



Victoria F. Sheehan
Commissioner

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION



William Cass, P.E.
Assistant Commissioner

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

Bureau of Bridge Design
June 21, 2018

REQUESTED ACTION

Authorize the Department of Transportation to enter into an Agreement with GM2 & Associates, Inc., Concord, NH, Vendor #163283; for a total amount not to exceed \$1,000,000.00, for on-call engineering services for various bridge projects located throughout the State, effective upon Governor and Council approval, through December 30, 2021. 100% Federal Funds.

Funding is available in State Fiscal Year 2019 and is contingent upon the availability and continued appropriation of funds in FY 2020, FY 2021 and FY 2022 as follows, with the ability to adjust encumbrances between State Fiscal Years through the Budget Office, if needed and justified.

	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
04-96-96-963515-3054				
Consolidated Federal Aid				
046-500463 Eng Consultants Non-Benefit	\$300,000.00	\$300,000.00	\$300,000.00	\$100,000.00

The Consolidated Federal Fund, AU 3054, is utilized at this time to encumber funds for this request. Actual funding sources will be determined by each particular project incurring expenses as a result of this request.

EXPLANATION

The Department requires professional on-call engineering consulting services for various projects statewide to supplement the Bureau of Bridge Design's capacity to provide preliminary and contract plan design, bridge & structural inspection, and other pertinent design services.

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 and 21-I:22-d, all applicable Federal laws and the Department's "Consultant Selection and Service Agreement Procedures" dated December 1999. 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 four (4) Statewide On-Call Bridge Design Services contracts. The assignment was listed as a "Possible Action Project" on the Department's website on December 28, 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 8, 2018 for consideration and approval by the Assistant Commissioner. Upon receipt of that approval, eight shortlisted firms were notified on March 28, 2018 through a technical "Request For Proposal" (RFP). Committee members individually rated the firms' technical proposals on May 24, 2018 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. The individual rankings were then totaled to provide an overall ranking of the eight firms, and the Committee's ranking was submitted to the Assistant Commissioner for consideration and approval. Upon receipt of the Assistant Commissioner's approval, the short listed firms were notified of the results and the four (4) highest-ranking firms were asked to submit a fee rate for negotiations.

The long list of twenty five (25) consultant firms that were considered for this assignment, with the eight shortlisted firms shown in bold, is as follows:

<u>Firm Name</u>	<u>Office Location</u>
1. AECOM	Manchester, NH
2. C&C Consulting Engineers, LLC	Boston, MA
3. CDR McGuire	Milton, MA
4. CHA Consulting, Inc.	Keene, NH
5. CMA Engineers, Inc.	Portsmouth, NH
6. CME Associates, Inc.	Nashua, NH
7. DuBois & King, Inc.	Bedford, NH
8. Gill Engineering, Associates, Inc.	Needham, MA
9. GM2 Associates, Inc.	Concord, NH
10. Greenman-Pedersen, Inc.	Portsmouth, NH
11. Hardesty & Hanover, LLC	Bedford, NH
12. HAKS	Boston, MA
13. HDR Engineering, Inc.	Manchester, NH
14. HEB Engineers, Inc.	North Conway, NH
15. HNTB Corporation	Westbrook, Maine
16. Hoyle, Tanner & Associates, Inc.	Manchester, NH
17. Jacobs Engineering Group Inc.	Bedford, NH
18. Kleinfelder, Inc.	Manchester, NH
19. Louis Berger U.S., Inc.	Manchester, NH
20. Parsons	Boston, MA
21. Stantec Consulting Services, Inc.	Auburn, NH
22. TEC Associates, Inc.	Hampton, NH
23. T Y LIN	Falmouth, ME
24. Weston & Sampson Engineers, Inc.	Manchester, NH
25. WSP USA, Inc.	Manchester, NH

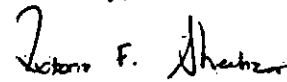
The firm of GM2 Associates, Inc. has been recommended for one of the four contracts. This firm has an excellent reputation and has demonstrated their capability to perform the required services in previous similar contracts with the Department. Background information on this firm is attached.

GM2 Associates, Inc. has agreed to furnish the on-call services for an amount not to exceed \$1,000,000.00. The cost for individual Task Orders assigned under this contract will be negotiated and use of a modified cost plus fixed fee or lump sum method of compensation will be determined based on the complexity and scope of engineering and technical services required. No new tasks may be assigned after the above-noted completion date, however, completion of previously assigned work begun prior to the completion date shall be allowed, subject to the written mutual agreement of both parties, which shall include a revised date of completion.

This Agreement, Statewide On-Call Bridge Design Services 41865 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 Agreements 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,

A handwritten signature in black ink, appearing to read "Victoria F. Sheehan". The signature is written in a cursive style with a large initial "V".

Victoria F. Sheehan
Commissioner

Attachments

PROJECT: Statewide On-Call Bridge Design Services (4 Contracts)

DESCRIPTION: Four (4) Statewide On-Call Agreements, at a maximum value of \$1,000,000 each over a three-year term, are needed to provide engineering services for bridge design and related technical/professional consulting services on demand for various projects at various locations throughout the State. Typical assignments may include, but are not limited to, the following tasks: Preliminary design, final design, and development of contract plans and documents for bridge maintenance and preservation, rehabilitation, replacement, construction for various types of bridge structures, and construction services; Design of roadway approaches if/as needed to fully develop bridge projects and plans, including roadway drainage design; Traffic control design; Inspection and load rating of various bridge types, including gusset plates as appropriate, and completion of Bridge Rating Form 4 (as-built and as-inspected conditions); Environmental efforts to prepare and complete all appropriate environmental documentation, including natural and cultural resource investigations and permitting requirements; Hydraulic calculations and analyses associated with bridges, waterways, and drainage structures; Design of scour countermeasures and substructure protection; Geotechnical evaluations and analysis; Evaluation of existing structures; Assist the Department in the public involvement process; 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; and Other additional tasks as needed to support assigned projects/tasks. This work will require Professional Engineer licensure in the State of New Hampshire.

Services Required: BRDG, STRC, RDWY, ENV, HYD, INSP, GEOT, PINV, SURV

SUMMARY

GM2 Associates, Inc.	1	2	1	3	1	3	11
Greenman-Pedersen, Inc.	3	1	3	1	2	1	11
Hardesty & Hanover, LLC	6	6	6	7	6	6	37
HDR Engineering, Inc.	2	3	2	4	3	2	16
HEB Engineers	4	4	4	2	5	4	23
HNTB Corporation	7	5	7	8	4	7	38
Louis Berger US, Inc.	8	8	8	5	7	5	41
WSP USA, Inc.	5	7	5	6	8	8	39

EVALUATION OF TECHNICAL PROPOSALS

Rating Considerations	W E I G H T	Scoring of Firms							
		GM2 Associates, Inc.	Greenman-Pedersen, Inc.	Hardesty & Hanover, LLC	HDR Engineering, Inc.	HEB Engineers	HNTB Corporation	Louis Berger US, Inc.	WSP USA, Inc.
Comprehension of the Assignment	20%	20	19	17	19	18	16	15	17
Clarity of the Proposal	20%	20	18	17	19	18	17	15	17
Capacity to Perform in a Timely Manner	20%	20	18	17	17	17	16	16	18
Quality & Experience of Project Manager/Team	20%	20	18	18	17	18	17	17	18
Previous Performance	10%	10	10	8	10	9	8	8	8
Overall Suitability for the Assignment	10%	10	9	8	10	8	8	8	8
Total	100%	100	92	85	84	88	84	79	86

- Ranking of Firms:
- 1. GM2
 - 2. HDR
 - 3. GPI
 - 4. HEB
 - 5. WSP
 - 6. HNTB
 - 7. HNTB
 - 8. LB

Rating Considerations	W E I G H T	Scoring of Firms							
		GM2 Associates, Inc.	Greenman-Pedersen, Inc.	Hardesty & Hanover, LLC	HDR Engineering, Inc.	HEB Engineers	HNTB Corporation	Louis Berger US, Inc.	WSP USA, Inc.
Comprehension of the Assignment	20%	20	20	19	19	19	18	17	17
Clarity of the Proposal	20%	18	19	17	19	18	17	16	18
Capacity to Perform in a Timely Manner	20%	20	20	18	18	19	18	18	18
Quality & Experience of Project Manager/Team	20%	19	19	16	19	19	18	17	17
Previous Performance	10%	10	10	8	9	9	8	7	8
Overall Suitability for the Assignment	10%	10	10	8	10	9	8	7	7
Total	100%	97	98	86	94	93	87	84	85

- Ranking of Firms:
- 1. GPI
 - 2. GM2
 - 3. HDR
 - 4. HEB
 - 5. HNTB
 - 6. HNTB
 - 7. WSP
 - 8. LB

EVALUATION OF TECHNICAL PROPOSALS (continued)

