



Victoria F. Sheehan
Commissioner

THE STATE OF NEW HAMPSHIRE
DEPARTMENT OF TRANSPORTATION



William Cass, P.E.
Assistant Commissioner

Bureau of Bridge Design
December 6, 2019

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

REQUESTED ACTION

Authorize the Department of Transportation to enter into an Agreement with Becker Structural Engineers, Inc. (Vendor 312062), for a total amount not to exceed of \$302,900.00, for the preliminary design, public involvement process, associated environmental & cultural services, final design, and construction support services for rehabilitation of the existing bridge carrying NH Route 49 over Mad River in the Town of Thornton, effective upon Governor and Council approval, through December 31, 2022. 100% Other Funds (SB 367 Funds).

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

Funding is available as follows:	<u>FY 2020</u>	<u>FY 2021</u>	<u>FY 2022</u>
04-96-96-963015-8910			
SB367 Capital Investment			
046-500463 Engineering Consultants	\$100,000.00	\$150,000.00	\$52,900.00

EXPLANATION

The Department requires professional engineering design and environmental consultant services to prepare preliminary design, public involvement process, associated environmental and cultural services, final plans, and construction support services for rehabilitation of the existing bridge carrying NH Route 49 Mad River in the Town of Thornton. Constructed in 1979, this five-span steel girder bridge with a concrete deck has a total length of 540.0 feet and a total width of 39.5 feet. It is on the Department's Red List of deficient structures. This project is shown in the 2019-2028 Ten Year Plan for construction (\$4.7M) in 2024.

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 Bridge Design, Environment, Highway Design, 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 preliminary and final engineering design and associated environmental services for the Thornton

40613 bridge project. The assignment was listed as a "Project Soliciting for Interest" on the Department's website on September 17, 2018, 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 October 26, 2018 for consideration and approval by the Assistant Commissioner. Upon receipt of that approval, three shortlisted firms were notified on November 28, 2018 through a technical "Request For Proposal" (RFP). Committee members individually rated the firms on January 24, 2019 using a written ballot to score each firm on the basis of comprehension of the assignment, clarity of the proposal, capacity to perform in a timely manner, quality and experience of the project manager and the team, previous performance, and overall suitability for the assignment. (A compilation of the completed individual rating ballots and the ranking summary form is attached.) The individual rankings were then totaled to provide an overall ranking of the three firms, and the Committee's ranking was submitted to the Assistant Commissioner for consideration and approval. Upon receipt of that approval, the short listed firms were notified of the results and the highest-ranking firm was asked to submit a fee proposal for negotiations.

The long list of sixteen (16) consultant firms that were considered for this assignment, with the three short-listed firms shown in bold, is as follows:

<u><i>Consultant Firm</i></u>	<u><i>Office Location</i></u>
AECOM	Manchester, NH
Becker Structural Engineers	Portland, ME
Beta	Manchester, NH
CMA	Portsmouth, NH
CME	Nashua, NH
DuBois & King Inc.	Bedford, NH
Fuss & O'Neil	Manchester, NH
Gill Engineering	Needham, MA
Greenman-Pederson, Inc.	Portsmouth, NH
Hardesty & Hanover, LLC	Bedford, NH
HNTB	Westbrook, ME
Kleinfelder	Manchester, NH
Stantec	Auburn, NH
TEC Engineering Corp.	Hampton, NH
Thornton Tomasetti	Boston, MA
WSP	Manchester, NH

The firm of Becker Structural Engineers, Inc. has been recommended for this contract. This firm is a new firm to NHDOT with good references and has demonstrated their capability to perform the necessary engineering and technical services for this assignment. Background information on this firm is attached.

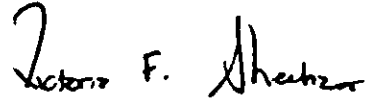
Becker Structural Engineers, Inc. has agreed to furnish the required services for a total amount not to exceed of \$302,900.00. This is a reasonable fee and is commensurate with the complexity of the project and the scope of engineering and technical services to be furnished.

This project funding is 100% SB367 Capital Investment.

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

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

Sincerely,

A handwritten signature in black ink, appearing to read "Victoria F. Sheehan". The signature is fluid and cursive, with the first name "Victoria" and last name "Sheehan" clearly distinguishable.

Victoria F. Sheehan
Commissioner

Attachments

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1. CERTIFICATION WITH REGARD TO THE PERFORMANCE OF PREVIOUS CONTRACTS OR SUBCONTRACTS, ETC.
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7. CERTIFICATION OF INSURANCE
8. CERTIFICATION OF AUTHORITY / VOTE
9. SIGNATURE PAGE

AGREEMENT
FOR PROFESSIONAL SERVICES

PREAMBLE

THIS AGREEMENT made this 22nd day of November in the year 2019 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 Becker Structural Engineers, with principal place of business at 75 York Street, in the City of Portland, State of Maine, hereinafter referred to as the CONSULTANT, witnesses that:

The Department of Transportation, State of New Hampshire, hereinafter referred to as the DEPARTMENT, proposes to rehabilitate the Red List bridge (Br. No. 239/152) carrying NH 49 over Mad River in the Town of Thornton.

The DEPARTMENT requires professional engineering consulting services for the preparation of environmental documents, bridge plans, roadway plans, other project plans as needed to progress through the permitting and public hearing process, final contract documents, and construction support services for this project. These services are outlined in the CONSULTANTS Scope of Work and Fee Proposal dated September 06, 2019, which is hereby adopted by reference and considered to be part of this AGREEMENT.

