



THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION



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Victoria F. Sheehan
 Commissioner

William Cass, P.E.
 Assistant Commissioner

Bureau of Highway Design
 March 16, 2018

His Excellency, Governor Christopher T. Sununu
 and the Honorable Council
 State House
 Concord, New Hampshire 03301

REQUESTED ACTION

Authorize the Department of Transportation to enter into an Agreement with the firm of GM2 Associates, Inc., Concord, NH, Vendor #163283, for an amount not to exceed \$1,698,325.32, for preliminary design services for the reconstruction of the unimproved 1.7 mile segment of NH 125 between Old County Road in the Town of Plaistow and Newton Junction Road in the Town of Kingston, effective upon Governor and Council approval, through May 31, 2020. 100% Federal Funds.

Funds to support this request are available in the following account in State FY 2018 and FY 2019, and are contingent upon the availability and continued appropriation of funds in FY 2020, with the ability to adjust encumbrances between State Fiscal Years through the Budget Office, if needed and justified:

	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>
04-096-96-963515-3054 Consolidated Federal Aid			
046-500464 Gen Consultants Non-Benefit	\$136,000.00	\$816,000.00	\$746,325.32

EXPLANATION

The Department requires professional engineering, environmental, and public involvement consulting services to re-evaluate the previously-conducted environmental review for the reconstruction of the unimproved 1.7 mile segment of NH 125 between Old County Road in the Town of Plaistow and Newton Junction Road in the Town of Kingston. The purpose of the project is to develop an alternative that will improve the safety and traffic operations of NH 125, while minimizing impacts on natural, cultural, and socio-economic resources. A preliminary design for this segment was developed for the Final Plaistow-Kingston 10044B Environmental Assessment/4(f) Evaluation in October 2005. Because the traffic growth anticipated by the Environmental Assessment has not occurred, the objectives of the engineering effort will be to reevaluate the recommendations of the Environmental Assessment in light of current traffic volumes and revised future projections, to modify the proposed action as appropriate for mobility along NH 125 as well as safe and efficient access to abutting properties, and to advance the project through preliminary and final design. As the development of improvement alternatives proceeds, it will be crucial to work closely with all appropriate public and private stakeholders through additional public outreach to gain consensus on design decisions. This project will require both Part "A" (Preliminary Design) and Part "B" (Final Design) services. This agreement is for Part "A" only. Upon completion of Part "A" services, the Department reserves the right to either negotiate a scope and fee for Part "B", or terminate the contract. This project is included in the State's Ten-Year Transportation Improvement Plan (Plaistow-Kingston X-A0003(378) 10044E).

The consultant selection process employed by the Department for this qualifications-based contract is in accordance with RSAs 21-I:22, 21-I:22-c, 21-I:22-d, 228:4 and 228:5-a, and all applicable Federal laws and the Department's "Policies and Procedures for Consultant Contract Procurement, Management, and Administration" dated August 25, 2017. The Department's Consultant Selection Committee is a standing committee that meets regularly to administer the process and make determinations. The Committee is comprised of the Assistant Director of Project Development (Chair), the Chief Project Manager, the Administrators of the Bureaus of Highway Design, Bridge Design, Environment, and Materials and Research, and the Municipal Highways Engineer.

The consultant selection process for this qualifications-based contract was initiated by a solicitation for consultant services for Plaistow-Kingston 10044E Reconstruct NH 125 from south of Plaistow town line northerly approximately 1.7 miles (Preliminary Design Part "A"). The assignment was listed as a "Project Soliciting for Interest" on the Department's website on January 18, 2017 asking for letters of interest from qualified firms. From the list of firms that submitted letters of interest, the Committee prepared a long and then short list of Consultants on March 9, 2017 for consideration and approval by the Assistant Commissioner. Upon receipt of that approval, three shortlisted firms were notified on March 29, 2017 through a technical "Request for Proposal" (RFP). Committee members individually rated the firms on May 11, 2017 using a written ballot to score each firm on the basis of comprehension of the assignment, clarity of the proposal, capacity to perform in a timely manner, quality and experience of the project manager and the team, previous performance, and overall suitability for the assignment. (A compilation of the completed individual rating ballots and the ranking summary form is attached.) The individual rankings were then totaled to provide an overall ranking of the three firms, and the Committee's ranking was submitted to the Assistant Commissioner for consideration and approval. Upon receipt of that approval, the short listed firms were notified of the results and the highest-ranking firm was asked to submit a fee proposal for negotiations.

The long list of seven consultant firms that were considered for this assignment, with the three short-listed firms shown in bold, is as follows:

Consultant Firm

Office Location

Allen & Major Associates, Inc.

Manchester, NH

Beta Group, Inc.

Manchester, NH

CLD Consulting Engineers, Inc.

Manchester, NH

GM2 Associates, Inc.

Concord, NH

Louis Berger U.S., Inc.

Manchester, NH

TEC, Inc.

Hampton, NH

Vanasse Hangen Brustlin, Inc.

Bedford, NH

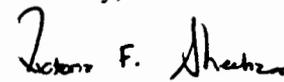
The firm of GM2 Associates, Inc. was recommended for this contract. This firm has an excellent reputation and has demonstrated their capability to perform the required services. Background information on this firm is attached.

GM2 Associates, Inc. has agreed to furnish the professional engineering services for an amount not to exceed \$1,698,325.32. This is a reasonable fee and is commensurate with the complexity of the project and the scope of the engineering and technical services to be furnished. This project funding is 80% Federal funds with 20% State match. Turnpike toll credit is being utilized for New Hampshire's match requirement, effectively using 100% federal funds.

This Agreement has been approved by the Attorney General as to form and execution. The Department has verified that the necessary funds are available. Copies of the fully-executed Agreement are on file at the Secretary of State's Office and the Department of Administrative Services, and subsequent to Governor and Council approval will be on file at the Department of Transportation.

It is respectfully requested that authority be given to enter into an Agreement for consulting services as outlined above.

Sincerely,



Victoria F. Sheehan
Commissioner

Attachments

ARCHITECT ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)

PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

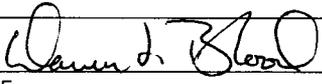
2a. FIRM (OR BRANCH OFFICE) NAME GM2 Associates, Inc.			3. YEAR ESTABLISHED 1988	4. DUNS NUMBER 794-090-464
2b. STREET 197 Loudon Road, Suite 310			5. OWNERSHIP a. TYPE Corporation	
2c. CITY Concord	2d. STATE NH	2e. ZIP CODE 03301		
6a. POINT OF CONTACT NAME AND TITLE Darren Blood, Director of Engineering			b. SMALL BUSINESS STATUS SBE/MBE Certified	
6b. TELEPHONE NUMBER 603-856-7854		6c. E-MAIL ADDRESS dblood@gm2inc.com		
8a. FORMER FIRM NAME(S) (if any)			8b. YR. ESTABLISHED	8c. DUNS NUMBER
N/A				

9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH			
02	Administrative	5		B02	Bridges	6
12	Civil Engineer	9		C10	Low Rise Buildings	3
15	Construction Inspector	9		C15	Construction Management	5
21	Electrical Engineer	1		H07	Highways, Parking Lots	4
32	Hydraulic Engineer	2		L02	Land Surveying	2
34	Hydrologist	1		P05	Planning	1
38	Land Surveyor	9	3	R06	Rehabilitation	1
48	Project Manager	1	1	T02	Inspection Services	5
57	Structural Engineer	23	3	T03	Traffic & Transportation Engineering	3
60	Transportation Engineer	4	1	T04	Topographic Surveying	3
	Other Employees					
Total		64	8			

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right)		PROFESSIONAL SERVICES REVENUE INDEX NUMBER			
a. Federal Work	0	1. Less than \$100,000.	6. \$2 million to less than \$5 million	7. \$5 million to less than \$10 million	8. \$10 million to less than \$25 million
b. Non-Federal Work	7	2. \$100,000 to less than \$250,000	9. \$25 million to less than \$50 million	10. \$50 million or greater	
c. Total Work	7	3. \$250,000 to less than \$500,000			
		4. \$500,000 to less than \$1 million			
		5. \$1 million to less than \$2 million			

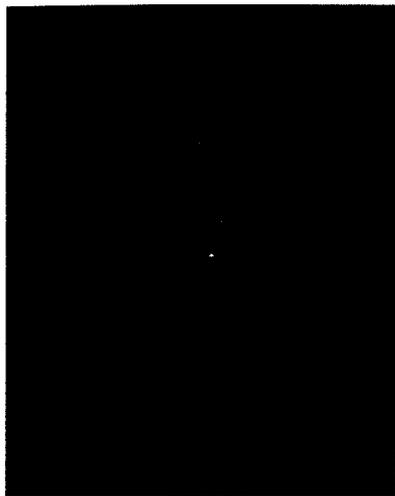
12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE December 5, 2016
c. NAME AND TITLE Darren L. Blood, PE Director of Engineering	

Darren Blood, PE

Regional Director of Northern New England, Vice President



ASSIGNMENT:

Project Manager

EDUCATION:

B.S. Civil Engineering, University of Hartford – 1993

CERTIFICATIONS:

NHDOT Local Public Agency Training #1007
MEDOT Local Project Administration Training
NCEES Certificate #39453

REGISTRATIONS:

Professional Engineer:
VT – 63424
ME – 10437
RI – 9382
NH – 9896
VA – 047360
CT – 27568
NY – 94910

PROFESSIONAL AFFILIATIONS:

American Society of Civil Engineers

PROFESSIONAL EXPERIENCE:

23 Years

YEARS WITH FIRM:

7 Years

Mr. Blood has more than 20 years of civil engineering experience involving highway and rail design and management. His major responsibilities include operations and project management. His design experience includes: roadway, interchange, and right-of-way development; parking lot and railroad geometric designs; alternatives analyses; and plan preparation using various design software packages. Mr. Blood is experienced in staff and budget management, preparation of final contract documents, and cost estimating.

RELATED PROJECT EXPERIENCE:

US Route 1 Over Former B&M Railroad, North Hampton, NH

Project Manager responsible for all coordination, roadway and bridge alternative development, quality control, cost control, sub-consultant coordination, staff management, and public participation support.

US Route 4 Over Bunker Creek, Durham, NH

Project Manager responsible for all coordination, schedule, design, and sub-consultant activities for the bridge replacement project, as well as NEPA documentation and roadway design.

NH Route 123A Over Bowers Brook, Acworth, NH

Project Manager responsible for all coordination, schedule, quality control, NEPA documentation, sub-consultant coordination, staff management, and cost control.

I-89 Over Hardy Hill Road, Lebanon, NH

Project Manager responsible for design development, quality control, scheduling, and budgeting for the superstructure replacement of the twin interstate bridges over a local roadway.

US Route 302 Over Sawyer River, Hart's Location, NH

Design Manager responsible for management of all aspects of bridge, hydraulics, and roadway design. Responsible for quality control, design coordination, client coordination, staff management, scheduling, and cost control.

On-Call Bridge Design, Statewide, NH

Project Manager responsible for overseeing assigned design tasks including scope development, bridge design, hydraulics, and roadway design. Responsible for design coordination, client coordination, staff management, scheduling, and cost control. Projects completed include: NH Route 31 over Souhegan River, Ocean Road over I-95, NH Route 111 over I-95, Hooksett Culvert Hydraulics, and I-89 over Hardy Hill Road.

Conway Bypass, Conway and North Conway, NH

Project Manager responsible for all aspects of design, roadway horizontal and vertical alignments, typical sections, right-of-way, cross sections, and construction phasing plans. Oversaw the coordination between engineering disciplines including structures, utilities, and traffic. Designed a visitor's parking lot and bus turnout in picturesque downtown Conway, New Hampshire.

Maine Power Reliability Program (MPRP), Statewide, ME

Project Manager responsible for 260 miles of survey for the MPRP project. This project included flagging clearing limits for logging activities and layout of construction access roads for the expansion of the transmission of electric power throughout the State of Maine. Responsible for staff management, scheduling, and cost control.

PROJECT: Plaistow-Kingston 10044E (Part A)

DESCRIPTION: This Federal Aid Project includes traffic analysis, preliminary design, public involvement, and reevaluation of previously conducted environmental review for the reconstruction of the unimproved 1.7 mile segment of NH 125 between Old County Road (Plaistow) and Newton Junction Road (Kingston). A preliminary design for this segment was developed by the Plaistow-Kingston 10044B Environmental Assessment and is available for inspection. The scope of work for Part A will involve: Thorough traffic analysis to confirm or modify the recommended layout as shown in the EA; Preliminary design to evaluate and modify the proposed layout as needed based on the results of the updated traffic analysis; ROW layout and plan development, including any necessary survey work, for reestablishing and documenting the existing highway right of way in a manner suitable for recording at the Registry of Deeds; Reevaluation of NEPA (completed in 2006) with respect to any modifications to the proposed action. The environmental evaluation will also need to identify all applicable environmental permitting requirements; Reinitiate a creative and robust public involvement process to reach consensus on a proposed action. Open house forum meeting(s) with town officials and stakeholders are expected to be part of this process. (The 10044B public hearing was held in 2004; this project will be covered by that Finding of Necessity). This project requires Part "A" (Preliminary Design) and Part "B" (Final Design) services. At the conclusion of Part "A", the Department reserves the right to either negotiate a scope and fee for Part "B", or terminate the contract.

Services Required: RDWY, ENV, HYD, PINV, TRAF, ROW, HAZ, HIST, LLS, LAND

SUMMARY

Beta Group, Inc.	2	3	3	3	3	3	3	20
CLD Consulting Engineers, Inc.	3	2	2	2	2	1	1	13
GM2 Associates, Inc.	1	1	1	1	1	2	2	9

EVALUATION OF TECHNICAL PROPOSALS

Rating Considerations	Scoring of Firms			
	WEIGHT	Beta Group, Inc.	CLD Consulting Engineers, Inc.	GM2 Associates, Inc.
Comprehension of the Assignment	20%	18	17	19
Clarity of the Proposal	20%	19	17	19
Capacity to Perform in a Timely Manner	20%	17	17	20
Quality & Experience of Project Manager/Team	20%	18	17	19
Previous Performance	10%	8	8	9
Overall Suitability for the Assignment*	10%	9	7	9
Total	100%	89	83	95

*Includes: Proximity to project; usage, quality and experience of subconsultants proposed; relation municipalities or other third party.

- Ranking of Firms:
1. GM2
 2. Beta
 3. CLD

Rating Considerations	Scoring of Firms			
	WEIGHT	Beta Group, Inc.	CLD Consulting Engineers, Inc.	GM2 Associates, Inc.
Comprehension of the Assignment	20%	15	17	19
Clarity of the Proposal	20%	18	18	18
Capacity to Perform in a Timely Manner	20%	18	19	19
Quality & Experience of Project Manager/Team	20%	17	18	20
Previous Performance	10%	9	10	10
Overall Suitability for the Assignment*	10%	9	9	10
Total	100%	86	91	96

*Includes: Proximity to project; usage, quality and experience of subconsultants proposed; relation municipalities or other third party.

- Ranking of Firms:
1. GM2
 2. CLD
 3. Beta

EVALUATION OF TECHNICAL PROPOSALS (continued)

Rating Considerations	Scoring of Firms			
	W E I G H T	Beta Group, Inc.	CLD Consulting Engineers, Inc.	GM2 Associates, Inc.
Comprehension of the Assignment	20%	16	16	18
Clarity of the Proposal	20%	18	16	16
Capacity to Perform in a Timely Manner	20%	12	14	18
Quality & Experience of Project Manager/Team	20%	12	14	18
Previous Performance	10%	7	8	9
Overall Suitability for the Assignment*	10%	7	8	9
Total	100%	72	76	88

*Includes: Proximity to project; usage, quality and experience of subconsultants proposed; relative municipalities or other third party.

- Ranking of Firms:
1. GM2
 2. CLD
 3. BETA

Rating Considerations	Scoring of Firms			
	W E I G H T	Beta Group, Inc.	CLD Consulting Engineers, Inc.	GM2 Associates, Inc.
Comprehension of the Assignment	20%	18	18	18
Clarity of the Proposal	20%	18	18	18
Capacity to Perform in a Timely Manner	20%	18	18	18
Quality & Experience of Project Manager/Team	20%	17	18	18
Previous Performance	10%	8	9	9
Overall Suitability for the Assignment*	10%	8	8	9
Total	100%	87	89	90

*Includes: Proximity to project; usage, quality and experience of subconsultants proposed; relative municipalities or other third party.

- Ranking of Firms:
1. GM2 Associates, Inc.
 2. CLD Consulting Engineers, Inc.
 3. Beta Group, Inc.

Rating Considerations	Scoring of Firms			
	W E I G H T	Beta Group, Inc.	CLD Consulting Engineers, Inc.	GM2 Associates, Inc.
Comprehension of the Assignment	20%	17	18	18
Clarity of the Proposal	20%	17	18	18
Capacity to Perform in a Timely Manner	20%	17	16	19
Quality & Experience of Project Manager/Team	20%	16	18	19
Previous Performance	10%	7	9	9
Overall Suitability for the Assignment*	10%	8	9	9
Total	100%	82	90	92

*Includes: Proximity to project; usage, quality and experience of subconsultants proposed; relative municipalities or other third party.

- Ranking of Firms:
1. GM2
 2. CLD
 3. BETA

Rating Considerations	Scoring of Firms			
	W E I G H T	Beta Group, Inc.	CLD Consulting Engineers, Inc.	GM2 Associates, Inc.
Comprehension of the Assignment	20%	14	18	17
Clarity of the Proposal	20%	18	19	18
Capacity to Perform in a Timely Manner	20%	17	17	17
Quality & Experience of Project Manager/Team	20%	17	18	18
Previous Performance	10%	8	9	9
Overall Suitability for the Assignment*	10%	9	9	9
Total	100%	85	90	88

*Includes: Proximity to project; usage, quality and experience of subconsultants proposed; relative municipalities or other third party.

- Ranking of Firms:
1. CLD
 2. GM2
 3. BETA

Rating Considerations	Scoring of Firms			
	W E I G H T	Beta Group, Inc.	CLD Consulting Engineers, Inc.	GM2 Associates, Inc.
Comprehension of the Assignment	20%	16	18	19
Clarity of the Proposal	20%	15	20	19
Capacity to Perform in a Timely Manner	20%	16	19	18
Quality & Experience of Project Manager/Team	20%	14	20	18
Previous Performance	10%	6	9	8
Overall Suitability for the Assignment*	10%	6	9	8
Total	100%	75	95	90

*Includes: Proximity to project; usage, quality and experience of subconsultants proposed; relative municipalities or other third party.