Rating Considerations		Scoring of Firms										
		W	G	M	H	T	H	E	B	C	L	W
Comprehension of the Assignment		20%	20	18	14	14	18	18	19	19	17	17
Clarity of the Proposal		20%	18	19	17	18	18	19	18	18	18	18
Capacity to Perform in a Timely Manner		20%	19	19	18	18	17	14	16	16	18	
Quality & Experience of Project Manager/Team		20%	19	18	19	19	18	18	18	18	18	
Previous Performance		10%	10	10	8	10	9	8	7	8	8	
Overall Suitability for the Assignment		100%	10	9	8	10	8	8	7	8	8	
Total		100%	94	93	86	94	89	86	86	86	87	

- Ranking of Firms:
- GM2
 - HDR
 - GPT
 - HEB
 - AWSP
 - H+H
 - HNTB
 - LBG

Rating Considerations		Scoring of Firms										
		W	G	M	H	T	H	E	B	C	L	W
Comprehension of the Assignment		20%	15	15	15	19	5	19	15	15	15	15
Clarity of the Proposal		20%	15	15	15	15	15	19	14	18	15	15
Capacity to Perform in a Timely Manner		20%	15	15	15	15	12	14	15	15	15	15
Quality & Experience of Project Manager/Team		20%	17	15	15	15	15	15	16	15	16	16
Previous Performance		10%	9	9	8	8	8	8	8	7	7	8
Overall Suitability for the Assignment		100%	94	93	88	92	81	81	81	81	81	84

- Ranking of Firms:
- GM2
 - GPT
 - HDR
 - HNTB
 - HEB
 - HEH
 - LBG
 - WSP

Rating Considerations		Scoring of Firms										
		W	G	M	H	T	H	E	B	C	L	W
Comprehension of the Assignment		20%	80	80	18	80	80	17	19	18	18	18
Clarity of the Proposal		20%	80	80	18	80	80	18	18	18	18	18
Capacity to Perform in a Timely Manner		20%	80	80	18	80	80	18	17	17	18	18
Quality & Experience of Project Manager/Team		20%	80	80	18	80	80	18	17	17	18	18
Previous Performance		10%	8	10	5	8	10	6	9	8	8	8
Overall Suitability for the Assignment		100%	98	99	84	97	94	93	90	90	90	92

- Ranking of Firms:
- GPT
 - HEB
 - GM2
 - HDR
 - LBG
 - WSP
 - H+H
 - HNTB

Rating Considerations		Scoring of Firms										
		W	G	M	H	T	H	E	B	C	L	W
Comprehension of the Assignment		20%	19	20	16	20	19	19	19	16	16	16
Clarity of the Proposal		20%	19	19	17	19	18	18	17	17	17	17
Capacity to Perform in a Timely Manner		20%	18	19	17	19	18	18	16	17	16	16
Quality & Experience of Project Manager/Team		20%	9	28	18	19	18	16	16	18	16	16
Previous Performance		10%	9	10	7	9	8	7	19	9	9	9
Overall Suitability for the Assignment		100%	94	97	84	95	87	81	81	81	81	84

- Ranking of Firms:
- GPT
 - HDR
 - GM2
 - HEB
 - LBG
 - H+H
 - HNTB
 - WSP

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ATTACHMENTS

1. CERTIFICATION WITH REGARD TO THE PERFORMANCE OF PREVIOUS CONTRACTS OR SUBCONTRACTS, ETC.
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AGREEMENT
FOR PROFESSIONAL SERVICES

PREAMBLE

THIS AGREEMENT made this 27 day of June 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, in the City of Concord, State of New Hampshire, and hereinafter referred to as the CONSULTANT, witnesses that:

The Department of Transportation, State of New Hampshire, hereinafter referred to as the DEPARTMENT, requires on-call engineering services for various bridge projects located throughout the STATE. The DEPARTMENT intends to have prepared for said projects preliminary design, final design, contract plans, specifications, special provisions, estimates of quantities and costs, and right-of-way plans, or other specific tasks and projects, as assigned and as needed. These services are outlined in the CONSULTANT'S technical and fee proposals prepared for each project's Task Order.

This AGREEMENT becomes effective upon approval by the Governor and Executive 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. TYPES OF SERVICES

The types of services required under the terms of this AGREEMENT may include, but are not necessarily limited to, any combination of the following:

1. Bridge inspections and documentation.
2. Bridge inspection rating and computations.
3. Field reconnaissance.
4. Bridge type, span, and location studies.
5. Hydraulic studies and reports.
6. Geotechnical services.
7. Environmental permitting support services, including preparation of NEPA documents & permit plans.
8. Preliminary bridge and roadway design, including plan preparation.
9. Final bridge and roadway design, including traffic control and plan preparation.
10. Quantity computations and estimate preparation.
11. Review of plans and calculations prepared by others.
12. Preparation of reports and contract documents.
13. Design of scour countermeasures and preparation of associated plans and documents.
14. Public participation.

Services requested for a particular project may be, but are not limited to, a special study, a partial bridge and roadway design, or a complete bridge and roadway design. A partial bridge and roadway design would include, but not necessarily be limited to, developing a project through the type, size, and location phase, or developing preliminary plans, final plans, estimates, and specifications from DEPARTMENT-furnished type, span, and location data. Other specific tasks or projects as needed by the DEPARTMENT may also be assigned.

If applicable, the DEPARTMENT will carry the project through the public meeting stage and will provide preliminary conceptual line and grade, if available, to the CONSULTANT for use in preparation of final plans.

The CONSULTANT shall be aware that the services to be performed under this Agreement will be on an as-needed basis. In addition, the CONSULTANT shall realize that emergency situations may arise that will require immediate response/action.

ARTICLE I

B. SCOPE OF WORK

The scope of work proposed by this AGREEMENT may include:

1. Development of base plans drafted by the CONSULTANT using survey provided by the DEPARTMENT. The CONSULTANT will be responsible for adding environmental resource mapping, utility information, existing right-of-way and property line information, etc. All these are provided by the DEPARTMENT or as noted elsewhere in this document.
2. Refinement of the alignment, grades, and intersections of the proposed roadway(s) as shown on preliminary conceptual designs furnished by the DEPARTMENT.
3. Preparation of complete designs including all plans, specifications for work not included in the current specifications of the DEPARTMENT, computations, estimates, and documents for the required submissions to the DEPARTMENT, the Federal Highway Administration, and/or any other STATE or Federal agency that may be required.
4. Design and preparation of contract plans for construction of the roadway, structures, construction phasing plans, drainage facilities (including best management practices for permanent erosion and sedimentation control and water-quality features), mitigation plans, and appurtenances in accordance with the policy and procedures of the DEPARTMENT and the provisions of this AGREEMENT. The plans shall include all commitments made in the environmental documents to the extent practicable.
5. Design and preparation of Traffic Control Plans. The DEPARTMENT will serve on the team with the CONSULTANT in developing the detailed Traffic Control Plans. The CONSULTANT shall develop the initial conceptual Traffic Control Plan and construction phasing. The DEPARTMENT will assist the CONSULTANT in the final design of the Traffic Control Plan as it relates to complications with concurrent work, utilities, and closures. The CONSULTANT shall complete the final design and the associated quantity calculations.

The engineering design shall take into consideration all factors affecting the cost of the construction, such as foundation problems, earthwork quantities, erosion and sedimentation control, water-quality-treatment issues, construction phasing and complexity, utilities affected, environmental, etc. During all phases of design, the CONSULTANT shall make a continuous effort to identify and minimize impacts on existing and proposed utilities.

The CONSULTANT shall, when requested by the DEPARTMENT, render such assistance as required, including the preparation and explanation of sketches and plans for, or at, any meetings or conferences held by the DEPARTMENT, without additional compensation therefor. Meeting notes and conference memos shall be the responsibility of the CONSULTANT.

The CONSULTANT shall submit for review, as requested, progress prints showing grades, cross-sections, special details, and general design. Paper prints shall be submitted upon request for soils studies, right-of-way use, evaluation of utility impacts, and other purposes.

ARTICLE I

All horizontal alignment notes including traverse-line notes furnished by the DEPARTMENT shall be computed to include coordinates.

Designs shall conform to the current standards, specifications, policies, and guidelines enumerated in the Federal-Aid Policy Guide, Subchapter 6, Part 625, or to 23 Code of Federal Regulations, Part 625 and the DEPARTMENT'S Design Manuals, except as otherwise approved.

Data from survey notes shall be transcribed and plotted as base plans, profiles, and cross-sections as required, if not furnished by the DEPARTMENT under Article I-F.

Visits to the site shall be made during the design to detect changed field conditions and, if required, additional surveys will be performed by the DEPARTMENT upon request. The DEPARTMENT will process additional survey requests to the extent necessary to ensure continuity between new and current detail model files. The CONSULTANT will be given these files and be responsible for the incorporation of these files into the current detail base plans and digital terrain models (DTM). The incorporation of additional survey information shall include all drafting, labeling, detailing, and field-checking of the detail from all survey requests.

The CONSULTANT shall examine which elements of design, such as horizontal and vertical alignments, typical sections, traffic control, earthwork utilization, drainage pipes, and structures, as well as soils suitability, might affect aerial and underground utilities. Any conflict between design elements and utilities shall be identified and brought to the attention of the DEPARTMENT. A special effort shall be made by the CONSULTANT to modify drainage features to avoid conflicts with underground utilities.

