

## **NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION PROCESS FOR MUNICIPALLY-MANAGED STATE HIGHWAY AID PROGRAM PROJECTS**

The design and construction of municipally-managed State Highway Aid Program projects must comply with certain requirements in order to receive State Highway Aid under the applicable provisions of NH RSA 235. The municipality shall apply for this Highway Aid on NH Department of Transportation (NHDOT) form titled “Application for State Highway Aid Construction or Reconstruction of Class I, II, and III Highways” available from the NHDOT Bureau of Planning and Community Assistance or District maintenance office. The form is also available on NHDOT’s website ([www.nhdot.com](http://www.nhdot.com)).

Under the municipally-managed process, a municipality has two options available to conduct the preliminary and construction engineering phases of the work.

### **Design Phase**

1. Preliminary engineering and construction engineering may be performed with municipal staff, provided the designer is a Licensed Professional Engineer registered in the applicable branch classification (e.g. Civil Engineer) or
2. The municipality may hire a consultant based on a qualification selection procedure per RSA 21-I:22. The municipality shall provide complete documentation of the selection process and subsequent fee negotiations (see **Attachment A** for generalized procedure).
3. The design shall be in accordance with “Design Procedures for Municipally-Managed State Highway Aid Program Projects” (**Attachment B**).

### **Construction Phase**

The municipality shall contract out the work by the competitive bid process. In general, this process will encompass the following steps and required procedures:

1. Upon receipt of NHDOT approval of final design plans, the municipality may proceed with advertising the work for bid with a copy of the bid advertisement sent to the Municipal Highways Engineer at NHDOT Bureau of Planning and Community Assistance. Potential bidders shall be required to meet established qualification standards in order to be an approved bidder on the project.
2. Upon receipt of bids, the municipality shall submit a tabulation of bids received to the Municipal Highways Engineer at NHDOT Bureau of Planning and Community Assistance for approval of the award to the low bidder.
3. The municipality shall provide on-site construction inspection by qualified personnel. In consultation with the municipality, NHDOT may direct that this inspection or a portion thereof be conducted under the direction of a Licensed Professional Engineer. It is further anticipated that District personnel will inspect the project periodically to observe progress and compliance with contract requirements.

## **REIMBURSEMENT**

### **General**

Under this process, State Highway Aid reimbursement to a municipality shall be at the rate of two-thirds (2/3) of all qualifying costs. These costs may include preliminary engineering, environmental analysis, right-of-way acquisitions, construction engineering, and construction.

Reimbursement shall be in the following manner:

#### **Design Costs**

NHDOT will reimburse the municipality two-thirds (2/3) of design costs incurred that are deemed appropriate and within an acceptable range for the type and magnitude of the designed project or are otherwise justifiable in the opinion of NHDOT. Reimbursement will occur after approval of the finalized plans and specifications and submittal of "municipality-paid" invoices if consultant designed or submission of staff-related charges if designed by the municipality.

#### **Construction Costs**

- A. Upon approval of award to the low bidder, NHDOT will reimburse the municipality one-half (1/2) of the State's two-thirds (2/3) share of the contract award.
- B. Upon final completion of the work and NHDOT inspection for conformity with the approved plans and specifications, NHDOT will reimburse the balance of the State's Share of qualifying costs. Reimbursement will be based on "Paid by municipality" invoices to the Contractor. Only work included in the approved bid documents as participating elements or extra work orders approved by NHDOT shall qualify for reimbursement.

#### **Construction Engineering Costs**

Qualifying costs for construction engineering whether provided by municipal staff or consultant services, to include shop drawing, fabrication and falsework review, laboratory and field testing of materials, and construction inspection, shall be reimbursed at the rate of two-thirds (2/3) of costs incurred, provided they do not exceed the acceptable range of costs for a project of this type and magnitude or type of services provided, or are otherwise justifiable in the opinion of NHDOT.