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

ARTICLE I

ARTICLE I - DESCRIPTION OF PROFESSIONAL SERVICES TO BE RENDERED

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

A. LOCATION AND DESCRIPTION OF PROJECT

This project involves rehabilitation of the Red List bridge (Br. No. 239/152) carrying NH Route 49 over Mad River in the Town of Thornton. The 534' long bridge spans west to east over the Mad River in the White Mountain National Forest connecting Interstate 93 (I-93) with the Town of Waterville Valley. Constructed circa 1980, the bridge is a five-span continuous horizontally curved steel plate girder bridge with a reinforced concrete deck. It has a curb-to-curb width of 31'-3" and an out-to-out width of 39'-6". The deck carries two lanes of traffic and one sidewalk for the Tier 3 regional corridor with an AADT of 1,900 vehicles and 4 percent trucks. The bridge is on the State's Red List and is scheduled to advertise January 2022. All plans, calculations, etc. shall be submitted using English Units.

B. SCOPE OF WORK (GENERAL)

The purpose of this project is: 1) Part "A", to study and prepare preliminary engineering plans suitable for a Public Information Meeting(s), Design Public Hearing (if needed, not anticipated), and completion of NEPA documentation; and; 2) Part "B", to prepare final plans, specifications and estimates for the bridge rehabilitation and associated roadway improvement contract. Part "B" is included in this scope of work.

The rehabilitated structure is anticipated to accommodate a minimum of 2-lanes of traffic (one in each direction) with appropriate shoulders. No change in lane capacity is anticipated with this effort.

The following general tasks are anticipated:

- Replacement of existing bridge deck including expansion joints and bridge rail
- Replacement of membrane and pavement
- Scour protection evaluation
- Traffic control design
- Public Outreach and Public Involvement
- Review condition of existing bridge and approaches
- Provide final bridge load rating for the bridge deck only, including NHDOT Bridge Rating Form 4
- Construction support services
- Environmental efforts for documentation including cultural resource investigations and permitting, to satisfy Federal and State requirements

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C. SCOPE OF WORK (PRELIMINARY ENGINEERING)

The CONSULTANT shall be responsible for developing engineered alternatives through an iterative process of design and review involving the DEPARTMENT, STATE and Federal environmental resource agencies, regional planning commissions, the local community, and the public. The work requires the development and refinement of engineering plans and technical documentation in accordance with the following criteria and involving the following work efforts:

1. Engineering Criteria

The CONSULTANT shall follow appropriate engineering criteria based on the latest AASHTO Policy on Geometric Design of Highways and Streets, AASHTO LRFD Bridge Design Specifications, NHDOT Highway Design Manual, and NHDOT Bridge Design Manual, as amended. Engineering shall take into account the functional classification of the roadways being addressed; volumes of traffic; methods of construction; erosion control; traffic control; cost; right-of-way needs and impacts to private property; and environmental constraints and the need to avoid or minimize impacts to environmental resources.

2. Design Site Reviews

The CONSULTANT to supplement available data, and to become familiar with the bridge and NH Route 49 as well as the adjoining roadway network anticipated to be affected shall perform on-site field reconnaissance of existing conditions within the study area. These field investigations shall be used to evaluate the feasibility of proposed improvements.

3. Technical Reports

The CONSULTANT shall prepare Technical Reports to address engineering issues that, to varying degrees, will be incorporated into the Draft Environmental document (Categorical Exclusion anticipated) serving as the major milestones during the various phases of the study process. Technical support and writing shall be required to address the engineering aspects of the study as required to supplement and complete environmental documentation. In addition, an Engineering Report explaining in summary fashion all pertinent issues, recommendations and decisions relative to the design as proposed shall be required.

4. Public Participation

The study shall require that the CONSULTANT be available to supplement the public participation process, in accordance with the DEPARTMENT'S Public Involvement Process for New Hampshire Transportation Improvement Projects. The CONSULTANT shall prepare presentation graphics, handouts and support displays, and be available to make presentations.

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Coordination may be required between the DEPARTMENT, and the Town of Thornton. The CONSULTANT shall be prepared to support such efforts as required. Responsibilities of the CONSULTANT team shall include attendance of up to 3 meetings when asked, preparation of minutes reflecting meeting commitments and preparation of illustrative plans and exhibits for the meetings, as directed by the DEPARTMENT.

D. SCOPE OF WORK (GEOTECHNICAL) (not anticipated; outside the CONSULTANT'S Scope of Work)

The DEPARTMENT anticipates completing the full geotechnical program required for the project. In support of the DEPARTMENT's geotechnical program, the CONSULTANT shall provide engineering to include preliminary and final subsurface exploration plan development and siting of the subsurface explorations by providing the station(s), offset(s) and associated GPS coordinate(s) for proposed or actual subsurface exploration locations for all bridge structures, as well as highway design elements to include but not limited to water quality BMP's, roadways, retaining walls box culverts, etc. No geotechnical work by the CONSULTANT is anticipated.

E. SCOPE OF WORK (ENVIRONMENTAL)

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.

The design of the permanent erosion and sedimentation control and water-quality features shall be the responsibility of the CONSULTANT (not anticipated; outside the CONSULTANT'S Scope of Work). The development of the Temporary Erosion Control and Stormwater Pollution Prevention Plan (SWPPP) (a permitting requirement during construction of the project) shall not be the responsibility of the CONSULTANT. However, recommended controls shall be addressed during final design to the extent that appropriate items, quantities, and an appropriate layout are developed for bidding purposes. Conceptual erosion and sedimentation control and water-quality plans shall be part of the Preliminary Plans - Roadway submission (not anticipated; outside the CONSULTANT'S Scope of Work). It is not anticipated at this time that the CONSULTANT shall furnish pre and post development design calculations with Q2, Q10, Q25, Q50 flows and water quality volumes, as appropriate. Site locations for BMP's, estimated areas and design elevations shall be proposed in sufficient detail to complete geotechnical investigations of each site.