- Ranking of Firms:
1. CLD
 2. GM2
 3. Beta

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ATTACHMENTS

- A. **SCOPE OF WORK FOR PART A PRELIMINARY DESIGN (Revision 2)**
Prepared by GM2 Associates, Inc. dated October 25, 2017

- 1. CERTIFICATION WITH REGARD TO THE PERFORMANCE OF PREVIOUS
CONTRACTS OR SUBCONTRACTS, ETC.
- 2. CONSULTANT DISCLOSURE STATEMENT FOR PREPARATION OF
ENVIRONMENTAL EVALUATIONS
- 3. CERTIFICATION OF CONSULTANT/SUBCONSULTANT
- 4. CERTIFICATION OF STATE DEPARTMENT OF TRANSPORTATION
- 5. CERTIFICATION FOR FEDERAL-AID CONTRACTS EXCEEDING \$100,000 IN
FEDERAL FUNDS
- 6. CERTIFICATION OF GOOD STANDING
- 7. CERTIFICATION OF INSURANCE
- 8. CERTIFICATION OF AUTHORITY / VOTE
- 9. SIGNATURE PAGE

**AGREEMENT
FOR PROFESSIONAL SERVICES**

PREAMBLE

THIS AGREEMENT made this 16 day of March in the year 2018 by and between the STATE OF NEW HAMPSHIRE, hereinafter referred to as the STATE, acting by and through its COMMISSIONER OF THE DEPARTMENT OF TRANSPORTATION, hereinafter referred to as the COMMISSIONER, acting under Chapter 228 of the Revised Statutes Annotated, and GM2 Associates, Inc., with principal place of business at 115 Glastonbury Blvd., in the City of Glastonbury, State of Connecticut, and NH Office at 197 Loudon Road, Suite 310, in the City of Concord, State of New Hampshire, hereinafter referred to as the CONSULTANT, witnesses that:

The Department of Transportation, State of New Hampshire, hereinafter referred to as the DEPARTMENT, proposes to improve the 1.7 mile segment of NH 125 between Old County Road in the Town of Plaistow and Newton Junction Road in the Town of Kingston.

The DEPARTMENT requires professional preliminary engineering design and environmental services to re-evaluate the previously-conducted environmental review for the reconstruction of the unimproved 1.7 mile segment. These services are outlined in the CONSULTANT'S Revised Scope of Work (Attachment A) dated October 25, 2017 and Fee Proposal dated September 27, 2017 (Revised February 1, 2018), which are hereby adopted by reference and considered to be part of this AGREEMENT.

This AGREEMENT becomes effective upon approval by the Governor and Council.

ARTICLE I

ARTICLE I - DESCRIPTION OF PROFESSIONAL SERVICES TO BE RENDERED

NOW THEREFORE, in consideration of the undertakings of the parties hereinafter set forth, the DEPARTMENT hereby engages the CONSULTANT, who agrees to render services to the DEPARTMENT which shall include, but not be restricted to, the following items, in accordance with conditions and terms hereinafter set forth:

A. LOCATION AND DESCRIPTION OF PROJECT

This project involves the study of improvements to the 1.7 mile segment of NH 125 between Old County Road (Plaistow) and Newton Junction Road (Kingston). The purpose of the project is to develop an alternative that will improve the safety and traffic operations of NH 125, while minimizing impacts on natural, cultural, and socio-economic resources. A preliminary design for this segment was developed for the Final Plaistow-Kingston 10044B Environmental Assessment/4(f) Evaluation (EA) in October 2005. Some key considerations to be aware of include the following:

- The segment of NH 125 to be improved is two lanes with variable width shoulders.
- Side roads, including Kingston Road and Colonial Road, intersect NH 125 at sharp skew angles.
- There are numerous private driveways within the segment. The EA proposed action sought to implement some access management measures.
- The EA proposed widening the roadway to provide a four-lane divided cross section with limited median crossings, and improving the geometrics of selected intersections. Kingston Road was proposed to be extended north to a new signalized intersection with NH 125 opposite Roadstone Drive (a private road).

Because the traffic growth anticipated by the EA has not occurred, the objectives of the engineering effort will be to reevaluate the recommendations of the EA in light of current traffic volumes and revised future projections, to modify the proposed action as appropriate for mobility along NH 125 and safe and efficient access to abutting properties, and to advance the project through preliminary and final design. As the development of improvement alternatives proceeds, it will be crucial to work closely with all appropriate public and private stakeholders to gain consensus on design decisions.

The design efforts for this project will encompass both part 'A' (preliminary) and part 'B' (final) design. Part 'A' efforts will: 1.) reevaluate the EA proposed layout and modify as appropriate; 2.) identify all impacted natural and cultural resources potentially affected by the proposed action, and investigate means of minimizing or mitigating the impacts; 3.) prepare an updated environmental document for the revised proposed action; and 4.) advance the design through the Preliminary Plan phase of plan development.

ARTICLE I

B. SCOPE OF WORK (GENERAL)

The purpose of this project is 1) Part A, to study and prepare preliminary engineering plans and update the NEPA document, and 2) Part B, to prepare final plans, specifications, and estimates for the roadway improvements. Part B is not included in this scope of work.

The DEPARTMENT reserves the right to either negotiate a scope and fee for Part B or proceed with a new solicitation.

The goals of the engineering efforts of this project are to select an appropriate proposed action that is supported by the communities, technically feasible, environmentally permissible, and economical; update the project's environmental document; and bring the proposed action through final design and to project advertising.

The development of improvement alternatives will include a dynamic public participation program involving public and private stakeholders and the general public in the decision-making process to aid in the determination of the proposed action.

C. SCOPE OF WORK (PRELIMINARY ENGINEERING)

The Part 'A' engineering tasks have been divided into three categories: Preliminary Engineering, Public Participation, and NEPA Documentation Re-Evaluation. The Preliminary Engineering tasks cover the work required to reevaluate and develop improvement alternatives to arrive at a proposed action. The Public Participation tasks cover public outreach for all aspects of the project. The NEPA Documentation tasks cover the work required to update and re-evaluate the impacts of the proposed action on all relevant natural and cultural resources. The tasks shown below are further described in the CONSULTANT's Scope of Work dated September 27, 2017/revised October 25, 2017 (Attachment A). Final design will be undertaken by Part 'B' of the design efforts, and will encompass the engineering efforts needed to advance the design from NEPA approval to project advertising.

1. Preliminary Engineering

a. Data Collection

The CONSULTANT shall collect any pertinent information available within the Project Limits including traffic volumes, utility locations, or other available materials. The CONSULTANT shall conduct a field review of the project area to identify key engineering controls, topographic features, natural and cultural resource constraints, and land uses that could have a bearing on the design.

b. Topographic Survey and Base Plan Preparation

The CONSULTANT will develop a digital terrain model from topographic survey data to be provided by the Department. The CONSULTANT will submit requests for supplemental survey as necessary. The DEPARTMENT will conduct the topographic survey(s) and

ARTICLE I

process the data, which the CONSULTANT will then incorporate into the digital terrain model. The most recent ortho-rectified digital aerial photographs will be provided by the DEPARTMENT if needed.

c. Right-of-Way Boundary Preparation

The CONSULTANT shall complete a boundary survey of NH Route 125 and intersecting municipal or State roads to a minimum distance of 500 ft. beyond the anticipated limits of the proposed improvements and be completed in accordance with the minimum standards for an Urban Boundary Survey as detailed in the New Hampshire Code of Administrative Rules (Part Lan 503, Technical Standards), including but not limited to complete field survey locating all appropriate monumentation and development of Right of Way (ROW) alignments. The CONSULTANT, in conjunction with a certified NH Licensed Land Surveyor, shall prepare a right of way plan showing ROW alignments where existent, and metes and bounds with station and offset information for the existing roadway corridors. The CONSULTANT will develop the existing Boundary and controls through the following process:

- i. ROW Facilitation Meeting: An initial meeting with the DEPARTMENT for project overview, review of historic ROW information and turnover of DEPARTMENT project data and ROW;
- ii. Records Research: The CONSULTANT shall research the town and city roads and property records, State highway and relevant archive records, court, registry and probate records, abutters' deeds and property plans within the project limits, and other research as needed to define the existing ROW limits;
- iii. Boundary Survey: The Consultant shall complete the boundary survey as outlined:
 1. Field recovery of Right-of-Way and abutting boundary monuments.
 2. Establish geodetic control network on NH State Plane Coordinate System.
 3. Perform boundary survey of existing Right-of-Way.
 4. Process survey control data using least squares adjustment at 95% confidence level.
 - a. Process side shot data on adjusted controls and verify.
 5. Develop Right-of-Way alignments and establish Right-of-Way limits based on survey and boundary control standards of practice and the current NHLSA Ethics and Standards.
- iv. Existing ROW Plan Review: The CONSULTANT shall submit a preliminary ROW plans for DEPARTMENT review and attend a ROW facilitation meeting to discuss ROW Plan review comments;

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- v. Development of Final Existing ROW Plan; The CONSULTANT shall address the comments from DEPARTMENT Preliminary Plan review through a written explanation on how review items were addressed prior to recording existing ROW plan with the County Registry. The CONSULTANT shall provide the DEPARTMENT with the Existing ROW Plans in DWG/DGN file format and PDF plan file. The CONSULTANT shall provide the DEPARTMENT with a plan showing the existing boundary monumentation and survey traverse in DWG/DGN file format and the geodetic control data in ASCII file format. The CONSULTANT shall be responsible to record the base plan.
- d. Traffic Data Collection & Analysis

The CONSULTANT shall gather traffic volume data as needed to analyze existing and future traffic operations under both no-build and build conditions within the project area. Macroscopic and microscopic evaluations will be undertaken for the various alternatives as needed.
- e. Crash Data Collection & Analysis

The DEPARTMENT will evaluate crash data to understand the safety performance within the project area and to consider how the alternatives would impact safety. This shall be provided to the CONSULTANT.
- f. Alternative Development & Evaluation

The CONSULTANT will develop and evaluate alternatives and investigate their consequences to allow the Department to select a proposed action.

 - i. Reasonable Alternatives: Each alternative will be developed to an equal level of detail. Lanes, shoulders, slope impact limits, right of way requirements, and potential water quality protection measures will be determined for each alternative.
 - ii. Cost Estimates: Conceptual cost estimates will be developed for the alternatives. The cost estimates will quantify items such as pavement, roadway select materials, earthwork, structures, significant drainage facilities, and other design elements as appropriate and apply the Department's current weighted average unit prices. Other items will be estimated on a percentage basis. Right of way acquisition costs will be determined from the assessed value of impacted property. Engineering and environmental mitigation costs will be estimated on a percentage basis.
- g. Engineering Report

The CONSULTANT shall prepare an Engineering Report to document the existing conditions within the corridor, and to summarize the design decisions and engineering details

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of the proposed action. Any rejected alternatives should also be documented to explain the justification for their rejection.

h. Project Team Meetings

Project team meetings will be held periodically over the course of Part A. These informal meetings will take place when needed to discuss project issues that may include resource constraints, impacts of alternatives, and cost issues. These meetings will involve CONSULTANT and DEPARTMENT staff, but may also include representatives of the Towns, Rockingham Planning Commission, state or federal agencies, or others as appropriate.

2. Environmental Documentation

a. Data Collection

The CONSULTANT shall review relevant data sources to identify all resources present within the Project Area. Resources to be identified include:

i. Water-Based Resources

a) Groundwater: Data regarding aquifers and public water supplies within the study area will be gathered from appropriate sources such as the GRANIT GIS database, NHDES mapping, or municipal mapping. The CONSULTANT will describe these resources and display them on project mapping.

b) Surface Waters: Data regarding existing surface waters and water quality will be gathered and documented. The CONSULTANT will investigate appropriate water quality treatment measures necessary to minimize nutrient impacts on surface waters. This shall include a pavement runoff analysis for Total Nitrogen, Total Phosphate and Total Suspended Solids and volume for the existing condition and the Proposed Action to determine appropriate size and placement of structural Best Management. Assessments of chloride (salt) loadings based on the number of travel lanes for the pre and anticipated Proposed Action shall be conducted and include an analysis of the effects to receiving waters.

Additionally the Consultant shall evaluate: protected sanitary public well radii within the corridor; the existing stormwater structures to ensure that the proposed work does not affect its operation; adhere to the Redevelopment requirements of the MS4 permit issued in 2017; adhere to the 2017 Revised AOT permit requirements, and; evaluate the potential effects on the surface waters and wetlands from construction activities.

c) Floodplains: FEMA floodplain and floodway information will be gathered from appropriate sources and displayed on project mapping.

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- d) Wetlands: The CONSULTANT will re-delineate wetlands within the corridor and re-evaluate their functions and values within the study area limits based on state and federal criteria, and will collect field data sufficient to document the delineation. Wetlands will continue to be identified using the 2007 wetland permit numerical designation. If access to private property is required, landowners will be notified by the DEPARTMENT. The CONSULTANT will survey wetland flagging using a GPS unit with sub-meter accuracy. The CONSULTANT will note any unusual features such as invasive species, disturbed areas, or uncommon wetland types such as bogs or vernal pools. No additional wetland mitigation is anticipated. If wetland impacts exceed those previously permitted (1.98 acres), mitigation will be an in-lieu fee payment to NHDES' ARM Fund.
 - e) Stream Crossings: The CONSULTANT will identify all perennial stream crossings within the project study limits. The CONSULTANT will determine the watershed size for each crossing and determine the corresponding Tier classification using the USGS Stream Stats tool. The CONSULTANT will perform a Stream Crossing Evaluation accordance with the NHDES Stream Crossing Rules Env-Wt 900 series to aid in determination of a design that meets the NHDES Stream Crossing Guidelines and/or alternative design.
- ii. Land-Based Resources
- a) Soils: Soil series within the study area will be mapped, including the distribution of prime, statewide, local, or unique farmland soils.
 - b) Active Farmlands: Active farmlands will be identified and described.
 - c) Public and Conserved Lands: Publicly owned lands, bicycle and pedestrian trails, and privately conserved lands will be identified.
 - d) Section 4(f) Resources: Parks, historic sites, or other areas subject to Section 4(f) will be identified.
 - e) Section 6(f) Resources: Lands receiving Section 6(f) funds will be identified based on coordination with the NH Department of Resources and Economic Development.
- iii. Wildlife
- a) Wildlife and Habitat: Wildlife resources will be identified with information from the NH Wildlife Action Plan and supplemented as needed by field reconnaissance.
 - b) Fisheries: The fisheries resource information will be updated based on coordination with NH Fish and Game and the US National Marine Fisheries Service.
 - c) Threatened and Endangered Species: Threatened and endangered species information will be gathered through coordination with the NH Department of

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Resources and Economic Development, NH Fish and Game Department, and the US Fish and Wildlife Service. The CONSULTANT will use the US Fish and Wildlife Service's on-line Information for Planning and Consultation (IPaC) tool for review of identified federally-listed species.

iv. Cultural Resources (Historic)

The CONSULTANT will prepare and submit, through the DEPARTMENT, a NH Division of Historical Resources (NHDHR) Request for Project Review (RPR) that identifies cultural resources in accordance with NHDHR Survey Manuals. Further assessment of the determination of eligibility for the National Register of historic resources will be undertaken in consultation with the Federal Highway Administration and the NH State Historic Preservation Officer. Updates to existing Eligibility Forms or evaluation of structures that have become 50 years old since the previous investigations, may be required. The CONSULTANT will conduct all necessary phases of Section 106 public outreach.

v. Cultural Resources (Archaeology)

Previously identified sensitive areas that may be impacted by project alternatives may be further investigated to determine their eligibility for the National Register and the need for mitigation. The need for additional archaeological investigations will be evaluated in consultation with the Federal Highway Administration and the NH State Historic Preservation Officer.

vi. Social and Economic Resources

The CONSULTANT will update the socio-economic analysis of the regional social and economic resources. The CONSULTANT will identify the socio-economic relationship between the study area transportation/circulation pattern, regional and local municipalities' Master Plans, and the businesses and residents within its immediate influence.

vii. Noise

The CONSULTANT shall perform, as necessary, tasks required to assess the potential effects on noise levels at receptors adjacent to the project to determine and/or achieve compliance with the FHWA Procedures for Abatement of Highway Traffic Noise and Construction Noise (23 CFR 772) and the DEPARTMENT'S *Policy and Procedural Guidelines for the Assessment and Abatement of Highway Traffic Noise for Type I and Type II Highway Projects* (the Noise Policy).

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viii. Air Quality

The CONSULTANT shall perform, as necessary, tasks required to assess the potential air quality impacts of the project to determine and/or achieve compliance with the State of New Hampshire Air Quality Implementation Plan, and the provisions set forth in the Clean Air Act Amendments (CAAA) and the National Environmental Policy Act (NEPA).

ix. Invasive Species

The CONSULTANT will determine the presence of invasive species in conjunction with other project field investigations. General locations and types will be identified within the project limits, but no detailed mapping will be provided.

x. Contaminated Properties

A database search will be undertaken to identify areas with records of hazardous materials or contamination. The CONSULTANT will coordinate with the DEPARTMENT's Bureau of Environment's Contamination Program to confirm findings, and will assess measures required to conduct geotechnical investigations within areas of potential contamination. The CONSULTANT will coordinate with the DEPARTMENT on evaluating the presence of asbestos or lead paint on existing bridges and in determining future investigation requirements of the project. Options for the handling of Limited Reuse Soils identified within the limits of the Proposed Action will be evaluated and reviewed with the DEPARTMENT.

xi. Construction Impacts

The CONSULTANT shall perform, as necessary, tasks required to assess the potential construction impacts on the natural, cultural, and socio-economic resources present within the project area.

b. Agency Coordination

The CONSULTANT will attend the DEPARTMENT's Natural Resource Agency meetings as needed and coordinate a field meeting, if needed, with the agencies to review resource impacts. The CONSULTANT will also attend the DEPARTMENT's Cultural Resource meetings as needed with the Federal Highway Administration and the NH Division of Historical Resources to discuss scope and findings.

c. Project Purpose and Need

The CONSULTANT will evaluate the proposed action for consistency with the Purpose and Need Statement for the project identified in the October 2005 Final Environmental Assessment/4(f) Evaluation.

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d. Proposed Action Re- Evaluation

The CONSULTANT will evaluate the impacts and effects of the design modifications on the Proposed Action identified in the October 2005 Final Environmental Assessment/4(f) Evaluation. The impacts of substantial revisions to the Proposed Action will be summarized in an Environmental Re-evaluation Document assessing compliance with the November 2005 Finding of No Significant Impacts.

e. Environmental Impacts of the Proposed Action

The CONSULTANT will identify resource impacts, potential measures to minimize or mitigate impacts, and possible resource enhancements that could be achieved by the Proposed Action.

