

**CONSTRUCTION ENGINEERING AND INSPECTION
DRAFT SCOPE OF SERVICES**

FOR

Project Description

ALICO ROAD CONNECTOR PHASE I, II & III

TABLE OF CONTENTS

1.0	PURPOSE:	1
2.0	SCOPE:	1
3.0	LENGTH OF SERVICE:	1
4.0	DEFINITIONS:	2
5.0	ITEMS TO BE FURNISHED BY THE COUNTY TO THE CONSULTANT:	3
6.0	ITEMS FURNISHED BY THE CONSULTANT:	3
6.1	COUNTY DOCUMENTS:	3
6.2	OFFICE AUTOMATION:.....	3
6.3	FIELD OFFICE:	4
6.4	VEHICLES:	4
6.5	FIELD EQUIPMENT:	4
6.6	LICENSING FOR EQUIPMENT OPERATIONS:	5
7.0	LIAISON RESPONSIBILITY OF THE CONSULTANT:	5
8.0	PERFORMANCE OF THE CONSULTANT:	5
9.0	REQUIREMENTS OF THE CONSULTANT:	6
9.1	GENERAL:.....	6
9.2	INDEPENDENT ENGINEERING JUDGEMENT:.....	6
9.3	PUBLIC SAFETY:	6
9.4	TIMELY RESOLUTION:	6
9.5	SURVEY CONTROL:.....	7
9.6	ON-SITE INSPECTION:	7
9.7	SAMPLING AND TESTING:	7
9.8	ENGINEERING SERVICES:.....	8
9.9	GEOTECHNICAL ENGINEERING:	10
9.10	SCHEDULE DEVELOPMENT AND REVIEW	13
9.11	ASPHALT PLANT SERVICES.....	13
10.0	PERSONNEL:	14
10.1	GENERAL REQUIREMENTS:.....	13
10.2	DESIRED PERSONNEL QUALIFICATIONS:.....	14
10.3	STAFFING:	25
11.0	QUALITY ASSURANCE (QA) PROGRAM:	25
11.1	QUALITY ASSURANCE PLAN:.....	25
11.2	QUALITY ASSURANCE REVIEWS:.....	26
11.3	QUALITY RECORDS:	27
12.0	CERTIFICATION OF FINAL ESTIMATES:	27
12.1	FINAL ESTIMATE AND AS-BUILT PLANS SUBMITTAL:	23
12.2	CERTIFICATION:	27
13.0	AGREEMENT MANAGEMENT:	27
13.1	GENERAL:.....	27
14.0	OTHER SERVICES:	28
15.0	POST CONSTRUCTION CLAIMS REVIEW:	248
16.0	CONTRADICTIONS:	28
17.0	THIRD-PARTY BENEFICIARY	28
18.0	COUNTY AUTHORITY	28

SCOPE OF SERVICES
CONSTRUCTION ENGINEERING AND INSPECTION

1.0 PURPOSE:

This scope of services describes and defines the Construction Engineering and Inspection (CEI) services which are required for contract administration, inspection, and materials sampling and testing for the construction projects listed below.

2.0 SCOPE:

Provide services as defined in this Scope of Services, the referenced manuals, and procedures.

The projects for which the services are required are:

Financial Project No: N/A
COUNTY Project No.: 9245
Descriptions: Alico Road Connector Phase I, II & III
County: Lee

Serve as the COUNTY's representative on the project and faithfully represent the COUNTY's interest in all matters, with special emphasis given to issues involving public safety, quality, timely completion of the work, and financial responsibility. Exercise independent professional judgment in performing obligations and responsibilities under this Agreement. Pursuant to Section 4.1.5 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 COUNTY's Department Director and Project Administrator respectively and shall be interpreted as such.

On a single Construction Contract, it is a conflict of interest for a professional firm to receive compensation from both the COUNTY and the Contractor either directly or indirectly.

Other projects developing within the geographical area of Lee COUNTY may be added at the COUNTY's discretion. The CONSULTANT must perform to the satisfaction of the COUNTY's representatives for consideration of additional CEI services.

3.0 LENGTH OF SERVICE:

The services for each Construction Contract shall begin upon written notification to proceed by the COUNTY.

Track the execution of the Construction Contract such that the CONSULTANT is given timely authorization to begin work. While no personnel shall be assigned until written notification by the COUNTY has been issued, the CONSULTANT shall be ready to assign personnel within 14 calendar days of notification. For the duration of the project, coordinate closely with the COUNTY and Contractor to minimize rescheduling of CONSULTANT activities due to construction delays or changes in scheduling of Contractor activities.

For estimating purposes, the CONSULTANT will be allowed an accumulation of thirty 30 calendar days for each phase to perform preliminary administrative services prior to the issuance of the Contractor's notice

to proceed on the first project and 30 calendar days to demobilize after the Final Acceptance of the last Construction Contract.

