NHDOT Assistant Commissioner Leon Kenison on page 137 of the Public Hearing Testimony.

112 Comment noted, no response required.

112 Through the Section 404 permit process, the Corps seeks to first avoid wetland impacts, then to minimize them. Bridging is not considered a form of avoidance, but rather a minimization measure.

114 Comment noted, no response required.

115 Comment noted. Additionally, the area to the southwest of the Weinstein Well where Alternatives 3,4,5 and 6 cross is considered a prime location for a future water supply according to the Southern New Hampshire Water Company (SNHWC). This is discussed on page V-37 of the Wells and Aquifers Technical Report.

112 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 140

[1] At one time I had the same luxury [2] that these people had here when I moved into [3] town. At 8:00 o'clock in the evening I could go [4] down and sit down on 102 and not even be [5] disturbed. We used to slide down there with a [6] double runner when we were kids. But you can't [7] do that.

[8] **MR. RINKER:** Back when the earth [9] was flat.

117 [10] **MR. SMITH:** So all I can say is we [11] talk about air quality. Just think of the people [12] that when it does mount from the 50,000 cars a [13] day to the 70,000 cars a day of the people going [14] across Taylor Falls Bridge, and there's a saying, [15] I don't know just exactly what it is, it's the [16] greatest good for the greatest number. Consider [17] that. Thank you.

[18] **MR. STREETER:** Thank you, Len. [19] And at least from my perspective I want to thank [20] you for all of the efforts that you've done for [21] good roads in Nashua-Hudson area. You're the [22] father of the road system in this area. And I [23] think we're all grateful for your efforts.

[24] The other half of, is it the

Page 141

[1] Carrabis team, Susan? Did I pronounce it [2] correctly that time?

[3] **STATEMENT BY SUSAN CARRABIS**

118 [4] **MS. CARRABIS:** It's Carrabis. [5] There are no more. I'm From brinton Landing. I [6] have a few things that I'd just like to point [7] out. It seems to me that you have two alternates [8] that require building a new interchange, and [9] you're going for one of them, where all the [10] others intersect at 10, which me would be the [11] better usage. As people have pointed out, [12] there's nobody up there. It would be far easier, [13] I would think, to tie into Exit 10. The whole [14] purpose of this thing is to go east-west, tie [15] across and continue. If you're doing it to [16] aleviate north-south, forget it. That's not [17] going to happen.

[18] I would also like to know if [19] anyone has considered taking the best of [20] Alternate 3 and putting it with the best of [21] Alternate 6 or something like that. I mean mix [22] and match perhaps.

[23] **MR. RINKER:** They've done that.

[24] **MS. CARRABIS:** I also think it

Page 142

119 [1] would be far better to spend the 185 million on [2] public transportation, getting a better train [3] system. As a commuter to Cambridge, I think some [4] of the money could be better spent to alleviate [5] Route 3 traffic, bring the train system up to the [6] Pheasant Lane Mall and have a park-and-ride [7] system there. As I understand it, the railroad [8] bed is already in place. It just has to be [9] upgraded.

[10] **MR. STREETER:** There are many, [11] many problems to do that, and that has been —

[12] **MS. CARRABIS:** Any less than [13] this?

[14] **MR. STREETER:** That's been a prime [15] concern of the Regional Planning Commission for [16] years. I will remind you that the Federal [17] Government has invested millions of dollars in [18] rail transportation and it was a failure back in [19] the late 70's, early 80's. Presently there are [20] studies underway to determine if people would use [21] the rail, and that's a big question. Would they [22] use it, do you think, if it was available?

[23] **MS. CARRABIS:** I would.

[24] **MR. STREETER:** It's going to take

Page 143

[1] more than you.

[2] **MS. CARRABIS:** I know that.

[3] **MR. RINKER:** There's another [4] problem too. There wouldn't be $180 million if [5] we didn't build the highway and put the polls on [6] the highway.

[7] **MS. CARRABIS:** I know. You could [8] use some of that, and the toll at Exit 1 is a [9] real joke. That's beside the point.

[10] A number of people have said that [11] Alternate No. 8 affects the least of wetlands and [12] residences and stuff like that. The only comment [13] I agree with from your only study is that it does [14] affect a number of key wetland. Four. [15] Everything else on here is the most expensive [16] route. It affects the most wells, the most [17] residential structures, everything else. So I [18] don't understand why route 8 is there. If it's [19] because the State already has some of that land, [20] they shouldn't have bought that land until the [21] route was finalized.

120

[22] **MR. STREETER:** I think everybody [23] agrees with that at this point.

[24] **MR. RINKER:** You see, the land was

117 Comment noted, no response required.

118 Refer to the response provided for comment #4 of the Public Hearing Testimony.

119 Extension of commuter rail service to Nashua from Boston has been the subject of numerous studies and continues to be of interest to the NRPC when it can be shown to be effectively utilized. The NHDOT has a keen interest in developing park-and-ride facilities in the Nashua area and currently maintains over 1,000 park-and-ride spaces in Southern New Hampshire. Refer to the responses provided for comment #10 of the Public Hearing Testimony and comments #23 and #31 through #33 of the EPA's March 2, 1993 letter for additional information.

120 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 144

[1] purchased before the State knew that the [2] environment people would get into what we've [3] gotten into. So this has been an on-going [4] process for years and years.

[5] **MS. CARRABIS:** And you didn't [6] think they'd object to filling in 187 acres of [7] wetlands?

[8] **MR. RINKER:** Seven or eight years [9] ago, no, they wouldn't have.

[10] **MS. CARRABIS:** I don't believe [11] that. I choose not to believe that.

[12] **MR. KENISON:** Ma'am, we have made [13] the decision not based upon ownership of land, [14] and this whole environment process, if you will [15] read it carefully, makes the decision not based [16] on ownership of land. We agree with your [17] premise. It can be sold and other land [18] purchased.

[19] **MS. CARRABIS:** I understand that, [20] but if you're basing it on what you have written [21] here, Alternate 8 is by far the most expensive [22] and most damaging. So I don't know what you're [23] basing it on.

[24] **MR. KENISON:** Well, we don't agree

Page 145

[1] with your premise.

[2] **MS. CARRABIS:** It's right here in [3] your report.

[4] **MR. KENISON:** If you look at the [5] number of residences that some of the other [6] alternatives take.

[7] **MS. CARRABIS:** Number of [8] residences impacted for 8 is fourteen. I agree [9] some of that's the only part. Some of the others [10] are higher.

[11] **MR. KENISON:** To us that was very [12] important.

[13] **MR. RINKER:** If you were one of [14] the residents, you'd think it was important.

[15] **MS. CARRABIS:** Come by my house at [16] Brinton Landing.

121 [17] One of the other things I would [18] like answered is what measures are going to be in [19] place to protect the Pennichuck Water Works? [20] What kind of drainage system? What kind of [21] training of the fire department for any kind of [22] toxic spills? And if you're going to use a [23] closed drainage system, then why not put it [24] further up if that's Anheuser-Busch's complaint

[1] about protecting their wells for the beer? They [2] can use a closed drainage system too.

Page 146

[3] **MR. KENISON:** We plan to do just [4] that for containment at any facility that [5] threatens an aquifer or watershed. And our fire [6] departments state-wide are training for these [7] sorts of incidents on a daily basis. We have a [8] new fire training academy in Concord which will [9] enable us to do a lot more in sophistication in [10] that regard.

[11] **MS. CARRABIS:** Okay, I have two [12] final points. No. 1, according to impact **122** studies [13] over hear comparing the no-build to the [14] full-build, it doesn't reduce it by a whole lot [15] that I can see. I don't see where it makes that [16] much of an impact. That's me.

123 [17] The other thing is that man-made [18] wetlands do not work. Nature makes wetlands, not [19] man. And I really hope that you take that into [20] consideration. Thank you.

[21] **MR. RINKER:** Thank you. [22] Ralph Thorm. Litchfield. Gave up [23] I guess.

[24] **MR. STREETER:** Nathan Guyer. 4

Page 147

[1] Cimmarron Drive, Nashua.

[2] **STATEMENT BY NATHAN GUYER**

[3] **MR. GUYER:** My name is Nathan [4] Guyer. Some of what I have to say will parallel [5] what's the Nashua Fish & Game people had to say, [6] but I sweated hard over this this morning, and I [7] intend to read it.

[8] **MR. RINKER:** Can you make that [9] available to the stenographer?

[10] **MR. GUYER:** I will give this to [11] the stenographer.

[12] **MR. RINKER:** And couldn't you just [13] say you echo the sentiments and not have to read [14] all of it?

[15] **MR. GUYER:** There are a few things [16] in here that I want to add.

[17] I'm a retired engineer. I live in [18] Nashua, and I am an activity member of Nashua [19] Fish & Game Club. As a long time engineer, I can [20] understand the desire for a circumferential [21] highway around Nashua to alleviate rush hour [22] congestion on current roads. However, I **124** cannot [23] understand why a unique, valuable, irreplaceable [24] public recreational resource in the Merrimack

121 Refer to the response provided for comment #2 of the Public Hearing Testimony, and to the response provided by NHDOT Assistant Commissioner Leon Kenison on page 146 of the Public Hearing Testimony.

122 Comment noted, no response required.

122 Comment noted. The understanding of successful wetland creation techniques is an ongoing process. Important considerations for increasing the success of mitigation efforts (based on the most current state of understanding of wetland mitigation) are addressed in the Wetland Technical Report.

124 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 148

[17] I'm a retired engineer. I live in [18] Nashua, and I am an activity member of Nashua [19] Fish & Game Club. As a long time engineer, I can [20] understand the desire for a circumferential [21] highway around Nashua to aleviate rush hour [22] congestion on current roads. However, I cannot [23] understand why a unique, valuable, irreplaceable [24] public recreational resource in the Merrimack

[1] Valley area must be eliminated when there are [2] other viable alternates which do not require such [3] a sacrifice.

[4] Nashua Fish & Game Association has [5] been a good member of the Nashua-Merrimack area [6] community for over 55 years, providing thousands [7] of local sportsmen and women a safe place to [8] practice outdoor skills, to train their children [9] and friends in safe gun handling and hunter [10] safety, in home defense, in military defense [11] preparation under the aegis of the director of [12] civilian markmanship. It often provides range [13] and other facilities for local police departments [14] and for first aid training. This certainly beats [15] unsupervised sandpit shooting. The property is [16] also a game preserve and wildlife refuge. In [17] fact, it has had an albino fox in residence for [18] the past two years.

[19] The location and terrain, with the [20] rifle ranges backed up by a high hill, are ideal [21] for the only long range 600 yard target range in [22] the entire State of New Hampshire. The [23] cominbation of conditions cannot be duplicated [24] anywhere else in the area any and probably

Page 149

[1] nowhere in the State. Therefore, this facility [2] must not be sacrificed to the desires of the road [3] builders, real estate opportunists to take the [4] easiest way out. There are other alternates [5] possible.

[6] For instance, a modification of [7] Alternate 8 to be run around the property north [8] of the hill at the end of the 600 yard range [9] would be viable. However, we are told that to do [10] this would make the intersection with F.E. [11] Everett Highway too close to Industrial Exit 10. [12] I would offer at least two possible solutions as [13] follows:

[14] 1. Since Exit 10 is primarily an [15] industrial intersection, it carries light traffic [16] for most of the day and night and only carries [17] heavy traffic twice a day. Therefore, a short [18] approach could be accommodated, and I'm sure such [19] a variance would be given if the Nashua Fish & [20] Game property didn't exist in its present [21] location.

[22] 2. Make the connection at Exit [23] 10. All worries about too short a distance [24] between intersections would be eliminated.

Page 150

[1] Exit 10 is new and the monies have [2] already been expended. A new different and [3] complete exit for the Circumferential Highway [4] will require a considerable additional [5] expenditure. I suggest applying this money to [6] the modification of Exit 10 to handle the [7] additional traffic from the Circumferential [8] Highway. Certainly some of the structure and [9] approaches of Exit 10 can be utilized, and [10] perhaps money already expended on Exit 10 will [11] help defray the expense of the modified [12] intersection.

[13] These suggestions do not preclude [14] other solutions, but are offered as possibilities [15] to prevent the elimination of a valuable, unique [16] and irreplaceable fill public resource in the [17] State of New Hampshire. Please give this matter [18] much additional consideration. Thank you.

[19] **MR. RINKER:** Let me say for the [20] record that I'm in deep sympathy with your [21] sentiments, and I hope if for some reason we [22] can't work the highway around that area, that [23] we'll do everything we can to replace it somehow [24] some where, because it is a treasure and

Page 151

[1] extremely important to a lot of target shooters [2] and hunters and sportsmen and so on in New [3] Hampshire. And I hope we can work something out [4] to handle it.

[5] Rena Petit. I bet you thought we [6] were never going to get to you.

[7] **MS. PETIT:** I knew you would.

[8] **MR. RINKER:** You're not going to [9] read all of this now that you're going to have it [10] entered in the record anyway, are you?

[11] **MS. PETIT:** Yes, I am. I took the [12] time to research it, and I took the time to wait [13] my turn, and I would appreciate the opportunity [14] to speak. Thank you.

[15] **STATEMENT BY RINA PETIT**

[16] **MS. PETIT:** My name is Rina Petit, [17] and live Litchfield. I'm here tonight to express [18] my concern over the failure of the draft [19] environmental impact statement or DEIS to include [20] a complete analysis of the Transit/Transportation [21] System Management alternative.

[22] There is no way that anyone, and I [23] mean anyone, could come here tonight and defend [24] the analysis done on Transportation System

125 Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to the paraphrased comments related to the Nashua Fish and Game Association. This can be found at the end of the section entitled "Regional".

125 Refer to the response provided for comment #4 of the Public Hearing Testimony.

127 Refer to the responses provided for comment #10 of the Public Hearing Testimony and comments #23 and #31 through #33 of the EPA's March 2, 1993 letter for additonal information on TSM and TDM issues.

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PUBLIC HEARING TESTIMONY

Page 152

[1] Mangement. As you know the TSM alternative is [2] made up of a wide range of measure designed to [3] increase vehicle occupancy and reduce [4] single-occupancy vehicle travel during peak [5] periods with travel demand management and low [6] cost engineered improvements to our existing road [7] system.

[8] When you look at the size of the [9] DEIS and then look at the superficial analysis [10] done on TSM, the disparity becomes very obvious. [11] Three pages are dedicated to the analysis of [12] TSM. Three pages. And that is supposed to be [13] the analysis of alternatives to spending $190 [14] million in public funds on a 12.5 mile 4-lane [15] toll road.

[16] This is simply indefensible. [17] Especially when you realize that residents [18] attending public informational meetings held at [19] Alvirne High School on April 10, 1991 and again [20] on July 6, 1992 stated their support for a [21] thorough review of TSM alternatives. The [22] public's call to fully explore TSM is carefully [23] documented in the DEIS, but the full exploration [24] of TSM just wasn't done.

128

Page 153

[1] In fact, I want you to know that I [2] attended the July 6th public informational [3] meeting and was shocked to find absolutely no [4] information for public review on the TSM [5] alternative. There was nothing. Nada. Zip. [6] Zilch. It just didn't exist. When I repeatedly [7] inquired as to why the TSM alternative wasn't [8] presented, I was told that it was still being [9] developed. Keep in mind that that was more than [10] one year since the public's previous request for [11] a thorough TSM analysis, and yet that request was [12] simply not acted upon by DEIS preparers. Why [13] wasn't TSM information available for public [14] review and comment? Why wasn't TSM seriously [15] considered?

[16] The minimal focus on TSM should [17] not surprising because while there were 153 [18] interagency meetings held by public officials and [19] agencies in preparation of the DEIS, the DEIS [20] itself lists only one meeting dedicated to TSM, [21] which was held on July 29th, 1991, which was [22] attended by the Department of Transportation and [23] the Fish and Wildlife Service.

[24] Subsequently, this lack of

Page 154

[1] attention makes for a seriously deficient TSM [2] analysis which does not even adequately identify [3] all the alternative transportation systems [4] currently available to Nashua area residents. It [5] does not even attempt to determine the [6] sufficiency of these systems and their potential, [7] and it doesn't not even allude to widely studied, [8] very successful TSM programs operating throughout [9] this country and how they could be implemented in [10] the Nashua area.

129

[11] It's no wonder that the DEIS [12] concludes that TSM could reduce peak traffic [13] volumes by only one to two percent. When you [14] start at zero and double the effort, the result [15] is still zero.

[16] The fact is that well conceived [17] and aggressively promoted Travel Demand [18] Management strategies can be simple, effective [19] and less costly than major road improvements to [20] alleviate traffic congestion. Study after study [21] show a reduction in vehicle trips, both [22] absolutely and within peak periods, by increasing [23] vehicle occupancy rates. TDM can provide a [24] minimum traffic reduction of 10 to 15 percent

130

[1] with 20 to 25 percent being very achievable. And [2] I've got the reports to prove it. In fact, I [3] forwarded a copy of one very informative study to [4] the Corps for review, and I will be submit-

128 Refer to the responses provided for comment #131 of the Public Hearing Testimony and comment #33 of EPA's March 2, 1993 letter for information on the TSM Alternative.

129 A full analysis of TDM programs throughout the country is included in Appendix B of the Revised Traffic and Transportation Technical Report. Refer to the responses provided for comment #10 of the Public Hearing Testimony and comments #23 and #31 through #33 of EPA's March 2, 1993 letter for additional information.

130 It is important to note that while some of the reductions in trips achieved at several locations are impressive and worthy of study in order to incorporate the aspects that made them successful into the TDM program in the Nashua area, these reductions are generally peak period work trips at single sites with a large number of employees. Work trips account for only 25 percent of total daily travel, TDM programs are generally geared only to peak period travel, and are much less successful at locations with a smaller number of employees at a single location. A full discussion of this complex issue is included in Appendix B of the Revised Traffic and Transportation Technical Report. Refer to the responses provided for comment #10 of the Public Hearing Testimony and comments #23 and #31 through #33 of the EPA's March 2, 1993 letter for additional information.

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PUBLIC HEARING TESTIMONY

Page 155

[1] with 20 to 25 percent being very achievable. And [2] I've got the reports to prove it. In fact, I [3] forwarded a copy of one very informative study to [4] the Corps for review, and I will be submitting [5] extensive written comments on this aspect. So I [6] won't go into detail here tonight.

131

[7] So not surprisingly, there's much [8] more that the TSM analysis missed. There was no [9] effort to look at specific traffic problem areas [10] to improve flow for a higher level of service on [11] our existing roads. Only two areas were [12] mentioned: the interaction of Henry A. Burque [13] Highway and Concord Street for separate left-turn [14] lanes and New Hampshire 102 in the vicinity of [15] the Hudson Mall.

[16] Failing to take a hard look at [17] each intersection in the study area to maximize [18] the efficient use of existing roads is a serious [19] shortcoming in this document. In fact, [20] engineered improvements were dismissed as [21] requiring major reconstruction and/or [22] right-of-way acquisition. There are low-cost [23] engineered improvements such as finetuning [24] existing signal lights, redirecting traffic flow

Page 156

[1] and minimizing curb cuts that can offer immediate [2] traffic relief. Other improvements for better [3] traffic flow include the installation of new [4] traffic lights. The fact is if traffic volumes [5] are close to capacity, even small improvements [6] could have a significant affect on traffic [7] conditions.

[8] In fact, engineered improvements [9] to our existing roads have already substantially [10] increased traffic efficiency. In the Town of [11] Hudson, for example, many of us here tonight [12] remember how the intersection at Lowell Road and [13] Central Street used to be just a few short years [14] ago. Traffic would back up at the stop light on [15] Lowell Road while trying to access Central [16] Street. To its credit, Hudson studied the [17] intersection and the traffic flow. It then [18] reconstructed the intersection and installed [19] lights. The result is a more efficient flow of [20] traffic.

[21] Our quality of life depends on a [22] balanced transportation system that provides for [23] all modes of travel, including pedestrians and [24] bicycle. Such a system would give the same

Page 157

[1] priority to the construction and maintenance of [2] walkways as is given to highways. The public [3] would be outraged, and rightly so, if the roads [4] were not plowed and sand promptly after each snow [5] storm. And yet the sidewalks, if they exist, [6] remain impassable weeks after the snow storm. [7] The public would also be outraged if the police [8] or fire department weren't accessible during a [9] storm, and yet CityBus, with its captive [10] ridership, was shut down as a result of this last [11] snow storm, leaving riders stranded.

132

[12] Our quality of life depends on [13] reducing single occupancy vehicles, not [14] increasing the supply of pavement to meet the [15] demand. We must develop a new way of thinking to [16] solve our traffic problems. We need to look at [17] the experience of electric utilities. It wasn't [18] too long ago that utilities had grandiose plans [19] to build generating facilities to meet the ever [20] increasing peak demand. Rising construction [21] costs and environmental concerns helped to shift [22] the focus to demand management with off-peak [23] rates, energy efficiency, co-generation, and [24] alternative energy sources to meet our electrical

Page 158

[1] needs. The end result is that while we don't [2] notice anything different when we turn on the [3] lights — how that electricity is generated — [4] has radically changed the way utilities do [5] business.

[6] This same approach should can and [7] should be taken with our transportation system. [8] Hoever, as a result of the DEIS' failure to [9] adequately review TSM, we have here tonight for [10] discussion purposes the alternative highway [11] routes — that's it. Tonight's public hearing [12] continues the narrow focus on project [13] consideration and approval rather than on the [14] broad perspective of our region's transportation [15] future.

[16] The memebers of the public here [17] tonight have not be presented with all of the [18] facts. The right thing to do would be to go back [19] to the drawing board, honesty study TSM and hold [20] another public hearing. A good decision-making [21] process must include considering of all [22] reasonable alternatives.

[23] As a result, I respectfully [24] request that we should have gotten in the first

131 TSM measures could improve traffic flow at individual intersections, however, the projected volumes in 2010 on Nashua Region roadways, particularly in the downtown, would be higher than the capacity of the roadways between intersections. Therefore, in order to accommodate these projected volumes, improvements to the roadway corridors themselves would be required. Upgrading corridors within downtown Nashua has been evaluated and determined not to be feasible due to substantial socioeconomic impact. (Refer to the Transit/TDM and TSM analysis in Appendix B of the Revised Traffic and Transportation Technical Report.) Detailed analysis of each intersection in the Nashua area is part of the ongoing regional transportation planning process. Such planning looks at the area in its entirety and develops a set of achievable transportation projects to improve the travel in the region. The Nashua-Hudson Circumferential Highway is a major element in the regional transportation plan. This comment suggests that detailed (intersection by intersection) regional transportation planning be performed within the context of this study which is of only one element in the transportation plan. Such efforts are more appropriate as part of the regional transportation planning process. Refer to the responses provided for comments #24, #32, and #33 of the EPA's March 2, 1993 letter for additional information regarding an upgrade Alternative and the TSM Alternative.

132 Refer to the responses provided for comment #10 of the Public Hearing Testimony and comments #23 and #31 through #33 of EPA's March 2, 1993 letter.

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PUBLIC HEARING TESTIMONY

Page 159

133 [23] As a result, I respectfully [24] request that we should have gotten in the first

[1] place, a complete and thoughtful analysis of [2] transportation alternatives and a scheduling of a [3] public hearing where all alternatives are [4] presented. Thank you.

[5] I'm also going to be forwarding [6] numerous reports that in the span between [7] Thanksgiving and Christmas I was able to uncover [8] on Transportation System Management [9] alternatives. Whoever you hired to do that [10] analysis really either didn't know what they were [11] doing, or they were not provided with the [12] resources to look into this issue. There's no [13] reason to have such an inadequate analysis as [14] part of this DEIS. There's no way to justify [15] it. And I hope you will take that into [16] consideration. Thank you.

[17] **MR. STREETER:** Thank you. [18] David Garfunkel.

[19] **STATEMENT BY DAVID A GARFUNKEL, FOR BROX INDUSTRIES**

[21] **MR. GARFUNKEL:** Councillor Rinker, [22] Councillor Streeter, members of the Department of [23] Transportation, and the Army Corps of Engineers, [24] my name is David Garfunkel. I'm with the law

Page 160

[1] firm of Gallagher, Callahan and Gartrell, and we [2] represent the interest of Brox Industries here [3] today.

134 [4] The only issue that I'm here to [5] discuss with this august body is the issue of [6] access to the Brox property. Currently Brox has [7] four access points from its site to the public [8] highways that surround it, and it uses these [9] access points to deliver its product to the [10] various consumers throughout the State of New [11] Hampshire and Greater New England who use their [12] products.

[13] Brox certainly appreciates the [14] Department of Transportation's recognition of [15] their access problem as reflected by the [16] inclusion of a bridge and a tunnel on the [17] conceptual plans that have been presented here [18] tonight. However, we continue to be concerned [19] about the anticipated reduction in access from [20] the four access points to two or possibly one [21] that will result if the plan is implemented. [22] Reduced access will substantially impact Brox's [23] capacity to do business. And that will have a [24] significant adverse economic consequences for

[1] Brox Industries.

Page 161

[2] Representatives of Brox Industries [3] stand ready and welcome the opportunity to [4] further discuss this access issue with the [5] Department of Transportation and hope that a [6] resolution of this problem can be reached through [7] the free exchange of information and ideas. [8] Thank you.

[9] **MR. STREETER:** Thank you, David. [10] I'm sure that the department will cooperate in [11] every way they can.

[12] **MR. GARFUNKEL:** Thank you very [13] much.

[14] **MR. RINKER:** Thomas Adams.

[15] (No response.)

[16] **MR. RINKER:** I think he decided he [17] was going to send it in because he had to leave.

[18] **MR. STREETER:** Ray Heitman, 12 [19] Fernwood Street.

[20] I notice the number from here on [21] in there's a number of people from the Fish & [22] Game Association. If your testimony is going to [23] be similar, I'd just wish you'd condense it in [24] some way.

Page 162

[1] **STATEMENT BY ROY K. HEITMAN, NASHUA FISH & GAME ASSOCIATION**

[3] **MR. HEITMAN:** I understand, [4] private citizens have a 3-minute limit, and for [5] politicians it's 3 months.

135 [6] We feel that there have been a [7] number of failings in this DEIS. Socio-economics, [8] you didn't go into any of the aspects of how the [9] businesses in the area would be impacted, the [10] loss of revenue, from a number of standpoints, of [11] the thousands of people we have come through the [12] club. We're concerned about, as was brought 136 up [13] earlier, about relocation because of the safety [14] issues and permitting, which would be almost [15] impossible.

137 [16] The State's wildlife zones do not [17] show the deer and other animals that we have on [18] the property. It is a wildlife preserve. [19] Anybody, regardless how citified you are, can [20] walk through there and see deer tracks any time [21] of the day, month, year, whenever. We also have [22] fox, geese, ducks, a large variety of fish in the [23] pond.

[24] I'm concerned about wetlands. I

132 The DEIS included the full range of alternatives including the No-Build, Transit/TDM, TSM, Full Build, and Partial Build Aternatives. Additional documentation of various case studies of Transit/TDM and TSM measures throughout the country and additional quantifying of the impacts associated with these measures have been prepared in response to the number of comments and level of interest exhibited relative to Transit/TDM and TSM measures at and since the public hearing. This analysis is summarized in the FEIS and fully presented in Appendix B of the Revised Traffic and Transportation Technical Report.

134 This comment is addressed by NHDOT Chief Project Manager Roderick Cyr on page 35 of the Public Hearing Testimony in his opening statement about the department's preferred alignment.

135 A thorough analysis of the socioeconomic impacts associated with this project is presented in the Socioeconomic Technical Report.

135 Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to the paraphrased comments related to the Nashua Fish and Game Association. This can be found at the end of the section entitled "Regional".

137 The Wildlife Blocks used in the analysis do not report species. The Wildlife Technical Report provides an extensive Species List on page IV-12 of area-wide observed species.

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PUBLIC HEARING TESTIMONY

Page 163

[1] can't understand why you want to destroyed them [2] when there are cheaper alternatives, using Route [3] 3 and then connecting with the vastly underused [4] Exit 10 as was proposed by the Merrimack Board of [5] Selectmen. And we're concerned, too, about the [6] industrial impact you seem to want to bring in or [7] the industry you want to bring into the area. I [8] think private residences are more in keeping with [9] the New Hampshire way of life than —

[10] **MR. STREETER:** I'm sorry, I don't [11] get your point there.

[12] **MR. HEITMAN:** My understand was [13] that you wanted to — this would help bring in [14] more business and more industry into setup out [15] there.

[16] **MR. STREETER:** This is a road [17] project to alleviate the poor quality of air in [18] downtown Nashua.

[19] **MR. HEITMAN:** It doesn't work that [20] way though. You bring in more traffic with [21] more roads. You don't bring in less traffic with more [22] roads. I lived in Washington, D.C., for ten [23] years. You can't get around the beltway now. It [24] was built to alleviate traffic problems, to take

Page 164

[1] traffic around Washington, D.C. You're build a [2] road here to take traffic around Nashua. It's [3] not going to work. It never has. It never [4] will. I worked down there on 128. Same problem [5] there. 495, as was brought up earlier.

[6] **MR. STREETER:** Route 128 was one [7] of the best designed highways in this nation. It [8] has achieved the purpose as 495 has.

[9] **MR. HEITMAN:** If that's one of the [10] best —

[11] **MR. STREETER:** As 395 has around [12] Washington.

[13] **MR. HEITMAN:** 395 is a disaster in [14] Springfield, Virginia. And I feel this will be [15] too. The State is proposing what they call a [16] dangerous curve going into the dangerous [17] intersection. Mr. Cyr told me last month that he [18] needed at least a mile between interchanges. [19] That one will give you three-fourths of a mile, [20] if that. So you've got a dangerous curve going [21] into a dangerous intersection.

[22] If you'll excuse my military [23] background, I just wonder what the acceptable [24] casualty rate is for that route 8 proposal. How

Page 165

[1] many deaths would you consider ii.

[2] **MR. STREETER:** That's not an [3] appropriate question.

[4] **MR. HEITMAN:** Thank you.

[5] **MR. STREETER:** Mary Beth Lewis.

[6] **STATEMENT BY MARY BETH LEWIS, NASHUA FISH & GAME ASSOCIATION**

[8] **MS. LEWIS:** Good evening. My name [9] is Mary Beth Lewis. And fortunately I don't have [10] any letters, pamphlets or anything, so I will [11] make this very brief, because it is. Most of [12] what I have to say is in support of Leslie and [13] Steve Chunn, because I am also a member of the [14] Nashua Fish & Game Association.

[15] And I'd just like to say it would [16] be a considerable loss if the club had to close [17] down. Now, I know you've indicated that you'd [18] like to try and relocate us. I don't see that [19] really happening, and not to relocate us where we [20] could be, as we currently are now.

[21] I have a five year old who has [22] been coming with me for two years to the Fish & [23] Game, and she loves it. Every week, "Mummy, when [24] are we going?" Because she loves the outdoors,

Page 166

[1] and it's a place I can bring her where she's [2] comfortable and I know she's safe have. I don't [3] have to worry about a car hitting her. Because [4] in order for that, she'd had have to be way out [5] of sight and gone from me for an awful long time.

[6] And the joy of seeing them fish, [7] when they catch a little perch on the hook. [8] Every year they have a fishing derby, an outing [9] for the families, and the number of kids that [10] come and the derby that they're in, and the [11] camping. They show how they camp way back when, [12] and the safety that's provided, not only for the [13] children but for the adults like myself.

[14] I will be going to a personal [15] protection course starting next week, which I [16] feel at this time in our lives with all the [17] violence that's coming. Fortunately we're not as [18] bad as Boston or Roxbury or some of the other [19] cities. But I hesitate sometimes when i go out [20] at night, and I have to walk in dark parking [21] lot.

[22] I'm just hoping that when my [23] daughter is a little bit older that I can afford [24] her the same benefits of these courses in

138 Refer to the response provided for comment #4 of the Public Hearing Testimony.

139 Comment noted, no response required.

140 Comment noted, no response required.

141 Refer to the responses provided for comments #6 and #7 of the Public Hearing Testimony.

142 Comment noted. Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to the paraphrased comments related to the Nashua Fish and Game Association. This can be found at the end of the section entitled, "Regional".

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PUBLIC HEARING TESTIMONY

Page 167

[1] protecting herself. And that's about it. You [2] know, Alternate 8? I don't think any alternate [3] is correct, listening to everyone I've heard [4] tonight, which is understandable. But Alternate [5] 8, based on the DEIS facts, out of the 12 of [6] them, 10 are affected more by Alternate 8 than [7] going with Alternate 3, the least affected.

[8] I think a little more reviewing, a [9] little more planning might be in order. I'd [10] appreciate it. Thank you.

[11] **MR. STREETER:** Thank you.

[12] **MR. RINKER:** David Burns.

[13] **STATEMENT BY DAVID BURNS, NASHUA FISH & GAME ASSOCIATION**

[15] **MR. BURNS:** Hello. David Burns, [16] Parkhurst Drive, Hudson, New Hampshire. I'm a [17] member and trustee of the Nashua Fish & Game [18] Association.

[19] I'm not here to tell you about how [20] unique we are or how irreplaceable we are, but [21] there are a couple of comments that I would like [22] to make. We've heard from representatives of [23] Nashua, Hudson, Litchfield, how they endorsed to [24] completion Alternate 8. Well, I can see their

Page 168

[1] point, and Alternate 8 up to and across the [2] Merrimack River, but once it coming into [3] Merrimack, it's obvious to me all they did was [4] choose between two different routes. There was [5] no study involved in the benefits of either one.

[6] A number of years ago, roughly [7] three years ago, I think the State spent around [8] $20 million for the interchange No. 10. That's [9] quite a substantial amount of money. I would [10] have thought that the State would have also have [11] tried to tie into that for this alternate.

[12] I can see coming across the [13] Merrimack River and coming up to Route 3, from [14] there to Interchange 10. Over to last number of [15] years, there have been millions of dollars to [16] straighten, widen that road, make it a lot better [17] traveling. And I would think that all you'd have [18] to do is come right up to that Route 3 and then [19] tie right into Interchange 10, and that would [20] alleviate a lot of problems. It would save a lot [21] of money because I'm sure that $20 million that [22] it cost three years ago is going be in excess of [23] $30 million to go from Route 3 through the [24] Pennichuck properties, Fish & Game properties and

[1] tie into the F.E. Everett Tunpike. Thank you.

Page 169

[2] **MR. RINKER:** Thank you. [3] William O'Donice. Is Bill here? [4] Bill O'Donice.

[5] (No response.)

[6] **MR. RINKER:** Let's take a brief [7] break.

[8] (A short recess was taken.)

[9] **MR. STREETER:** Can we reconvene, [10] please?

[11] **MR. RINKER:** Can we press on? I'd [12] like to call on Howard Dilworth.

[13] **STATEMENT BY HOWARD DILWORTH, JR., PRESIDENT, HUDSON HISTORICAL SOCIETY**

[15] **MR. DILWORTH:** My name is Howard [16] Dilworth. I live on Old Derry Road, Hudson, and [17] I speak this evening as President of the Hudson [18] Historical Society.

[19] During the process that this [20] hearing has been on-going where there were [21] meetings for officials and towns and other type [22] of meetings over the last several months, it was [23] suggested that people come to this particular [24] hearing tonight to speak to some of the

Page 170

[1] alternative impacts besides wetlands, so that we [2] may address some of these other issues to the [3] Army Corps of Engineers. And it is for this [4] reason I'm here to speak this evening.

[5] First off, I'd like to say that I [6] am in favor of corridor 8 and not 5 and 6, [7] because 5 and 6 would take the home of the Hudson [8] Historical Society. Incidentally, there are a [9] lot of people who have commented that they're in [10] favor or not in favor of a particular corridor [11] because it happens to be in their backyard. [12] Corridor 8 is going to pass in the field [13] adjacent, right next to where I live.

[14] Actually, like I said, I'm opposed [15] to Alternatives 5 and 6 because it would take the [16] home of the Hudson Historical Society. This [17] highway will have an impact on Hudson more than [18] any other community in the area. Hudson has [19] already paid very dearly for roadway development [20] in the past. 20 years ago when we built bridges [21] across the Merrimack to improve traffic flow both [22] in and out of Hudson into Nashua, we lost what [23] was considered to be our downtown, the community [24] at the bridge. Many new people who come into

128 Comment noted, no response required.

144 The DEIS is that study.

145 Refer to the response provided for comment #4 of the Public Hearing Testimony.

142 Comment noted, no response required.

146 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 171

town, ask where our downtown is. Well's that's where it went. Now you know.

147 The an Alvirne Hills House is representative of our most familiar benefactor in town. It was the summer home of Dr. Hills. Dr. Hills was a descendant of the original settlers of the Town. Those of you who live in Nashua are familiar with Hills Ferry Road. The road is so named. The Hills family had a ferry that crossed the river. Adding the extra bridges across the Merrimack, wherever they will go, will bring us back to the number of river crossings we had 300 years ago.

Dr. Hills left very much money and land to the Town of Hudson, both for our library and for our high school.

148 The caretaker of our home reports that there are numerous wildlife on the grounds of the property. The caretaker reports that there is a family of deer that's seen approximately three times a week; foxes; several kinds of birds. And this person is in the process of reporting what she sees to the Audubon Society.

Page 172

149 If you agree to take Alternatives 5 and 6, there will be no Old Home Days in Hudson. Those of you who are not familiar with Old Homes Days, it's activity that many communities have once a year where they celebrate the town. In Hudson we do it in a big way. We have a carnival, we have a parade. And incidentally, it happens to be the location where most of our civic organizations conduct the bulk of their fund-raising activity for the yes. Alternatives 5 and 6 would mean no more Old Home Days.