All plotting, drafting, and calculations performed by the CONSULTANT shall be independently checked by members of the CONSULTANT's staff other than those who performed the original work. The work of each stage submission (including quantity estimates) shall have been appropriately checked. The PS&E submission and final mylars shall have had complete final and "three-way" checking.

The CONSULTANT shall verify all computations, posting, and design calculations and shall furnish to the DEPARTMENT after completing the design phase of the individual construction contract, two (2) permanent, legible copies of the design and quantity calculations suitably bound in prescribed folders and, when directed, all study plans, work plans, alternate studies, and estimates indexed in accordance with DEPARTMENT procedures. The CONSULTANT shall also furnish to the DEPARTMENT three (3) permanent, legible copies of the drainage computations with drainage area plans after completing the design phase of each individual construction contract. The drainage computations shall include a narrative discussing the existing pre-construction and the resultant post-construction peak flows and their impact along with appropriate drainage control features.

The CONSULTANT'S Licensed Professional Engineer stamp for the State of New Hampshire shall appear on the construction plans, reports, and any other documents that will be submitted to the

ARTICLE I

DEPARTMENT. Stamps shall be those of the professional engineers who prepared them or under whose direct supervisory control they were prepared.

C. STAFFING

The CONSULTANT shall furnish the DEPARTMENT with a list of qualified personnel including their labor classification and current direct-labor wage rates prior to entering into negotiations for this AGREEMENT. The CONSULTANT shall utilize the personnel approved by the DEPARTMENT during negotiations for this AGREEMENT for the performance of the work. If at any time the CONSULTANT is unable to use the personnel specified, it shall request approval from the DEPARTMENT to use other personnel. To obtain DEPARTMENT approval, the CONSULTANT shall request the substitution in writing and provide resumes for the new individuals at least 14 days in advance of the proposed substitutions, for review by the DEPARTMENT.

D. QUALITY CONTROL

The CONSULTANT is expected to perform in a professional manner and all work shall be neat, well organized, fully comply with the requirements of this AGREEMENT and Task Orders, and meet the specified accuracy requirements. The DEPARTMENT will reject any data that does not comply with the above. The DEPARTMENT will decide when the data and services have fully met the project requirements. The CONSULTANT will not be paid for insufficient work.

E. TASK ORDERS

As needs develop, the DEPARTMENT will issue specific Task Orders to the CONSULTANT. These Task Orders will be initiated by a Request for Proposal (RFP) letter that will include a detailed description of the project or elements of work, an outline of the services required, responsibilities of the parties, materials to be supplied by the DEPARTMENT, and other information necessary to complete the work for the Task Order. The CONSULTANT shall then submit to the DEPARTMENT for approval a scope of work and fee proposal that includes the names of all personnel to be assigned to the Task Order and a tentative work schedule for each Task Order assigned. The DEPARTMENT will review the CONSULTANT'S proposal and schedule negotiations, if necessary, to clarify the proposed scope of work, discuss the personnel proposed, the number of work hours needed, and any other associated proposed costs to establish the final not-to-exceed or lump-sum amount for the Task Order. Upon approval of the CONSULTANT'S proposal by the DEPARTMENT and FHWA (if applicable), the DEPARTMENT will issue a Task Order Authorization to Proceed Letter. A conference may be required to turn over a Task Order to the CONSULTANT. Costs associated with the CONSULTANT'S preparation of a scope of work and fee for a Task Order are non-reimbursable.

ARTICLE I

F. MATERIAL FURNISHED BY THE DEPARTMENT OF TRANSPORTATION

The DEPARTMENT will furnish the following data, if available, to the CONSULTANT:

1. Electronic files in English Units of the following information in accordance with the DEPARTMENT'S CAD/D Procedures and Requirements for incorporation into the plans by the CONSULTANT:
 - a. All existing survey and baseline data on disk or tape, field notes, and note reductions in the format outlined in the current DEPARTMENT CAD/D Procedures and Requirements. An electronic ground model shall be provided, if available, along with all existing information that can be used to create a model (ASCII point file, SDR data files, etc.).
 - b. Electronic survey-data-file notes (meaning an unprocessed, survey-data dump) of all additional surveys requested by any party during the design process. The CONSULTANT shall be responsible for the reduction, editing, and incorporation of this data into the ground-terrain model and the plans. This data will be provided in a format as indicated in paragraph 1.a. above. Upon completion, the CONSULTANT shall confirm that the survey is correct by conducting appropriate field inspections.
 - c. Electronic preliminary horizontal and vertical alignments for the project limits as envisioned. This data will be in MX format and coordinate (x, y, z) data (ASCII) format, in accordance with the DEPARTMENT'S CAD/D Procedures and Requirements.
 - d. Any additional surveys of adjacent parcels, mitigation sites, wetland boundaries, or other pertinent items deemed necessary and processed by the DEPARTMENT. Incorporation of this information into the ground terrain model and plans shall be the responsibility of the CONSULTANT.
 - e. 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.
 - f. Electronic drawings in MicroStation format of the existing underground utilities, if provided to the DEPARTMENT by the utility. The CONSULTANT shall be prepared to provide an electronic copy of preliminary base plans to the DEPARTMENT for use by the utilities. The CONSULTANT shall be responsible for the incorporation of this 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.F.1.a. thru f. above (electronic information) both existing and proposed, when available, for verification by the CONSULTANT.
 - b. Any additional information (e.g., abstracting, utilities, existing bridge plans, data, and inspection reports (if available) etc., not available electronically) for the CONSULTANT to incorporate into

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- the plans in accordance with the DEPARTMENT'S CAD/D Procedures and Requirements.
- c. Critical cross-sections left and right of the existing baseline or within the current limits of ground data.
 - d. Aerial photography within the project area for use by the CONSULTANT in producing the 1"=200'-scale property layout plan sheets for the right-of-way purchase plans.
3. Roll-plan print(s) of the project details and profiles of existing ground at survey line at a scale of 1"=50'.
 4. Prints and data-exchange files of existing conditions not previously provided to the CONSULTANT. Reduction and incorporation shall be the responsibility of the CONSULTANT.
 5. Right-of-way data. This will include legacy alignments, existing right-of-way layout, property lines, parcel owners, and any other applicable abstracting information in MicroStation format for incorporation into the plans by the CONSULTANT.
 6. All required permits. The CONSULTANT shall be responsible for plans and computations for impacted areas. These plans shall provide all necessary data, area hatching, and detail so these plans can be forwarded to the respective regulatory agencies as appropriate attachments for the permit applications.
 7. Necessary traffic data and counts.
 8. Proposal for bidding and Standard Specifications for Road and Bridge Construction, plus supplemental specifications and special provisions that the DEPARTMENT currently has available.
 9. Geotechnical investigations and recommendations, if available.
 10. The location of all existing utilities through direct contact with the various utility companies. Following the determination of all conflicts between existing utilities and the proposed construction by the CONSULTANT, the DEPARTMENT will coordinate the necessary relocation of the conflicting utilities, unless otherwise specified.
 11. Design and layout of highway lighting, temporary and permanent, if deemed necessary. The CONSULTANT shall be responsible to incorporate into the project documents as required.
 12. The description and conceptual layout of all permanent guide signs (stick diagrams). The CONSULTANT shall be responsible for the final design of these signs. Also, the DEPARTMENT will furnish a list of permanent construction signs and warning devices reflecting the general construction. The CONSULTANT shall be responsible for all temporary guide and regulatory signs and permanent construction signing required for the traffic control plans, construction phasing, and detours for the construction of the project.
 13. Sketches, layouts, and items for landscaping within the project. The CONSULTANT shall be responsible to incorporate the details into the plan and project documents.
 14. Any updates of the DEPARTMENT-supplied CAD/D information will be released to the CONSULTANT throughout the duration of the AGREEMENT, as appropriate. The DEPARTMENT

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shall be held harmless from any and all loss, damage, expense, or liability whatsoever resulting from the use of these programs and macros or translated information. The DEPARTMENT may supply the documentation for use with these programs and macros but will not be responsible for training the CONSULTANT in their use.

G. WORK SCHEDULE AND PROGRESS REPORTS

The CONSULTANT shall be aware that the services to be performed under this AGREEMENT will be on an as-needed basis. In addition, the CONSULTANT shall realize that emergency situations may arise that will require immediate response/action.

The CONSULTANT shall be available to begin performance of the services designated in the Contract promptly upon receipt from the DEPARTMENT of a Notice to Proceed Letter. The CONSULTANT shall complete the services required for each Task Order without delay unless unable to do so for causes not under the CONSULTANT'S control.

It is imperative that close coordination between the CONSULTANT and the DEPARTMENT be maintained at all times so as to ensure compliance with the DEPARTMENT'S requirements for specific Task Orders.

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 Bureau of Bridge Design, giving the percentage of completion of the work required by this AGREEMENT. Separate progress reports for highway design efforts and bridge design efforts shall be required. These monthly progress reports shall be received by the DEPARTMENT by the 10th day of each month.