The CONSULTANT will perform tasks as outlined in the October 25, 2018 Revised Scope of Work for the following resources/impacts:

- Land Use
- Social and Economic Resources
- Farmlands
- Air Quality
- Noise
- Groundwater Resources
- Surface Water Resources
- Chloride Loading
- Pollutant Loading (TN, TP & TSS)
- Floodplains
- Wetlands
- Wildlife/Vegetation/Fisheries
- Threatened or Endangered Species
- Parks/Recreation/Conservation Lands
- Cultural Resources
- Hazardous Materials/Contamination
- Limited Reuse Soils
- Visual Resources
- Environmental Justice (provided by the DEPARTMENT)
- Construction Impacts
- Summary of Impacts
- Environmental Commitments

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f. Section 6 (f)

Section 6(f) properties will be identified, and potential impacts to 6(f) properties will be quantified. Coordination for use of 6(f) properties will include one field meeting with the Department of Resources and Economic Development and additional coordination activities.

g. Environmental Re-Evaluation Document

The Environmental Re-Evaluation Document will document the resource impacts outlined in Section C.2.e above. The document will incorporate, either directly or by reference, the analysis and conclusions reached with the re-evaluation of the Proposed Action. The document will also identify which environmental permits are required, but the actual permit applications will not be undertaken until final design. The Section 4(f) evaluation, resource reports, agency correspondence, and public meeting summaries will be appended. An administrative Draft will be prepared for review by the DEPARTMENT and the Federal Highway Administration. After comments are addressed by the CONSULTANT, the Draft Re-Evaluation document will be submitted to the DEPARTMENT, the Federal Highway Administration, and other parties as directed. Following review of the Draft Re-Evaluation document and comments received, the CONSULTANT will revise and finalize the document. Six printed copies of the Final Re-Evaluation document will be provided to the DEPARTMENT as well as 3 CDs and a pdf of the document.

3. Public Participation

The CONSULTANT shall support a dynamic public participation process that enhances the DEPARTMENT'S "Public Involvement Process for New Hampshire Transportation Improvement Projects". The CONSULTANT shall prepare presentation graphics, handouts and support displays, and be available to make presentations and draft meeting minutes. Specific tasks include:

a. Prepare a Public Involvement Plan

The CONSULTANT will prepare a Public Involvement Plan outlining all elements of the tasks listed below. The plan will include a detailed schedule of all activities.

b. Working Group Meetings

The CONSULTANT, in consultation with the Towns, will assist the DEPARTMENT in identifying appropriate stakeholders and assembling a working group whose role will be to advise the design team on the development and evaluation of design alternatives. Working group meetings will be held as needed with project stakeholders to review and discuss alternatives and to facilitate local input into important design decisions. The CONSULTANT will prepare any needed informational handouts and presentation materials, will assist with presentations as needed, and will document the proceedings.

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c. Public Informational Meetings

Two Public Informational Meetings will be held to involve the public and other interested parties (including any Section 106 Consulting Parties) in the project development process. The first Public Informational Meeting will take place early in the design to facilitate discussion of the reasonable range of design alternatives, while the second Public Informational Meeting will focus on the proposed action and will occur during the NEPA process prior to finalizing the Draft Environmental Study. The CONSULTANT will prepare any needed informational handouts and presentation materials, will assist with presentations as needed, and will document the proceedings.

D. MATERIAL FURNISHED BY THE DEPARTMENT OF TRANSPORTATION

The DEPARTMENT will furnish the following data to the CONSULTANT:

1. Electronic files of the following information in accordance with the DEPARTMENT'S CAD/D Procedures and Requirements for incorporation into the plans by the CONSULTANT:
 - a. Topographical mapping within the project area shall be provided along with any pertinent electronic supporting information (survey field notes, ASCII point file, SDR data files, etc.). The Department will also gather any supplemental topographical survey data that is determined to be necessary as the project proceeds, and will process this data for use. Incorporation of this supplemental information into the digital terrain model and base plan shall be the responsibility of the CONSULTANT.
 - b. Electronic drawings in MicroStation format of roadway typical cross-sections and other detail sheets shall be provided, when available from the DEPARTMENT'S CAD/D library, upon request by the CONSULTANT, in accordance with the current DEPARTMENT CAD/D procedures and Requirements.
 - c. Electronic drawings in MicroStation format of the existing utilities, if provided to the DEPARTMENT by the utility. The CONSULTANT shall be prepared to provide an electronic copy of the preliminary base plans to the DEPARTMENT for submission to and use by the utilities. The CONSULTANT shall be responsible for the incorporation of this utility information (either in paper or electronic format) into the plans, in accordance with the current DEPARTMENT CAD/D Procedures and Requirements.
2. Prints of the following information:
 - a. Any information outlined in Article I.D.1.a thru c. above (electronic information) both existing and proposed, when available, for verification by the CONSULTANT.

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- b. Any additional information not available electronically (e.g., utilities) for the CONSULTANT to incorporate into the plans in accordance with the DEPARTMENT'S CAD/D Procedures and Requirements.
3. Right-of-Way data: Any additional information collected or prepared by the DEPARTMENT that could supplement the CONSULTANT's Right-of-Way Boundary (Section C.1.c.) (e.g., existing right-of-way layout per record plans, property lines to a tax map level, parcel owners, title abstracting, etc.) will be provided by the DEPARTMENT in MicroStation format for incorporation into the plans by the CONSULTANT.
4. Plans of prior highway and bridge construction projects within the project limits, as available.
5. The location of all existing and proposed utilities through direct contact with the various utility companies.
6. Geotechnical investigations and recommendations, if available: Electronic files of the Environmental resource data collected in previous studies.
7. Crash data and Safety Analysis within the study area.
8. Ground survey, as needed, within the study area to supplement the digital surface model. The CONSULTANT will process the raw survey data and incorporate into the digital surface model.
9. The DEPARTMENT's latest high-resolution color aerial photography (which is geo-referenced and ortho-rectified).

E. WORK SCHEDULE AND PROGRESS REPORTS

The CONSULTANT shall begin performance of the services designated in the Contract promptly upon receipt from the DEPARTMENT of a Notice to Proceed and the material to be furnished as herein described. The CONSULTANT shall complete these services without delay unless unable to do so for causes not under the CONSULTANT'S control.

The CONSULTANT'S sequence of operation and performance of the work under the terms of this AGREEMENT shall be varied at the direction of the DEPARTMENT to give priority in critical areas so that schedules and other STATE commitments, either present or future, can be met.

The CONSULTANT shall develop an acceptable reporting system capable of indicating project status on at least a monthly basis for all critical activities of the project. Monthly progress reports shall be submitted by the CONSULTANT to the Project Manager, giving the percentage of completion of the work required by this AGREEMENT. These monthly progress reports shall be received by the DEPARTMENT by the 10th day of each month. All correspondence shall include the STATE and Federal project numbers as well as the municipality's name.

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F. SUBMISSION OF REPORTS, PLANS AND DOCUMENTS

All work submitted by the CONSULTANT to the DEPARTMENT shall be in US Customary units.

The submissions shall be as necessary in accordance with the study process and environmental analysis as outlined above. Each submission shall be supplemented with such electronic copies of MicroStation drawings, illustrations, and descriptive matter as are necessary to facilitate a comprehensive understanding and review of proposed concepts.

The CONSULTANT will be expected to support their design proposals and any issues resulting from review by the DEPARTMENT or in the public participation phase (including agency coordination), with alternative studies and reasonably itemized cost comparisons for alternate concepts.

In addition, the CONSULTANT'S final submission shall include hard copy of plans, etc. as well as electronic CAD/D files. The CAD/D files shall consist of the base plans with enhancements in MicroStation format, using DEPARTMENT naming conventions, line styles and character styles.

G. FORMATS FOR DELIVERABLES

All work and supporting documents for Task Orders completed under this AGREEMENT shall be developed by the CONSULTANT and delivered to the DEPARTMENT according to the following formats:

Electronic Transfer of Data: The DEPARTMENT requires the following to ensure compatibility with software used by the DEPARTMENT and to ensure the efficient and timely exchange of computer files between the DEPARTMENT and the CONSULTANT.

All files submitted must be fully compatible with the formats listed in this document without any conversion or editing by the DEPARTMENT. Any files requiring conversion and/or editing by the DEPARTMENT will not be accepted. All files shall be virus free. All files shall use the DEPARTMENT'S file naming convention.

Computer Aided Design/Drafting (CAD/D) files: All CAD/D files shall be in accordance with the Deliverable Requirements described in the DEPARTMENT'S CAD/D Procedures and Requirements in effect at the time this AGREEMENT was executed, or any later version. All files submitted must be fully compatible with the current version of MicroStation being used by the DEPARTMENT. (The DEPARTMENT'S CAD/D Procedures and Requirements document can be found on the CAD/D website by following the "Downloads" link at www.nh.gov/dot/cadd/.)

Word Processing, Spreadsheet, and Database Files: For each Phase, all relevant files shall be provided in a format fully compatible, as appropriate, with the following:

Word Processing: Microsoft Word 2010 or NHDOT compatible version

Spreadsheets: Microsoft Excel 2010 or NHDOT compatible version

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Databases: Microsoft Access 2003 or NHDOT compatible version

These specifications will be updated as necessary to reflect changes in DEPARTMENT software such as adding new software or updating to new versions of existing software. In such instances, the CONSULTANT will be promptly notified.

Computer File Exchange Media: Electronic files shall be exchanged between the DEPARTMENT and the CONSULTANT using the following media as appropriate for Windows Operating Systems:

FTP: Files posted to the DEPARTMENT'S FTP site can be actual size or compressed. Contact the Project Manager for instructions for accessing the FTP site.

Compact Disc (CD): Files on CD(s) should be actual size, not compressed.

DVD: Files on DVD(s) should be actual size, not compressed.

Email: Files 10 MB or smaller may be transferred via Email. If compressed, the files should be self-extracting and encrypted based on content.

Copies: The CONSULTANT shall provide hard (paper) and electronic copies of the deliverables for each Phase of Work. For all deliverables, provide electronic copies in two electronic versions; an electronic version in the original electronic file format (i.e., MicroStation (*.dgn), Microsoft Word (*.docx), Microsoft Excel (*.xlsx), etc.) and an electronic version in Adobe Acrobat (*.pdf) file format.

Website Information:

- a. Website Content: All external NHDOT websites created for this project shall meet the ADA Section 508 requirements as stated in the NH DoIT Website Standards. Those standards are outlined in <https://www.nh.gov/doit/vendor/documents/nh-website-standards.pdf>.
- b. Website Documents: All documents posted to a website created for this project, or that are submitted to be posted to a NHDOT website, shall meet ADA Section 508 accessibility requirements. A checklist for document compliance is provided in <https://www.section508.gov/content/build/create-accessible-documents> (go to second link down under "Checklists").

Upon completion of the AGREEMENT, the CONSULTANT shall turn over all documentation, including, but not limited to, all reports, test results, drawings, plans, and all financial supporting documentation in the formats described above.

H. DATE OF COMPLETION

In accordance with the Governor and Council Resolution authorizing this AGREEMENT, the date of completion for the Part A professional design services rendered under this AGREEMENT is **May 31, 2020**.

ARTICLE II

ARTICLE II - COST PLUS FIXED FEE COMPENSATION OF CONSULTANT

A. GENERAL FEE

In consideration of the terms and obligations of this AGREEMENT, the STATE, through the DEPARTMENT, hereby agrees to pay and the CONSULTANT agrees to accept as full compensation for all services rendered to the satisfaction of the DEPARTMENT under this AGREEMENT (except as otherwise herein provided) an amount equal to the sum of the following costs:

1. Actual salaries* approved by the DEPARTMENT paid to technical and other employees by the CONSULTANT, including salaries to principals, for the time such employees are directly utilized on work necessary to fulfill the terms of this AGREEMENT. A list of those personnel working on the project with their classifications and current salary rates shall be submitted to the DEPARTMENT for approval. The rates of any additional personnel working on the project, if any, shall require written approval of the DEPARTMENT prior to working on the project. The CONSULTANT shall submit classifications and rates for any additional personnel a minimum of 14 days prior to using the additional personnel.

*In accordance with DEPARTMENT policy, the maximum direct-labor rate allowed for all positions under this AGREEMENT shall be \$60.00 per hour unless a waiver to the salary cap has been specifically approved for specialty services.

2. Costs which are directly applicable to the salaries, salary burden, and direct and indirect costs, including administration costs. These costs may be applied to only straight time salary extensions where overtime is employed. These amounts shall be based on actual costs to the CONSULTANT for such items during the period of the AGREEMENT and those allowable in accordance with the applicable cost principles contained in Federal Acquisition Regulations Subpart 31.2 and Subpart 31.105. Further, any overtime required for this project shall have the prior written approval of the DEPARTMENT.
3. A fixed fee amount as shown in Article II, Section B for profit and non-reimbursed costs.
4. Reimbursement for direct expenses, including work performed by other parties, such as borings, laboratory tests, field survey, special electronic computer services, services of other specialists, printing, photogrammetry, traffic counts, reproductions and travel not included in normal overhead expenses. The reimbursable costs for mileage and for per diem (lodging and meals) shall be that allowed by the CONSULTANT'S established policy but shall not exceed that allowed in the Federal Acquisition Regulations (Subpart 31.205-46) and in the Federal Travel Regulations. The General Services Administration (GSA), Regulation 41 CFR Part 301-4, specifies the FTR automobile mileage reimbursement. Mileage and per diem costs shall be subject to approval by the DEPARTMENT.

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All costs as described in the foregoing paragraphs are to be determined by actual records kept during the term of the AGREEMENT which are subject to audit by the STATE and Federal Governments. The final payment and all partial payments made may be adjusted to conform to this final audit. In no case will any adjustments exceed the total amount to be paid shown in the following paragraph and in Article II, Section C.1. All Subconsultant costs may also be subject to audit by the STATE and Federal Governments.

The total amount to be paid under this AGREEMENT shall not exceed \$1,698,325.32, the sum of the amounts shown in Article II, Section B (which amount is based on the CONSULTANT'S fee and manhour estimates of September 27, 2017 (Revised February 1, 2018), except by agreement of all parties made after supplemental negotiations. Should circumstances beyond the control of the CONSULTANT require extension of the time of completion more than one (1) year, the general fee may be renegotiated; however, the fixed fee (b) shall not change for reasons of work duration alone. The fixed fee (b) shall only change when there has been a significant increase or decrease in the scope of work outlined in this AGREEMENT.

All salaries and increases thereof paid to technical or other employees assigned to this project shall be the result of a company-wide evaluation of all employees and shall not be restricted to employees assigned to this project.

If, in the opinion of the DEPARTMENT, any salary or increase thereof of engineering or technical personnel assigned to this project is unreasonable, it shall notify the CONSULTANT of its opinion with regard thereto and request the CONSULTANT to justify said salary or increase thereof. In the event that the CONSULTANT furnishes justification satisfactory to the DEPARTMENT for said salary or increase thereof, then such salary or increase thereof shall be approved as a payroll expense.

The DEPARTMENT shall have the right to exercise the power of review and approval of salary increases thereof, for a period of thirty (30) days after the submission of a monthly invoice by the CONSULTANT. Unless the DEPARTMENT notifies the CONSULTANT in writing during the thirty-day period that such salary increase thereof is, in its opinion, unreasonable, such lack of notice shall constitute approval of said salary increase thereof from the first day of the preceding month.

The DEPARTMENT shall have the right, at the time of audit, to review all items charged to overhead on this project. If, in the opinion of the DEPARTMENT, such payment is unreasonable, the CONSULTANT shall be required to justify such payment or payments before they will be approved as direct or indirect cost.

The CONSULTANT shall maintain adequate cost records for all work performed under this AGREEMENT. All records and other evidence pertaining to cost incurred shall be made available at

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all reasonable times during the contract period and for three (3) years from the date of final voucher payment for examination by the STATE and copies thereof shall be furnished if requested.

B. SUMMARY OF FEES

The STATE, through the DEPARTMENT, hereby agrees to pay and the CONSULTANT agrees to accept as full compensation the following:

- a. Actual CONSULTANT'S salaries*, costs applicable to actual salaries, salary burden (direct and indirect) and administrative costs attributable to overhead, the sum of which is estimated at \$1,188,549.75. For billing purposes, salary burden and overhead costs are currently estimated at 165.00% of actual salaries.
- b. A fixed fee to cover profit and non-reimbursed costs at \$118,854.97.
- c. Reimbursement for direct, out-of-pocket expenses estimated at \$18,900.00.
- d. Reimbursement for actual cost* of subconsultants estimated as follows:
 - McFarland-Johnson, Inc. \$183,095.85.
 - Harris Miller Miller & Hanson Inc. \$32,966.15.
 - Independent Archaeological Consulting, LLC \$99,610.70.
 - Preservation Company \$56,347.90.

NOTE: See Article IV.G – SUBLETTING for subconsultant Professional Liability Insurance information.

The actual amount payable under each category (a), (c) and (d) is only estimated and shall be changed only upon mutual agreement of the DEPARTMENT and CONSULTANT.

*In accordance with DEPARTMENT policy, the maximum direct-labor rate allowed for all positions under this AGREEMENT shall be \$60.00 per hour unless a waiver to the salary cap has been specifically approved for specialty services.

C. LIMITATION OF COSTS

1. Costs incurred against this AGREEMENT shall not exceed \$1,698,325.32 unless otherwise authorized. The CONSULTANT shall give the DEPARTMENT a ninety (90)-day written notice when it appears that this limit will be exceeded.
2. It is expected that the total cost to the STATE shall be the cost set forth under Article II, Section A, and the CONSULTANT agrees to use his best efforts to perform the work specified in the AGREEMENT and all obligations under this contract within such limiting amount.
3. The STATE shall not be obligated to reimburse the CONSULTANT for costs incurred in excess of the limiting amount set forth in Article II, Section A.

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4. Change orders issued under this contract shall not be considered an authorization to the CONSULTANT to exceed the limiting amount set forth in the Summary in the absence of a statement in the change order, or other contract modifications, increasing the limiting amount.

D. PAYMENTS

Payments on account of services rendered under this AGREEMENT shall be made as follows:

1. Monthly payments on account may be made upon written request of the CONSULTANT. Detailed vouchers shall include certification of manhours of effort by employee classification and actual salaries and other costs incurred accompanied by satisfactory evidence of work performed during the period. Actual salaries paid and percentage factor shown in Article II, Section B, part (a) as well as for all approved subconsultants, including those listed in part (d) of Section B, shall be used until such time as true costs of salary burden and overhead are fixed by audit. At that time, payments shall be adjusted to agree with the percentage factors as determined by audit for the period in which the work was performed, as approved by the DEPARTMENT. The fixed fee shall be invoiced during the billing period based upon the overall percent complete of the project's scope of work as approved by the DEPARTMENT.
2. The CONSULTANT shall submit a final voucher upon completion of services required by this AGREEMENT, which includes any unbilled portion of the allowable costs or fixed fee and adjustments, if necessary, for audited actual costs and deliver all required plans, documents and records.