Alternatives 5 and 6 would destroy our heritage. When I look at Alternatives 5 and 6, I can't help but think what this would do to the Town of Hudson is similar to what happened to several towns in Massachusetts when they built the Quabbin Reservoir. These towns basically disappeared off the face of the earth. I would hate to see a Hudson that just existed on a map. Thank you.

MR. RINKER: Thank you.

MR. STREETER: Richard Widhu, 26 Cyracuse Road, Nashua.

Page 173

STATEMENT BY RICHARD WIDHU

MR. WIDHU: I promise I won't speak long.

MR. STREETER: Just so the next person will know, Robert Brown is up next.

MR. WIDHU: I'd just like to speak about one particular aspect of Alternative 7 where it comes into the Everett Turnpike. Three years ago I went to an information meeting on wetlands presented by a hydrologist working in New Hampshire, and I specifically asked him his opinion of a proposal for a bridge crossing Pennichuck Pond which would have diversion channels built along this side of it to carry away runoff. He stated that his opinion was that any bridge is bound to develop cracks and faults with time, and somebody had talked about a closed circuit here, and I question whether anything can really be closed and for how long.

150 My concern is that runoff from the highway carrying oil, salt, and other residue from traffic can seep through cracks like this a long time before they are ever noticed by any inspectors, and this would carry pollution into

Page 174

the reservoir.

During rainy weather and times of melting snow, traffic can splash road pollutants above any kind of barrier that might be built along such a bridge. And snowplows even run a risk of pushing snow contained pollutants over these barriers.

In addition, the air borne dust and particles from traffic fall directly into the reservoir. Even if runoff is diverted through channels along the bridge, how far from the edge of the reservoir can you safely discharge this without leaching back into the groundwater. I feel that Alternative 7 would be, in the long run, a threat to the drinking water supply of Nashua and many other towns served by the Pennichuck Reservoir. And I feel some of the suggestions made about extending Alternative 8 north to connect up with Interchange 10 is one of the better changes to this alternative that I've heard tonight. Thank you.

151

MR. STREETER: Thank you, Richard.

MR. RINKER: Robert Brown, are you

142 Comment noted, no response required.

143 Comment noted, no response required.

149 Comment noted, no response required.

150 Snow and runoff could enter the Pennichuck water supply by falling from or seeping through joints in the bridge that would be constructed over Bowers Pond as part of Alternative 7. This amount is expected to be very small. The F.E. Everett Turnpike traverses the Pennichuck Reservoir and has not substantially degraded water quality. Refer to the response provided for comment #2 of the Public Hearing Testimony for additional information concerning drainage within the Pennichuck watershed.

151 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 175

[1] here?

[2] (No response.)

[3] **MR. RINKER:** Pressing on. Mark [4] Boisvert. Mark?

[5] (No response.)

[6] **MR. RINKER:** Brian Donahue.

[7] (No response.)

[8] **MR. RINKER:** I think he left. [9] Philip MacSweeney. [10] **STATEMENT BY PHILIP MacSWEENEY** [11] **MR. MacSWEENEY:** My name is Philip [12] MacSweeney. I'm a resident of 10 Hichory Street, [13] Hudson. I'm also joint owner of the property at [14] 3 Cin-Fri Drive, Hudson.

[15] I took my life savings four years [16] ago to help my eldest son, who tonight is [17] working, to pay for his mortgage. He lives on a [18] very exclusive neighborhood in the south of [19] Hudson. Wason Road parallels the alignment 8. [20] However, I guess the Indians must have walked [21] Wason Road because there's a place where it dips [22] south rather deeply. But the Circumferential [23] Highway doesn't. It runs right up against it [24] within several hundred feet.

Page 176

[1] Right now there's a beautiful view [2] of the south. The air is clear. It's free from [3] noise. Beautiful area. The six homes and the [4] land includeed are worth $2 million. I know. I [5] helped build it with Harry Gray who had to leave [6] a few minutes ago. I worked on that home. The [7] lots were $70 to $80,000. You'll turn that [8] property there into a truck stop.

[9] I know it's a very personal [10] interest. I feel for the deer and beaver and [11] everyone else, but human beings are still the [12] greatest species on earth, but they have the [13] least consideration for one another.

152

[14] I don't know what you can do. I [15] asked the other night that I came here if that [16] road could be moved a little further south so [17] there would be some breathing room so that the [18] road would not be visible within twice the length [19] of this hall here. And I was told, "Well, that [20] would cost several hundred thousand dollars to [21] move that road back a bit." But that's what it [22] cost me and my son for that home, and a lifetime [23] of work. Thank you.

[24] **MR. STREETER:** I'd just for the

Page 177

[1] record like to remind you I have a son that lives [2] right off Wason Road who is affected.

[3] **MR. RINKER:** Jim Barns.

[4] **STATEMENT BY JIM BARNES, HUDSON CONSERVATION COMMISSION**

[6] **MR. BARNES:** Good evening. My [7] name is Jim Barnes. I live On McKinney Drive in [8] Hudson. I'm a member of the Hudson Conservation [9] Commission. I'd like to address my comments to [10] two specific crossings of wetlands in the [11] southern portion of the road.

[12] **MR. STREETER:** Are you speaking on [13] behalf of the Conservation Commission?

[14] **MR. BARNES:** I'm speaking on [15] behalf of the Conservation Commission.

[16] The first crossing is the wetlands [17] around Limit Brook where Alternative 8 is [18] proposed to cross this wetland with a bridge. I [19] believe it's a thousand or 1500 feet in length. [20] This wetland is currently fairly remote and [21] fairly unaffected by development in that area. [22] There's a lot of wildlife in the area. And while [23] we, as a Commission, don't necessarily favor this [24] crossing, if you have to put it here, what we

152 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

153

154

Page 178

[22] There's a lot of wildlife in the area. And while [23] we, as a Commission, don't necessarily favor this [24] crossing, if you have to put it here, what we

[1] really want is this bridge with the closed [2] drainage system. We would not at all be in favor [3] of putting any kind of fill to separate the [4] wetlands into two pieces or dredging of the [5] wetland area. The bridge is what we prefer, if [6] it has to go here.

[7] The second crossing that we're [8] concerned with is the crossing of Second Brook [9] that leads into Mile Swamp. It's a little bit [10] farther along on the southern section. The [11] location of the roadway as proposed, and all of [12] the alternatives cross this roadway at this [13] brook, not just 7 or 8. All of them cross in [14] this general area.

[15] It's basically a high point near [16] some wetlands that are the headwaters of the [17] Second Brook that flow into Mile Swamp. But also [18] on the other side of the ridge there are some [19] wetland systems that go the other direction into [20] Musquash Swamp and Musquash Brook, and they're [21] not on the map or part of this study area.

[22] What we're concerned with is that [23] this wetland section provides a wildlife corridor [24] for deer and other large mammals moving up and

Page 179

[1] down the wetlands. If you cross the Second Brook [2] and put in a small culvert, then the animals will [3] be forced to cross over the roadway, which [4] obviously endanger the animal but also endangers [5] people driving along that area if large animals, [6] like deer, try to cross the roadway.

[7] What we would like to see is some [8] kind of bridge or large crossing so that the [9] animals have a continuous corridor underneath the [10] roadway.

[11] **MR. STREETER:** Does the Town own [12] that property in the Second Brook area, the [13] wetlands?

[14] **MR. BARNES:** The Town doesn't own [15] that property, no. There are other properties [16] nearby that the Town does own that are [17] conservation areas. The Musquash Swamp and [18] Musquash Brook area is 300 plus acres that were [19] purchased with land conservation funds.

[20] **MR. KENISON:** Councillor, we will [21] certainly look at that. I think we see that [22] particular area, I think probably the [23] Conservation Commission does. It probably is of [24] such a nature it will be built on and will remain

Page 180

[1] in its present state. And we'll certainly look [2] at providing access for animals back and forth.

[3] **MR. RINKER:** Leonard Vigeant. I [4] don't know if I'm pronouncing that correctly. 4 [5] Hilltop Road, Hudson. Leonard Vigeant?

[6] (No response.)

[7] **MR. RINKER:** Not here?

[8] **MR. STREETER:** Wilfred O-k-l-e, [9] 36 Meade Street.

[10] (No response.)

[11] **MR. STREETER:** The next one is [12] Glenn Anderson, Sr. and Glenn Anderson, Jr.

[13] (No response.)

[14] **MR. STREETER:** Robert Suomala from [15] Amherst. These are all members of the Nashua [16] Fish & Game Association.

[17] (No response.)

[18] **MR. STREETER:** Steven DiLorenzo.

[19] (No response.)

[20] **MR. RINKER:** Abbott Rice. I think [21] Abbott's here.

[22] **MR. STREETER:** The next one will [23] be Steve Densberger.

[24] **STATEMENT BY ABBOTT RICE**

155

Page 181

[1] **MR. RICE:** My name is Abbott [2] Rice. I live here in Hudson. I'm speaking for [3] myself, but I come from a background having [4] served on the Hudson Zoning Board. I was on the [5] Sounding Board, Conservation Commission and six [6] years on the Hudson Town Council. Prior to that, [7] I lived in Laconia, New Hampshire and served on [8] the Rag Committee. The Army Corps of Engineers [9] came up to us a number of times. We worked up on [10] the cleaning up of the river. So I have a [11] background in conservation. I'm well aware of [12] many of the things we talked about tonight.

[13] Tonight I want to speak from a [14] different side, the side I think most of us have [15] forgotten tonight. A side that I think many of [16] the people of Hudson, Litchfield, Nashua really [17] belong to, and that is the side of the commuter.

[18] I travel 25 miles one way over to [19] Haverhill. We heard about trains. We heard [20] about buses. All I got is Route 111. 25 percent [21] of my time to get to Haverhill is spent trying to [22] get out of Hudson. I come down from the [23] Litchfield line, right down onto 102, down to [24] Route 111 and go out on Route 111 and still

153 Comment noted. If Alternative 7 or 8 is determined to be the LEDPA and is permitted, under the Corps 404 permit process, mitigation measures such as crossing this wetland with a bridge will be considered. Refer to the response provided for comment #113 of the Public Hearing Testimony.

153 Comment noted. The Second Brook wildlife corridor is documented in the Wildlife Technical Report. The mitigation section of that report addresses bridges over wildlife corridors. Road kill is recognized as a problem in areas where a roadway intersects a wildlife corridor.

The Corps will consider requiring various mitigation measures as permit conditions that minimize adverse impacts if it is determined that they are necessary and practicable. The Corps will coordinate with the FWS regarding ways to minimize impacts to wildlife.

153 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 182

[1] within the bounds which I would be safe if I was [2] on the Tunpike or on the bypass. The people that [3] drive on that road, they drive on your right, [4] they drive on your left, and if they could, they [5] would drive over the top of you or underneath [6] you. That's the way they travel on Route 111. [7] That's what I'm facing, and these are people that [8] are traveling east and west at a high speed on [9] fairly good road.

[10] I think a major part of our [11] economy in this particular area is made up by [12] people who work in Massachusetts and spend it in [13] New Hampshire. I have commuted, as I said, 15 [14] years. Two years I've commuted to Boston.

[15] **MR. STREETER:** Nothing wrong that [16] that, Abbott.

[17] **MR. RICE:** No, I'm not complaining [18] on that particular point. But the thing is if [19] we're bringing it back and forth and if we have [20] problems in transportation in getting back and [21] forth, we'll probably end up with many people [22] going in different directions.

[23] Incidentally, I came down from [24] Laconia, so I didn't come up from the other end

Page 183

[1] — well, I did at one point.

[2] Where would we be today if we did [3] not have 128, 495, 93, 95? When I went skiing as [4] a youngster we used to drive up Route 16. As a [5] matter of fact, on my first trips coming up old [6] Route 3. We came out of Boston on Route 4, Route [7] 3, and I've forgotten now how long it took me to [8] get there. I remember traveling to Montpelier, [9] Vermont before 89 was put up there, coming from [10] Duxbury, Mass. It was a five-hour trip. How [11] long does it take me to get up here?

156 [12] Roads do not create traffic. They [13] do not create cars. Cars people drive and [14] they're still going to be driving no matter how [15] they're going to get around.

[16] Bridges. This would bring at [17] least one more bridge across the Merrimack

[18] River. Take a little trip. Start at [19] Newburyport, travel north. How many cities and [20] towns in Massachusetts and New Hampshire where [21] there are bridges crossing the river have only [22] two bridges? The City of Haverhill has, I think, [23] three or four. Lowell, how many does that have? [24] Lawrence? Manchester? Concord? I'm not sure

Page 184

[1] when you get up into Franklin what you're getting [2] up in that area. Even Laconia, which claims [3] they're on the Merrimack River, has a number of [4] bridges that get across. We have two, and we [5] probably have more traffic crossing those two [6] bridges than any other bridges in the area.

157 [7] I think there is another point [8] where it personally has touched us. Our family [9] has been involved in several accidents, accidents [10] that occurred in this town that if the traffic [11] was not on 102 or 111 or any of those roads, [12] probably would not have taken place. Some [13] involved minor injuries. But it's been a [14] problem.

[15] The Town of Hudson took care of [16] one area where we were having a lot of these [17] problems, and that is when they widened 102. But [18] still we see traffic backing up to the high [19] school. They would be going around, not coming [20] down through the Town. Think of the fumes with [21] the cars that are parked there in many case 15, [22] 20 minutes. Think of the traffic that was coming [23] down 3A, and those of you who live in Litchfield [24] that went down Webster Street and try to sneak up

Page 185

[1] those back roads, and the confusion we had until [2] we did make some changes.

[3] It's time that we make a change. [4] I think what I'm saying right now is I'm urging [5] you people to move. I've been in this Town for [6] about 17 years, and the day I moved in on Sunland [7] Drive, I knew that the highway was coming. We [8] thought it was coming on the other side of us. [9] Now it's going to be north of us. But we knew [10] that it was there. And if anybody moved into [11] Hudson, Litchfield, anywhere where they knew the [12] highway was coming, it's their responsibility to [13] look around before they buy. We inquired. We [14] found the road was coming. We accepted the road [15] and we hope that other people will accept it.

158 [16] **MR. STREETER:** I think it's also [17] incumbent on the developer, too, to indicate to a [18] prospective buyer that a road contemplated.

[19] **MR. RICE:** I agree with that too.

[20] **MR. STREETER:** Appreciate your [21] comments, sir.

[22] Steven Densberger.

[23] **STATEMENT BY STEPHEN J. DENSBERGER, PENNICHUCK WATER WORKS, INC.**

156 Comment, noted, no response required.

152 Comment, noted, no response required.

156 Comment, noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 186

[1] **MR. DENSBERGER:** Good evening. My [2] name is Stephen Densberger. I'm Vice-President [3] of Pennichuck Water Works in Nashua.

[4] **MR. STREETER:** Before you continue [5] Steve, isn't it correct that the Everett Turnpike [6] was built over portions of the Pennichuck [7] properties since the 1950s, and there hasn't been [8] an incident since it's been built?

[9] **MR. DENSBERGER:** I can't speak to [10] the issue of incidents. I do know the highway [11] was built in the 1950s. People used to dump [12] toluene in the ground in the 1950s also. And [13] that was okay then.

[14] **MR. STREETER:** I was just trying [15] to make a point that the Everett Turnpike does go [16] through portions of your property.

[17] **MR. DENSBERGER:** That's correct. [18] We have sent a letter as part of [19] the record. I have a copy here that I'll leave [20] with the stenographer, and I'll keep my remarks [21] brief. I just want to summarize a few key [22] points.

159 [23] We were very glad to see the [24] Alternate 8 as an option in lieu of crossing the

Page 187

[1] ponds. We think that the pond crossings are much [2] greater threat to the water supply.

[3] I have attached to the letter a [4] copy of a newsleter knew let from Weston & [5] Sampson Engineers, summarizing a spill on [6] November 30th, 1992 down in Wilmington, [7] Massachusetts on I-93. The thought of 11,000 [8] gallons of gasoline spilling into our water [9] supply is the type of incident that, you know, if [10] today we were trying to build a highway across a [11] watershed, we'd probably not have be successful.

[12] **MR. STREETER:** They did react very [13] quickly though to that?

[14] **MR. DENSBERGER:** Yes, they did. [15] They did a great job. It was very expedious, but [16] gasoline still got into the supply, and it's [17] really groundwater supply there.

160 [18] What prompted us to write this [19] letter and to get on the record was the efforts [20] by Nashua Fish & Game. We understand their [21] concerns about the loss of their property. [22] However, to prefer an alternative to go back and [23] cross the ponds, we didn't think was fair. There [24] are other alternatives.

Page 188

161 [1] The Pennichuck system has grown in [2] recent years. We don't just supply a few people [3] in the City of Nashua. It's the entire city. We [4] supply parts of Merrimack. We are wholesale [5] suppliers to Milford. We just recently entered [6] contracts to supply in the future the Towns of [7] Hudson and Litchfield. And we think that the [8] Pennichuck Brook system deserves protection. So [9] we wanted to make sure we got this on the record, [10] and I appreciate your patience in listening to [11] us. Thank you.

[12] **MR. STREETER:** Thank you, Steve. [13] Philip Lamoreaux, New Searles [14] Road, Nashua.

[15] (No response.)

[16] **MR. RINKER:** Frederick Brough.

[17] (No response.)

[18] **MR. RINKER:** Kathleen Coakley. [19] Concerned students of Alvirne High. I can image [20] what she would want to testify on.

[21] **STATEMENT BY KATHLEEN COAKLEY, CONCERNED STUDENTS OF ALVIRNE HIGH SCHOOL**

[25] **MS. COAKLEY:** I'm very concerned [24] about —

Page 189

[1] **MR. STREETER:** Just for the [2] record, identify yourself.

162 [3] **MS. COAKLEY:** I'm Kathleen [4] Coakley. I'm concerned about the reason, like, [5] you want to take away a hundred acres of Alvirne [6] property, and that's basically, you want to go [7] through the tree farm, and people planted all [8] those trees not just to build a highway over [9] them. And you're taking away from the education [10] of the people of Alvirne High School.

[11] We're very proud of our [12] agricultural program there, and we work very [13] hard, and I don't think it's right for you to try [14] to take it away just like that. I mean, it's not [15] yours to take away.

[16] It seems like you already made [17] this decision, and we have no say in it. I mean, [18] last time I checked, according to the [19] Constitution, this is our country.

[20] **MR. STREETER:** Kathleen, let me [21] try to put it in perspective. The State's [22] position is we do not want to take any property [23] from Alvirne. The Federal Government through the [24] Corps of Engineers has recommended an alternative

139 Comment, noted, no response required.

138 Comment, noted, no response required.

121 Comment noted. Refer to the response provided for comment #2 of the Public Hearing Testimony.

162 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 190

[1] route. So really you should be directing your [2] efforts to the good Colonel. We want the route [3] to go the way the Department wants it to go. The [4] Corps feels that the environmental impact would [5] be greater with the State's preferred choice [6] rather than theirs. So please direct your [7] efforts to the Colonel.

[8] **MS. COAKLEY:** Well, also at [9] Alvirne High, we're not only concerned about the [10] fact that, like, they are proposing to take a [11] hundred acres of our land. It's also the fact [12] that, I mean you seem to be making these [13] decisions without asking us. I mean, did you [14] ever ask the people at Alvirne we want our land [15] taken away? There's just a lot of things. Plus [16] people are totally disregarding Nature. Nature [17] created wetlands. We can't just go and create [18] new ones just like that. I mean it's all at the [19] expense of the American people any way, plus [20] Nature and I don't think that's right.

[21] **MR. RINKER:** Kathleen, you do [22] understand though that the Alternate 8 doesn't go [23] through Alvirne High School, that the State [24] doesn't want to go through Alvirne High School.

Page 191

[1] Yes, we've asked the people from Alvirne. We've [2] already had a lot of testimony in the past on the [3] record not wanting to go through Alvirne. If we [4] can convince the Corps of Engineers that [5] Alternate 8 is the better route, we won't have to [6] go through your high school.

[7] **MR. STREETER:** Maybe the Colonel [8] would like to respond to you, Kathleen.

[9] **COL. HUGHES:** We are listening. [10] That's what we're here for tonight.

[11] **MR. KENISON:** If I could just [12] address this. I think you're very courageous to [13] address us tonight in this fashion, somebody who [14] is a student at Alvirne.

[15] I think it's been stated that our [16] recommendation, our preferred alternative does in [17] fact avoid the taking of Alvirne land. Yes, we [18] have been in touch, spoken with school [19] officials. We do recognize the stature of the [20] program nationally, and I think we've said that [21] earlier in the layout statements. And in concert [22] with the Constitution and the statutes as enacted [23] by the Legislature, this is a public hearing. [24] And in fact, the Commission and the Colonel and

Page 192

[1] the Department will, in fact, consider your [2] testimony and all others tonight, and that's one [3] quorum that has been traditionally provided by [4] the Legislatures around the country. And we've [5] had many public meetings prior to this, and [6] perhaps you weren't with us, but other people [7] have been. But tonight is the official occasion [8] for putting your thoughts forward. So that's [9] consistent with the Constitution.

[10] **MS. COAKLEY:** Well, I just think [11] it's really sad that a lot of people aren't aware [12] of the impact that this is going to have on [13] everybody. You want us to pay these tolls and [14] stuff like that? I mean, that's ridiculous. We [15] pay enough just ot live, let alone just to [16] travel. People have to get to work. People have [17] lives. You're basically saying they have to pay [18] just get from point A to point B too? That's a [19] lot of money that you're wanting from us.

[20] **MR. RINKER:** Thank you.

[21] **MR. KENISON:** I think, [22] councillors, that if you want to work through [23] some of the school officials, I'm sure Rod Cyre [24] would be pleased to come down and address your

Page 193

[1] class on aspects of highway finance and how it [2] particularly relates to Circumferential Highway.

[3] **MR. CYR:** That's a good suggestion [4] Thank you. Maybe your Councillor would like to [5] go down too.

[6] **MR. RINKER:** Maybe I'll go down [7] with Rod Cyr. Sure, we'd be glad to.

[8] **MS. COAKLEY:** Thanks.

[9] **MR. RINKER:** Thank you. You're to [10] be admired for coming here and staying so late [11] and giving your testimony. We appreciate it, and [12] it will be entered into the official record and [13] will be considered.

[14] Claudette Durocher.

[15] (No response.)

[16] **MR. STREETER:** Richard Gagnon from [17] Hollis.

[18] (No response.)

[19] **MR. STREETER:** G. Allen Oldham, 20 [20] Salisbury Road, Nashua.

[21] **STATEMENT BY RICHARD N. GAGNON**

[22] **MR. GAGNON:** Richard Gagnon. A [23] lot of the things I was going to talk about have [24] already been said, probably several times.

163 **164** **165**

162 There was public involvement on 6/8/90, 4/10/91, 7/6/92, and at the 1/4/93 Public Hearing, as well as meetings with various town commissions.

124 Comment noted, no response required.

165 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 194

166 [1] I'm in favor of using 10, period. [2] That's cost $22 million for 1.1 mile. And if [3] that wasn't considered when they were going to [4] build this road, then someone in New Hampshire [5] just screwed up. We don't have money to throw [6] away. Budgets are tight enough. Exit 10 can be [7] chipped away like they cut the rock already. And [8] you've got future there.

[9] Exit 10 you could run a highway, [10] which is going to have to happen. We talk about [11] Rodonis' farm and all these other things now. [12] They are not going to exist in 20 years. And the [13] reason for that is this place is going to grow, [14] just like it already has. Just like the big [15] Colby farms are gone. And the thing is going to [16] happen with Litchfield, Hollis and everywhere [17] else. It's going to great broken up and divided [18] up.

167 [19] But right now we do the best we [20] can, and I don't care how you do it, there's a [21] lot of ways you can travel. But I don't want to [22] see a deadend street over by what you're calling [23] Alternative 8, where at Exit 10 you already have [24] a viable place to travel, and it's acceptable,

Page 195

[1] and you've got a place to go west, and you [2] possibly will end up having to have a place going [3] east, because Nashua and Manchester in one or two [4] generations are going to touch whether we like it [5] or not. Because that's the way it is. There's [6] going to be two million people here in New [7] Hampshire, not one, and it's going to happen.

168 [8] So that is a dead end, and I'm [9] tired of spending money. This whole state is [10] tired of spending money on things that are not [11] going to be used in the future. So let's see [12] what we can do with what we already have up [13] there, Exit 10. $22 million, 1.1 mile.

[14] Even the roads they built around [15] the San Juan Mountains they call the Million [16] Dollars Mile. This makes it look real good. [17] Thank you.

[18] **MR. STREETER:** Allen.

[19] **STATEMENT BY G. ALLEN OLDHAM, NASHUA FISH & GAME ASSOCIATION**

[21] **MR. OLDHAM:** My name is Allen [22] Oldham. I come here tonight representing Nashua [23] Fish & Game and also representing approximately [24] 22 instructors who use the Nashua game facilities

Page 196

[1] for training classes.

148 [2] I don't think that people really [3] realize. I've heard a lot of good wishes and so [4] forth on relocating Nashua Fish & Game to another [5] facility somewhere in this local region, and I [6] applaud that effort. However, I don't think that [7] any regard has been taken to finding us approval [8] to the necessary permits. The approvals of a [9] whole new host of abutters. Right now we have [10] with the Pennichuck and Sanders and DEC and the [11] natural boundaries that we have surrounding our [12] facility, a facility that's probably going to be [13] very, very difficult to replace in any degree.

170 [14] In addition you're losing the [15] resource to recreation that these instructors [16] provide training for.

[17] In addition to the natural things [18] that you might think being at a fish and game [19] facility, such as basic rifle marksmanship, high [20] power rifle training, pistol markmanship, the [21] home protection firearm courses that you've heard [22] about from other speakers tonight. We also [23] provide hunter safety courses and classes. We [24] provide our facilities to the State for training

Page 197

[1] its New Hampshire hunter safety instructors [2] themselves. We also provide the facility for [3] training instructors in the NRA shooting [4] disciplines.

[5] In addition to that, there's [6] another adjunct called junior olympic rifle [7] markmanship and pistol markmanship and air rifle [8] markmanship that a few of the instructors at [9] Nashua Fish & Game are qualified for, myself [10] being one of those.

[11] We have ended up training juniors [12] at this facility over the past 15 years that I [13] have been there, taking them from people who have [14] never fired or even seen a firearm, all the way [15] up to national level competition. We've even had [16] one team place in first place, the Whistler Boy [17] Competition, which is a small bore and high power [18] rifle competition in the National Championships.

[19] During the last 15 years, we have [20] had participants at the National Championships [21] from our own training classes for every year for [22] the past 15 years.

[23] I don't hear anything about [24] replacing the facility in this regard, and the

165 Refer to the response provided for comment #4 of the Public Hearing Testimony.

127 Refer to the responses provided for comments #4 and #8 of the Public Hearing Testimony.

165 Comment noted, no response required.

169 Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to the paraphrased comments related to the Nashua Fish and Game Association. This can be found at the end of the section entitled, "Regional."

170 Comment noted, no response required.

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PUBLIC HEARING TESTIMONY

Page 198

[1] disruption it's going to make to the members [2] currently. We also provide and have just [3] finished training approximately 12 instructor in [4] first aid and adult CPR, who are providing those [5] services not only to the members of Nashua Fish & [6] Game but also to the public as well.

[7] Obviously we can do first aid [8] training and adult CPR someplace else, but it's [9] just one aspect of services that are provided by [10] Nashua Fish & Game members.

[11] I would think in looking at all [12] the different alternates, I've tried going [13] through the summary report and looking at the [14] different alternates that are there, and I think [15] I would have to put my vote, if you want to take [16] it, towards moving the Alternate 7 to the No. 10 [17] interchange. I think that has the least [18] disruption of a facility such as Nashua Fish & [19] Game and also is obviously complete without [20] having to be a lot of extra construction. Thank [21] you.

171

[22] **MR. STREETER:** I'd just remind you [23] that it has a major impact on Litchfield and a [24] lot of people living there.

Page 199

[1] Anyone else that has not been [2] called on? We've gone through all the cards. Is [3] there anyone else who wishes to address the [4] Commission? Pete, you've been very quiet. All [5] set?

[6] **FROM THE FLOOR:** All set.

[7] **MR. STREETER:** Anyone else who [8] would like to address us a second time briefly?

[9] **MR. MacSWEENEY:** Could I ask a [10] couple of questions?

[11] **MR. STREETER:** Sure. Just [12] identify yourself.

171

[13] **MR. MacSWEENEY:** Philip MacSweeney [14] again. If a road goes within 300 or 400 feet of [15] home residences where they have wells drilled, [16] will there be a monitoring of those wells before, [17] during and after to insure the water quality, [18] because the water there is beautiful today.

[19] **MR. KENISON:** Yes, there will be.

173

[20] **MR. MacSWEENEY:** There are about [21] 14 houses right in the proximity of my son's [22] house. Will there be sound barriers? Because [23] that is very close. You don't show it too [24] distinctly on either chart the way it's set up.

Page 200

[1] Like Wason Road, the houses don't even appear [2] there. My son's house is not there. It says [3] Cin-Fri over the label, so the house isn't [4] there. And then on the other map they only show [5] Wason Road coming right up against the highway, [6] but they don't show any of the homes. But if you [7] were to go there and take a look at that, the [8] integrity of that, it just amazes me as to what's [9] going to happen. I'll help you move it back a [10] little bit.

[11] **MR. KENISON:** Well, I don't know [12] who quoted you, as you spoke earlier, just a few [13] hundred thousands dollars to move the road. I [14] don't believe anybody is in a position to make [15] that sort of statement with any accuracy at all.

[16] **MR. MacSWEENEY:** That gentleman [17] over there sitting at the end of the table.

[18] **MR. KENISON:** I don't think he [19] really offered it in that context. If our [20] roadway does not impact directly on the property, [21] we're not empowered to consider you for damages, [22] consider the property owner for damages. [23] However, if you are an abutter that is within [24] proximity, you can certainly address your

Page 201

[1] concerns to us as you're doing now, I guess on [2] behalf of your son.

[3] **MR. MacSWEENEY:** Right.

[4] **MR. KENISON:** We will certainly [5] look at that from the point of view of the impact [6] of noise and view. And I can't tell you tonight [7] what we can do until we look and then analyze the [8] situation whether landscaping or whether so some [9] sort of a noise barrier is warranted or not. We [10] do have standards for noise barriers. We will [11] have to do a sound modeling. We can also take a [12] look at aggressive landscaping as a possible [13] remedy.

[14] **MR. MacSWEENEY:** Okay. Thank you [15] very much.

[16] **MR. STREETER:** Thank you. Anyone [17] else? This will be the last speaker.

[18] **STATEMENT BY TOM GOULD**

[19] **MR. GOULD:** I'm Tom Gould. I live [20] in Hudson, New Hampshire.

[21] I'd just like to make a comment. [22] I've been following this since 1983 when I moved [23] into the state, and it seems to me — travel [24] across the Taylor Falls Bridge every day. I must

171 Comment noted, no response required.

172 Comment answered by NHDOT Assistant Commissioner Leon Kenison on page 199 of the Public Hearing Testimony.

172 Refer to the candidate noise barrier locations in Figure 3.8-1 on page 3-43 of the DEIS and in the Noise Technical Report.

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PUBLIC HEARING TESTIMONY

Page 202

[1] be one of the 45,000 people that do that. And [2] this project has to go through. It has to be [3] built. We can study it more 'til the cows come, [4] but I don't think we'll ever find an alternative [5] that looks better than the Alternative 8 that we [6] see up there on the map.

[7] As an engineer I appreciate some [8] of the difficulty in trying to please everybody, [9] and I don't think you can. There will be impact, [10] negative and there will be positive benefit, and [11] I think you have to weigh the two against each [12] other. Thank you.

[13] **MR. STREETER:** Thank you. [14] Commissioner Kenison, do you want [15] to wrap it up? What's the next step?

[16] **MR. KENISON:** Well, we will try to [17] get this transcribed, both the Corps of our [18] people, and we'll lay it all before you for the [19] decision making.

[20] **MR. STREETER:** Col Hughes, any [21] last words of wisdom?

[22] **COL. HUGHES:** Thank you for the [23] comments and thank you for coming out tonight. [24] We appreciate them and we'll take them into

Page 203

[1] consideration our decision making process. Thank [2] you.

[3] **MR. STREETER:** Thank you. Declare [4] the hearing closed at 10:27 p.m.

[5] (Whereupon, at 10:27 p.m., the [6] hearing was closed.)

B.P.A. REPORTING ASSOCIATES, INC.

174 Comment noted, no response required.

175 Comment noted, no response required.

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6. Citizen Comments

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6.1 CITIZEN

A total of 62 written comment letters were received from the public on the DEIS. Twenty one of these letters came from residents of the Village at Barretts Hill. The majority of these twenty one comment letters voiced similar concerns. For this reason, issues raised in these letters were paraphrased.

Written comments and the corresponding responses follow.

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CITIZEN

Colonel Hughes
U.S. Army Corps of Engineers
New England Division
434 Trapelo Road
Waltham, MA 02254-9149
(File No. 198801828)

Dear Colonel Hughes,

We have been notified that our home at 2-4 Mark Street, Hudson, NH, lies directly in the path of The U.S. Army Corps. of Engineering's Preferred Route for the new Circumferential Highway.

My name is David Annand. My wife, Allison, and I own and live in the home named above. We have a number of concerns about this project which we would like to discuss with you.

We will not go into detail here about the "public conerns" of whether or not the project is needed, or where the road will be placed if it is built. Instead, we would like to share the "private concerns" that we have if The U.S. Army Corps. of Engineering's Preferred Route is chosen and you destroy our home in the process.

After searching for a long time, My wife Allison and I purchased our home a little over 2 years ago. The home and property were unique and just what we were looking for.

The location was perfect. Allison is a school teacher here in Hudson, at Nottingham West, which is less than 1 mile away. I design custom kitchens over in South Nashua, which is about 3 miles from our home. In addition to our full time jobs, we also operate a small business out of our home. Our immediate family lives 4 miles in one direction and 5 miles in the other direction. This allows us to remain very close to all our neices and nephews, uncles and aunts.

Mark Street is (and has been for the last 12 years) a dead end road with a cul-de-sac at the end, so there is very little traffic and no "traffic noise". The nieghborhood is very quiet and we are surrounded by woods. This means the neighborhood kids can safely play and ride their bikes out on the street. This was particularly important to us, because we planned to have children soon. In fact, Allison is now pregnant and due on April 12, 1993.

Not only was the location perfect, but the piece of property itself had wonderful potential for the future.

It fit all of our short term needs:
- Excellent quality
- Less than 10 years old (i.e. low maintaince)
- A large split level duplex with separate living areas for both homes
- Large lot with separate yards for both homes
- A home that was unique and easy to rent
- Income from renting the other home to help us get started and established
- Room to expand within the homes and therefore increase their value

It also fit our longer term needs:
- Extra building lot on which we could built our next home
- Steady future income stream
- Low maintaince

continued

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CITIZEN

Over the last 2 years we have invested close to $35,000 on improvements and repairs, (not including all of our own time!). We were always willing to do so, because we were looking to the future and knowing we would be keeping the property for many years to come.

Obviously, we are most concerned about the investment we have made in our home and our future here in South Hudson. An investment that would be destroyed if you build the highway on top of our home and property.

1 **Please keep in touch with us on this matter! We think one of the worst parts of this whole process is the lack of communication with the people who are directly affected by these decisions.** For example, we were mailed a copy of the New Hampshire Department of Transportation's "Proposed Alignment". This packet contained a map showing a route which crosses over Musquash Rd approx 3/4 mile from our home. The packet said nothing about the possibility of our home being taken. Then out of the blue, 2 weeks latter, we get a call from our selectman informing us our home is on the list to be taken for the new highway (along with the rest of our neighborhood). This is not the way we should be informed about this!

We thank you for this opportunity to share our concerns with you. Again, please keep us informed on all matters that relate to us.

Sincerely,

David & Allison Annand

David and Allison Annand
4 Mark Street
Hudson, NH 03051
(603) 598-8785
January 22,1993

1 The NHDOT routinely notifies individuals whose property is affected by their preferred alignment, which at the time of the Public Hearing was Alternative 8. Although Alternative 8 is preferred by the NHDOT, it is not necessarily a permittable alignment by Corps requirements. The Corps, however, did not go to the Public Hearing with a preferred alignment, but did identify an alignment that appeared to have less impact on aquatic resources than Alternative 8. The NHDOT thus decided to notify property owners abutting the Corps identified alignment since it is a potentially permittable alignment. By notifying all property owners potentially impacted by the highway, NHDOT avoids holding another Public Hearing in the future for those individuals that were not notified initially. Upon issuance of a 404 permit, residents along the permitted alignment will be notified.