In addition, the CONSULTANT shall be responsible for the following:

- Final estimates of impacts to flood storage and mitigation recommendations as may be required (not anticipated; outside the CONSULTANT'S Scope of Work).

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- Coordination of final design plan submissions and wetland impact accounting, as well as follow-up coordination on permit conditions. Coordination with NHDES will be the responsibility of the DEPARTMENT.
- Incorporation of water quality treatment measures (i.e. treatment basins and swales) into the overall project design if required (not anticipated; outside the CONSULTANT'S Scope of Work).

The CONSULTANT'S plans shall include all commitments made in the environmental documents to the extent practicable.

F. SCOPE OF WORK (FINAL DESIGN)

The scope of final design work proposed by this AGREEMENT includes:

1. The development of base plans drafted by the CONSULTANT using existing plans or updated ground survey provided by the DEPARTMENT, if such survey is determined to be necessary. The CONSULTANT shall develop plans at the scale of 1"=50', unless otherwise noted. The CONSULTANT shall be responsible for the incorporation of environmental resource mapping, utility information, right-of-way and property-line information, etc. All of these are provided by the DEPARTMENT or as noted elsewhere in this document.
2. The refinement of the alignment, grades and intersections of the proposed roadway(s) as shown on the preliminary designs.
3. The 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. The design and preparation of contract plans for construction of the roadway, structures, traffic control plans, construction phasing plans, layout and design of overhead sign structures (conceptual design of foundations for purposes of developing quantities with final design based on shop drawings provided by the Contractor) (not anticipated; outside the CONSULTANT'S Scope of Work), drainage facilities (including Best Management Practices for permanent erosion- and sedimentation-control and water-quality features) (not anticipated; outside the CONSULTANT'S Scope of Work), temporary and permanent traffic signals (including phasing, conduit, signal coordination, foundations, and other signalization issues) (permanent traffic signals not anticipated; outside the CONSULTANT'S Scope of Work), landscaping plans and appurtenances (not anticipated; outside the CONSULTANT'S Scope of Work) , 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. The incorporation of all permanent guide, warning and regulatory signs and permanent construction signing into the contract plans, including the quantity summary sheets. All signing on the plans shall

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be closely coordinated with the location of guardrail installations, slopes, utility locations (including street lights and underground utilities) and drainage-system locations to avoid conflicts and to determine which support system will be required to install the signs. The CONSULTANT will be responsible to identify all conflicts and to make necessary adjustments to highway signing.

6. The design and incorporation into the contract plans (including the quantity summary sheets) of all temporary guide and regulatory signs and permanent construction signing required for use with detours or construction staging. These signs and locations, including identifying the location of overhead sign structures, shall be shown on the Traffic Control Plans. The CONSULTANT shall be responsible for the design of all necessary overhead sign structure foundations (not anticipated; outside the CONSULTANT'S Scope of Work).
7. The design of all supporting members for utilities that traverse any bridge structure (not anticipated; outside the CONSULTANT'S Scope of Work).
8. The incorporation of utility relocations, as designed by others into the contract plans. Municipal utility relocations (e.g., sewer and/or water), as provided by the DEPARTMENT, shall be included, as necessary, into the contract plans, summary sheets and estimate. Municipal utility relocation items, as incorporated into the contract plans, shall be kept separate from the highway and/or bridge items in the estimates submitted. The unit item numbers and unit prices to be used for the utility relocations shall be provided by the DEPARTMENT (utility relocations not anticipated; outside the CONSULTANT'S Scope of Work).

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, construction materials, 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. Meeting notes and conference memos shall be the responsibility of the CONSULTANT.

The CONSULTANT shall submit for review, as requested, progress Portable Documents Format (PDF) files (black line) showing grades, cross-sections, special details and general design. PDF files shall be submitted upon request for soils studies, right-of-way use, evaluation of utility impacts, and other purposes. The DEPARTMENT will provide the existing right-of-way layout and property layout in the appropriate CAD/D format. The CONSULTANT shall incorporate the abstracting information into the base plans.

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All horizontal alignment notes including traverse-line notes furnished by the DEPARTMENT shall be computed by the CONSULTANT 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 Manual and Standard Plans for Road and Bridge Construction (2001), except as approved.

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

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 shall 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 of 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 in order 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 and design calculations. The CONSULTANT shall furnish a PDF file of the design calculations and when directed, all study plans, work plans, alternate studies, and estimates indexed in accordance with DEPARTMENT procedures.

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

G. SCOPE OF WORK (UTILITIES)

The utility coordination for this project will be performed by the DEPARTMENT. The CONSULTANT shall incorporate utility relocations, as designed by the individual utility owner, into the

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contract plans. Municipal utility relocations (e.g., sewer and/or water), as approved by the DEPARTMENT, shall be included, as necessary, into the contract plans, cross-sections, summary sheets and estimate. Non-participating municipal utility relocation items shall be kept separate from the highway and/or bridge items in the estimates submitted. The DEPARTMENT will provide the unit item numbers and unit prices to be used for the utility relocations.

H. MATERIAL FURNISHED BY THE DEPARTMENT OF TRANSPORTATION

The DEPARTMENT will furnish the following data 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, notes and note reductions in the format outlined in the DEPARTMENT'S CAD/D Procedures and Requirements. An electronic ground model will 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, along with reproducible sheets, 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 DEPARTMENT'S 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 and manipulation of this information

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(either in paper or electronic format) into the plans, in accordance with the DEPARTMENT'S CAD/D Procedures and Requirements.