ARTICLE III

ARTICLE III - GENERAL PROVISIONS

A. HEARINGS, ETC.

The DEPARTMENT will make all arrangements for and hold all necessary public meetings or hearings in connection with the project, including recording and filing of surveys and plats, enter into all necessary agreements with railroads, public utilities, municipalities, agencies of the Federal Government or others, and make orders of takings and financial settlements with owners of properties affected.

B. CONTRACT PROPOSALS

(Not applicable to this AGREEMENT.)

ARTICLE IV

ARTICLE IV - STANDARD PROVISIONS

A. STANDARD SPECIFICATIONS

The CONSULTANT agrees to follow the provisions of the Design Manuals, Standard Specifications for Road and Bridge Construction, and Standard Plans for Road and Bridge Construction of the DEPARTMENT; A Policy on Geometric Design of Highways and Streets and LRFD Bridge Design Specifications of the American Association of State Highway and Transportation Officials (AASHTO), and amendments thereto, and/or other professional codes or standards applicable to the services to be performed under this AGREEMENT. When a publication (including interim publications) is specified, it refers to the most recent date of issue in effect at the time of execution of this AGREEMENT.

B. REVIEW BY STATE AND FHWA - CONFERENCES - INSPECTIONS

It is mutually agreed that all portions of the work covered by this AGREEMENT shall be subject to the inspection by duly-authorized representatives of the STATE and Federal Highway Administration, United States Department of Transportation, at such time or times as the STATE or Federal Highway Administration deems appropriate.

The location of the office where the work will be available for inspection by STATE and Federal Highway Administration representatives is 197 Loudon Road, Suite 310, Concord, NH.

It is further mutually agreed that any party, including the duly-authorized representatives of the Federal Highway Administration, may request and obtain conferences, visits to the site, and inspection of the work at any reasonable time.

C. EXTENT OF CONTRACT

1. Contingent Nature of AGREEMENT

Notwithstanding anything in this AGREEMENT to the contrary, all obligations of the STATE, including, without limitation, the continuance of payments, are contingent upon the availability and continued appropriation of funds, and in no event shall the STATE be liable for any payments in excess of such available appropriated funds. In the event of a reduction or termination of those funds, the STATE shall have the right to terminate this AGREEMENT.

2. Termination

The DEPARTMENT shall have the right at any time, and for any cause, to terminate the work required of the CONSULTANT by this AGREEMENT by written notice of such termination provided to the CONSULTANT by the DEPARTMENT, and, in the event of such a termination of this AGREEMENT without fault on the part of the CONSULTANT, the CONSULTANT shall be entitled to compensation for all work theretofore satisfactorily performed, pursuant to this AGREEMENT, such compensation to be fixed, insofar as

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possible, based upon the work performed prior to termination. If no contract or contracts for construction of the project contemplated by this AGREEMENT is (are) entered into within two (2) years after satisfactory completion of the services outlined in Article I, all of the services contemplated by this AGREEMENT shall be deemed to have been completed.

It shall be a breach of this AGREEMENT if the CONSULTANT shall fail to render timely the services required under this AGREEMENT, in accordance with sound professional principles and practices, to the reasonable satisfaction of the DEPARTMENT, or shall be in such financial condition as to be unable to pay its just debts as they accrue, or shall make an assignment for the benefit of creditors, or shall be involved in any proceeding, voluntary or involuntary, resulting in the appointment of a receiver or trustee over its affairs, or shall become dissolved for any cause. In the event of the happening of any one or more of the foregoing contingencies, or upon the substantial breach of any other provisions of this AGREEMENT by the CONSULTANT, its officers, agents, employees, and subconsultants, the DEPARTMENT shall have the absolute right and option to terminate this AGREEMENT forthwith, and, in addition, may have and maintain any legal or equitable remedy against the CONSULTANT for its loss and damages resulting from such breach or breaches of this AGREEMENT; provided, however, that as to all plans, drawings, tracings, estimates, specifications, reports, proposals, sketches, diagrams, and calculations, together with all material and data theretofore furnished to the DEPARTMENT by the CONSULTANT, of a satisfactory nature in accordance with this AGREEMENT, which plans, drawings, tracings, etc., are of use to the DEPARTMENT, the CONSULTANT shall be entitled to a credit, based on the contract rate for the work so performed in a satisfactory manner and of use and benefit to the DEPARTMENT.

D. REVISIONS TO REPORTS, PLANS OR DOCUMENTS

The CONSULTANT shall perform such additional work as may be necessary to correct errors in the work required under the AGREEMENT caused by errors and omissions by the CONSULTANT without undue delays and without additional cost to the DEPARTMENT.

Furthermore, prior to final approval of plans, specifications, estimates, reports, or documents by the DEPARTMENT, the CONSULTANT shall make such revisions of them as directed by the DEPARTMENT, without additional compensation therefor, except as hereinafter provided:

1. If, after its written approval thereof, the DEPARTMENT shall require changes to the plans or documents that revise engineering or other factors specifically approved, thereby necessitating revisions of the contract plans or documents, or,
2. When applicable, if during the term of this AGREEMENT, a revision of the alignment is ordered by the DEPARTMENT to the extent that the revised alignment will lie completely or

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partially outside the limit of the survey data plotted by the CONSULTANT (this does not apply to those adjustments and refinements to the alignments anticipated under the scope of work), or,

3. If, after approval by the DEPARTMENT of the final contract plans or documents, the CONSULTANT shall be ordered in writing by the DEPARTMENT to make revisions, or to perform services other than those necessary to adapt said plans, reports, or documents to conditions observed during field inspections and encountered during construction; the CONSULTANT shall be entitled to compensation therefor in accordance with Article II, Section B, such compensation to be in addition to the fee specified in Article II, Section A, for its original work on the plans, reports or documents.

E. ADDITIONAL SERVICES

If, during the term of this AGREEMENT, additional professional services are required due to a revision in the limits of the project, or it becomes necessary to perform services not anticipated during negotiation, the DEPARTMENT may, in writing, order the CONSULTANT to perform such services, and the CONSULTANT shall be paid a fee in accordance with the provisions of Article II, Sections A and B.

If, during the term of this AGREEMENT, additional professional services are performed by the CONSULTANT due to the fact that data furnished by the DEPARTMENT are not usable or applicable, the STATE will, upon written approval by the DEPARTMENT, reimburse the CONSULTANT for such additional design services in accordance with the provisions of Article II, Sections A and B.

If additional services are performed by the CONSULTANT through its own acts, which are not usable or applicable to this project, the cost of such additional services shall not be reimbursable.

F. OWNERSHIP OF PLANS

All data, plans, drawings, tracings, estimates, specifications, proposals, sketches, diagrams, calculations, reports, or other documents collected, prepared, or undertaken either manually or electronically by the CONSULTANT under the provisions of this AGREEMENT, immediately shall become the property of the DEPARTMENT, and, when completed, shall bear the CONSULTANT'S endorsement. The CONSULTANT shall surrender to the DEPARTMENT, upon demand at any time, or submit to its inspection, any data, plan, drawing, tracing, estimate, specification, proposal, sketch, diagram, calculation, report, or document which shall have been collected, prepared, or undertaken by the CONSULTANT pursuant to this AGREEMENT, or shall have been hitherto furnished to the CONSULTANT by the DEPARTMENT. The CONSULTANT shall have the right, with the written approval of the DEPARTMENT, to use any of the data prepared by it and hitherto delivered to the DEPARTMENT at any later stage of the project contemplated by this AGREEMENT.

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G. SUBLETTING

The CONSULTANT shall not sublet, assign or transfer any part of the CONSULTANT'S services or obligations under this AGREEMENT without the prior approval and written consent of the DEPARTMENT.

All subcontracts shall be in writing and those exceeding \$10,000 shall contain all provisions of this AGREEMENT, including "Certification of CONSULTANT/Subconsultant". For subconsultants working on design, hazardous materials, geotechnical services, etc., the minimum limits of their professional liability (errors and omissions) insurance coverage shall be not less than \$2,000,000 in the aggregate, with a deductible of not more than \$75,000. For subconsultant contracts with less risk, e.g., wetland evaluations, materials inspection and testing, structural steel fabrication inspection, underwater bridge inspection, research, bridge deck condition surveys, surveying, mapping, noise studies, air-quality studies, etc., the minimum limits of their professional liability (errors and omissions) insurance coverage shall be not less than \$1,500,000 in the aggregate, with a deductible of not more than \$25,000. For subconsultant contracts with no risk, e.g., subsurface exploration, archaeology, cultural resources, data gathering, etc., professional liability insurance shall not be required. If coverage is claims made, the period to report claims shall extend for not less than three years from the date of substantial completion of the construction contract. A copy of each subcontract shall be submitted for the DEPARTMENT'S files.

H. GENERAL COMPLIANCE WITH LAWS, ETC.

The CONSULTANT shall comply with all Federal, STATE, and local laws and ordinances applicable to any of the work involved in this AGREEMENT and shall conform to the requirements and standards of STATE, municipal, railroad, and utility agencies whose facilities and services may be affected by the construction of this project. The services shall be performed so as to cause minimum interruption to said facilities and services.

I. BROKERAGE

The CONSULTANT warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the CONSULTANT, to solicit or secure this Contract, and that it has not paid or agreed to pay any company or person, other than a bona fide employee working solely for the CONSULTANT, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, the STATE shall have the right to annul this Contract without liability, or, at its discretion, to deduct from the contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee.

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J. CONTRACTUAL RELATIONS

1. Independent Contractor

The CONSULTANT agrees that its relation to the STATE is as an independent contractor and not as an agent or employee of the STATE.

2. Claims and Indemnification

a. Non-Professional Liability Indemnification

The CONSULTANT agrees to defend, indemnify and hold harmless the STATE and all of its officers, agents, and employees from and against any and all claims, liabilities, or suits arising from (or which may be claimed to arise from) any (i) acts or omissions of the CONSULTANT or its subconsultants in the performance of this AGREEMENT allegedly resulting in property damage or bodily injury, and/or, (ii) misconduct or wrongdoing of the CONSULTANT or its subconsultants in the performance of this AGREEMENT.

b. Professional Liability Indemnification

The CONSULTANT agrees to defend, indemnify and hold harmless the STATE and all of its officers, agents, and employees from and against any and all claims, liabilities, or suits arising from (or which may be claimed to arise from) any negligent acts or omissions of the CONSULTANT or its subconsultants in the performance of professional services covered by this AGREEMENT.

c. These covenants shall survive the termination of the AGREEMENT. Notwithstanding the foregoing, nothing herein contained shall be deemed to constitute a waiver of the sovereign immunity of the STATE, which immunity is hereby reserved by the STATE.

3. Insurance

a. Required Coverage

The CONSULTANT shall, at its sole expense, obtain and maintain in force the following insurance:

1. Commercial or comprehensive general liability insurance, including contractual coverage, for all claims of bodily injury, death, or property damage, in policy amounts of not less than \$250,000 per occurrence and \$2,000,000 in the aggregate (STATE to be named as an additional insured); and
2. comprehensive automobile liability insurance covering all motor vehicles, including owned, hired, borrowed, and non-owned vehicles, for all claims of bodily injury, death, or property damage, in policy amounts of not less than \$500,000 combined single limit; and
3. professional liability (errors and omissions) insurance coverage of not less than \$2,000,000 in the aggregate. If coverage is claims made, the period to report claims

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shall extend for not less than three years from the date of substantial completion of the construction contract. No retention (deductible) shall be more than \$75,000; and

4. workers' compensation and employer's liability insurance as required by law.

b. Proof of Insurance

The policies described in paragraph (a) of this section and Section G shall be in the standard form employed in the STATE, issued by underwriters licensed or approved by the Department of Insurance of the STATE. Each policy shall contain a clause prohibiting cancellation or modifications of the policy earlier than 30 days, or 10 days in cases of non-payment of premium, after written notice thereof has been received by the STATE. The CONSULTANT shall provide to the STATE a certificate of insurance evidencing the required coverages, retention (deductible), and cancellation clause prior to submittal of the AGREEMENT to Governor and Council for approval and shall have a continuing duty to provide new certificates of insurance as the policies are amended or renewed.

4. No Third-Party Rights

It is not intended by any of the provisions of the AGREEMENT to make the public, or any member thereof, a third-party beneficiary of the AGREEMENT, or to authorize anyone not a party to this AGREEMENT to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of this Contract. The duties, obligations, and responsibilities of the parties to this AGREEMENT with respect to third parties shall remain as imposed by law. No portion of this AGREEMENT shall be understood to be a waiver of the STATE'S sovereign immunity.

5. Construction of AGREEMENT

This AGREEMENT is executed in a number of counterparts, each of which is an original and constitutes the entire AGREEMENT between the parties. This AGREEMENT shall be construed according to the laws of the STATE.

K. AGREEMENT MODIFICATION

The assignment of the CONSULTANT, generally established by the scope of work in this AGREEMENT, shall not be modified in any way without prior approval of the Governor and Council.

L. EXTENSION OF COMPLETION DATE(S)

If, during the course of the work, the CONSULTANT anticipates that one or more of the completion dates specified in this AGREEMENT cannot be met, it shall be the CONSULTANT'S responsibility to notify the DEPARTMENT in writing at least ninety (90) days prior to the

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completion date(s) in question. The CONSULTANT shall state the reasons that a completion date(s) cannot be met and request a revised date(s) for consideration by the DEPARTMENT.

M. TITLE VI (NONDISCRIMINATION OF FEDERALLY-ASSISTED PROGRAMS)

COMPLIANCE

During the performance of this AGREEMENT, the CONSULTANT, for itself, its assignees and successors in interest agrees as follows:

- (1) **Compliance with Regulations**: The CONSULTANT shall comply with Title VI of the Civil Rights Act of 1964 regulations relative to nondiscrimination in federally-assisted programs of the DEPARTMENT, such regulations entitled Title 49 Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the REGULATIONS), and which are herein incorporated by reference and made a part of this AGREEMENT.
- (2) **Nondiscrimination**: The CONSULTANT, with regard to the work performed by it during the AGREEMENT, shall not discriminate on the grounds of race, color, religion, age, sex, handicap, sexual orientation, or national origin in the selection and retention of subconsultants, including procurements of materials and leases of equipment specific to this project. The CONSULTANT shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the REGULATIONS, including employment practices when the AGREEMENT covers a program set forth in Appendix B of the REGULATIONS.
- (3) **Solicitations for Subcontracts, Including Procurements of Materials and Equipment**: In all solicitations either by competitive bidding or negotiation made by the CONSULTANT for work to be performed under a subcontract, including procurements of materials or leases of equipment specific to the project, each potential subconsultant or supplier shall be notified by the CONSULTANT of the CONSULTANT'S obligations under this AGREEMENT and the REGULATIONS relative to nondiscrimination on the grounds of race, color, religion, age, sex, handicap, sexual orientation, or national origin.
- (4) **Information and Reports**: The CONSULTANT shall provide all information and reports required by the REGULATIONS or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information and its facilities as may be determined by the DEPARTMENT or the Federal Highway Administration to be pertinent to ascertain compliance with such REGULATIONS, orders and instructions. Where any information required of a CONSULTANT is in the exclusive possession of another who fails or refuses to furnish this information, the CONSULTANT shall so certify to the DEPARTMENT or the Federal Highway Administration, as appropriate, and shall set forth what efforts it has made to obtain the information.

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- (5) Sanctions for Noncompliance: In the event of the CONSULTANT'S noncompliance with nondiscrimination provisions of this AGREEMENT, the DEPARTMENT shall impose sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
- (a) withholding of payments to the CONSULTANT under the AGREEMENT until the CONSULTANT complies; and/or
 - (b) cancellation, termination, or suspension of the AGREEMENT, in whole or in part.
- (6) The CONSULTANT shall take such action with respect to any subcontract or procurement as the DEPARTMENT or the Federal Highway Administration may direct as a means of enforcing such provisions, including sanctions for noncompliance, provided, however, that in the event a CONSULTANT becomes involved in, or is threatened with, litigation with a subconsultant or supplier as a result of such direction, the CONSULTANT may request the DEPARTMENT to enter into such litigation to protect the interests of the STATE, and, in addition, the CONSULTANT may request the United States to enter into such litigation to protect the interests of the United States.
- (7) 23 CFR 710.405(b) and Executive Order 11246 entitled "Equal Employment Opportunity," as amended by Executive Order 11375 and as supplemented in Department of Labor REGULATIONS (41 CFR Part 60), shall be applicable to this AGREEMENT and any subagreements hereunder.
- (8) Incorporation of Provisions: The CONSULTANT shall include the provisions of paragraphs (1) through (7) in every subcontract, including procurements of materials and leases of equipment specific to the project, unless exempt by the REGULATIONS, or directives issued pursuant thereto.

In accordance with EXECUTIVE ORDER 11246, the DEPARTMENT has the authority and responsibility to notify the Office of Federal Contract Compliance Programs of the United States Department of Labor if they become aware of any possible violations of Executive Order 11246 and 41 CFR Part 60. The Office of Federal Contract Compliance Programs is solely responsible for determining compliance with Executive Order 11246 and 41 CFR Part 60 and the CONSULTANT should contact them regarding related compliance issues.

N. DISADVANTAGED BUSINESS ENTERPRISE POLICY REQUIREMENTS

1. Policy. It is the policy of the United States Department of Transportation (USDOT) to ensure nondiscriminatory opportunity for Disadvantaged Business Enterprises (DBE's), as defined in 49 Code of Federal Regulations (CFR) Part 26, to participate in the performance of agreements and any subagreements financed in whole or in part with Federal funds. Consequently, the DBE requirements of 49 CFR Part 26 apply to this AGREEMENT.

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2. Disadvantaged Business Enterprise (DBE) Obligation. The STATE and its CONSULTANTS agree to ensure nondiscriminatory opportunity for disadvantaged business enterprises, as defined in 49 CFR Part 26, to participate in the performance of agreements and any subagreements financed in whole or in part with Federal funds. In this regard, the STATE and its CONSULTANTS shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that disadvantaged business enterprises have the opportunity to compete for and perform work specified in the agreements. The STATE and its CONSULTANTS shall not discriminate on the basis of race, color, religion, age, sex, handicap, sexual orientation, or national origin in the award and performance of agreements financed in whole or in part with Federal funds.
3. Sanctions for Non-Compliance. The CONSULTANT is hereby advised that failure of the CONSULTANT, or any Subconsultant performing work under this AGREEMENT, to carry out the requirements set forth in paragraphs 1 and 2 above, shall constitute a breach of agreement and, after the notification of the United States Department of Transportation, may result in termination of this AGREEMENT by the STATE or such remedy as the STATE deems appropriate.