#### **Miscellaneous Costs**

Costs incurred in the production of contract plans and proposals, advertisement for bid, and property rights-of-way to include appraisals, land damages, deed preparation and recording fees at the County Registry of Deeds qualify for reimbursement if deemed reasonable by NHDOT.

#### **Consultant and Contractor Evaluations**

NHDOT engages many consultants and contractors to perform work. In order to maintain a level of quality, NHDOT prepares performance evaluations of these firms. This material

assists in determining on an annual basis whether these firms should continue to be classified as qualified to provide services to NHDOT.

In order to expand our information base and to provide some insight to a municipality on prospective consultant or contractor providers, we ask that the performance evaluation forms provided in **Attachment C** be completed at completion of services and submitted to NHDOT's Assistant Director of Project Development. Your cooperation in this regard is appreciated.

The information gathered is considered confidential. Access to the submitted evaluations through NHDOT will be limited to a categorization of the assessed performance without provision of the actual written report. Municipalities may contact NHDOT's Contracts Administration Office at (603) 271-3466 for this information. NHDOT will indicate the source of the evaluations by municipality so that others may consult with them regarding their experience with consultant or contractor providers.

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**ATTACHMENT A**

**CONSULTANT SELECTION PROCESS  
FOR SPONSOR-MANAGED  
STATE HIGHWAY AID PROGRAM PROJECTS**

Selection of a consultant to provide design services (see **Attachment B**) will comply with RSA 21 I:22.

Firms to be considered for selection must demonstrate experience in the discipline required and have a licensed professional engineering or architect staff registered in the State of New Hampshire in the branch classification required.

A minimum of three firms shall be selected to provide a brief technical proposal which should address the following issues: Firm qualifications, project understanding, project approach, project schedule and resumes of the project design team to be assigned to the project. This procedure may be supplemented with an interview of the firms being considered. Solicitation of the Request for Proposal (RFP) should include a description of the anticipated scope of work.

The above selection process may be waived upon approval by NHDOT if the municipality has staff qualified to do the design or the municipality has a firm meeting the noted requirements under contract and selection for those services conformed to the procedure herein.

Upon review of the RFP's and conducting of interviews, if so used, the municipality's selection committee shall rate the firm in order of preference. The top-rated firm shall be notified of its standing and be requested to submit a fee proposal for services. The municipality shall provide the top-rated firm with a copy of **Attachment B**, "Design/Environmental Analysis Procedures for Municipally-Managed State Highway Aid Program Projects", to ensure that the consultant understands the level of design detail and submittal requirements for NHDOT approval.

Should the municipality be unsuccessful in reaching a satisfactory negotiated fee with the top-rated firm, they may terminate without prejudice and commence negotiations with the second rated firm. If no agreement can be reached with the second firm, the municipality may move onto the third. Once negotiations are terminated with a firm, negotiations may not be reopened.

A copy of the negotiated contracted fee should be submitted to NHDOT prior to execution so that it may advise the municipality of any provisions or excess costs not qualifying for reimbursement.

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**ATTACHMENT B**

**DESIGN/ENVIRONMENTAL ANALYSIS PROCEDURES  
FOR MUNICIPALLY-MANAGED  
STATE HIGHWAY AID PROGRAM PROJECTS**

**1. Purpose**

These instructions cover administrative procedures applicable to all State Highway Aid projects designed by licensed professional engineers for municipally-managed projects. All studies and plans shall be submitted through the municipality to the Municipal Highways Engineer at NHDOT Bureau of Planning and Community Assistance for review and approval.

**2. Engineering Study**

The municipality's engineer or consultant shall prepare an Engineering Study for the project to include the following:

**A. Existing Conditions**

This section shall contain a description of the existing roadway to include travel way and shoulder width and general alignment of the approach roadway, including any significant geometric or topographical conditions.

**B. Design Criteria**

This section shall contain a listing of the relevant design criteria and manuals to be used, including design speed and traffic data. At a minimum, the design of roadway elements shall conform to the current standards, specifications, policies and guidelines enumerated in the Department's Highway Design Manual and Bridge Design Manual, except as approved. Further, the contract documents for construction of the project shall require that all items of work shall comply with the material and construction requirements of the current Standard Specification for Road and Bridge Construction of the New Hampshire Department of Transportation, except as approved.

