EXHIBIT “A”

CONSTRUCTION ENGINEERING AND INSPECTION

SCOPE OF SERVICES

FOR

DISTRICTWIDE CEI AND SUBSURFACE UTILITY LOCATE SERVICES

Financial Project ID(s):

220835-1-62-23 and Various

Federal Project No.:

N/A and TBD
SCOPE OF SERVICES
CONSTRUCTION ENGINEERING AND INSPECTION

1.0 PURPOSE:

This scope of services describes and defines the services which are required for construction engineering and inspection (CEI), materials sampling and testing, contract administration and claims analysis for projects assigned in the District Three area.

2.0 SCOPE:

The Consultant shall be responsible for providing services as defined in this Scope of Services, the referenced Department manuals and procedures.

The project for which the services are required is:

Financial Project IDs: Various
Descriptions: District-Wide CEI and Subsurface Utility Locate Services

The Consultant shall provide personnel meeting the requirements set forth in this Agreement in appropriate numbers at the proper times to ensure that the responsibilities assigned under this Agreement are effectively carried out.

In order for the Consultant to schedule its activities, the Department will endeavor to provide the Consultant at least three (3) calendar days advance notice of the award date of each construction contract where Consultant Engineering Inspections Services are required. The Consultant shall maintain close coordination with the Department and each Contractor in order to minimize rescheduling of the Consultant’s activities due to construction delays or changes in scheduling of the Contractor’s activities.

The Consultant shall exercise their independent professional judgment in performing their obligations and responsibilities under this Agreement. Pursuant to Section 4.1.4 of the Construction Project Administration Manual (CPAM), the authority of the Consultant’s lead person, such as the Senior Project Engineer, and the Consultant’s Project Administrator shall be identical to the Department’s Resident Engineer and Project Administrator respectively and shall be interpreted as such.

Services provided by the Consultant shall comply with Department manuals, procedures, and memorandums in effect as of the date of execution of the Agreement unless otherwise directed in writing by the Department. Such Department manuals, procedures, and memorandums are found at the State Construction Office’s website.

3.0 BEGINNING AND LENGTH OF SERVICES:

Individual projects in the consultant contract will be assigned specific time restraints that will be met by the consultant. The consultant will submit a work schedule showing key phases which will establish the time restraints agreed upon at the time of fee approval. A time extension will be an exception to the specific restraints and will only occur if the delay is caused by the Department, not the consultant.
The Department's District Director of Operations shall furnish the consultant a letter of authorization specifying the work to be done and the fees to be paid for each project assigned under this agreement. No work shall be commenced by the consultant until receipt of a Letter of Authorization.

4.0 DEFINITIONS:

A. **District Secretary:** The Chief Executive Officer in each of the Department’s eight (8) Districts.

B. **District Director of Transportation Operations:** The Director of Construction, Maintenance, Traffic Operations, Materials, and Safety.

C. **District Construction Engineer:** The administrative head of the District’s Construction Offices.

D. **District Consultant CEI Manager:** The Department employee assigned to administer the Construction Engineering and Inspection Program in the District.

E. **District Final Estimates Manager:** The administrative head of the District Final Estimates Office.

F. **District Contract Compliance Manager:** The administrative head of the District Contract Compliance Office.

G. **Operations Engineer:** The Engineer assigned to a particular County or area to administer Construction and Maintenance Contracts for the Department.

H. **Resident Engineer:** The Engineer assigned to a particular County or area to administer Construction Contracts for the Department.

I. **Construction Project Manager:** The Department employee assigned to manage the Construction Engineering and Inspection Contract and represent the Department during the performance of the services covered under this Agreement.

J. **District Professional Services Administrator:** The Administrative Head of the Professional Services Office.

K. **Public Information Office:** The Department’s office assigned to manage the Public Information Program.

L. **Engineer of Record:** The Engineer noted on the Construction plans as the responsible person for the design and preparation of the plans.

M. **Consultant:** The Consulting firm under contract to the Department for administration of Construction Engineering and Inspection services.

N. **Agreement:** The Professional Services Agreement between the Department and the Consultant setting forth the obligations of the parties thereto, including but not limited to the performance of the work, furnishing of services, and the basis of payment.
O. **CEI Senior Project Engineer:** The Engineer assigned by the Consultant to be in charge of providing Construction Contract administration for one or more Construction Projects. This person may supervise other Consultant employees and act as the lead Engineer for the Consultant.

P. **CEI Project Administrator/Project Engineer:** The employee assigned by the Consultant to be in charge of providing Construction Contract administration services one or more Construction Projects.

Q. **CEI Resident Compliance Specialist:** The employee assigned by the Consultant to oversee project specific compliance functions.

R. **Contractor:** The individual, firm, or company contracting with the Department for performance of work or furnishing of materials.

S. **Construction Contract:** The written agreement between the Department and the Contractor setting forth the obligations of the parties thereto, including but not limited to the performance of the work, furnishing of labor and materials, and the basis of payment.

T. **Construction Training & Qualification Program (CTQP):** The Department program for training and qualifying technicians in Aggregates, Concrete, Earthwork, and Asphalt. The University of Florida Transportation Research Center (TRC) administers this program. Program information is available at CTQP website.

### 5.0 ITEMS TO BE FURNISHED BY THE DEPARTMENT TO CONSULTANT:

A. The Department, on as needed basis, will furnish the following Contract documents for each project. These documents may be provided in either paper or electronic format.

1. Construction Plans,
2. Special Provisions,
3. Copy of the Executed Construction Contract, and
4. Utility Agency’s Approved Material List (if applicable).

A. The Department will allow connection to the FDOT Network by the Consultant through either dialup communications, authorized Virtual Private Network (VPN) or approved leased lines. Appropriate approvals must be received from the Department prior to their use.

B. The Department will furnish and support the software packages for SiteManager.

C. Contract Documents for each assigned project will be furnished by the District Professional Services Administrator.

D. The Department will furnish to the Consultant an adequate supply of all sampling containers to be used in carrying out inspection services under this Agreement.
Some of these are, but not limited to: disposable type molds for casting concrete test cylinders, sample cartons, sample bags, and other expendable type testing supplies.

E. All test report forms, report forms, and all other forms necessary for project documentation will be furnished by the Department.

F. Field office space required to perform services authorized under this Agreement.

6.0 ITEMS FURNISHED BY THE CONSULTANT:

6.1 Department Documents:

All applicable Department documents referenced herein shall be a condition of this Agreement. All Department documents, directives, procedures, and standard forms are available through the Department’s Internet website. Most items can be purchased through the following address. All others can be acquired through the District Office or on-line at Department’s website.

Florida Department of Transportation
Maps and Publication Sales
605 Suwannee Street, MS 12
Tallahassee, Florida 32399-0450
Telephone No. (850) 414-4050

http://www.fdot.gov/construction/

6.2 Office Automation:

Provide all software and hardware necessary to efficiently and effectively carry out the responsibilities under this Agreement.

Provide each inspection staff with a laptop computer (or tablet) running SiteManager application through Citrix connection using a mobile broadband connection at the jobsite.

All computer coding shall be input by Consultant personnel using equipment furnished by them.

All informational, contractual and other business required for this project will be through a system of paperless electronic means. When the specifications require a written submission of documentation, such documents must be submitted electronically.

All documents requiring a signature must be executed electronically by both parties in accordance with Chapter 668, Florida Statutes, and have the same force and effect as a written signature. The Department will provide a web-based collaboration site to facilitate the electronic document exchange. All persons requiring access to the collaboration site shall be identified during the preconstruction conference. All persons that normally sign paper documents, and will be using the site, must acquire digital signature certificates.
Ownership and possession of computer equipment and related software, which is provided by the Consultant, shall remain at all times with the Consultant. The Consultant shall retain responsibility for risk of loss or damage to said equipment during performance of this Agreement. Field office equipment should be maintained and operational at all times.

Current technical specifications for office automation can be viewed at: http://www.fdot.gov/Construction/DesignBuild/ConsultantCEI/OfficeAutomation.shtm

6.3 **Vehicles:**

Vehicles will be equipped with appropriate safety equipment and must be able to effectively carry out requirements of this Agreement. Vehicles shall have the name and phone number of the consulting firm visibly displayed on both sides of the vehicle.

6.4 **Field Equipment:**

The Consultant shall supply survey, inspection and testing equipment, essential in order to carry out the work under this Agreement. Such equipment includes those non-consumable and non-expendable items, which are normally needed for a CEI project and are essential in order to carry out the work under this Agreement.