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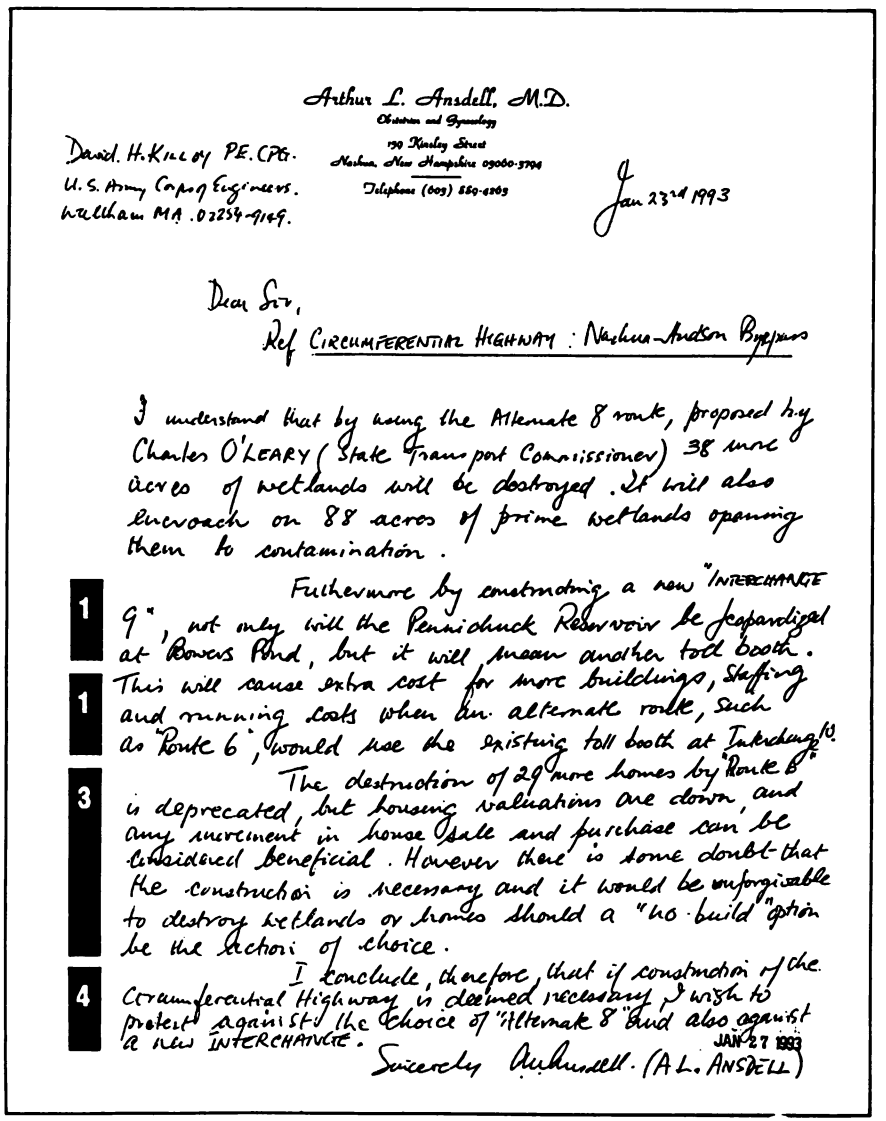
CITIZEN



Arthur L. Ansdell, M.D.
Obstetrics and Gynecology
170 Kinsley Street
Nashua, New Hampshire 03060-3704
Telephone (603) 880-0303

David H. Kiley PE. CPG.
U.S. Army Corps Engineers.
Waltham MA. 02254-9149.

Jan 23rd 1993

Dear Sir,

Ref CIRCUMFERENTIAL HIGHWAY : Nashua-Hudson Bypass

I understand that by using the Alternate 8 route, proposed by Charles O'LEARY (State Transport Commissioner) 38 more acres of wetlands will be destroyed. It will also encroach on 88 acres of prime wetlands opening them to contamination.

1 Furthermore by constructing a new "INTERCHANGE 9", not only will the Pennichuck Reservoir be jeopardized at Bowers Pond, but it will mean another toll booth. This will cause extra cost for more buildings, staffing and running costs when an alternate route, such as "Route 6", would use the existing toll booth at Interchange 8.

3 The destruction of 29 more homes by "Route 8" is deprecated, but housing valuations are down, and any increment in house sale and purchase can be considered beneficial. However there is some doubt that the construction is necessary and it would be unforgivable to destroy wetlands or homes should a "no-build" option be the factor of choice.

4 I conclude, therefore, that if construction of the Circumferential Highway is deemed necessary, I wish to protest against the choice of "Alternate 8" and also against a new INTERCHANGE.

JAN 27 1993

Sincerely Ansdell. (A.L. ANSDELL)

1 A detention basin will be included in the design of Exit 9. Refer to the response provided for comment #2 of the Public Hearing Testimony.

2 Considerable reconstruction would be required at Exit 10 in order to include the Circumferential Highway. Refer to the response provided for comment #4 of the Public Hearing Testimony.

2 Comment noted, no response required.

4 Comment noted, no response required.

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CITIZEN

17 Thornton Rd. West,
Merrimack, N.H. 03054

Dear Sir,

Ref: Nashua-Hudson Circumferential Highway.

1 I am writing to express my support for the position taken by the Army Corps of Engineers with regard to the selection of the route for the Nasua-Hudson Circumferential Highway.

The D.O.T.'s choice of Alternate 8 ignores the detrimental effect on prime wetlands which are a resource for the future of our people and wildlife. In my view, the choice of alternate 5 & 6 would indeed be preferable. It appears that the D.O.T. are more interested in short term issues than in the overall long term impact of their decisions.

2 Futhermore, there is considerable dispute as to the effectiveness of building this highway to address an essentially North/South congestion problem. The need for this new road, to my mind, has not been proven. I note that there is no "no-build" v option.

3 Having studied the environmental impact statements prepared by the D.O.T., I am not fully convinced by their conclusions. I am disappointed that they are ignoring advice given by the E.P.A.

In conclusion I hope that the Army Corps will stand firm on their position of recommending either alternative 5 & 6.

Sincerely,

P. Ansdell MD

Patricia M. ANSDELL MD.

David H. KILLOY PE.CPG;
Chief, Permits Branch,Regulatory Division,
US Army Corps of Engineers,
424 Tropelo Rd. WALTHAM, MA 02254-9149.

JAN 26

1 Comment noted, no response required.

2 There is a No Build option, Alternative 1. There is nothing associated with this option, as it is a No Build option, and, thus, it is the same roadway network as exists today. In those instances where resources would be affected in the future (2010) with a No-Build option, those resources were reported in the DEIS.

3 The EPA, as a Cooperating Agency, was involved in the decisions of alternative selection. The alternatives suggested by the EPA (i.e. the Partial Builds), have been studied in the DEIS.

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CITIZEN

Robert W. Brown, Christine Brown
174 Robinson Road
Hudson, NH 03051

U.S. Army Corps of Engineers
New England Division
Ms. Theresa Flieger
424 Trapelo Road
Waltham, MA 02254-9149

January 17, 1993

Reference: File No. 198801828

Dear Ms. Flieger:

The following information is submitted pursuant to the public notice dated November 24, 1992 relative to file number 198801828, the Nashua-Hudson Circumferential Highway. This Notice provides for written public comment by January 11, 1993 and subsequantlly extended to January 24, 1993.

We are providing the following comments and recommendations to the U.S. Army Corps of Engineers and the New Hampshire Department of Transportation.

The following comments are intended to address alignment issues. These comments do not address funding issues (IE. tolls). Project financing is considered to be under the purview of the New Hampshire Department of Transportation and the State Legislature.

These comments are a result of a review and analysis of the October 1992 Revised Draft Environmental Impact Statement produced by the U.S. Army Corps of Engineers.

1 o On pages S-2 & S-3 under Beneficial effects, there are three additional benefits not mentioned. These are;

1.) Improved safety of vehicular and pedestrian traffic on the local roads of Hudson,

2 2.) Improved quality of life for the residents of Hudson that live on or near the local corridors currently being used to move traffic east-west.

3 3.) The Draft Regional Transportation Study that was performed this past summer by the Nashua Regional Planning Commission indicates that approximately 60% of the traffic that enters Hudson from the east continues through to destinations west of Hudson. Therefore, an additional benefit will be lessening the impact of this traffic on the local roadways by providing an efficient east-west transportation network.

4 o On page 2-24 under Historical Resources it is stated that alternatives 5 and 6 will displace the Hudson Historical Society and Cultural Center (commonly referred to as the Hills House). This structure is on the National Register of Historical Places. What is not stated is that Doctor Hills is Hudson's greatest benefactor. Doctor Hills has left a lasting

4 legacy to the community that he and his family came to love. We submit that pursuing of alternatives 5 and 6 go beyond the irreplaceable loss of a building but also, includes the loss of a significant piece of Hudson's history.

5 o On page 2-24 under Historical Resources there is no mention of the loss of agricultural lands of the Alvirne High School. This land is part of the continuing legacy of the gifts given to Hudson from Dr. Hills.

6 o On pages 2-26 and 2-27 it is stated that alternatives 7 and 8 will impact more undeveloped land than the other alternatives under consideration. Although this is true, it must be taken into consideration that a great deal of this undeveloped land exists due to the long range planning of the State and the Local Communities. This planning resulted in obtaining the right of way that would be required to construct this roadway. We submit to you that if there had been no long range planning than the amount of undeveloped land would be substantially less.

7 o On page 2-28 it is stated that alternatives 5 and 6 will require the taking of a well (well H10). All other alternatives will not require the taking of wells.

8 o On pages 2-29 and 2-30 it is stated that alternative 6 impacts the least amount of wetlands and alternative 7 impacts the most. However, alternative 8 impacts the least number of "key wetlands". It should be noted that alternative 6 impacts 25 % more of the "key wetlands."

4 o On page 2-31 it is stated that alternatives 3 through 6 would impact a known asbestos site (site 21, 4 Gregory Street). Alternatives 7 and 8 do not impact any known asbestos sites. We believe that disturbing this asbestos site is contrary to the public good.

10 o Figure 3.1-2 on page 3-8 indicates that the level of service existing in 1990 is, for the most part, in a failure condition (level of service F). While figure 2-6 on page 2-17 indicates that with full build the level of service is greatly improved at the 20-year benchmark. We believe that the improved level of service translate directly to improved safety of vehicular and pedestrian traffic in these corridors.

11 o In section 3-2 that begins on page 3-15 it is stated that the pattern of development within Hudson is of a radial nature. Further, it is stated that the Commercial Development within the Town has occurred along the primary roadways of NH routes 102, 111 and Lowell road. We believe that this illustrates and supports our position that the Town of Hudson has been planning its future in accordance with the previously described B/C corridor.

12 o On page 3-19 and 3-21 are comments related to the Zoning Regulations of the community. These comments do not reflect the fact of the planning board having worked for the last 2 1/2 years on a complete rewrite of our zoning ordinance. This effort will result with changes being forwarded to town meeting.

13 o Pages 3-31 and 3-32 present comments on farmland. It should be noted that

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13 alternatives 5 and 6 will have the greatest impact to farmlands while alternatives 7 and 8 have the least. It must be pointed out that alternatives 5 and 6 will impact the farmlands of the Alvirne High School and the Agriculture program of the school. Further, it must be noted that this is the only program of it's kind in the State of New Hampshire. This program has received national recognition and is considered to be one of the ten best agriculture programs in the country.

14 o Pages 3-57 through 3-60 comment on Threatened or Endangered Wildlife species. We must point out that alternatives 5 and 6 will impact the feeding areas and potential roosting habitats of the Bald Eagle. Alternatives 7 and 8 are least likely to have adverse impacts on our national symbol, the Bald Eagle.

15 o The environmental impact statement does not recognize the facts that there are neighborhoods that have been built and now exist as a result of the long range planning of the community and the State. We the undersigned do live in one of these areas.

16 o We fully endorse the project need and purpose.

17 o When the alternative soultions, such as mass transit, improving the local roadways, and partial build are carefully reviewed it is very appartent that these alternative soultions do not meet the stated project need or purpose. The purpose of this roadway is to move traffic in an east-west direction. This is not the soultion to the north-south traffic congestion on route 3.

18 o Careful review of the traffic projections clearly that there is improvement in the local roadways of routes 102, 103, and 3a.

19 o Statements that are being made relative to the lack of full transportation alternatives soultions are without merit. We would submit that these indivuals and goverment agencies do in fact have hidden agendas.

Therefore, in recognition of all the elements that are required as part of the environmental impact statement, as well as assessing the least environmentally damaging and practicable alternative project alignment (LEDPA) we endorse alternative 8. This alternative serves the project purpose and is the least environmentally damaging alternative when all elements of the environmental impact statement are reviewed and considered.

We ask that these written comments be included as part of the public record. Should you have questions regrading these comments please address these questions to the to us at the above address.

Sincerely,

Robert W. Brown

Christine M. Brown

Christine M. Brown

1 to 14 These comments were presented at the Public Hearing as oral testimony by Robert Brown, Chairman of the Hudson Planning Board. Responses to these comments can be found in the section entitled, "Public Hearing Transcript, #12 through #26.

15 Comment noted, no response required.

15 Comment noted, no response required.

17 Comment noted, no response required.

18 Comment noted, no response required.

19 Comment noted, no response required.

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8 January 1993
RR7, 234 Derry ST
Litchfield, NH
03051

1 The Hudson - Nashua circumferential Highway should be constructed. another bridge between Litchfield and Merrimack is needed. The route as proposed by the Army Corps of engineers will have highway access very close to Alvirne Hill School. To me it would be a safety problem.

2 The route would pass through, cut up Litchfield farms. We have lost enough farms already. The number of families that would be moved is much greater if this route is used.

JAN 12 1993

1 Comment noted, no response required.

2 Comment noted. This issue is addressed in the Farmland Technical Report and the DEIS.

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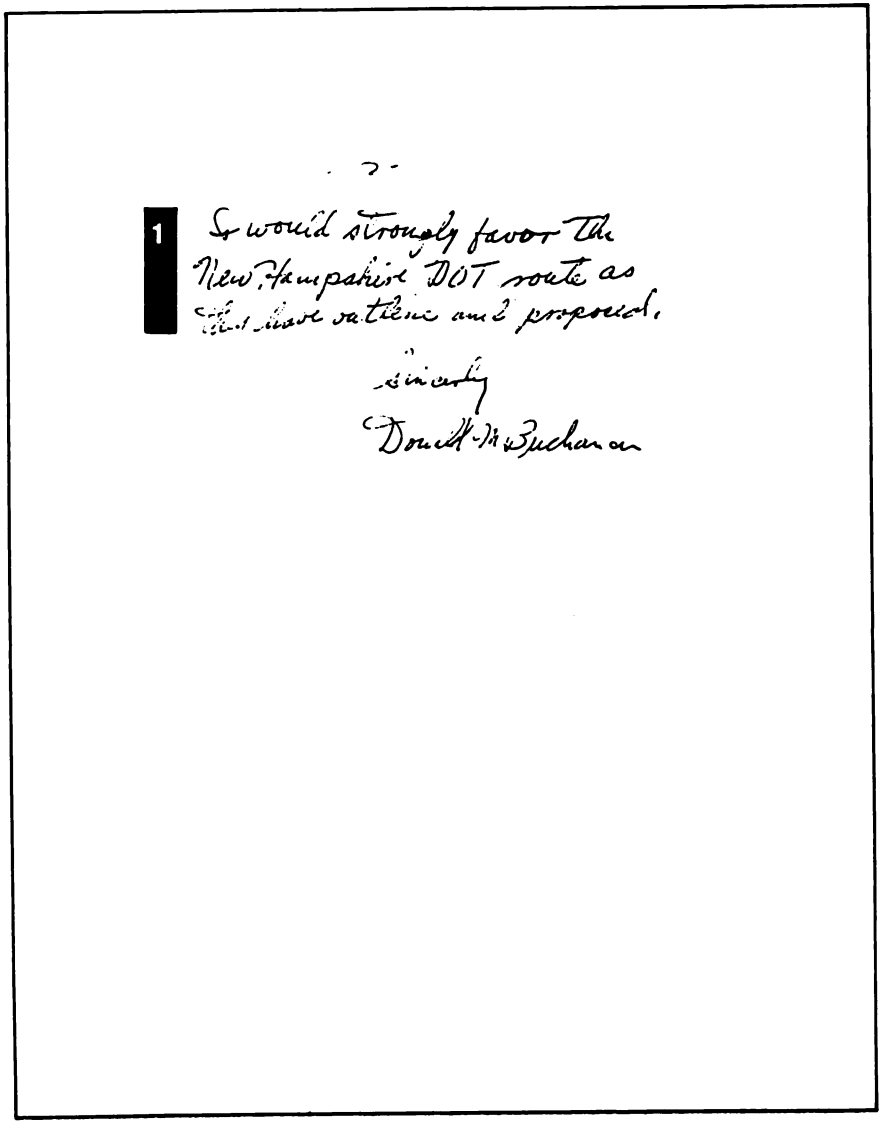

-2-

1 I would strongly favor the New Hampshire DOT route as I have stated and proposed.

Sincerely

Donald M. Buchanan

3 Comment noted, no response required.

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1/13/93
U.S. ARMY CORPS OF ENGINEERS
N.H. DEPARTMENT OF TRANSPORTATION

Dear Sirs,

I am writing to you to express some concerns I have regarding the impact of the circumferential highway. I have attended several of the meetings concerning the highway including the last meeting sponsored by the N.H. DOT and the U.S. Army Corps of Engineers. I felt I was unable to voice my concerns at the meeting due to the rather large and intimidating presence of special interest groups and their lawyers as well as the local politicians and media.

I am a resident of Hudson N.H. I own a custom duplex at 47 Spear Rd. which is lot 16-1, map 21. This lot is approx. 60,000 sq. ft. in size. My home, which I built myself, is situated at the rear of my lot because of the presence of wetlands at the front of the lot. The other unit of this duplex is occupied by my father. We are both self-employed and operate small businesses out of our homes. We have made many custom improvements and are planning many more. This seemed like such an ideal location to raise a family, because it is a very quiet and relatively secluded part of town. There is an abundance of woods, ponds, streams and wildlife.

1 However, due to the close proximity of the highway, I am having my doubts. I have many concerns regarding right of ways, set back distances, construction impact, and eventual traffic noise. According to the prefered route chosen by the state, the highway would only be approximately 75' from my home. The map depicting this route shows a culvert and retaining wall on my lot in the area of my septic system. When I questioned this, I was bluntly told the state would buy me out. Upon further questioning, I was told the first option was to relocate my septic system on my lot. This would be virtually impossible due to the narrow width of the lot and the presence of ledge and wetlands. The final option would be to acquire our home. This would be financially devastating to myself and my family.

2 The highway will virtually isolate us from the beauty of the surrounding area. The impact of construction so close to my home will certainly affect the quality of our lives as well as the integrity of our house. The impact

3 of future traffic noise is very troubling. This issue, I feel, has not been properly addressed, if at all. This will not be a safe environment to raise my children.

JAN 2 1 1993

4 Right-of-way issues regarding acquisitions and relocations are handled by the NHDOT on a case by case basis in accordance with state and federal statutes and regulations.

2 Comment noted, no response required.

3 An analysis of noise levels along Spear Road (Noise Site ID No. 25-3 and 16-1) indicates that the expected noise levels from the proposed Circumferential Highway do not exceed the FHWA's criterion of 67 dBA, or the NHDOT's criterion of 15 dBA above the existing ambient noise levels. As a result, noise mitigation measures are not proposed for this area.

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1/13/93
U.S. ARMY CORPS OF ENGINEERS
N.H. DEPARTMENT OF TRANSPORTATION

Because the prefered route has not yet been accepted by the Army Corps of Engineers, I have not been able to find out if I will lose my home. If my home was in the direct path of the highway, I would be more certain of the outcome. However, because I am only an abutter, I am uncertain of the final impact. Until a more accurate survey is done, I am left in limbo and cannot plan my family's future.

I was told that the setback required was only 50'. Because of the location of my home on my lot, this would create a mere 75' buffer. This is alarmingly insufficient. It would seem that with the abundance of undeveloped land that is available in this area, a better and less damaging route could be found.

4

Because of the highway, the value of my home would be drastically reduced. This coupled with the current economic situation in New England and especially in southern N.H. will create a severe financial hardship, whether the highway is built or not. The value of my home is already at 70% of its actual value. Not knowing what the impact the highway will have on my home and family is very troubling. I realize that the benefit of the highway should outweigh the sacrafice of the few who will be adversely affected. But from my standpoint, that sacrafice would be heartfelt from the many who stand to lose their homes or live so close to it.

5

Your understanding in this matter would be greatly appreciated. Any information that you could provide me with would be very helpful in planning my family's future.

Sincerely,

Norman Cailler
47 Spear Rd.
Hudson N.H. 03051

4 Comment noted. Refer to the response provided for comment #1 of this letter.

5 Comment noted, no response required.

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CITIZEN

Northern Lights
Joseph-David Carrabis, Director

49 Brinton Drive
Nashua, New Hampshire 03060
603-881-9390

18 Jan 93

David H. Killoy, PE, CPG
Chief, Permits Branch
Regulatory Division
US Army Corps of Engineers
424 Trapelo Rd
Waltham, MA 02254-9149

Dear Sir:

I am writing regarding the proposed Nashua Circumferential Highway. In this letter, I will repeat my concerns stated the evening of the public hearing and present other information which has been made available to me.

1 There seemed a consensus that the highway is needed. I disagree. What is needed is a means of alleviating the present traffic congestion. As I said during the hearing, it is unlikely such a highway will alleviate traffic. When you put down a road, people will drive on it. The highway will not decrease traffic load, it will increase it. Further, the main concern is north-south traffic, which the proposed highway in no way, shape, or form addresses.

It was said by the committee that land for Alignment 8 -- the favored route by the state -- was purchased several years ago before any environmental and other concerns were expressed. Not so! One tract of land was purchased only one year ago (a deed can be made available if necessary).

2 It was said that wetlands which were disturbed in one area would be created in another. I've never known wildlife, except for migratory species, to willingly accept a forwarding address. Even in the case of migratory species, origin and destination never change. It's taken the Earth several thousand years to create the natural habitats in this area. It will take six years for these areas to be permanently altered. Once altered, even with zero usage through perpetuity, the natural habitats will never return to their current state. The city of Nashua has expressed great interest in preserving its wetlands. Now is the time to do so.

JAN 21 1993

1 Comment noted. Refer to the responses provided for comments #23, #31, and #32 of the EPA's March 2, 1993 letter, and #6 and #7 of Stephen Kaiser's written comments.

2 Comment noted. The wetlands regulations and guidance regarding mitigation do not justify destruction of wetlands, but describe ways to offset losses incurred by unavoidable wetland losses.

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3 because the state of NH doesn't want to deal with Federal regulations -- regulations which, if followed, would save the state of NH $138.75 million. Considering how my property taxes have been going up while real income has continued to plummet, I would gladly let the Federal government fund 3/4 of any project in the state if it meant saving me money. This project will be built during the administration of a President who wants to promote jobs and infrastructure and a Vice-President who wants to protect the environment. Surely Alignment 8 doesn't meet both agendas.

4 Also, having advised federal and state agencies on various projects, I know the "2x + 10" rule applies. What is proposed to cost $25 ends up costing 2x$25 + $10, or $60. Perhaps a more conservative and realistic estimate of the final cost of this project is 2x$185 million + $10 million, or $380 million. The sad truth of experience is that the "2x + 10" rule also applies to projected length of project. The circumferential highway will not only finally cost $380 million, it will take much longer than six years to complete, perhaps reaching the "2x + 10" rules projected 22 years.

5 Alignment 8 requires the construction of new ramps onto the Everett Turnpike. These ramps would be dangerously close to the existing and under utilized ramps at Exit 10. Further, Alignment 8 requires the construction of roadways which are prohibitively curved for use at normal highway speeds and traffic. One purpose

6 for the circumferential highway is to promote industrial growth. Where better than Exit 10, under utilized at present and already developed for industrial use, via another alignment?

7 The town of Merrimack outlined a plan in the Wednesday Nashua Telegraph to continue the Rt 101-bypass, following along the railroad bed south. Merrimack would like to extend a road from the existing Exit 10 on Rt 3, across Rt 101, and connect to the by-pass by the McDonalds on Amherst St. Merrimack would rather build a new road to do this, as the existing Camp Sargent road currently used for connection between these two points is too narrow, winds too much to handle the volume of traffic, and travels directly past an elementary school.

By making the circumferential highway connect to the existing Exit 10 instead of building a new exit one mile south, the Board's purpose of easing the flow of traffic east-west would be accomplished if they connect the circumferential highway at the existing Exit 10 to the proposed 101-bypass extension.

My last comment regarding the public hearing is an observation. Each of the arguments presented by the committee and its adherents was soundly and exactingly countered by several pre-

3 Comment noted, no response required.

4 Comment noted, no response required.

3 Comment noted. Refer to the responses provided for comments #6 and #7 of the Public Hearing Testimony.

6 Chapter 1 of the DEIS, does not state that the purpose is to promote industrial growth.

7 Comment noted. Refer to the response provided for comments #4 and #8 of the Public Hearing Testimony.

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senters in the audience. Given that the committee couldn't counter any of the arguments nor could it adequately address all the concerns of the public presenting at the meeting, and that it appears Alignment 8 is still the state's route of choice, there must be other reasons which were not made either apparent or available by the state's representatives at the meeting. I wish to know what those other reasons are. If the sum of these reasons are the greater displacement of families due to having to purchase more residential properties, I offer that in this depressed economy, with so many people either unable or unwilling to keep their properties, many would look eagerly to the state's purchasing their properties for a higher-than-fare market value, as is how such things are done.

I also have personal concerns regarding the development of Alignment 8. I am self-employed and have an office in my home and a beautiful screened-in porch which overlooks the current natural habitat and which will be within several hundred feet of the rampways to Concord St. if Alignment 8 is developed. During the spring, summer, and early fall I occasionally have clients in for discussions and do much of my work out on the porch. This would be severely disrupted should Alignment 8 be developed, directly affecting my ability to generate income. It should be known that my self-employment has produced twelve books of which five have become international bestsellers and two have become internationally adopted college texts, over 300 articles, short stories, award winning poetry, television scripts, and novels. In addition, my self-employment has developed an nationally recognized therapeutic technique for adolescent and adult trauma. All from my home office and porch, neither of which I'd be able to use during construction of Alignment 8 due to sensoral disturbances, not to mention traffic after Alignment 8 is open to the public.

What can the state do to insure my ability to work undisturbed and generate revenue in my chosen fields both during and after construction?

Sincerely,

Joseph Carrabis

8 The NHDOT selects its preferred alternative based on a balance of a number of factors including socioeconomic and environmental impacts. These factors must be considered in light of the regulatory framework that exists. Additionally, the alternative must be feasible and buildable from both economic and engineering perspectives.

8 Comment noted. Refer to the response provided for comment #9 of the letter from Brent and Nancy Morrison.

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CHAGNON REALTY CORP.

145 TEMPLE STREET • NASHUA, NH 03060 • TEL. (603) 889-7778

3 Dec, 1992

Army Corps of Engineers
424 Trapello Road
Waltham Mass.

Gentlemen;

1 I read an article in The Broadcaster Re. the circumferential highway thru Hudson N.H. and how you propose to exchange wetlands.

I own a thirty acre wetland in Merrimack N.H. I wish to sell same. Would you keep this on file should the need arise to exchange wetlands in the future.

Very truly yours
Emile Chagnon

DEC 0 3 1992

1 The first priority of wetland mitigation efforts is to restore previously degraded wetland systems, in an effort to offset losses incurred by the construction of a highway. Purchase of existing wetlands does not satisfy the no net loss objective, since it does not add wetland acreage to the landscape, but simply preserves what is already protected by current federal and state legislation.

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I

4 Burns St.
Nashua, N.H
Jan. 20, 1993

Dear Ms Fleiger,

1 Just a short note to let you know, I am "not" in favor of this Circumferential Highway.

2 1. Why bother having the EPA if what they say doesn't matter. The EPA has voted "against" this so called DOT's favored route 3X.

2. If we go the route DOT wants, we get "NO" gorernment aide. How stupid! Nashua is now trying to cut expenses, so we can keep our tax rate "down". Where do we start? The schools of course!! Take out the janitors, librarians, reading specialist, sports, psychologist, etc — that way we can raise the utility rates and, of course, don't forget, "we" have to pay for the Circumferential Highway.

What A SWAP!!! People of Nashua won't know the difference ___ HA!!!

3 Now because this highway is going orer/around/through or whatever OUR DRINKING Water, they do need to "raise" our rates at least 2.5% — so we can drink Merrimack River water, that isn't eren fit to swim in!!

JAN 26 1993

3. Nashuans voted 67% in favor of

4 Comment noted, no response required.

2 The EPA has participated in the alternative selection process as a cooperating agency. Their technical advice and input will be considered by the Corps throughout the process. The final permit decision rests with the Corps. The highway is a user funded facility, it is not funded by highway and gasoline taxes.

1 Comment noted, no response required.

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II

Mayor Wagner because he was an environmenta list. I don't think the people of Nashua want to see about 40 ACRES of wetland filled. Do you?

4. Land has been sold to the state already with high profits and then these same people (I'll mention NO names) buy back a little land and/or house for barely nothing. In the Nashua Telegraph on Sunday, January, 17 – Stephen Kaiser, an independent traffic engineer from Cambridge, Mass. concluded that "the real purpose of the project is not to relieve traffic congestion but to profit landowners whose property Abuts the road. You know what? That sounds about right. What do you think?

Thanks for you time
Mrs. Louise Collaid

P.S. Sorry this letter was longer than I expected.

4 Comment noted, no response required.

5 Comment noted. The official project purpose is stated in section S.3 on page S-2 of the DEIS. The project will provide relief of the traffic congestion that presently exists as well as influence development in the region.

Nashua Telegraph Sunday Jan. 17

Others express concern about need for road

State and federal officials aren't the only ones with concerns about the need for a Circumferential Highway.

An independent traffic engineer and a Litchfield resident have expressed strong concerns about the proposed $185 million, 12.5-mile, divided four-lane highway.

Stephen Kaiser, an independent traffic engineer from Cambridge, Mass., testified earlier this month before state and federal officials that building the complete circumferential highway will result in "severe congestion on much of the regional highway network."

In reviewing the state's documents, Kaiser concluded that the [illegible] projects not to relieve traffic congestion but to profit landowners whose property abuts the road.

"The circumferential highway is being misrepresented when it is offered to the public as a traffic solution. What it is, and probably always was, is a benefit and a stimulus to real estate development, primarily in Hudson."

Kaiser stressed the failure of the document to explore alternatives, such as improved use of traffic signals and expanded mass transit, in an effort to relieve traffic congestion.

Litchfield resident and circumferential watchdog Rina Petit also faulted the document for providing a "superficial" analysis of traffic systems management as an alternative.

"They had an obligation to look at the most cost-effective and most efficient way to provide traffic relief," she says.

Petit says insufficient research went into the half-dozen pages devoted to the possibilities of improving existing intersections, providing train, bus and car pooling, and questioning whether a toll road would discourage ridership.

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DEAR MR. SWETT
or
To whom it may concern,

I am opposed to Alternative 8 for the Nashua Circumferential Highway. Alternative 8 calls for the northern connection of the highway with the Everett Turnpike by cutting through Southern Merrimack. Mainly, I am opposed to the impact Alternative 8 will have on the Nashua Fish and Game Association, a unique and irreplaceable facility, a facility that is a tremendous asset to the local area. 1

Alternative 8 has the highway going through the center of the club grounds. The club has the only high power (600 yard) range in The State of New Hampshire. The club not only provides a safe and responsible place to shot for it's 600 members, but also offers opportunities to the community. Courses in personal protection, hunter safety, junior rifle are taught and a place is provided for local police departments to practice and quality.

I support the circumferential highway returning to South Merrimack, crossing the river and ending on Route 3 (The Daniel Webster Highway). At this point, if motorists wished to continue onto the FE Everett Turnpike, they could use the newly constructed Exit 10. Exit 10 is within a mile of where the circumferential highway would connect with Rt. 3. 2

I feel that this alternative would preserve the Nashua Fish and Game Association as well as provide a functional access from the circumferential highway to the FE Everett Turnpike.

Philip A. Conte

Philip A. Conte
38 Seminole Dr.
Nashua, NH 03063

1 Comment noted. Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to the paraphrased comments related to the Nashua Fish and Game Association. This can be found at the end of the section entitled, "Regional".

2 Comment noted, no response required.

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NASHUA-HUDSON
CIRCUMFERENTIAL HIGHWAY

Date 11/25/92

Please complete this form and leave it in the appropriate box today.

Name Cheryl Daniels

Address 314 Fox Run

City Hudson State NH Zip Code 03051

1 Comments It would be in the best interest of our community, The Village at Barrett Hill (red dot labelled VBH on the reverse side of this comment sheet), if ALL of the alternatives (7 & 8 currently do not) followed the path highlighted in blue which currently is proposed for alternatives 3 through 6. However, in the event that the path highlighted in blue negatively impacts the quality of life of some other residential community as much as the path highlighted in yellow (currently proposed for alternatives 7 & 8) impacts us, perhaps an entirely new path located midway, if possible, between the blue and yellow paths could be adopted for all of the alternatives. My husband and I understand and are concerned that the route proposed for alternatives 7 & 8 would place the highway at the minimum footage away from our community allowed by law. This of course, would lower our property value and subject us to unwanted air and noise pollution, particularly in summer and winter. But most importantly, we are most concerned about the safety of our two pre-school age children who play in the area behind our home where this highway will run near. We are praying that whatever can be done to maximize the clearance between our community and the highway will be done.

☑ Check here if you would like to be placed on the project mailing list.

Thank you for your participation in this project

New Hampshire Department of Transportation . New England Division, Army Corps of Engineers

1 The initial stages of the study consisted of an examination of a group of 33 alternative alignments. These were reduced to six Build Alternative Alignments, a Transit/TDM and TSM Alternative, and a No Build Alternative which were studied in greater detail in the DEIS. This was done after coordinating with federal and state agencies. The general public was also invited to comment on both sets of alternatives at various public informational meetings. The range of alternatives selected represent a reasonable range for NEPA purposes. Note that physical constraints limit the number of practicable alternative alignments. In addition, alternatives that were eliminated from further study were typically found to be more environmentally damaging.

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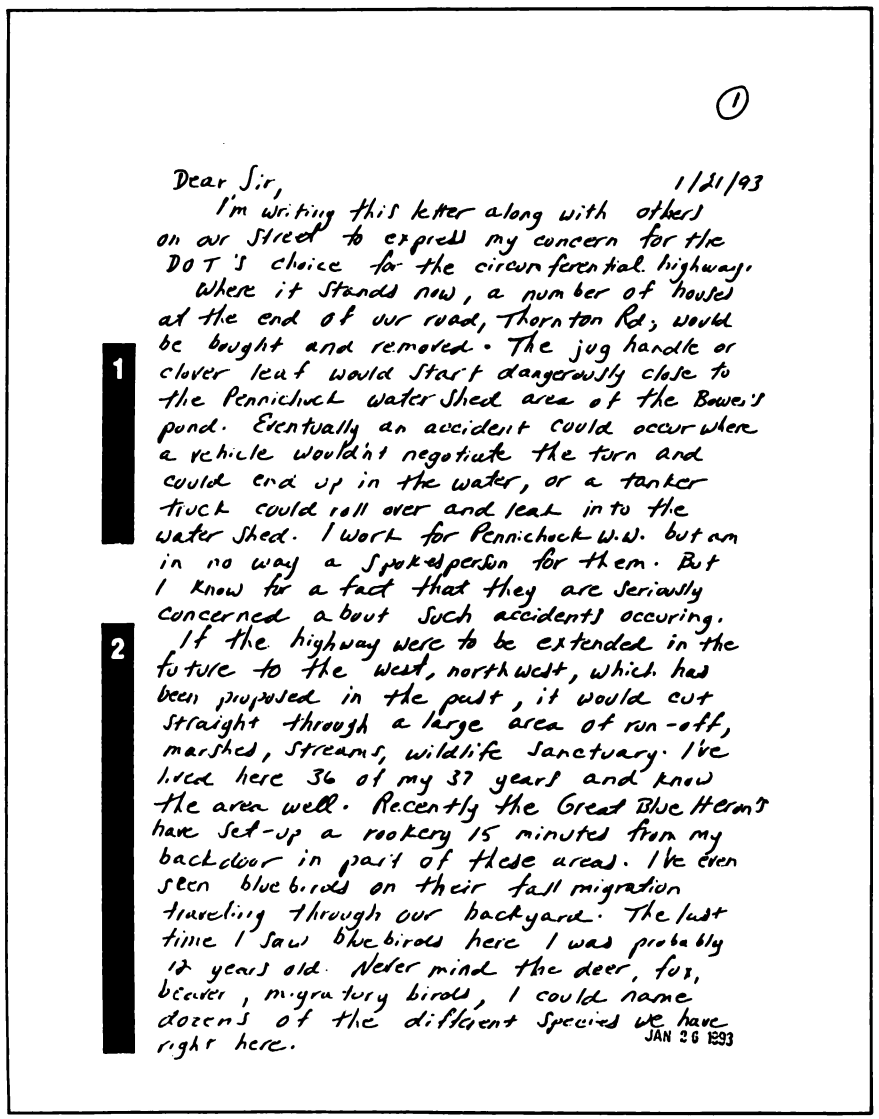

(1)

Dear Sir, 1/21/93

I'm writing this letter along with others on our Street to express my concern for the DOT's choice for the circumferential highway.

Where it stands now, a number of houses at the end of our road, Thornton Rd, would be bought and removed. The jug handle or clover leaf would start dangerously close to the Pennichuck water shed area of the Bowe's pond. Eventually an accident could occur where a vehicle wouldn't negotiate the turn and could end up in the water, or a tanker truck could roll over and leak into the water shed. I work for Pennichuck W.W. but am in no way a spokesperson for them. But I know for a fact that they are seriously concerned about such accidents occuring.

If the highway were to be extended in the future to the west, northwest, which has been proposed in the past, it would cut straight through a large area of run-off, marshes, streams, wildlife sanctuary. I've lived here 36 of my 37 years and know the area well. Recently the Great Blue Herons have set-up a rookery 15 minutes from my backdoor in part of these areas. I've even seen blue birds on their fall migration traveling through our backyard. The last time I saw blue birds here I was probably 12 years old. Never mind the deer, fox, beaver, migratory birds, I could name dozens of the different species we have right here.

JAN 26 1993

1 Comment noted. Refer to the response provided for comment #2 of the Public Hearing Testimony. The Technical Report entitled, "Stormwater Runoff Quality, Hazardous Materials Spills and Their Management", provides an in-depth analysis on spill probabilities and explains how this analysis was modeled.