- g. PDF files of any information outlined in Article I.F.1.a. thru f. above, both existing and proposed, when available, for verification by the CONSULTANT.
2. PDF files of the following information:
 - a. Any additional information (e.g., abstracting, utilities, etc., not available electronically) for the CONSULTANT to incorporate into the plans in accordance with the DEPARTMENT'S CAD/D Procedures and Requirements.
 - b. Available critical cross-sections 100 feet left and right of the existing baseline or within the current limits of ground data. The CONSULTANT shall be responsible for any remaining coverage necessary.
3. Reproducible sheets of roadway typical cross-sections and other available detail sheets for inclusion in the contract plans.
4. PDF files of the project details and profiles of existing ground at the survey line at a scale of 1" = 50'.
5. PDF files and data-exchange files of existing conditions not previously provided to the CONSULTANT. Reduction and incorporation of this material shall be the responsibility of the CONSULTANT.
6. Right-of-way data, property lines and parcel owners on PDF files of English-scale base plans provided by the CONSULTANT, which shall then be digitized and incorporated by the CONSULTANT into the plans.
7. All required permits. The CONSULTANT shall be responsible for plans and computations for impacted areas. These plans shall provide all necessary data, area hatching (according to DEPARTMENT standards) and detail so that these plans can be forwarded to the respective regulatory agencies as appropriate attachments for the permit applications.
8. Necessary traffic data and count.
9. Proposal for bidding and Standard Specifications for Road and Bridge Construction, Standard Plans for Road and Bridge Construction, plus supplemental specifications and special provisions that the DEPARTMENT currently has.
10. Geotechnical investigations and recommendations.
11. The location of all existing utilities through direct contact with the various utility companies.

Following the determination by the CONSULTANT of all unavoidable conflicts between existing utilities and the proposed construction, the DEPARTMENT will coordinate the necessary relocation of the conflicting utilities. The CONSULTANT shall be prepared to furnish CAD/D files in the current DEPARTMENT format to the DEPARTMENT for use in assisting the utilities' design.

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12. 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 Plans as it relates to complications with concurrent work, utilities and closures. The CONSULTANT shall complete the final design and the associated quantity calculations.
13. Conceptual design and layout of highway lighting (temporary and permanent) if deemed necessary. The CONSULTANT shall be responsible for incorporating the design and layout into the project documents and for recommending adjustments required to avoid conflicts (highway lighting not anticipated; outside the CONSULTANT'S Scope of Work).
14. The design of all permanent guide, warning and regulatory signs, including, but not limited to, the layout, sign size, text, item numbers, item descriptions, approximate location and quantities in the DEPARTMENT'S current format. Also, the DEPARTMENT will furnish a list of permanent construction signs and warning devices reflecting the general construction. The CONSULTANT shall be responsible for the incorporation of these signs into the contract plan(s) (including the quantity summary sheets) and the final design of overhead-sign structures.
15. The pavement-marking description, layout, item numbers and item descriptions will be provided to the CONSULTANT for inclusion into the plan set(s). The CONSULTANT shall be responsible for providing the DEPARTMENT with PDF files and, possibly, electronic CAD/D files, in the DEPARTMENT'S current format, of the pavement layout for the development of the pavement markings. The CONSULTANT shall be responsible for quantities and the development of appropriate summary tables within the plan sets.
16. Sketches, layouts and items for landscaping within the project. The CONSULTANT shall be responsible for incorporating this material into the plans and project documents.
17. 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 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 shall not be responsible for any training in their use.

I. WORK SCHEDULE AND PROGRESS REPORTS

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

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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 report progress to the DEPARTMENT in conjunction with DEPARTMENT'S Standardized Invoicing process. Invoices shall be submitted for each month that there has been more than \$10,000 in cumulative billable work since the last invoice, or at least quarterly. For months with no progress or less than \$10,000 cumulative work since the last invoice, invoices or a status report briefly describing the reasons for little or no progress shall be submitted.

J. 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 recommendations. All issues shall be noted as to whether the CONSULTANT feels that the issue is within the scope of work described in Article I. Meetings between the CONSULTANT and the DEPARTMENT shall be held prior to submissions to discuss design issues and recommendations.

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 performed 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 final right-of-way plans shall be submitted as PDF files.

In addition to the final 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, and 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 shall be submitted 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

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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 PDF files 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:

a. Rehabilitation (TSL (Type-Span-Location)) Study

Based on a complete review of the material furnished by the DEPARTMENT and developed and/or supplemented by the CONSULTANT, particularly in regard to the proposed design criteria, predicted traffic, preliminary soil data, expected Best Management Practices for erosion- and sedimentation-control and water-quality issues, conceptual traffic control and topography of the project area, the CONSULTANT shall prepare and submit to the DEPARTMENT PDF files 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 areas) 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, typically, geotechnical information is not available at this time and, therefore, this submission may need to be recut and reordered for subsequent submissions when soils/ledge information is made available. Plans addressing significant modifications to private parking areas and accesses shall be developed and used to coordinate with property owners early in the process.
- 3) Proposed intersection plans, including proposed lane use, with traffic assignments 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 for the project in the final design. The location and lane use of 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 and conceptual location of overhead-sign structures.
- 6) Conceptual Best Management Practices for erosion and sedimentation control and water-quality issues shall be shown with approximated flows. A presentation and narrative will be required to explain the concept for approval (Best Management Practices for erosion

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and sediment control and water quality issues is not anticipated; outside the CONSULTANT'S Scope of Work).

- 7) Roll plans shall show where match lines are anticipated for future cut sheets.
- 8) Preliminary typical sections with top-line template.
- 9) Proposed limits and recommendations for letting the construction under separate contracts, including cost estimates, areas of overlap, maintenance of traffic, drainage, etc.
- 10) Proposed right-of-way layout with bounds (Not anticipated; outside the CONSULTANT'S Scope of Work).