Hard hats shall have the name of the consulting firm visibly displayed.

Equipment described herein and expendable materials under this Agreement will remain the property of the Consultant and shall be removed at completion of the work.

The Consultant’s handling of nuclear density gauges shall be following their license.

The Consultant shall retain responsibility for risk of loss or damage to said equipment during performance of this Agreement. Field office equipment shall be maintained and in operational condition at all times.

6.5 **Licensing for Equipment Operations:**

The Consultant will be responsible for obtaining proper licenses for equipment and personnel operating equipment when licenses are required. The Consultant shall make the license and supporting documents available to the Department, for verification, upon request.

Radioactive Materials License for use of Surface Moisture Density Gauges shall be obtained through the State of Florida Department of Health.

7.0 **LIAISON RESPONSIBILITY OF THE CONSULTANT:**

The Consultant shall keep the Construction Project Manager informed of all significant activities, decisions, correspondence, reports, and other communications related to its responsibilities under this Agreement, and seek input from the Construction Project Manager in order for the Construction Project Manager to oversee the Consultant’s performance.
8.0 PERFORMANCE OF THE CONSULTANT:

During the term of this Agreement and all Supplemental Amendments thereof, the Department will review various phases of Consultant operations, such as construction inspection, materials sampling and testing, and administrative activities, to determine compliance with this Agreement. The Consultant shall cooperate and assist Department representatives in conducting the reviews. If deficiencies are indicated, the Consultant shall implement remedial action immediately. Department recommendations and Consultant responses/actions are to be properly documented by the Consultant. No additional compensation shall be allowed for remedial action taken by the Consultant to correct deficiencies. Remedial actions and required response times may include but are not necessarily limited to the following:

A. Further subdivide assigned inspection responsibilities, reassign inspection personnel, or assign additional inspection personnel, within one week of notification.

B. Immediately replace personnel whose performance has been determined by the Consultant and/or Department to be inadequate.

C. Immediately increase the frequency of monitoring and inspection activities in phases of work that are the Consultant’s responsibility.

D. Increase the scope and frequency of training of the Consultant personnel.

9.0 REQUIREMENTS OF THE CONSULTANT:

9.1 General:

It shall be the responsibility of the Consultant to administer, monitor, and inspect the Construction Contract such that the project is constructed in reasonable conformity with the plans, specifications, and special provisions for the Construction Contract.

The Consultant shall observe the Contractor’s work to determine the progress and quality of work identify discrepancies, report significant discrepancies to the Department, and direct the Contractor to correct such observed discrepancies.

Pursuant to Section 337.11(9)(a), Florida Statutes, the Consultant is hereby designated by the Secretary of the Department to negotiate and approve Supplemental Agreements within the thresholds established in the CPAM. However, the Consultant must seek input from the Construction Project Manager relating to all Supplemental Agreement requests. Supplemental Agreements must be determined to be in accordance with Florida law by the Department prior to approval by the Consultant. For any Supplemental Agreement which exceeds the thresholds, the Consultant shall prepare the Supplemental Agreement as a recommendation to the Department, which the Department may accept, modify or reject upon review. The Consultant shall consult with the Construction Project Manager.
Manager, as necessary and shall direct all issues, which exceed its delegated authority to the Construction Project Manager for Department action or direction.

The Consultant shall advise the Construction Project Manager of any significant omissions, substitutions, defects, and deficiencies noted in the work of the Contractor and the corrective action that has been directed to be performed by the Contractor.

9.2 **Survey Control:**

The Consultant shall check or establish the survey control baseline(s) along with sufficient baseline control points and bench marks at appropriate intervals along the project in order to: (1) make and record such measurements as are necessary to calculate and document quantities for pay items; (2) make and record pre-construction and final cross section surveys of the project site in those areas where earthwork (i.e., embankment, excavation, subsoil excavation, etc.) is part of the construction project; and (3) perform incidental engineering surveys.

Provide survey data in LandXML format.

Any questions or requests for “Waiver of Survey” should be directed to the District Final Estimates Manager.

9.3 **On-site Inspection:**

The Consultant shall monitor the Contractor’s on-site construction activities and inspect materials entering into the work in accordance with the plans, specifications, and special provisions for the Construction Contract to determine that the projects are constructed in reasonable conformity with such documents. The Consultant shall maintain detailed accurate records of the Contractor’s daily operations and of significant events that affect the work. The Department will monitor all off-site activities and fabrication unless otherwise stipulated by this Agreement.

Perform underwater bridge construction inspections of bridges with permanently submerged structural members in compliance with CPAM Section 10.6, Underwater Bridge Construction Inspection.

Consultant shall be responsible for monitoring and inspection of Contractor’s Work Zone traffic control plan and review of modifications to the Work Zone Traffic Control Plan, including alternate Work Zone Traffic Control Plan, in accordance with the Department’s procedures. Consultant employees performing such services shall be qualified in accordance with the Department’s procedure.

9.4 **Sampling and Testing:**

The Consultant shall perform sampling and testing of component materials and completed work in accordance with the Construction Contract documents. The minimum sampling frequencies set out in the Department’s Materials Sampling, Testing and Reporting Guide shall be met. In complying with the aforementioned guide, the Consultant shall provide daily surveillance of the Contractor’s Quality Control activities at the project site and perform the sampling and testing of
materials and completed work items that are normally done in the vicinity of the project for verification and acceptance.

The Department will perform inspection and sampling of materials and components at locations remote from the vicinity of the project and the Department will perform testing of materials normally done in a laboratory remote from the project site. Determine the acceptability of all materials and completed work items based on either test results or verification of a certification, certified mill analysis, DOT label, DOT stamp, etc.

The Department will monitor the effectiveness of the Consultant’s testing procedures through surveillance and obtaining and testing independent assurance testing.

Sampling, testing and laboratory methods shall be as required by the Department’s Standard Specifications, Supplemental Specifications or as modified by the special provisions of the Construction Contract.

Documentation reports on sampling and testing performed by the Consultant shall be submitted during the same week that the construction work is done.

The Consultant shall be responsible for transporting samples to be tested in a Department laboratory to the appropriate laboratory or appropriate local FDOT facility.

The Consultant will input verification testing information and data into the Department’s database using written instructions provided by the Department.

9.5 Engineering Services:

The Consultant shall coordinate the Construction Contract administration activities of all parties other than the Contractor involved in completing the construction project. Notwithstanding the above, the Consultant is not liable to the Department for failure of such parties to follow written direction issued by the Consultant.

Services include maintaining the required level of surveillance of Contractor activities, interpreting plans, specifications, and special provisions for the Construction Contract, maintaining complete, accurate records of all activities and events relating to the project, and properly documenting all significant project changes. The Consultant shall perform the following services:

(1) Attend a pre-service meeting for the Agreement in accordance with CPAM. Provide appropriate staff to attend and participate in the pre-service meeting. At the time of this meeting submit the FDOT Computer Security Access Request for use of FDOT Data Center Facilities and access to the Department’s computer systems to the Construction Project Manager for approval.

(2) Schedule and attend a Final Estimate informational meeting with the District Construction Final Estimates Office. The Consultant shall provide appropriate staff to attend and participate in this meeting.
(3) Schedule and attend a meeting with the District Contract Compliance Manager prior to the Pre-construction Conference. The Senior Project Engineer, Project Administrator and Resident Compliance Specialist shall attend this meeting.

In most cases, the above will take two separate meetings based on experience and knowledge of the particular firm.

(4) Schedule and attend a SiteManager/EDMS informational meeting with the District Construction Office. The Consultant shall provide appropriate staff to attend and participate in this meeting.

Provide personnel proficient in the use of computers and scanner operation to input construction documents into an EDMS. This will require familiarity with the documents and guidelines, posted on the Department’s website for EDMS. Duties will include scanning, attributing and retrieving documents that are to be archived electronically.

(5) Schedule and conduct a meeting with the District Construction Environmental Liaison prior to the Pre-construction conference and another meeting prior to project final acceptance. The purpose of these meetings is to discuss the required documentation, including as-builts, necessary for permit(s) compliance.

(6) Verify that the Contractor is conducting inspections, preparing reports and monitoring all storm water pollution prevention measures associated with the project. For each project that requires the use of the NPDES General Permit, provide at least one inspector who has successfully completed the “Florida Storm water, Erosion, and Sedimentation Control Training and Certification Program for Inspectors and Contractors”. The Consultant’s inspector will be familiar with the requirements set forth in the FEDERAL REGISTER, Vol. 57, No. 187, Friday, September 5, 1992, pages 4412 to 4435 “Final NPDES General Permits for Storm Water Discharges from Construction Sites” and the Department’s guidelines.