2 Comment noted. Refer to the response provided for comment #8 of the Public Hearing Testimony for information related to the status of the Route 101A bypass.

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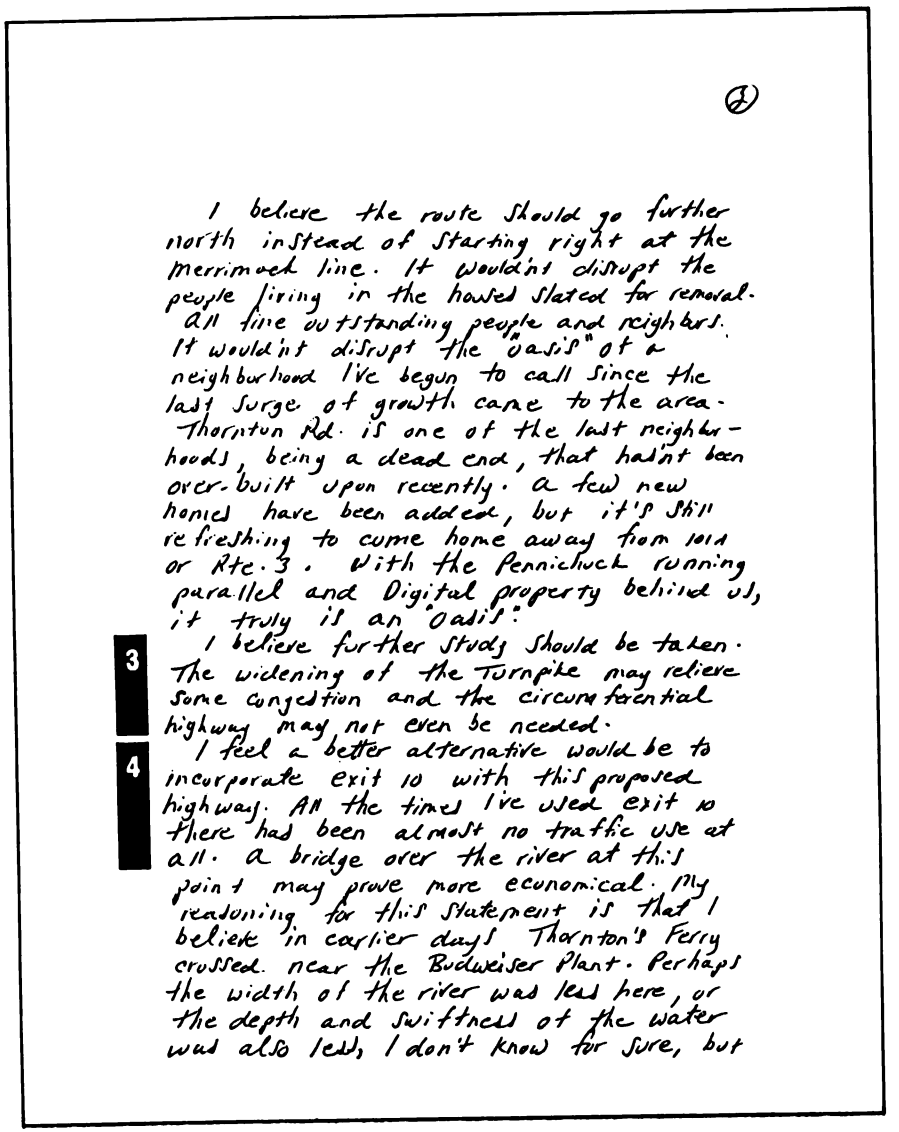

(2)

I believe the route should go further north instead of starting right at the Merrimack line. It wouldn't disrupt the people living in the houses slated for removal. All fine outstanding people and neighbors. It wouldn't disrupt the "oasis" of a neighborhood I've begun to call since the last surge of growth came to the area. Thornton Rd. is one of the last neighborhoods, being a dead end, that hasn't been over-built upon recently. A few new homes have been added, but it's still refreshing to come home away from 101A or Rte. 3. With the Pennichuck running parallel and Digital property behind us, it truly is an "Oasis".

3 I believe further study should be taken. The widening of the Turnpike may relieve some congestion and the circumferential highway may not even be needed.

4 I feel a better alternative would be to incorporate exit 10 with this proposed highway. All the times I've used exit 10 there had been almost no traffic use at all. A bridge over the river at this point may prove more economical. My reasoning for this statement is that I believe in earlier days Thornton's Ferry crossed near the Budweiser Plant. Perhaps the width of the river was less here, or the depth and swiftness of the water was also less, I don't know for sure, but

3 Comment noted. Refer to responses provided for comments #10 of the Public Hearing Testimony, and #23 and #31 through #33 of the EPA's March 2, 1993 letter.

4 Comment noted. Refer to the response provided for comment #4 of the Public Hearing Testimony.

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(3)

3 that's where they chose to run the Ferry across. Also from exit 10, if the highway were extended west, northwest, would go across higher ground, Still some wetlands, but I think may be less detrimental to wetlands and drinking water supply.

I hope the Army Corps of Engineers will stand firm and not be swayed to the DOT's plans.

Thank You, Sincerely

Nathan J. Demers

Mr. Nathan J. Demers
26 Thornton Rd
Merrimack, N.H. 03054

5 Comment noted. See reference in comment #2.

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NASHUA-HUDSON
CIRCUMFERENTIAL HIGHWAY

Date _____

Please complete this form and leave it in the appropriate box today.

Name WILLIAM A DEMBITER JR

Address 404 ELK RUN

City HUDSON State N.H. Zip Code 03051

Comments _____

1 The issue of the Nashua-Hudson Highway does impact the Village at Barrett Hill just as it will many other sections in Hudson. A reasonable discussion of that highway would not doubt conclude that the need for this project has diminished considerably. To cost justify the expense of this project in the light of how it impacts traffic on Route 3 would be difficult. To by-pass a small section of Route 3 and merely rejoin it at interchange 3 while Massachusetts does nothing to widen the same road is just a fool's journey. The use of highway funds would be wisely spent to widen Route 3 to 3 or 4 lanes in each direction. The Town of Hudson would lose considerable tax base from houses taken for this silly project, and gain little from the completion of the project. The town would be split in half with no gain in the pain of it all. To distress housing developments is unconscionable. Alternates 7 and 8 for the Village at Barret Hill would considerably affect the quality of life for a project that pays a substantial amount taxes to the town with little or no gain. This alternative would be the minimum footage in proximity to our homes. However, if this mess must persist then at least alternatives 3 to 6 would afford some measure of relief and a minimum of diminished quality of life for the some 300 or so people who reside in this Village. As long as there are intelligent alternatives than you must concur on the side of the residents and not a wasteful highway.

4 Traffic volumes on roadways in the CBD's of both Nashua and Hudson as well as on the Taylor Falls Bridge indicate that the existing network is overburdened in these areas. The need for this highway has been documented by the NHDOT for many years and is projected to become greater in future years as congestion becomes worse. Refer to the responses provided for comments #10 of the Public Hearing Testimony and #23 and #31 through #33 of the EPA's March 2, 1993 letter.

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CITIZEN

Edmond Durand
5 Bradford Drive
Litchfield, N. H. 03051
603 881 7596
Resident of Olson's Mobile Home Park

January 11, 1993

U.S. Army Corps of Engineers
424 Trapelo Road
Waltham, MA 02254-9149

Dear Sir:

First, I wish to thank you for your time and for the information you provided me with at the January 4th, 1993 meeting on the Nashua-Hudson circumferential highway at the Memorial School in Hudson.

I would have liked to publicly speak out but I'm a little shy to do so in front of the nearly 300 attendants.

What you showed me raised a few questions that I need some answers to.

8 My first question is about the two wells that are inside your buffer lines or may even be run over by tha off ramp.

I have been told the highway will be twenty feet high so as to pass over Rte 3a. This concerns me as well as other residences in the park. It seems to me that any run off from the highway such as gas or oil leakage will certainly get deposited in our wells. These two wells are our main water supply since the other two wells run very low during the summer.

2 During another meeting I attended, I was told that we could run a sleeve under the highway so we could be connected to the Hudson water and sewerage lines that goes up to Adam's Estate. At this meeting we were told that the neither the State nor the Town of Litchfield would pay for the sleeve. Also, this would cost the Residences of the park to now pay for water and sewerage that at this time is included in the park rent. I fell that the park will not reduce its weekly rent to the residences. Therefore, we will be paying the additional water and sewerage bill's because of the highway.

3 My second question is: What about the noise pollution we will be subjected to. The D.O.T. say the level will be tolerable.

I ask you What is Tolerable? Is this noise level test performed in a house that is made with 2 x 6 construction and 5 inches of insulation plus 1/2 inch sheetrock or a mobile home with 2 x 2 construction and 2 inches of insulation and 3/16 paneling also

22 JAN 1992

1 These concerns are discussed on page V-32 of the Wells and Aquifers Technical Report which addresses wells associated with Olson's Mobile Home Park.

2 Comment noted, no response required.

3 Residents located at Olson's Mobile Home Park are already impacted by traffic noise from NH Route 3A. Although the addition of the Circumferential Highway (Alternatives 7 or 8) is expected to result in a slight increase in noise levels, these levels are not expected to exceed the FHWA criterion of 67 dBA, or the NHDOT's criterion of a 15 dBA increase above existing noise levels. These criteria are based on outdoor noise levels.

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covered with a metal siding the conducts sound unlike the wood siding on the house that does not. 3

When I first moved into my mobile home nine years ago, there was nothing said about the highway. In fact it wasn't bought to my attention until about five years later. If I had known about the highway I would certainly had looked for something else.

The residence of the park are now locked into their homes as it is very tough to sell them because no one wants a highway outside their home. If we do sell them we take a real beating on the price, because of the highway.

At this time I would like to propose to the Corps of Engineers and the D.O.T. to purchase tha home's that are inside the park. 8
I fell this a very reasonable suggestion to our problem. We have suggested this to the D.O.T. and did not even get a reply to it. Therefore, I am asking again that you consider it.

We have a residence association and at one of the general meetings we asked all the member's present if they would like the state to purchase their home's and the answer was unanimously, YES.

Would you please consider this and if you have any questions that I can answer for you please feel free to call or write and I will be more than happy to help. Please get back to me on my concerns. We would appreciate it.

Thank you very much for your time and your cooperation.

Sincerely,

Edmond Durand

4 Right-of-way issues regarding acquisitions and relocations are handled by the NHDOT on a case by case basis in accordance with state and federal statutes and regulations.

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CITIZEN

Paul R. Felcyn
Linda W. Felcyn
16 Brinton Dr.
Nashua, NH 03060

January 6, 1993

Terry Flieger
U. S. Army Corps of Engineers
434 Trapelo Road
Waltham, MA 02154

Dear Ms. Flieger:

As attendees of the January 4, 1993 public hearing regarding the proposed alignment of the Nashua-Hudson circumferential highway, we request that this letter be included for the official record.

As abutters to the northern segment of the State's proposed alignment 8, we have lived on Brinton Drive for 6 years and have first-hand experience with the traffic patterns on Route 3 as well as with the wildlife in the lower Pennichuck Brook watershed. Recognizing that there are numerous considerations impacting the final alignment of the highway, we wish to identify two pertinent issues regarding traffic flow and wildlife in this area, hoping that your committee will reconsider the preferred alignment of the highway in the northern section.

1 First, the recently constructed interchange at exit 10 is little used. This is particularly true for semi-truck trailers departing from, and on route to the Budweiser Brewery and Nashua Corp. We witness trucks daily, 3 or 4 at a time, traveling both northbound and southbound on Route 3 passing the intersection with Brinton Drive despite the convenient location of the brewery at exit 10. We have also witnessed many such trucks exiting the northbound side of the Everett Turnpike at exit 7, and have followed them past Brinton Drive on route to the brewery. We feel that a new exit 9 is unwarranted and that additional consideration be given to making better use of exit 10.

2 Second, it is our hope that the State and U.S. Army Corps of Engineers do not underestimate the full value of the wildlife that exits in the lower Pennichuck Brook watershed. We have seen on numerous occasions: blue heron, two owls, red fox, beaver, ducks, and a variety of wild birds. We have seen the activity of beavers engaged in chewing down trees and constructing dams. This area is often explored by the neighborhood youth, and the brook is used during the summer for fishing, and for swimming on hot days. There are twenty or so children on Brinton Drive alone who benefit by having this unique watershed safely located in their own backyard. The proposed alignment 8 through this section of the highway will undoubtedly take this actively used resource away from our children. Even though we were directly affected as property owners by the recently passed city ordinance restricting the development of

3 wetlands in Nashua, we enthusiastically voted in favor of that measure in the hope that this wetland can be preserved for the future.

Should you have any questions regarding these matters, please do not hesitate to call Paul R. Felcyn at (603) 595 - 7686.

Very truly yours,

Linda W. Felcyn

Paul R. Felcyn

JAN 1 1 1993

1 Comment noted. Refer to the response provided for comment #4 of the Public Hearing Testimony.

3 This site has been documented as a notable wildlife habitat in the Wildlife Technical Report and DEIS.

3 Comment noted, no response required.

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January 4, 1993
9 Stoney Lane
Hudson, New Hampshire 03051

U.S. Army Corps of Engineers
Attention: Ms. Terry Flieger
434 Trapelo Road
Waltham, Massachusetts 02154

Dear Ms. Flieger,

1 We believe the Nashua-Hudson Circumferential Highway in New Hampshire is an unnecessary project. The serious ecological situation in the world dictates auto usage will have to be curtailed to eliminate gas usage, ozone depletion and the greenhouse effect. Only a small percent decrease in auto usage would help traffic to move freely, making this highway unnecessary. We have noticed this past year with the increasing unemployment rate, the traffic on Route 3 (which we use daily) moves along faster. Perhaps it is still not too late to prevent the development of this highway system.

2 It is important to our country and the world to put money into subsidized efficient, convenient and inexpensive mass transportation. In these times, when money for projects is competitive and budgets are strained, we should consider the future and provide funding for research and development of public transportation. No steps were ever taken to promote public transportation (a bus system) along those heavily traveled roads before proposing the highway. No government encouragement or plan for car pooling was ever undertaken. A trial period of staggered work hours may prove to alleviate the traffic crush which occurs only a few hours a day. Are a few hours worth slicing up towns, tearing up farmlands, wetland and woodlands. Will this progress help areas to grow and develop? Who is benefiting from this highway and are the benefits really worth the costs?

3 In France, the success of the new Disneyland is dependant on the new rail line people from all over Europe will be using. There are no new plans for highways, parking lots or added pollution problems. We should be looking for progressive plans for our future, perhaps we should be looking for a new route west by looking east.

Sincerely yours,
Rocco and Margaret Femia

1 Comment noted, no response required.

2 Comment noted, no response required.

3 As documented in the DEIS, efforts to increase ridership on the local bus system in Nashua have been pursued throughout the years through such efforts as cooperative marketing with downtown businesses. Additionally, efforts to increase ridesharing have been and continue to be pursued by the NRPC, and the NHDOT through construction of over 1,000 park-and-ride spaces in Southern New Hampshire. The continuation of these efforts and their expansion were studied in the DEIS through doubling transit ridership, expanding vanpooling in the area, and through other efforts to reduce single occupant vehicular travel. Based on this analysis, it was determined that these types of measures could be expected to reduce overall peak travel by one to two percent and traffic operations could be improved in Nashua through improvements to several intersections. It was concluded that the Transit/TDM and TSM alternatives *alone* would not reduce volumes sufficiently or improve operations sufficiently to take away the need for the Circumferential Highway. Additional study of Transit/TDM and TSM was conducted in response to concerns raised since the publication of the DEIS. This additional analysis, which is summarized in the FEIS and further documented in Appendix B of the Revised Traffic and Transportation Technical Report, covers a wide range of Transit/TDM and TSM techniques and quantifies the potential impacts of those most likely to be effective in the Nashua area.

Project benefits versus detriments are evaluated by the Corps through the public interest review requirement prior to a 404 permit decision. For a permit to be issued, the Corps must determine that the project is not contrary to the public interest. The proposed Circumferential Highway would serve the development expected to occur in the Nashua area. A full analysis of the development impacts is included in the Technical Report entitled "Cumulative Development and Associated Impacts."

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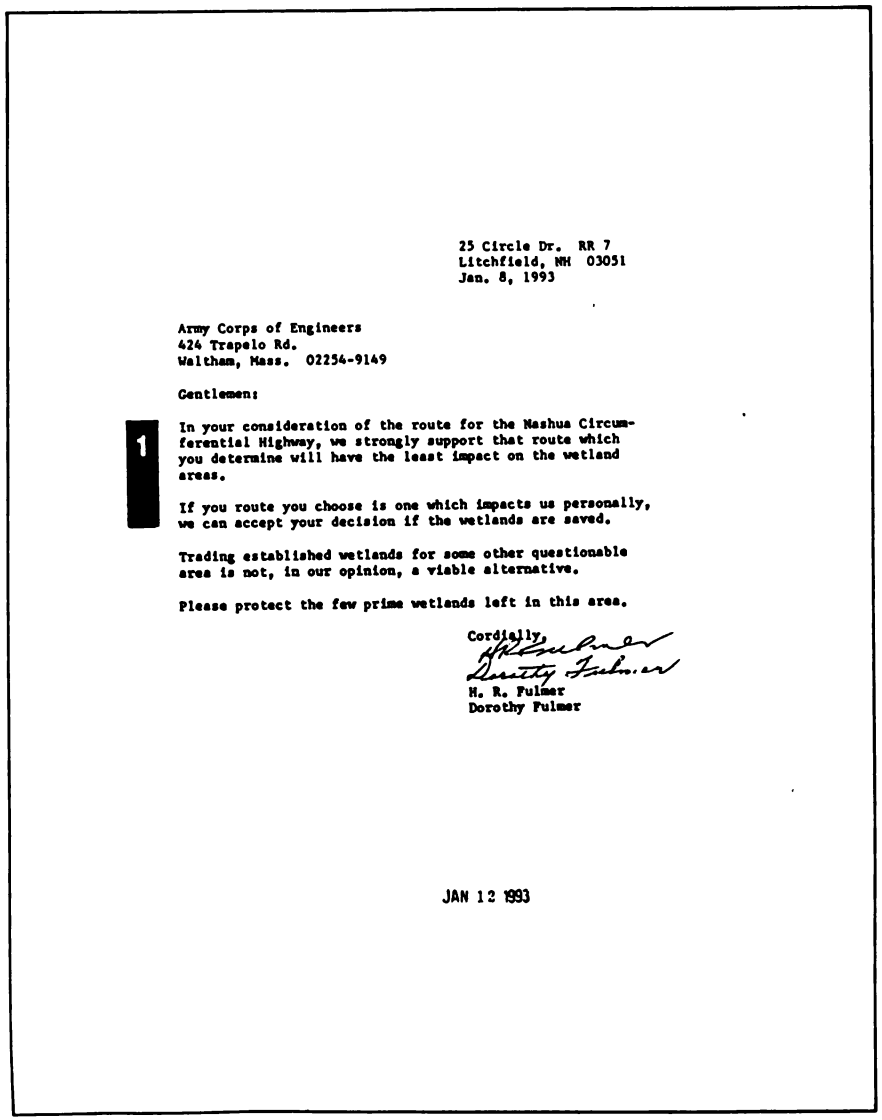

25 Circle Dr. RR 7
Litchfield, NH 03051
Jan. 8, 1993

Army Corps of Engineers
424 Trapelo Rd.
Waltham, Mass. 02254-9149

Gentlemen:

1 In your consideration of the route for the Nashua Circumferential Highway, we strongly support that route which you determine will have the least impact on the wetland areas.

If you route you choose is one which impacts us personally, we can accept your decision if the wetlands are saved.

Trading established wetlands for some other questionable area is not, in our opinion, a viable alternative.

Please protect the few prime wetlands left in this area.

Cordially,
H. R. Fulmer
Dorothy Fulmer

JAN 12 1993

1 Comment noted, no response required.

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CITIZEN

4 January 1992

22 Brinton Drive
Nashua, NH 03060

U.S. Army Corps of Engineers
434 Trapelo Road
Waltham, Ma 02154

To Whom It May Concern,

1 Although we were unable to attend the Public Hearing scheduled on 4 January 1993 due to prior commitments, we would like to voice our opposition to the northerly corridor selected by the New Hampshire Department of Transportation. This northerly track runs directly

2 through the Nashua Public Water Supply and environmentally sensitive wetlands. With other viable routes much less environmentally sensitive, it would seem inconceivable that it was seriously considered to run the highway through this area. As demonstrated just prior to Christmas on exit 8, off the F.E. Turnpike, accidents can and do happen, when a tanker overturned. What would have happened had this same accident or worse happened over our Public Water Supply?

3 The selection of this corridor over more viable routes due to cost savings of a few dollars, exposes the flagrant disregard for public safety (our water supply) and environmental issues by the representatives of the State of New Hampshire. It is obvious that the State of New Hampshire was in error for purchasing the property along the corridor prior to approval of the permit and trying to force this ill conceived plan (a plan based on politics and economics rather than issues) through the Corp of Engineers and EPA. The economic issue should be considered a very low priority in this case. The executive council and all who supported this policy will hopefully learn from their mistake of purchasing property prior to approval and not repeat it in the future. I trust that the Corp of Engineers and EPA will prove to be the good stewards of the New Hampshire Public Water Supply and environment that our own state representatives cannot be entrusted to protect and not allow the New Hampshire state representatives to bully your agency into approving selection of this route because they unwisely purchased the property prior to your approval.

The Corp of Engineers and EPA have our full support and expectations for protecting public safety (our water supply) and New Hampshire's environment.

4 Based on the building plans that I saw, the portion of the highway between Concord Street and the Merrimack river will require filling the Wetlands and providing a single aqueduct to allow water to pass under the highway. The area the state is proposing to fill is a flood plain and does flood each spring. Using common since, the restricted flow of water during heavy or moderate flooding will cause the water to rise higher (acting as a dam) than would otherwise have been the case on the south side of the highway. This would change the flood zone ratings of my property from what they

JAN 08 1993

1 Comment noted, no response required.

2 Comment noted. Refer to the response provided for comment #2 of the Public Hearing Testimony. Alignment 8 does not run directly through the Pennichuck Reservoir, it intercepts portions of the watershed. Alignments 3 through 6 pass close to the Weinstein Well, which is the public water supply of Litchfield and Hudson.

3 Economic issues relating to right-of-way purchase have no bearing on the decisions concerning this project.

4 Comment noted. Refer to the response provided for comment #3 of Brent and Nancy Morrison's letter.

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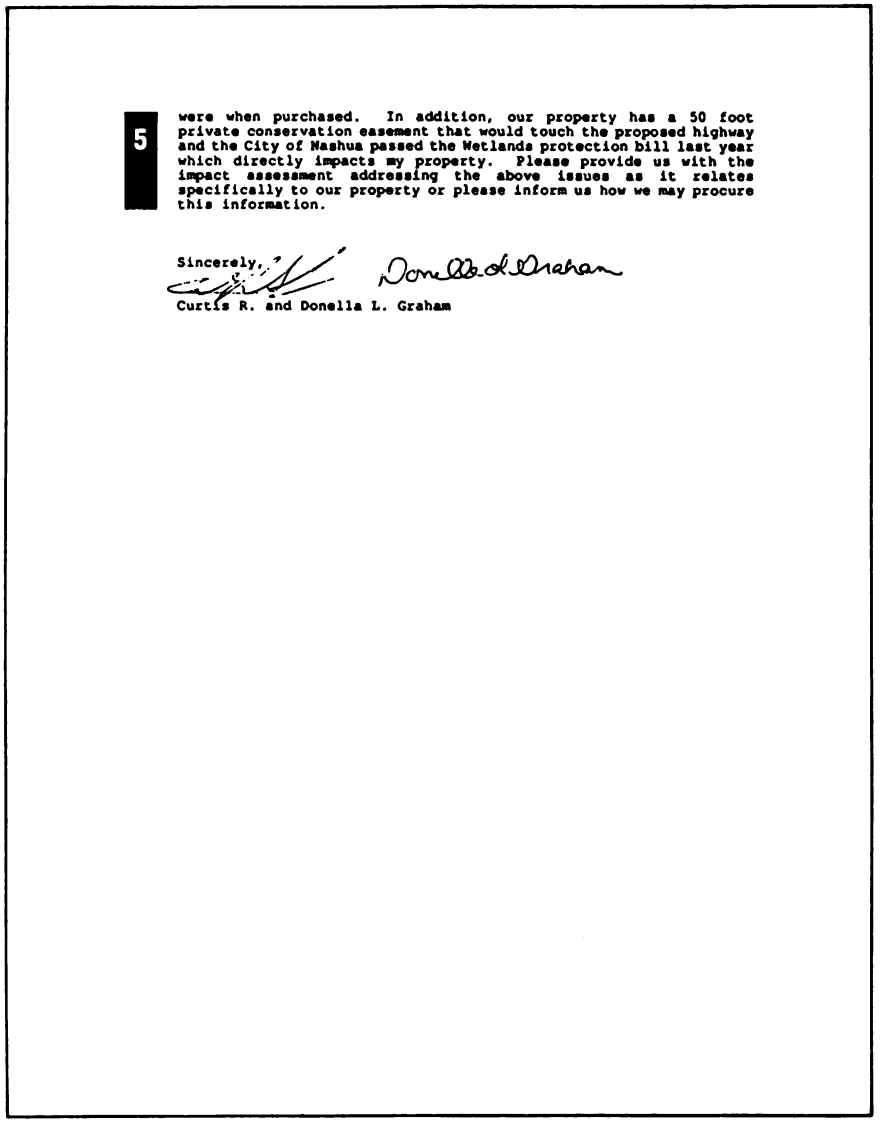

5 were when purchased. In addition, our property has a 50 foot private conservation easement that would touch the proposed highway and the City of Nashua passed the Wetlands protection bill last year which directly impacts my property. Please provide us with the impact assessment addressing the above issues as it relates specifically to our property or please inform us how we may procure this information.

Sincerely,

Curtis R. and Donella L. Graham

5 The DEIS and FEIS are available at the Nashua City Hall and the Nashua Public Library. As for specific property questions, these should be addressed directly to the NHDOT or, as in this case, to the city of Nashua since the issue relates to the wetlands protection bill.

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CITIZEN

Jan. 22, 1993

Chairman of the Commission
c/o Robert W. Greer
Director of Project Development
The New Hampshire Department of Transportation
P.O. Box 483
Concord, NH 03302-0483

Dear Mr. Chairman:

As abutters to the state Department of Transportation's preferred route for the Circumferential Highway, we are, of course, seriously concerned by a highway literally in our backyard. We are also disturbed that the northern strip of Concord Street adjacent to Pennichuck Water Works will be expanded to a two-lane road with both exit and entrance ramps, bringing even more traffic to both Concord Street and Henri Burque Highway.

1 But what most concerns us is that the preferred route for the Circumferential crosses directly through Pennichuck's watershed, bordering the holding ponds. This area encompasses several acres of the city-designated prime wetlands, which will be permanently altered or destroyed.

In January 1990, two-thirds of the city's residents voted in favor of implementing an ordinance that would protect wetlands from further destruction. In May 1991, the Board of Aldermen voted, 12-2, to designate seven areas of the city as prime wetlands, including the above-mentioned areas.

As presented at the Jan. 4, 1993, public hearing, there are two practical alternatives to this most destructive northern route. Both would take the highway to Exit 10 of the F.E. Everett Turnpike in Merrimack. Not only is this section of the highway route less damaging environmentally, it takes less homes and is cheaper to build, as it would not necessitate the construction of a new Exit 9.

2 An added plus for traffic in and around Nashua, is that this route enables east-west traffic to bypass Amherst Street (Route 101A) by continuing from the Circumferential Highway across the turnpike to Continental Boulevard and then to the new Camp Sargent Road Bypass, which would empty traffic at the end of Amherst Street on Nashua's western border. It should also be noted that Merrimack officials would like the Camp Sargent Road Bypass to connect with a planned 101A Bypass. Thus, connecting the Circumferential at Exit 10 would provide an east-west highway from Hudson to Milford, and enable the state to save money by ending the 101A Bypass at the intersection of the Camp Sargent Road Bypass, instead of going on to Exit 8 of the Turnpike.

In looking at the northern section of Alternative 8 versus the northern section of Alternative 3/5, there are numerous specific differences that show the latter choice to be far better environmentally, economically and practically. They are:

3 *Alternative 8 will result in four failed intersections in Nahsua, while Alternative 3/5 will result in only three. In fact, the intersection of Henri Burque Highway and Concord Street will be considerably better (a C rating) than failed under Alternative 3/5.
*Alternative 8 would impact 10 homes, while Alternative 3/5 would impact only 6 to 7 homes.
4 *Alternative 8 contains a sharp curve to the north that Rod Cyr of the state Department of Transportation said in 1984 was too dangerous for highway traffic.

JAN 27 1993

1 Comment noted, no response required.

2 Comment noted. Refer to the response provided for comment #8 of the Public Hearing Testimony.

3 Comment noted, no response required.

4 Comment noted. Refer to the response provided for comment #6 of the Public Hearing Testimony.

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Page 2

5 *Alternative 8 would bring Exit 9 within one-mile of Exit 10 -- against the DOT's own criteria for highway safety.

6 *Alternative 8, while now skirting the holding ponds for Pennichuck Water Works instead of transversing them directly, still lies well within the watershed posing a grave danger in the event of a toxic spill. Even without a spill, over several years, the proximity of fuel exhaust will deteriorate the water supply of Pennichuck's 60,000 plus customers.

*Alternative 8 does approximately 30 percent more damage to wetlands than does Alternative 3/5.

7 *Alternative 8 still transverses Pennichuck Brook, which has been designated a prime wetland by the city and accepted as such by the State of New Hampshire Wetlands Board.

8 *Alternative 8 would necessitate the construction of a new exit configuration at the turnpike -- a considerably higher cost than routing the highway to Exit 10, which already exists and is already large enough to handle the connection with the Circumferential.

9 *Alternative 8 provides no common terminus for the Route 101A bypass, which the Legislature required in its legislation calling for the Circumferential's construction. The EPA and the Army Corps of Engineers have already told the state DOT that routing 101A through the Pennichuck Brook west of the turnpike is unacceptable.

In closing, we would like to point out that the Nashua Board of Aldermen recently voted in favor of a resolution to ask that placement of this northern section be reconsidered. We also believe an independent assessment of the Environmental Impact Statement would agree with our conclusions and urge that the placement of the northern section of this highway be seriously reconsidered.

Sincerely,

Thomas R. Grilli
Judith A. Grilli
55 Brinton Drive
Nashua NH 03060-1274

CC: Army Corps of Engineers
Environmental Protection Agency

5 Comment noted. Refer to the response provided for comment #7 of the Public Hearing Testimony.

3 Comment noted. Refer to the response provided for comment #2 of the Public Hearing Testimony.

7 Comment noted, no response required..

5 Comment noted. Refer to the response provided for comment #4 of the Public Hearing Testimony.

9 Comment noted. Refer to the response provided for comment #8 of the Public Hearing Testimony.

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JANUARY, 4, 1993

MY NAME IS NATHAN GUYER. I AM A RETIRED ENGINEER. I LIVE IN NASHUA AND I AM AN ACTIVE MEMBER OF THE NASHUA FISH AND GAME CLUB.

AS A LONG TIME ENGINEER I CAN UNDERSTAND THE DESIRE FOR A CIRCUMFERENTIAL HIGHWAY AROUND NASHUA TO ALLEVIATE RUSH HOUR CONGESTION ON CURRENT ROADS. HOWEVER, I CANNOT UNDERSTAND WHY A UNIQUE, VALUABLE, AND IRREPLACEABLE PUBLIC RECREATIONAL RESOURCE IN THE MERRIMACK VALLEY AREA MUST BE ELIMINATED WHEN THERE ARE OTHER VIABLE ALTERNATIVES WHICH DO NOT REQUIRE SUCH A SACRIFICE.

1 NASHUA FISH AND GAME ASSOCIATION HAS BEEN A GOOD MEMBER OF THE NASHUA, MERRIMACK AREA COMMUNITY FOR OVER 55 YEARS, PROVIDING THOUSANDS OF LOCAL SPORTSMEN AND WOMEN A SAFE PLACE TO PRACTICE OUTDOOR SKILLS, TO TRAIN THEIR CHILDREN AND FRIENDS IN SAFE GUN HANDLING, IN HUNTER SAFETY, IN HOME DEFENSE, IN MILITARY DEFENSE PREPARATION UNDER THE AEGIS OF THE DIRECTOR OF CIVILIAN MARKSMANSHIP. IT OFTEN PROVIDES RANGE AND OTHER FACILITIES FOR LOCAL POLICE DEPARTMENTS AND FOR FIRST AID TRAINING. THIS CERTAINLY BEATS UNSUPERVISED SHOOTING IN SAND PITS. THE PROPERTY IS ALSO A GAME PRESERVE AND WILDLIFE REFUGE. IN FACT, IT HAS HAD AN ALBINO FOX IN RESIDENCE FOR THE PAST TWO YEARS.

THE LOCATION AND TERRAIN, WITH THE RIFLE RANGES BACKED UP BY A HIGH HILL, ARE IDEAL FOR THE ONLY LONG RANGE 600 YARD TARGET RANGE IN THE ENTIRE STATE OF NEW HAMPSHIRE. THE COMBINATION OF CONDITIONS CANNOT BE DUPLICATED ANYWHERE ELSE IN THE AREA AND PROBABLY NOWHERE IN THE STATE. THEREFORE, THIS FACILITY MUST NOT BE SACRIFICED TO THE DESIRES OF THE ROAD BUILDERS AND REAL ESTATE OPPORTUNISTS TO TAKE THE EASIEST WAY OUT. THERE ARE OTHER ALTERNATIVES POSSIBLE.

FOR INSTANCE, A MODIFICATION OF ALTERNATE 8 TO BE RUN AROUND THE PROPERTY NORTH OF THE HILL AT THE END OF THE 600 YARD RANGE WOULD BE VIABLE. HOWEVER, WE ARE TOLD THAT TO DO THIS WOULD MAKE THE INTERSECTION WITH F. E. EVERETT HIGHWY TOO CLOSE TO INDUSTRIAL EXIT 10.

I WOULD OFFER AT LEAST TWO POSSIBLE SOLUTIONS, AS FOLLOWS:

2 (1.) SINCE EXIT 10 IS PRIMARILY AN INDUSTRIAL INTERSECTION, IT CARRIES LIGHT TRAFFIC FOR MOST OF THE DAY AND NIGHT, AND ONLY CARRIES HEAVY TRAFFIC TWICE A DAY. THEREFORE, A SHORT APPROACH COULD BE ACCOMODATED, AND I AM SURE SUCH A VARIANCE WOULD BE GIVEN IF THE NASHUA FISH AND GAME PROPERTY DIDN'T EXIST IN ITS PRESENT LOCATION.

(2.) MAKE THE CONNECTION AT EXIT 10. ALL WORRIES ABOUT TOO SHORT A DISTANCE BETWEEN INTERSECTIONS WOULD BE ELIMINATED.

EXIT 10 IS NEW AND THE MONIES HAVE ALREADY BEEN EXPENDED. A NEW, DIFFERENT, AND COMPLETE EXIT FOR THE CIRCUMFERENTIAL HIGHWAY WILL REQUIRE A CONSIDERABLE ADDITIONAL EXPENDITURE.

I SUGGEST APPLYING THIS MONEY TO THE MODIFICATION OF EXIT 10

4 Comment noted. Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to the paraphrased comments related to the Nashua Fish and Game Association. This can be found at the end of the section entitled, "Regional".

2 Comment noted. Refer to the Response provided for comment #4 of the Public Hearing Testimony.

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3 TO HANDLE THE ADDITIONAL TRAFFIC FROM THE CURCUMFERENTIAL HIGHWAY. CERTAINLY SOME OF THE STRUCTURE AND APPROACHES OF EXIT 10 CAN BE UTILIZED AND PERHAPS MONEY ALREADY EXPENDED ON EXIT 10 WILL HELP DEFRAY THE EXPENSE OF THE MODIFIED INTERSECTION.

THESE SUGGESTIONS DO NOT PRECLUDE OTHER SOLUTIONS, BUT ARE OFFERED AS POSSIBILITIES TO PREVENT THE ELIMINATION OF A VALUABLE, UNIQUE AND IRRREPLACEABLE PUBLIC RESOURCE IN THE STATE OF NEW HAMPSHIRE.

PLEASE GIVE THIS MATTER MUCH ADDITIONAL CONSIDERATION.