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) (Not anticipated, outside the CONSULTANT'S Scope of Work.
- 3) Water-quality treatment (Not anticipated; outside the CONSULTANT'S Scope of Work.
- 4) Mitigation areas and wetland impacts.
- 5) Earthwork balances and availability.
- 6) Potential closed drainage and underdrain outlets, and cover over drainage structures.
- 7) Right-of-way involvement.
- 8) Potential conflicts with major utilities.
- 9) Proposed present and future signal interconnect and coordination.
- 10) Separate construction contracts.

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, and the coordination with the design of bridges or other structures. This shall include profiles and cross-sections, particularly where clearance and setbacks may be issues.

The CONSULTANT shall indicate on the plans all traffic assignments at intersections together with the AM and PM and Saturday 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.

Estimates for this submission 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.

For development of the right-of-way lines, sight-distance review and the assessment of environmental impacts, it shall be necessary that all templates be plotted to develop slope

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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 need to have roundings shown at this submission. Guardrail calculations shall also be submitted.

b. Slope and Drainage Plans – Roadway (not required as a separate set; part of PPS&E Submission)

The Slope and Drainage Plans submission shall consist of PDF files showing slope lines, drainage-system details and drainage features, and proposed right-of-way lines, including drainage, slope and/or construction easements. The 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 (Not anticipated, outside the CONSULTANT'S Scope of Work. 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. Drainage-computation book shall be submitted as PDF files 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 (Not anticipated, outside the CONSULTANT'S Scope of Work. 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.

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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, areas of fill or dredged volumes in the temporary and permanent conditions for each construction contract and the final build-out for this project.

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c. Utility Plans (not anticipated; outside the CONSULTANT'S Scope of Work)

Following submission and review of the Slope and Drainage submission, the CONSULTANT shall incorporate DEPARTMENT comments into the design layout and assemble the plans into a cut-sheet format. The CONSULTANT shall then furnish PDF files front sheet, plans, profiles and cross-sections and a list of revised utility conflicts for use by the Design Services Section. The CONSULTANT shall also submit separate electronic files of this information, in a format acceptable to the DEPARTMENT, in conformance with the DEPARTMENT'S CAD/D Procedures and Requirements. 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, erosion- and sedimentation-control features, other structures, right-of-way lines (proposed permanent and temporary, and existing), curbing, pavement layout, sign structures, 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 lighting and signal 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 and the Slope and Drainage 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 will not be given to the CONSULTANT for this submission by the DEPARTMENT. PDF files of this plan set shall 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.

d. Preliminary PS&E - Roadway

The Preliminary PS&E submission shall consist of PDF files of preliminary contract drawings, and a Preliminary PS&E estimate of quantities and costs. 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. Quantity Summary sheets shall be submitted. All item summary boxes for drainage, clearing-and-grubbing, earthwork, 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. Item summary boxes of

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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 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. An electronic copy of the spreadsheet shall be submitted for each estimate in a format furnished by the DEPARTMENT. Roadway items shall be kept separate from bridge items. PDF calculations shall be furnished with the estimate. The plans shall reflect all comments from the Slope and Drainage Plans submission and issues that appear during final design. PDF of the drainage-computations book (as revised, based on Slope and Drainage comments) including temporary drainage computations for each contract shall be submitted with the Preliminary PS&E submission.

e. PS&E - Roadway (not required; outside the CONSULTANT'S Scope of Work)

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 PDF files of construction plans, the revised quantities book, and a PS&E estimate.

f. Contract Plans (Final Paper) and Consultant Documents

For each construction contract, upon approval of the foregoing in writing by the DEPARTMENT, the CONSULTANT shall make the final submission of contract plans, and a final PS&E estimate of costs. These final contract plans and documents shall reflect all comments resulting from the Preliminary 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 shall be submitted as PDF files. Also, all CONSULTANT backup documents shall be resubmitted to reflect the final PS&E comments and final contract-plan conditions. The CONSULTANT shall also submit PDF of the final Drainage Calculations as well as the final Quantities.

The final contract plans shall include:

- (1) A front sheet.
- (2) Typical sections of improvement.
- (3) Summary-of-quantities sheets.
- (4) Plan and profile sheets.

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(5) Detail sheets and/or special sheets required.

(6) Cross-section sheets.

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" 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 the bridge deck only 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:

- Rehabilitation (TSL (Type-Span-Location)) Study
- Boring Layout (not required, outside the CONSULTANT'S Scope of Work)
- Preliminary Plans (30% complete)
- Preliminary PS&E Plans (80% complete)
- PS&E Plans (95% complete) (not required, outside the CONSULTANT'S Scope of Work)
- Contract Plans (Final Paper)

a. Rehabilitation (TSL (Type-Span-Location)) Study

The alignment and profile developed during the Rehabilitation (TSL) Study will closely reproduce the existing alignment and profile and will, after approval by the DEPARTMENT, serve as a base for determining the types of bridge rehabilitation that may be utilized and the arrangement of the bridge rehabilitation 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.

Rehabilitation (TSL) study plans shall be prepared for the bridge rehabilitation 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

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the superstructure, materials of construction, beam spacing and locations, and dimensions of pavement; curbs, etc.

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 (not required; outside the CONSULTANT'S Scope of Work)

Following the review and acceptance of the Rehabilitation (TSL) Study by the DEPARTMENT, a boring layout plan shall be prepared for each bridge, the layout being based on the approved Rehabilitation (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 the bridge rehabilitation shall be prepared following acceptance by the DEPARTMENT of the Rehabilitation (TSL) Study.