O. DOCUMENTATION

The CONSULTANT shall document the results of the work to the satisfaction of the DEPARTMENT and the Federal Highway Administration. This shall include preparation of progress reports, plans, specifications, and estimates and similar evidences of attainment of objectives called for in this AGREEMENT.

P. CLEAN AIR AND WATER ACTS

If the amount of the AGREEMENT or subcontract thereunder exceeds \$100,000, the CONSULTANT or subconsultant shall comply with applicable standards, orders, or requirements issued under Section 306 of the Federal Clean Air Act (43 U.S.C. 1857(h)), Section 508 of the Federal Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency regulations (40 CFR Part 15), which prohibit the use under non-exempt Federal contracts, grants, or loans of facilities included on the EPA List of Violating Facilities. The CONSULTANT or subconsultant shall report violations to the FHWA and to the U. S. Environmental Protection Agency Assistant Administrator for Enforcement (EN-329).



ATTACHMENT A

Plaistow-Kingston 10044E Part A – Preliminary Design, Rev. 2

October 25, 2017

1.00 Pre-Preliminary Phase

1.01 Evaluate Available Plans and Data

Information received from the Department including plans and other studies, letters, meeting reports, and previous design alternatives will be reviewed to aid in the full understanding of the project issues and design controls.

1.02 Base Plan Preparation

The engineering base plan will be provided by the Department and a digital terrain model will be developed from the topographic survey data provided by the Department. It is assumed that a three dimensional triangle file containing all break lines and point shots will be provide by the Department for model development.

1.03 Site Review

A thorough site review will be completed. This will consist of walking the length of the corridor and documenting features shown or not shown on the plans and observing traffic and potential conflicts. Photos will also be taken for future reference. The site will be visited periodically (assume 1 full day site review and 3 half day on-site team coordination meetings) to note changes in the field conditions and to evaluate the feasibility of the proposed improvements as the design progresses.

1.04 Develop Design Criteria

The project Design Criteria will be developed utilizing current NHDOT and AASHTO documents, policies and guides including AASHTO Policy on Geometric Design of Highways and Streets, AASHTO LRFD Bridge Design Specifications, NHDOT Highway Design Manual, and the NHDOT Bridge Design Manual (BDM).

1.05 Coordinate Traffic Counting and Review Data

GM2 will manage and oversee the traffic counting vendor, and review the data provided.

Since several of the existing intersections on NH Route 125 may be combined into one intersection, weekday twelve-hour turning movement counts (6:00 AM to 6:00 PM) will be taken at nine (9) intersections: Kingston Road; Granite Road; Roadstone Drive (2 locations); Granite Fields Sports Complex; Dorre Road; Colonial Road (2 locations); and Debra Road. This information will be utilized for traffic signal warrant analysis for existing conditions and also for the traffic signal warrant analysis of alternate roadway configurations. The information will also be used to determine the length of left turn storage lanes at unsignalized median openings.

Twelve-hour turning movement counts will be taken on a Saturday and a Sunday at the Granite Fields Sports Complex to account for weekend activities at this facility.



The intersections of NH Route 125 & Old County Road and of NH Route 125 & Hunt Road & Newton Jct. Road will also require twelve-hour turning movement counts. The counts will be used to compute the synchro analysis of this segment of NH Route 125.

A one-week continuous directional traffic count will be obtained during a period of time when school is in session. The count will identify different vehicle types by direction. This information will be used to determine if traffic volume fluctuations during the weekdays and on weekends will affect the design.

1.06 Safety Analysis

Not Included. The Department will complete the safety analysis and provide the information for inclusion in the Engineering Report.

1.07 Traffic Analysis and Model

The traffic data and turning movements provided by the traffic counting vendor will be synthesized and collated to produce meaningful and justified highway improvement alternatives. Lane configurations and widening options will be studied. The Department will provide growth factors, preferred design years, and factor preferences where required for development of the model. Level of Service (LOS) for the current year and design year will be developed. Preliminary queue lengths, intersection capacity, and turning lane storage for the approaches of NH Route 125 and proposed intersection locations will be developed. The results of the analyses will be formatted for inclusion in the Engineering Report.

1.08 Signal Warrants Analysis

Signal warrants will be evaluated for NH Route 125 and intersections at Kingston Road, Granite Fields Sports Complex, Dorre Road, and Colonial Road (2) for current year and design year.

1.09 Develop Conceptual Alternatives

It is anticipated that conceptual alternatives (a maximum of four (4)) will be developed for NH Route 125 and refined with Over the Shoulder (OTS) meetings. The assumed four (4) alternatives will include a No-Build, Three Lane with Raised Islands, Three Lane with No Raised Islands, and Four Lane with Raised Islands.

Conceptual alternatives developed will minimize impacts to environmental, cultural, and historic resources as well as private property. The study of nine (9) intersections will review up to two (2) alternatives per intersection and will be refined through the OTS meetings and design progression.

1.10 Develop Preliminary Drainage

Existing and proposed watersheds will be identified. Potential outlets and possible treatment areas will also be identified to conform with the MS4 requirements.

1.11 Existing Right-of-Way Survey & Research

Using the title research and initial ground survey provided by the Department, GM2 survey staff will locate property bounds and other physical field evidence pertinent to verify property boundaries and will create the project "erl" and "ert" MicroStation files. It is assumed that the plans for NH Route 125, the title research for

adjacent parcels, and all other associated plans within the Department archives will be made available for this task. There are approximately 72 parcels adjacent to the project limits. Full boundary survey of abutting properties is not included. The total estimated acreage for the parcels will be provided by the Department from deed or other information.

The numbered wetland flags placed by McFarland Johnson (MJ) staff will be located as part of this task.

1.12 Develop Existing Right-of-Way Information

The legacy alignment for NH Route 125 and the Rights-of-Way located in Task 1.11 will be developed into base Registry Plans for review by the Department. All previous legacy alignment information available for the corridor research and developed by the Bureau of ROW shall be provided along with any previously developed ROW abstracting. Registry Plans will be developed so that they may be recorded at the Rockingham County to define the existing State property limits. The plans will comply with the requirements of the Rockingham County Registrar and the NHDOT Right-of-Way Plans Checklist.

1.13 Develop Retaining Wall Layout and Alternative Wall Types

GM2 will develop conceptual retaining wall layouts where needed and evaluate alternative wall types that would be appropriate for the locations.

1.14 Develop Traffic Control Alternatives

Traffic control alternatives will be developed to concept level only to determine the property required, if any, for the maintenance of traffic during construction.

1.15 Develop Hydraulic/Hydrologic Analysis for Little River Crossings

The existing hydraulic model will be developed for the Little River Crossings under NH Route 125 and the Granite Fields Sport Complex drive. It is anticipated that information from the USGS, NH StreamStats, and the New England Hill and Lowland method will be used to develop Riverine flow values. Engineering judgment and collaboration with the Department will then be used to select the best riverine flows for modeling. The result of the analysis will be a tier designation in accordance with the NHDES Stream Crossing Rules and a recommended hydraulic opening for the proposed structure. This analysis will be included as an appendix in the Engineering Report.

Hydraulic model geometry will be developed using survey topographic information and river cross section information provided by the Department. GM2 will provide guidance in the location of the required river cross sections. This model will be created to focus directly on the subject crossing, incorporating model limits that will reflect the hydraulic influence of the structure on the river profile.

The existing site crossing and the proposed alternative(s) will then be coded into the model. The hydraulic adequacy of the existing structure will be determined, followed by modeling for a proposed hydraulic opening that would be required to meet design criteria for the design flood event. To determine the influence of the proposed structure on the subject reach of Little River, the existing and proposed profiles will be compared.

Scour for each of the alternates will be computed based on methods presented in FHWA documents, namely HEC-18 (Scour at Bridges), to aid in foundation design.

1.16 Develop Cost Comparisons

A conceptual cost estimate will be developed to support the alternative being brought forward for the NEPA approval. Other alternatives cost will be developed far enough to support the preferred alternative comparisons. The cost estimates will be based on major construction items and construction contingencies. The result will be an order of magnitude estimate for alternative evaluation. ROW costs will not be included in the estimates.

1.17 Develop 15% Plan Submission

This task includes the development of the feasible alternatives based on the comments received from the Department on the OTS meetings. A set of 15% Pre-Preliminary Plans will be submitted for review. The set will consist of roll plans including a 50 scale plan, profile, typical, and critical cross sections.

2.00 Preliminary Phase (30%)

2.01 Incorporate Utility Information

Any utility information gathered and provided by the Department will be incorporated onto the plans and cross sections.

2.02 Develop Final LOS Calculations and Traffic Design

Comments on the 15% submission will be addressed and the traffic model will be completed. LOS calculations, queue lengths, intersection capacity, and turning lane storage for the approaches of NH Route 125 and the nine (9) major intersections studied will be finalized. The results of the analyses will be formatted for inclusion in the Engineering Report.

2.03 Develop Conceptual Drainage and BMP's for Selected Alternative

The conceptual drainage for the project will be developed to the 30% level identifying general locations available for BMP's and other expected drainage structure locations. A conveyance system will be required to address surface runoff associated with the roadway improvements. In this preliminary phase of design, drainage improvements will be conceptually prepared to provide a base map for what is to be designed in the next design phase. In as much as possible within the MS4 guidelines, drainage will be maintained with a surface system (e.g. swales) to facilitate water quality best management practices.

2.04 Develop Proposed Right-of-Way & Easements

Proposed Right-of-Way limits and easements for the selected alternative will be identified and labeled by type. Monuments will need to be set at standard positions along the ROW of the corridor in compliance with NHDOT specifications and registry of deeds requirements. The intent is to set these monuments in Part B and post construction.

2.05 Develop Wetland Impact Plans

Wetland Impact Plans will be developed for the selected alternative utilizing NHDOT's Design Submission Checklist (HDM Appendix 2 -14 and those listed on the Bureau of Environment website) and Wetlands Bureau Permit Application Guidelines (HDM Appendix 2-15 and those listed on the Bureau of Environment website). Plans will include a Cover Sheet, Standard Symbols Sheets, and the Wetland Impact Plans (assume ten (10) cut sheets).

2.06 Develop 30% Plans for Selected Alternative

Comments on the 15% submission will be addressed and then Preliminary Plans will be developed for the selected alternative utilizing NHDOT's Design Submission Checklist. Plans will be 50 scale roll plans. The preliminary guardrail design will be developed under this task as is required to define property impacts associated with the planned roadside improvements. Additionally, 30% Preliminary Plans of the proposed retaining wall(s), if necessary, will be developed and submitted on cut sheet(s).

2.07 Develop 30% Profiles for Selected Alternative

Preliminary Profiles will be developed for the selected alternative utilizing NHDOT's Design Submission Checklist. Profiles will be 50 scale horizontal/10 scale vertical roll plans.

2.08 Develop 30% Typical Sections for Selected Alternative

Preliminary Typical Sections will be developed for the selected alternative utilizing NHDOT's Design Submission Checklist. Typical sections will be 10 scale cut sheets.

2.09 Develop 30% Cross Sections for Selected Alternative

Preliminary Cross Sections including drive sections will be developed utilizing NHDOT's Design Submission Checklist. Cross Sections will be 10 scale roll plans.

2.10 Develop 30% Traffic Control Plans for Selected Alternative

Preliminary Traffic Control Plans will be developed for the selected alternative. Depending on the alternative selected, traffic control may only be shown on typical staging sections at this level of development.

2.11 Develop 30% Traffic Signal Plans for Selected Alternative

A Preliminary traffic signal plan will be developed for each warranted traffic signal (maximum of two locations). The plan will identify traffic signal equipment location.

2.12 Develop 30% Quantities and Engineer's Estimate for Selected Alternative

A 30% Engineer's Estimate will be developed for the selected alternative utilizing quantities calculated from the 30% Plans and current NHDOT unit costs. The estimate will include contingency items based on discussion with the Department to arrive at a preliminary construction estimate.

2.13 Develop Engineering Report

The Engineering Report will be developed according to the sample in the NHDOT Highway Design Manual. Superelevation and edge line profiles (if necessary based on proposed grades) will be plotted and included in the report appendices.

3.00 Type, Size and Location (TS&L)

3.01 Develop Bridge/Structure Type, Size & Location (TS&L) for Selected Alternative

The bridge/structure concepts for the two Little River crossings approved in the Study Phase for further development in the Preliminary Phase of the project will incorporate or otherwise resolve all requirements and constraints from applicable studies, reports and analyses developed within and outside the Department for the selected bridge/structure types.

During the Preliminary Phase, upon receiving approval on the recommended bridge/structure layout, the design of the bridge/structures will be further advanced in accordance with the requirements of the BDM. The design will be developed after careful appraisal of the site conditions, foundation recommendations, results of the preliminary hydraulics, scour potential, rights-of-way, and highway limitations including maintenance and protection of traffic, both present and future. The replacement bridge/structure options will be developed in accordance with the NHDES Stream Crossing Guidelines (Env-Wt 900 regulations).

As part of the Preliminary Phase, the type, size, and location (TS&L) of the bridge/structures will be presented to the Department for comment and approval.

3.02 Geotechnical Coordination

This task includes the coordination with the Bureau of Materials and Research to develop a subsurface exploration plan based on the selected alternative to complete the preliminary phase geotechnical investigations and recommendations for the bridge/structures and the proposed retaining walls.

4.00 Slope & Drain Phase (60%)

4.01 Develop 60% Plans for Selected Alternative

Slope and Drain Plans will be developed by addressing the 30% review comments and progressing the design to 60% utilizing NHDOT's Design Submission Checklist. Plans will be 50 scale cut sheets (assume ten (10)). Additionally, 60% plans of the proposed retaining wall(s) will be developed and submitted on cutsheet(s).

4.02 Develop 60% Profiles for Selected Alternative

Slope and Drain Profiles will be developed by addressing the 30% review comments and progressing the design to 60% utilizing NHDOT's Design Submission Checklist. Profiles will be 50 scale horizontal/10 scale cut sheets (assume ten (10)).

4.03 Develop 60% Typical Sections for Selected Alternative

Based on pavement recommendations provided by the Department, the required typical sections will be finalized. Typical sections will be 10 scale cut sheets. It is assumed that four (4) typical sections for NH Route 125 and one (1) typical section for each sideroad (7) will be required, resulting in six (6) cut sheets.

4.04 Develop 60% Roadway Detail Sheets

Not Included.

4.05 Develop 60% Drainage Design

The drainage design for the project will be developed under this task. Calculation and backup material for the design shown on the plans will be developed. Pre-construction and post-construction drainage flows will be documented. Both plans showing the existing and proposed watersheds for the project will be finalized. A Drainage Report will be developed including the required support documentation. Drainage notes for incorporation in the plan set will be developed. Drainage structures will be added to the cross sections.

4.06 Develop 60% Drainage Detail Sheets

Detail sheets required showing designed outlet protection, swales, and other non-standard elements will be developed.

4.07 Develop Water Quality Enhancement Features

Water quality enhancement features will be developed in accordance with the MS4 rules. It is assumed that areas available will be limited to those specifically identified in the previously developed Public Hearing plan as follows:

- Parcel 158 west of NH Route 125
- Parcel 168 west of NH Route 125
- Parcel 289 & 290 east of NH Route 125
- Parcel 288 east of NH Route 125
- Parcels 283, 284 & 285 east of NH Route 125
- Parcel 279 east of NH Route 125
- Parcels 2, 3 & 4 west of NH Route 125
- Parcel 5 west of NH Route 125

The existing treatment facility on the west side of NH Route 125 (Parcel 9) is assumed to be sized to treat stormwater runoff for any widening within this project to the north in compliance with the MS4 rules.

4.08 Develop 60% Cross Sections for Selected Alternative

Slope and Drain cross sections including drive sections and ledge sections will be developed utilizing the NHDOT Design Submission Checklist. The complete template and drainage will be incorporated on the sections at this stage. Cross Sections will be 10 scale cut sheets, resulting in approximately 200 cut sheets (assuming 25' ledge cross sections in areas shown on the Hearing Plan and 50' in all others).



4.09 Develop 60% Traffic Control Plans for Selected Alternative

Slope and Drain Traffic Control Plans will be developed by addressing the 30% review comments and progressing the design to 60% utilizing NHDOT's Design Submission Checklist. It is assumed that the traffic control plans will only require plan view delineation for this project. Additional interim profiles and separate traffic control cross sections will not be required. Plans will be 50 scale roll plans. The plans will show the minimum typical section allowed during construction activities.

4.10 Develop 60% Quantities and Engineer's Estimate for Selected Alternative

The 30% Engineer's Estimate will be updated to reflect the quantities calculated from the 60% Plans and current NHDOT unit costs. The estimate will include contingency items based on discussions with the Department to arrive at a 60% Construction Estimate.

4.11 Update Wetland Impact Plans

Wetland Impact Plans will be updated by addressing comments received from the Department. Plans will include a Cover Sheet, Standard Symbols Sheets, and the Wetland Impact Plans (assume ten (10) cut sheets).

4.12 Update Engineering Report

The Engineering Report will be finalized to include any changes made during the 60% design development.

5.00 Preliminary Bridge/Structure Plans

5.01 Preliminary Superstructure Design

This task includes performing design calculations to properly size the proposed superstructures (likely precast concrete frames) for the two Little River crossings.

5.02 Preliminary Substructure Design

This task includes performing design calculations to properly size the proposed substructure elements for the two Little River crossings.

5.03 Develop Bridge General Plan & Elevation

This task includes developing a General Plan and Elevation for the two Little River crossings.

5.04 Develop Bridge Site Plan & Profile

This task includes developing a Site Plan and Profile for the two Little River crossings.

5.05 Develop Boring Log and Boring Layout Sheets

This task includes developing Boring Log and Boring Layout sheets for the two Little River crossings.

5.06 Develop Substructure Elevations/Developed Views

This task includes developing a Substructure Elevations/Developed Views for the two Little River crossings.

5.07 Finalize Bridge/Structure Typical Sections

This task includes finalizing the Bridge/Structure Typical Sections for the two Little River crossings.

5.08 Geotechnical Coordination

This task includes the coordination with the Bureau of Materials and Research regarding the preliminary foundation design and the bearing capacity of either the new foundation or the existing foundation for the two Little River crossings.

6.00 Coordination of Environmental Efforts

6.01 Archeological Resource Investigations (IAC)

This task includes the management of and coordination with Independent Archaeological Consulting, LLC (IAC) in determining if archaeological sites or resources are present.