(7) Analyze problems that arise on a project and proposals submitted by the Contractor; work to resolve such issues, and process the necessary paperwork.

(8) Monitor, inspect and document utility relocation self-performed by the contractor for conformance with Utility Agency’s Standards and the Utility Agency’s Approved Materials List. Document utility construction progress to be performed by Utility Agencies. Facilitate coordination and communication between Utility Agency’s representatives, Department’s staff and Contractors executing the work. Identify potential utility conflicts and assist in the resolution of utility issues including Department and Local Government owned facilities.

Identify, review, and track progress of Joint Project Agreements, and/or other Department and utility agreements. Address work progress, track reimbursement activities, and address betterment and salvage determination.
Prepare all necessary documentation to support reimbursement activities and betterment and salvage determination.

(9) Produce reports, verify quantity calculations, field measure for payment purposes as needed to prevent delays in Contractor operations and to facilitate prompt processing of such information in order for the Department to make timely payment to the Contractor.

(10) Prepare and make presentations for meetings and hearings before the Dispute Review Boards relating to the projects covered by this Agreement.

(11) Monitor each Contractor and Subcontractor’s compliance with specifications and special provisions of the Construction Contract in regard to payment of predetermined wage rates in accordance with Department procedures.

(12) Provide a Project Manager who manages Consultant Construction Engineering and Inspection (CCEI) contracts and is in responsible charge of CCEI managed construction projects at all times. Visits assigned projects and monitors the CCEI to ensure construction project administration is in accordance with the contract documents, the Construction Project Administration manual (CPAM), department policies and procedures. Provides guidance to the CCEI on plan errors, field changes, extra work, contract interpretations and procedure interpretations. Reviews and provides guidance to the CCEI on construction supplemental agreements, work orders, time extensions and other contract changes. Acts as the liaison between the CCEI, the Design Project Manager (DPM) and the Engineer of Record (EOR).

(13) Provide a Resident Compliance Specialist for surveillance of the Contractor’s compliance with Construction Contract requirements. The Resident Compliance Specialist is responsible for reviewing, monitoring, evaluating and acting upon documentation required for Construction Contract compliance, and maintaining the appropriate files thereof. Typical areas of compliance responsibility include EEO Affirmative Actions for the prime contractor and subcontractor, DBE Affirmative Action, Contractor Formal Training, Payroll, and Subcontracts. The Resident Compliance Specialist must keep all related documents and correspondence accurate and up to date; attend all compliance reviews and furnish the complete project files for review; and assist the District Contract Compliance Manager as requested.

(14) Provide Community Outreach Services and be proactive in keeping the community aware of the current status and traffic impacts of the referenced project. With approval from the Department’s designee, prepare and disseminate information to the public, elected officials and the media of any upcoming events, which will affect traffic flow. Produce and distribute all publications (letters, flyers, brochures, videos and news releases) necessary for this contract. Prior to release, the Department’s designee will approve all responses, letters, news releases and the like. Approved materials to be
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distributed to the media will be done through the District Public Information Office. Provide timely, professional responses to project inquiries including emails, telephone calls, etc. If applicable, coordinate public information meetings, open houses, community meetings, groundbreakings, ribbon cuttings as directed by the Department’s representatives. If applicable, notify TeleAtlas of permanent roadway changes. Provide current and accurate information to the Department’s designee for inclusion on the District’s website and other social media platforms. All print, audio, and digital media developed under this contract shall be provided in original format and will become property of the Department.

(15) Prepare and submit to the Construction Project Manager monthly, a Construction Status Reporting System (CSRS) report, in a format to be provided by the Department.

(16) Video tape the pre-construction conditions throughout the project limits. Provide a digital photo log or video of project activities, with heavy emphasis on potential claim items/issues and on areas of real/potential public controversy.

(17) Provide a digital camera for photographic documentation of pre-construction state and of noteworthy incidents or events during construction.

These photographs will be filed and maintained on the Consultant’s computer using a digital photo management system.

Photographs shall be taken the day prior to the start of construction and continue as needed throughout the project. Photographs shall be taken the days of Conditional, Partial and Final Acceptance.

9.6 **Claims Review and Analysis**

The Consultant shall provide assistance with “Claims Review” for various District Wide projects. These services shall include, but not be limited to, the following:

- Review and evaluate construction related claims for validity and reasonableness;
- Perform a full field audit of records to determine documentation, procedures and testing methodology;
- When necessary make a full audit of the Contractor’s records;
- Review and analysis of plans and specifications;
- Review schedules using latest technologies to evaluate the effect of changes on the project schedule;
- Load schedules with manpower, equipment and material availability in order to analyze any loss of productivity, as well as, determine if lack of resources restrained the progress of the project;
- Prepare a financial data base model of the project including overhead costs and capital expenditures to demonstrate the total financial effect of occurrences;
9.7 **Construction Support**

1. Provide constructability review of plans and specifications necessary in construction packaging of contract bids.

2. Review and evaluate construction contract packages and recommend possible improvements to strengthen documents as a management tool during construction.

3. Review terms and conditions of special provisions and standard specifications and recommend additions to meet construction objectives.

4. Establish construction contract time for selected projects.

5. Review and recommend for approval/disapproval time extension/suspension submitted by the contractor.

6. Review construction schedules submitted by Contractors and recommend approval/disapproval to District Construction Engineer.

7. Review and recommend for approval/disapproval selected Maintenance of Traffic (MOT) plans.

8. Study the need for and recommend, advanced construction contracts for clearing, grubbing, and removal of obstacles and buildings prior to sectional construction contracts. If authorized, assists in the developing and monitoring of these contracts.

9. Ensure compliance for each segment of construction as to distribution of approved drawings and specifications and other data in reference to contract terms and conditions; i.e., permits, regulations, coordination, construction methods, utilities, communication and alternative construction methods.

10. Maintain a construction control system:

   - Costs.
   - Estimates (Initial contract value and independent estimate of value for extra work and claims).
   - Schedules (Schedule analysis to determine contract duration).
   - Contract status (major change reports).
   - Production.
   - Quantity survey.
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- Progress (physical).
- Progress payments.

11. Conduct and/or participate in prebid conferences for construction contracts.

12. Coordinate utility relocation construction:
   - Preconstruction conferences.
   - Monitor relocations.
   - Review/evaluate pay requests.
   - Inspect utilities relocation construction work performed by utilities/Contractors where covered by reimbursable agreements.
   - Inspect railroad company(s) relocation construction work performed by railroad/Contractors where covered by reimbursable agreements.

13. Prepare contract scopes of services, technical special provisions, specifications, requests for proposals, and other contract related documents.

14. Review and respond to questions of an engineering nature with relation to the construction of each project, the preparation and advertising for bids, review of bids, and awards of contracts for construction.

9.8 Construction Management Support

1. Review claims and disputes and recommend necessary actions.

2. Overview construction contracts including the need to take action in accordance with authority delegated to the Engineer as defined in the Department’s Standard Specifications for Road and Bridge Construction.

3. Analyze contract change requests during the course of construction and recommend appropriate action.

4. Review construction inspection reports relating to Contractors’ performance and communicate with Contractors, if necessary, regarding non-conformance to plan specifications, workmanship, etc.

5. Ensure project construction quality control/quality assurance program with regard to:
   - Conformance.
   - Reliability.
   - Acceptance.
   - Rejection, requiring:
     - Rework.
     - Repair.
     - Replacement.
     - Reverification.
   - Document quality control.
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- Material Testing Surveillance.

6. Administer an Assessment of Quality Program to ensure Contractor’s performance is in accordance with Department procedures, specifications and rules.

7. Coordinate utility relocation activities with utility company. Monitor activities of utility companies where labor and materials are eligible for reimbursement. Review and recommend for payment all invoices submitted by utility companies.

8. Serve as liaison between the Department, the construction Contractors, and interested public and private agencies to promote cooperation during the construction process.

9. Determine shop drawing submittal requirements; track such submittals through the review and distribution process, providing separate review and approvals as necessary.

10. In the event of the need to revise contract drawings during construction period, issue contract original drawings to the Design Engineer for revision, obtain the revised originals from the Design Engineer, review the changes and corrections and on behalf of the Department, issue new prints of the revised drawings to all parties concerned.