The preliminary structural designs completed as part of the Rehabilitation (TSL) Study phase shall be refined to incorporate the review comments and minor changes in profile and/or alignment. 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, , sub- and superstructure layout, slope limits, and major topographical items.

The plan and elevation sheets developed in the Rehabilitation (TSL) Study 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. These items shall become part of the final PS&E plans.

Preliminary Plans, estimated quantities and construction costs shall be submitted as PDF files 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.

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

Estimates of quantities shall be prepared for all materials of construction and shall be tabulated on the plans and summarized for the bridge rehabilitation and the reinforcing-bar schedules shall be completed.

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

e. PS&E – Bridge (not required; outside the CONSULTANT'S Scope of Work)

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 (Final Paper)

Comments resulting from the DEPARTMENT's review of the Preliminary PS&E submission shall be incorporated into the design and contract plans.

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

3. Right-of-Way Plans (not required; outside the CONSULTANT'S Scope of Work)

Right-of-way plans shall consist of a separate set of plans for the purpose of negotiating, defining and recording the required right-of-way for the project.

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, parcel numbers, property owners' names and access points granted
- c. Summary sheets
- d. Purchase plan sheets showing all impacts (temporary or permanent)
- e. Registry Plans

In order 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

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plans shall be in English units. The CONSULTANT shall be prepared to provide working (progress) right-of-way plans (front sheet, summary sheets, plan sheets) concurrent with the Slope and Drainage Plans submission for each roadway contract, if 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 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, a PDF file will be required for use by the DEPARTMENT'S Bureau of Right-of-Way. The CONSULTANT shall be prepared to make revisions to the final right-of-way 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 PDF files of 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) containing the parcel(s) in question. The working (progress) print(s) are intended to be 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.

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K. SCOPE OF WORK (CONSTRUCTION SUPPORT SERVICES)

If a contract for construction of the project, or part of it, is entered into within two 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:

1. Construction

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

- a. At the CONSULTANT'S sole expense, correct and resolve negligent errors and/or omissions within the contract plans and specifications prepared by CONSULTANT found during construction.
- b. 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 in order to permit the proper completion of the project. This work effort, if required, will be viewed as additional services, subject to an adjustment in the fee.

2. Shop Drawings

The CONSULTANT shall:

- a. Review, check and approve all working drawings prepared by others including the 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.

L. DATE OF COMPLETION

In accordance with the Governor and Council Resolution authorizing this AGREEMENT, the date of completion for the professional design services rendered under this AGREEMENT is **December 31, 2022**. Completion of construction support services shall be in accordance with Article I-I - Construction Support Services.

ARTICLE II

ARTICLE II - COST PLUS FIXED FEE COMPENSATION OF CONSULTANT

A. GENERAL FEE

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

- 1) Actual salaries* approved by the DEPARTMENT paid to technical and other employees by the CONSULTANT, including salaries to principals, for the time such employees are directly utilized on work necessary to fulfill the terms of this AGREEMENT.

* In accordance with DEPARTMENT policy, the maximum direct-labor rate allowed for all positions under this AGREEMENT, including subconsultants, shall be \$60.00 per hour unless a waiver to the salary cap has been specifically approved for specialty services. A waived rate shall remain fixed at that rate for the life of the AGREEMENT unless a subsequent waiver is requested and approved.

An overtime premium of one and one half times the direct labor rate for non-exempt employees working beyond the standard 40 hours per workweek may be allowed for special circumstances when approved by the DEPARTMENT in writing in advance. The overhead portion of non-exempt employees' salary rates shall not be adjusted. Engineers are not eligible for overtime premium rates.

Direct salary costs are estimated at: \$71,107.00

- 2) Overhead costs applicable to the direct salary costs. The audited indirect cost rate, as submitted to and approved by the DEPARTMENT, will be applied to the direct salary costs. The CONSULTANT'S audited indirect cost rate for fiscal year ending 2018, which expires June 30, 2020, 122.56%, shall be used for invoicing for the life of the AGREEMENT.

Overhead costs are estimated at: \$87,148.74

- 3) A fixed fee amount based on the estimated risk to be borne by the CONSULTANT [maximum 10.00% of Labor Costs (including overhead costs)] for profit and non-reimbursed costs.

The fixed fee is: \$15,825.57

- 4) Reimbursement for direct expenses, including, but not limited to, subconsultants with a subcontract value of less than \$200,000, printing, reproductions and travel not included in normal overhead expenses. The reimbursable costs for mileage and for per diem (lodging and meals) shall be that allowed by the CONSULTANT'S established policy but shall not exceed that allowed in the Federal Acquisition Regulations (Subpart 31.205-46) and in the Federal Travel Regulation. Mileage and per diem costs shall be subject to approval by the DEPARTMENT. Subconsultants with a subcontract value of less than \$200,000 shall be invoiced as direct

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expenses and do not require individual invoices, unless the subcontract is more than 25% of the contract total.

Direct expenses are estimated at: \$1,330.69

5) Reimbursement for actual cost of subconsultants is estimated as follows:

Sebago Technics \$38,000.00

Normandeau Associates \$31,550.00

Headwaters Hydrology \$29,650.00

Diana's CADD \$28,288.00

AGREEMENT NOT-TO-EXCEED TOTAL \$302,900.00

The amount payable under categories 1), 2), 4), and 5) may be reallocated within the not-to-exceed total upon mutual agreement of the DEPARTMENT and the CONSULTANT. Reallocations shall be properly documented for Final Audit purposes, but do not require a formal amendment.