6.02 Historic Resource Investigations (MJ & PC)

This task includes the management of and coordination with Preservation Company (PC) in preparing the NHDHR Intensive-Level Inventory Forms potential historic resources in the project impact area. GM2 will coordinate with MJ on the Request for Project Review (RPR) who will submit it to the Department for submission to the New Hampshire Division of Historic Resources.

6.03 Wetland/Floodplain Delineation (MJ)

This task includes the management of and coordination with MJ in completing the necessary wetlands/floodplain delineations and permitting.

6.04 NEPA Documentation

This task includes the coordination required to manage and assist in the development of the project NEPA documentation with the project team.

6.05 Natural Resource Investigations (MJ)

This task includes the management of and coordination with MJ in completing the necessary reviews of natural resources including any rare, threatened or endangered species.

6.06 Noise and Air Studies (HMMH)

This task includes the management of and coordination with HMMH in completing the necessary noise and air quality studies.

7.00 Support Public Involvement Process

7.01 Develop Illustrative Plans

The standard NHDOT Hearing Plan utilizing the Legend in HDM Appendix 2-10 will be developed for the Public Officials Meeting. This plan will also be used subsequent Public Informational and Resource Meetings.

7.02 Develop Exhibits/Renderings

Exhibits showing additional project information such as bridge layout, and/or traffic control phasing will be developed to aid in the Public's understanding of the project. It is anticipated that no bridge renderings will be developed.

7.03 Public Participation Support

This task includes the management of and coordination with MJ on their Public Participation effort. It also includes assisting in the developing of project informational materials to be sent to the public and utilized at Working Group Meetings in Plaistow and Kingston.

7.04 Design Studies Development

Further design studies and/or plan revisions to the 30% plans resulting from the public involvement process will be developed and reviewed by the Department through an OTS prior to proceeding with the 60% Slope and Drain Plans.

8.00 Meetings

8.01 Design Development Meetings – Over the Shoulder (OTS)

It is anticipated that there will be five (5) Over the Shoulder (OTS) meetings to discuss and refine the design alternatives throughout Part A. OTS Meetings are intended to solicit constructive opinions, intent and possibly direction from the Department about design alternatives under consideration in an effort to streamline the design process and limit the potential for rework after a submission. All meetings are assumed to be at NHDOT in Concord.

GM2 will be responsible for OTS meeting minutes.

8.02 Natural Resource Meetings

Staff attendance at four (4) Natural Resource meeting throughout Part A is included. These meetings are assumed to be at NHDOT in Concord.

8.03 Cultural Resource Meetings

Staff attendance at four (4) Cultural Resource meetings throughout Part A is included. These meetings are assumed to be at NHDOT in Concord.

8.04 Public Officials Meetings

Staff attendance at two (2) Public Officials Meetings throughout Part A is included. These meetings will be in Plaistow and Kingston. The Department is responsible for scheduling the Public Officials Meetings, venue reservations, and advertising. GM2 will provide an active role in the meetings through coordination, presentation, necessary graphics and support materials as described in Task 7.00. It is assumed that there will also be a preparation meeting with the Department staff in advance of the Public Officials Meeting as a “dry-run” to coordinate the presentation and information to be delivered.

8.05 Public Informational Meetings

Staff attendance at two (2) Public Informational Meetings in Part A is included. These meetings will be in Plaistow and Kingston. The Department is responsible for scheduling the Public Informational Meetings, venue reservations, and advertising. GM2 will provide an active role in the meetings through coordination, presentation, necessary graphics and support materials as described in Task 7.00. It is assumed that there will also be a preparation meeting with the Department staff in advance of the Public Informational Meeting as a “dry-run” to coordinate the presentation and information to be delivered.

8.06 Meetings of the Commission

Staff attendance at two (2) Meetings of the Commission in Part A is included. These meetings are assumed to be at NHDOT in Concord. This task includes development of the plans or displays necessary to support the Department’s effort at Commission Meetings. Based on discussions with the Department, it is likely that a new Commission will be necessary moving forward.

8.07 Working Group Meetings

Staff attendance at four (4) Working Group Meetings, two (2) in Plaistow and two (2) in Kingston, is included.

9.00 Project Administration

9.01 Progress Reports

This task includes the development and update of the monthly Progress Reports provided to the NHDOT Project Manager assigned to the project. The progress report will highlight the month’s activities, identify outstanding items and serve as monthly chronology of the project development.

9.02 Schedule

A project schedule will be developed and updated as needed during the design development with input from the Department.



Direct Expenses - Travel

Included is travel expense for four (4) Public Officials/Informational meetings (two (2) in Plaistow and two (2) in Kingston), four (4) Working Group Meetings (two (2) in Plaistow and two (2) in Kingston), and four (4) site visits.

Direct Expenses – Printing

Estimated costs for presentation paper, copying cost for reports, and project plans are included in this item.

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Project Goal

The goal of Part A of the Plaistow-Kingston NH Route 125 project is to develop and select a preferred alternative for the 1.7 mile project corridor, conduct a public participation program, and secure an approved Environmental Document.

Study Approach

The MJ Team will use a Context Sensitive Solutions approach that includes a dynamic public participation program to engage the public as the project develops. A Working Group made up of town and Rockingham Planning Commission officials will be utilized in an advisory capacity to help guide the project.

The project will be separated into three categories: Preliminary Engineering (to be completed by the prime consultant, GM2), NEPA Documentation, and Public Participation. Preliminary Engineering includes traffic analysis, right-of-way survey, and alternatives development. NEPA Documentation, which entails re-evaluating the previously prepared EA, will also include resource identification, agency coordination, development of a project purpose and need, impacts determination, and 4(f) and 6(f) coordination. Public Participation includes Working Group meetings, public officials meetings, project fact sheets, a YouTube page that will host informational video snippets, and public informational meetings.

Project Limits

The project corridor extends approximately 1.7 miles along NH Route 125 beginning at a point just north of Old Country Road in Plaistow and ending at a point just south of Newton Junction Road in Kingston.

Study Objectives

This scope covers only Part A of the project development process, which is preliminary engineering and environmental documentation. The objectives of Part A are to:

- Develop a Project Purpose and Need Statement
- Select a Preferred Alternative
- Prepare an Environmental Document
- Create an Engineering Report

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Consultant Team Roles

McFarland-Johnson, Inc. (MJ)

MJ is a subconsultant to the prime consultant, GM2. MJ will lead the Environmental Documentation and collaboratively develop the Public Participation components of the project.

Each of the following sub-consultants under the prime consultant has a specific technical role as well as participation in the Public Participation program, when necessary.

Preservation Company (PC)

PC is responsible for the historic resource investigations.

Independent Archaeological Consulting, LLC (IAC)

IAC is responsible for the archeological resource investigations.

STUDY TASKS

This Scope of Work covers Part A of the Plaistow-Kingston NH Route 125 Preliminary Design Services (Part A). The tasks for Part A that will be undertaken by MJ have been separated into two categories: Public Participation and NEPA Documentation. The following is a list of the specific tasks under each category. Following this list is a description of each task that includes detailed information about the work proposed for each task.

Public Participation

Task **Description**

1. Prepare a Public Involvement Plan
2. Working Group Meetings
3. Public Officials/Public Informational Meetings
4. Project-Specific YouTube Page / Produce Video Snippets
5. Project Fact Sheets
6. Project Visualizations

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NEPA Documentation

- | <u>Task</u> | <u>Description</u> |
|-------------|---|
| 1. | Data Collection |
| 2. | Agency Coordination |
| 3. | Project Purpose and Need |
| 4. | Description of Proposed Action |
| 5. | Environmental Impacts of Reasonable Alternatives |
| 5.1. | Land Use |
| 5.2. | Social and Economic Resources |
| 5.3. | Farmlands |
| 5.4. | Groundwater Resources |
| 5.5. | Surface Water Resources |
| 5.6. | Chloride Loading |
| 5.7. | Pollutant Loading |
| 5.8. | Wetlands |
| 5.9. | Wetland Mitigation |
| 5.10. | Wildlife/Vegetation/Fisheries |
| 5.11. | Threatened or Endangered Species/Invasive Species |
| 5.12. | Parks/Recreation/Conservation Lands |
| 5.13. | Cultural Resources |
| 5.13.1. | Area of Potential Effect (APE) |
| 5.13.2. | Historic Resources |
| 5.13.3. | Archaeological Resources |
| 5.14. | Contaminated Properties/Hazardous Materials |
| 5.15. | Visual Resources |
| 5.16. | Environmental Justice |
| 5.17. | Construction Impacts |
| 5.18. | Summary of Impacts |
| 5.19. | Environmental Commitments |
| 6. | NEPA/Section 4(f) Re-Evaluation |

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Public Participation

Task 1 Prepare a Public Involvement Plan

Description: MJ will prepare a Public Involvement Plan, submitting the draft plan for the Department's review. MJ will meet with the Department to review the plan and after receiving comments, will revise and resubmit the final plan.

Assumptions:

1. Two (2) rounds of revisions of the draft plan are included in this scope.

Task 2 Working Group Meetings

Description: Up to four (4) meetings will take place with the Project Working Group, a group of stakeholders that may include Town staff, RPC staff and other stakeholders identified by the Department as appropriate. The Working Group will act in an advisory role.

Assumptions:

1. MJ attendance at each of the four (4) meetings noted above will include up to two (2) MJ representatives.
2. MJ collaboratively with GM2 will provide informational and presentation materials at these meetings relevant to MJ's scope of work.
3. GM2 will attend each meeting.
4. Advertising these meetings to the public will be done by the Department.
5. Public facilities will be available to hold the meetings. The Department will secure each meeting location. Also, no special audio-video equipment (other than conventional projector/computer equipment required for technical presentations) will be required for the public meetings. If other equipment is needed, the Department will provide it.
6. MJ will prepare and distribute meeting minutes.

Task 3 Public Officials/Public Informational Meetings

Description: Up to four (4) Public Officials Meetings (POM) / Public Informational Meetings (PIM) will be held to involve elected officials, the public and other interested parties (including identified Consulting Parties) in the project development process. The first series of meetings would be two (2) POM meetings to inform the elected officials of important project developments (assumed one (1) meeting each in Plaistow and Kingston). The second set of meetings would be two (2) PIM meetings to engage the public within the entire 1.7 mile corridor, not based upon town boundaries. During each PIM a presentation will be given. Project graphics will also be displayed for public viewing before and after the meeting.

Assumptions:

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1. MJ attendance at each PIM will average three (3) representatives.
2. Public facilities will be available to hold the PIMs. The Department will secure each PIM location. Also, no special audio-video equipment (other than conventional projector/computer equipment required for technical presentations) will be required for the PIMs. If other equipment is needed, the Department will provide it.
3. MJ collaboratively with GM2 will prepare project fact sheet, graphic presentations, and displays for each PIM.
4. MJ will prepare meeting summary.
5. The Department will notify local newspapers, radio stations, news stations, etc. about each PIM. MJ will provide the meeting details (dates/location) to each of the two (2) towns for distribution to the public through their standard communication methods. Department will notify applicable resource agencies.
6. Mailed notifications to abutters will be handled by the Department. MJ collaboratively with GM2 will create a Project Fact Sheet for inclusion with the notification to the abutters. The Project Fact Sheet will detail key milestones, objectives and other salient details of the project and the opportunities for public involvement and the URL of the project-specific YouTube page (refer to Tasks 4 and 6).

Task 4 **Project-specific YouTube Page / Video Snippets**

Description: MJ will develop, update and maintain a project-specific YouTube page (Name to be determined by the Department). The YouTube page will contain the MJ-created visualization (refer to Task 6) and up to six (6) video snippets of key project elements. The video snippets will be created by MJ in the average length of two (2) minutes each. These video are intended to explain key elements of the project based upon interviewing technical staff and showing graphic depictions of these key elements. By being hosted on a YouTube page the public is able to obtain information on the project from any device with video capabilities (Smart Phone, computer and similar).

Assumptions:

1. Department will approve the video snippets prior to posting on the YouTube page. One (1) round of revisions is included for each video snippet.

Task 5 **Project Fact Sheets**

Description: MJ collaboratively with GM2 will prepare up to two (2) Project Fact Sheets that will be included in the Department's mailing to project abutters prior to each PIM and will be available at each PIM. Project Informational Briefs will detail key milestones, objectives and other salient details of the project and detail the opportunities for public involvement and the URL of the project-specific YouTube page hosting the visualization and video snippets.

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Assumptions:

1. The Project Fact Sheets will be color and limited to one (1) page double-sided.
2. It is assumed that there will be a maximum of two (2) rounds of revisions for each informational brief.
3. MJ will print copies for distribution

Task 6 Project Visualizations

Description: MJ will prepare up to two (2) corridor length visualizations. These visualizations accurately display rich visualizations of the existing street or roadway and surrounding terrain, along with potential design alternatives. The existing terrain is created using a combination of Autodesk's InRoads and 3DS Max along with Trimble Sketchup, providing a virtual environment that is nearly true to life. Google Streetview, satellite imagery available on the web, and a web-based program known as Pictometry are also used as references to enhance the realism of the model. MJ then takes the roadway surface model created in InRoads and combines it with shape files that must be created for the roadways, grassed areas, and even the pavement stripes, to provide a visual representation of the proposed roadway alternative overlaid on the model of the existing terrain. Lumion 3D is used to create this final visualization. Once the model is created, screen shots and videos can be extracted for posting on Youtube and for use at public engagement events. MJ will provide one "fly-through" video and four "screen shots" of each of the two corridor alternatives.

NEPA Documentation

Task 1 Data Collection

Description: Environmental resource information will be based upon readily available published information and studies, agency consultation and field investigations within the study area.

Water Based Resources

- Groundwater: MJ will coordinate with the NHDES Drinking Water & Groundwater Bureau to determine requirements and recommendations for the protection of drinking water supplies, as well as stormwater conveyance and treatment in the vicinity of drinking water supplies and wellhead protection areas.
- Surface Waters: The most recent 303(d) list will be reviewed to determine if impaired surface waters are located in or near the project area. The project is located within an MS4 regulated area and will be subject to MS4 redevelopment requirements for stormwater treatment. Current regulatory requirements and restraints associated with water-

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based resources will be identified and summarized. The analysis of pavement runoff and appropriate treatment will consider all requirements associated with drinking water protections, groundwater protections, and MS4.

- Floodplains: There are no FEMA mapped flood zones within the project area.
- Wetlands: Wetlands and streams, including ordinary high water and top of bank, will be delineated within the project limits to the extent of proposed slope and drainage work, and existing or proposed State right-of-way. Up to five (5) additional areas totaling up to five (5) acres will be reviewed, consisting of previously identified locations and any new locations.

MJ will prepare a wetland delineation report that includes the following:

- locations of delineated features (picked up by GM2 survey);
 - classifications of wetlands present within the wetland project area;
 - brief description of each wetland's hydrology, soils, and vegetation;
 - flagging number system of each delineated feature based on the numbering system established in the 2005 EA;
 - photographs of each identified wetland;
 - description of each wetland's functions and values with inclusion of the Wetlands Function-Value Evaluation Form from the Highway Methodology Workbook Supplement; and
 - Wetland Determination Data Plot Forms
 - CWS stamp
- Stream Crossings: MJ will complete a stream assessment at the Little River crossing according to requirements of the NHDES Stream Crossing Rules. Results of this assessment will be included in the wetland delineation report.

Land Based Resources – the following resources will be identified and mapped:

- Soils series mapped by USDA will be identified. Since the project is located in an urban area, it is assumed that an Important Soils Rating will not be required.
- Active Farmlands
- Public and Conserved Lands: Publicly owned lands, bicycle and pedestrian trails, and privately conserved lands will be identified from existing databases and through coordination with town officials and the LCIP and LCHIP programs.
- Section 4(f) Resources
- Section (6f) Resources

Wildlife

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- Wildlife and Habitat: MJ will identify areas where habitat connectivity occurs or could be improved based on field observations, aerial imagery, and data collected in other tasks.
- Fisheries: MJ will coordinate with NH Fish & Game to obtain input on known fisheries in the project area.
- Threatened and Endangered Species: MJ will utilize existing webtools to request a NH Natural Heritage Bureau (NHB) database review and the USFWS Official Species List. It is assumed that one formal field survey for rare species will be required.

Cultural Resources (Historic)

Section 106 consultation will be required to identify historic resources and assess adverse effects.

MJ will prepare a Request for Project Review (RPR), which will consist of the following tasks:

1. For all structures within the Area of Potential Effect (APE), assemble and tabulate information on locations, identification, approximate construction dates, and previous surveys (based on a DHR file review completed by PC);
2. Prepare aerial depictions of structures within the APE;
3. Provide photographs of neighborhoods or structures using photographs from field reviews and desktop information such as Google Street View;
4. Describe existing land use within the APE;
5. Discuss the purpose and need for the project, history of the project, and the general nature of possible effects from the project.

The RPR will be submitted to the Department's Cultural Resources Program for forwarding to FHWA and NHDHR.

Cultural Resources (Archaeology)

- Archaeological: MJ will review the Phase 2 report prepared by Independent Archaeological Consulting (IAC).

Others

- Social and Economic Resources: MJ will review the corridor, correspond with local and regional planners, and review local and regional plans. The types of economic activity along the corridor and its regional importance will be summarized in general terms. No quantitative analysis of economic activity or tax implications will be undertaken.
- Invasive Species: Locations of NH prohibited invasive plants will be delineated within project limits in conjunction with other field

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investigations. Approximate limits of populations will be located with GPS and shown on project plans.

- Contaminated Properties/Hazardous Materials: MJ will identify properties within 1,000 feet of the project limits that could represent a potential to contain or be a source of hazardous wastes or contaminated materials. The scope of services for the screening will consist of the following tasks: 1) review of historic aerial photographs to evaluate past and current land use within the project areas, 2) review of State and Federal regulatory databases, which will entail reviewing NHDES OneStop Database files and performing an EDR search, and 3) a site reconnaissance of the project areas to look for observable physical evidence of contamination or potential contamination sources. This information will be described in a summary report that includes a list of parcels with apparent potential contamination concerns.
- Construction Impacts: Potential construction impacts will be described in general terms along with the management measures likely to be taken to avoid or minimize impacts.

Task 2 Agency Coordination

Description: MJ will meet with resource agencies at the Department's monthly resource agency meetings and at one field meeting. MJ will attend up to four (4) natural resource agency meetings and up to four (4) cultural resource agency meetings. MJ will coordinate one (1) field meeting, if needed, with the resource agencies to review resource impacts and potential mitigation measures. One (1) MJ staff member will prepare meeting information, attend each meeting, and prepare meeting minutes.

MJ will provide correspondence as needed to keep agencies apprised of progress and get their input. Additionally, MJ will send the standard NHDOT initial contact letter to town officials and applicable local organizations.

