

SCOPE OF SERVICES

Consultant Engineering and Inspection Services

Interstate 85/385 Interchange Improvements Greenville County

Description

The **Interstate 85/385 Interchange Project** consists of improvements to the Interstate 85/Interstate 385 System Interchange, widening of I-385 through the interchange area and rehabilitation to portions of I-85 just north and south of the interchange area. The purpose of this project is to improve the safety, operation, capacity and condition of the interchange of Interstate 85 and interstate 385 and the adjacent segments of interstate roadway. The Project will be accomplished utilizing the design-build contracting method.

Scope of Services

The SCDOT desires to hire a Consultant that possesses past design-build experience and is capable to perform Construction Engineering and Inspection (CEI) Services for the Project to include, but not limited to, construction management, construction engineering, assurance and acceptance inspection, sampling, testing, and construction survey verifications to determine compliance with the contract requirements. The Consultant will provide services that conform to current state policy and practice of construction engineering including certification of personnel. The performance of the services will: ensure that quality materials are being incorporated into the project, ensure that quality workmanship is utilized on the project, ensure that the work of the contractor is progressing in accordance with the proposed schedule, and ensure compliance with applicable state laws regarding environmental issues. Other tasks may be added as deemed necessary by the SCDOT.

Project Management

Consultant shall provide a Project Engineer over the project. This project shall be the Project Engineer's sole responsibility. SCDOT's Resident Engineer or his designee will provide daily supervision on the project and will make final decisions. The Project Engineer will report directly to SCDOT's Resident Engineer or his designee. The Project Engineer will be responsible for ensuring an appropriate level of inspection for all phases and aspects of the project. The Project Engineer will direct a staff of Project Inspectors that will carry out the majority of the inspection, sampling, and testing responsibilities on the project.

Consultant shall provide a Materials Management Engineer. The duties for this engineer shall include coordination with project inspectors to ensure all samples and certifications are obtained and tests are performed as described in the SCDOT Construction Manual, Standard Specifications, Special Provisions and Supplemental Specifications. Additional

task include logging all samples into the project sample log, tracking test results, ensuring check samples are taken as needed, addressing failing samples with the required documentation and coordination with SCDOT's material lab for the purpose of alternate testing.

All references to the Project Engineer, Materials Management Engineer, staff of inspectors, or to any individual inspector in the scope of services section shall be as Consultant.

Contract Management & Administration

The Consultant shall provide office engineering, scheduling and administration staff to adequately manage the project to include, but not limited to the tasks as listed below.

1. Document management
 - a. Software
 - b. Personnel
 - c. Interface with Design-Build contractor as necessary
 - d. Hard copies and electronic data
 - e. Construction submittals & tracking
2. EEO compliance
3. DBE plan and program monitoring
4. Training program
5. Safety program
6. Contractor pay requests and estimate generation
 - a. Verification and approvals
7. Endorse partnering concept
8. Dispute management
9. Construction contract change order generation
10. Project documentation
 - a. SiteManager DWR
 - b. Photo and video gallery
 - c. Materials sampling and testing
 - d. Project inspection reports
11. Project schedule
 - a. CPM analysis
 - b. Schedule approval recommendation
 - c. Progress Reports
 - d. Updates
12. Contractor submittals
 - a. Submittal review Coordination and Tracking
 - b. Independent analysis & estimate of change orders
 - c. Claims review
 - d. Certification of Contractor's inspection personnel
 - e. As-Built Plans
13. Resource agency coordination
 - a. Environmental mitigation/permit monitoring
 - b. Water quality monitoring
 - c. Permit requirement tracking

- d. Permit modification tracking
- 14. Right-of-way coordination
 - a. Acquisition schedule/Special provision adherence
 - b. Relocation, demolition and clearing activities
 - c. Hazardous material handling activities
- 15. Utility coordination
 - a. Utility company facilitation
 - b. Specification conformance reviews
 - c. Utility relocation diaries
- 16. Project Closeout (completed within 180 days of project Substantial completion)
 - a. Final Inspection
 - b. Completion of Punchlist
 - c. Materials Certification preparation and submittal
 - d. DBE Compliance Review
 - e. Final Quantities and Estimate
 - f. Review Contractor As-built plans

Inspection and Testing Services

Consultant shall provide a sufficient number of Project Inspectors to perform the majority of the on-site inspection and testing duties in accordance with the project Quality Assurance Program. Consultant shall be responsible for verifying and documenting that the quantities of testing Quality Control and Quality Acceptance (QC and QA) are being met and maintain master project QC and QA records. The Consultant shall review the Contractor's Quality Control (QC) Plan and recommend for approval in accordance with contract documents. Consultant shall interface and coordinate with the Contractor's QC personnel on a daily basis. The Project Inspectors shall report directly to the Project Engineer who shall direct the daily work of the inspectors. Project Inspectors shall coordinate all sampling and certification information with the Materials Management Engineer. These inspectors will be responsible for highly technical and specialized inspection and testing procedures for roadway and bridge construction in the areas of concrete, foundations, soils and earthwork, asphalt roadway, concrete paving, erosion control, maintenance of traffic, and others. These positions will be expected to be SCDOT certified in the areas mentioned, or possess the ability to become certified through the SCDOT certification program. The following tasks have been developed to address the aforementioned goals and objectives.