NATHAN E. GUYER
4 CIMMARRON DR.
NASHUA, NH 03062

2 Comment noted. Refer to the Response provided for comment #4 of the Public Hearing Testimony.

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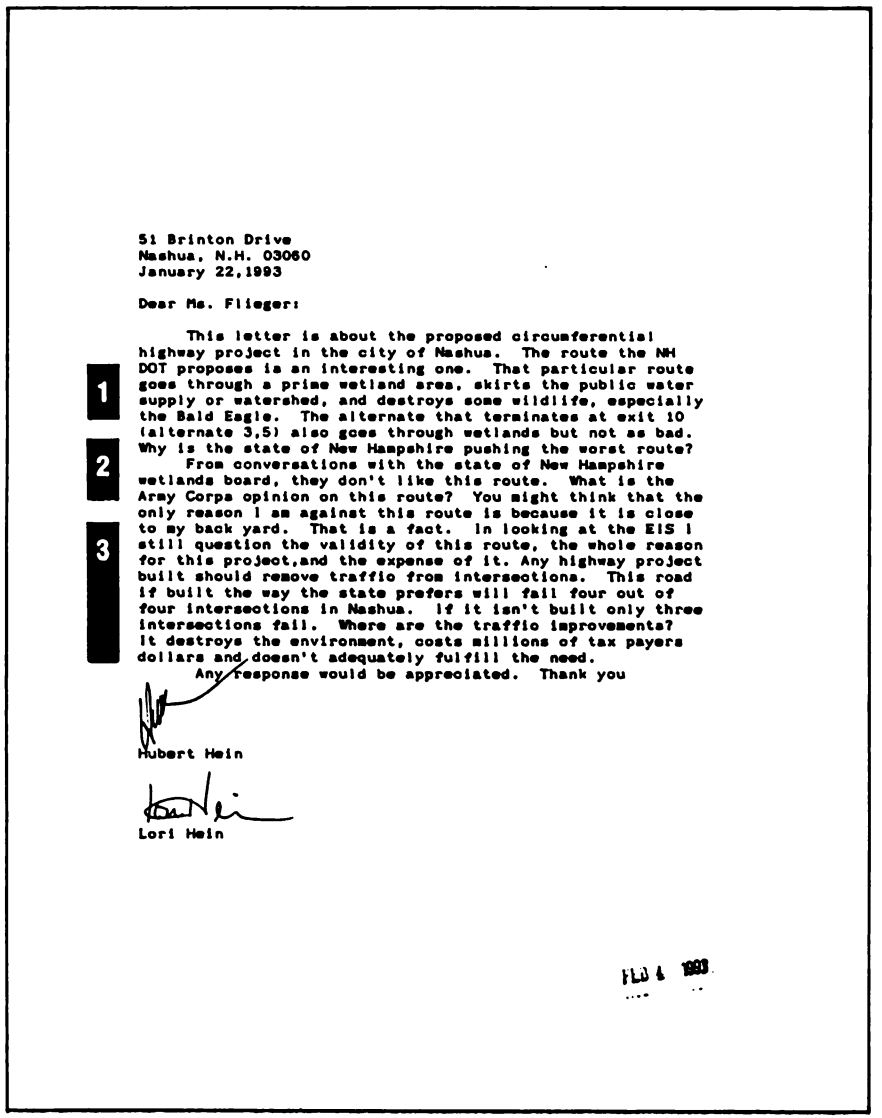

51 Brinton Drive
Nashua, N.H. 03060
January 22,1993

Dear Ms. Flieger:

1 This letter is about the proposed circumferential highway project in the city of Nashua. The route the NH DOT proposes is an interesting one. That particular route goes through a prime wetland area, skirts the public water supply or watershed, and destroys some wildlife, especially the Bald Eagle. The alternate that terminates at exit 10 (alternate 3,5) also goes through wetlands but not as bad. Why is the state of New Hampshire pushing the worst route?

2 From conversations with the state of New Hampshire wetlands board, they don't like this route. What is the Army Corps opinion on this route? You might think that the only reason I am against this route is because it is close to my back yard. That is a fact. In looking at the EIS I still question the validity of this route, the whole reason for this project,and the expense of it. Any highway project built should remove traffic from intersections. This road if built the way the state prefers will fail four out of four intersections in Nashua. If it isn't built only three intersections fail. Where are the traffic improvements?

3 It destroys the environment, costs millions of tax payers dollars and doesn't adequately fulfill the need.

Any response would be appreciated. Thank you

Hubert Hein

Lori Hein

FEB 4 1993

1 Eagles will not be destroyed. Refer to the response provided for comment #40 of the EPA's March 2, 1993 letter.

2 The Corps, through the Section 404 permit process, can only permit the LEDPA, which may or may not be the NHDOT's preferred alternative. Further analysis of DEIS concerns, and coordination with federal, state, and local agencies will be necessary before a LEDPA is determined. Ultimately, the LEDPA is determined and a permit decision ensues.

5 Comment noted. Refer to responses provided for comments #10 of the Public Hearing Testimony, and #23 and #31 through #33 of the EPA's March 2, 1993 letter.

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CITIZEN

THE NASHUA-HUDSON CIRCUMFERENTIAL HIGHWAY

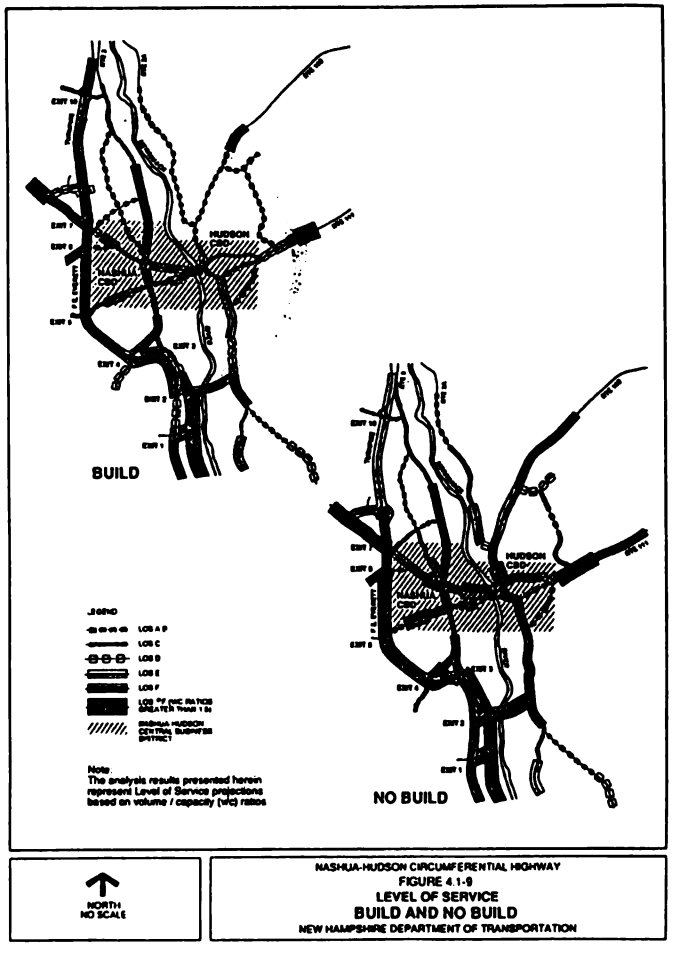
Project No. 10644

Comments to the
Reconvened Public Hearing,
Hudson Memorial High School
January 4, 1993

on the Revised
Draft Environmental Impact Report
U.S. Army Corps of Engineers
New England Division
October 1992

Prepared by :
Stephen H. Kaiser, Transportation Engineer
Cambridge, Mass.

Note : The comments herein are entirely those of the author and may or may not, in whole or in part, represent the views of any individual or group with an interest in the Nashua-Hudson Circumferential Highway project.



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REVIEW OF THE SUPPLEMENTAL DRAFT E.I.S.

FOR THE

NASHUA CIRCUMFERENTIAL HIGHWAY

The primary focus of this review is on the traffic implications of the Nashua Circumferential highway. This project was first proposed in 1959, and the project is now entering its 34th year of planning.

The 1980s brought a tremendous increase in land development and traffic growth on almost all roads in the area. Growth projections for the next 20 years generally show increases in population and traffic in the range of 60% to 70%.

The Nashua Circumferential Highway has been presented in the EIS as a solution to certain traffic problems in the Nashua area. The primary emphasis has been on the traffic reduction at the Turners Falls Bridge.

The question for the project developers, reviewers and permitting agencies is this : does the project truly represent a traffic solution and does this EIS and associated traffic reports document the true impacts of the project, both negative and positive?

1 It is not clear from the EIS how this $200 million toll highway will be funded or controlled. The location of toll booths will be crucial, and the EIS does not make this clear. Having certain links "free" and other links
2 "toll" will tend to result in traffic diverting to the free route, unless congestion is a deciding factor. Therefore, we need to know the congestion on free routes and the absence of same on toll routes.

PEAK HOUR TRAFFIC FLOWS

3 The EIS traffic analysis appears to be based on the generation of daily vehicle flows on highway links, followed by the application of adjustment factors to obtain peak hour flows. All of the traffic volumes are shown in the EIS as daily flows, yet the *capacity* of roads and intersections is determined by the hourly flows and peak hour factors. This peak hour data should have been presented as part of the traffic study.

LEVELS OF SERVICE

The SDEIS defines the various highway levels of service on page 3-7, from which the following are significant for understanding capacity and congestion :

1 Comment noted. The highway is a user funded facility, it is not funded by highway and gasoline taxes. Refer to the response provided for comment #31 of the Public Hearing Testimony for additional information.

2 The influence that tolls have regarding traffic diversion is incorporated as part of the traffic model. Time is a major component of any traffic model. In making a trip from point "A" to point "B", the traveler seeks the quickest route. A toll booth produces a time delay as well as a monetary requirement that must be considered in the model. To do this, per capita income of the region is used to determine the average monetary value of time delay caused by the toll. This consideration is then included in the model in order to get diversion on all roadway links that will have tolls as well as those links that have existing tolls such as the F.E. Everett Turnpike. What is not known at this time is the exact amount of the toll, therefore it is unknown how the actual toll cost will affect people's decisions. However, an estimate as to the toll cost was used and comparisons were made to past incidents where tolls have been raised in order to get a further understanding of toll diversion.

5 Projected traffic volumes utilized for this study were based on the 24-hour MINUTP traffic model as developed by the NRPC. Level of service on roadway links was based on the volume to capacity ratio as reported by the MINUTP model based on a standard ratio of peak hour traffic to 24-hour traffic of 0.10. For intersection analysis, 24-hour volumes were converted to peak hour using the same ratio and the intersection turning movement volumes were derived based on factoring existing counts using an iterative balance procedure. Because the peak hour traffic volumes are simply a direct factor of the 24-hour volumes, they are not shown separately in the Traffic and Transportation Report or DEIS.

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-- page 2 --

Level of Service D : "A high density traffic condition approaching unstable flow."

Level of service E : "Conditions at or near the capacity" of the highway

Level of service F : "Forced-flow or breakdown conditions with queuing along critical approaches."

4 The EIS notes that "LOS 'D' is generally accepted as the minimum design level for urban street systems." (p. 3-7) The EIS also notes that "The Daniel Webster Highway/Main Street corridor in Nashua as well as the southern portion of F.E. Everett Turnpike are currently operating at LOS 'F' or worse."

With LOS D as the minimum acceptable design level for traffic, it is reasonable to conclude that LOS E and LOS F represent unacceptable traffic conditions and hence failure of the highway system to perform properly.

NETWORK FAILURE

5 The EIS demonstrates graphically where the congestion is most likely to be. The Level of Service diagrams show *orange* for LOS D, and *red* for LOS F. In addition, a "worse than bad" category of F' is shown as a thick red line, wherever traffic demand volumes exceed capacity by more than 50%. (An error in the text on page 4-3 states that volumes exceeds capacity by 150%) This color scheme is shown on the inside cover of these comments, illustrating the year 2010 Build and No Build traffic conditions.

6 The report indicates quite clearly in Figure 2-6 or Fig. 4.1-9 for the year 2010 Build condition with the complete circumferential highway that there will be severe congestion on much of the regional highway network. While congestion at the river crossings is diminished by the new road, the north-south corridor of the Everett Turnpike and Daniel Webster highway remains severely congested at level of service F.

All of the congested segments and bottlenecks are represented in Red, and the network is awash in Red. There are 21 miles of roadway designed as LOS F or worse with the circumferential, compared to 21.5 miles today. Such conditions are reflective of severe congestion problems and represent clearly unacceptable traffic conditions. Nevertheless, the circumferential highway proposal (fully built with and including the major widening and reconstruction of the Everett Turnpike) shows many areas of the road network at 50+% worse than LOS F conditions. Most obvious is the failure of the north-south highway system now and in the future.

4 Comment noted, no response required.

5 Comment noted. This error has been corrected in the FEIS.

4 As stated in the project purpose, the Circumferential Highway is intended to reduce traffic congestion in and near the Central Business Districts of Nashua and Hudson. Since the traffic flows within these districts is east-west, the alternative east-west routes that are provided by the Circumferential Highway would result in substantially improved traffic operations within the Central Business Districts. East-west travel has been and continues to be important within the region. By addressing and providing substantial improvement for the east-west travel, the Circumferential Highway will substantially improve traffic congestion problems in the region as a whole. As this comment notes, the Circumferential Highway would not result in much improvement to north-south travel on the F.E. Everett Turnpike. This is because the Circumferential Highway would present a longer route for north-south motorists. Under emergency conditions or when the Turnpike is highly congested, the Circumferential Highway would, however, be a viable and important alternative north-south route. No single transportation project can solve the projected traffic problems in the region entirely; the Circumferential Highway is, however, projected to improve traffic flows in the Nashua region, particularly in the Nashua and Hudson Central Business Districts.

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7 Another measure of the tremendous overloading of the north-south highways is the projected increase on the Everett turnpike at its heaviest load point. From an existing 69,800 vehicles a day, the traffic would grow to 134,700 by the year 2010, which is a 93% increase. Even if widening were done in Nashua to accommodate this flow, the cooperation of Massachusetts would be needed, in order to continue 6 or 8 lanes across the state line to the south.

ALLEGED IMPROVEMENT IN NORTH-SOUTH TRAFFIC FLOW

8 In the EIS statement of purpose and the summary results, no claim is made of any improvements in north-south traffic flow. Indeed, the computer results show no reason to believe this. Nevertheless, there remains in the text an isolated paragraph on page 4-24 which makes this unsubstantiated claim. This paragraph, in its entirety states:

> *Construction of the Nashua-Hudson Circumferential Highway will also result in improved accessibility throughout the study area and in Southern New Hampshire. Improvements attributable to the project will occur in north-south traffic flow by providing relief for the F.E.Everett Turnpike. The Turnpike is the major north-south route through the Nashua area, and as a result, serves both local and bypass trips. Portions of the Turnpike presently operate at stop-and-go conditions during peak hours of travel. The Nashua Hudson Circumferential Highway will improve the efficiency of north-south traffic movements in this area by providing motorists with an alternative bypass.*

Nowhere in the report is this claim substantiated by any numbers or technical analysis. This claim is not reflected in the project benefit listing on pages S-2 and S-3. Indeed, the traffic analysis claims exactly the opposite. Figure 4.1-9 shows quite clearly that the extent of LOS F- traffic congestion on the Turnpike is *worse* between interchanges #2 and #4.

The EIS LOS/congestion conclusion follows logically from an inspection of the traffic forecasts, which show a 12% increase in traffic demand resulting from the Circumferential, compared to the No Build. Specifically, the year 2010 traffic volumes increase from 119,800 to 134,700 with the Circumferential.

This congested section of the Turnpike becomes the bottleneck, because it is the most intensely overloaded section of the Turnpike. Improvements in traffic flow anywhere else mean nothing if the bottleneck remains bad or is made worse. A chain is no stronger than its weakest link.

1 Comment noted, no response required.

2 Comment noted. The paragraph on page 4-24 of Volume I of the FEIS has been revised as follows:

Construction of the Nashua-Hudson Circumferential Highway would also result in improved accessibility throughout the study area and in Southern New Hampshire. Since the Circumferential Highway is a longer north-south route than the F.E. Everett Turnpike, it would not represent a viable alternative to the Turnpike under normal circumstances. However, in emergency conditions, or if the Turnpike were highly congested, the Circumferential Highway would provide a relief route for this north-south traffic.

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-- page 4 --

5 Where did the unsubstantiated assertion on page 4-26 about north-south traffic come from? If it was not a technical judgment, was it political? It would appear to me that the entire offending paragraph on page 4-26 should be stricken from the EIS.

STATED PURPOSE

9 The stated purpose of the project is "to assist east-west traffic movements and to reduce congestion on existing bridges and streets in and near the central business districts of Nashua and Hudson by adding new crossings of the Merrimack River." (p. S-2) One can appreciate how carefully this claim has been worded, given the clear evidence of massive congestion on the Turnpike. There are improvements at the Taylor Falls Bridge and they are undeniable. However, they pale in comparison to the failures elsewhere in the system and the fact that the Circumferential Highway contributes to a 12% worsening of the Everett Turnpike bottleneck.

LOCAL FAILURES

10 The stated goal of improving conditions in the central business districts does not appear to be supported by EIS analysis. Table 2-5 on page 2-19 shows three intersections in Nashua which are LOS F today and remain LOS F for all alternatives. The intersections remain overloaded, with or without the circumferential.

TRUE FUNCTION OF THE CIRCUMFERENTIAL

11 One of the indisputable results of the new highway is the contention of the EIS that the new highway will offer "Support of a planned course of land development opportunity enabled by the project." (p. S-3) Some critics, however, might dispute whether this result should be listed as one of the "beneficial effects" of the circumferential.

The reverse side of the controversy is suggested by the listing under "adverse effects" the "Acceleration by ten years of anticipated land development." Surely there are many land developers who would see such an acceleration as a bonanza, not an adverse public impact. Our development plans remain very controversial, and they probably always will.

The circumferential highway is being misrepresented when it is offered to the public as a traffic solution. What it is and probably always was, is a benefit and a stimulus to real estate development, primarily in Hudson. In this sense the proper label for this highway project should be an economic development highway, with the primary beneficiaries being real estate interests who now or own land near the highway interchanges.

9 Comment noted. Refer to the response provided for comment #6.

10 As compared to the No Build conditions, the Circumferential Highway would divert 53 percent of traffic on the Taylor Falls Bridge, 48 percent of the traffic on Canal and Hollis Streets, and 42 percent of the traffic in Hudson on NH Routes 102, 111, and 3A. While the levels of service for the No Build and Build Alternatives at these three intersections are the same in terms of a letter ranking, the substantially higher volumes that would be experienced under the No Build Alternative would result in longer traffic queues, extended peak periods as traffic congestion extends into the hours on either side of the current peak, and diversion of traffic wherever possible onto local side streets. While the intersections were assumed to have identical configurations for both the No Build and the Build Alternatives, in reality the intersections would be improved wherever possible. The lower volumes that would utilize the intersections under the Build Alternative would result in the need for less extensive intersection improvements and a greater likelihood of successfully improving the intersection performance. Because the intersections are located in an urbanized area, there is limited space for intersection improvements. The more minor improvements that would be needed for the Build Alternative are therefore more likely to be feasible than the more extensive measures that would be required for the No Build Alternative.

11 Comment noted. The official project purpose is stated in section S.3 on page S-2 of the FEIS. The project will provide relief to the traffic congestion that presently exists as well as influence development in the region.

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-- page 5 --

EFFECTS OF ACCELERATED GROWTH

12 One consequence of the accelerated growth resulting from the new highway would be an accelerated increase in traffic volumes. In the real world, the trip table is not fixed. This accelerated development will begin the moment the plan for the project is approved. Many developers start building in anticipation of the new highway. They know that transportation access is key to the value and development potential of any land parcel. If the road is not there, you will not get the same intensity of development. Some observers may respond that "you will get the development anyway", but this claim is false. Any developer will tell you that the bigger the new highway, the larger will be his project and the faster its completion.

The EIS computer model fails to recognize this fundamental rule of economics, as do virtually all other similar models. In a comparison of the Build and No-Build conditions, the traffic entering the area from the south is identical in both cases. The "fixed trip table" means that the modelers begin with a fixed number of trips between all the origins and destinations, independent of highway capacity or congestion. They proceed to assign trips to various routes, with the assumption that as traffic builds up, the cars travel slower and slower through the congestion. The computer calculates the fastest route for each trip and the actual traffic assignment to each roadway link is generated.

It is this process which allows for V/C ratios of greater than 1.50, because the computer can actually end up assigning more than an excess of 50+% new vehicles to a route. We all know that highway capacity is limited and that we cannot stack cars on top of each other, but the computers don't know that. The computer programmers continue this delusion of assigning traffic from a fixed trip table. This method has been with us of since the earliest days of travel assignments and primitive computing. It remains with us today, so that our traffic projections are sadly misleading.

In the real world, traffic will back up and form queues. When the delays become intolerable, the traffic will try to find other routes or times of travel. Or drivers may decide not to make the trip at all.

It does not appear to be wise public policy to stimulate economic growth which will accelerate the overloading of the Everett Turnpike. Will this mean a future 8- or a 10-lane Turnpike to handle the traffic? Why have the transportation planners not told us what is really needed to make the network function with this heavy dependence on auto traffic?

12 Comment noted. The relationship between roadway construction and land development is complex, consisting of causal relationships working in a number of directions, and continues to be debated and studied within the transportation profession. While there is little doubt that new roadways provide additional opportunities for new development to occur and may provide the final criteria necessary for development to occur, it is an inaccurate simplification to state that additional highway construction results in additional growth and, further, that bigger highways result in bigger developments. There are numerous examples of highways built specifically to spur economic development now sitting empty that refute such a simplified observation. A large number of factors contribute to development including regional employment opportunities, land use controls, tax rates, general business climate, regional accessibility, and the publicly built and maintained infrastructure such as water and sewer, schools, and the transportation system. Most or all of these factors contribute to the overall level of development and the locations within the region where this development is most likely to occur. Because transportation is only one of the factors related to overall development, the Circumferential Highway may change the timing of development or the location of some development, but is unlikely to substantially change the overall regional growth. Therefore, while assuming the same fixed trip table for each alternative represents a simplification of the complex relationship between land use and the transportation infrastructure, it is a generally accurate simplification. It should also be pointed out that the traffic model used in the analysis was reviewed by traffic model expert Patrick Corda DeSouza of the FHWA who determined that its projections were reasonable. Refer to Appendix A of the FEIS for the FHWA review.

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-- page 6 --

EAST-WEST SUCCESS WORSENS NORTH-SOUTH FAILURE

13 The benefits of an east-west traffic success are lost if the north-south transportation system fails. East-west travel is not as severe a problem as are north-south movements. Nashua has tripled the number of East-West river crossing lanes since 1970, while the north-south expressway remains the same. Today, part of the Everett turnpike is proposed for widening to 6-lanes, but the north-south deficiencies are the single most important issue for the Nashua region. Not only are north-south deficiencies ignored by this project and this EIS, they are made worse.

Even if the Circumferential highway can make the claim to somehow diverting traffic from the Everett Turnpike, it will do so only as long as the turnpike is slow and congested. In this sense, the circumferential benefit is possible ONLY if the turnpike fails and is badly congested. Obviously this is not a formula for a successful highway system for Nashua.

In a short period, the Nashua-Hudson area has gone from 2 lanes crossing the Merrimack River to 6 lanes. The current proposal is to expand this to 10 lanes. The current 6 lanes are underutilized, and probably represent only about 50% utilization of the lane capacity. Given the massive congestion likely for the Everett Turnpike, any addition to the existing 6 lanes crossing the Merrimack River appears to be a very low priority.

RECOGNIZING THE PROBLEM

Stated in very simple terms, the highway engineers cannot make the roadway system work. The Everett Turnpike is destined for severe congestion, and the EIS tells us so. If people are waiting for traffic solutions, the Circumferential highway is not the answer.

ALTERNATE SOLUTIONS

14 While the impacts on Nashua area highways appear very severe in the next century, the question can properly be asked : have the impacts been exaggerated, and are there alternatives which will address a more realistic future for the Nashua area?

One perspective is to view the 1980s as a period of vast overbuilding and expansion. Our reliance on mini-computer and mainframe industries may prove a burden, and the 8,000 jobs provided by Digital should not be taken for granted in the future. The projections of 60% growth may not come to pass.

-- page 7 --

14 The Nashua Circumferential has the positive benefit of illustrating the results of relying exclusively on automobile transportation. Some of our most intense congestion is now occurring in the suburbs, and in rural areas totally devoid of mass transit or pedestrian amenities. The general thinking in areas outside dense cities is that people will not walk, they will not take transit, and they will not carpool, so the only alternative is to develop transportation and land use plans which cater to the single-occupant automobile. The results are disastrous, both in transportation and aesthetic terms.

Nashua must learn to find other ways to break its 100% reliance on the automobile. The answer will not be any single thing. Instead, it will be a lot of little things ... improved bus service, local and regional rail service, developing better ways for pedestrians and bicyclists to get around, ride sharing, shuttle buses to businesses, flex time, 4-day weeks, traffic signal improvements and minor widening, transportation management networks, parking fees and even some zoning controls based on traffic generation ..... all of these items should be the proper domain of the planners as they plan for the future of the Nashua area. Transportation Systems Management should be defined in an aggressive and comprehensive way, which does not appear to have been the case in the EIS.

TRAFFIC SIGNAL IMPROVEMENTS

An example of the inefficiencies in the existing highway system can be seen in the Hudson approaches to the Taylor Falls Bridge. The traffic signal just east of the bridge operates on a very long signal cycle of almost 3 minutes. The stretched out cycle times result in flow inefficiencies, including queuing blockage from an adjacent poorly coordinated signal. I observed about 20 seconds of the cycle being wasted because no traffic was moving whatsoever.

Solutions include shortening the cycle time to 120-140 seconds, painting 2 lanes for queuing on eastbound Route 102 between the two signals, and possible widening of the eastbound approach from the bridge to provide for a two storage lanes for the left turn. These changes would entail expenditures in the thousands of dollars, rather than millions and should result in about a 40% improvement in intersection capacity.

Our traffic and bridge engineers should also learn to do better by the pedestrian. Pedestrians should be accepted as a valid mode of transportation.

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RAIL IMPROVEMENTS AND TRAFFIC

Any program which reduces traffic on the Turnpike serves to assist the Nashua-Hudson area. For example, rail service from Manchester and Concord through to Boston could remove some of the through trips from the Turnpike. Currently, there are proposals to construct a rail tunnel in Boston connecting North and South Stations, so that rail travels could go from Maine and New Hampshire to Boston and on to New York and Washington. An alternative to driving and flying to New York and points south is available.

The Draft Transportation Task Force Report of November 1992, "New Hampshire's Transportation in the 21st Century," urges the state to "Promote and support the restoration of passenger rail service, beginning with commuter rail extensions to Plaistow and Nashua and continuing north as demand indicates." (p. 6)

WETLANDS

If the decision is made to proceed with this highway, the public environmental obligations are then to minimize damage to wetlands, among other issues. One possible way to reduce environmental impacts is to reduce the 400-foot highway swath through any wetlands area the highway encounters. There is no reason why the ROW could not be reduced to 100 feet at wetlands crossings. The 400-ft. right-of-way requirement is excessive.

13 The goal of improving traffic flow within the Central Business Districts of Nashua and Hudson has been and continues to be a top concern in the Nashua region. As the most feasible means to improve the traffic within the Central Business Districts, the Circumferential Highway has been part of the regional transportation plans for more than 20 years. The traffic analysis performed for this EIS confirms that traffic congestion in these downtown areas would be severe if the Circumferential Highway were not built and that a high level of traffic relief would be provided if it were constructed. While north-south traffic is of concern, this project addresses the top transportation priority as determined by the local governments in the Nashua region.

14 Comment noted. Refer to the responses provided for comments #20 and #26 of the EPA's March 2, 1993 letter.

15 Comment noted. Reduction of the right-of-way to minimize impacts on wetlands and other resources will be considered by the Corps during the 404 permit process and may be added as special conditions to the permit.

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-- page 9 --

APPENDIX A. THE INNER BELT
BOSTON'S CIRCUMFERENTIAL HIGHWAY

A useful analogy is in order. The City of Boston historically has had a Northern Artery, a Central Artery an a Southern Artery. As the years have past and I-93 was extended through Boston, the City has been dominated by a North-South expressway running through the center of the City. In 1948, a proposal was made to construct an Inner Belt highway, but generally the resulting patchwork was a partial circumferential loop road grafted onto a Central Artery. The Highway Designers fought valiantly to keep the Central expressway from becoming overloaded, but in the end they lost.

By 1962, computer simulations showed that if congestion delays were ignored, there would be four times as many cars trying to go through downtown Boston as capacity was available to handle them. In other words, the state highway authorities had the full and complete information showing that their highway would become disastrously congested, yet they proceeded to endorse the highway master plan and even printed the traffic modeling results showing how overloaded the system would be.

In Nashua, N.H., the circumferential highway is more recent, but still represents a partial loop pasted onto a congested north-south highway. Worst of all, the Nashua circumferential travels through very sparsely developed land in Hudson and Litchfield with few major destinations, compared to the development intensity of Nashua. Therefore, the circumferential highway cannot act very effectively as a distributional highway to take the load off the Everett Turnpike.

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STEPHEN H. KAISER, PhD ..... TRAFFIC AND TRANSPORTATION ENGINEER

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191 Hamilton Street
Cambridge, Mass. 02139

EDUCATION ..... MIT, Mechanical Engineering B.S. 1965, M.S. 1967, PhD 1971

PROFESSIONAL EXPERIENCE .....

- Volunteer Computer Teacher, (1986-present)
  Blessed Sacrament School, Cambridge, Mass. Grades 1 through 8. Currently 4-days and 92 students each week. Hourly classes on up to 9 computers emphasizing word processing, writing, print formatting, educational games, French & Spanish programs, computer maintenance and simple repairs, model making projects.

- Independent Engineer, (1984-present)
  Traffic and transit analysis, including computer applications. Consultant to Westborough Planning Board, Belmont Board of Selectmen Back Bay Civic Association, Concerned Citizens of North Attleboro, Porter Square Defense Fund. Pro Bono traffic work for projects in Cambridge (Alewife, Cambridgeport, East Cambridge), Danvers, Andover, & Boston.

- Principal Civil Engineer, (1976-1984) specializing in transportation analysis ... State Environmental review office (MEPA)
  Executive Office of Environmental Affairs, Commonwealth of Mass.

  -- Reviewed environmental notification forms for significance of environmental impacts. Field meetings with developers, consultants local officials and citizens.

  — Drafted MEPA scopes for major projects, with detailed definition of traffic work programs. Reviewed highway and development EIRs and drafted MEPA comments (North Station, Commonwealth Pier, Copley Place, Central Artery Depression, Kendall, East Cambridge, Alewife, numerous Route 128 and 495 area projects, Attleboro Mall, Route 25 (Bourne), Route 2 (Erving and Wendell). Reviewed transit EIRs on fare increase; analysed transit energy efficiency.

  — Special Assignments : Field monitor for erosion control on I-190; staff engineer for 1978 Hazardous Materials Transportation Task Force. MEPA representive to interagency Roadsalt Task Force.

- TRAFFIC PLANNER AND ENGINEER (1970-1974) Metropolitan District Commission
  Boston, Mass.

  — Served as consultant and later state employee : responsible for traffic analysis, assisted in highway planning and design review parkway design standards, bikeway planning, pavement markings monitored highway expenditures and budgets; MDC representative to the Boston Transportation Planning Review and the Joint regional Transportation Committee. Provided interagency coordination with Mass. Dept. of Public Works and MBTA.

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8 January 1993
46 Rip Road
Hanover,N.H.03755

U.S. Army Corps of Engineers
New England Division
Regulatory Branch
424 Trapelo Road
Waltham,Ma. 02154

Dear Ccrps Personnel ;

1 I wish to oppose granting wetland dredge and/or fill permits for any of the N.H. D.O.T. highway alternatives proposed for the Nashua-Hudson circumferential highway.The function of the proposed highway alternatives could be better served,at lower financial and environmental costs by means of a light rail system.The rationale for the proposed highway is not to speed thru traffic, but to accomodate local commuters. The region has an existing air quality problem,which will be exacerbated by increaing commuter driving in the area.

2 Light rail can serve the commuter needs of the region while improving air quality. Improved air quality will reduce constraints on future manufacturing growth in the area.Light rail is safer than auto or bus commuting. Light rail requires less land for its right of way, while that narrower right of way can accomodate more passengers per hour than an eight lane highway.Light rail requires less fuel,thus improving the U.S. balance of payments.Light ra'l encourages the development and redevelopment of downtown areas,while any of the circumferential highway alternatives would promote sprawl.Light rail would be less affected by snow and ice storms than would any of the highway alternatives. Light rail would require no salt in winter,reducing impacts on wetlands and water supplies.

The recent light rail proposal for Burlington Vermont ($50 million for a five mile route) costs 25 % less per mile than the State's preferred Nashua- Hudson route, and the Burlington light rail proposal is for a double track initial investment.I find the State's assumption of a one to one wetland"replacement" ratio to be insufficient. A light rail system would have less aural impact upon the region than any proposed highway alternatives.You may not be aware that Manchester N.H. has a plan to link its downtown with Manchester Airport by rail.Eventually, Nashua could be linked to Manchester by light rail, making southern New Hampshire more attractive.

3 I ask that the Corps not play a passive role to the New Hampshire Department of Transportation.Approval of any of the highway alternatives will commit scarce finincial and environmental resources to an inefficient mode of transportation.The adoption of an inefficient mode of transportation in the nashua area will have negative impacts on land use, local tax base,and the above mentioned aspects.New Hampshire transportation "planning" has been irrational and wasteful for many years.I urge the Corps to inject some reason into the planning process.

Sincerely,
Thomas A. Linell

JAN 11 1993

1 Comment noted, no response required.

2 Comment noted. A complete analysis of Transit/TDM and TSM options, including light rail, is summarized in the FEIS and is fully documented in Appendix B of the Revised Traffic and Transportation Technical Report.

3 Comment noted. The effects on land use, local tax base, and other socioeconomic considerations is discussed in the Socioeconomics Technical Report, which is part of the DEIS.

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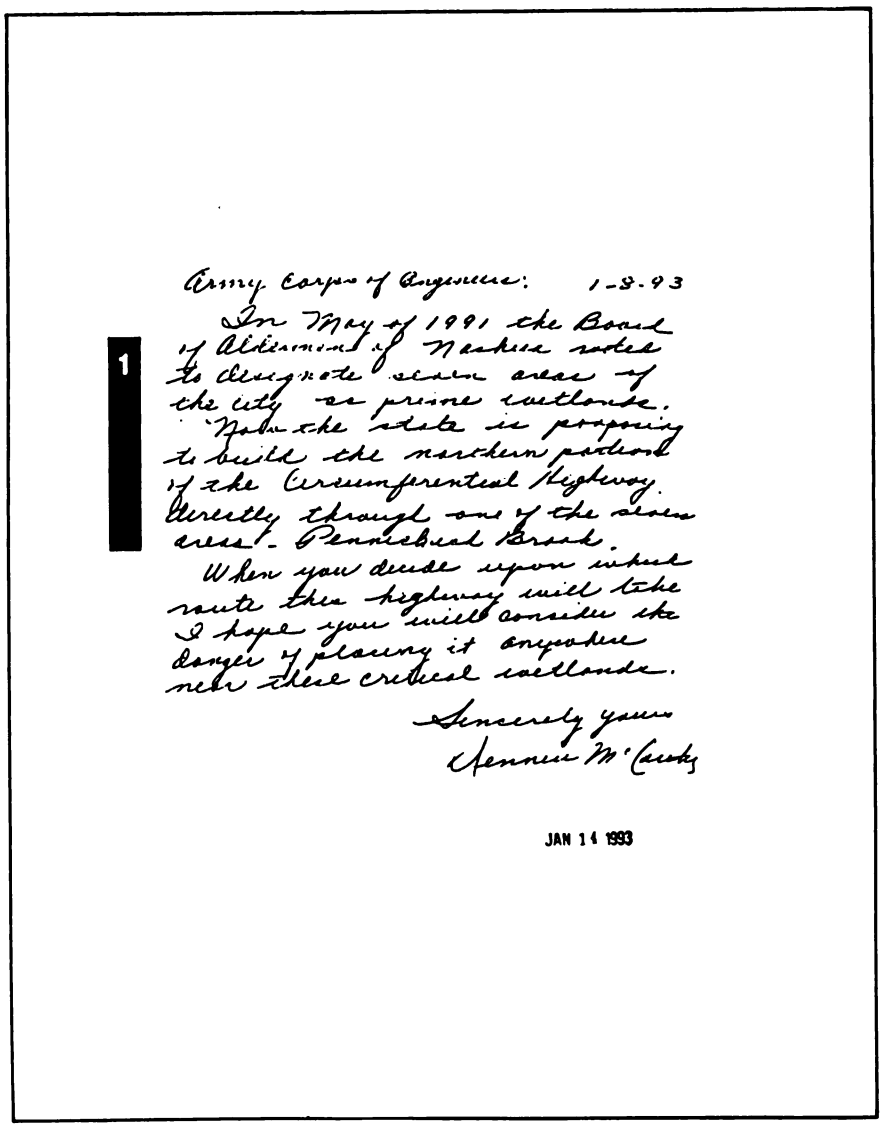

Army Corps of Engineers: 1-8-93

In May of 1991 the Board of Aldermen of Nashua voted to designate seven areas of the city as prime wetlands. Now the state is proposing to build the northern portion of the Circumferential Highway directly through one of the seven areas - Pennichuck Brook.

When you decide upon which route this highway will take I hope you will consider the danger of placing it anywhere near these critical wetlands.

Sincerely yours
Jennie McCurdy

JAN 14 1993

1 Comment noted, no response required.

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Mr. Fliegen, please take note of this request as an FYI.
Sincerely, HM

5 January 1993

Chairman of the Commission
c/o Robert W. Greer
Director of Project Development
The State of New Hampshire Department of Transportation
P.O. Box 483
Concord, NH 03302-0483

Dear Mr. Greer,

This is related to the 4 January 1993 C. Highway meeting in Hudson, NH.

1 I want to go on record as asking that other alternatives to the Nashua-Hudson Circumferential Highway be more closely considered and or reconsidered.