The anticipated letting schedules and construction times for the projects are tabulated below:

Construction Contract Estimate			
County Project ID	Letting Date (Mo/Day/Yr)	Start Date (Mo/Day/Yr)	Duration (Days)
9245			
Phase 1	03/20/2024	09/01//2024	912
Phase 3	02/01/2025	07/01/2025	912
Phase 2	02/01/2026	07/01/2026	1,270

4.0 DEFINITIONS:

- A. Agreement: The Professional Services Agreement between the COUNTY 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.
- B. Contractor: The individual, firm, or company contracting with the COUNTY for the performance of work or furnishing of materials.
- C. Construction Contract: The written agreement between the COUNTY 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.
- D. Construction Project Manager: The COUNTY employee assigned to manage the Construction Engineering and Inspection Contract and represent the COUNTY during the performance of the services covered under this Agreement.
- E. Construction Training/Qualification Program (CTQP): The Department program for training and qualifying technicians in Aggregates, Asphalt, Concrete, Earthwork, and Final Estimates Administration. Program information is available on the CTQP website.
- F. CONSULTANT: The Consulting firm under contract to the COUNTY for administration of Construction Engineering and Inspection services.
- G. CEI Project Administrator/Project Engineer: The employee assigned by the CONSULTANT to be in charge of providing Construction Contract administration services for one or more Construction Projects.
- H. CEI Senior Project Engineer: The Engineer assigned by the CONSULTANT to be in charge of providing Construction Contract administration for one (1) or more Construction Projects. This person may supervise other CONSULTANT employees and act as the lead Engineer for the CONSULTANT.
- I. CEI Resident Compliance Specialist: The employee assigned by the CONSULTANT to oversee project-specific compliance functions.
- J. Engineer of Record (EOR): The Engineer noted on the Construction plans as the responsible person for the design and preparation of the plans.

- K. Public Information Office: The COUNTY's office assigned to manage the Public Information Program.

5.0 ITEMS TO BE FURNISHED BY THE COUNTY TO THE CONSULTANT:

- A. The COUNTY, on an as-needed basis, will furnish the following Construction Contract documents for each project. These documents may be provided in either paper or electronic format:
1. Construction Plans
 2. Specifications Package
 3. Computer Aided Drafting and Design (CADD) Files
 4. Copy of the Executed Construction Contract
 5. Utility Agency's Approved Material List (if applicable)

6.0 ITEMS FURNISHED BY THE CONSULTANT:

6.1 COUNTY Documents:

All applicable COUNTY and Florida Department of Transportation (FDOT) documents referenced herein shall be a condition of this Agreement. Documents can be acquired through the COUNTY's and/or Florida Department of Transportation's website.

Florida Department of Transportation
Maps and Publication Sales
605 Suwannee Street, MS 12
<http://www.fdot.gov/construction/>

Lee COUNTY Department of Transportation
1500 Monroe St.
Fort Myers, FL 33901
www.LeeGov.com

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) 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.

Ownership and possession of computer equipment and related software provided by the CONSULTANT, shall remain with the Consultant at all times. 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 operational at all times.

6.3 Field Office:

Provide a field office with sufficient room and furnishings to effectively carry out responsibilities under this Scope of Services. The field office shall be approved by the County.

Field office expenses will be compensated in accordance with Exhibit “B” of the contract documents, Method of Compensation.

Provide a private office (minimum of 150 square feet) for the COUNTY Project Manager with office furniture, telephone, and broadband internet access.

Itemized direct expenses associated with field office rent, utilities, field office set-up/mobilization and de-mobilization costs only, when authorized and when properly supported by evidence of costs incurred. Utility costs may include electricity, water, natural gas, sewer, internet connection (e.g., non-mobile DSL or cable lines), trash pick-up, and hook-up fees associated with the aforementioned utilities. Field office set-up/mobilization and de-mobilization charges involved with transporting the trailer to and from the job site may also be reimbursed.

6.4 Vehicles:

Equip vehicles with appropriate safety equipment and to effectively carry out the requirements of this Agreement. Vehicles shall have the CONSULTANT’s name and phone number visibly displayed on both sides of the vehicle.

Vehicles operating within the limits of the mine will be required to meet the mine safety standards.

Phase 2 of the project may have limited accessibility initially and require a 4-person off-road utility vehicle to be provided by the consultant. Off-road utility vehicle expenses will be compensated in accordance with Exhibit “B” of the contract documents, Method of Compensation.

6.5 Field Equipment:

Supply survey, inspection, and testing equipment essential to perform services under this Agreement; such equipment includes non-consumable and non-expendable items.

Hard hats and safety vests shall have the CONSULTANT’s name 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.

Handling of nuclear density gauges shall be in compliance with license requirements.

Retain responsibility for risk of loss or damage to said equipment during performance of this Agreement. Maintain field office equipment at all times.

6.6 Licensing for Equipment Operations:

Obtain proper licenses for equipment and personnel operating equipment when licenses are required. The license and supporting documents shall be available for verification by the COUNTY, 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:

For the duration of the Agreement, keep the COUNTY's Project Manager informed of all significant activities, decisions, correspondence, reports, and other communications related to its CONSULTANT's responsibilities under this Agreement.

Facilitate communications between all parties (i.e. architectural, mechanical, materials, landscaping, local agencies, etc.), ensuring responses and resolutions are provided in a timely manner. Maintain accurate records to document the communication process.

Inform the designated COUNTY project personnel of any design defects, reported by the Contractor or observed by the CONSULTANT.

Submit all administrative items relating to Invoice Approval, Personnel Approval, Time Extensions, and Change Orders/Supplemental Task Authorizations to the COUNTY Project Manager for review and approval.

8.0 PERFORMANCE OF THE CONSULTANT:

During the term of this Agreement and all Change Orders/Supplemental Task Authorizations thereof, the COUNTY will review various phases of the CONSULTANT's operations, such as construction inspection, materials sampling and testing, and administrative activities, to determine compliance with this Agreement. Cooperate and assist COUNTY representatives in conducting the reviews. If deficiencies are indicated, immediately implement remedial action. Document the COUNTY's recommendations and the CONSULTANT's 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 seven (7) calendar days of notification.
- B. Immediately replace personnel whose performance has been determined by the CONSULTANT and/or the COUNTY 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:

Administer, monitor, and inspect the Construction Contract such that the project is constructed in conformance with the plans, specifications, and special provisions of the Construction Contract.