**C. Alternative Roadway Alignments**

This section shall include a description of the methodology and reasoning used to determine each proposed roadway alignment alternative studied. The discussion shall include horizontal and vertical curves; travel way and shoulder widths; and impacts of each proposed roadway alignment, to include wetlands, utilities, other existing structures, and private property. For intersection projects, capacity, sight distance, storage and queue length calculations shall be included. The municipality's engineer or consultant shall make a recommendation, based on the studies and his professional judgment, as to which alternative should be advanced for final design.

#### **D. Boring Layout and Logs**

Borings shall be taken if determined necessary by the municipality's engineer or consultant. The number and content of the boring logs shall be sufficient to present a reasonably accurate picture of subsurface conditions.

#### **E. Cost Estimate**

An itemized cost estimate shall be furnished for each proposed alternative roadway alignment. Item numbers and names shall conform to the Item Description Master File as furnished by NHDOT.

#### **F. Environmental Considerations**

The Engineering Report should identify the natural, cultural, social and economic resources that may be affected by each of the alternatives considered. The final design should comply with applicable environmental laws, rules, regulations, and guidelines regarding, but not necessarily limited to RSA 482-A (NH Fill and Dredge in Wetlands Act), RSA 227-C:9 (Directive for Cooperation in the Protection of Historic Resources), and Section 404 of the Clean Water Act (Federal Dredge and Fill Permit). Federal involvement in a project (e.g. Section 404 Permit) can trigger other Federal environmental regulations or requirements.

To facilitate compliance with RSA 227-C:9, the municipality's engineer or consultant should, early in the Engineering Study Phase, schedule an initial meeting with the NH Division of Historical Resources (NHDHR) to identify potential historical or archeological concerns. To assist all participants in the process, that meeting should be scheduled through NHDOT's Bureau of Environment Cultural Resources Manager (Telephone 271-3226), as part of the NHDHR's attended bimonthly meetings conducted at NHDOT to review cultural resource issues on a multitude of projects.

The municipality's engineer or consultant is advised to describe the scope of the project and bring pictures of not only the bridge, but also of the property in the four quadrants that might be affected by the project construction. NHDHR can then advise the municipality's engineer or consultant of concerns they may have regarding potential historical or archeological issues. Results of the meeting may require engagement of one or more cultural resource sub-consultants to research and provide pertinent information in compliance with RSA 227-C:9, leading to additional meetings with NHDHR or a determination made that no further contact is required as there is no affect on cultural resources.

A list of State and Federal environmental regulations/requirements that may be applicable is provided at the end of **Attachment B**.

### **3. Concept Plans (30%)**

Concept plans for each alternative studied shall be submitted to NHDOT for review. These plans shall include, but not be limited to:

- a) General plan with alignment, lane widths, shoulder widths, taper rates, turning radii, pavement striping, driveway and access work limits, slope lines, traffic data, existing and proposed right-of-way and easements.

- b) Profiles of all affected roads showing existing and proposed grades. Proposed vertical alignments will show vertical curve lengths and “k” values as well.
- c) Cross-sections at critical or controlling locations.

NHDOT will decide at this stage which design alternative will be advanced to final design.

#### **4. Preliminary Plans (60%)**

Preliminary plans for the approved concept, which may later be incorporated into the final plans, shall include, but not be limited to:

- a) Front sheet with location map and layout
- b) Typical section of improvement
- c) General construction plans including pavement marking, drainage and utility relocations
- d) Signalization plan if required
- e) Documentation of drainage design
- f) Erosion control measures
- g) Right-of-Way acquisition plan sheets
- h) Profiles of all roadways affected by the project
- i) Boring locations and logs if available
- j) Description and prosecution of work and traffic control plan
- k) Cross-sections

#### **5. Finalized Plans and Contract Proposal (95%)**

Following review of the Preliminary Plans by NHDOT, finalized plans and contract proposal, including specifications, shall be prepared and submitted to NHDOT for review and approval. This submission shall include an up-dated quantity list, a cost estimate, and a copy of the required permits (e.g. Wetlands Board, EPA, etc.).