2 . The age of some of the studies' datum is approaching three decades.
2 . There is new data that has not been adequately considered (plant closings, etc.)
3 . There are other forms of transportation that may service our needs more efficiently and effectively for now and into the future.
4 . There seems to be strong feeling that the circumferential highway as currently planned is in fact not going to help relieve highway problems but is going to MAKE THINGS WORSE!...
5 . With the current government down sizing in the areas of military spending we should not do any building / planning until we know what the overall economy is going to do over the next couple years. Many of the jobs that have recently been lost in the Nashua - Hudson area will not come back to the area because government spending at previous levels will not happen.
6 . Economically the currently planned Nashua-Hudson Circumferential Highway will not add anything to the economy, but rather will continue to cost the individual taxpayer in the form of taxes and tolls.
7 . If traffic problems do exist then why aren't we considering less costly items like:
. changing traffic flows . more "jug handles"
. changing timings of traffic lights . etc.

Thank you for your considerations to this matter. Would you please give me a response to these concerns.

Sincerely,
HM

Henry W. McElroy, Jr.

15 Iroquois Road
Nashua, NH 03063

JAN 08 1993

1 Comment noted. Refer to the response provided for comment #1 of the letter from Cheryl Daniels regarding the alternative selection and analysis process.

2 The data considered in the EIS is up to date, as to when the reports were prepared to be part of the DEIS (1990 through 1992).

3 A complete analysis of Transit/TDM and TSM options is summarized in the FEIS and is fully documented in Appendix B of the Revised Traffic and Transportation Technical Report.

4 Comment noted. Refer to the response provided for comment #32 of the EPA's March 2, 1993 letter.

5 Comment noted. Refer to the Socioeconomic Technical Report which projects future growth and economics based on past factors.

3 Table 4.3-1 in the DEIS addresses direct economic impacts of the alternatives.

7 Comment noted. Refer to the response provided for comment #33 of the EPA's March 2, 1993 letter which discusses TSM measures.

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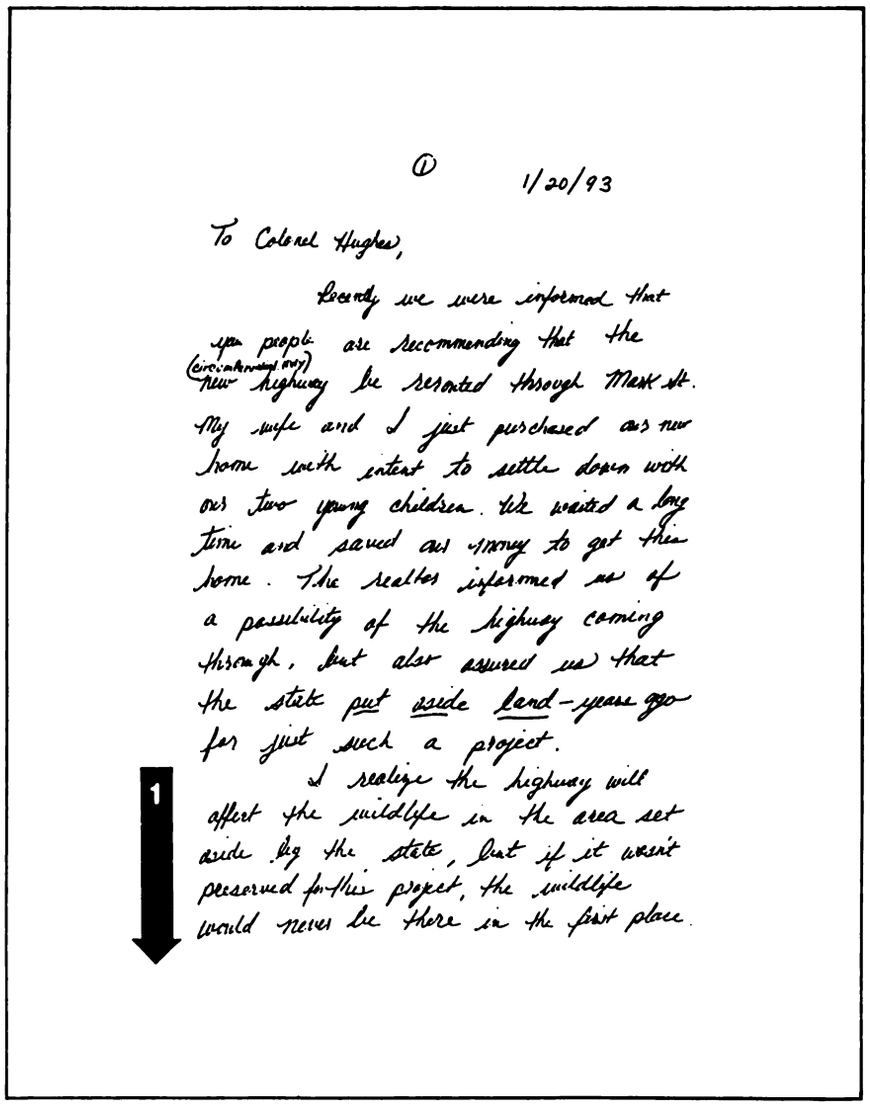

① 1/20/93

To Colonel Hughes,

Recently we were informed that you people are recommending that the (circumferential way) new highway be rerouted through Mack St. My wife and I just purchased our new home with intent to settle down with our two young children. We waited a long time and saved our money to get this home. The realtor informed us of a possibility of the highway coming through, but also assured us that the state put aside land - years ago for just such a project.

1 I realize the highway will affect the wildlife in the area set aside by the state, but if it wasn't preserved for this project, the wildlife would never be there in the first place.

1 Comment noted, no response required.

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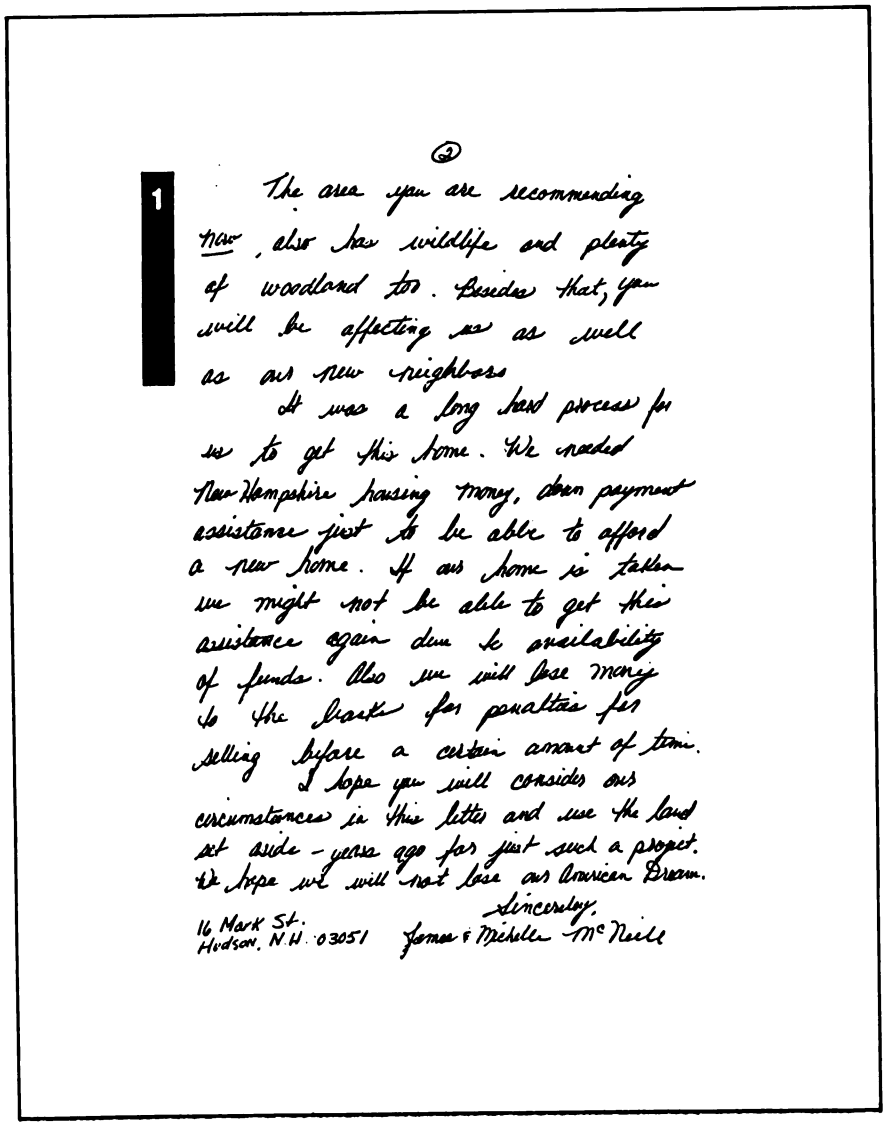

(2)

1 The area you are recommending now, also has wildlife and plenty of woodland too. Besides that, you will be affecting us as well as our new neighbors.

It was a long hard process for us to get this home. We needed New Hampshire housing money, down payment assistance just to be able to afford a new home. If our home is taken we might not be able to get this assistance again due to availability of funds. Also we will lose money to the banks for penalties for selling before a certain amount of time.

I hope you will consider our circumstances in this letter and use the land set aside - years ago for just such a project. We hope we will not lose our American Dream.

Sincerely,

16 Mark St.
Hudson, N.H. 03051

James & Michelle McNeil

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Brent E. & Nancy M. Morrison
36 Brinton Drive
Nashua, NH 03060-1275

January 9, 1993

Chairman of the Commission
c/o Robert W. Greer
Director of Project Development
The New Hampshire Department of Transportation
P.O. Box 483
Concord, NH 03302-0483

Dear Mr. Chairman,

As concerned residents of the City of Nashua and homeowners in the Brinton's Landing sub-division, We would like to express our concerns about the recently proposed Nashua-Hudson Circumferential Highway.

1) Public Water Supply Contamination- The proposed Alignment 8 passes too close to Pennichuck Pond and the potential risk of contamination of the public water supply (and other interconnected ponds) is too great. The US Army Corps of Engineers Draft Environmental Impact Study (DEIS) clearly states that Alternative 8 will affect 4 key wetland areas, including 3 high yield aquifers and 128 acres of surface aquifer. This alternative should not be considered for the same reasons that Alternative 7 was rejected earlier, because of the close proximity to a valuable public drinking water supply.

2) Disturbance of Prime Wetland Areas- Wetland Area No. 147 (Pennichuck Brook) is in the direct path of alternative 7/8 and would be entirely eliminated as a result of construction. In 1991, the residents of Nashua voted, by an overwhelming majority, to protect the designated wetland areas within the city. This area not only contains wildlife habitats and has been used as a recreational area for hiking and fishing by many of the neighborhood residents. This designated Wetland is to be buried under hundreds of feet of roadway and the run-off from Pennichuck Brook will be diverted through a culvert. This culvert, as proposed, is 10 x 10 ft, and is of questionable capacity especially during the heavy spring run-off or during periods when the Pennichuck Waterworks find it necessary to drain the level of it's water supply ponds.

3) Increased Traffic Flow- We, as well as other residents of the Brinton's Landing sub-division, will attest to the increase in traffic, especially from large tractor-trailer trucks on Concord Street (Route 3), both North and South bound. This increase in traffic is the direct result of the opening of Exit 10 and the re-building of Exit 11 on the F.E. Everett Turnpike in Merrimack. The increase in the number of vehicles, We believe this is the direct result of those individuals deliberately avoiding the tolls at both those exits. The large truck traffic on Henri Burque Highway and Concord Street (Route 3 North) to Anheuser-Busch, Sanders Associates, Nashua Corporation and other commercial/industrial facilities, was to be diverted away from this area by providing more direct access from the F.E. Everett Turnpike via "new" Exit 10.

JAN 15 1993

1 Comment noted. Refer to the response provided for comment #2 of the Public Hearing Testimony.

2 Comment noted. The extent of wetland impact in this area will not be known until final design has been completed. Measures to minimize wetland impacts will likely be implemented, especially because this site has been identified as a prime wetland as well as a key wetland in the EIS. The key wetland designation flags areas of value. The value of the different wetlands is one of many factors considered in the selection of a final alignment.

3 The 10' by 10' culvert that is referred to in this comment is a box culvert. The State of New Hampshire Design Standards require box culverts to be capable of conveying the flood waters of a 100 year storm. During final design, the box culvert will be reevaluated to ensure compliance to the State's Design requirements. In this particular area, the box culvert will be designed to handle the additional increased flows when the Pennichuck Corporation draws down its' reservoir. Its design will be capable of passing the same capacity as the existing upstream culvert under the Daniel Webster Highway.

4 Comment noted, no response required.

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We believe the City of Nashua even noticed this increase in traffic and wanted to set an example for those who were trying to avoid these tolls. In fact, beginning with the opening of Exit 10 and the installation of new toll booths at Exit 11, the City of Nashua, Police Department began setting up radar speed traps to catch would-be violators entering Nashua from the north or leaving Nashua toward Merrimack.

5 As a result of this increase in traffic flow on Concord Street, it is very difficult to turn south-bound from Brinton Drive onto Concord Street at anytime during the day and evening. We are concerned that with the proposed Alignment 8 that the construction of the interchange at Route 3, between the Nashua/Merrimack town line and the Harris Pond development, would make it nearly impossible to turn left (south-bound) onto Concord Street from Brinton Drive or other side streets like Rancourt Street, for example. This route is followed daily by hundreds of residents and at least 2 school buses carrying children follow this route.

6 4) Traffic Controls- Proposed Alternative 8 appears to provide "toll free" access from locations south on the F.E. Everett Turnpike (Exit 3-7) up to the Route 3 interchange via proposed Exit 9. We would like to understand what provisions have been made for traffic controls in the area. From the maps, we examined at the recent Public Hearing at Hudson Memorial School, it was difficult, if not impossible to discern what type of traffic control(s), if any, will be provided at most intersections an/or interchanges. We, in Nashua, are all too aware of the recent death of 13 year old, Michael De Costa which was primarily due a to complete lack of pedestrian traffic controls in the area of the incident.

Route 3 in Merrimack has been widened from the Nashua/Merrimack town line and to beyond Exit 10 in the last four years. Portions have even been expanded to two (2) lanes in each direction. With only two (2) lanes on Concord Street already presenting traffic problems, now. The impact of additional flow both north- and south-bound, from the town line to Henri Barque Highway, could create a bottle neck situation. The Executive Summary of the DEIS does, however, mention that separate left turn lanes should be added at the north bound intersection of Henri Barque and Concord Street as the result of heavy congestion. Average Daily Traffic (ADT) volumes and future projections should be studied in greater detail before accepting Alternative 8. These results of these studies and recommendations by the US Army Corps of Engineers should be included in the final EIS.

7 5) Pedestrian/Human-powered Vehicle Access to Harris Pond Development - Anyone who resides in the North end of Nashua can tell you that walkers, joggers, and bicyclers frequent the wide shoulders of the current roadway both north- and south-bound. Many people use this route for exercise purposes for health reasons. Many of the elderly residents walk from Harris Pond to Brinton's Landing and adjoining neighborhood on a daily basis for this purpose, some year-round, we might add. This access would undoubtedly be eliminated as a result of the construction of the interchange at Route 3 and the necessary improvement to the existing road bed approaching from the south from Rancourt Street to the town line.

8 6) Pedestrian Access to the Merrimack River Bridge- Which ever alternative is built, we believe that pedestrian access must be provided by the State at any water crossing over the

5 Comment noted. If traffic studies determine this intersection to be a problem, improvements to the intersection will be necessary in order to ensure both adequate traffic flow and pedestrian and automotive safety.

6 Further details on the type and location of traffic controls will be developed as part of the final design of a selected alternative. Traffic controls will be designed and located to ensure both adequate traffic flow and pedestrian and automotive safety.

7 Access of U.S. Route 3 to pedestrians and bicyclists will be maintained. This access will be temporarily limited during the actual construction of the Circumferential Highway.

8 Comment noted. Refer to the response provided for comment #47 of the Public Hearing Testimony.

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8 Merrimack River. With the minimum number of water crossings which exist over the Merrimack River it is essential to provide access to all the public, not just the driving variety. The few crossings, that presently exist, provide limited or poor access to the pedestrian or human-powered vehicles. As area growth continues, greater access to neighboring communities should be provided by permitting "open" access to the other communities and businesses

9 7) Noise Mitigation- What provisions have been made for adequate sound buffering between the elevated section and the residences? The close proximity of the elevated portion of proposed Circumferential Highway (Alternative 8) to the Brinton's Landing neighborhood, at the Merrimack River crossing, will undoubtedly, create a traffic noise problem. While current levels are near zero in this area, the DEIS summary states that the FHWA criteria of 67 dBA would be exceeded in 39-44 areas and that Alternative 8 has the highest number of areas (83) which will be impacted by at least a 15 dBA increase. The DEIS summary mentions identification of 16 candidate locations for noise barriers. We believe, sound barriers will be required to bring the traffic noise to within acceptable limits.

If Alternative 8, or any other Alternative route for that matter, is built, protection from the increased noise levels must be dealt with properly, efficiently and in a timely manner. We are concerned that inadequate budgeting and planning provisions have been made for such noise mitigation efforts.

Thank you for the opportunity to express my concerns. Please place these concerns into the public record of the hearing held on January 4, 1993 for this proposed project. We would like to thank the commission for its consideration on these points and we would appreciate a response to these points as soon as possible.

Sincerely,

Brent E. & Nancy M. Morrison
Nashua

cc US Army Corps of Engineers, New England Division
Mayor, City of Nashua
Nashua Regional Planning Commission

Page 3

8 Comment noted. Refer to the response provided for comment #47 of the Public Hearing Testimony.

8 Although this area has been identified as a candidate site for a noise barrier, (refer to Figure I-2, Location 15 in the EIS), this section of the highway is indeed elevated. As a result, certain other considerations regarding the feasibility of constructing a noise barrier in this location need to be addressed in greater detail. Different types of noise barriers will be considered during final design of the LEDPA, but due to the design requirements of the highway as it passes through this area, mitigation options are limited.

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JOHN J. O'NEIL, INC.
99 Pine Hill Rd., Nashua, NH 03063 (603) 598-3500 Fax (603) 598-3581

January 23, 1993

Terry Flieger, Project Manager
U.S. A.C.O.E.
424 Trapello Road
Waltham, MA

Dear Terry,

We wish to first compliment the authors of the Executive Summary EIS on their concise and thorough job.

My firm represents the owners of Blackberry Run, which abuts the proposed circumferential highway to the south of the 1st fork in the 7 & 8 and 3 - 6 alternatives. Blackberry Run is a proposed 24 lot residential subdivision with approximately 80 acres of land and contains 40± acres of NWI wetlands of high value. (Denoted as upper limit brook alternative mitigation site pg. 31 of the EIS.)

1 It is our understanding that the circumferential highway will be elevated through this system. As such, minimal dredge and fill can be anticipated. However, the appurtenant highway will auditorally & visually impact the area. Recently Walmart constructed a 300,000 square foot facility for which they built a 50 foot high landscape berm to alleviate these same conditions to the west. Due to the open wetland area, and the ongoing Blackberry Run construction, residents can anticipate looking directly at the highway. The elevation of the highway reduces wetland impact to the detriment of Blackberry Run.

2 It is further our understanding that the State has purchased Bensons animal farm for the purpose of replication pursuant wetland dredge and fill credits. Whereas this will indisputably be an environmental benefit, only the ACOE will be able to ascertain if this parcel will compensate for the total impact due to highway construction. It is our feeling that the separate impact to the Upper Limit Brook system could be compensated for by preserving Blackberry Run as a buffer & potentially creating an additional 8± acres of wetlands.

As such, if the current proposed Bensons site is not adequate to make up for the other separate systems impacted, we would request consideration be given to the purchase (on par with bensons) of Blackberry run for a mitigation and preservation site, and to remove the visual and auditory impacts anticipated to the residential community.

A full study regarding values which could be provided will be furnished upon request by yourself or the NHDOT in the event that current mitigation is deemed insufficient.

Sincerely, John J. O'Neil, PE President
CIVIL ENGINEERS, SURVEYORS, LAND PLANNERS JAN 27 1993

1 Comment noted. Refer to the candidate noise barrier locations in Figure 3.8-1 on page 3-43 of the DEIS and in the Noise Technical Report. Visually, vegetation over time will soften the abruptness of the right-of-way intrusion. This may be accelerated through aggressive landscaping techniques.

2 In accordance with the Section 404 mitigation memorandum of agreement between the EPA and the Corps, wetland restoration has a higher mitigation priority than preservation. Blackberry Run was investigated for its mitigation potential by representatives from the NHDOT, the Corps, and the FWS. This site was considered to have low mitigation potential, since the existing wetland and upland habitats were viewed as valuable systems. However, if the primary mitigation site (the former Benson's Wild Animal Farm) is not adequate to compensate for unavoidable wetland losses, the Blackberry Run site may be reconsidered.

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Mr. David H. Killoy, PE.CPG
Chief, Permits Branch Regulatory Division
US Army Corps of Engineers
424 Tropelo Road
Watham, MA 02254-9149

Reference: Nashua-Hudson Circumferential

Dear Sir:

As residents of Merrimack my husband and I feel obligated to write and voice our concerns about the confusion and lack of consideration that seems to be apparent in reference to this highway. There are several issues that we feel the DOT has chosen to ignore when they made their recomendation for Route 8.

1 The first is the lack of attention to the destruction of the wetlands, which in turn will cause serious permanent damage to the wildlife (and people) if the DOT's choice of Alternate Route #8 is chosen. Any short term advantages of this highway should certainly not outweigh the long term impact on the environment. It has been reported that the EPA's evaluation of this project have been just about ignored. Why is this so?

We assume that traffic problems need to be addressed, but as of yet there have been no concrete conclusions or reports which show that this highway will alleviate any potential problem except for on a short term basis. Does a traffic problem really exist? This question has not been answered to our satisfaction.

2 We know for a fact that residents who abut the water here on Thornton Road have a buffer zone that restricts them from cutting down trees in proximity to the water. This regulation is enforced to maintain the wetland. Why is it then, that a highway, with it's obvious toxic spillage potential, be allowed to comprise this same wetland. This is very confusing.

The Army Corps of Engineers have taken a postion to recommend either Alternate Route 5 & 6 and we stand firmly behind them.

Sincerely,
Dick and Debbie Peterson
Debbie Peterson
36 W. Thornton Road
Merrimack, NH 03054

JAN 13 1993

1 Comment noted. Refer to the response provided for comment #2 of the letter from Mrs. Louise Collaid.

2 Impacts to wetlands can be allowed if they comply to existing regulations. Local regulations are intended to protect wetlands just as State and Federal Regulations protect wetlands. No impacts will occur in the absence of permits for this project. This EIS and the NEPA process is the procedural review to weigh impacts.

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Testimony Before the
Executive Council and the U.S. Army Corps of Engineers
at the Joint Public Hearing
on the Nashua-Hudson Circumferential Highway

January 4, 1993

Submitted by: Nina Petit
132 Page Road
Litchfield, NH 03051

1

My name is Nina Petit and I live in Litchfield.

I'm here tonight to express my concern over the failure of the Draft Environmental Impact Statement (DEIS) to include a complete analysis of the Transit/Transportation System Management (TSM) Alternative.

There is no way that anyone, and I mean anyone, could come here tonight and defend the analysis done on TSM. As you know, the Transportation System Management (TSM) Alternative is made up of a wide range of measures designed to increase vehicle occupancy and reduce single-occupant vehicle travel during peak periods with Travel Demand Management (TDM) and low cost engineered improvements to our existing road system.

When you look at the size of the DEIS and then look at the superficial analysis done on TSM, the disparity becomes very obvious. Three pages are dedicated to the analysis of TSM. Three pages! And that is supposed to be the analysis of alternatives to spending $190 million in public funds on a 12.5 mile, 4 lane toll road.

This is simply indefensible, especially when you realize that residents attending Public Informational Meetings held at Alvirne High School on April 10, 1991 and on July 6, 1992 stated their support for a thorough review of TSM Alternatives. The public's call to fully explore TSM is carefully documented in the DEIS but the full exploration of TSM just wasn't done.

In fact, I want you to know that I attended the July 6th Public Informational Meeting and was shocked to find absolutely no information for public review on the TSM Alternative. There was nothing...nada... zip...zilch. It just didn't exist. When I repeatedly inquired as to why the TSM alternative wasn't presented, I was told that it was still being developed. Keep in mind that more than one year passed since the public's previous request for a thorough TSM analysis and yet that request simply was not acted upon by DEIS preparers. Why wasn't TSM information available for public review and comment? Why wasn't TSM seriously considered?

The minimal focus on TSM should not be surprising because while there were 153 interagency meetings held by public officials and agencies in preparation of the DEIS, the DEIS lists only one meeting dedicated to TSM (July 29, 1991), which was attended by the Department of Transportation (DOT) and the Fish and Wildlife Service (FWS).

Subsequently, this lack of attention makes for a seriously deficient TSM analysis which does not even adequately identify all of the alternative transportation systems currently available to Nashua area residents (1); it does not even attempt to determine the sufficiency or

7 This letter was presented orally at the Public Hearing Testimony on January 4, 1993. Refer to the responses provided to comments #127 through #133 of the Public Hearing Testimony. A complete analysis of Transit/TDM and TSM issues is summarized in the FEIS and is further documented in Appendix B of the Revised Traffic and Transportation Technical Report.

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1 these systems and their potential (2); and it does not even allude to widely studied, very successful TSM programs operating throughout this country and now they could be implemented in the Nashua area (3).

It's no wonder that the DEIS concludes that TSM "...could reduce ...peak...traffic volumes by one...(to) two percent..." When you start at zero and couple the effort, the result is still zero.

The fact is that well conceived and aggressively promoted Travel Demand Management (TDM) strategies can be simple, effective and less costly than major road improvements to alleviate traffic congestion. Study after study show a reduction in vehicle trips, both absolutely and within peak periods, by increasing vehicle occupancy rates. TDM can provide a minimum traffic reduction of 10% to 15% with 20% to 25% being very achievable.

I forwarded a copy of one very informative study to the Corps for review and I will be submitting extensive written comments on this aspect so I won't go into detail here tonight.

So, not surprisingly, there's much more that the TSM analysis missed.

There was no effort to look at specific traffic problem areas to improve flow for a higher level of service on our existing roads. Only two areas were mentioned: the intersection of Henri A. Burque Highway and Concord Street for separate left turn lanes and NH Route 102 in the vicinity of the Hudson Mall.

Failing to take a hard look at each intersection in the study area to maximize the efficient use of existing roads is a serious shortcoming in this document. In fact, engineered improvements were dismissed as requiring major reconstruction and/or right-of-way acquisition. There are low cost engineered improvements such as finetuning existing signal lights, redirecting traffic flow, and minimizing curb cuts that can offer immediate traffic relief. Other improvements for better traffic flow include the installation of new traffic signals. The fact is, if traffic volumes are close to capacity, even small improvements could have a significant effect on traffic conditions.

In fact, engineered improvements to our existing roads have already substantially increased traffic efficiency. In the Town of Hudson, for example, many of us here tonight remember how the intersection at Lowell Road and Central Street used to be just a few short years ago. Traffic would back up at the stop sign on Lowell Road while trying to access Central Street. To its credit, Hudson studied the intersection and the traffic flow. It then reconstructed the intersection and installed lights. The result is a more efficient flow of traffic.

Our "quality of life" depends on a balanced transportation system that provides for all modes of travel including pedestrian and bicycle. Such a system would give the same priority to the construction and maintenance of walkways as is given to highways. The public would be outraged, and rightly so, if the roads were not plowed and sanded promptly after each snow storm. And yet, sidewalks, if they exist, remain impassable weeks after a snow storm. The public would also be outraged if the police or fire department weren't accessible during a storm and yet, CITYBUS, with its "captive" ridership, was shut down as a result of this last snow storm - leaving riders stranded.

1 Our "quality of life" depends on reducing single occupancy vehicles (SOV) - not increasing the supply of pavement to meet the demand. We must develop a new way of thinking to solve our traffic problems.

We need to look at the experience of electric utilities'. It wasn't too long ago that utilities had grandiose plans to build generating facilities to meet the ever increasing "peak" demand. Rising construction costs and environmental concerns helped to shift the focus to "demand management" with off-peak rates, energy efficiency, co-generation, and alternative energy sources to meet our electrical needs. The end result is that while we don't notice anything different when we turn on the lights - how that electricity is generated has radically changed the way utilities do business.

This same approach can and should be taken with our transportation system. However, as a result of the DEIS's failure to adequately review TSM, we have here tonight for discussion purposes the alternative highway routes...that's it. Tonight's public hearing continues the narrow focus on project consideration and approval rather than on the broader perspective of our region's transportation future.

The members of the public here tonight have not been presented with all of the facts. The right thing to do would be to go back to the drawing board, honestly study TSM, and hold another public hearing. A good decisionmaking process must include consideration of all reasonable alternatives.

As a result, I respectfully request what we should have gotten in the first place. A complete and thoughtful analysis of transportation alternatives...and the scheduling of a public hearing where all alternatives are presented.

Thank you.

NOTES:

(1) The DEIS did not mention nonprofit CARAVAN vanpool operations in New Hampshire. In the Nashua area CARAVAN operates 7 vehicles carrying almost 100 persons (14 riders per vehicle: Merrimack 1, Hudson 1, Nashua 5, Manchester 2, Londonderry 7, Derry 2, Salem, 3 Concord 1, Portsmouth 4, Hampton 2, etc.).

While the DEIS identified Vermont Transit's operations, there is another commuter bus service operated by Concord Trailways that makes 4 nonstop trips each way from Nashua to Boston with a daily ridership of 65-70 passengers. The cost is $11.95 for a roundtrip ticket, which is essentially the cost of Boston parking for a day.

Each person I spoke with at CARAVAN (617-227-7665), Concord Trailways (603-228-3300) and Vermont Transit (1-800-451-3292), agreed that when cost-effective, efficient alternatives to driving alone are available to people...then people will choose them. Ken Hunter of Concord Trailways took considerable time with me to describe the need for better facilities at more convenient locations. He sees a tremendous ridership potential in the Nashua area and I agree.

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(2) Regarding park and ride lots, the DEIS points out on page 3-11 that along the F.E. Everett Turnpike in Nashua there are "...two park and ride lots, with 60 spaces each..." Think of it - two lots - 60 spaces each - along a stretch of highway that is travelled by 54,000 to 92,000 vehicles a day! There was no attempt to determine new locations for park and rides or what efforts could be made to increase their usage.

(3) Study: Traffic Mitigation and Demand Management, prepared by Transit Innovations and Program Development, NY, NY available through the U.S. Department of Transportation (DOT-I-88-02)

Study: Managing Transportation Demand In Metropolitan United States: An Overview and Case Study, prepared by Rivkin Associates, 7508 Wisconsin Avenue, Bethesda, MD 20814

Study: Transportation Demand Management: Planning, Development and Implementation, (Autumn 1990 American Planning Association Journal), by Erik Ferguson

Report: Key Considerations for Developing Local Government Transportation System Management Programs, Metropolitan Transportation Commission, 101 8th Street, Oakland,CA 94607

TSM Resource: Surface Transportation Policy Project, 1400 Sixteenth Street, NW Suite 300, Washington, DC 20036
Tel: 202-939-3470

TSM Resource: Any Hamilton, Conservation Law Foundation, 3 Joy Street, Boston, MA 02108-1497 Tel:617-742-2540

Other Resources:

Article: Getting From Here To There: Building a Rational Transportation System, Institute for Local Self-Reliance, 2425 18th Street, NW, Washington, DC 20009-2096
Telephone: 202-232-4108

Articles: Paved With Good Intentions?, (August 3/10, 1992 The Nation) and Applying the Brakes (September 17, 1990 The Nation), by Jane Holtz Kay, Telephone: 617-426-7261

Study: Draft New Hampshire's Transportation in the 21st Century, November 1992, available through NH Department of Transportation

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132 Page Road
Litchfield, NH 03051

January 25, 1993

Ms. Theresa Flieger
US Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, MA 02254-9149

RE: File #198801828
Nashua-Hudson Circumferential Highway

Dear Ms. Flieger,

I would appreciate these additional comments, to which I referred at the January 4th public hearing, be made part of the public record.

First of all, I want to thank you and the US Army Corps of Engineers for being very responsive to my requests and concerns. I honestly did not expect the staff of a large federal agency to be as accommodating as you have been to me. Also, I was pleasantly surprised that the Corps extended the comment period to allow for more public input. In the eleven years that I have been following this highway project, this is the first time someone has actually listened to the public and acted on their concerns.

I. JANUARY 4, 1993 PUBLIC HEARING:

This public hearing was conducted much better than previous circumferential hearings held by the Executive Council. In prior hearings, the public wasn't allowed to speak until all public officials (state, regional, and local who supported the highway) had spoken and that usually meant waiting at least 2 1/4 to 2 1/2 hours into the hearing. As you can probably guess that also set the tone for support of the project.

This hearing alternated between public officials and the public, which allowed more public comment opportunities. However, as in previous hearings, the Executive Councillors interrupted, bullied, and challenged those speakers voicing concerns about the highway but allowed highway supporters the full opportunity to speak. It's very difficult under the best of circumstances for members of the public to gather the courage to approach the microphone and speak. I know how nervous that makes me and I've spoken at numerous meetings. It is very intimidating to members of the public to see others being chastised for expressing their concerns. The Executive Councillors have a definite pro-highway bias that clearly limits the public's ability to comment.

II. TOLLS

1 I understand the Corps' reasoning for deferring the toll issue to the state; however, the tolls are an integral part of the project. Without them, the project couldn't be financed and built. With them, there's a high potential for toll diversion onto the existing road network (1) thereby possibly negating any "congestion relief" the project might provide.

JAN 27 1993

Comments continued
Rina Petit
File #198801828
Nashua-Hudson Circumferential Highway

II. TOLLS continued

1 It could also be that the amount charged travellers to assure a certain level of congestion relief won't be sufficient to cover the cost of debt service and maintenance. This is an important consideration for the public because NH DOT estimates a $1.9 billion (2) deficit in maintaining the existing transportation infrastructure over the next 18 years. How will any revenue shortfall from the tolls be made up? If there's a possibility of diverting maintenance funds from the existing road system, which will continue to be overburdened even with the circumferential, then the public needs to be made aware of that possibility and the consequences. In any event, for the public to make informed comments on this project, the DEIS needs to thoroughly analyze all aspects of the proposed tolls from diversion to the ability of the project to pay for itself.

III. TRANSIT/TRANSPORTATION SYSTEM MANAGEMENT (TSM) ALTERNATIVE

2 Two principles should be applied to all proposed public works projects: the old medical maxim, "first of all, do no harm" and a new transportation maxim, "provide a level playing field for all transportation modes". To meet these two challenges, a thorough analysis of cost-effective, efficient TSM alternatives needs to be done. The primary objective should be to develop an intermodal transportation system that respects the environment, enhances community life, and promotes safe means of travel. Since I discussed certain aspects of TSM including engineered improvements to the existing road network at the January 4th hearing, I will focus on other areas here.

One mode of travel that is almost nonexistent in the Nashua area is walking. In the U.S., only 10.7% of personal trips are by foot. Contrast that with Germany, France, Sweden and the U.K. where the pedestrian trips are 30.3%, 30%, 39%, and 29% respectively. Simply by constructing sidewalks/walkways throughout the Nashua area and building pedestrian overpasses on heavily congested Amherst Street and Daniel Webster Highway, this mode of travel will be as viable as an SOV.

Bicycling is very dangerous in each "study area" community because bicyclists co-mingle with trucks and cars. A coherent plan to develop bicycle paths to promote health and safety would provide another alternative to SOV's. Employer-provided bicycle racks and shower facilities would encourage an increase in the home to work trip by bicycle. In Litchfield, there's a man who rides his bike 66 miles roundtrip to work in Massachusetts. It's a 1 1/2 hour trip each way. A detailed article in The Telegraph presented bicycling such long distances as very doable even under the hostile conditions that currently exist.

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Comments continued
Rina Petit
File #198801828
Nashua-Hudson Circumferential Highway

III. (TSM) ALTERNATIVE continued

2 Traffic Demand Management (TDM) is a very effective approach to mitigate traffic. Employers hold the key to success by introducing variable work hours, promoting transit/ridesharing, providing preferential parking spaces, etc. Fully documented experiences (3) suggest that "...well-conceived and aggressively promoted programs can reduce peak-period traffic in office and commercial developments by as much as 10% to 15%...", that flex-time alone achieved a 45% reduction of SOV's during peak periods (3), and 20% to 25% of commuters utilize alternative means of transportation (4).

Other TDM measures employers could take are to provide the $60 transit subsidy and to reduce subsidized parking availability to discourage driving alone (5). TDM objectives include: eliminating trip entirely, shifting trip from a more congested destination to a less congested one, shifting trip from a lower-occupancy mode of travel (e.g. drive alone) to a higher-occupancy one, shifting trip from a more congested route to a less congested one, and shifting trip from a more congested time period to a less congested one (6).

IV. POPULATION, HOUSING, EMPLOYMENT, & TRAFFIC PROJECTIONS

3 I am very concerned that population, housing, employment, and traffic projections (7),(8) are very inflated, which would increase the perceived need for a highway. The Nashua area is continuing to experience job losses and higher than usual vacancy rates in existing housing, commercial and industrial properties. Any growth this area has over the next few years will simply be replacing lost growth. It may be that a more realistic approach to the projections would make an effective TSM strategy a more viable alternative.

Another statistic to consider is that 10% of New Hampshire's registered vehicles (80,000) are uninsured (9) but operating on the roads. If mandatory insurance legislation passes, automobile registration and usage may drop significantly as it did in Maine (10) when that state recently enacted mandatory insurance.

4 Also, since financial institutions financing new vehicle purchases require insurance, it is very likely that these uninsured vehicles are older, more polluting makes and models that won't pass the more stringent emissions testing being required by the Environmental Protection Agency (11). This could result in even more vehicles being taken off the roads.