Observe the Contractor's work to determine the progress and quality of work. Identify discrepancies, report significant discrepancies to the COUNTY, and direct the Contractor to correct such observed discrepancies.

Seek input from the COUNTY Project Manager relating to all Change Order/Supplemental Task Authorization requests. Change Orders/Supplemental Task Authorizations must be determined to be in accordance with Florida law by the CONSULTANT prior to approval by the COUNTY. Prepare the Change Order/Supplemental Task Authorization as a recommendation to the COUNTY, which the COUNTY may accept, modify or reject upon review. Consult with the COUNTY Project Manager as necessary and direct all issues that exceed delegated authority to the COUNTY Project Manager for COUNTY action or direction.

Inform the designated COUNTY project personnel of any significant omissions, substitutions, defects, and deficiencies noted in the Contractor's work and the corrective action that has been directed to be performed by the Contractor.

9.2 Independent Engineering Judgement:

Exercise independent engineering judgment in pursuit of the project. Personnel are expected to gather information from project inspection personnel and make informed, technically sound decisions to promote timely, successful completion of the project without sacrificing quality. For technical issues that require coordination with the COUNTY, all levels of CEI Project Engineer shall be expected to present options for consideration along with a preferred option. Engineering experience and expertise are considerations for the selection of CONSULTANT staff. It is the COUNTY's expectation that this experience and expertise will be employed by CONSULTANT staff to make sound engineering judgments and recommendations throughout the project.

9.3 Public Safety:

Hold public safety paramount throughout the project. If the CONSULTANT determines that any activity of the Contractor poses an imminent hazard to the public, the CONSULTANT shall direct the Contractor to immediately cease the activity and to close the affected lanes of traffic until the deficiency is addressed.

9.4 Timely Resolution:

Prioritize the COUNTY's goal of the timely and successful completion of the project. Work to actively develop solutions to issues encountered on the project in an expedient manner and work to ensure that issues do not persist for long periods without resolution.

9.5 Survey Control:

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 measurements 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 or other COUNTY approved format.

Any questions or requests for “Waiver of Survey” should be directed to the COUNTY Project Manager.

9.6 On-site Inspection:

Monitor the Contractor's on-site construction activities and inspect materials in accordance with the Contract Documents for the Construction Contract to determine that the projects are constructed in reasonable conformity with such documents. Maintain detailed accurate records of the Contractor's daily operations and of significant events that affect the work. The COUNTY will monitor off-site activities and fabrication unless otherwise stipulated by this Agreement.

Monitor and inspect Contractor’s Temporary Traffic Control Plan and review modifications to the Temporary Traffic Control Plan, including Alternate Traffic Control Plan, in accordance with the COUNTY’s procedures. CONSULTANT employees performing such services shall be qualified in accordance with the COUNTY’s procedures.

9.7 Sampling and Testing:

Perform sampling and testing of component materials and completed work in accordance with the 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, provide daily surveillance of the Contractor's Quality Control activities and perform the sampling and testing of materials and completed work items for verification and acceptance.

As requested by the COUNTY, the CONSULTANT will perform inspection and sampling of materials and components at locations remote from the project site and the CONSULTANT will perform testing of materials normally performed in a laboratory remote from the project site.

Determine the acceptability of all materials and completed work items on the basis of either test results or verification of a certification, certified mill analysis, DOT label, DOT stamp, etc.

Sampling, testing and laboratory methods shall comply with the Contract Documents.

Prepare and submit sampling and testing documentation reports to the COUNTY the same week that the construction work is performed.

Transport samples to be tested in a Florida Department of Transportation approved laboratory. When required, transport resolution samples to a secondary FDOT approved

laboratory or appropriate local FDOT facility within 24 hours after the initial cure. The Project Administrator will provide the VT Laboratory ID number for sample delivery. Transmittal card must accompany the sample. A chain of custody (if provided by the VT firm) must be signed by the CCEI and VT representatives for sample tracking purposes and maintained by both the CCEI and VT firms.

9.8 Engineering Services:

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 COUNTY for failure of such parties to follow written direction issued by the CONSULTANT.

Services shall include maintaining the required level of surveillance of Contractor activities and interpreting the Contract Documents for the Construction Contract. Maintain complete, accurate records of all activities and events relating to the project and properly document all project changes. All reports, records, documents, and miscellaneous work product produced by the CONSULTANT shall be made available upon request of the COUNTY at no additional cost to COUNTY. The following services shall be performed:

- (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.
- (2) If requested by the County, provide design phase plan reviews, and provide written recommendations to the COUNTY.
- (3) Attend construction contract bid opening conducted by the COUNTY. Evaluate the bidders received by the COUNTY and provide written recommendation to award to the COUNTY.
- (4) 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, CONSULTANT shall provide at least one (1) inspector who has successfully completed the "Florida Stormwater, Erosion, and Sedimentation Control Training and Certification Program for Inspectors and Contractors". The CONSULTANT's inspector shall 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.
- (5) Analyze the Contractor's schedule(s) (i.e., baseline(s), revised baseline(s), updates, as-built, etc.) for compliance with the Contract Documents. Elements including, but not limited to, completeness, logic, durations, activity, flow, milestone dates, concurrency, resource allotment, and delays will be reviewed. Verify the schedule conforms with the construction phasing and MOT sequences, including all contract modifications. Provide a written review of the schedule identifying significant omissions, improbable or unreasonable activity durations, errors in logic, and any other concerns as detailed in CPAM.
- (6) Analyze problems that arise on a project and proposals submitted by the Contractor; work to resolve such issues and process the necessary documentation.