Before finalized plans and contract proposals are submitted, they shall be independently checked in detail by a highway designer other than the original designer, and reviewed by the municipality’s or consultant’s supervising engineer in responsible charge of the project.

The municipal engineer’s or consultant’s licensed professional engineer’s stamp for the State of New Hampshire shall appear on the plans and contract proposal to be advertised. The stamp shall be that of the professional engineer who prepared the plans and contract proposal or under whose direct supervisory control they were prepared.

## **6. Construction Services**

The consultant shall render services to the municipality including, but not restricted to, the following:

### **A. Consultation**

If and when required during the construction of the project, the consultant shall provide general consulting services and advice and review of all detail construction drawings.

### **B. Checking Shop Drawings, Interpretation, etc.**

- 1) Review, check and approve all working drawings prepared by others to include the construction contractors or their subcontractors.
- 2) Render interpretations, as necessary, of the drawings and specifications and submit recommendations for necessary modifications in either or both to meet unanticipated construction conditions and prepare necessary drawings and specifications to cover same.
- 3) Prepare such detailed drawings as may be needed to supplement the contract drawings to permit the proper completion of the project.

### **C. Field Inspection Services - if not performed by the municipality**

## **7. As-Built Plans**

The municipality's engineer or consultant shall submit one (1) set of reproducible as-built plans (sepias not acceptable) to the Municipal Highways Engineer at NHDOT Bureau of Planning and Community Assistance. The as-built plans will be due following NHDOT approval of the completed construction work and prior to the municipality's reimbursement for the State's share of construction costs.



## **State & Federal Environmental Regulations/Requirements**

### **State**

1. NH Dredge & Fill Permit (Wetlands) RSA 482-A
2. Water Quality Certificate (Section 401)
3. Coastal Zone Management Consistency
4. NH Rivers Management & Protection Program
5. NH Lakes Management & Protection Program
6. NH Shoreland Protection Act
7. NH Native Plant Protection Action of 1987
8. NH Endangered Species Conservation Act of 1979
9. Directive for Cooperation in the Protection of Historic Resources RSA 227-C:9
10. Public Waters Access Advisory Board

### **Federal**

1. National Environmental Policy Act
2. Federal Highway Administration (FHWA) Env. Regs. 23 CFR 771, 772
3. FHWA Technical Advisory T6640.8A
4. Section 4(f), DOT Act
5. Uniform Relocation Assistance and Real Property Acquisition Act of 1970
6. Title VI of Civil Rights Act of 1964/Executive Order 12898
7. Surface Transportation and Uniform Relocation Assistance Act of 1987; Section 123(f) (Historic Bridges); Section 130 (Wildflowers)
8. Safe Drinking Water Act
9. Sections 106/110 of the National Historic Preservation Act
10. Wild & Scenic Rivers Act
11. Land and Water Conservation Fund Act (Section 6f)
12. Executive Order 11990 (Protection of Wetlands)
13. Rivers and Harbors Act of 1899
14. Federal Water Pollution Control Act (1972), as amended by Clean Water Act
15. Executive Order, 11988 (Floodplain Management)
16. National Flood Insurance Act
17. Coastal Zone Management Act
18. Farmland Protection Policy Act of 1981
19. Resource Conservation and Recovery Act of 1976 (Haz. Waste)
20. Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Haz. Mats.)
21. Superfund Amendments and Reauthorization Act (Haz. Waste)
22. Endangered Species Act of 1973
23. Fish and Wildlife Coordination Act
24. Clean Air Act

Other regulations/requirements may also apply, during project development (pre-construction), construction or post-construction (maintenance).