Task 3 Project Purpose and Need

Description: The Purpose and Need Statement will be developed in consultation with GM2 and NHDOT. Draft and final versions of the Purpose and Need will be developed and circulated for review.

Assumptions:

1. No more than three iterations of the Purpose and Need will be required.

Task 4 Description of Proposed Action

Description: The GM2/MJ Team will describe the Proposed Action.

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Task 5 Environmental Impacts of Reasonable Alternatives

Description: MJ will identify resource impacts, potential measures to minimize or mitigate impacts, and possible resource enhancements that could be achieved by the three design alternatives. The impact assessment will be used to inform the selection of the preferred alternative, and will be used to ensure that impacts are consistent with those identified in the 2005 EA and FONSI. Methods and assumptions for evaluating impacts are described below.

Task 5.1 Land Use

MJ will identify likely effects on land use along the corridor and will identify potential mitigation actions, if applicable. This will include discussions with planning staff in the impacted communities as necessary.

Task 5.2 Social and Economic Resources

MJ will discuss potential economic impacts of the project in general terms with local and regional planners and officials. The potential kinds of changes in businesses and economic activity along the corridor and its regional importance will be described in general terms. No quantitative analysis is proposed.

Task 5.3 Farmlands

The project is located within an Urbanized Area and is therefore exempt from review under the Farmland Protection Policy Act. Therefore, it is assumed no analysis of farmland soil impacts and no Farmland Conversion Impact Rating Form will be needed.

Task 5.4 Groundwater Resources

The proximity to each public well and the extent of the project falling within Wellhead Protection Areas, if any, will be quantified. Overlap with town wellhead or aquifer protection zoning will be identified. It is assumed no direct impacts to wells will be required and no special mitigation measures for groundwater protection will be needed.

Task 5.5 Surface Water Resources

MJ will quantify and describe any proposed direct impacts to surface waters. For stream crossings, the NHDES tier classification and design requirements will be identified. Measures for protecting water quality during construction will be described in general terms.

Task 5.6 Chloride Loading

Assessments of chloride (salt) loadings based on the number of travel lanes for the pre-construction and reasonable alternative(s) shall be conducted and will include an analysis of the effects to receiving waters. Chloride levels in the Little River were measured in 2004; these values will be used to determine if receiving waters have the capacity to absorb additional inputs. If receiving waters do not have the capacity to absorb additional

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inputs, ways to reduce chloride inputs will be considered and addressed in general terms.

Task 5.7 Pollutant Loading (TN, TP & TSS)

The project goal for pollutant loading is to achieve no net increase in pollutant loading in each receiving water. Permits that will be required during Final Design will be identified, such as the MS4 General Permit and Water Quality Certificate. MJ will investigate appropriate water quality treatment measures necessary to achieve No Net Increase in Loading of stormwater pollutants of greatest concern (Total Nitrogen, Total Phosphorus and Total Suspended Solids) and 80% TSS removal and 50% TP removal. This shall include a pavement runoff analysis for these constituents and volume for the existing project corridor condition and alternatives (but not the entire watershed) to determine approximate size and placement of structural Best Management Practices (BMPs). BMP placement will take into consideration soil conditions, depth to bedrock, groundwater tables, wellhead protection areas, and the proximity to the project's stormwater discharge points. The impervious surface area of the project alternatives is assumed to be similar in size.

Task 5.8 Wetlands

Proposed areal and linear impacts to wetlands and streams will be described and quantified. Impacts will be reported by individual wetland and wetland functions and classifications.

Task 5.9 Wetland Mitigation

Avoidance, minimization, and mitigation measures will be addressed. The Department has provided adequate mitigation for up to 1.95 acres of wetland impacts occurring within this project. If impacts exceed this total, it is assumed the Department would provide additional mitigation in the form of an ARM Fund payment. It is assumed that no wetland mitigation sites will need to be investigated.

Task 5.10 Wildlife/Vegetation/Fisheries/Invasive Species

Impacts to wildlife, wildlife habitats, vegetation communities, invasive species, and fishery resources will be quantified in terms of square footage and described. No formal wildlife studies or mitigation design measures are included in this scope of work. Enhancement measures to improve fish habitat or access to fishing opportunities may be considered in general terms.

Task 5.11 Threatened or Endangered Species

MJ will quantify and describe impacts to the habitat of each threatened or endangered species within the study area, and coordinate with the NH Fish & Game and NH Natural Heritage Bureau on potential impacts to State listed species.

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It is anticipated that the project will be eligible for review under the *Federal Highway Administration and Federal Railroad Administration Range-Wide Biological Assessment for Transportation Projects for Indiana Bat and Northern Long-Eared Bat Programmatic Consultation*. MJ will complete the regulatory review determination key in the USFWS IPaC webtool for NHDOT's use in consultation with USFWS.

Task 5.12 Parks/Recreation/Conservation Lands

Impacts to parks, recreation lands, trails, or conservation lands will be quantified and described. Planned parks or trail networks will also be considered. Coordination with appropriate interest groups will occur to determine appropriate mitigation measures for proposed impacts. No formal mitigation design measures are included in this scope of work. See also the Section 4(f) Evaluation task, below.

Task 5.13 Cultural Resources

Task 5.13.1 Area of Potential Effect (APE)

The Area of Potential Effect will be determined in consultation with GM2, PC, IAC, NHDOT cultural resources staff, and NHDHR.

Task 5.13.2 Historic Resources

An effect memo and Memorandum of Agreement were signed as part of the 2006 EA review. New or previously identified impacts to historic structures or districts will be described and evaluated at a joint meeting of NHDHR, FHWA, and NHDOT. It is assumed that a new effect memo will be required; however, a new MOA will not be needed.

Task 5.13.3 Archaeological Resources

The proximity to archaeologically sensitive areas or other archaeological resources, and any necessary protection measures, will be described.

Task 5.14 Contaminated Properties/Hazardous Materials

Information from the Summary Report completed in Task 1 of NEPA Documentation will be incorporated into the NEPA document. No detailed analysis will be conducted as part of this scope. Recommendations for further investigations of the selected alternative will be provided, including qualitative language regarding Limited Reuse Soils.

Task 5.15 Visual Resources

MJ will identify visually sensitive areas along the corridor, such as residential neighborhoods or public parks. The changes in visual appearances in these areas will be described in general terms. Visualizations completed in Task 6 above detailed in the Public Participation section will be utilized in this review.

Plaistow-Kingston
McFarland Johnson Part A Supplemental Scope of Work and Task Description

Task 5.16 Environmental Justice

The Department will complete and provide documentation of the environmental justice analysis for the project area. MJ will incorporate the findings into the NEPA document.

Task 5.17 Construction Impacts

Potential construction impacts and likely mitigation measures will be described in general terms only. These may include detours during construction; erosion and sediment control; air, noise, and dust pollution; and special measures that may be needed to protect water quality.

Task 5.18 Summary of Impacts

Impacts will be summarized in tabular form.

Task 5.19 Environmental Commitments

Environmental commitments will be summarized in this section.

Task 6 NEPA/Section 4(f) Re-Evaluation

Description: The purpose of the re-evaluation is to document resources and impacts not included in the 2005 EA, and to reference the EA for those resources and impacts that have not changed. The written re-evaluation will be provided in a format similar to a NHDOT Individual Categorical Exclusion.

The 2005 Section 4(f) Evaluation will be reviewed to confirm that it is applicable to the current project. It is assumed that a new Section 4(f) Evaluation will not be required.

Assumptions:

1. Two (2) rounds of revisions by NHDOT are included in this scope.
2. Relevant figures and mapping will be provided in the document.

PROPOSED SCOPES OF WORK

Noise and Air Quality Analyses and Technical Reports for

Proposed NH Route 125 Improvements in Plaistow and Kingston, New Hampshire Part 'A' NEPA Documentation

Federal Project # A000(378); State Project Number 10044E

Prepared for
GM2 Associates and NHDOT

Prepared by
HMMH
Proposal No. P17-20105
August 1, 2017



1. INTRODUCTION AND BACKGROUND

Harris Miller Miller & Hanson Inc. (HMMH) is pleased to present these scopes of work to GM2 Associates (GM2) and the New Hampshire Department of Transportation (NHDOT) to conduct noise and air quality studies for NEPA documentation in connection with an environmental reevaluation of proposed improvements to New Hampshire Route 125 in Plaistow and Kingston. The scopes address the reconstruction of a 1.7 mile section of Route 125 between Old County Road in Plaistow and Newton Junction Road in Kingston. The project limits are at approximately Stations 2064 and 2092 as indicated on earlier plans developed for the project.

2. SCOPE OF WORK – NOISE ANALYSIS

The noise analysis will be conducted in accordance with NHDOT's 2016 traffic noise policy and FHWA highway noise regulations contained in 23 CFR 772.¹

Initially, depending on the preferred alternative, HMMH will coordinate with NHDOT staff to determine if the project would be FHWA Type I or Type III. The scope of work presented below will apply if the project is Type I. However, if the project is determined to be Type III, a noise study is not needed, and HMMH will not proceed with the scope of work given here.

2.1 Task 1: Data Collection, Document Review, and Coordination

HMMH will coordinate with GM2 on the data requirements for the noise study. GM2 will provide CAD files for the proposed roadway improvements, and also available aerial photography and digital terrain information. HMMH will collect land-use and parcel information from state and local sources as available.

¹ 23 CFR Part 772, as amended 75 FR 39820, July 13, 2010; Effective date July 13, 2011 – "Procedures for Abatement of Highway Traffic Noise and Construction Noise,": Federal Highway Administration, U.S. Department of Transportation.
"Policy and Procedural Guidelines for the Assessment and Abatement of Highway Traffic Noise for Type I Highway Projects," New Hampshire Department of Transportation, April 2011.

HMMH will work with GM2 and/or NHDOT traffic engineers to develop appropriate existing and future traffic volumes and speeds for the loudest noise hour, as required by FHWA and NHDOT policies. Traffic data will be needed for all roadways undergoing improvements including Route 125, Kingston Rd, Granite Rd, Dorre Rd, Roadstone Dr, Colonial Rd, Happy Hollow Ln, and Debra Rd.

2.2 Task 2: Site Visit and Noise Measurements

HMMH will conduct a site visit and noise measurement survey. Noise measurements will be conducted at up to five (5) short-term (up to 30 minutes in duration) locations near noise-sensitive properties in the study area. Tentative locations include near Granite Road, Dorre Road, Colonial Road, and near the northern terminus. HMMH also will conduct traffic counts on Route 125 simultaneously during the noise measurement program. The purpose of the site visit will be to confirm residential and any other noise-sensitive land uses, and to become familiar with the topography and noise shielding elements in the study area. Short-term noise measurements will not necessarily be conducted during the loudest-hour conditions. The noise measurements will provide information about existing sound levels and will assist in refining modeling assumptions through a validation process.

Property owner notification (right-of-entry) letters may be needed in advance of the field measurements. If so, HMMH will identify properties where access is expected to be needed, and GM2 or NHDOT will notify the owners.

2.3 Task 3: Noise Model Validation, Prediction, and Impact Assessment

HMMH will compute highway traffic noise levels for the Existing and Design Year No-Build and Build alternatives at each of the existing noise-sensitive residential and recreational land uses in the study area, typically within 300 feet of the Project roadways.

Using GIS and roadway design plans, available topographic information and aerial photography, HMMH will develop a model for TNM noise predictions. The latest version of the FHWA-approved Traffic Noise Model (TNM Version 2.5) will be used to calculate noise levels in the noise-sensitive areas. Noise contributions from major cross streets will be included, where such traffic data are available.

HMMH will conduct a model validation exercise with traffic counted during the short-term noise measurement program in Task 2. The noise measurements will help us refine the TNM modeling assumptions, if necessary.

Loudest-hour noise levels will be computed for the Existing and Design Year No-Build and Build conditions using the loudest-hour traffic conditions identified for each alternative. We will conduct an assessment of the future noise impact from the Project roadways. Existing loudest-hour sound levels will allow the prediction of any noise impact that may be due to substantial increases in existing noise levels. The extent of the impact will be assessed by the number of noise-sensitive dwelling units, recreational receptors and interior institutional spaces predicted to be exposed to noise impact in the design year.

2.4 Task 4: Preliminary Noise Abatement Evaluation

HMMH will evaluate noise abatement measures wherever noise impact is expected to occur with the proposed roadway improvements. We will determine the feasibility and reasonableness of



noise barriers where they are warranted. Our assessment of the study area suggests that the project corridor has a relatively low density of residential development along Route 125, which will make it unlikely to find noise abatement to be cost-reasonable. Further, many homes have driveway access onto Route 125, which limits the acoustical feasibility of noise abatement.

2.5 Task 5: Reporting

HMMH will prepare a Draft Noise Study Report for NHDOT review, make the necessary revisions resulting from the review, and then submit a final version of the report. The report will aim to provide pertinent information in a manner understandable to the lay public. The report will include documentation of the noise analysis, including discussion of noise standards and criteria, the modeling approach and assumptions, graphics showing the measurement locations, and TNM receiver locations and predicted sound levels at each receptor, tables of noise impact estimates for the all alternatives, and a discussion of the feasibility and reasonableness of any noise abatement measures that are evaluated. As needed, details of feasible noise barriers will be provided, including height, length, location, estimated cost, number of receptors benefited, and effectiveness according to NHDOT policies. The technical report (including graphics) will be provided in electronic format.



3. SCOPE OF WORK – AIR QUALITY ANALYSIS

The assessment will be conducted consistent with the National Environmental Policy Act (NEPA) including all Federal Highway Administration (FHWA), Environmental Protection Agency (EPA), and NH DOT regulations and guidance.

3.1 Task 1: Traffic Data Collection

HMMH will work with the traffic engineers during their analysis to ensure appropriate traffic data are collected for use in the air quality study.

For the carbon monoxide (CO) analysis, which is detailed below, traffic will be needed for the main roadway along Route 125 as well as intersections within the study area for the Existing, Opening and Design Year conditions including the No-Build and Build Alternative. The traffic data needed consists of peak AM and PM hourly volumes and level of service (LOS) for each Alternative and condition. Turning movement figures along with intersection signal timing and average daily traffic (ADT) volumes should also be included.

3.2 Task 2: Applicable Level of Pollutants

A project level analysis is typically conducted for operational emissions of carbon monoxide (CO), Particulate Matter, MSATs, VOCs and NOx. The scope of work for each pollutant is project specific and based on expected traffic volumes (which have not been completed) and the EPA attainment status of the study area.

Sulfur Dioxide: The Project is located in Rockingham County which is designated as attainment for all criteria pollutants except the 2010 sulfur dioxide standard. All or parts of Hillsborough, Merrimack, and Rockingham counties are designated non-attainment for the 2010 sulfur dioxide standard. However, this status only covers the towns of Candia, Deerfield and Northwood, which are outside the project area; therefore, Conformity for SO2 does not apply.

Ozone: The 1-hour 1979 and 8-hour 1997 ozone standards have since been revoked and the area was recently reclassified as unclassifiable/attainment for ozone.

Particulate Matter: The study area is located in an EPA designated attainment area for particulate matter (PM₁₀ and PM_{2.5}); therefore, PM₁₀ and PM_{2.5} Transportation Conformity requirements do not apply for projects located in Rockingham County.

CO Hot-Spot Analysis: The cities of Manchester and Nashua are designated a maintenance area for CO, therefore, projects in these areas may require a CO hot spot analysis (i.e. microscale analysis (Phase II-Level II study)) to ensure compliance with the National Ambient Air Quality Standards (NAAQS). The hot-spot analysis typically examines worst-case ground-level CO impacts due to traffic flow in the immediate vicinity of a project intersection/interchange. Since the project is not located in an attainment area for CO, a Phase 1 qualitative analysis may suffice to determine the projects impacts for compliance under the Clean Air Act Amendments (CAAA) and or NEPA. After receiving the traffic information, the project will need to be evaluated against the Phase 1 criteria including comparison of the project to projects of similar design and traffic conditions. HMMH may need to coordinate with the local Metropolitan Planning Organization (MPO), the NH Department of Environmental Services (NHDES) Air Resources Division and/or the NHDOT Bureau of Planning and Community Assistance to determine compliance under Phase 1 with the CAAA.

If the project does not meet the Phase I criteria, then a Phase II analysis will be required to ensure compliance with the NAAQS. The Phase II analysis is a more detailed quantitative analysis which is comprised of two levels; Microscale and Mesoscale analyses. HMMH will work with NHDOT to determine if one or both of these analyses will be required.

Greenhouse Gases: With the recent withdrawal of federal guidance addressing greenhouse gas analyses and climate change², and since this project involves a reevaluation of a previously conducted EA, we assume that a GHG analysis is not warranted. This will need to be verified by NHDOT.

Microscale CO Hot-Spot Analysis

If a Phase II analysis is required, the intersections will be ranked consistent with EPA procedures (e.g. LOS and peak hour volumes) and a microscale hot-spot analysis will be conducted at the two worst case ranked intersections using the latest versions of the EPA Mobile Vehicle Emissions Simulator (MOVES) and CAL3QHC models to estimate worst-case CO concentrations at individual receptor (i.e. receiver) locations. The modeling results will be added to appropriate CO background concentrations for each condition and Study Alternative and compared to the NAAQS.

Mesoscale Analysis

A mesoscale analysis is typically performed to assess the total VOCs and NO_x (i.e. ozone precursors), carbon dioxide (CO₂) if applicable, methane and nitrous oxide associated with motor vehicle emissions for each condition and Alternative compared to the No-build condition. The mesoscale analysis evaluates the regional impact of VOC, NO_x and greenhouse gas (if required) emissions affiliated with the project. HMMH assumes a regional impact analysis (i.e. mesoscale) will not be required for this project.

²See: <https://www.federalregister.gov/documents/2017/04/05/2017-06770/withdrawal-of-final-guidance-for-federal-departments-and-agencies-on-consideration-of-greenhouse-gas>

HMMH assumes the Build Alternatives will not significantly affect air quality and/or cause a violation of the NAAQS, therefore a Phase III analysis will not be required to evaluate abatement alternatives. HMMH assumes either a qualitative analysis (Phase I) or quantitative (Phase II) will be required to address CO impacts.

3.3 Task 3: Mobile Source Air Toxics (MSATs)

On October 18, 2016, the FHWA issued updated interim guidance regarding Mobile Source Air Toxics (MSATs) in a NEPA analysis to include the EPA's recent MOVES2014a emission model along with updated research on air toxic emissions from mobile sources. The guidance includes three categories and criteria for analysing MSATs in a NEPA document; 1) No Meaningful MSAT effects; 2) Low Potential MSAT effects; 3) High Potential MSAT effects.