- (7) 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, COUNTY's staff and Contractors executing the work. Identify potential utility conflicts and assist in the resolution of utility issues including COUNTY and Local Government owned facilities.

Identify, review, and track progress of Utility Work by Highway Contractor Agreements (UWHCA), Joint Project Agreements, and/or other COUNTY 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.

- (8) Produce reports, verify quantity calculations and 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 COUNTY to make timely payment to the Contractor.
- (9) Provide Community Outreach Services and be proactive in keeping the community aware of the status and traffic impacts of the referenced project. With approval from the COUNTY'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 and news releases) necessary for this contract. Prior to release, the COUNTY's designee will approve all responses, letters, news releases, etc. Provide timely, professional responses to project inquiries including emails, telephone calls, etc. Coordinate public information meetings, open houses, community meetings as directed by the COUNTY's representatives. Notify the COUNTY Project Manager of any/all Lane Closures, Road Closures, Sidewalk, Bike Path or Shared Use Paths for submission to the COUNTY's Road-Watch publication. Develop and maintain a project specific website to be
- (10) Prepare and submit to the COUNTY Project Manager a monthly status report, in a format to be specified by the COUNTY.
- (11) Provide a digital video recording of 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.
- (12) 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.

9.9 Geotechnical Engineering:

The prime Consultant may engage the services of a geotechnical subconsultant to perform some of the services indicated in this section. However, the prime Consultant will be responsible to the COUNTY for the satisfactory performance and timeliness of these services.

The prime Consultant will be required to interact with the Geotechnical Engineer of Record and COUNTY. All references to the COUNTY in the following sections implicitly include the COUNTY and his/her delegated representative on the project, who may be the COUNTY in-house personnel or a subconsultant working for the COUNTY .

Become familiar with the existing site conditions and the Contract Documents. Observe and record the progress and quality of foundation work to determine that the foundations are constructed at the correct locations and elevations, identify discrepancies, and direct the Contractor to correct such observed discrepancies. Attend the Preconstruction Conference and/or special geotechnical meeting for the Construction Contract. All services under this section will be performed in accordance with FDOT Specification Section 455. Inspect and verify that the Contractor has performed the foundation work in accordance with applicable FDOT Specification Section 455 and other Contract Documents. Provide qualified Geotechnical Engineers and CTQP-qualified inspectors in Drilled Shaft/Pile Driving/Auger Cast Pile inspection, relevant to the foundation type(s) required in the plans. Schedule and coordinate meetings and facilitate communications between the Contractor and any Specialty Contractors, the CEI, and the COUNTY as needed. Observe and verify that all work is performed in accordance with the Contract Documents. Ensure that any specialty work is completed as necessary to accomplish its intent.

The following geotechnical engineering services shall be performed:

1) Drilled Shafts:

- Process and review the Drilled Shaft Installation Plan in accordance with CPAM.
- Schedule and coordinate a pre-drilled shaft installation meeting to review and discuss the drilled shaft installation procedures. Make sure that the Contractor's field superintendent, CEI's drilled shaft inspector(s), and the COUNTY are invited. Prepare and distribute meeting minutes to the attendees.
- Inspect installation of test holes (methods shafts), load test shafts, and production shafts and ensure they are constructed in accordance with Contract Documents for the Construction Contract. Report to the COUNTY any problems observed during the installation of the test holes, deviations from the Drilled Shaft Installation Plan or Contract Documents, and construction quality issues associated with the Contractor's methods.
- If there are pilot holes in the project, advise the COUNTY on the pilot hole schedule. Verify the pilot hole locations. Inspect the performance of the pilot holes and complete the proper FDOT inspection form, describing accurately the soils/rocks encountered and corresponding depths, the results of field testing performed (Standard Penetration Test blow counts, Cone Penetration Tests, or other, if applicable) and the results of the rock coring performed (coring time, recovery and RQD).
- Analyze the load test data, pilot holes and any other available soils/rock data as required to establish final drilled shaft tip elevations and minimum rock socket lengths. Submit report(s) recommending production shaft tip elevations, minimum rock socket lengths and any other recommendations that may be required in the project (such as rock socket material definition and impact of permanent or

temporary casing on the required minimum socket lengths) to the COUNTY for approval.

- Inspect the bottom of the shafts for cleanliness using manual soundings or shaft inspection device as required in the Contract Documents.
- Complete all necessary drilled shaft inspection forms and keep a log of all inspections made of the shafts. Observe the performance of any load tests and verify that the details are implemented as planned.
- Provide completed drilled shaft inspection forms for all production and test shaft installations to the COUNTY upon completion of the drilled shaft installation.
- When conditions occur which are different from those indicated on the plans, immediately report them to the Geotechnical Engineer of Record and the COUNTY. Recommend adjustments to the authorized depths as necessary to obtain the shaft capacity to the COUNTY for approval.
- Review the drilled shaft logs and the concrete placement logs to identify possible shaft integrity problems and potential causes. Communicate identified issues to the COUNTY.
- Hire a Specialty Engineer to perform non-destructive integrity testing of drilled shafts as required to estimate shaft uniformity and to detect possible shaft defects. Report results to the COUNTY.
- Evaluate problems encountered during construction, and coordinate with the COUNTY and the Contractor to resolve such problems, including possible withdrawing Drilled Shaft Installation Plan approval.