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**ATTACHMENT C**

**TOWN/CITY OF \_\_\_\_\_  
CONSULTANT PERFORMANCE EVALUATION**

**Project Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Project Number:** \_\_\_\_\_

**Project Description:** \_\_\_\_\_

**Town/City Project Manager:** \_\_\_\_\_

**Consultant Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Consultant Lead Person:** \_\_\_\_\_

**Type of Work:** \_\_\_\_\_

**A. General:**

**Organization and Management**

NOTE: Additional remarks required for all items rated as "Below Expectations".

	Expectations			Comments
	Above	Meets	Below	
1. Technical Capability of Personnel				
2. Adequacy of Supervision				
3. Communication and Cooperation with Municipality				
4. Attitude Toward the Project				
5. Invoicing				
6. Administration of Subconsultants				
7. Anticipate and Resolve Design Issues				

**Comments:** \_\_\_\_\_

8. Did the Consultant file any extras? (Provide brief explanation for all extras.)

**Comments:** \_\_\_\_\_

9. Indicate below the names of any of the consultant's employees whose performance was outstanding on this project and what their contribution was. Similarly, indicate the names of those whose performance was below expectations and in what way.

**Comments:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**B. Design Services:** Ratings and comments should consider completeness, timeliness, accuracy, and quality (ability to anticipate and resolve design issues) of submissions.

Expectations

	Above	Meets	Below	Comments
Support for Environment Process				
Conceptual Alternatives				
Engineer Report				
Public Participation Support				
Preliminary Plans				
Final Plans				
Bid Phase				
Construction Services				

**Comments:** \_\_\_\_\_  
\_\_\_\_\_

**Evaluation Submitted By:**

\_\_\_\_\_ Date: \_\_\_\_\_  
Town/City Project Manager

\_\_\_\_\_ Date: \_\_\_\_\_  
Chairman, Board of Selectmen/Town or City Manager

**Consulting Firm** (Attach responses or comments if appropriate)

**Comments:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*I/We acknowledge that I/we have read this report and have discussed it with the municipality.  
My/Our signature(s) does not necessarily mean that I/we agree with the report.*

Project Manager: \_\_\_\_\_ Date: \_\_\_\_\_

Principal: \_\_\_\_\_ Date: \_\_\_\_\_

Mail to: Asst. Director of Project Development, NHDOT  
PO Box 483, Concord, NH 03302-0483

**ATTACHMENT C**

**TOWN/CITY OF \_\_\_\_\_  
CONTRACTOR PERFORMANCE EVALUATION**

**Date:** \_\_\_\_\_

**Contractor:** \_\_\_\_\_  
Name

\_\_\_\_\_ Address

**Contract Administrator:** \_\_\_\_\_  
Name

**Project Name:** \_\_\_\_\_ **Project Number:** \_\_\_\_\_

**Type of Project:** Road  Signals  Bridge  Other \_\_\_\_\_

**Original Contract Amount:** \_\_\_\_\_ **Contract Completion Date:** \_\_\_\_\_

**Project Start Date:** \_\_\_\_\_ **Project Completion Date:** \_\_\_\_\_

**Extension Date Granted:** \_\_\_\_\_ **Over/Under:** \_\_\_\_\_

If contract over-ran in time, was it due to the fault of the Contractor? Yes  No

If yes, briefly give the reason/s why: \_\_\_\_\_

Check Correct Response	Above Expectations			Met Expectations			Below Expectations			Comments (See back)
Quality of Work										
Public Relations/General Attitude										
Organization & Personnel										
Contract Compliance										
Equipment Amount/Condition										
Supervision										
Cooperation										
Payment of Accounts										
Subcontractor Performance										

\_\_\_\_\_  
Contract Administrator/Date  
(Consultant Resident Engineer)

\_\_\_\_\_  
Consultant Project Manager/Date

\_\_\_\_\_  
Town/City Project Manager, Town/City Manager,  
Chairman Board of Selectmen

Mail to: Asst. Director of Project Development, NHDOT  
PO Box 483, Concord, NH 03302-0483