For projects with low potential MSAT effects, a qualitative assessment (Phase I analysis) of emissions projections will be conducted in accordance with Appendix B and Appendix C of the FHWA guidance. For projects with no meaningful MSAT effects, no formal analysis is required.

For Projects considered as high potential MSAT effects, (i.e. projects with traffic volumes greater than 140,000 to 150,000 AAWDT) a quantitative analysis (Phase II analysis) will be conducted to evaluate MSAT emissions across roadway links within the "affected network".

Based on expected ADT volumes for the Build Alternative, the Project is assumed to be one of low potential MSAT effects and only a qualitative analysis will be required.

3.4 Task 4: Reporting

HMMH will prepare a Draft Air Quality Study Report for NHDOT review, make the necessary revisions resulting from the review, and then submit a final version of the report. The report will aim to provide pertinent information in a manner understandable to the lay public. The report will include documentation of the air quality analysis, including discussion of air quality standards, attainment status, regulatory discussion, any modeling approach and assumptions, graphics, and tables of air quality impact estimates for the all Alternatives and conditions. The technical report (including graphics) will be provided in electronic format.



Scope of Work for Phase II Determination of Eligibility (DOE) in New Hampshire

Independent Archaeological Consulting, LLC (IAC) conducted Phase IB and Phase II testing in 2007-2008 along the Route 125 corridor and identified four sites for which Phase II DOE or further Phase II DOE was recommended ((Wheeler et al 2012; Table 1). Depending on planned project impacts, IAC proposes to conduct Phase II Determination of Eligibility at four (4) archaeological sites along the Route 125 corridor if needed. Three of the sites are in Area 6 and one is in Area 12.



Table 1. Results and recommendations following testing along Route 125 corridor.

Sensitivity/ Test Area	Sensitivity	Previous Testing	Site #	Recommendations
6	Pre-Contact	Phase IB and II	Little River 1 (27-RK-435)	expanded Phase II
6	Pre-Contact and Post-Contact	Phase IB and II	Noyes-Stevens Farmstead (27-RK-434)	expanded Phase II
6	Pre-Contact	Phase IB	Little River 2 (27-RK-436)	Phase II
12	Post-Contact	Phase IB	Quarrel Site (27-RK-439)	Phase II

The Phase II DOE is conducted in order to evaluate the site in terms of its eligibility to the National Register of Historic Places (NRHP). Archaeologists follow Phase II guidelines as outlined in the Archaeological Standards and Guidelines, developed by the New Hampshire Department of Transportation (NHDOT) and endorsed by the New Hampshire Division of Historical Resources (NHDHR). These guidelines can be viewed on line at: <http://www.nh.gov/nhdhr/review/archaeology>

A necessary component of the Phase II DOE is the development of a cultural context for the particular site or resource. This requires sufficient background research to reconstruct the environmental context for Pre-Contact Native American archaeological resources, or for Post-Contact Euroamerican resources, to understand the regional site distribution. Where resources are rare or poorly known within a study area, archaeologists will need to look in other areas for analogous site types.

For the field component, archaeologists excavate larger testholes at closer intervals, to define the nature and integrity of archaeological deposits. For instance, excavating shovel test pits (STPs) at 4-m intervals will assist in the locating of artifact clustering overall distribution, and subsurface features. Larger excavation units (1-m-x-1-m test unit or trenches measuring 2 m by 1 m) are used to sample features and to define stratigraphy, and to investigate the range of artifact types, numbers and proportions of types. In certain instances, the Phase II study will employ the use of small backhoes or excavators to reach more deeply buried soil horizons, along river banks or in urban settings.

Depending on the results of the Phase II fieldwork, specialized analyses may be required. For Pre-Contact archaeological resources, charcoal from intact deposits can be used to date features through radiocarbon dating. Where faunal materials are found, archaeologists can hire experts who can identify the species of mammal, bird, or fish, to learn about the food resources utilized by ancient peoples.

Native American lithics (stone tools and flakes) and pottery can be analyzed in terms of lithic sourcing while the study of stylistic variation can inform on the time period and cultural affiliation of First Nation peoples. In instances where floral material is present, archaeologists can learn whether Native Americans were planting maize or exploiting wild plants. Where archaeologists do not have specialists on staff, they will hire others who perform these services.

For the analysis of Euroamerican sites, archaeologists will often prepare a minimum vessel count (MVC) to quantify the number and types of ceramic wares or bottles. They will identify ware types (e. g., creamware, pearlware, whiteware, white granite, buff-colored coarse earthenware, redware, stoneware and others) to pinpoint the dates of occupation. Archaeologists can study consumer behavior and elucidate foodways in the identification of vessel decorations and forms. They can also analyze faunal and floral samples to more fully articulate dietary information.

The Phase II DOE report combines all the aforementioned elements – background research, extensive fieldwork, artifact processing and analysis – and prepares a report with the following sections:

- Introduction
- Method Statement (and justification)
- Environmental and Cultural Context
- Results of Field Investigations (including those from Phase I)
- Comparative Site Analysis
- Statement of Significance (or Determination of Eligibility)

The objective of the DOE is to provide an evaluation of the resource, and whether it is eligible for listing in the National Register of Historic Places, and under which of the four criteria it may be considered eligible. The evaluation of site significance may be argued at the local, state, or federal level, and should discuss site integrity and its comparison to similar sites noted in the contextual discussion.

References cited:

- Wheeler, K, J. Tumelaire, A. Booth, E, Marlatt, J. Cofelice, R. Sherman, M. Labbe
2012 *Results of Phase IB Intensive Archaeological Investigation and Phase II Determination of Eligibility for the Route 125 Reconstruction Project (STP-X-5375(010) 100044-B), Plaistow and Kingston, New Hampshire*. Report submitted to Vanesse Hangen Brustlin, Bedford, NH

PRESERVATION COMPANY

11 September 2017

Darren L. Blood, P.E. via email: DBlood@GM2INC.COM
GM2 Associates, Inc.
197 Loudon Road, Suite 310
Concord, NH 03301

RE: *Plaistow-Kingston 10044-E, X-A000(378), NH 125 Improvements*

Dear Darren:

Here is a proposal of Scope of Work to prepare the historic resources documentation for the Plaistow-Kingston 10044-E project. We have re-familiarized ourselves with the area and with our previous work from 2002-2004. Within the segment of the current project, there is only one previously identified property that may be National Register eligible. The Happy Hollow Cemetery was documented in 2003, but the Determination of Eligibility was left open-ended, because additional, fairly in-depth information was requested by NHDHR, but the resource was not going to be affected by the project at that time. A file search will be needed, in case there has been survey work by other consultants since 2004. There are approximately nine properties that are now fifty years old, which will need NHDHR inventory forms. None appear likely to be eligible and none of the properties previously determined not eligible in 2003 have achieved any significance since that time.

Respectfully submitted,



Lynne Emerson Monroe
LEM:tjh

Preservation Company
Sunny Knoll
5 Hobbs Road
Kensington, NH 03833
603-778-1799

PreservationCompany@comcast.net



www.PreservationCompany.c

Project Understanding

This project involves study the 1.7 mile segment of NH 125 between, but not including, Old County Road in Plaistow and Newton Junction Road in Kingston. The intersections of those roads were covered by prior projects in 2004 and 2007. The current project area along NH 125 is defined mainly by modern commercial and industrial properties. There are mid-twentieth century residences and businesses along the road and a few isolated older properties.

The current project area was included in the larger Plaistow-Kingston 10044-B project for which determinations of eligibility were made by the New Hampshire Division of Historical Resources (NHDHR) in 2003. All resources built prior to ca. 1955 were inventoried. The NHDHR documentation for that project was completed by Preservation Company between 2002 and 2004, including a Project Area Form and Town-wide Area forms for Plaistow and Kingston. A total of 37 individual resources in Plaistow and 44 properties and one historic area in Kingston were inventoried. Seven individual properties were determined eligible for the National Register of Historic Places. Four properties were un-determined with outstanding more information requests outside the scope of the project at that time. The majority of identified resources were south of the current project area where Plaistow 10044D and 10044F were carried out in 2007 and 2011. The historic resources immediately north of the current project, at the intersection of NH 125 and Newton Junction Road were documented by Preservation Company for the Kingston 10044-C project in 2002. A historic district and three individual properties were determined eligible for the National Register.

Within the current project area of Plaistow-Kingston 10044-E, there were no properties in Plaistow that were inventoried for 10044-B in 2003. In Kingston fifteen individual properties in the current project area were inventoried (KIN0014-KIN0027 and KIN0045). None were determined eligible. A single property, KIN0019, was among those for which no determination of eligibility was made in 2003. It was considered possibly eligible, pending further information. If affected by the current project, completion of the more information request by NHDHR will be needed to update the inventory form. KIN0019, the Happy Hollow Cemetery is a small neighborhood cemetery on the east side of NH 125 opposite Dorr Road. The NHDHR request for more information was for a greater and comparative discussion of the design values of the gravestones and determination of what types of information the cemetery might disclose about local family groupings and cultural patterning.

Since the 2003 study, properties constructed between ca. 1955 and ca. 1967 have reached fifty years of age. Based on a preliminary review of tax maps and assessment cards within the current project area, there are estimated to be four properties in Plaistow and five in Kingston that would require NHDHR inventory forms. A file review at New Hampshire Division of Historical Resources will be needed to identify whether other historic resources survey has been completed in the project area by other consultants.

Scope Of Work

Preservation Company will provide information for inclusion in the Request for Project Review (RPR) to be prepared by McFarland-Johnson. Preservation Company will identify all previously surveyed resources based on a file review at NHDHR and company documents. Determinations of eligibility and requests for more information on file will be reviewed. Properties now over fifty years old and not previously surveyed will be identified by tax card dates.

Preservation Company will complete approximately nine (9) individual NHDHR inventory forms for properties built after ca. 1955 that have reached fifty years of age since the previous study. It is estimated there are four properties in Plaistow and five in Kingston built between ca. 1955 and ca. 1967. Taking ca. 1968 or 1969 as the cutoff date, results in the same number. All fieldwork, photography and mapping will be carried out according to NHDHR guidelines.

Preservation Company will conduct field review of all previously documented resources to note any changes, resources no longer extant or properties whose potential eligibility for the National Register may have changed due to improvements or increased significance due to greater age. Any changes will be photographed and recorded on continuation sheets to existing inventory forms. Given the types and conditions of properties in this area, none are expected. No properties in the Plaistow-Kingston 10044-E project area were previously been determined eligible for the National Register.

A single property, the Happy Hollow Cemetery in Kingston (KIN0019) may require an updated NHDHR inventory form for a completed determination of eligibility. NHDHR files will be consulted to confirm that no additional work has been done on this resource by another consultant since 2003. Anticipated fieldwork would include updated photography and more detailed documentation of gravestones. Comparative analysis of other Kingston cemeteries will be needed. Research needs might include review of local histories and town records. Census records and other genealogical sources and background context on cemeteries may be needed to answer the questions posed by NHDHR

It is assumed that National Register resources to the north and south in the areas of Kingston 10044-C and Plaistow 10044-D will not be affected by 10044-E.

Attachment 1

**CERTIFICATION WITH REGARD TO THE PERFORMANCE OF
PREVIOUS CONTRACTS OR SUBCONTRACTS SUBJECT TO
THE EQUAL OPPORTUNITY CLAUSE AND THE FILING OF REQUIRED REPORTS**

The CONSULTANT X, proposed subconsultant _____, hereby certifies that it has X, has not _____, participated in a previous contract or subcontract subject to the equal opportunity clause, as required by Executive Order 11246 and that it has X, has not _____, filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

GM2 Associates, Inc.

(Company)

By: 

Manish K. Gupta, PhD

President

(Title)

Date: 03/16/2018

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b)(1)), and must be submitted by consultants and proposed subconsultants only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts that are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally, only contracts or subcontracts of \$10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime consultants and subconsultants who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award of contracts and subcontracts unless such consultant submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.

(Revised: June, 1980) **NOTE:** TO BE COMPLETED BY CONSULTANT WHEN SIGNING AGREEMENT.

Attachment 2

**CONSULTANT DISCLOSURE STATEMENT
FOR PREPARATION OF
ENVIRONMENTAL EVALUATIONS**

I hereby affirm that I have read and reviewed the Council on Environmental Quality (CEQ) regulation [40 CFR 1506.5(C)] and related guidance issued by CEQ and that pursuant thereto this firm has no financial or other interest in the outcome of this project.

I further hereby affirm that the information provided herein is true and correct and acknowledge that any knowingly false statement or false representation as to any material part contained herein may subject me to a fine and/or imprisonment, pursuant to pertinent provisions of the United States Code.

03/16/2018

(Date)

A handwritten signature in black ink, appearing to read "Mark L. E.", written over a horizontal line.

(Signature)

CERTIFICATION OF CONSULTANT/SUBCONSULTANT

I hereby certify that I am the President/CEO and duly-authorized representative of the firm of GM2 Associates, Inc., and that neither I nor the above firm I here represent has:

- (a) employed or retained for a commission, percentage, brokerage, contingent fee, or other consideration, any firm or person (other than a bona fide employee working solely for me or the above CONSULTANT) to solicit or secure this Contract,
- (b) agreed, as an express or implied condition for obtaining this Contract, to employ or retain the services of any firm or person in connection with carrying out the Contract, or
- (c) paid, or agreed to pay, to any firm, organization or person (other than a bona fide employee working solely for me or the above CONSULTANT) any fee, contribution, donation or consideration of any kind for, or in connection with, procuring or carrying out the Contract:

I/WE do also, under penalty of perjury under the laws of the United States, certify that, except as noted below, the company or any person associated therewith in the capacity of (owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving the administration of Federal funds): (a) is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency; (b) has not been suspended, debarred, voluntarily excluded or determined ineligibility by any Federal agency within the past three years; (c) does not have a proposed debarment pending; and (d) has not been indicted, convicted or had a civil judgment rendered against (it) by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

except as here expressly stated (if any):

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted, indicate below to whom it applies, the initiating agency, and dates of action. Providing false information may result in criminal prosecution or administrative sanctions.

I acknowledge that this certificate is to be furnished to the State Department of Transportation and the Federal Highway Administration, U. S. Department of Transportation, in connection with this Contract involving participation of Federal-aid highway funds, and is subject to applicable State and Federal laws, both criminal and civil.

03/16/2018

(Date)



(Signature)

CERTIFICATION OF STATE DEPARTMENT OF TRANSPORTATION

I hereby certify that I am the Director of Project Development of the Department of Transportation of the State of New Hampshire, and the above consulting firm or its representatives has not been required, directly or indirectly, as an express or implied condition in connection with obtaining or carrying out this Contract, to:

- (a) employ or retain, or agree to employ or retain, any firm or person, or
- (b) pay, or agree to pay, to any firm, person, or organization, any fee, contribution, donation, or consideration of any kind:

except as here expressly stated (if any):

4/2/18
(Date)


(Signature)

Attachment 5

**CERTIFICATION FOR FEDERAL-AID CONTRACTS
EXCEEDING \$100,000 IN FEDERAL FUNDS**

The prospective participant certifies, by signing and submitting this agreement, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower-tier subcontracts which exceed \$100,000 and that all such subrecipients shall certify and disclose accordingly.

Attachment 9

IN WITNESS WHEREOF the parties hereto have executed this AGREEMENT on the day and year first above written.

Consultant

WITNESS TO THE CONSULTANT

By: *Shivam Bhatta*
MARKETING DIRECTOR

Dated: 3/16/2018

CONSULTANT

By: *Manish K. Gupta*
Manish K. Gupta, PhD
President
(TITLE)

Dated: 3/16/2018

Department of Transportation

WITNESS TO THE STATE OF NEW HAMPSHIRE

By: *Michelle L. Gouin*

Dated: 4/2/18

THE STATE OF NEW HAMPSHIRE

By: *P. J. Shea*
Director of Project Development
for DOT COMMISSIONER

Dated: 4/2/18

Attorney General

This is to certify that the above AGREEMENT has been reviewed by this office and is approved as to form and execution.

Dated: 4/11/18

By: *Allyson Byers*
Assistant Attorney General

Secretary of State

This is to certify that the GOVERNOR AND COUNCIL on _____ approved this AGREEMENT.

Dated: _____

Attest:
By: _____
Secretary of State



CERTIFICATION OF AUTHORITY

I, Lawrence Russ, Esq., do hereby certify that I am the Secretary of the GM2 Associates, Inc. having its corporate location at 115 Glastonbury Boulevard, Glastonbury, CT 06033 organized and existing under the laws of the State of Connecticut. That I am keeper of the corporate records and seal. The following are true and correct statement of resolutions duly adopted and ratified by the Board of Directors of the Corporation on January 26, 2018 in accordance with the constituent charter of the GM2 Associates, Inc.; and the same have not in any way been modified, repealed or rescinded, but are in full force and effect:

THAT Manish K. Gupta was elected President, and his term of office began on January 26, 2018 and will continue until resolved otherwise. As the President, Manish K. Gupta serves as the Chief Executive Officer for GM2 Associates, Inc. and is duly authorized to enter into agreement and sign contract for NHDOT Project for preliminary engineering design and environmental services to re-evaluate the previously conducted environmental review for the reconstruction of the unimproved 1.7-mile segment of NH 125 between Old County Road in the Town of Plaistow and Newton Junction Road in the Town of Kingston.

Dated at Glastonbury, Connecticut this 16th day of March, 2018.

A handwritten signature in cursive script that reads "Lawrence Russ".

Lawrence Russ, Esq.
Secretary

State of New Hampshire

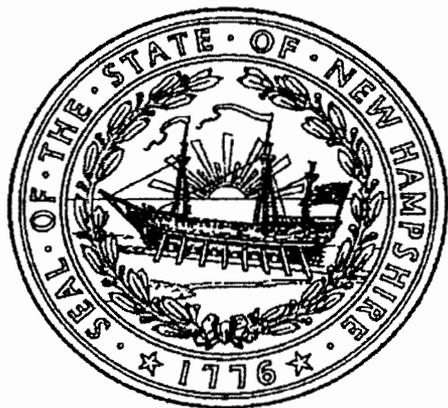
Department of State

CERTIFICATE

I, William M. Gardner, Secretary of State of the State of New Hampshire, do hereby certify that GM2 ASSOCIATES, INC. is a Connecticut Profit Corporation registered to transact business in New Hampshire on May 04, 2000. I further certify that all fees and documents required by the Secretary of State's office have been received and is in good standing as far as this office is concerned.

Business ID: **346216**

Certificate Number : **0004071435**



IN TESTIMONY WHEREOF,

I hereto set my hand and cause to be affixed
the Seal of the State of New Hampshire,
this 2nd day of April A.D. 2018.

A handwritten signature in black ink, appearing to read "William M. Gardner".

William M. Gardner
Secretary of State