2) Piles:

- Process and review the Pile Installation Plan in accordance with CPAM.
- Perform preliminary Wave Equation Analyses to assess and provide comments regarding the suitability of hammer driving system(s) included in the Pile Installation Plan. Provide analyses results (estimated blow count ranges for the nominal bearing resistances, installation stresses etc.) to the COUNTY.
- Schedule and coordinate a pre-pile installation meeting to review and discuss the pile installation procedures. Make sure the Contractor's field superintendent, CEI's pile inspectors, and the COUNTY are invited. Prepare and distribute meeting minutes to the attendees.
- Provide personnel proficient in operation of the PDA or EDC monitoring equipment required for the project, for data collection, interpretation and analysis. Utilize the most current version of equipment and software for dynamic testing and dynamic data analysis.
- Perform dynamic testing per the Contract Documents during initial driving and re-drives. Submit electronic Pile Driving Analyzer (PDA) and Embedded Data Collector (EDC) files upon completion of the test pile installation.
- Inspect and record the test pile driving process in accordance with CPAM.
- Perform signal matching analysis on test pile data for selected blows, using the latest software version. At a minimum, signal matching analysis shall be performed on initial drive data where required resistance is obtained below the minimum tip elevation and on set-check data (if any). If requested in special circumstances, the end of drive signal matching analysis will be performed in the field upon completion of the drive; otherwise, it shall be completed within 24 hours of driving the instrumented pile.
- Analyze the test data and available soils data as required to establish production pile lengths and driving criteria. The analysis must include signal matching analysis and wave equation calibration analysis to determine a pile driving-soil system model that will predict accurately driving resistance with stroke (or

pressure) and blows per foot while matching transferred energy and dynamic stresses with the ones measured in the field. Submit preliminary report(s) recommending production pile lengths and driving criteria to the COUNTY for approval. The preliminary report shall include printed & plotted Signal Matching and Wave Equation Analysis outputs, and electronic files (Windows compatible) of all raw data obtained by the PDA and EDC equipment and the signal matching and wave equation analyses.

- Furnish final written letters, signed and sealed, for production pile lengths and the driving criteria in accordance with CPAM. When applicable, include recommendations to determine “firm bearing material”.
- Inspect the conditions of the piles prior to installation, including any pile splices.
- Observe and verify that concrete piles were properly supported during storage and handled with appropriate pick-up details per the Contract Documents.
- Inspect and record the pile driving installation. Provide a pile inspection device that displays and stores electronically for every hammer blow along with a timestamp: stroke for open-ended diesel hammers and blows per foot and blows per minute for all hammers. The device must auto-generate the Department’s Pile Driving Record form and export the non-editable electronic data in a format compatible with the Pile Driving Record form. Use this device during the inspection of test piles and production piles.
- Observe the performance of any static or statnamic load tests and review the details are implemented as planned.
- Evaluate problems encountered during construction and coordinate with the DGE and the Contractor to resolve such problems, including possible additional testing and withdrawing the Pile Installation Plan.

3) Spread Footings:

- Observe construction of spread footing foundations and verify that they are founded at the required elevation and on the proper soil/rock material.
- Verify the Construction Plan requirements and the applicable specifications are followed throughout the spread footing construction.
- Evaluate problems encountered during construction and coordinate with the COUNTY and the Contractor to resolve such problems.

9.10 Schedule Development and Review:

Provide a qualified CEI Scheduler experienced in Primavera scheduling software. The CEI Scheduler will be provided all necessary information for this assignment, including confidential engineering estimates. Analyze Contractor’s schedule(s) (i.e. baseline(s), revised baselines(s), updates, as-built, etc.) for compliance with contract documents. Elements including, but not limited to, completeness, logic, durations, activity, flow, milestone dates, concurrency, resource allotment, and delays will be reviewed. Verify the schedule conforms with the construction phasing and MOT sequences, including all contract modifications. Provide a written review of the schedule identifying significant omissions, improbable or unreasonable activity durations, errors in logic, and any other concern as detailed in CPAM.

9.11 Asphalt Plant Services:

Provide Asphalt Plant Inspection services for Verification:

- Ensure that all Bituminous Verification requirements are met.
- Provide recommendations regarding the disposition of substandard materials.
- Generate the Random Numbers and notify the Quality Control (QC) technician after the mixture is produced and instruct when the QC technician shall take the sample.
- Perform testing and inspection within the allotted timeframe, as defined in the contract documents. Perform daily inspections of the Producer's Facility to ensure that the Producer is complying with their QC Plan and the contract documents. Document all inspections in daily journal.
- Keep a daily journal using a format or electronic system directed by the COUNTY Project Manager documenting the arrival and departure time, failures, QC, Process Control (P.C.), and all verification inspections performed, any production related problems, and any other pertinent information that the COUNTY directs to be documented. Electronically submit the daily journal to the COUNTY Project Manager at the completion of production for the day.
- Observe the QC testing for accuracy (on a random yet consistent basis) to ensure that the QC staff is accurately documenting the weights and calculations of the test results performed. Submit the copy of handwritten data to COUNTY, as requested. Be familiar with the Producer's QC Plan for the facility and ensure that QC staff is following the Plan.
- Notify the COUNTY Project Manager immediately when recurring problems are encountered, or serious lapses occur with the QC staff following their Producer QC Plan or the contract documents.
- Be knowledgeable of the contract documents pertaining to Asphalt Production and testing at the Producer facilities.
- Document all material sample failures and all specification violations in the daily journal and notify the Project Administrator (PA) and the District Bituminous Office immediately.
- Perform a daily review of the QC worksheets and records for accuracy and completeness. Notify the PA and the COUNTY if the QC staff fails to complete the testing and pertinent paperwork within 24 hours. Make every effort to verify lots within the 24-hour timeframe, and on days the plant is producing.
- If resolution testing is required, notify the PA and the COUNTY immediately. After obtaining the resolution test results from an independent FDOT approved testing facility, update the Composite Pay Factor (CPF) Worksheet and other pertinent Department forms. Reissue revised forms to the PA within 24 hours of receiving the results from the independent FDOT approved testing facility unless directed otherwise. Provide the following additional plant inspection and testing related services, as requested:
 - Label and sign V and R sample boxes.
 - Inspect the asphalt plant, review, and analyze both QC and V test results and verify QC technician reports in Department's database are accurate.
 - Notify the Materials lab when Lot is completed and when Verification Technician needs to be sent to verify the completed lot.
 - Update the daily production spreadsheet.
 - Recommend to stop or restrict asphalt plant production.
 - Approve, monitor, revise, transfer, and terminate Asphalt Mix Designs, as applicable.