The total amount to be paid under this AGREEMENT shall not exceed \$302,900.00, the sum of the amounts shown in Article II, Section A (which amount is based on the CONSULTANT'S fee and manhour estimates of September 6, 2019), except by agreement of all parties made after supplemental negotiations and documented by a formal amendment to the AGREEMENT. Should circumstances beyond the control of the CONSULTANT require extension of the time of completion more than one (1) year, the general fee may be renegotiated and documented by a formal amendment to the AGREEMENT; however, the fixed fee (b) shall not change for reasons of work duration alone. The fixed fee (b) shall only change when there has been a significant increase or decrease in the scope of work outlined in this AGREEMENT.

B. LIMITATION OF COSTS

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

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C. PAYMENTS

Monthly payments on account of services rendered under this AGREEMENT may be made upon submission of invoices by the CONSULTANT to the DEPARTMENT. The CONSULTANT shall follow the DEPARTMENT'S Standardized Invoicing format. The fixed fee shall be invoiced during the billing period based upon the overall percent complete calculated within the approved progress report found in the DEPARTMENT'S Standardized Invoicing. Invoices shall be submitted for each month that there has been more than \$10,000 in cumulative billable work since the last invoice, or at least quarterly.

Actual salaries paid and the indirect cost rate shown in Article II, Section A, shall be used until such time as true costs of salary burden and overhead are fixed by Final Audit. At that time, payments shall be adjusted to agree with the indirect cost rates as determined by Final Audit for the period in which the work was performed, as approved by the DEPARTMENT.

D. ANNUAL INDIRECT COST RATE SUBMISSIONS

The CONSULTANT and all subconsultants with a subcontract value of \$200,000 or greater shall submit their audited indirect cost rate and related documents annually for the life of this AGREEMENT as follows:

To comply with the Federal Acquisition Requisitions (FAR), the CONSULTANT'S Indirect Cost Rate Audit must meet the following requirements:

- Be conducted by an independent Certified Public Accountant (CPA), a Federal government agency, or another state transportation agency.
- Be conducted in accordance with Generally Accepted Government Auditing Standards (GAGAS) issued by the U.S. Government Accountability Office (GAO) and with the cost principles and procedures set forth in Part 31 of the FAR.
- Follow the guidance of the most recent American Association of State Highway Transportation Officials Uniform Audit and Accounting Guide for Audits of Architectural and Engineering Consulting Firms (AASHTO Audit Guide).

In addition to the Indirect Cost Rate Audit, CONSULTANTS shall submit the following documentation:

- AASHTO Internal Control Questionnaire (ICQ) for Consulting Engineers form with the required attachments.
- Certification of Final Indirect Costs as required pursuant to 23 CFR 172.11 and FHWA Order 4470.1A.
- Complete copy of the CONSULTANT'S annual audited financial statements.
- Analysis of reasonableness of executive compensation as outlined in the AASHTO Audit Guide.
- Cognizant letter, if available.

ARTICLE II

- A listing of all contracts, with dollar amounts, the CONSULTANT has currently with the DEPARTMENT as a prime consultant or subconsultant.

Annual indirect cost rate submissions are due within 6 months of the CONSULTANT'S fiscal year end and shall be submitted to the DEPARTMENT'S Internal Audit Office electronically to DOT-InternalAudit@dot.nh.gov or in writing.

E. RECORDS, REPORTS, AND FINAL AUDIT

The CONSULTANT shall maintain adequate cost records for all work performed under this AGREEMENT. All records and other evidence pertaining to cost incurred shall be made available at all reasonable times during the AGREEMENT period and for three (3) years from the date of final expenditure report 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 Regulations (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 Final Audit, to review all items charged 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 Article II Section A.1 through A.5 are to be determined by actual records kept during the term of the AGREEMENT, which are subject to Final 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 not-to-exceed amount specified in Article II, Section A. All Subconsultant costs may also be subject to Final 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, if necessary.

B. CONTRACT PROPOSALS

After the CONSULTANT has furnished to the DEPARTMENT contract drawings, special provisions, specifications, and 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 75 York Street, Portland, Maine.

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

ARTICLE IV

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,

ARTICLE IV

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 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.

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 wetland evaluations, mapping, noise studies, and air-quality studies, the minimum limits of their professional liability (errors and omissions) insurance coverage shall be not less than \$1,500,000 in the aggregate. If coverage is claims made, the period to report claims shall extend for not less than three

ARTICLE IV

years from the date of substantial completion of the construction contract. No retention (deductible) shall be more than \$25,000. 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.

ARTICLE IV

J. CONTRACTUAL RELATIONS

1. Independent Contractor

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

2. Claims and Indemnification

a. Non-Professional Liability Indemnification

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

b. Professional Liability Indemnification

The CONSULTANT agrees to 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

ARTICLE IV

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 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.

ARTICLE IV

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

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

COMPLIANCE

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

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

ARTICLE IV

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

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

N. DISADVANTAGED BUSINESS ENTERPRISE POLICY REQUIREMENTS

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

ARTICLE IV

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

O. DOCUMENTATION

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

P. CLEAN AIR AND WATER ACTS

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

Attachment 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.

Becker Structural Engineers

(Company)

By: _____

President

(Title)

Date: _____

11/22/19

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

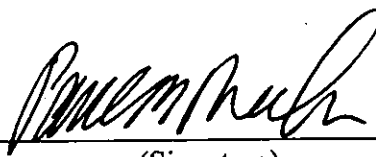
**CONSULTANT DISCLOSURE STATEMENT
FOR PREPARATION OF
ENVIRONMENTAL EVALUATIONS**

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.