11. Prepare and maintain monthly progress schedules and reports applicable to all phases of the construction operation, and such special reports as may be required to keep the Department advised with respect to the progress of construction on a project.

12. Upon completion of a construction contract, monitor the preparation of Final As-Built drawings and recommend to the Department approval of such record drawings.

13. Prepare a Final Engineering Report on the construction status of each Project.


9.9 **Special/Technical Support**

1. Provide technical support for scheduling programs.

2. Provide expert witnesses and subject matter experts as required for construction litigation.

3. Perform special engineering, architectural, or landscape architecture studies, as necessary and directed.
4. Provide Geotechnical services, including coring, test piles, soundings, etc. on an as-needed, emergency basis.

5. Provide specialty geotechnical engineering services to set pile driving criteria determine pile casting lengths, perform PDA services, review special geotechnical anomalies, and review out of tolerance foundation work.

6. Provide surveying services to complete special surveys as directed, or to resolve survey issues.

7. Monitor construction activities through aerial photographs.

9.10 **Community Outreach**

1. Provide the following services for public awareness on construction projects:
   - Prepare and implement Community Awareness Plans (CAP).
   - Participate in any public information program to inform the public on the status and impact of construction projects.
   - Provide project information to the public through establishment of contact with the media and use of any communication tools necessary to effectively inform the public.

10.0 **PERSONNEL:**

10.1 **General Requirements:**

The Consultant shall provide prequalified personnel necessary to efficiently and effectively carry out its responsibilities under this Agreement. Method of compensation for personnel assigned to this project is outlined in Exhibit “B.”

**Unless otherwise agreed by the Department, the Department will not compensate straight overtime or premium overtime for the positions of Senior Project Engineer, Project Administrator/Project Engineer, Contract Support Specialist, and Associate or Assistant to any of these positions.**

10.2 **Personnel Qualifications:**

The Consultant shall provide competent personnel qualified by experience and education. The Consultant shall submit in writing to the Construction Project Manager the names of personnel proposed for assignment to the project, including a detailed resume for each containing at a minimum: salary, education, and experience. The Consultant Action Request form for personnel approval shall be submitted to the Construction Project Manager at least two weeks prior to the date an individual is to report to work.
Personnel identified in the Consultant technical proposal are to be assigned as proposed and are committed to performing services under this Agreement. Personnel changes will require written approval from Department. Staff that has been removed shall be replaced by the Consultant within one week of Department notification.

Before the project begins, all project staff shall have a working knowledge of the current CPAM and must possess all the necessary qualifications/certifications for fulfilling the duties of the position they hold. Cross training of the Consultant’s project staff is highly recommended to achieve a knowledgeable and versatile project inspection team but shall not be at any additional cost to the Department and should occur as workload permits. Visit the training page on the State Construction Office website for training dates.

Minimum qualifications for the Consultant personnel are set forth as follows. Exceptions to these minimum qualifications will be considered on an individual basis. However, a Project Administrator working under the supervision and direction of a Senior Project Engineer or an Inspector working under the supervision and direction of a Senior Inspector shall have six months from the date of hire to obtain the necessary qualifications/certifications provided all other requirements for such positions are met and the Consultant submits a training plan detailing when such qualifications/certifications and other training relative to the Department’s procedures, Specifications and Design Standards will be obtained. The District Construction Engineer or designee will have the final approval authority on such exceptions.

Complex Category Two (CC2) Bridge Structures: Bridge structures that are complex and require advanced designs and construction engineering and inspection. The following structures are classified as CC2 bridge structures:

- Concrete Post-Tensioned Segmental Box Girder (CPTS)
- Concrete Post-Tensioned Continuous Beam (CPTCB)
- Movable Bridges (MB)
- Post-tensioned Substructures (PTS)

**SENIOR PROJECT ENGINEER** - A Civil Engineering degree and registered in the State of Florida as a Professional Engineer (or if registered in another state, the ability to obtain registration in the State of Florida within six months) and six (6) years of engineering experience [(two (2) years of which are in major road or bridge construction)] or [(five (5) of which are in major bridge construction) - for Complex Bridge Projects with the exception of PTS projects which require two (2) years of major bridge construction], or for non-degreed personnel the aforementioned registration and ten (10) years of engineering experience (two (2) years of which are in major road or bridge construction). Qualifications include the ability to communicate effectively in English (verbally and in writing); direct highly complex and specialized construction engineering administration and inspection program; plans and organizes the work of subordinate and staff members; develops and/or reviews policies, methods, practices, and procedures; and reviews programs for conformance with Department standards. Also must have the following:
QUALIFICATIONS:
Attend the CTQP Quality Control Manager course and pass the examination.

CERTIFICATIONS:
FDOT Advanced MOT

OTHER:
Complete the Critical Structures Construction Issues, Self Study Course, and submit the mandatory Certification of Course Completion form (for structures projects)

A Master’s Degree in Engineering may be substituted for one (1) year engineering experience.

CEI PROJECT ADMINISTRATOR/PROJECT ENGINEER - A Civil Engineering degree plus two (2) years of engineering experience in construction of major road or bridge structures, or for non-degreed personnel eight (8) years of responsible and related engineering experience, two (2) years of which involved construction of major road or bridge structures with the exception of Complex Category 2 (CC2) bridge structures.

For CC2 bridge structures, a Civil Engineering degree and registered in the State of Florida as a professional engineer (or if registered in another state, have the ability to obtain registration in Florida within six (6) months) plus five (5) years general bridge construction experience, two (2) years of which must have been with the type of CC2 bridge construction project for which CEI services are being provided by this scope or for non-degreed and/or non-registered personnel eight (8) years of general bridge construction experience, (4) years of which must have been with the type of CC2 bridge construction project for which CEI services are being provided by this scope. Additionally, a minimum of one (1) year of experience as the Project Administrator in primary control of the type of CC2 construction project for which CEI services are being provided by this scope. As an exception, only one (1) year of PTS bridge experience will be required for registered project administrators and two (2) years of PTS bridge experience for non-registered project administrators. Post-tensioning experience is not required for precast prestressed concrete flat slab superstructures but successful completion of an FDOT accredited grouting and post-tensioning course is required. To be in primary control, a Project Administrator must have supervised two or more inspectors as well as two or more support staff (Office Manager, Resident Compliance Specialist, and Secretary) and must have been directly responsible for all CEI services assigned.

CPTS years of experience must have included a minimum of twelve (12) months experience in each of the following areas: (1) casting yard operations and related surveying; (2) segment erection and related surveying, post-tensioning (PT) of tendons and grouting of prestressing steel.

CPTCB years of experience must include monitoring of the following: girder erection, safe use of girder erection cranes, stabilization of girders after erection, false work for temporary girder support, and PT and grouting operations.

PTS years of experience must include monitoring of the following: installation of PT ducts and related hardware and post-tensioning and grouting of strands or be the level of experience that meets the criteria for CPTS or CPTCB bridges.
MB years of experience must have been in MB mechanical and/or electrical construction.

Receives general instructions regarding assignments and is expected to exercise initiative and independent judgment in the solution of work problems. Directs and assigns specific tasks to inspectors and assists in all phases of the construction project. Will be responsible for the progress and final estimates throughout the construction project duration. Must have the following:

Qualifications:
CTQP Final Estimates Level II

Certifications:
FDOT Advanced MOT

OTHER:
Attend CTQP Quality Control Manager Course and pass the examination.
Attend a FDOT accredited post-tensioning training course and pass the examination (for post-tensioned CC2 projects)
Attend a FDOT accredited grouting training course and pass the examination (for post-tensioned CC2 projects)
Complete the Critical Structures Construction Issues, Self Study Course, and submit the mandatory Certification of Course Completion form (for structures projects)

A Master's Degree in Engineering may be substituted for one (1) year of engineering experience

CEI ASSISTANT PROJECT ADMINISTRATOR/PROJECT ENGINEER –
A Civil Engineering degree plus one (1) year of engineering experience in construction of major road or bridge structures, or for non-degreed personnel six (6) years of responsible and related engineering experience, two (2) years of which involved construction of major road or bridge structures with the exception of Complex Category 2 (CC2) bridge structures.