H. SUBMISSION OF REPORTS, PLANS AND DOCUMENTS

During the prosecution of this AGREEMENT, the CONSULTANT shall prepare and submit to the DEPARTMENT separate submissions as described hereinafter.

The CONSULTANT, with each submission, shall submit a transmittal describing the "design issues" addressed in that submission. In addition, the transmittal shall include anticipated or outstanding issues and the CONSULTANT'S recommendation. All issues shall be noted as to whether the CONSULTANT feels the issue is within the scope of work described in Article I.

All plan drawings, including size of sheets, lettering, symbols, and scale of said drawings, shall conform to the requirements and standards of the DEPARTMENT. Any and all CAD/D-related work completed during the course of this project shall be in conformance with the DEPARTMENT'S CAD/D Procedures and Requirements in effect at the time of execution of this AGREEMENT. Final construction plans and

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final right-of-way plans shall be submitted using waterproof ink on permanent, archival-quality, double-matte, polyester-base film [.003 in thick] or silver-halide emulsion ("wash-off") reproduction on polyester-base film [.003 in thick]. Cross-section sheets shall be submitted on quality paper prints. Construction and right-of-way plans shall be submitted on 22 in x 34 in sheets.

In addition to the final reproducible plans being furnished as noted herein, the CONSULTANT shall provide electronic file copies of all highway and bridge project plan sheets with real State plane coordinates, including, but not limited to, final quantity sheets, typicals and detail sheets, general plans and profiles, traffic-signal sheets, cross-sections, and right-of-way plans. In addition to these plan sheets, an electronic file of the entire project's final design shall be submitted in an "uncut" format showing all design features in a real State plane-coordinate system unrotated. These final electronic files shall be indexed with file name, description of the contents of the file, and project sheet number applicable. All files submitted shall be in conformance with the DEPARTMENT'S CAD/D Procedures and Requirements. Any plans (e.g., quantity summary sheets) produced from a spreadsheet (e.g., Excel, or equivalent) shall be submitted in ASCII file or format suitable for incorporation into Microsoft Office or the current DEPARTMENT software. The final Special Provisions(s) and other documents, as requested, shall be submitted in both electronic format (Microsoft WORD-compatible) and hard copy. The CONSULTANT shall also be prepared to submit separate electronic files of all alignments, bound locations, and other project features, as requested, in a format acceptable to the DEPARTMENT, throughout the design contract, in conformance with the DEPARTMENT'S CAD/D Procedures and Requirements. The CONSULTANT shall also provide a hard copy of all proposed alignments (25-foot minimum station interval and curve control points) with associated State plane coordinates (x, y, z).

1. Roadway Design Submissions

The plan submissions for roadway design shall follow the procedures outlined below unless approved during scope development between the Department and the Consultant:

a. Pre-Preliminary Plans - Roadway

This submission, made by the CONSULTANT, shall cover work through the 15% - 20% completion stage. During this stage, short conceptual presentations by the CONSULTANT to the DEPARTMENT on work to date, with feedback and direction coming from the DEPARTMENT, are anticipated with the DEPARTMENT. The CONSULTANT shall develop during the Pre-Preliminary stage:

- (1) Information on the alternative solutions proposed by the CONSULTANT. Each respective alternative shall be dimensioned to delineate travel-lane widths and various geometric features and include the average daily traffic (ADT) for both the current and design years and the directional design hourly volumes (DDHV) for the design year.
- (2) Preliminary level-of-service calculations shall be performed for intersections.

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- (3) Conceptual traffic control plan for each alternative solution.
- (4) Plotted old-ground cross-sections with the top line of template showing finished grades at selected critical points and any other information deemed necessary by the DEPARTMENT to properly assess the respective alternatives' impact on adjacent properties.
- (5) Study profiles with old-ground information and proposed grade lines.
- (6) "Study" estimates for use in evaluating the various alternatives.
- (7) A narrative shall be furnished describing each alternative design solution's advantages and disadvantages. The CONSULTANT shall make a recommendation with qualifying statements justifying the preferred alternative. The CONSULTANT will be expected to support its design proposal in any issues resulting from review by the DEPARTMENT and Federal agencies with alternate studies and reasonably itemized study cost comparisons for alternatives. The DEPARTMENT will review this submission and any revisions requested shall be made by the CONSULTANT. At this time, the DEPARTMENT will select the scheme for further development.

b. Preliminary Plans - Roadway

Based on a complete review of the material furnished by the DEPARTMENT, particularly in regard to the proposed design criteria, the predicted traffic, preliminary soil data, expected Best Management Practices for erosion and sedimentation control and water-quality issues, conceptual traffic control, and the topography of the project area, the CONSULTANT shall prepare and submit to the DEPARTMENT one (1) set of vellum plan sheets and one (1) set of prints (22 in. x 34 in. paper prints) showing:

- (1) The recommended horizontal and vertical alignment of all necessary roadway construction including local roads.
- (2) All roadway cross-sections (50-foot intervals, except at 25-foot intervals in ledge) and drive cross-sections which shall be plotted with the top line of the template of the proposed roadway cross-sections shown. The CONSULTANT shall recognize that they may not have geotechnical information at the time of this submission and may need to re-cut and re-order their cross-sections when soils/ledge information is made available for subsequent submissions.
- (3) Proposed intersection plans, including proposed traffic lane-use and circulation plans, pavement layouts, and major control elements.
- (4) Proposed treatment of local roadways affected by the project, along with significant construction appurtenances and other design features.
- (5) The alignment (horizontal and vertical) of major detours or construction phases that will have significant implications to the project in the final design. The location and lane use of

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temporary signals, if warranted. Critical cross-sections with superelevations shall be developed and labeled by phases to assist in the assessment of the conceptual traffic control phasing.

- (6) Conceptual Best Management Practices for erosion and sedimentation control and water-quality issues shall be shown with approximated flows. A presentation or narrative may be required to explain the concept for approval. This plan shall be of a quality acceptable for viewing by Natural Resource agencies.

The following issues shall also be considered in the development of the above-mentioned plans:

- 1) Traffic Control Plan and construction phasing.
- 2) Erosion and sedimentation control measures (permanent and temporary).
- 3) Water-quality treatment.
- 4) Mitigation areas and wetland impacts.
- 5) Earthwork balances and availability.
- 6) Potential closed drainage & underdrain outlets.
- 7) Right-of-way involvement.

This submission shall be supplemented with such conceptual drawings, illustrations, and descriptive matter as are necessary to facilitate a comprehensive review of both the proposed design and the feasibility of construction. This shall include single, standard-size sheets showing to scale the proposed plan, elevation, and cross-section of each bridge.

The CONSULTANT shall indicate on the plans all traffic assignments at intersections together with the turning motions. The traffic assignments shall be expressed in terms of average daily traffic (ADT) for both the current and design years and directional design hourly volumes (DDHV) for the design year.

This submission shall include the CONSULTANT's recommendations for the limits of the construction contract(s), together with a preliminary estimate for each contract recommended. The estimate shall be reasonably itemized to cover roadways, structures, drainage, and other construction items as well as costs of railroad and utility changes to be financed by the STATE. Quantities need not be computed in detail but shall be estimated with sufficient accuracy to result in a "good" estimate.

For development of the right-of-way lines, sight-distance review, and the assessment of environmental impacts, it will be necessary that all templates be plotted to develop slope lines. This shall require computation and submission of pavement superelevation calculations. Rounding of slopes shall be considered in developing slope lines, but plotted cross-section templates do not have to have rounding shown at this submission. Guardrail calculations shall also be submitted.

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c. Slope and Drainage Plans - Roadway

The Slope and Drainage Plans submission shall consist of five sets of roll plans (paper prints not to exceed 8 feet to 10 feet in length) at each location showing slope lines, drainage-system details and drainage features, and proposed right-of-way lines, including drainage, slope, and/or construction easements. The roll plans shall include typical sections, plan views, profiles, guardrail locations, and cross-sections with complete template plotted and appropriate references on the plans relative to drainage design to assist with the review of the drainage design and the backup drainage calculations. The submission shall be supplemented with a list of utility conflicts that could not be avoided during the design. Complete Best Management Practices for permanent erosion and sedimentation control features and water-quality appurtenances shall be shown accompanied by backup calculations. The backup calculations shall also include a narrative, mapping, and computations addressing pre-construction and post-construction (and post-development, if applicable) drainage conditions and applicable drainage-control features. Two bound drainage-computation books shall be submitted with all backup drainage calculations illustrated and referenced to each drainage appurtenance shown based on the drainage design.

At this time, a field inspection shall be held with the DEPARTMENT and indicated design changes or corrections shall be made and incorporated into the plans for the Preliminary PS&E submission. Any indicated revisions to fit actual field conditions, including any horizontal and vertical alignment revisions found necessary during this field inspection and any resulting corrections to the right-of-way requirements, shall be made by the CONSULTANT.

Also, with the Slope and Drainage submission, the CONSULTANT shall submit the Traffic Control Plans in near-final form showing temporary slopes, lane uses and widths, overhead-sign structures, temporary traffic signals, temporary guardrail and barrier locations, temporary drainage, temporary easements, profiles, temporary drives, detour cross-sections and superelevations, etc. with backup calculations. Construction phasing shall be shown with narratives for each phase.