In this economy, more families are experiencing unemployment and underemployment, making vehicle ownership and maintenance very difficult. If the federal government enacts a .50 per gallon gasoline tax, even more people will opt out of their vehicles. Even without the gasoline tax increase, the average American household allocates 18.7% (12) of its budget to transportation expenses, most of which is auto-related. It is imperative for our transportation planners to develop cost-effective, affordable transportation alternatives to SOV's.

1 Comment noted. Refer to the response provided for comment #2 of Stephen Kaiser's written comments.

2 Comment noted. Refer to responses for comments #10 of the Public Hearing Testimony, and #23 and #31 through #33 of the EPA's March 2, 1993 letter.

3 Projections took into account current economic conditions with projections in housing prepared by the NRPC. This information was also reviewed by traffic model expert Patrick Corda DeSouza at the FHWA who determined that projections were reasonable. Refer to the Socioeconomics Technical Report, p. I-7.

1 Comment noted, no response required.

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Comments continued
Rina Petit
File #198001828
Nashua-Hudson Circumferential Highway

IV. POPULATION, HOUSING, EMPLOYMENT, & TRAFFIC PROJECTIONS continued

The bottom line is that it is very possible that mandatory insurance, stringent emission testing, .50 federal gasoline tax and TSM could provide the same level of "relief" that the Circumferential is projected to deliver.

In conclusion, I hope the US Army Corps of Engineers will steer a course for a rational and comprehensive approach to solving the Nashua area's transportation problems. Our public officials have assumed this highway should get built because it has been talked about for years. The public deserves better reasons than that for the circumferential's construction. In fact, the only reason the circumferential actually looks like it will provide some congestion relief is that those same public officials have taken a "do nothing" approach to force the circumferential's construction.

The Corps, as an independent entity, can eliminate the highway bias in this planning process. This can be done by ordering a new TSM analysis, by considering all aspects of the tolls, by carefully reviewing the population projections for more conservative/realistic projections, and by convening a new hearing for the public to consider all alternatives.

I appreciate any and all consideration that you may give to my comments.

Thank you.

Sincerely,

Rina Petit
Home: 603-889-5792
Work: 508-975-7766

Notes:

1. NHCH-DEIS, September 18, 1992 letter to the files, W.F. O'Donnell, US DOT: "The toll penalties applied seem to be slightly high when treated as a cost/hour. Mr. Lantos indicated that he tried several iterations until the traffic projection on the toll facilities seemed reasonable. If they were high, there could be a slightly reduced attraction to the Circumferential and the F.E. Everett Turnpike."

2. New Hampshire's Transportation in the 21st Century (Draft), November 1992, New Hampshire Department of Transportation, page 9: "...The needs and revenues tables show that revenues available to preserve New Hampshire highways and bridges will be $6.8 billion, approximately $1.9 billion less than the $8.7 billion of estimated needs..."

3. Transportation Management Associations: Battling Suburban Traffic Congestion, C. Kenneth Orski, Urban Land, December 1986

   A copy of this document has been enclosed.

4. Managing Transportation Demand in Metropolitan United States: An Overview and Case Study", Malcolm D. Rivkin, Ph.D., AICP, October 1990

   A copy of this document has been enclosed.

5. Mass Transit: Effects of Tax Changes on Commuter Behavior, US General Accounting Office, September 1992

   A copy of the pages listing the selected studies has been enclosed.

6. Transportation Demand Management, Planning Development and Implementation, Erik Ferguson, APA Journal, Autumn 1990

   A copy of this document has been enclosed.

7. NHCH-DEIS, September 18, 1992 letter to the files, W.F. O'Donnell, US DOT:
   "I questioned the very high future employment projections (+7493) shown for zones 43,45,57, and 48 in southern Nashua. Mr.Lantos agreed that they may be optimistic given the current economic conditions..."
   "I questioned the high housing unit forecasts for zones 79 and 80 (+5877) in southwestern Nashua. Mr. Lantos explained that the Halls Corner Housing Development (3,400) units) has been approved by the City for that area and is awaiting better market conditions and financing. He feels that these figures are achievable witnin the 20-year time frame".
   "I also questioned the high employment (+6047) for zones 137 and 138 in Merrimack near the Industrial Interchange along the F.E. Everett Turnpike. Mr. Lantos feels that these projections are also optimistic even under the current economic conditions...".
   The conclusion was that the projections for the NC project were reasonable and that these variations would not influence project decision making.

8. NHCH-DEIS, September 17, 1992 correspondence from Patrick DeCorla-Souza, USDOT:
   "...Overall growth in land use development forecasted by NRPC for the year 2010 is reasonable. Growth in dwelling units over the 20 year period 1990-2010 is forecasted to be 41.5%, while employment growth is forecasted to slightly exceed 50%. While separate projections of population growth have not been made by NRPC, population growth would be much less than 41.5%, since household size continues to decrease in Nashua as in other urban areas. The 20-year growth projected by NRPC appears to be conservative in comparison with the historical (10-year) population growth of 25% from 1980 to 1990 based on census data. .."
   "The NRPC should consider the following in future model updates: introduction of household size as an independent variable in the trip production models. Also, overall trip rates per dwelling unit or per person should be compared with similar urban areas such as Manchester..."

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9. "Nashua Lawmakers Push Mandatory Insurance", The Telegraph, January 16, 1993, Representatives Bonnie McCann and Theresa Drabinowicz are sponsoring HB 217 - the Independent Insurance Agents of New Hampshire are supporting the legislation. "...Assistant Insurance Commissioner David Nichols estimated that 10% of all NH cars - or nearly 80,000 - are on the road without insurance. That's up from an 8.2% estimate from the department a year ago..."

10. January 22, 1993 telephone conversation with State of Maine Department of Motor Vehicles Data Processing Department yielded the following passenger vehicles registration by year:

1987	783,924
1988	832,527
1989	846,667
1990	867,626
1991	857,410
1992	850,809

There are 16,817 (2%) fewer passenger vehicles on Maine's roads after the enactment of mandatory insurance.

11. "Tougher Standards for Car Emissions Set", The Boston Globe, November 6, 1992, "...New England metropolitan areas where the more stringent, high-tech testing will be required are: ...Manchester, Nashua and Portsmouth-Dover-Rochester, NH..."

12. "Putting Pedestrians on an Equal Footing", The Surface Transportation Policy Project Bulletin, September 1992, Volume II, Number 7.

Also, a copy of "Key Considerations for Developing Local Government Transportation System Management Programs" by Susan Pultz has been enclosed for general background information.

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CITIZEN

132 Page Road
Litchfield, NH 03051

January 22, 1993

RE: File #198801828

Dear Ms. Flieger,

I took these pictures this morning, which is more than one week since the last snowfall. Note how bare the roads are - but most sidewalks are still snow covered. No wonder people are driving their SOV's!

1 It's ony because the NH DOT and local communities don't give the construction and maintenance of sidewalks/bicycle paths (and other modes of travel) the same consideration as highways that the circumferential can be held out as the only viable way to relieve congestion. In fact this bias is even evident in the DEIS because the circumferential proposal does not provide for a walkway over the northern Merrimack River crossing. It precludes any travel mode that is not vehicular from gaining mobility with this project.

Nashua area residents deserve more travel options than SOV's. I hope that your agency will lead the way.

Sincerely,

Rina Petit

NOTE:
Photos were included with the submission of this letter.
These photos are part of the Public Hearing file.

1 On the State highway system where sidewalks exist, the NHDOT does not plow sidewalks. They do routine maintenance but they do not do the so called "Winter maintenance" of plowing. The majority of the streets in the study area are maintained by the local community. Sidewalk plowing policy on both local streets and state highways is up to the local community.

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11-JAN-93
Louis J Poulin
Nancy A Poulin
165 Barretts Hill Road
Hudson, NH 03051

The purpose of this letter is to highlight the impact and feelings that the proposed circumferential highway will have on our home and family. Our home is located on Barretts Hill Road near the intersection of Windham Road which runs parallel to Route 111. Our property was represented by 92B on the map that was displayed at Memorial School in Hudson on Jan 4, 1993. On the town of Hudson map, it is lot 30-1. We have resided at 165 Barretts Hill Road since September of 1986. This was a brand new home.

The major problems that the proposed circumferential highway will have on our home and our family are:

- Depreciated value and marketability of our home
- 1 - Substantial increase in noise pollution from highway
- 2 - Substantial decrease in air quality from exhaust fumes
- Living at a construction site for years to come
- Change from quiet, peacefull family neighborhood to "EXPRESSWAY BLUES"
- Not knowing exactly when and how all this will happen

3 When the highway is eventually built, the neighborhood that we live in will change drastically. The highway will bring a large increase in the noise and air pollution. The fact that we live up on a hill will magnify these problems. The highway will come across Route 111 at an elavated level, at or above the level of our home and pass to the south of our home. There will also be an onramp to the highway, essentially at out front door. There will remain in effect a valley between the highway and our home. We have been told by a state official at the hearing that since we are up on the hill that their is no cost effective solution for us. He also seemed to imply that either we live with this or move out of the area at our expense. This is NOT an acceptable answer. The state of New Hampshire and/or responsible parties for bringing the highway project about should work with us to come to an acceptable solution.

JAN 14 1993

1 The area along Barretts Hill Road was identified as a candidate noise barrier location which will be evaluated for noise mitigation in the final design of the project.

2 Comment noted. The highway's impact on air quality is analyzed in the Air Quality Technical Report.

3 Right-of-way issues regarding acquisitions and relocations are handled by the NHDOT on a case by case basis in accordance with state and federal statutes and regulations.

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4 The highway abutting the southern edge of our property will have a negative impact on the value of our home and drastically reduce the marketability of our home. I have solicited the opinion of a local realtor, Souza Realty of Hudson, NH and it is their professional opinion that the highway abutting our home will depreciate the value of our home BEFORE the construction starts by approximately $10,000.00 (see attached letter) The value and marketability of our home will be further reduced once construction begins. Construction projects include the circumferential highway, relocation of Barretts Hill Road in front of our home and driveway reconstruction to join the new location of Barretts Hill Road. Not knowing the details of exactly how and when all this construction will begin is also a negative aspect.

SUMMARY

5 We did not purchase our home on Barretts Hill in Hudson, NH with the intention that we wanted to live next to a highway. We would have selected a home that was already abutting a highway if we did or would have moved to the city. We feel that the highway abutting our property will have a severe negative impact on our lifestyle, and it already has with the thought of the highway being there. We do not feel that we should be burdened with the task of selling our home at a substantial loss for being unlucky enough to have purchased a home that eventually will have a limited access highway next to it. We feel strongly that the state of New Hampshire and/or parties responsible for bringing the highway past our home to assist us in relocating outside the immediate area of the highway. I am available to further discuss this matter with the appropriate people. I wish to be contacted within the next 30 days to at least setup some time to discuss this matter. I can be contacted during the day at work at (603)881-1958 or evenings at home (603)880-6709.

Sincerely,

Louis J Poulin

Nancy A Poulin

4 Comment noted. Refer to the response provided for #3 of this letter.

5 Comment noted. Refer to the response provided for #3 of this letter.

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CITIZEN

Sousa REALTY & DEVELOPMENT

46 Lowell Road, Hudson, NH 03051
(603) 880-7799 • FAX: 880-8926

Mr. Louis Poulin
165 Barretts Hill Rd.
Hudson, NH 03051

January 8, 1993

Dear Louis,

I have completed my Comparable Market Analysis on your home at 165 Barretts Hill Road, in Hudson, NH. I had to take into consideration the fact that your home will be abbutting the future Circumferential Highway. Based on this I have found that to be detrimental to the price of your home.

I have depreciated your home approximately ($10,000.00) Ten thousand dollars based on this factor. This is also based on your home selling in the near future. Should your home not sell now and still be on the market when the construction starts, I feel that the depreciation will decrease more. I also feel strongly that when your home is placed on the market and you disclose to a potentisl buyer that the circumferential highway will be abbutting the property, I feel it will turn some customers away and some customers will automatically try to offer a lower price.

I wish I could give you a better feel, but I can't. I feel that if you place your home on the market, you should place it in a price range between 105,500 and $111,800. with a suggested price of $109,900 to start.

Good Luck,

Kathleen M. Sousa
Broker

P. S. I will look forward to hearing from you.

KMS/sam

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CITIZEN

William H. Ross
16 Clearview Dr.
Nashua N.H. 03062

December 5, 1993

Lt. COL. JAMES K. HUGHES
US Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, Ma. 02254-9149

cc: Ms. Theresa Flieger
Mr. Bernard Streeter

Dear colonel Hughes;

1 I wish to formally be on record in opposition to the State of New Hampshire, Dept. of Transportation choice of alternate 8 for the Nashua - Hudson Circumferential Highway.

The "Summary Comparison of Impacts for Build Alternatives" found in the "Executive Summary" shows clearly that Alternates 7 and 8 present the worst possible alternatives in terms of damage to wetlands and wildlife habitat.

It is my understanding that the permits may only be issued to the "least environmentally damaging, practical alternative." Its clear that alternates 7 and 8 are not the least environmentally damaging.

2 The "Executive Summary" defines the purpose of the highway as providing a transportation improvement to assist east-west traffic movements. A look at the route of alternate 7 or 8 shows a highway that does not connect with an east-west road but with the Everett Turnpike less than a mile of newly built intersection 10. Intersection 10 does provide the necessary east-west access. The safety issue of two interchanges within less than a mile, and, building a new interchange and not connecting at interchange 10 is very troubling.

Alternate 7 or 8 fails the "practical" test!.

I urge you to protect our valuable natural resources and deny a permit to alternate 7 or 8.

Respectfully yours
WILLIAM H. ROSS

JAN 08 1993

1 Comment noted, no response required.

2 The Circumferential Highway does facilitate east-west travel across the Merrimack River, where the major problem currently exists. Refer to the responses provided for comments #4, #7, and #8 of the Public Hearing Testimony for additional information.

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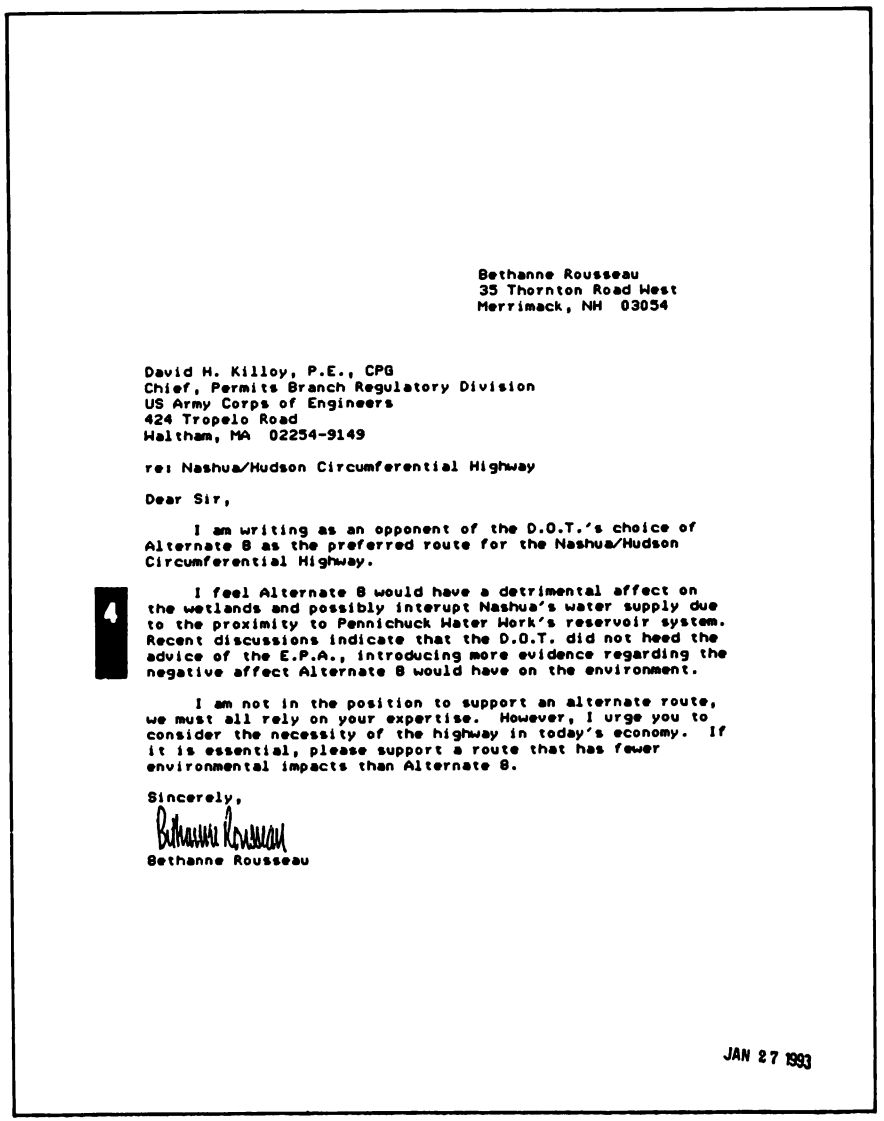

Bethanne Rousseau
35 Thornton Road West
Merrimack, NH 03054

David H. Killoy, P.E., CPG
Chief, Permits Branch Regulatory Division
US Army Corps of Engineers
424 Tropelo Road
Waltham, MA 02254-9149

re: Nashua/Hudson Circumferential Highway

Dear Sir,

I am writing as an opponent of the D.O.T.'s choice of Alternate B as the preferred route for the Nashua/Hudson Circumferential Highway.

4 I feel Alternate B would have a detrimental affect on the wetlands and possibly interupt Nashua's water supply due to the proximity to Pennichuck Water Work's reservoir system. Recent discussions indicate that the D.O.T. did not heed the advice of the E.P.A., introducing more evidence regarding the negative affect Alternate B would have on the environment.

I am not in the position to support an alternate route, we must all rely on your expertise. However, I urge you to consider the necessity of the highway in today's economy. If it is essential, please support a route that has fewer environmental impacts than Alternate B.

Sincerely,

Bethanne Rousseau

JAN 27 1993

1 Comment noted, no response required.

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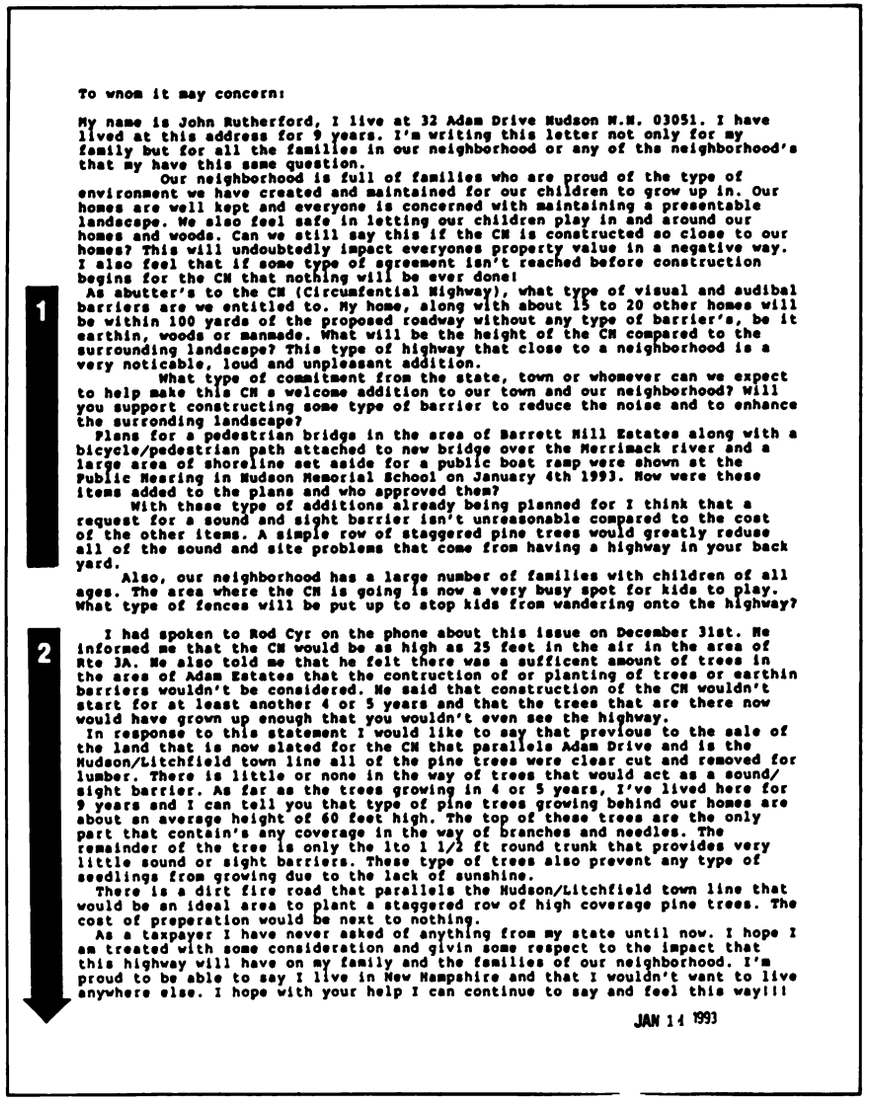

To whom it may concern:

My name is John Rutherford, I live at 32 Adam Drive Hudson N.H. 03051. I have lived at this address for 9 years. I'm writing this letter not only for my family but for all the families in our neighborhood or any of the neighborhood's that my have this same question.

Our neighborhood is full of families who are proud of the type of environment we have created and maintained for our children to grow up in. Our homes are well kept and everyone is concerned with maintaining a presentable landscape. We also feel safe in letting our children play in and around our homes and woods. Can we still say this if the CH is constructed so close to our homes? This will undoubtedly impact everyones property value in a negative way. I also feel that if some type of agreement isn't reached before construction begins for the CH that nothing will be ever done!

1 As abutter's to the CH (Circumfential Highway), what type of visual and audibal barriers are we entitled to. My home, along with about 15 to 20 other homes will be within 100 yards of the proposed roadway without any type of barrier's, be it earthin, woods or manmade. What will be the height of the CH compared to the surrounding landscape? This type of highway that close to a neighborhood is a very noticable, loud and unpleasant addition.

What type of commitment from the state, town or whomever can we expect to help make this CH a welcome addition to our town and our neighborhood? Will you support constructing some type of barrier to reduce the noise and to enhance the surronding landscape?

Plans for a pedestrian bridge in the area of Barrett Hill Estates along with a bicycle/pedestrian path attached to new bridge over the Merrimack river and a large area of shoreline set aside for a public boat ramp were shown at the Public Hearing in Hudson Memorial School on January 4th 1993. How were these items added to the plans and who approved them?

With these type of additions already being planned for I think that a request for a sound and sight barrier isn't unreasonable compared to the cost of the other items. A simple row of staggered pine trees would greatly reduse all of the sound and site problems that come from having a highway in your back yard.

Also, our neighborhood has a large number of families with children of all ages. The area where the CH is going is now a very busy spot for kids to play. What type of fences will be put up to stop kids from wandering onto the highway?

2 I had spoken to Rod Cyr on the phone about this issue on December 31st. He informed me that the CH would be as high as 25 feet in the air in the area of Rte 3A. He also told me that he felt there was a sufficent amount of trees in the area of Adam Estates that the contruction of or planting of trees or earthin barriers wouldn't be considered. He said that construction of the CH wouldn't start for at least another 4 or 5 years and that the trees that are there now would have grown up enough that you wouldn't even see the highway.

In response to this statement I would like to say that previous to the sale of the land that is now slated for the CH that parallels Adam Drive and is the Hudson/Litchfield town line all of the pine trees were clear cut and removed for lumber. There is little or none in the way of trees that would act as a sound/sight barrier. As far as the trees growing in 4 or 5 years, I've lived here for 9 years and I can tell you that type of pine trees growing behind our homes are about an average height of 60 feet high. The top of these trees are the only part that contain's any coverage in the way of branches and needles. The remainder of the tree is only the 1to 1 1/2 ft round trunk that provides very little sound or sight barriers. These type of trees also prevent any type of seedlings from growing due to the lack of sunshine.

There is a dirt fire road that parallels the Hudson/Litchfield town line that would be an ideal area to plant a staggered row of high coverage pine trees. The cost of preperation would be next to nothing.

As a taxpayer I have never asked of anything from my state until now. I hope I am treated with some consideration and givin some respect to the impact that this highway will have on my family and the families of our neighborhood. I'm proud to be able to say I live in New Hampshire and that I wouldn't want to live anywhere else. I hope with your help I can continue to say and feel this way!!!

JAN 14 1993

1 Although this area has been identified as a candidate site for a noise barrier (Figure I-2, Location 10 of the EIS), this section of highway is elevated. As a result, certain other considerations regarding the feasibility of constructing a noise barrier at this location need to be addressed in greater detail. These considerations will be addressed in greater detail upon determination of a LEDPA and issuance of the 404 permit. Regarding visual barriers, vegetation over time will eventually soften the abruptness of the right-of-way intrusion. Aggressive landscaping techniques may also be used at specific locations along the preferred alternative if determined to be necessary.

3 Comment noted, no response required.

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Please respond to the following questions:

2 Will the state commit to some type of sound/site barrier to parallel the Hudson/ Litchfield town line and Adam Drive?

3 Will any type of fence be in place to keep children from playing or trying to cross the highway along the Adam Drive area?

I know I've asked a lot of questions in my letter, but they are very important to me and my family and a lot of other families. I hope you are able to understand and respond to these questions before any final plans for the CH are made.
Also if there is anyway I can help in this project I would be willing to give my time and effort where it may be needed. Thanks!!!!

regards
John Rutherford
32 Adam Drive
Hudson NH 03051
(603) 881-9670

2 Fences will be installed along the entire length of the highway.

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CITIZEN

45 Brinton Drive
Nashua, NH 03060

January 16, 1993

Chairman of the Commision
c/o Robert W. Greer
Director of Project Development
The New Hampshire Department of Transportation
P.O. Box 483
Concord, NH 03302-0483

Dear Mr. Chairman,

As a concerned citizen of the City of Nashua and as an abutting homeowner, I want to express my concerns with the alignment of the northern terminus of the Circumferential Highway from New Hampshire Route 102 to the F.E. Everett Turnpike. The proposed northern alignment of alternative 8 violates the environmental and social/economic selection criteria set forward in the Revised Draft Environmental Impact Statement (RDEIS). When evaluating the impacts the social/economic factors were considered before the environmental. Furthermore, the alignment does not provide the service required to support the construction of the highway. The bottom line is that the "practical" alignments to the north, which terminate at Exit 10, provide a more viable solution. The balance of evaluation must be tilted in favor of the environmental impacts. The social/economic concerns cited in the RDEIS are self imposed, man-made, whereas the environmental impacts are irreversible to highway construction. 1

1. **Environment- Protection of the Public drinking water and the protection of the Pennichuck prime wetlands.** The proposed alignment 8 will pass too closely to Bower's Pond. The potential risk to the drinking water is too great. 2

The designs to mitigate the impact may address the containment of ground contaminates, but do little to contain the greater threat of air "fallout" contaminates. The Overview of Study Area Aquifers and Wells shows that the groundwater flow is from the northern terminus to the ponds. Whereas, the ground water flow is away from both Litchfield's drinking well (L14) and the aquifer below Anheuser-Busch in Merrimack. Also, the RDEIS does not contain the cumulative impact of the proposed highway alignments to the west of the northern terminus. Alignments of the 101A Bypass will impact the remaining chain of ponds to the west of Bower's Pond. I believe that the EPA is correct in its assessment that the best mitigation is to move the northern terminus a greater distance from the ponds. 3 4

4 Comment noted. All impacts are considered on an objective basis in the determination of a LEDPA. Weighted selection criteria are unacceptable by participating agencies due to the subjectivity involved in the "weighing" process.

3 Comment noted. Air fallout may affect the Pennichuck Reservoir from numerous existing sources, including both mobile and stationary sources.

3 Comment noted. Refer to the response provided for comment #77 of the Public Hearing Testimony.

4 Comment noted. Refer to the response provided for comment #8 of the Public Hearing Testimony. Since plans have been dropped indefinitely, cumulative impacts in this area are now considered to be minimal.

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5 The weighted impact of alternative 8 is greater than the practical alternatives to the north. For each key wetland identified in the RDEIS, I assigned a weighted value based on the Functions of Impacted Wetlands (see attachment 1). In this manner I calculated the value of the wetland based not only on the total acres affected but also on the functional value of the wetland. In comparison to alternative 8, the "M" alignment (northern part of the 3,5 alternative) is about 30% less damaging. The "L","O" alignment (also the 4,6 alternative) is 50% less damaging. The significance of the contrasts suggests that the U.S. Army Corps of Engineers and the State Department of Transportation (DOT) have erred in their assessment of the least environmentally damaging alternative.

Any suggestion that will diminish the weighted factor conclusions will be in violation of the regulatory authority and responsibility of the Corps of Engineers. My calculation becomes of greater value when you consider the fact that 67% of Nashua's referendum voters chose to protect the city's wetlands with an ordinance. It becomes quite obvious that the RDEIS is putting more weight on the social/economic concerns.

6 2. **Social/Economic- Predetermined alignments, Public Health, Excessive Costs.** The State DOT made a proposal based upon a predetermined alignment. The selection process narrowed the number of proposed alignments from 33 to 8. By definition these alignments are all practical alternatives. As such, each alternative can be examined in its entirety or as a segment in combination with other segments. The intent is to hopefully arrive at the least damaging alternative. Yet even after this exhaustive process the State DOT arrives at the same basic alignment which closely matches the land it acquired over the years in preparation for the construction. The State's purchase of land precedes the analysis of the RDEIS. It appears that the DOT compromised its objectivity and prejudiced the conclusions of the RDEIS. The ownership of land is not permanent and costs can be recovered. The

7 construction of alignment 8 through prime wetlands and near Bower's Pond will erode the quality of life and unnecessarily put the public health at risk. The RDEIS provides traffic statistics but does not adequately address the health risk associated with the impact to the drinking ponds. The RDEIS further calculates the environmental impact

8 based on total acres impacted and not on the functional values. Anyone can argue that the loss of a prime wetland has more social value than the loss of minor wetlands or bogs.

The construction of alternative 8 will result in a

9 substantial "S" curve, something the State DOT said in 1989 would not be practical. The proposed exit will be less than a half of a mile from exit 10, violating the DOT's own criteria because it creates a traffic safety bottle neck similar to Exit 6/7. Namely, traffic entering the turnpike

5 Assigning weights to individual wetlands was specifically avoided in the EIS, since such an exercise is arbitrary and can often obscure important information. A single number does not always accurately represent the complexity of wetland systems. Comprehensive and detailed information about each of the potentially-impacted wetlands is presented in Appendix A of the Wetlands Technical Report. The raw data is available for each reviewer to form individual conclusions about the value of these wetland systems. The weighing system used in this comment erroneously assumes an importance to the order that the functions are listed in the icon boxes. (The top row has value 3, middle row value 2, and bottom row value 1). However, the wetland functions are listed in a random order; the rows have no significance with regard to value. Weight assignments are specifically not made in the EIS. It should be noted that one function is not necessarily more valuable than another. Also, the occurrence of multiple functions does not always indicate more value. Other environmental impacts besides those to wetlands are also considered in the determination of the LEDPA such as floodplains, aquifers, wildlife, and air and noise impacts.

6 Comment noted. The alternative that is preferred by the NHDOT is not necessarily the permittable alternative under Section 404 of the CWA.

7 Comment noted. Refer to the response provided for comment #2 of the Public Hearing Testimony. The Technical Report entitled "Stormwater Runoff Quality, Hazardous Materials Spills and Their Management" addresses impacts to the Pennichuck water supply.

6 Comment noted. Under Section 404 of the CWA, only the LEDPA can be permitted. This is not based on wetland acreage alone. Functional values of wetlands are also considered. The EIS displays these for that purpose.

3 Comment noted. Refer to the responses provided for comment #6 and #7 of the Public Hearing Testimony.

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9 at Exit 9 going north would impede traffic trying to depart the turnpike at Exit 10. The cost of the mitigating designs
10 are not included in the estimated construction costs mentioned in the Summary Comparison of Impacts for Build Alternatives (Table 5). Also omitted is the cost of a pipeline from the Merrimack River to the Pennichuck Water Works; a 60% cost to the state and a 40% cost to rate payers. Choosing an alignment to Exit 10 will also avoid the cost of a new exit. These hidden costs omit facts pertinent to any decision process to assess the economic benefits to the alternatives.

The social/economic impacts of the other northern
11 alternatives is minor. The Existing Land Use and the Existing Zoning maps show that the alignment "M" is consistent with Litchfield's and Merrimack's zoning. The alignment will not divide the city of Litchfield. The alignment will pass through vacant land. These maps refute the conclusions offered in the RDEIS which provides comments only to full build alternatives. The Table 5 for the northern section shows that 3 to 4 less residences will be taken with the northern alignments vs alignment 8. If the analysis was by segment the RDEIS would have to reconsider the conclusions.

The choice of an alignment to Exit 10 will be consistent with the RDEIS data and regional planning, protect public health, provide a more safe alignment, and avoid the cost of constructing another exit.

12 3. **Highway Purpose- Failed Nodes, Flexibility for future East-West expansion, Northern Terminus at LOS F regardless of location.** After reading the Intersection Level of Service Analysis Results Circumferential Highway Alternatives (table 4, pg 19, Executive Summary), I wonder how the cost of construction will justify the results. The table lists the traffic nodes which are considered to be failed. Even after the build of alternative 8 the number of failed nodes does not change. The intersections of Lowell/Central and the Taylor Falls Bridge/NH 102 will improve. However, the traffic level will shift to fail the Henri Burque (HBW)/Concord intersection and worsen the HBW/Manchester intersection. After all the expense, the business district of Nashua will still be in grid lock at the DW Highway/Spit Brook, Amherst/Concord, and Main/Concord intersections. The table does not support the RDEIS narrative claiming a 22% improvement. What good is there to a volume reduction when the intersections are still failed. The RDEIS makes no provisions to redesigning or improving the failed nodes. Any reasonable person must question the logic of continuing with a program that will offer no benefit.

13 Alignment 8 does not provide for future east-west expansion. Alternative 8 provides no common terminus for the Route 101A Bypass, something the Legislature required in its legislation calling for the Circumferential construction. Alternatives connecting to Exit 10 will provide connection to

10 Estimates as to the cost of the project are gross estimates and are relative for each Full Build alternative. Estimating the cost of mitigation designs is premature at this time. The EIS presents general mitigation measures that can and have been proven effective. A specific mitigation plan will be agreed upon once a LEDPA is determined. At that time, an estimate as to the cost of these measures can be made. However, the costs to mitigate impacts will be roughly in the same range for each Full Build alternative. The cost of the pipeline for Alternative 7 will not noticeably increase the cost of that alternative due to the large price tag involved with the Circumferential Highway project as a whole. Refer to the response provided for comment #4 of the Public Hearing Testimony regarding the restructuring of Exit 10.

11 The analysis of alternatives was conducted by segment. Partial Build alternatives failed to meet the project purpose. Environmental as well as economic factors were considered in the analysis, and conclusions were made based on a fair and thorough analysis of all segments.

12 Comment noted. Refer to the responses provided for comments #10 of the Public Hearing Testimony, and #31 through #33 of the EPA's March 2, 1993 letter.

13 Comment noted. Refer to the response provided for comment #8 of the Public Hearing Testimony.

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13 the Camp Sargeant Road Bypass which will allow traffic to continue all the way to Amherst and avoid the Amherst Street congestion.

The RDEIS traffic studies do not adequately model the alignments which terminate at Exit 10. The argument given at the Public Hearing in Hudson, Jan 4, 1993, is that there will be no demand by travellers to go to Exit 10. These comments are not consistent with the data, since the northern terminus will be at a level of service "F" regardless of location. In order to adequately assess the contribution of a northern terminus at exit 10, the RDEIS must model the "M" segment.

Thank you for the opportunity to express my concerns. Please place this document into the public record of the hearing held on January 4, 1993 for this proposed project. I would like to receive a response to these points as soon as possible.

Sincerely,

Michael Schwed
Nashua

incl
cc: US Army Corps of Engineers, New England Division
Environmental Protection Agency
New Hampshire Wetlands Board
Nashua Conservation Commission
Mayor, City of Nashua

NOTE:
Included with Mr. Schwed's letter were photocopies of a number of figures and tables taken from the Draft EIS to illustrate some of his points. These tables / figures are included in the Public Hearing Record.

NASHUA-HUDSON CIRCUMFERENTIAL HIGHWAY: WETLANDS IMPACT
KEY WETLANDS FUNCTIONAL "WEIGHTED" VALUES

WETLAND ID	VALUE 3	2	1	LEVEL TOTAL	IMPACTED X ACRES	WEIGHTED = SCORE	ASSOCIATED ALTERNATIVE	PERCENT IMPACT
H17	3	4	4	21	6.3	132.3	ALT 8	
H15	2	2	1	11	1.5	16.5	ALT 8	
H14	2	2	1	11	2.8	30.8	ALT 8	
ALTBC6B	1	0	1	4	1.2	4.8	ALT 8	
ALTBC6A	3	2	1	14	1.2	16.8	ALT 8	
ALTBC5	1	2	3	10	0.1	1	ALT 8	
GH8	1	1	1	6	8.3 TO 10.6	49.8 TO 63.6	COMMON TO ALT 3&5 AND 4&6, 8	
L05	2	3	0	12	1.9	22.8	ALT 4 & 6	
L04A	1	2	1	8	1.4	11.2	ALT 4 & 6	
L03	1	1	0	5	0.9	4.5	ALT 4 & 6	
NM1	1	1	3	8	0.5	4	ALT 4 & 6	
L01	1	1	2	7	1.7	11.9	ALT 4 & 6	
OP1B	3	1	0	10	4	40	ALT 4 & 6	
OP2	2	1	1	9	0.2	1.8	ALT 4 & 6	
OP3	3	1	0	10	0.8	8	ALT 4 & 6	
MP1A	2	2	0	12	2.2	26.4	ALT 3 & 5	
MP1C	1	2	0	7	0.2	1.4	ALT 3 & 5	
MP2	1	1	1	6	8.7	52.2	ALT 3 & 5	
MP3	2	2	3	13	4.9	63.7	ALT 3 & 5	
TOTAL						202.2	ALT 8	-
WEIGHT						104.2	ALT 4 & 6	48.47
						143.7	ALT 3 & 5	28.93

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January 17, 1993

Dear Colonel Hughes,

This letter is written to express our concerns and objections for the Army Corps' preferred corridor for the Circumferential Highway.