QUALIFICATIONS:
CTQP Final Estimates Level II

CERTIFICATIONS:
FDOT Intermediate MOT

CEI CONTRACT SUPPORT SPECIALIST - A High School diploma or equivalent and four (4) years of road & bridge construction engineering inspection (CEI) experience having performed/assisted in project related duties (i.e., Materials Acceptance and Certification (MAC) System, progress and final estimates, EEO compliance, processing Construction Contract changes, etc.) or a Civil Engineering Degree. Should exercise independent judgment in planning work details and making technical decisions related to the office aspects of the project. Should be familiar with the Department’s Procedures covering the project related duties as stated above and be proficient in the computer programs necessary to perform these duties. Shall become proficient in Trimble Business Center - Heavy Construction Edition (HCE) or approved surface to surface comparison software and Engineering Menu.
Qualifications:
CTQP Final Estimates Level II

CEI ASSOCIATE CONTRACT SUPPORT SPECIALIST - High school graduate or equivalent plus three (3) years of secretarial and/or clerical experience including two (2) years’ experience in construction office management having performed project related duties (i.e., Materials Acceptance and Certification (MAC) System, progress and final estimates, EEO compliance, processing Construction Contract changes, etc.). Experienced in the use of standard word processing software. Should exercise independent initiative to help relieve the supervisor of clerical detail. Assists the Project Administrator in office related duties (i.e., CQR, progress, and final estimates, EEO compliance, Processing Construction Contract changes, etc.). Project specific work under the general supervision of the Senior Project Engineer and staff.

QUALIFICATIONS:
CTQP Final Estimates Level I

CEI RESIDENT COMPLIANCE SPECIALIST - High School Graduate or equivalent with one (1) year of experience as a Resident Compliance Specialist on a construction project or two (2) years of assisting the Resident Compliance Specialist in monitoring the project. Should have prior experience in both State and Federal Aid funded construction projects with FDOT and knowledge of EEO/AA laws and FDOT’s DBE and OJT programs. Ability to analyze, collect, evaluate data, and take appropriate action when necessary. Must attend all training workshops or meetings for Resident Compliance Specialists as well as spend time at the District Compliance office as determined necessary.

CEI SENIOR INSPECTOR/SENIOR ENGINEER INTERN – High school graduate or equivalent plus four (4) years of experience in construction inspection, two (2) years of which shall have been in bridge and/or roadway construction inspection with the exception of Complex Category 2 (CC2) bridge structures or a Civil Engineering degree and one (1) year of road & bridge CEI experience with the ability to earn additional required qualifications within one year. (Note: Senior Engineer Intern classification requires one (1) year experience as an Engineer Intern.)

For CC2 bridge structures, be a high school graduate or equivalent and have five (5) years of general bridge construction experience of which two (2) years must have been with the type of CC2 bridge construction project for which CEI services are being provided by this scope. As an exception, only one (1) year of PTS bridge experience will be required. Additionally, a minimum of twelve (12) months of experience as the Senior Inspector in primary control of the type CC2 construction project for which CEI services are being provided by this scope. To be in primary control, a Senior Inspector must have supervised two or more inspectors and must have been directly responsible for all inspection requirements related to the construction operations assigned.

CPTS years of experience must have included a minimum of twelve (12) months of inspection experience in one or both of the following depending on
which area the inspector is being approved for: (1) casting yard inspection; (2) erection inspection. In addition, two (2) years of geometry-control surveying experience is required for inspectors that perform or monitor geometry control surveying in a casting yard. CPTCB years of experience must include monitoring and inspection of the following: girder erection, safe use of girder erection cranes, girder stabilization after erection, false work for temporary girder support, and PT and grouting operations. PTS years of experience must include monitoring of the following: installation of PT ducts and related hardware and post-tensioning and grouting of strands or be the level of experience that meets the criteria for CPTS or CPTCB bridges. MB years of experience must have included the inspection of MB mechanical components for machinery inspectors and MB electrical components/systems for electrical inspectors.

Must have the following as required by the scope of work for the project:

QUALIFICATIONS:
- CTQP Concrete Field Technician Level I
- CTQP Concrete Field Inspector Level II (Bridges)
- CTQP Asphalt Roadway Level I
- CTQP Asphalt Roadway Level II
- CTQP Earthwork Construction Inspection Level I
- CTQP Earthwork Construction Inspection Level II
- CTQP Pile Driving Inspection
- CTQP Drilled Shaft Inspection (required for inspection of all drilled shafts including miscellaneous structures such as sign structures, lighting structures, and traffic signal structures)
- CTQP Grouting Technician Level I
- CTQP Post-Tensioning Technician Level I
- IMSA Traffic Signal Inspector Level I
- CTQP Final Estimates Level I

CERTIFICATIONS:
- FDOT Intermediate MOT
- Nuclear Radiation Safety
- IMSA Traffic Signal Inspector Level I

OTHER:
Complete the Critical Structures Construction Issues, Self Study Course, and submit the mandatory Certification of Course Completion form (for structures projects)

Responsible for performing highly complex technical assignments in field surveying and construction layout, making, and checking engineering computations, inspecting construction work, and conducting field tests and is responsible for coordinating and managing the lower level inspectors. Work is performed under the general supervision of the Project Administrator.

**CEI INSPECTOR/ENGINEER INTERN** - High school graduate or equivalent plus two (2) years’ experience in construction inspection, one (1) year of which shall have been in bridge and/or roadway construction inspection, or an Engineer Intern
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with a Civil Engineering degree (requires certificate) having the ability to earn the required qualifications and certifications within one year, plus demonstrated knowledge in the following:

Must have the following as required by the scope of work of the project:

QUALIFICATIONS:
CTQP Concrete Field Inspector Level I
CTQP Asphalt Roadway Level I
CTQP Earthwork Construction Inspection Level I
CTQP Pile Driving Inspection
CTQP Drilled Shaft Inspection (required for inspection of all drilled shafts including miscellaneous structures such as sign structures, lighting structures, and traffic signal structures)
IMSA Traffic Signal Inspector Level I
CTQP Final Estimates Level I

CERTIFICATIONS:
FDOT Intermediate MOT
Nuclear Radiation Safety
IMSA Traffic Signal Inspector Level I
Florida Stormwater, Erosion, and Sedimentation Control Training and Certification Program for Inspectors and Contractors

OTHER:
Complete the Critical Structures Construction Issues, Self Study Course, and submit the mandatory Certification of Course Completion form (for structures projects)

Responsible for performing assignments in assisting Senior Inspector in the performance of their duties. Receive general supervision from the Senior Inspector who reviews work while in progress.

CEI ASPHALT PLANT INSPECTOR - High School Graduate or equivalent plus one (1) years’ experience in the surveillance and inspection of hot mix asphalt plant operations or 80 hours working under an approved and qualified asphalt plant inspector at the asphalt plant and have the following:

Qualifications:
CTQP Asphalt Plant Level I
CTQP Asphalt Plant Level II

Certifications:
None

CEI INSPECTORS AIDE - High School graduate or equivalent and able to perform basic mathematical calculation and follow simple technical instructions. Duties are to assist higher-level inspectors. Must obtain FDOT Intermediate MOT within the first six months of the assignment.
CEI SURVEY PARTY CHIEF - High School graduate plus four years of experience in construction surveying (including two (2) years as Party Chief). Experienced in field engineering and construction layout, making and checking survey computations and supervising a survey party. Work is performed under general supervision of Project Administrator.

CEI INSTRUMENT PERSON - High school graduate plus three (3) years of experience in construction surveying one (1) year of which shall have been as instrument-man. Responsible for performing assignments in assisting Party Chief in the performance of their duties. Receives general supervision from Party Chief who reviews work while in progress.

CEI ROD-MAN/CHAIN PERSON - High school graduate with some survey experience or training preferred. Receives supervision from and assists Party Chief who reviews work while in progress.

CEI ENVIRONMENTAL SPECIALIST - A Bachelor’s Degree in Environmental Science and three (3) years of professional experience and general background and knowledge in wetlands ecology, environmental permitting, wildlife surveys, wetland assessment, mitigation and management, management and erosion control practices, and/or hazardous waste and oil spill remediation, site restoration, environmental audits, contamination assessments, soil and groundwater remediation, and underground storage tank services as appropriate for the project. For project work involving management and erosion control practices, the individual shall be a qualified FDEP Stormwater Management Inspection.

QUALIFICATIONS:
NPDES FDEP Qualified

CERTIFICATIONS:
FDEP

CEI CASTING YARD ENGINEER/ MANAGER - (Concrete Post-Tensioned Segmental Box Girder Bridges (CPTS)) Must be a registered Professional Engineer in the State of Florida (or if registered in another state, have the ability to obtain registration in Florida within 6 months) with a minimum of one (1) year, or non-registered with a minimum of three (3) years of experience with the use of geometry control computer programs and with the performance of surveying procedures required for the production of precast concrete box segments at a casting yard.