11/22/19

(Date)



(Signature)

Attachment 3

CERTIFICATION OF CONSULTANT/SUBCONSULTANT

I hereby certify that I am the President and duly-authorized representative of the firm of Becker Structural Engineers, 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:

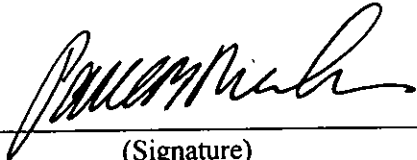
I/WE do also, under penalty of perjury under the laws of the United States, certify that, except as noted below, the company or any person associated therewith in the capacity of (owner, partner, director, officer, principal investigator, project director, manager, auditor, or any position involving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

11/22/19
(Date)


(Signature)

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):

December 5, 2019
(Date)


(Signature)

Attachment 5

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

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

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

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

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

Attachment 9

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

Consultant

WITNESS TO THE CONSULTANT

By: [Signature]

Associate

Dated: 11/22/19

CONSULTANT

By: [Signature]

President

(TITLE)

Dated: 11/22/19

Department of Transportation

WITNESS TO THE STATE OF NEW HAMPSHIRE

By: [Signature]

Dated: December 5, 2019

THE STATE OF NEW HAMPSHIRE

By: [Signature]

Director of Project Development

for DOT COMMISSIONER

Dated: December 5, 2019

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: Jan. 16, 2020

By: [Signature]
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

State of New Hampshire

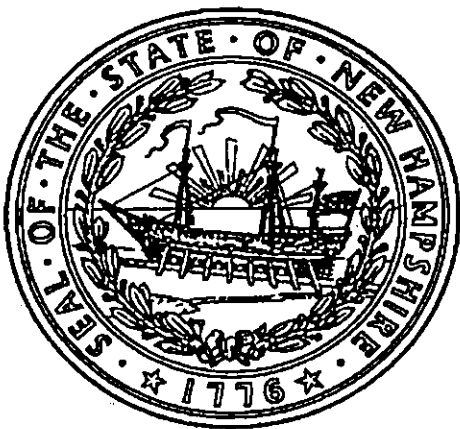
Department of State

CERTIFICATE

I, William M. Gardner, Secretary of State of the State of New Hampshire, do hereby certify that BECKER STRUCTURAL ENGINEERS, INC. is a Maine Profit Corporation registered to transact business in New Hampshire on April 23, 2008. 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: 595362

Certificate Number: 0004619947



IN TESTIMONY WHEREOF,

I hereto set my hand and cause to be affixed
the Seal of the State of New Hampshire,
this 19th day of November A.D. 2019.

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

William M. Gardner
Secretary of State



BECKER
STRUCTURAL ENGINEERS

CERTIFICATE OF VOTE

I, Todd M. Neal hereby certify that I am duly elected Vice President of Becker Structural Engineers. I hereby certify the following is a true copy of a vote taken at a meeting of the Board of Directors of the Corporation, duly called and held on January 10, 2019, at which a quorum of the Board was present and voting.

VOTED: That Paul B. Becker is duly authorized to enter into a specific contract namely Thornton, 40613, Preliminary and Final Design. With State of New Hampshire, Department of Transportation, and further authorized to execute any documents which may in his judgement be desirable or necessary to effect this purpose of this vote.

I hereby certify that said vote has not been amended or repealed and remains in full force and effect as of November 22, 2019, and that Paul B. Becker is duly elected President of this Corporation.

DATED: November 22, 2019

ATTEST: 

Todd M. Neal, Vice President

ACORD

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

12/02/2019

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 any rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Greyling Ins. Brokerage/EPIC 3780 Mansell Road, Suite 370 Alpharetta, GA 30022	CONTACT NAME: Jerry Noyola	
	PHONE (A/C, No, Ext): 770-552-4225	FAX (A/C, No): 866-550-4082
	E-MAIL ADDRESS: jerry.noyola@greyling.com	
INSURED Becker Structural Engineers, Inc. 75 York Street Portland, ME 04101	INSURER(S) AFFORDING COVERAGE	
	INSURER A: National Union Fire Ins. Co.	NAIC # 19445
	INSURER B: New Hampshire Ins. Co.	23841
	INSURER C: Syndicate 2623/623 at Lloyd's	37540
	INSURER D:	
	INSURER E:	
	INSURER F:	

COVERAGES

CERTIFICATE NUMBER: 19-20

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 SUBR INSR 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 GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input checked="" type="checkbox"/> LOC OTHER:		5268227	04/01/2019	04/01/2020	EACH OCCURRENCE \$1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$500,000 MED EXP (Any one person) \$25,000 PERSONAL & ADV INJURY \$1,000,000 GENERAL AGGREGATE \$2,000,000 PRODUCTS - COM/POP AGG \$2,000,000 \$
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$		4489721	04/01/2019	04/01/2020	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$ EACH OCCURRENCE \$ AGGREGATE \$ \$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input checked="" type="checkbox"/> N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A	015893793 (AOS) 015893794 (CA)	04/01/2019 04/01/2019	04/01/2020 04/01/2020	<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
C	Professional Liab		B1636N191750	06/20/2019	06/20/2020	Per Claim \$2,000,000 Aggregate \$2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: NHDOT Project: Thornton, 40613, Preliminary and Final Design.

The State of New Hampshire is named as an Additional Insured with respects to General Liability where required by written contract.

Professional Liability Deductible: 75,000.

Should any of the above described policies be cancelled by the issuing insurer before the expiration date

(See Attached Descriptions)

CERTIFICATE HOLDER

CANCELLATION

State of New Hampshire
Department of Transportation
7 Hazen Drive
Concord, NH 03301

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

D.H. Gilling

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DESCRIPTIONS (Continued from Page 1)

thereof, we will endeavor to provide 30 days' written notice (except 10 days for nonpayment of premium) to the Certificate Holder.