At this submission, a revised study estimate shall be prepared and submitted by the CONSULTANT based on the best information and design features shown in this submission relative to the anticipated construction including any detours or temporary widenings.

Following incorporation of the DEPARTMENT'S comments on the Slope and Drainage Submission, the CONSULTANT shall submit Wetland Impact plans showing permanent and temporary impacts for each wetland for each phased construction contract for inclusion with the wetland permit applications. These areas shall be hatched according to the DEPARTMENT'S standards. Accompanying these plans, the CONSULTANT shall provide a tabulated impact summary showing wetland identification numbers and areas of fill or dredged volumes in the

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temporary and permanent conditions for each construction contract and for the final build-out for this project.

d. Utility Plans

Prior to final quantity calculations for the Preliminary PS&E submission, the CONSULTANT shall furnish one (1) reproducible plan set for use by the Design Services Section. This submission plan set is intended to facilitate the identification of the scope of work required by various utilities to comply with the planned construction. The plans are intended to reflect the near-final design of drainage systems with all appurtenances and drainage notes, erosion and sedimentation control features, other structures, right-of-way lines (proposed permanent and temporary; and existing), curbing layout, pavement layout, traffic signals, slope limits, guardrail, final template plotted on cross-sections, detours and detour cross-sections, traffic control issues with construction phasing, underdrain, drive locations, sidewalks, clearing and grubbing limits, fencing requirements, building demolition, and traffic conduit. Also, the plans shall reflect all existing detail, existing drainage, and existing utilities. The intent is to have incorporated all comments from the preliminary right-of-way submission along with design work that has progressed. All final design notes may not be necessary, but the scope of construction shall be evident to the reviewing utilities. This plan set will not be reviewed and comments not given to the CONSULTANT for this submission by the DEPARTMENT. Copies of this plan set will be forwarded to the Design Services Section to finalize the utility relocations as required. The plans shall show the status of the design prior to preparation of the Preliminary PS&E submission.

e. Preliminary PS&E - Roadway

The Preliminary PS&E submission shall consist of one (1) reproducible plan set of preliminary contract drawings, draft special provisions for which a current special provision is not available from the DEPARTMENT, and a Preliminary PS&E estimate of quantities and costs satisfactory for processing to the Federal Highway Administration. The plans shall include title sheet, typical sections, all plan sheets, profile sheets, curb and pavement marking layout plans, traffic signal plans, complete traffic control plans, cross-section sheets, and necessary detail sheets. Also, landscaping, seeding, and grading plans shall be included, if required. Quantity Summary sheets shall be submitted in near-final form. All item summary boxes for drainage, clearing and grubbing, surfacing and select materials, curbing, guardrail, sidewalks, traffic signs, construction signs and warning devices, pavement markings, conduit and pull boxes, landscaping and slope protection, bounds, fencing, delineation and witness markers, and other items that are nearly complete shall be shown and note line-entries completed. Rounding and totals are not required. Items summary boxes of expected work not listed above shall be included and shown without line entries completed. In developing the plans to the Preliminary PS&E stage, the DEPARTMENT will

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require an estimate of the quantities, expected unit costs, and total costs prepared in the form and manner prescribed by the DEPARTMENT for the Preliminary PS&E submission for each construction contract. Roadway items shall be kept separate from bridge items. The unit prices used in the estimate shall be approved by the DEPARTMENT. The plans shall reflect all comments from the Preliminary plans submission and issues that appear during final design. The CONSULTANT shall make revisions as directed by the DEPARTMENT.

f. PS&E - Roadway

Upon approval in writing by the DEPARTMENT of the Preliminary PS&E submission, the CONSULTANT shall proceed to prepare and submit to the DEPARTMENT for approval the PS&E submission, which shall consist of six complete sets of paper prints of construction plans, two bound copies of the final quantities book, and a PS&E estimate in duplicate. The PS&E estimate shall also be submitted in electronic format (Microsoft Excel-compatible) as furnished by the DEPARTMENT. Duplicate copies shall be submitted of a completed draft of the Special Provisions for all items not in the Standard Specifications for Road and Bridge Construction of the DEPARTMENT and for which a current special provision is not available.

The CONSULTANT shall make revisions as directed by the DEPARTMENT.

g. Contract Plans (Mylars) and Consultant Documents

Upon approval of the foregoing in writing by the DEPARTMENT the CONSULTANT shall make the final submission of contract plans, any final special provisions required, and a final PS&E estimate of costs. These final contract plans and documents shall reflect all comments resulting from the PS&E review. The CONSULTANT shall be prepared to incorporate all comments, furnish drafting services for omissions found, and generally assist the DEPARTMENT in finalizing the contract plans. If changes are requested to be made to the CONSULTANT's plans by the DEPARTMENT, the CONSULTANT shall be prepared to update the corresponding electronic files and submit them to the DEPARTMENT. Final acceptance of the contract plans will be made in writing. The final contract plans submitted shall include one set of paper prints. Also, all CONSULTANT backup documents shall be resubmitted to reflect the final PS&E comments and final contract plan conditions.

The final contract plans shall include:

- (1) A title sheet (on form furnished by the DEPARTMENT).
- (2) Typical sections of improvement.
- (3) Summary-of-quantities sheets.
- (4) Plan and profile sheets.
- (5) Detail sheets and/or special sheets required.
- (6) Cross-section sheets.

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Each of the plan sheets shall be labeled with its corresponding electronic file name.

2. Bridge Design Submissions

The plan submissions for bridge structures shall follow, in general, the "Instructions for Consulting Engineers Concerning Routine Procedures on Bridge Design Projects" and "Instructions for Consulting Engineers Concerning the Performance of Engineering Services under Special Statewide Agreements", formats prepared by the DEPARTMENT.

The content, completeness, and scales for all drawings shall be as approved by the DEPARTMENT and shall be such as to accurately portray the placement and positioning of components and surfaces and the general appearance of the structural units. Large-scale details shall be employed as directed for congested areas or connections between components.

The CONSULTANT shall perform a load-rating analysis for each bridge using the appropriate AASHTO Method, or as directed by the DEPARTMENT, to be submitted on a form provided by the DEPARTMENT.

The phases for the development of the project are as follows unless approved during scope development between the Department and the Consultant:

- TSL (Type-Span-Location) Study Plan
- Boring Layout
- Preliminary Plans (30% complete)
- Preliminary PS&E Plans (80% complete)
- PS&E Plans (95% complete)
- Contract Plans

a. TSL (Type-Span-Location) Studies

The alignments and profiles developed during the preliminary design of the highway portion of the project will, after approval of the preliminary highway plans by the DEPARTMENT, serve as a base for determining the types of structures that may be utilized and the arrangement of the structure and its components with respect to span lengths, clearances, alignments, etc., which may affect the interface between the bridge and the highway or other features at the bridge location. These "other" features may include existing bridges, drainage facilities, buildings, streets, utilities, etc., or new structures and roadways, ramps, etc., that will be part of the project.

TSL study plans shall be prepared for each bridge showing the selected structure and shall include the plan, elevation, and typical bridge section. The plan and elevation shall generally be drawn to a scale as approved by the DEPARTMENT and shall accurately portray the location and size of the structural components, pavement and slope lines, center and grade lines, vertical and horizontal clearances, etc. The typical bridge section shall portray the components of the superstructure, materials of construction, beam spacing and locations, and dimensions of pavement, curbs, etc.

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At those locations where an existing bridge is adjacent to or a second bridge is proposed, sufficient detail shall be provided for the second bridge to clearly and accurately show the relationship between the two structures.

b. Boring Layout

Following the review and acceptance of the TSL Study by the DEPARTMENT, a boring layout plan shall be prepared for each bridge, the layout being based on the approved TSL Plan. This proposed boring layout plan shall be submitted to the DEPARTMENT for approval.

The results of the subsurface explorations shall be plotted, indicating the materials encountered (by description and blow counts), water table, approximate construction elevations, etc. These subsurface data sheets shall be further developed for inclusion in the preliminary and final contract plans.

c. Preliminary Plans - Bridge

Preliminary plans for each bridge shall be prepared following acceptance by the DEPARTMENT of the TSL Study and Boring Layout, completion of the subsurface explorations, and preparation of the subsurface data sheets.

The preliminary structural designs completed as part of the TSL phase shall be refined to incorporate the review comments, minor changes in profile and/or alignment, and the results of soils investigations. Also included in this phase shall be the development of the survey plan for the bridge location. This plan shall include the existing surface contours, boring locations, sub- and superstructure layout, slope limits, and major topographical items.

The plan and elevation sheets developed in the TSL phase shall be refined as necessary (including addition of plans). Profiles shall be developed for each alignment and shall include the appropriate section of the bridge, including substructure and foundation details.

Additional items to be included are the typical approach sections for the facilities over and under the bridge and the developed view of the abutments showing foundation treatment and rock lines, as appropriate. These items shall become part of the final PS&E plans.