CEI GEOTECHNICAL ENGINEER for Category I Bridge Pile Foundations - Registered in the State of Florida as a Professional Engineer (or if registered in another state, the ability to obtain registration in the State of Florida within six months) plus four (4) years of experience as a Geotechnical Engineer in responsible charge of geotechnical work, including at least two Category I bridges with pile foundations. Experience performing, Analyzing and interpreting the results of: non-destructive testing of pile foundations, dynamic and static load testing, the Pile Driving Analyzer (PDA), CAPWAP and WEAP as appropriate.
CEI GEOTECHNICAL ENGINEER for Category I Bridge Drilled Shaft Foundations - Registered in the State of Florida as a Professional Engineer (or if registered in another state, the ability to obtain registration in the State of Florida within six months) plus four (4) years of experience as a Geotechnical Engineer in responsible charge of geotechnical work, including at least two Category I bridges with drilled shaft foundations. Experience performing analyzing and interpreting the results of: the Shaft Inspection Device, non-destructive tests of drilled shaft foundations and load tests as appropriate.

CEI GEOTECHNICAL ENGINEER for Category II Bridge Pile Foundations - Registered in the State of Florida as a Professional Engineer (or if registered in another state, the ability to obtain registration in the State of Florida within six months) plus five (5) years of experience as a Geotechnical Engineer in responsible charge of geotechnical work, including at least one Category II bridge with pile foundations. Experience performing, analyzing and interpreting the results of: non-destructive testing of pile foundations, dynamic and static load testing, the Pile Driving Analyzer (PDA), CAPWAP and WEAP as appropriate.

CEI GEOTECHNICAL ENGINEER for Category II Bridge Drilled Shaft Foundations - Registration in the State of Florida Board as a Professional Engineer (or if registered in another state, the ability to obtain registration in the State of Florida within six months) plus five (5) years of experience as a Geotechnical Engineer in responsible charge of geotechnical work, including at least one Category II bridge with drilled shaft foundations. Experience performing, analyzing and interpreting the results of: the Shaft Inspection Device, non-destructive tests of drilled shaft foundations and load tests as appropriate.

CEI GEOTECHNICAL TECHNICIAN for Pile Foundations - Qualified CTQP Pile Driving Inspector, knowledgeable in pile installation in conjunction with dynamic load tests with a minimum of three (3) years of experience on at least two (2) Department bridge projects: for projects with Embedded Data Collectors (EDCs), certified EDC monitoring equipment operator.

CEI GEOTECHNICAL TECHNICIAN for Drilled Shaft Foundations - Qualified CTQP Drilled Shaft Inspector, knowledgeable in drilled shaft installation with a minimum of three (3) years of experience on at least two (2) Department bridge projects.

CEI COMMUNITY OUTREACH SPECIALIST: High school graduate or equivalent and be knowledgeable in public information and/or advertising involving mass circulation or distribution of literature, mass advertising or other similar activities and performed such work for at least three (3) years.

CEI UTILITY COORDINATOR - High school graduate or equivalent and be knowledgeable of Department’s Standards, policies, procedures, and agreements and shall have a minimum of 4 years of experience performing utility coordination in accordance with Department’s Standards, policies, procedures, and agreements.

CEI SENIOR ITS INSPECTOR - High School graduate or equivalent plus four (4) years of experience in construction inspection, two (2) years of which shall have
been in ITS construction inspection, or a Civil Engineering Degree and one (1) year of ITS CEI experience, plus demonstrated knowledge in the following:

**QUALIFICATIONS:**
Fiber Installation Inspection and OTDR Fiber Testing  
DMS Operation and Testing  
Controller Operation and Testing  
CCTV Installation, Operation and Testing  
MVDS Operations and Testing  
FDOT SEMP Training  
Familiarity with Existing Communication Equipment and Switches

**CERTIFICATIONS:**
IMSA Fiber Optics for ITS Level II Field (or equivalent)

Responsible for inspecting construction work; monitoring ITS and electrical installation techniques to ensure conformance with the plans, specifications, National Electrical code and other applicable manuals and is responsible for coordinating and managing the lower level inspectors. Responsible for escalating any deficiencies to the Project Administrator.

**CEI ITS INSPECTOR** - High School Graduate or equivalent plus two (2) years of experience in construction inspection, one (1) year of which shall have been in ITS construction inspection, or an Engineer Intern with a Civil Engineering degree (requires certificate) having the ability to earn the required qualifications within one year, plus demonstrated knowledge in the following:

**QUALIFICATIONS:**
Fiber Installation Inspection and OTDR Fiber Testing  
DMS Operation and Testing  
Controller Operation and Testing  
CCTV Installation, Operation and Testing  
MVDS Operations and Testing  
Familiarity with Existing Communication Equipment and Switches

**CERTIFICATIONS:**
IMSA Fiber Optics for ITS Level I (or equivalent)

Responsible for inspecting the construction work; monitoring the correct ITS and electrical installation techniques to ensure conformance with the plans, specification, National Electrical Code and other applicable manuals. Responsible for escalating to the Senior Inspector or Project Administrator (as applicable) any deficiencies.

**CEI BRIDGE PROJECT ADMINISTRATOR (PAINTING/ LEAD ABATEMENT/ STRUCTURAL REPAIR):**

Certifications:  
NACE Level III Certified or BCI Level II Certified  
SSPC C-3 Lead Paint Removal  
AWS Certified Welding Inspector (CWI) familiar with ANSI/AASHTO/AWS Bridge Welding Code
CEI BRIDGE SENIOR INSPECTOR (PAINTING/ LEAD ABATEMENT/ STRUCTURAL STEEL REPAIR):

Certifications:
NACE Level III Certified or BCI Level II Certified
SSPC C-3 Lead Paint Removal
AWS Certified Welding Inspector (CWI) familiar with ANSI/AASHTO/AWS Bridge Welding Code

CEI BRIDGE INSPECTOR (PAINTING/ LEAD ABATEMENT/ STRUCTURAL STEEL REPAIR):

Certifications:
NACE Level I or BCI Level I
SSPC C-3 Lead Paint Removal
AWS Certified Welding Inspector (CWI) familiar with ANSI/AASHTO/AWS Bridge Welding Code

CEI LANDSCAPE INSPECTOR – High School Graduate or equivalent plus three (3) years of roadway or commercial landscape construction and/or maintenance experience, or Florida Nursery Growers and Landscape Association (FNGLA) Landscape Technician Certification; plus one (1) year of roadway or commercial landscape construction and/or maintenance experience, or a degree in a related field; plus one (1) year of roadway landscape construction and/or maintenance experience. The individual must be skilled at plant identification, classification, and grades and standards for nursery plants as established by the manual “Grades and Standards for Nursery Plants” by the Florida Department of Agriculture and Consumer Services. The individual must be knowledgeable of current Florida Department of Transportation methods for landscape and irrigation installation. The individual must have the ability to read and interpret contract documents. The individual will receive general supervision from the Senior Landscape Inspector who reviews work while in progress. For standalone landscape projects, required certification and training includes FDOT Intermediate MOT, and FDEP Stormwater Erosion and Sedimentation Control Inspector.

10.3 Staffing:

Once authorized, the Consultant shall establish and maintain an appropriate staff throughout the duration of construction and completion of the final estimate. Responsible personnel, thoroughly familiar with all aspects of construction and final measurements of the various pay items, shall be available to resolve disputed final pay quantities until the Department has received a regular acceptance letter.

Construction engineering and inspection forces will be required of the Consultant while the Contractor is working. If Contractor operations are substantially reduced or suspended, the Consultant will reduce its staff appropriately.
In the event that the suspension of Contractor operations requires the removal of Consultant forces from the project, the Consultant will be allowed ten (10) days maximum to demobilize, relocate, or terminate such forces.

11.0 QUALITY ASSURANCE (QA) PROGRAM:

11.1 Quality Assurance Plan:

Within thirty (30) days after receiving award of an Agreement, furnish a QA Plan to the Construction Project Manager. The QA Plan shall detail the procedures, evaluation criteria, and instructions of the Consultant’s organization for providing services pursuant to this Agreement. Unless specifically waived, no payment shall be made until the Department approves the Consultant QA Plan.