Although our house will not be taken directly, we are concerned about the following:

1. The proximity of the Highway to our house.
2. The realignment of Wason Road, this will place our house on the corner of a very busy intersection.
3. Problems with drainage and run-off waters.
4. To what extent will this decrease the value of our house.

According to the drawings we are located at Parcel # 518 B.

Sincerely,

Peter and Sandra Silver
71 B Burns Hill Road
Hudson, N.H. 03051
(603) 883-4849

1 Comment noted, no response required.

2 Comment noted. Drainage is thoroughly examined in Final Design to ensure that runoff waters are properly controlled.

3 Right-of-way issues regarding acquisitions and relocations are handled by the NHDOT on a case by case basis in accordance with state and federal statutes and regulations.

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CITIZEN

January 14, 1993

U. S. Army Corp of Engineers
424 Trapelo Road
Waltham, MA 02254-9149
Attn: Ms. Theresa Flieger
198801828

RE: Circumferential Highway

Dear Ms. Flieger:

I thought I would let you know my comments on the routes chosen by the State of New Hampshire for the Circumferential Highway.

By allowing alternatives #7 and #8, these have the highest impact on hydric soils, wetlands, and key wetlands, undeveloped wildlife habitat, notable habitat, surface area aquifers, floodplains, community wells, especially in the southern section. They are also the most expensive routes.

1 I believe it would be in the environment's best interest not to build at all. According to traffic studies, it won't help the traffic anyway.

As far as the environment is concerned, the least impact is the best. Houses and business can be moved or replaced. Our wetlands and animals cannot.

Please do not allow this highway to ruin the wildlife habitat, which routes #7 & #8 show would wipe out.

Thank you.

Very truly yours,

Alan J. Simoneau
4 Homestead Lane
Hudson, NH 03051

JAN 20 1993

1 Comment noted, no response required.

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CITIZEN

DATE: 22 January 1993.

TO: Robert W. Greer: Director of Project Development State of N.H. D.O.T.
Theresa Fleiger: U.S. Army Corps. of Engineers

CC: Delbert Downing: N.H. Wetlands Board
EPA

1 I implore all of you to seriously consider NOT approving the proposed alignment of the northern section of alternative 8 for the circumferential highway. I ask that you carefully review the reasons why alternative 3/5 (exit 10) is the least environmentally damaging and most practical route.

2 I have listed below some of the reasons why 3/5 is the environmentally conscious choice. I would also like to point out that these and several other reasons in support of alternative 3/5 were brought up several times at the public hearing held on January 4 1993. No one disputed these points but local and state officials and the D.O.T. just insisted that alternative 8 is the best of all the available choices. WHY?

3 Why do our local and state officials want alternative 8, the most environmentally damaging of all alternatives? Why is the current state favored alternative 8 still being considered when the Army Corps rejected a similar route in the late 1980's because of "environmental concerns regarding the Pennichuck Wetlands?" If you have reasons why alternative 8 is better for the environment than 3/5 I would be interested in hearing them.

SUPPORT !!! VETO !!!!

Alternative 3/5 (exit 10)	Alternative 8
4a * Impacts the least amount of wetlands Note: * More than 2/3 of Nashua voters voted to protect the wetlands at a special election in January 1990	* Directly impacts an area (between Concord St. and Merrimack River) designated a "prime wetland" by the city and accepted by the State of N.H. Wetlands Board * Transverses Pennichuck Brook which is also designated a "prime wet land".
4b * Does not come anywhere near holding ponds.	* Skirts the holding ponds for Pennichuck Water Works and falls within the watershed posing a danger in the event of a toxic spill. The proximity to the fuel exhaust will deteriorate the water supply over time.
4a * Joins at exit 10, an existing exit. Saves the expense of building another exit (exit 9).	* Would bring exit 9 within one mile of exit 10 against the DOT's own criteria because it creates a traffic safety problem similar to the current exit 6/ exit 7. Traffic entering the turnpike at exit 9 going north would impede traffic trying to depart the turnpike at exit 10.

JAN 27 1993

1 Comment noted, no response required.

2 The NHDOT selects its preferred alternative based on a balance of a number of factors including socioeconomic and environmental impacts. These factors must be considered in light of the regulatory framework that exists. Additionally, the alternative must be feasible and constructable from both economic and engineering perspectives. Note that NHDOT's preferred alternative may not necessarily be the LEDPA, which is the only permittable alternative under Section 404 of the CWA. LEDPA determination will be made by the Corps after consideration of input from the public and federal, state, and local officials. The 404 permit decision follows shortly thereafter.

3 The reasons for local and state officials support of Alternative 8 are outlined in the DEIS comment letters contained within this document. The Corps did not reject any alternative in the 1980's. The alternative that was opposed by some agencies in 1984 directly crossed the Pennichuck Reservoir. Alternative 8 was designed to pass around the reservoir and holding ponds. This alternative will contain a closed drainage system in the vicinity of the reservoir to ensure maximum protection of this valuable water supply.

4 Reasons for supporting Alternatives 3 and 5 (Exit 10) are noted, with the following clarifications:

4a Alternative 6 impacts the least amount of wetlands (54 acres), not Alternatives 3 and 5. See Figure 4.14-1 in the EIS.

4b Comment noted. Refer to the response provided for comment #2 of the Public Hearing Testimony concerning the impact that Alternative 8 has on the Pennichuck Water Works.

4a Comment noted. Refer to the response provided for comment #7 of the Public Hearing Testimony for further information on the proximity of Exit 9 to Exit 10.

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SUPPORT !!!	VETO !!!
Alternative 3/5 (exit 10)	Alternative 8
4d * Does not disturb the Merrimack Fish and Game Preserve.	* Takes a major portion of land away from the Merrimack Fish and Game Preserve. One that will be next to impossible to replace.
4e * Connects to Camp Sargent Rd. Bypass creating an east/west bypass and allows traffic to continue all the way to Amherst and avoid the Amherst St. congestion.	* Provides no common terminus for the Route 101A bypass which legislation required for the Circumferential's construction. The EPA and Army Corps has already stated that routing Rt. 101A through the Pennichuck Brook west of the turnpike is unacceptable.

Sincerley,

Timothy J. Stanley

Linda M. Stanley

53 Brinton Drive
Nashua, N.H. 03060

4b Comment noted. Refer to the NHDOT letter from Assistant Commissioner Leon Kenison in response to paraphrased comments related to the Nashua Fish and Game Association. This can be found at the end of the section entitled, "Regional".

4a Comment noted. Refer to the response provided for comment #8 of the Public Hearing Testimony for information concerning the NH Route 101A bypass.

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4 Campbell Avenue
Hudson, New Hampshire 03051

Ms Terry Flieger
U. S. Army Corps of Engineers
434 Trapelo Road
Waltham, MA 02154

Dear Ms Flieger:

I attended the meeting at Memorial School in Hudson on January 4 but when I found there were 50+ people who wanted to speak I decided to write.

1 My husband and I have lived in Hudson at the same address since 1948. Hudson was lovely - cool and quiet until all the world decided to move in. We live one street back from route 111 right at the Taylor Falls Bridge so you can see that we have a vested interest in getting the Circumferential highway built - and quickly.

2 I have one concern. If circumferential means to go around then why do Hudson taxpayers have to pay to go 3A south - cross Sagamore bridge which is already there - just to get to Daniel Webster Highway in Nashua. You may or may not be aware of it by Daniel Webster has a lot of good shopping - we use it all the time. There is no charge for going over the highway at Broad Street in Nashua - or Kinsley Street - in Nashua - or Main Dunstable Road in Nashua - and all have access to the highway. What makes Hudson different?

I'm perfectly happy to pay the toll if I'm going south to Mass and using the road - but for local travel - going over an existing bridge that 's been there approximately 17-18 years doesn't make sense. Could the toll booth be placed on the Nashua side - or a lane set aside for anyone just going to Daniel Webster.

Sincerely,

Mrs. Norman L. Valley

JAN 20 1993

1 Comment noted, no response required.

3 Comment noted. Refer to the response provided for comment #31 of the Public Hearing Testimony.

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CITIZEN

Marilyn M. Wade, P.E.
123 Page Road
Litchfield, New Hampshire 03051

25 January 1993

Ms. Theresa Flieger
U.S. Army Corps of Engineers
New England Division
424 Trapelo Road
Waltham, Massachusetts 02254-9149

Dear Ms. Flieger:

Attached please find my review comments regarding the proposed Nashua- Hudson Circumferential Highway, File Number 198801828. These comments are limited given the inordinately short time allotted for review of so extensive a set of reports.

1 It is unfortunate that the DEIS for this project was released over Thanksgiving and that the public comment period was held over the Christmas and New Year's holidays, when the majority of the people to be effected were occupied with the activities of the season. While I assume this timing was not deliberate, it was certainly not conducive to full participation and dialogue among the impacted communities, and between the communities and the regulators. I certainly hope that any future attempts by the Corps to encourage public participation in the permitting process would be more appropriately timed.

Please feel free to contact me by telephone at (603)886-0748 if you have any questions regarding my comments. A written response, or a copy of any responsiveness summary prepared as part of the NEPA process would be greatly appreciated.

Sincerely,

Marilyn M. Wade

Attachment

JAN 27 1993

1 Comment noted. Refer to the response provided for comment #3 of the Conservation Law Foundation's letter.

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REVIEW OF THE REVISED DRAFT
ENVIRONMENTAL IMPACT STATEMENT
NASHUA-HUDSON CIRCUMFERENTIAL HIGHWAY
OCTOBER 1992

General Comments

2 1. The evaluation of any proposed project begins with a clear statement of the project objectives. According to the DEIS, the objectives of the circumferential highway are to "..provide a transportation improvement to assist east-west traffic movements and to reduce congestion on existing bridges and streets in and near the central business districts of Nashua and Hudson..". According to the DEIS, however, these stated objectives will not be met in the design year 2010, and in most instances will be only marginally improved over the current situation. (See Table 4, page 19 of the Executive Summary regarding levels of service with the various alternatives).

3 2. If the stated objectives are the true objectives of the project, then it is conceivable that Route 111 could become the improved and preferred east-west corridor, without the expenditure and disruption of the full build alternatives. For example, Route 111 could be improved and rerouted to connect with the Everett Turnpike as it presently does, flow south along a widened and improved Turnpike and exiting at the new Exit 2. It would then follow across the improved Sagamore Bridge, and join with the partial build to the eastern end or Route 111. The CBD portions of this east-west route through Nashua and Hudson could be eliminated by allowing only pedestrian, bus and emergency access to the Taylor Falls Bridge. As outrageous as the idea of eliminating traffic on the Taylor Falls bridge sounds, it would certainly achieve the objectives of the project in question, and could even provide quite the enterprise zone along and across the River.

1 3. The true objectives of the project appear to be stated on page 2 of the executive summary under beneficial effects, namely the "Construction of a significant piece of the long standing regional infrastructure development plan." and "Support of a planned course of lend development opportunity enabled by the project." Accelerated commercial development, in a region saturated with vacant commercial property, at the expense of wetlands, aquifers, prime farmland, and a quality of life hardly seems an appropriate or beneficial use of limited available funding. The report

1

2 Comment noted. Refer to the responses provided for comment #10 of the Public Hearing Testimony, and #23 and #31 through #33 of the EPA's March 2, 1993 letter.

3 One of the key features of the proposed Circumferential Highway is the addition of badly needed river crossings over the Merrimack River. Removing the existing Taylor Falls Bridge as an automotive crossing would work against this need. This would result in a substantial increase (approximately 50,000 more vehicles per day) in the traffic volumes on the Sagamore Bridge, and do virtually nothing to improve east-west traffic flow. In addition, the economic livelihood of downtown areas is largely keyed to good automotive access (the rise of suburban shopping malls that are designed to be friendly to automobiles is evidence of this). Closing the Taylor Falls Bridge to car traffic would likely face considerable opposition by downtown Nashua merchants and property owners. Therefore, the alternative that is suggested in this comment is not considered to be a reasonable alternative to the traffic congestion problem that presently exists in the CBD's of Nashua and Hudson. Refer to Figure 2-6 in the FEIS.

4 Comment noted, no response required.

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itself indicates that the growth will occur without the highway, only at a slower rate. Wouldn't slower development provide more opportunity for reasoned and thoughtful approaches to avoiding adverse environmental impacts?

Specific Comments

4. Are the review comments from the U.S. DOT Federal Highway Administration (FHWA) available for public review? What did the FHWA consider as the project purpose and need? When the FHWA considered the traffic model, did they evaluate the following:
   - Is the model precise and accurate? Does it have a proven usage, verified in the field?
   - Does the model appropriately represent the situation in Nashua and Hudson?
   - Is the model complete? Are all considerations accounted for, or are there a limited set of parameters that the model can evaluate?
   - Was a sensitivity analysis done on the model? What are the model inputs that most effect whether the outcome appears "reasonable"?

5. Although the DEIS claims to "fully disclose" the alternative alignments being considered, there is virtually no analysis of the TSM and (to a lesser extent) the No Build alternatives when compared to the Full Build Alternatives. The DEIS does not present convincing evidence that these two alternatives are not feasible or practicable.

6. From Table 5 of the Executive Summary, it can easily be demonstrated that alternatives other than the preferred alternative 8 have less severe environmental impacts. Several of the other alternatives have similar levels of impacts, but to different receptors. It is my opinion that alternative 5 appears to have the least overall adverse impact, if a full build alternative must be chosen. What are the criteria the Corps of Engineers will use to determine if an alternative is "practicable"? Does taking four times as many structures in order to reduce the environmental impacts constitute the impracticable? Will the Corps still consider TSM and No Build alternatives in its evaluation of what is practicable?

7. The Technical Report on Air Quality Analysis does not include either areawide or microscale emissions analysis for the two toll barriers planned for this project. Doesn't the project in effect move the emissions from the CBD areas to the toll plazas? Where the region is already in non-attainment, the additional burden of the toll traffic emissions should be fully evaluated.

8. The Technical Report regarding Stormwater Runoff Quality,

2

5 Comment noted. The secondary and cumulative development impact assessment was conducted to bring attention to those areas predicted to see increased future development. Planners and regulators should use the information in order to prepare for potential impacts in advance. Thus, reasonable and thoughtful approaches to development can be employed even though the rate of development may be somewhat accelerated.

6 The FHWA review of the traffic is included in Appendix A of the EIS. The Purpose and Need that they considered is in Chapter 1 of the EIS.

7 The Nashua regional transportation model as developed by the NRPC was reviewed in detail by transportation modeling experts at FHWA. These experts concluded that the model sufficiently and accurately represented travel in the Nashua region. All transportation models take as input population, employment, and/or land use data based on actual conditions, and are calibrated by comparing model results against actual traffic counts. This provides a level of confidence that the predicted traffic volumes in future years are accurate. Model output is checked for reasonableness before performing analysis of the output. Roadways with unreasonably high forecast traffic can be checked by determining where traffic on a particular roadway is coming from or going to and then checking that the proposed land use changes are accurate and reasonable.

8 Refer to the response provided for comment #133 of the Public Hearing Testimony.

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REVIEW OF THE REVISED DRAFT
ENVIRONMENTAL IMPACT STATEMENT
NASHUA-HUDSON CIRCUMFERENTIAL HIGHWAY
OCTOBER 1992

General Comments

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Specific Comments

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5. Although the DEIS claims to "fully disclose" the alternative alignments being considered, there is virtually no analysis of the TSM and (to a lesser extent) the No Build alternatives when compared to the Full Build Alternatives. The DEIS does not present convincing evidence that these two alternatives are not feasible or practicable.
6. From Table 5 of the Executive Summary, it can easily be demonstrated that alternatives other than the preferred alternative 8 have less severe environmental impacts. Several of the other alternatives have similar levels of impacts, but to different receptors. It is my opinion that alternative 5 appears to have the least overall adverse impact, if a full build alternative must be chosen. What are the criteria the Corps of Engineers will use to determine if an alternative is "practicable"? Does taking four times as many structures in order to reduce the environmental impacts constitute the impracticable? Will the Corps still consider TSM and No Build alternatives in its evaluation of what is practicable?

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8. The Technical Report regarding Stormwater Runoff Quality,

2

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7. The Technical Report on Air Quality Analysis does not include either areawide or microscale emissions analysis for the two toll barriers planned for this project. Doesn't the project in effect move the emissions from the CBD areas to the toll plazas? Where the region is already in non-attainment, the additional burden of the toll traffic emissions should be fully evaluated. **10**

8. The Technical Report regarding Stormwater Runoff Quality, **11**

2

9 The determination of practicability is done on a case by case basis. The definition of what is practicable is based on criteria found in Section 404(b)(1) guidelines at 40 CFR §230.10(a). This definition states that a project is practicable if it is available and capable of being done after taking into consideration costs, logistics, and existing technology in light of the overall project purpose. The Corps considers all alternatives in its evaluation of what is considered practicable.

10 Additional study has been conducted in order to determine the effect that the toll plazas have on both emissions and localized CO impacts. Refer to the response provided for comment #82 of the EPA's March 2, 1993 letter and the supporting data in Appendix A of this document.

11 The EIS presents general mitigation plans that can and have been effectively implemented. Specific mitigation plans will be considered once a LEDPA is determined. The mitigation measure most appropriate for conditions which exist will be used wherever warranted. The mitigation measures may be either proposed up front by the NHDOT or be imposed as a condition of the 404 permit.

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11 Hazardous Material Spills and Their Management refers to various engineered structures to mitigate adverse environmental impacts. In most instances, however, these engineered mitigative measures are described as "possible" measures that "could" be utilized. What assurances will be made that these engineered structures will be incorporated in all instances in order to minimize any impacts.

3

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PW6.23
1-7-93

Robert W. Greer
Director of Project Development
State of New Hampshire Dept. of Transportation
P. O. Box 483
Concord, NH 03302-0483

RECEIVED
COMMISSIONERS OFFICE
JAN 07 1993
THE STATE OF NEW HAMPSHIRE
DEPT. OF TRANSPORTATION

Dear Sir;

1 I would like to express my opposition to any plan to reconsider Alternative 7 of the Circumferential Highway Project where this highway connects with the Everett Turnpike at its northern terminus.

Three years ago I attended an informational meeting on wetlands presented by a hydrologist working in New Hampshire. I specifically asked his opinion of a proposal being then considered for a bridge crossing Pennichuck Ponds which would have drainage channels along its sides to carry away runoff.He stated that any bridge is bound to develop cracks and faults with time. My concern is that runoff from the highway carrying oil, salt and other residue from traffic, projected in the current Circumferential Highway proposal at 26,000 vehicles per day in this area, would seep through such cracks long before they are discovered by inspectors. This would carry harmful pollutants into the ponds, which are the drinking water reservoir for the City of Nashua. 2

During rainy weather and times of melting snow, traffic can splash road pollutants above barriers along a bridge and snowplows run a risk of pushing snow carrying contaminants over barriers. Airborne particles from traffic would settle into the reservoir.

Even if runoff is partially diverted through channels along the bridge, how far from the edge of the reservoir must it safely be discharged without leaching into the water supply?

In my opinion Alternative 7 would be a threat in the long run to the drinking water supply for Nashua and surrounding areas which depend upon the Pennichuck Reservoir.

3 If Alternative 7 was originally proposed to eliminate the sharp curve at the end of Alternative 8, why not lessen this curve by bringing Alternative 8 into the Everett Turnpike north of the Nashua Fish & Game Club, disrupting less of the latter's land and utilizing the already existing Interchange 10 on the Turnpike? At the public hearing in Hudson on January 4 there was considerable support for saving the Fish & Game land as well as using Interchange 10.

1 to 3 This letter reiterates the issues that Mr. Widhu raised at the Public Hearing Testimony. Refer to the responses provided for comments #150 and #151 of that testimony as well as the NHDOT letter from Assistant Commissioner Leon Kenison in response to comments related to the Nashua Fish and Game Association. This letter can be found at the end of the section entitled, "Regional".

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I realize much effort has already been put into this project, but I would appreciate your considering my input concerning this small section of the proposed alignment.

Sincerely yours,

Richard Widhu

Richard Widhu
23 Syracuse Road
Nashua, NH 03060

NOTE:
This letter was submitted to the Corps for inclusion into the record at the January 4, 1993 Public Hearing.

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1 Twenty one letters (21) were received from residents at the Village at Barretts Hill voicing similar concerns about the proposed Nashua-Hudson Circumferential Highway Alternatives 7 and 8. The following list summarizes these residents' concerns:

- The highway (Alternatives 7 and 8) will pass in close proximity to this residential area, at the minimum distance as required by law.
- Increased noise and air pollution due to constant vehicular traffic.
- A lowering of property values that are already depressed below assessed values.
- The highway will pose a safety risk to children residing in the neighborhood.
- Overall decrease in the quality of life of residents of the Village at Barretts Hill.

NOTE:
Comment letters were received from the following individuals:

Robert and Sheila Malmgren
The Nagy Family
Mr. & Mrs. Henry Valenti
Norbert & Claire Fiedemann
Mr. & Mrs. Ronald Stickney
Steven J. Donahue
Paulette Ris
Susan & Richard Nelson
Joan C. Lynde
Cheryl Daniels
Maurice & Wilma Chaput
Ken and Lisa Gogan
William A. Dempster, Jr.
Donald R. Hackert
Bill & Eileen Berry
Mark Binette
Charles & Jeannette Burke
Courtenay & Lynn Muller
Michael & Patricia Mongeau
Stephen Mather-Lee
Robert & Andrea Carabio

1 Comments noted, no response required.

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Appendix A
Nashua-Hudson Circumferential Highway
Toll Plazas: Air Quality Effects Assessment

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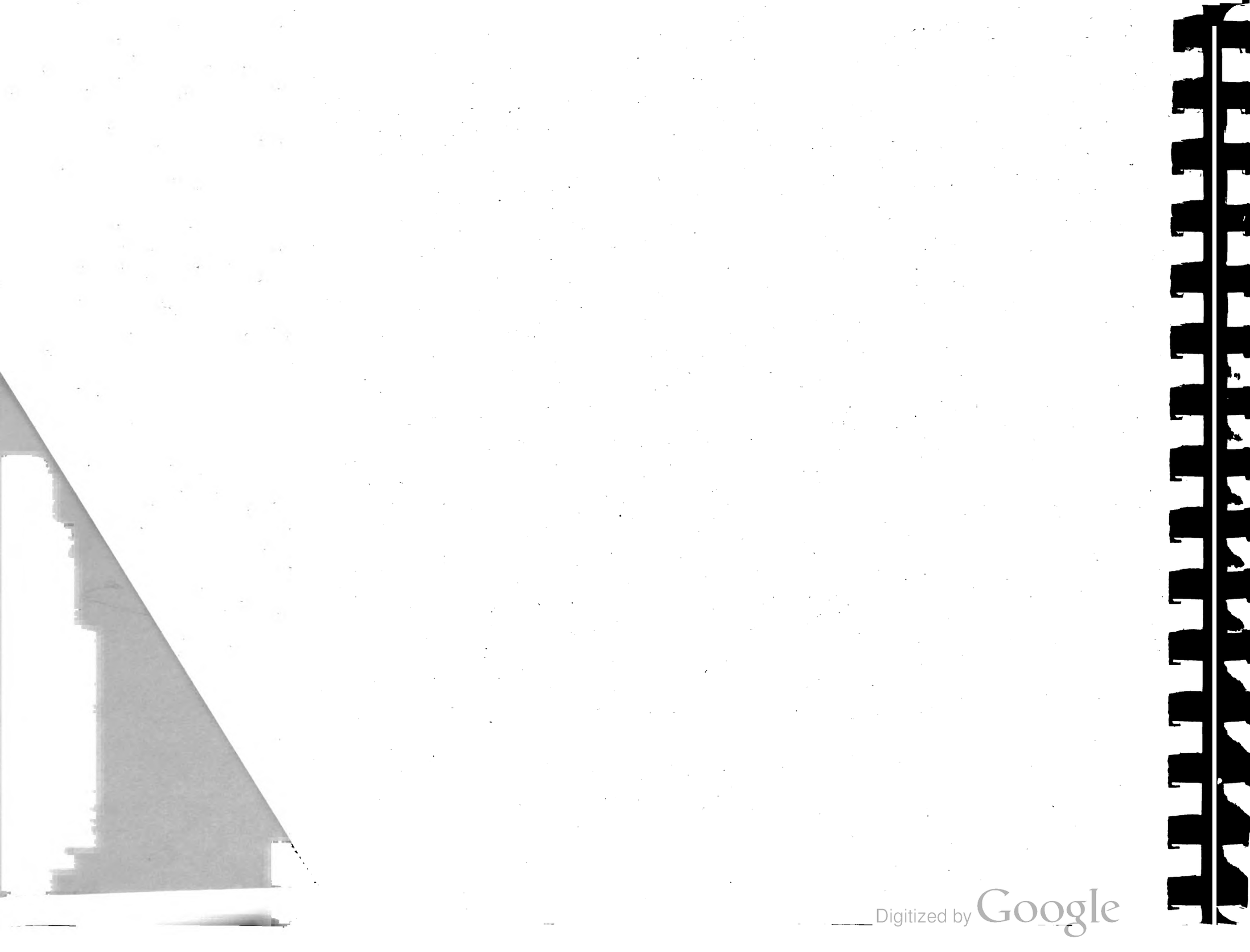
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APPENDIX A

TABLE 1

Demand Traffic Volumes for the NHCH Toll Plazas

	Peak-Hour		Eight-Hour		24-Hour	
	ALT. 7	ALT. 8	ALT. 7	ALT. 8	ALT. 7	ALT. 8
1. North Plaza						
a. 2000						
Approach, NB	1,390	1,350	7,391	7,178	13,900	13,500
On-Ramp	320	300	1,701	1,595	3,200	3,000
Exit, Total	1,710	1,650	9,092	8,773	17,100	16,500
NHCH SB	1,314	1,226	6,988	6,520	13,143	12,261
Off-Ramp	391	390	2,080	2,070	3,913	3,893
b. 2010						
Approach, NB	1,690	1,650	8,986	8,773	16,900	16,500
On-Ramp	390	360	2,074	1,914	3,900	3,600
Exit, Total	2,080	2,010	11,059	10,687	20,800	20,100
NHCH SB	1,603	1,495	8,522	7,951	16,028	14,953
Off-Ramp	477	475	2,537	2,524	4,772	4,747
2. South Plaza						
a. 2000						
Approach, SB	940	940	4,998	4,998	9,400	9,400
On-Ramp	1,250	1,260	6,646	6,699	12,500	12,600
Exit, Total	2,190	2,200	11,644	11,697	21,900	22,000
NHCH NB	1,001	1,012	5,323	5,381	10,011	10,120
Off-Ramp	1,303	1,317	6,929	7,001	13,031	13,168
b. 2010						
Approach, SB	1,140	1,150	6,061	6,115	11,400	11,500
On-Ramp	1,520	1,530	8,082	8,135	15,200	15,300
Exit, Total	2,660	2,680	14,143	14,250	26,600	26,800
NHCH NB	1,221	1,234	6,491	6,562	12,208	12,342
Off-Ramp	1,589	1,606	8,450	8,538	15,892	16,058

TABLE 2

Average Delays and Queue Lengths at NHCH Toll Plazas During Peak Hour

	Demand Volumes (veh/hr)	Average Delay (sec)	Average Queue (# veh)	No. of Booths Open
1. North Plaza				
a. 2000				
Alt. 7: Mainline	1,390	38	3.0	5
On-Ramp	320	22	1.0	2
Alt. 8: Mainline	1,350	36	2.7	5
On-Ramp	300	22	0.9	2
b. 2010				
Alt. 7: Mainline	1,690	60	5.6	5
On-Ramp	390	24	1.3	2
Alt. 8: Mainline	1,650	56	5.1	5
On-Ramp	360	23	1.2	2
2. South Plaza				
a. 2000				
Alt. 7: Mainline	940	29	1.9	4
On-Ramp	1,250	49	4.3	4
Alt. 8: Mainline	940	29	1.9	4
On-Ramp	1,260	50	4.4	4
b. 2010				
Alt. 7: Mainline	1,140	40	3.2	4
On-Ramp	1,520	83	8.8	4
Alt. 8: Mainline	1,150	41	3.3	4
On-Ramp	1,530	85	9.0	4

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APPENDIX A

TABLE 3

Estimated Maximum Eight-Hour
CO Concentrations* in the Vicinity of the
NHCH Toll Plazas

Receptor Location**		2000 ALT. 7	2000 ALT. 8	2010 ALT. 7	2010 ALT. 8
A)	NORTH PLAZA				
R1	ROW NB, 400' W of Tolls	2.7	2.6	2.6	2.6
R2	ROW NB, 200' W of Tolls	2.5	2.4	2.4	2.4
R3	ROW NB, 100' W of Tolls	2.4	2.4	2.4	2.4
R4	ROW NB, @ Toll Plaza	2.4	2.3	2.3	2.3
R5	ROW NB, 100' E of Tolls	2.4	2.3	2.3	2.3
R6	ROW NB, 200' E of Tolls	2.4	2.4	2.4	2.4
R7	ROW NB, 400' E of Tolls	2.4	2.4	2.4	2.4
R8	ROW NB, 600' E of Tolls	2.3	2.3	2.3	2.2
R9	ROW SB, Opp. Tolls	2.5	2.5	2.4	2.5
R10	Administration Bldg	2.8	2.8	2.7	2.7
B)	SOUTH PLAZA				
R1	ROW SB, 400' W of Tolls	3.4	3.4	3.5	3.6
R2	ROW SB, 200' W of Tolls	3.5	3.5	3.6	3.8
R3	ROW SB, 100' W of Tolls	3.6	3.6	3.8	4.0
R4	ROW SB, @ Toll Plaza	3.7	3.7	3.9	4.1
R5	ROW SB, 100' E of Tolls	3.7	3.8	4.0	4.2
R6	ROW SB, 200' E of Tolls	3.7	3.7	3.9	4.0
R7	ROW SB, 400' E of Tolls	3.5	3.5	3.6	3.7
R8	ROW SB, 600' E of Tolls	3.3	3.3	3.4	3.5
R9	ROW NB, Opp. Tolls	2.9	3.0	3.0	3.1
R10	Administration Bldg	3.9	4.0	4.2	4.4

* Concentrations are in parts per million (ppm). The state and Federal eight-hour standard is 9 ppm.

** See Figures 1 and 2 for locations of receptors with respect to the toll plazas.

TABLE 4

Estimated Maximum One-Hour
CO Concentrations* in the Vicinity of the
NHCH Toll Plazas

Receptor Location**		2000 ALT. 7	2000 ALT. 8	2010 ALT. 7	2010 ALT. 8
A)	NORTH PLAZA				
R1	ROW NB, 400' W of Tolls	4.5	4.4	4.5	4.4
R2	ROW NB, 200' W of Tolls	4.3	4.2	4.3	4.2
R3	ROW NB, 100' W of Tolls	4.2	4.1	4.2	4.1
R4	ROW NB, @ Toll Plaza	4.1	4.0	4.2	4.0
R5	ROW NB, 100' E of Tolls	4.1	4.0	4.1	4.0
R6	ROW NB, 200' E of Tolls	4.2	4.1	4.2	4.0
R7	ROW NB, 400' E of Tolls	4.2	4.1	4.2	4.0
R8	ROW NB, 600' E of Tolls	4.0	3.9	4.0	3.9
R9	ROW SB, Opp. Tolls	4.4	4.3	4.4	4.2
R10	Administration Bldg	4.7	4.6	4.8	4.6
B)	SOUTH PLAZA				
R1	ROW SB, 400' W of Tolls	5.6	5.6	5.8	5.8
R2	ROW SB, 200' W of Tolls	5.8	5.8	6.1	6.2
R3	ROW SB, 100' W of Tolls	6.0	6.0	6.4	6.5
R4	ROW SB, @ Toll Plaza	6.1	6.2	6.5	6.6
R5	ROW SB, 100' E of Tolls	6.3	6.3	6.8	6.9
R6	ROW SB, 200' E of Tolls	6.2	6.2	6.7	6.8
R7	ROW SB, 400' E of Tolls	5.8	5.8	6.2	6.3
R8	ROW SB, 600' E of Tolls	5.5	5.5	5.8	5.8
R9	ROW NB, Opp. Tolls	5.0	5.0	5.2	5.2
R10	Administration Bldg	6.6	6.6	7.1	7.2

* Concentrations are in parts per million (ppm). The state and Federal one-hour standard is 35 ppm.

** See Figures 1 and 2 for locations of receptors with respect to the toll plazas.

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APPENDIX A

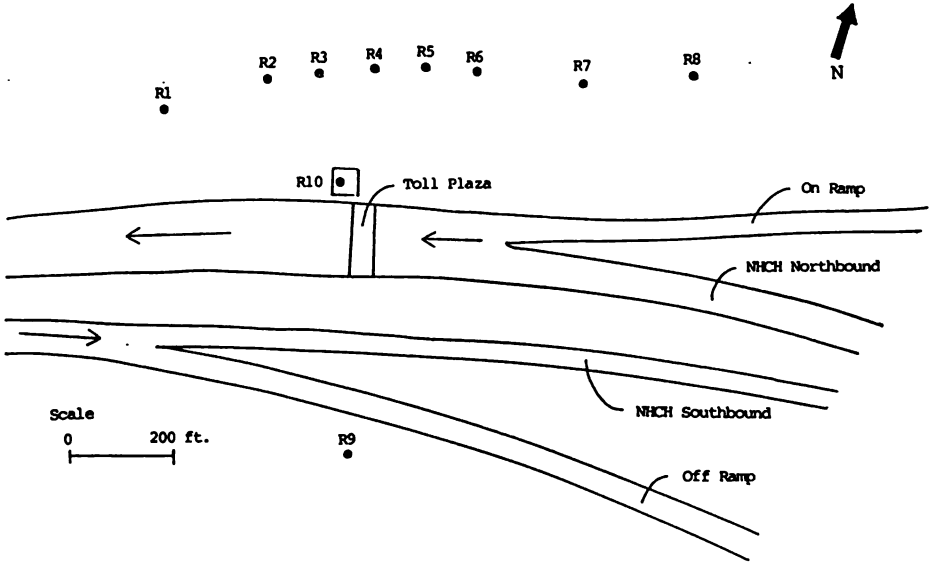

FIGURE 1
NHCH NORTHBOUND TOLL PLAZA SHOWING LOCATIONS OF AIR QUALITY RECEPTORS

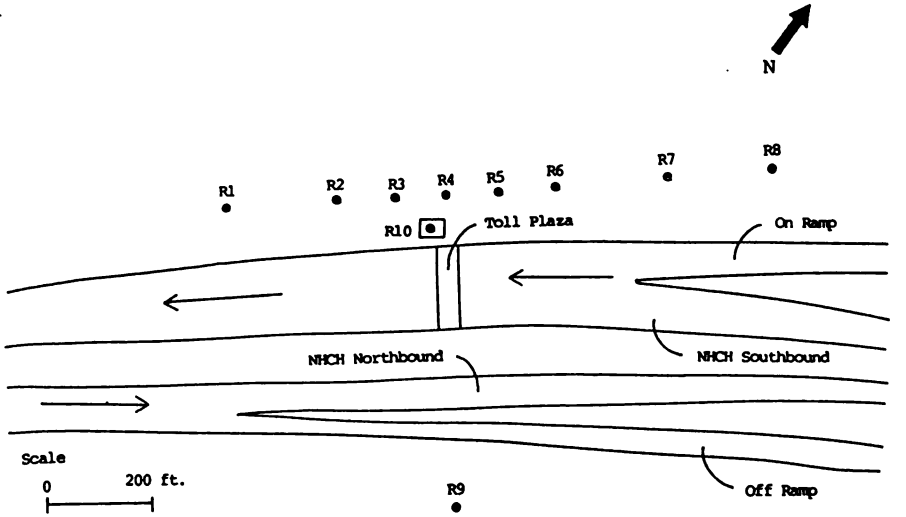

FIGURE 2
NHCH SOUTHBOUND TOLL PLAZA SHOWING LOCATIONS OF AIR QUALITY RECEPTORS

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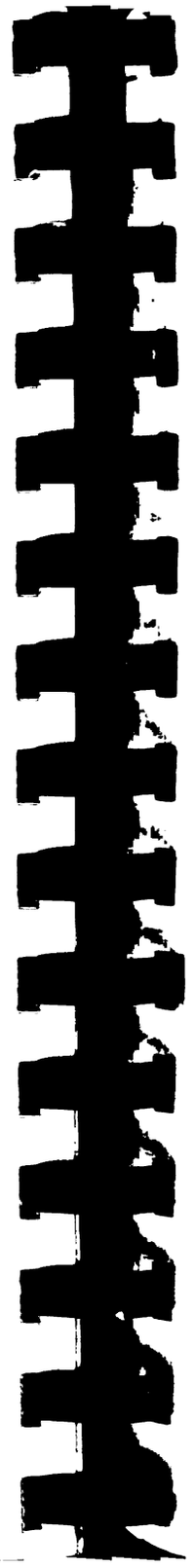

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