Reproducible prints of these Preliminary Plans and estimated quantities and construction costs shall be submitted for approval by the DEPARTMENT prior to progressing to final design of the bridge.

d. Preliminary PS&E - Bridge

Upon receipt of written approval of the Preliminary Plans, the final design and preparation of contract plans shall commence. This final design shall incorporate revisions, if any, in the Preliminary Plans as approved by the DEPARTMENT.

The plan and elevation, survey plan and profiles, and boring logs as submitted for the Preliminary Plans shall be refined as necessary and become a part of the final contract plans.

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Estimates of quantities shall be prepared for all materials of construction and shall be tabulated on the plans and summarized for each bridge.

Upon completion of these contract plans, except for quantities and reinforcing-bar lists, copies of the plans shall be submitted to the DEPARTMENT for review and comment, the plans at this stage representing about 80% completion.

e. PS&E - Bridge

Comments resulting from the DEPARTMENT's review of the Preliminary PS&E submission shall be incorporated into the design and contract plans. The estimate of quantities shall be completed and tabulated and the reinforcing-bar schedules shall be completed.

Upon completion of these contract plans, copies of the plans shall be submitted to the DEPARTMENT for review and comment, the plans at this stage representing about 95% completion.

f. Contract Plans

Comments resulting from the DEPARTMENT's review of the PS&E submission shall be incorporated into the design and contract plans. The final contract plans submitted shall include one set of paper prints.

Upon completion of these contract plans, they shall be submitted to the DEPARTMENT, the plans at this stage representing 100% completion.

3. Right-Of-Way Plans

Right-of-way plans shall consist of a separate set of plans for the purpose of defining, negotiating, acquiring, and recording the required right-of-way for the project if requested under the Task assignment.

Final right-of-way plans shall be developed to include:

- a. Front sheet
- b. Property-layout plan sheets 1"=200'-scale (or as appropriate) showing existing detail, complete parcel boundaries, proposed roadway layout with alignment controls, parcel numbers, property owners' names, and existing and granted access points.
- c. Summary sheets
- d. Purchase plan sheets showing all impacts (temporary or permanent)
- e. Registry Plans

To expedite right-of-way acquisitions by the DEPARTMENT, it may be necessary to complete the right-of-way plans in stages, with work in some areas being accomplished very early in the project schedule. The preparation of the right-of-way plans in stages shall coincide with the limits and scope of the corresponding phased-construction contract plans. Right-of-way plans shall be in English units. The CONSULTANT shall be prepared to provide working (progress) right-of-way plans (front

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sheet, summary sheets, plan sheets) (three sets of paper prints) concurrent with the Slope and Drainage Plans submission for each roadway contract, as requested. Where the proposed right-of-way lines have been firmly established, acquisition calculations shall be performed. Acquisition and easement calculations may be submitted in handwritten format. The purpose of this working (progress) submission is to show anticipated areas of acquisition and easements, as well as, the correct format of the right-of-way plans.

The preliminary right-of-way submission (three sets of paper prints) shall be submitted concurrently with, or shortly after, the CONSULTANT'S submission of the contract specific Slope and Drainage plans. The preliminary right-of-way plans shall include a front sheet, summary sheets, and all plan sheets. Acquisition and easement areas shall be calculated and summary boxes filled in. Handwritten format is acceptable.

The right-of-way purchase plans shall be submitted after the CONSULTANT has received and incorporated the DEPARTMENT'S Slope and Drainage, and preliminary right-of-way plan comments. The CONSULTANT shall be prepared to make corrections and/or revisions as required. Upon DEPARTMENT review and written approval of the purchase plan submission, nine sets of paper prints will be required for use by the DEPARTMENT'S Bureau of Right-of-Way. At the submission of the roadway PS&E plans, the CONSULTANT shall submit a "draft" set of registry recordation plans based on the guidance of RSA 478:1-a and DEPARTMENT procedures. The DEPARTMENT will review the format and layout with the Registry for acceptance. The CONSULTANT shall be prepared to make revisions to the final right-of-way purchase plans based on the DEPARTMENT'S negotiations with property owners. The Consultant shall modify the final negotiated purchase plans to develop a separate set of plans for registry recordation based on the guidance of RSA 478:1-a and Department procedures. The final mylars for the registry plans shall be submitted with the mylars of the Contract Plans submission.

In the event that the DEPARTMENT needs to acquire a particular parcel in advance of completing the right-of-way plan process, the CONSULTANT shall be prepared to submit a working (progress) print(s) for the parcel(s) in question. The working (progress) print(s) are intended to be an extension of the construction plans showing the impacts, easements, etc., with summary boxes illustrating impacts to the parcel(s). Upon completion of the negotiation process, the CONSULTANT shall revise the ROW plans to allow for recordation at the registries. Revisions shall include the removal of hatching, miscellaneous text, etc.

I. GEOTECHNICAL SERVICES

A full geotechnical program including the following shall be provided by the CONSULTANT if requested under the Task assignment:

- a. Submission of plan and narrative of the proposed geotechnical investigation for approval.

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- b. Subsurface investigation, including field inspection. The CONSULTANT shall work with the DEPARTMENT to secure permission from the owner(s) for site access to private property. Notice of Entry letters will be mailed by the DEPARTMENT, based upon a list of landowners' names and addresses developed, if needed, by the CONSULTANT and given to the DEPARTMENT, to landowners whose properties are within the project limits and are to be affected by geotechnical investigations. Following written notification by the DEPARTMENT, the CONSULTANT shall, whenever possible, personally contact all resident property owners prior to making geotechnical investigations or entering the property. Any property damage resulting from the CONSULTANT'S work shall be promptly reported to the DEPARTMENT. The CONSULTANT shall exercise due care when working on private property, and site restoration will be the responsibility of the CONSULTANT and/or subconsultant.
- c. Field and/or laboratory testing as required.
- d. Geotechnical report describing project and location, existing conditions, exploration logs, material testing results, geological features, potential geotechnical problems, and design recommendations. The report shall address excavation issues, soil types, fill requirements, foundation recommendations for all structural components of the project, slope stability, ledge limits, bearing capacities, groundwater elevations, underdrain requirements, water-quality features, erosion and sedimentation potential, artesian conditions, and other geotechnical factors affecting the design or construction of the project. The CONSULTANT shall consider economic and DEPARTMENT standards in making their recommendations. The report shall serve as an evaluation of soil conditions by which the design is influenced and shall also be available to Contractors to supplement their bid process and the construction.

Geotechnical data and draft recommendations (five sets) shall be available when developing and reviewing the Slope and Drainage submission for the highway design and the Preliminary Plans submission for the bridge design. Following review and concurrence, a final report (ten bound sets) shall be submitted prior to the Preliminary PS&E submission.

J. ENVIRONMENTAL SERVICES

Design of wetland mitigation, permanent erosion control, water-quality features, and any monitoring of the groundwater table prior to and during the design of the project, shall be the responsibility of the CONSULTANT. Monitoring wells may be required with the DEPARTMENT responsible for drilling the wells. The CONSULTANT shall be expected to monitor the wells and incorporate the data in the design. Temporary erosion control for the project shall be designed by others during construction of the project; however, this issue shall be addressed during final design should it affect the design, the area required, and the construction of the project. Permanent erosion and sedimentation control and water-quality features shall be shown at the Slope and Drainage Plans submission with design backup calculations

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complete. Conceptual erosion and sedimentation control and water-quality plans shall be part of the Preliminary Plans - Roadway submission. The CONSULTANT shall furnish conceptual design calculations with Q2, Q10, Q25, Q50 flows and first-flush volumes, as appropriate. Site locations, estimated areas, and design elevations shall be proposed in detail sufficient enough to complete geotechnical investigations of each site. Wetland mitigation design and plan development shall be in accordance with the DEPARTMENT'S Wetland Mitigation Plan - Consultant Requirement Manual. The CONSULTANT'S plans shall include all commitments made in the environmental documents to the extent practicable.

K. MISCELLANEOUS SERVICES

The CONSULTANT shall perform bridge inspections as directed by the DEPARTMENT or as required for design purposes. Bridge Inspection and Bridge Damage Reports shall be prepared as directed by the DEPARTMENT.

L. 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 compatibility with software used by the DEPARTMENT to ensure the efficient and timely exchange of computer files between the DEPARTMENT and the CONSULTANT, as listed below.

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
Spreadsheets:	Microsoft Excel 2010
Databases:	Microsoft Access 2003

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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:

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 1 MB or smaller may be transferred via Email. If compressed, the files should be self-extracting.

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 (*.DOC), Microsoft Excel (*.XLS), etc.) and an electronic version in Adobe Acrobat (*.PDF) file format.

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.