Significant changes to the work requirements may require the Consultant to revise the QA Plan. It shall be the responsibility of the Consultant to keep the plan current with the work requirements. The Plan shall include, but not be limited to, the following areas:

A. Organization:

A description is required of the Consultant QA Organization and its functional relationship to the part of the organization performing the work under the Agreement. The authority, responsibilities and autonomy of the QA organization shall be detailed as well as the names and qualifications of personnel in the quality control organization.

B. Quality Assurance Reviews:

Detail the methods used to monitor and achieve organization compliance with Agreement requirements for services and products.

C. Quality Assurance Records:

Outline the types of records which will be generated and maintained during the execution of the QA program.

D. Control of Subconsultants and Vendors:

Detail the methods used to control subconsultant and vendor quality.

E. Quality Assurance Certification:

An officer of the Consultant firm shall certify that the inspection and documentation was done in accordance with FDOT specifications, plans, standard indexes, and Department procedures.

11.2 Quality Assurance Reviews:

Conduct semi-annual Quality Assurance Reviews to ensure compliance with the requirements of the Agreement. Quality Assurance Reviews shall be conducted to evaluate
the adequacy of materials, processes, documentation, procedures, training, guidance, and staffing included in the execution of this Agreement. Quality Assurance Reviews shall also be developed and performed to achieve compliance with specific QA provisions contained in this Agreement. The semi-annual reviews shall be submitted to the Construction Project Manager in written form no later than one (1) month after the review.

On short duration CCEI projects (nine (9) months or less), the CCEI shall perform an initial QA review within the first two (2) months of the start of construction.

On asphalt projects, the CCEI shall perform an initial QA review on its asphalt inspection staff after the Contractor has completed ten (10) full work days of mainline asphalt paving operations, or 25% of the asphalt pay item amount (whichever is less) to validate that all sampling, testing, inspection, and documentation are occurring as required of the CCEI staff.

11.3 **Quality Assurance Reviews:**

Maintain adequate records of the quality assurance actions performed by the organization (including subcontractors and vendors) in providing services and products under this Agreement. All records shall indicate the nature and number of observations made, the number and type of deficiencies found, and the corrective actions taken. All records shall be available to the Department, upon request, during the Agreement term. All records shall be kept at the primary job site and shall be subject to audit review.

11.4 **Quality Assurance Reviews:**

Maintain adequate records of the quality assurance actions performed by the organization (including subcontractors and vendors) in providing services and products under this Agreement. All records shall indicate the nature and number of observations made, the number and type of deficiencies found, and the corrective actions taken. All records shall be available to the Department, upon request, during the Agreement term. All records shall be kept at the primary job site and shall be subject to audit review.

12.0 **CERTIFICATION OF FINAL ESTIMATES:**

12.1 **Final Estimate and As-Built Plans Submittal:**

Prepare documentation and records in compliance with the Agreement, Statewide Quality Control (QC) Plan, or Consultant’s approved QC Plan and the Department’s Procedures as required by CPAM.

Submit the Final Estimate(s) and one (1) set of final “as-built plans” documenting Contractor’s work in accordance with CPAM.

Revisions to the Certified Final Estimate will be made at no additional cost to the Department.

12.2 **Certification:**

Consultant personnel preparing the Certified Final Estimate Package shall be CTQP Final Estimates Level II certified.
Duly authorized representative of the Consultant firm will provide a notarized certification on a form pursuant to Department’ procedures.

12.3 **Offer of Final Payment:**

The Consultant shall prepare the Offer of Final Payment package as outlined in CPAM. The package shall accompany the Certified Final Estimates Package submitted to the District Final Estimates Office for review. The Consultant shall be responsible for forwarding the Offer of Final Payment Package to the Contractor.

13.0 **AGREEMENT MANAGEMENT:**

13.1 **General:**

(1) With each monthly invoice submittal, the Consultant will provide a Status Report for the Agreement. This report will provide the accounting of the additional Agreement calendar days allowed to date, an estimate of the additional calendar days anticipated to be added to the original schedule time, an estimate of the Agreement completion date, and an estimate of the Consultant funds expiration date per the Agreement schedule for the prime Consultant and for each subconsultant. The Consultant will provide a printout from the Equal Opportunity Reporting System showing the previous month’s payments made to subconsultants. Invoices not including this required information may be rejected.

(2) When the Consultant identifies a condition that will require an amendment to the Agreement, the Consultant will communicate this need to the Construction Project Manager for acceptance. Upon acceptance, prepare and submit an Amendment Request (AR), and all accompanying documentation to the Construction Project Manager for approval and further processing. The AR is to be submitted at such time to allow the Department 12 weeks to process, approve, and execute the AR. The content and format of the AR and accompanying documentation shall be in accordance with the instructions and format to be provided by the Department.

(3) The Consultant is responsible for performing follow-up activities to determine the status of each Amendment Request submitted to the Department.

13.2 **Invoicing Instructions:**

Monthly invoices shall be submitted to the Department in a format and distribution schedule defined by the Department, no later than the 20th day of the following month.

If the Consultant cannot submit their monthly invoice on time, the Consultant shall notify the Department, prior to the due date the reason for the delay and the planned submittal date. Once submitted, the Consultant Project Principal or Senior Project Engineer shall notify the Construction Project Manager via e-mail of the total delay in calendar days and the reason(s) for the delay(s).

All invoices shall be submitted to the Department in electronic and hard copy formats in accordance with District Construction and Contract Invoice Tracking System (CITS) procedures. The Construction Project Manager must receive hard copy documentation within...
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three (3) workdays of electronic submittal or the electronic submittal will be rejected. (Saturday, Sunday, and Department holidays are not considered workdays).

A Final Invoice will be submitted to the Department no later than the 20th day of the month following Final Acceptance of the individual project.

14.0 SUBCONSULTANT SERVICES

Upon written approval by the Construction Project Manager and the Department, and prior to performance of work, the Consultant may subcontract for engineering surveys, materials testing, or specialized professional services.

15.0 SUBSURFACE UTILITY LOCATE SERVICES:

15.1 Objectives:

The Consultant shall provide all necessary services to designate and locate existing surface and subsurface Utilities to support the construction of roadway and bridge projects on a districtwide basis as selected by the Department.

The terms "designate" in this Scope of Services means to indicate, by marking, the presence and approximate horizontal location and depth, when the reading appears valid, of all existing subsurface Utilities using standard geophysical prospecting techniques. The Consultant does not guarantee the accuracy of such designations as substitutions or as-built information during any demolition, excavation or construction activities. The term "locate" means to obtain an accurate position of surface utilities using standard practices and subsurface utilities (horizontally and vertically) by digging a test hole. Any data provided by consultant is not a substitute for full compliance with all applicable underground utility damage prevention laws.

15.2 Basic Services to be Provided:

It is the intent of this Scope of Services that the Consultant, employing qualified, competent and experienced personnel, shall perform the basic services set forth herein providing services equal to the practice prevalent by consultants practicing within the subject area of work and commensurate with the magnitude and intricacy of the work under consideration. These basic services shall be so complete that it will not be necessary for the Department to supplement any of the operation by its own personnel, except as noted hereinafter. The Department, however, reserves the right to make such reviews from time to time, as it may deem necessary or desirable and to maintain proper liaison. The items, which follow, are not intended to be comprehensive or exclusive but set forth in general outline the work that is expected.

15.3 Subsurface Utility Designating Service:

The Consultant shall:

1. Obtain all necessary permits from city, county, municipality or other jurisdiction to allow the Consultant to work in existing street, roads, etc. for
the purpose of marking, measuring and recording the location of existing subsurface utilities.

2. Designate, record and mark the approximate horizontal location of the existing utilities and their major laterals to existing buildings by a method approved by the Department. No storm sewers are to be designated unless authorized by the Department. All survey work required, including the retracing of the survey centerline of baseline, would be determined and performed by the Consultant.

3. Determine and provide the Department with the approximate depth of all existing utilities as determined by the designator when the readings appear valid. This depth indication is understood by both the Consultant and the Department to be approximate only and is not intended to be used in designing the right-of-way and construction plans.

4. Provide all signs and other safety devices and equipment, including all necessary flagmen needed to control traffic.

5. Secure all "As Built" plans, plats and other data as supplied by utility companies as are necessary.

6. Provide all necessary support personnel to secure the data outlined in this section.

7. All data to be furnished to the FDOT on 5 1/4" floppy disks, tape or tapes in Intergraph Design File format, or a hardcopy, all of which will be compatible with the Department's computer system.