10.0 **PERSONNEL:**

10.1 **General Requirements:**

Provide prequalified personnel necessary to efficiently and effectively carry out all responsibilities under this Agreement. Method of compensation for personnel assigned to this project is outlined in Exhibit "B" of the contract documents.

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

10.2 **Desired Personnel Qualifications:**

Provide competent personnel qualified by experience and education. Submit to the COUNTY Project Manager the names of personnel proposed for assignment to the project,

Including a detailed resume for each containing at a minimum: education, and experience. Requests for personnel approval shall be submitted to the COUNTY Project Manager at least 14 calendar days 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 the COUNTY. Staff that has been removed shall be replaced by the CONSULTANT within seven (7) calendar days of COUNTY notification.

Desired qualifications for the CONSULTANT personnel are set forth as follows: Exceptions to these desired qualifications will be considered on an individual basis. For CTQP certifications which require training specifically developed for Department specifications, the CONSULTANT may propose project staff possessing an equivalent certification from a national or other state DOT accreditation program. These exceptions may be granted under the stipulation that the appropriate CTQP certification be obtained prior to the corresponding work activity or such other time as approved by the COUNTY Project Manager. The COUNTY Project Manager or designee shall have the final approval authority on such exceptions.

Except as noted herein, before the project begins, all project staff shall have a working knowledge of the Contract Documents 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 COUNTY and should occur as workload permits. Visit the training page on the State Construction

CEI SENIOR PROJECT ENGINEER - LICENSURE:

- Professional Engineer (PE) registered in the State of Florida
 - Ability to obtain endorsement in the State of Florida within six months of Project NTP if registered in another state

EXPERIENCE:

- Six (6) years of engineering experience
 - Two (2) of those years involved in relevant transportation projects
 - Exception: Five (5) years for Complex Category 2 (CC2) and PTS bridge structures
- A Master's Degree in Engineering may be substituted for one (1) year engineering experience.

QUALIFICATIONS/ CERTIFICATIONS:

- FDOT Advanced MOT
- CTQP Quality Control Manager (Attend and pass the examination)
 - To be achieved by Project NTP, if CEI Project Administrator/ Project Engineer holds qualification at time of proposal

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)

- Responsible for: Directing a highly complex and specialized construction engineering administration and inspection program;
- Responsible for: Planning and organizing the work of subordinate and staff members;
- Responsible for: Developing and/or reviewing policies, methods, practices, and procedures;

- Responsible for: Reviewing programs for conformance with Department standards.

CEI PROJECT ADMINISTRATOR/PROJECT ENGINEER -
EDUCATION:

- High School Diploma or Equivalent

LICENSURE (FOR CEI PROJECT ENGINEER):

- Professional Engineer (PE) registered in the State of Florida
 - Must obtain endorsement in the State of Florida within six (6) months of Project NTP if registered in another state

EXPERIENCE:

For personnel with Engineering, Engineering Technology or Construction Management degrees:

- Two (2) years of engineering experience in relevant transportation projects.
- A Master's Degree in Engineering, Engineering Technology, or Construction Management may be substituted for one (1) year of engineering experience

For personnel without Engineering, Engineering Technology or Construction Management degrees:

- Eight (8) years of CEI or roadway or bridge construction experience,
- Two (2) of those years involved in relevant transportation projects.

QUALIFICATIONS/ CERTIFICATIONS:

Qualifications/certifications for this position may be obtained within six (6) months from the date of hire provided that this position works under the supervision and direction of a Senior Project Engineer, all other requirements for the position are met, and a training plan is submitted detailing when the qualifications/certifications will be obtained.

- FDOT Advanced MOT
- CTQP Final Estimates Level II
- CTQP Quality Control Manager (Attend and pass the examination)

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Receiving general instructions regarding assignments and exercising initiative and independent judgment in the solution of work problems.
- Responsible for: Directing and assigning specific tasks to administrative and field staff and assisting in all phases of the construction project.
- Responsible for: Progress estimates and final estimates throughout the construction project duration.

CEI ASSISTANT PROJECT ADMINISTRATOR/PROJECT ENGINEER –
EDUCATION:

- High School Diploma or Equivalent

LICENSURE (FOR CEI ASSISTANT PROJECT ENGINEER):

- Professional Engineer (PE) registered in the State of Florida
 - Ability to obtain endorsement in the State of Florida within six (6) months of Project NTP if registered in another state

EXPERIENCE:

For personnel with Engineering, Engineering Technology, or Construction Management degrees:

- One (1) year of engineering experience in relevant transportation projects.