M. CONSTRUCTION SUPPORT SERVICES

If a contract (contracts) for construction of the project (projects), or part of it (them), is (are) entered into within two (2) years after completion by the CONSULTANT of the services outlined in Articles I, III and IV, the CONSULTANT shall, without additional compensation therefor, render services to the DEPARTMENT, including, but not restricted to, the following:

a. Construction

If and when required by the DEPARTMENT during the construction of the project, the CONSULTANT shall:

1. At its sole expense, correct and resolve errors and/or omissions within the contract plans and specifications found during construction.
2. Render interpretations, as necessary, of the contract plans and specifications and submit recommendations for necessary modifications in either or both and, upon approval of recommendations by the DEPARTMENT, revise the contract plans and specifications to cover same and prepare other detailed drawings as may be needed to supplement the contract plans to permit the proper completion of the project. This work effort, if required, will be viewed as additional services, subject to an amendment to the Task Order.

b. Shop Drawings

ARTICLE I

The CONSULTANT shall review, check, and approve working drawings prepared by others including construction contractors or their subcontractors subject to the provisions of Section 105. Only that work designed by the DEPARTMENT will be excluded from this requirement.

N. DATE OF COMPLETION

The date of completion for the professional services rendered under this AGREEMENT is **December 30, 2021**, unless terminated earlier upon the depletion of the total amount payable under this AGREEMENT, or extended as allowed by the following provision:

No new tasks may be assigned after the above noted completion date, however, the CONSULTANT shall complete any tasks begun prior to the completion date, but not yet completed, in accordance with the methods of compensation specified in Article II and all other applicable portions and contractual requirements of this Agreement. This shall be subject to the written mutual agreement of both parties, which shall include a revised Date of Completion to allow completion of the previously assigned work. Completion of construction services shall be in accordance with Article I-M. - Construction Support Services.

ARTICLE II

ARTICLE II - COMPENSATION OF CONSULTANT FOR ON-CALL SERVICES AGREEMENTS

A. AGREEMENT 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 the combined total cost of all work, expenses, and profit for Task Orders issued under this AGREEMENT, an amount not to exceed \$1,000,000.00. (The CONSULTANT shall note that no payments will be made for work, expenses, or profit, whether authorized or not, exceeding the \$1,000,000.00 total amount.)

B. METHOD OF COMPENSATION FOR TASK ORDERS

The method of compensation for Task Orders issued under this agreement will either be a **Modified Cost-Plus-Fixed-Fee** format with method of payment as described in Section C, below, or a **Lump-Sum** format with method of payment as described in Section D, below.

C. MODIFIED COST-PLUS-FIXED-FEE FORMAT

The following costing items are incorporated as part of this AGREEMENT:

1. **Task Order Cost** - The negotiated not-to-exceed cost of each modified cost-plus-fixed-fee format Task Order will be based on the types of labor classifications required along with the number of labor hours negotiated for each labor classification multiplied by the corresponding contract labor rate for the current contract period, and the other factors (fixed fee, direct expenses, and subconsultant costs) as follows:

$$\begin{aligned}
 & \text{Labor Costs (Sum of negotiated hours x contract labor rates)} \\
 + & \text{ Fixed Fee (negotiated amount)} \\
 + & \text{ Direct Expenses (estimated amount)} \\
 + & \text{ Subconsultant Costs (estimated amount or lump sum)} \\
 = & \text{ Task Order Cost}
 \end{aligned}$$

2. **Contract Labor Rates** – The contract labor rates will be the total hourly wage for each labor classification including overhead and annual contract adjustment rate (when applicable) as follows:

$$\begin{aligned}
 & \text{Direct Labor Rate (\$/hr)} \\
 + & \text{ Direct Labor Rate x Overhead Rate (\%)} \\
 = & \text{ Loaded Labor Rate (\$/hr) for Base Period (LLRBP)}
 \end{aligned}$$

LLRBP x 0.61% (Initial Contract Adjustment Rate) = Contract Labor Rate (\\$/hr) for Base Period (CLRBP)
 CLRBP x Annual Contract Adjustment Rate (%) = Contract Labor Rate for Contract Period 2 (CLRCP2)
 CLRCP2 x Annual Contract Adjustment Rate (%) = Contract Labor Rate for Contract Period 3 (CLRCP3)*
 *Same formula for additional contract periods, when applicable.

The contract labor rates will be a firm-fixed-price per contract period. The originally negotiated contract labor rates for the labor classifications included in this AGREEMENT shall remain in effect for a one-year base period from the date that this AGREEMENT becomes effective. The rates for

ARTICLE II

subsequent one-year periods include an annual contract adjustment rate. However, contract labor rates that are in effect at the time a particular Task Order is issued shall remain effective throughout the duration of that Task Order and shall apply to all amendments issued for the Task Order. The contract labor rates for a Task Order will not be adjusted for the annual contract adjustment rate if the contract year changes during the duration of the Task Order.

(The annual contract adjustment rate is set by the DEPARTMENT'S Consultant Selection Committee at their first meeting in January of each year and will be used for all On-Call contracts negotiated during that calendar year.)

In the event that the Completion Date for this AGREEMENT is extended for a period of six months or less, either in accordance with the provisions included in Article I, Section N - Date of Completion, or by an amendment to the AGREEMENT, the contract labor rates for the last Contract Period shall remain in effect. For an extension to the Completion Date of this AGREEMENT for a period of longer than 6 months, the annual contract adjustment rate shall apply and an additional Contract Period will be established.

In accordance with DEPARTMENT policy, the maximum direct labor rate allowed for all labor classifications under this AGREEMENT shall be \$60.00 per hour (including the annual contract adjustment rate) for the life of the Contract. For this AGREEMENT, the \$60.00 per hour maximum direct labor rate translates to a \$166.35 per hour maximum contract labor rate.

CONTRACT LABOR RATES (PER HOUR)

(based on the CONSULTANT'S wage rate submission dated June 11, 2018.)

<u>Classification</u>	<u>Base Period</u>	<u>Contract Period 2</u>	<u>Contract Period 3</u>
Project Manager	\$166.35	\$166.35	\$166.35
Lead Engineer Highway	\$166.35	\$166.35	\$166.35
Lead Engineer Traffic	\$164.58	\$166.35	\$166.35
Lead Engineer Hydraulic	\$166.35	\$166.35	\$166.35
Lead Engineer Structural	\$166.35	\$166.35	\$166.35
Senior Engineer	\$146.44	\$150.30	\$153.29
Project Engineer	\$110.37	\$113.26	\$115.53
Assistant Engineer	\$80.90	\$83.04	\$84.67
Environmental Coordinator	\$83.67	\$85.86	\$87.58

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LS/Technician	\$123.38	\$126.62	\$129.14
Technician	\$91.63	\$94.04	\$95.93

3. ~~Initial and Annual Contract Adjustment Rates - An initial contract adjustment rate of 0.61% will be used to adjust the rates for the Base Period to compensate for the time between the fee proposal and the Notice To Proceed.~~ The Contract Labor Rates for each one-year contract period after the initial contract base period shall include an annual contract adjustment rate. For this AGREEMENT, the annual contract adjustment rate for each one-year Contract Period after the initial base period is 2.0%.
4. **Overhead Factor** - The negotiated overhead factor (177.25%) shall remain fixed at that rate for the life of the Contract and shall not be subject to change as a result of a final audit.

5. **Fixed Fee** - A fixed fee for profit and non-reimbursed costs shall be a negotiated amount for each Task Order based on the estimated risk to be borne by the CONSULTANT [maximum 10.00% of Labor Costs (including overhead)]. The fixed fee may only be adjusted (increased or decreased) if there is a significant change in the scope or character of the work, as determined by the DEPARTMENT. Any change to the fixed fee shall be documented in writing by a DEPARTMENT Bureau-level amendment. Upon satisfactory completion of the Task Order, the CONSULTANT will be paid the originally-negotiated or amended amount of the fixed fee, regardless of whether the actual number of hours used to complete the Task Order is less or more than the originally-negotiated or amended number of hours.
6. **Direct Expenses** - Direct expenses shall be negotiated as a not-to-exceed amount for each Task Order and reimbursed at actual cost. Reimbursable direct expense items include work 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 whether performed by the CONSULTANT or other parties and shall be billed at actual cost. 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.
7. **Subconsultant Costs** - Subconsultant costs may be either negotiated as a not-to-exceed amount for each Task Order and reimbursed at actual cost or negotiated as a lump-sum amount.

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D. LUMP-SUM FORMAT

1. Task Order Cost - The negotiated total amount of each lump-sum format Task Order will be considered full compensation for all services for the Task Order performed to the satisfaction of the DEPARTMENT. Said lump-sum amount includes all labor, overhead, profit (maximum 15.00% of total labor + total overhead; based on the estimated risk to be borne by the CONSULTANT), direct expenses, and subconsultant costs. The lump-sum amount may only be adjusted (increased or decreased) if there is a significant change in the scope or character of the work, as determined by the DEPARTMENT. Any change to the lump-sum amount shall be documented in writing by a DEPARTMENT Bureau-level amendment.

E. SUBCONSULTANT SUPPORTING SERVICES

(Subconsultant Supporting Services were not anticipated during negotiations for this AGREEMENT.)