8. Provide a monthly summary of work completed and underway.

The Department will:

1. Provide highway plans showing the alignment, profile and benchmark data and project limits of the selected projects.

15.4 **Subsurface Utility Locating (Test Hole) Service:**

The Consultant shall:

1. Pick up and review plans at location designated by the Department and obtain utility company's records as required.

2. Obtain all necessary permits from city, county, municipality or other jurisdiction to allow the Consultant to work in existing streets, roads, etc. for the purpose of locating (digging), measuring and recording the location of existing subsurface utilities.

3. Coordinate with utility agency/owners as required by this Agreement and as required by law.
4. Neatly cut and remove existing paving.
   a. Cut area not to exceed 225 square inches.
   b. Excavate using a method enabling vertical as well as horizontal exploration through this cut.

5. Excavate test holes in such a manner as to prevent any damage to wrappings, coatings, or other protective coverings, such as by a vacuum excavation method, hand digging, etc.

6. Be responsible for any damage to the utility during excavation of same.

7. Backfill and compact with select material around utility structure.

8. Furnish and install and color-code permanent above-ground marker (i.e., P.K nail, peg, steel pin, or hub), directly above centerline of the structure and record the elevation of the marker.

9. Provide a permanent restoration of the pavement within the limits of the original cut at the time of backfill. In the event the test hole is excavated in an area other than the roadway pavement, the area disturbed shall be restored to the condition prior to the excavation.

10. Provide all traffic control in accordance with Department policy and MUTCD, labor and equipment.

11. Provide complete clean-up of work site to equal or better condition than before excavation.

12. Tie all vertical controls to furnished datum. If turns or additional benchmarks are required to obtain the tie, this shall be done by the Consultant. The accuracy of these turns or additional benchmarks shall be in accordance with established surveying practices.

13. All data obtained by consultant of existing surface/subsurface utilities shall be furnished to the Department on a 5 1/4 inch floppy disks, tape or tapes in Intergraph design file format all of which shall be compatible with the Department's computer system along with a hard copy for the Department's project file.

14. Close-out permits are required.

15. Provide the following test hole information on a 5 1/4 inch floppy, tape or tapes in Intergraph design file format all of which shall be compatible with Department's computer system.
   a. Elevation of top and/or bottom of utility tied to the datum furnished.
b. Horizontal location using the distance right or left of indicated center line stationing when available. All survey work required, including the retracing of the survey centerline or baseline, would be determined and performed by the Consultant.

c. Outside diameter of pipe or width of duct banks and configuration of no encased multi-conduit systems.

d. Utility structure material composition, when possible.

e. Identify benchmarks used to determine elevations.

f. Elevations provided by the Consultant shall be within an accuracy of +/-0.05’ based on the benchmarks shown on the Consultant's certification forms.

16. Provide a monthly summary of work completed.

The Department will:

1. Provide highway plans with the locations of the required test holes indicated.

2. Provide highway plans showing the alignment, profile and benchmark data for the selected projects.

15.5 Surface Utility Locating Service:

Surface location services shall be conducted in accordance with the Department's Location Survey Manual.

15.6 Utility Location and Verification Service During Construction:

The consultant shall be available for these services during construction if required.

15.7 Utility Locating (Ground Penetrating Radar (GPR)) Services:

GPR is a non-destructive geophysical tool that involves the propagation of electromagnetic pulses into the earth. It is used for a broad range of applications in engineering and environmental investigations and can be employed to designate underground utilities, locate voids, determine depth to bedrock, determine depth to groundwater, map salt-water intrusion, map conductive contaminant plumes, map faults, map sand and gravel deposits, and map rebar in concrete, to name a few.

15.8 Errors:

The designating and/or locating services shall be checked for accuracy before submission of data by the Consultant. The Consultant will be required, without additional compensation, to correct any errors, including but not limited to omissions, discrepancies and ambiguities in the work, which may be discovered before or during construction. Acceptance of the designating or locating service by the Department shall not relieve the Consultant of the responsibility of subsequent correction of errors.

15.9 Maintenance of Records:
The Consultant shall maintain all books, documents, papers, accounting records and other evidence supporting the cost incurred and shall make such materials available at its offices at all reasonable time during the Agreement period and for three (3) years from the date of final payment under the Agreement for inspection by the Department.

15.10 **Staffing by Consultant:**

The control and supervision of all phases of the work performed for this Agreement by the Consultant shall be under the direction of an engineer underground utility locating or designating specialist employed by the Consultant who has had not less than three (3) years experience on the type of work herein described and he shall be assigned to the project until all work has been completed or until the Department agrees in writing that he may be replaced or removed.

A staff of competent engineers or specialists adequate in number and experience to perform the described work in the prescribed time shall be assigned to perform work under this Agreement. All work shall be performed by or under the supervision of a surveyor or professional engineer who is licensed in Florida.

15.11 **Conferences and Meetings:**

The initial conference shall be called by the Department at a place and time selected by the Department for the purpose of reviewing the Consultant's work program, schedules, procedures, methods and the clarification of any ambiguities that may then exist and shall be attended by the principal Consultant or a partner of the Consultant and the Consultant's Project Engineer.

Conferences will be called no more frequently than one each month for the duration of this Agreement at a place and time fixed by the Department. Such periodic conferences will be attended by representatives of the Department, the Consultant's Project Engineer and such other project personnel of the Consultant as may be required for the purpose of reviewing the Consultant's progress and such details of the project that may appear to require examination.

15.12 **Liability of Consultant, Indemnification, Standard or Performance and Effect of Acceptance of Plans:**

It is expressly understood that the Consultant shall indemnify, defend and hold harmless the Department from and against all damages, claims, suits, judgments, expenses, actions and costs (of every name and description) arising out of or resulting from any negligent act or omission in the performance by the Consultant of the Consultant's services. The Consultant shall perform said services with the standard of care, skill and diligence normally expected of and provided by a Consultant or Engineer in the performance of the same services, or services similar to the services to be provided hereunder. Acceptance of the designating and/or locating services by the Department shall not waive any of the rights of the Department contained in this Section nor release or absolve the Consultant from any responsibilities or duties contained in this Agreement.

16.0 **OTHER SERVICES:**

Upon written authorization by the District Construction Engineer or designee, the Consultant will perform additional services in connection with the project not otherwise identified in this
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Agreement. The following items are not included as part of this Agreement, but may be required by the Department to supplement the Consultant services under this Agreement.

A. Assist in preparing for arbitration hearings or litigation that occurs during the Agreement time in connection with the construction projects covered by this Agreement.

B. Provide qualified engineering witnesses and exhibits for any litigation or hearings in connection with the Agreement.

C. Provide inspection services in addition to those provided for in this Agreement.

D. Provide services determined necessary for the successful completion and closure of the Construction Contract.

17.0 POST CONSTRUCTION CLAIMS REVIEW:

In the event the Contractor submits a claim for additional compensation and/or time after the Consultant has completed this Agreement, analyze the claim, engage in negotiations leading to settlement of the claim, and prepare and process the required documentation to close out the claim. Compensation for such services will be negotiated and effected through a Supplemental Amendment to this Agreement.

18.0 CONTRADICTIONS:

In the event of a contradiction between the provisions of this Scope of Services and the Consultant’s proposal as made a part of their Agreement, the provisions of the Scope of Services shall apply.

19.0 THIRD PARTY BENEFICIARY

It is specifically agreed between the parties executing this Agreement that it is not intended by any of the provisions of any part of the Agreement to create in the public or any member thereof, a third party beneficiary hereunder, or to authorize anyone not a party to this Agreement to maintain a claim, cause of action, lien or any other damages or any relief of any kind pursuant to the terms or provisions of this Agreement.

20.0 DEPARTMENT AUTHORITY

The Department shall be the final authority in considering modifications to the Construction Contract for time, money or any other consideration except matters agreed to by the Contractor through contract changes negotiated by the Consultant, as authorized in Section 9.1 herein.

21.0 PROJECT COST ACCOUNTING

Although the Consultant is assigned work by Task Work Order and each Task Work Order is assigned in a single general financial project identification number for billing purposes, the Consultant and its subconsultants shall have staff performing work on this contract charge their time to the nearest quarter hour to each specific project on which work is being performed. The Department shall provide the Consultant and its subconsultants the eleven digit project number assigned to each specific project in which the Department requires the Consultant to capture time and cost. At any given time, there may be several specific projects in which staff would be charging time. The Consultant shall provide the Department with each invoice the cost incurred for each specific project. Time expended by accounting
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personnel of the Consultant in preparation of invoices associated with this contract is an unallowable direct project cost.