For personnel without Engineering, Engineering Technology, or Construction Management degrees:

- Six (6) years of responsible and related engineering experience
 - Two (2) of those years involved in construction of relevant transportation projects

QUALIFICATIONS/ CERTIFICATIONS:

- FDOT Advanced MOT
 - May obtain with six (6) months after Project NTP if holding a current FDOT Intermediate MOT certificate
- CTQP Final Estimates Level II

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)

CEI CONTRACT SUPPORT SPECIALIST -
EDUCATION:

- High School Diploma or Equivalent

EXPERIENCE:

For personnel with Engineering, Engineering Technology, or Construction Management degrees:

- No prior experience is required

For personnel without Engineering, Engineering Technology, or Construction Management degrees:

- Four (4) years of CEI experience having performed/assisted in project related duties (i.e., Materials Acceptance and Certification (MAC) System input, progress and final estimates, EEO compliance, processing Construction Contract changes, etc.); or

QUALIFICATIONS/CERTIFICATIONS:

- CTQP Final Estimates Level II

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Exercising independent judgment in planning work details and making technical decisions related to the office aspects of the project
- Responsible for: Familiarity with the Department's Procedures covering the project related duties as stated above and proficient in the computer programs necessary to perform those duties.

CEI SENIOR INSPECTOR-

EDUCATION:

- High school graduate or equivalent

EXPERIENCE:

- Four (4) years of CEI experience in roadway or bridge construction

QUALIFICATIONS/ CERTIFICATIONS:

Must have the following as required by the scope of work for the intended assignment on the project at the time of NTP:

- CTQP Final Estimates Level I
- 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 structure foundations
- FDOT Intermediate MOT
- IMSA Traffic Signal Inspector Level I
- Nuclear Radiation Safety
- Florida Stormwater, Erosion, and Sedimentation Control Training and Certification Program for Inspectors and Contractors

Recommended when the scope of the project includes concrete pavement, grinding concrete pavement, or concrete pavement slab replacement. Courses are available from the Transportation Curriculum Coordination Council (TC3).

- PCC Paving Inspection (TC3CN004-15-T1)
- Diamond Grinding and Grooving (TC3MN009-15-T1)
- Curing, Sawing and Joint Sealing (TC3CN032-16-T1)

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Performing highly complex technical assignments in field surveying and construction layout, marking, and checking engineering computations, inspecting construction work, and conducting field tests
- Responsible for: Coordinating and managing the lower level inspectors
- Responsible for: Performing work under the general supervision of the Project Administrator

CEI INSPECTOR –

EDUCATION:

- High School Diploma or Equivalent

EXPERIENCE:

- Two (2) years of experience in construction inspection,
 - One (1) year of which shall have been in bridge and/or roadway construction.

QUALIFICATIONS/ CERTIFICATIONS:

Qualifications/certifications for this position may be obtained within six (6) months from the date of hire provided that the position works under the supervision and direction of a Senior Inspector or Senior Engineer Intern, all other requirements for the position are met, and a training plan is submitted detailing when the qualifications/certifications will be obtained.

Must have the following as required by the scope of work for the intended assignment on the project at the time of NTP:

- CTQP Final Estimates Level I
- 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, lighting, and traffic signal structure foundations
- IMSA Traffic Signal Inspector Level I

- FDOT Intermediate MOT
- Nuclear Radiation Safety
- Florida Stormwater, Erosion, and Sedimentation Control Training and Certification Program for Inspectors and Contractors

Recommended when the scope of the project includes concrete pavement, grinding concrete pavement, or concrete pavement slab replacement. Courses are available from the Transportation Curriculum Coordination Council (TC3).

- PCC Paving Inspection (TC3CN004-15-T1)
- Diamond Grinding and Grooving (TC3MN009-15-T1)
- Curing, Sawing and Joint Sealing (TC3CN032-16-T1)

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Receiving general supervision from and assisting the Senior Inspector in the performance of their duties

CEI ASPHALT PLANT INSPECTOR

EDUCATION:

- High School Graduate or equivalent

EXPERIENCE:

- One (1) year of 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

CERTIFICATIONS/QUALIFICATIONS:

- CTQP Asphalt Plant Level 1
- CTQP Asphalt Plant Level 2

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Responsible for: Receiving general supervision from and assisting the Senior Inspector in the performance of their duties

SUR CREW CHIEF –

EDUCATION:

- High School Diploma or Equivalent

EXPERIENCE:

- Four (4) years of experience in construction surveying
 - Two (2) years as Crew Chief
- Experienced in field engineering and construction layout, making and checking survey computations, and supervising a survey party

ABILITIES/ RESPONSIBILITIES:

- Ability to: Communicate effectively in English (verbally and in writing)
- Ability to: Perform work under general supervision of the Project Administrator

CEI COMMUNITY OUTREACH SPECIALIST- High School Graduate or equivalent and be knowledgeable in community outreach 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.

SENIOR GEOTECHNICAL ENGINEER for Bridge Pile Foundations-

LICENSURE:

- Professional Engineer registered in the State of Florida or ability to obtain registration in the State of Florida within six (6) months

EXPERIENCE:

Ten (10) years of experience as a Geotechnical Engineer in responsible charge of geotechnical work, including at least two (2) Category II bridges with pile foundations

For Pile Driving Analyzer (PDA):

- Rank of “Intermediate”, at minimum, on the Pile Driving Contractors Association (PDCA) Dynamic Measurement and Analysis Proficiency Test
- Have been in responsible charge of Geotechnical foundation construction engineering and dynamic testing work on at least five (5) Department bridge projects. The experience may be obtained while working under the supervision of another qualified Professional Engineer.
- Have worked on activities related to dynamic pile testing, signal matching analysis (e.g., CAPWAP analysis), and wave equation analysis.