F. INVOICING and PAYMENT

The CONSULTANT shall submit two copies of invoices to the DEPARTMENT containing the following:

- (a) Task Order number, project name and number (if applicable);
- (b) Number, description, and cost of each item being billed (modified cost-plus-fixed-fee format);
- (c) Quantity delivered/Percentage completed this billing period of each item being billed;
- (d) Amount due for each item being billed (modified cost-plus-fixed-fee format);
- (e) Invoice amount/Total due
- (f) Amount billed through this invoice (contract cumulative)
- (g) Percentage of contract complete

The DEPARTMENT will compensate the CONSULTANT the amount agreed to for said Task Order upon the satisfactory completion and acceptance of the work. Payments will be made upon approval of the submittals/deliverables by the DEPARTMENT. The CONSULTANT may request partial payment for each separate Task Order, provided that no successive request for partial payment is submitted closer than 28 days. A progress report, a proper invoice, and, if requested by the DEPARTMENT, a copy of the plans and other supporting data, shall be submitted with each request for partial payment. A progress report shall be prepared and submitted by the CONSULTANT every thirty (30) days with each invoice requesting a partial payment for all Task Orders that exceed 60 days in length. The fixed fee invoiced amounts for a modified cost-plus-fixed-fee format Task Order shall be based upon the overall percentage complete of the Task Order scope of work as approved by the DEPARTMENT. Upon satisfactory completion and acceptance of the work for each individual Task Order, the CONSULTANT may submit a proper invoice to request final payment.

ARTICLE II

G. RECORDS - REPORTS

The CONSULTANT shall maintain adequate cost records for all work performed under this AGREEMENT. All records and other evidence pertaining to costs incurred shall be made available at all reasonable times during the AGREEMENT period and for three (3) years from the date of final voucher payment for examination by the STATE, Federal Highway Administration, or other authorized representatives of the Federal Government, and copies thereof shall be furnished if requested. Applicable cost principles are contained in the Federal Acquisition Regulation (FAR) in Title 48 of the Code of Federal Regulations (Subpart 31.2 and Subpart 31.105).

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 costs.

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 Article II, Section A – Agreement General Fee. All Subconsultant costs may also be subject to audit by the STATE and Federal Governments.

ARTICLE III

ARTICLE III - GENERAL PROVISIONS

A. HEARINGS, ETC.

The DEPARTMENT will make all arrangements for and hold all necessary 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

After the CONSULTANT has furnished to the DEPARTMENT all contract drawings, special provisions, specifications, estimate of quantities, and unit cost by items, the DEPARTMENT will prepare the documents for receipt of proposals from construction contractors and for execution of a construction contract or contracts.

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, 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 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

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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 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,

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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, Section 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, Section 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.

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.

ARTICLE IV

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.

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

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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 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 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

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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 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

ARTICLE IV

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.
- (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

ARTICLE IV

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 AGREEMENT 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.
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.

ARTICLE IV

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

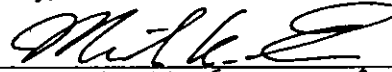
If the amount of the AGREEMENT or subcontract thereunder exceeds \$100,000, the CONSULTANT or subconsultant shall comply with applicable standards, orders, or requirements issued under Section 306 of the Federal Clean Air Act (43 U.S.C. 1857(h)), Section 508 of the Federal Clean Water Act (33 U.S.C. 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 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 , proposed subconsultant _____, hereby certifies that it has , 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 , 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 / CEO
(Title)

Date: 6/27/2018

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.

6/27/2018
(Date)


(Signature)
Manish K. Gupta, PhD

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:

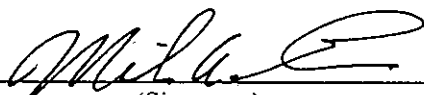
I/WE do also, under penalty of perjury under the laws of the United States, certify that, except as noted below, the company or any person associated therewith in the capacity of (owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving 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.

6/27/2018
(Date)


(Signature)
Manish K. Gupta, PhD

Attachment 4

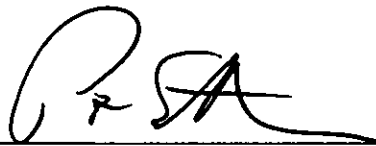
CERTIFICATION OF STATE DEPARTMENT OF TRANSPORTATION

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):

7/6/18
(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 6

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

Consultant

WITNESS TO THE CONSULTANT

By: Lawrence Russ
Lawrence Russ, Esq.
General Counsel of GM2
Associates, Inc.

Dated: 6-27-2018

CONSULTANT

By: Moulish K. Gupta
Moulish K. Gupta, PhD
President / CEO
(TITLE)

Dated: 6/27/2018

Department of Transportation

WITNESS TO THE STATE OF NEW HAMPSHIRE

By: Michelle L. Duran

Dated: 7/6/18

THE STATE OF NEW HAMPSHIRE

By: [Signature]
Director of Project Development

for DOT COMMISSIONER
Dated: 7/6/18

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: 7/30/18

By: Allie B. Greenstein
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


CERTIFICATE OF AUTHORITY

I, Lawrence Russ, do hereby certify that I am the Secretary and General Counsel of GM2 Associates, Inc. ("GM2" or the "Corporation"), which corporation has its principal offices at 115 Glastonbury Boulevard, Glastonbury, Connecticut 06033, and is organized, incorporated, and in good standing under the laws of the State of Connecticut. I also certify that I am the keeper of the GM2 corporate records and seal, and that each of the further statements in this Certificate is true and correct.

Under resolutions duly adopted and ratified by the Board of Directors (the "Board") of the Corporation on January 26, 2018 in accordance with the constituent charter and By-Laws of GM2, which have not in any way been modified, repealed or rescinded subsequently, but remain in full force and effect, it was resolved:

THAT Manish K. Gupta was elected President of the Corporation as of January 26, 2018 and that he will retain that office until and unless the Board resolves otherwise; and THAT as President, Manish K. Gupta also serves as the Chief Executive Officer of the Corporation, and, as such, is duly authorized by the Corporation's By-Laws to enter into and sign contracts on behalf of the Corporation, including the contract with the State of New Hampshire Department of Transportation for Statewide On-Call Bridge Design Services # 41865.

Dated at Glastonbury, Connecticut this 27th day of June, 2018.



Lawrence Russ, Esq., Secretary and General Counsel
GM2 Associates, Inc.

State of New Hampshire

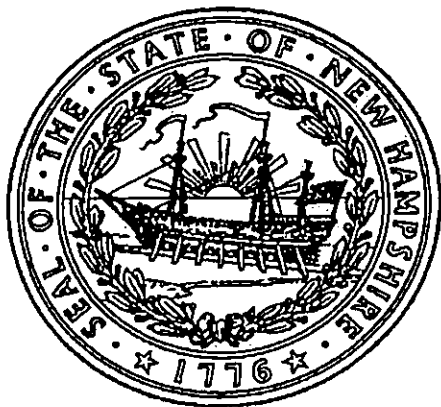
Department of State

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



GM2ASSO-01

KFULLER

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

06/22/2018

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Smith Brothers Insurance, LLC 68 National Drive Glastonbury, CT 06033	CONTACT NAME: Keith Fuller		
	PHONE (A/C, No, Ext): (860) 430-3337	FAX (A/C, No):	
	E-MAIL ADDRESS: kfuller@smithbrothersusa.com		
INSURED GM2 Associates, Inc. 115 Glastonbury Blvd. Glastonbury, CT 06033	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A: Hartford Fire Insurance Co.		19682
	INSURER B: Sentinel Insurance Company		11000
	INSURER C: Hartford Casualty Ins. Co.		29424
	INSURER D: Travelers Casualty and Surety Company of America		31194
	INSURER E:		
INSURER F:			

COVERAGES

CERTIFICATE NUMBER:

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADOL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR	X	X	02UUNHX5582	01/01/2018	01/01/2019	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMPIOP AGG \$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:						
B	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY		X	02UUN HX5582	01/01/2018	01/01/2019	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
C	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 10,000		X	02XHUX4273	01/01/2018	01/01/2019	EACH OCCURRENCE \$ 8,000,000 AGGREGATE \$ 8,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory In NH) <input type="checkbox"/> Y/N If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	02WEEG8589	01/01/2018	01/01/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	Professional Liab.		X	106428813	01/01/2018	01/01/2019	Each Claim 3,000,000
D	DED:\$40,000 ea claim		X	106428813	01/01/2018	01/01/2019	Annual Aggregate 5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
FOR PROFESSIONAL LIABILITY COVERAGE, THE AGGREGATE LIMIT IS THE TOTAL INSURANCE AVAILABLE FOR CLAIMS PRESENTED WITHIN THE POLICY PERIOD FOR ALL OPERATIONS OF THE INSURED. THIS LIMIT WILL BE REDUCED BY PAYMENTS OF CLAIMS AND EXPENSES. THIS INSURANCE IS NOT FOR A SPECIFIC PROJECT.

RE: STATEWIDE ON-CALL BRIDGE DESIGN SERVICES 41865.

STATE OF NH IS NAMED AS ADDITIONAL INSURED WITH RESPECT TO GENERAL LIABILITY PER POLICY FORMS.

CERTIFICATE HOLDER

CANCELLATION

The State of New Hampshire Department of Transportation 7 Hazen Drive, P.O. Box 483 Concord, NH 03302-0483	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE <i>Kimberly S. Conolly</i>