For Embedded Data Collector (EDC):

- Have been in responsible charge of Geotechnical foundation construction engineering and dynamic testing work on at least five (5) Department bridge projects.
- Have worked on activities related to activities of dynamic pile testing, wave equation analysis, and to be proficient on the EDC “Smart Pile Review” software and “FDOT Method” of capacity analysis

ABILITIES/RESPONSIBILITIES:

- Responsibility for: Analyzing and interpreting the results of non-destructive testing of pile foundations, dynamic load testing (PDA/EDC) and static load testing.
- For scopes with Embedded Data Collector (EDC):
 - Supervise the EDC Operator

GEOTECHNICAL ENGINEER for Bridge Pile Foundations-

LICENSURE:

Professional Engineer registered in the State of Florida or ability to obtain registration in the State of Florida within six (6)

EXPERIENCE:

- Four (4) years of experience as a Geotechnical Engineer performing, analyzing and interpreting the results of non-destructive testing of pile foundations, dynamic load testing (PDA/EDC) and static load testing.

For Pile Driving Analyzer (PDA)

- Rank of “Intermediate”, at minimum, on the Pile Driving Contractors Association (PDCA) Dynamic Measurement and Analysis Proficiency Test

- Have been in responsible charge of Geotechnical foundation construction engineering and dynamic testing work on at least five (5) Department bridge projects. The experience may be obtained while working under the supervision of another qualified Professional Engineer.
- Have worked on activities related to dynamic pile testing, signal matching analysis (e.g., CAPWAP analysis), and wave equation analysis.

For Embedded Data Collector (EDC)

- Have worked on activities related to dynamic pile testing, wave equation analysis, and to be proficient on the EDC “Smart Pile Review” software and “FDOT Method” of capacity analysis.
- Completed the SmartPile EDC training course.

SENIOR 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.

The senior CEI Geotechnical Technician/Operator must meet the following as required by the scope of work of the project:

For Pile Driving Analyzer (PDA)

- Rank of “Intermediate”, at minimum, on the Pile Driving Contractors Association (PDCA) Dynamic Measurement and Analysis Proficiency Test
- Experience testing at least five (5) Department bridges. The experience may be obtained while working under the supervision of another qualified Operator.

For Embedded Data Collector (EDC)

Completed the SmartPile EDC training course

GEOTECHNICAL TECHNICIAN for Pile Foundations- Qualified CTQP Pile Driving Inspector, knowledgeable in pile installation.

SENIOR GEOTECHNICAL ENGINEER for 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) with ten (10) years of experience as a Geotechnical Engineer in responsible charge of geotechnical work, including at least one Category II 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.

GEOTECHNICAL ENGINEER for 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) with 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.

SENIOR 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 with at least two (2) Department bridge projects.

GEOTECHNICAL TECHNICIAN for Drilled Shaft Foundations

Qualified CTQP Drilled Shaft Inspector, knowledgeable in drilled shaft installation.

ENVIRONMENTAL SPECIALIST-

EDUCATION:

- Bachelor's Degree in Environmental Science

EXPERIENCE:

- Three (3) years of professional experience
- 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.

QUALIFICATIONS/CERTIFICATIONS:

For projects involving management and erosion control practices:

- FDEP Stormwater Erosion and Sedimentation Control Inspector

10.3 Staffing:

Once authorized, the CONSULTANT shall establish and maintain appropriate staffing 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 COUNTY 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 up to ten (10) calendar days to demobilize, relocate, or terminate such forces.

11.0 QUALITY ASSURANCE (QA) PROGRAM:

11.1 Quality Assurance Plan:

Within 30 days after receiving award of an Agreement, CONSULTANT shall furnish a QA Plan to the COUNTY 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 COUNTY 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 performed in accordance with the Contract Documents 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 COUNTY 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 Records:

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 COUNTY, upon request, during the Agreement term. All records shall be kept at the primary job site and 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, or CONSULTANT's approved QC Plan and the COUNTY's as required by CPAM.

Submit the Final Estimate(s) and one (1) set of final "as-built plans" documenting the 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 Final Estimate Package shall have the CTQP Final Estimates Level II certification.

13.0 AGREEMENT MANAGEMENT:

13.1 General:

- (1) With each monthly invoice submittal, the will CONSULTANT provide a Status Report for the Agreement. This report will provide an accounting of 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 SUB-CONSULTANT.
- (2) When the CONSULTANT identifies a condition that will require an amendment to the Agreement, the CONSULTANT will communicate this need to the COUNTY Project Manager for acceptance. Upon acceptance, CONSULTANT shall prepare and submit a Change Order (CO)/Supplemental Task Authorization (STA), and all accompanying documentation to the COUNTY Project Manager for approval and further processing. The CO/STA is to be submitted at such time to allow the COUNTY 12 weeks to process, approve, and execute the CO/STA. The content and format of the CO/STA and accompanying documentation shall be in accordance with the instructions and format to be provided by the COUNTY.
- (3) The CONSULTANT is responsible for performing follow-up activities to determine the status of each CO/STA submitted to the COUNTY.

14.0 OTHER SERVICES:

Upon written authorization by the COUNTY Project Manager or designee, the CONSULTANT will perform additional services in connection with the project not otherwise identified in this

Agreement. The following items are not included as part of this Agreement but may be required by the COUNTY 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 project covered by this Agreement.
- B. Provide qualified engineering witnesses and exhibits for arbitration hearings or litigation 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.

15.0 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 CO/STA to this Agreement.

16.0 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.

17.0 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.

18.0 COUNTY AUTHORITY

The COUNTY 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.