1. Perform Inspection and Quality Acceptance Testing for all Concrete Structures

The Consultant shall provide all necessary personnel and equipment to perform all necessary Quality Acceptance inspection, sampling, and on-site testing of concrete structures on the Project. This task includes performing necessary air and slump tests, inspecting the construction of the formwork, placement and tying of reinforcing steel, checking grades as set by the contractor, making and storing concrete cylinders, logging all samples into the project sample log, tracking test results, taking check samples as needed, addressing failing samples by arranging and assisting in alternate testing of materials through the SCDOT lab, and all other inspection duties as described in the SCDOT Construction Manual and Standard Specifications, latest edition. The Consultant shall provide sufficient staff to monitor all these activities independently and to sample

and test materials in accordance with the sampling frequencies established by the special provisions, specifications, supplemental specifications, and the SCDOT Construction Manual. All Consultant staff assigned to this task must possess a current SCDOT certification in Concrete Inspection.

2. Perform Inspection and Quality Acceptance Testing for all Structural Foundations

The Consultant shall provide all necessary personnel and equipment to perform all necessary Quality Acceptance inspection, sampling, and on-site testing of structural foundations on the Project. This may include driven pile foundations, spread footing foundations, and drilled shaft foundations. This task includes performing necessary inspection of the driven piles, including gathering all necessary information for the completion of the pile recap sheet and spot checks of pile alignment and cut off grades. This task also includes the necessary inspection of drilled shafts, including inspection of the excavated shaft, tying and placement of the rebar cage, sampling and inspection of the slurry, on-site testing and sampling of the concrete, completion of all forms associated with drilled shafts, including the concrete curves, etc., facilitating the CSL testing, logging all samples into the project sample log, tracking test results, taking check samples as needed, addressing failing samples by arranging and assisting in alternate testing of materials through the SCDOT lab, and all other inspection duties as described in the SCDOT Construction Manual and the Standard Specifications, latest edition. The Consultant shall provide sufficient staff to monitor all these activities independently and to sample and test materials in accordance with the sampling frequencies established by the special provisions, specifications, supplemental specifications, and the SCDOT Construction Manual. All Consultant staff assigned to this task must possess a current SCDOT certification in Foundations.

3. Perform Inspection and Quality Acceptance Testing for all Earthwork and Base Activities

The Consultant shall provide all necessary personnel and equipment to perform all necessary Quality Acceptance inspection, sampling, and on-site testing of earthwork and base construction on the Project. This includes, but is not limited to embankment construction, excavations, mucking, borrow excavation, installation of geosynthetics and geogrids, cement and/or lime stabilization, ground modifications, graded aggregate base course construction, placement of drainage systems, and any other related activities. This task includes performing necessary inspection and sampling of borrow excavation and subgrade at frequencies established in the specifications, monitoring, inspection, and testing of all compaction activities on the project, establishing limits of mucking or undercutting, inspection and sampling of geosynthetic material placement, and completion of all forms associated with earthwork and base construction, logging all samples into the project sample log, tracking test results, taking check samples as needed, addressing failing samples by arranging and assisting in alternate testing of materials through the SCDOT lab, and all other inspection duties as described in the SCDOT Construction Manual and the Standard Specifications, latest edition. The Consultant shall monitor Contractor's compliance with the Contractor's approved QC plan for earthwork and shall provide sufficient staff to monitor all these activities independently and conduct Quality Acceptance sampling and testing of materials in accordance with the sampling

frequencies established by the special provisions, specifications, supplemental specifications, and the SCDOT Construction Manual. All Consultant staff assigned to this task must possess a current SCDOT certification in Earthwork.

4. Perform Inspection, Testing and Monitoring of the Quality Assurance Program for all Hot Mix Asphalt Activities

The Consultant shall provide all necessary personnel and equipment to perform QC and QA inspections, sampling, and on-site testing of Hot Mix Asphalt construction on the Project. This includes Contractor's adherence with the SCDOT's Supplemental Technical Specification for Hot Mix Asphalt Quality Assurance, SCDOT Designation: SC-M-400. This task may include the placement of Asphalt Base, Binder, Surface, and Friction Courses, and any other related activities. Testing requirements includes performing rate calculations, checking mix and mat temperatures, monitoring the workmanship of the paving crew, directing any corrective action deemed necessary, taking roadway samples when needed, monitoring the compaction activities of the contractor, monitoring and performing compaction tests of asphalt, reviewing the traffic control operations associated with this activity, logging all samples into the project sample log, tracking test results, taking check samples as needed, addressing failing samples by arranging and assisting in alternate testing of materials through the SCDOT lab, and all other inspection duties as described in the SCDOT Construction Manual and the Technical Specifications, latest edition. The Consultant shall monitor Contractor's compliance with the Contractor's approved QC plan for asphalt and shall provide sufficient staff to monitor all these activities independently and conduct sampling and testing of materials in accordance with the sampling frequencies established by the special provisions, specifications, supplemental specifications, supplemental technical specifications and the SCDOT Construction Manual. All Consultant staff assigned to this task must possess a current SCDOT certification as HMA Roadway Technician.

5. Perform Quality Acceptance Inspection and Testing for all other construction activities associated with the Project and not specifically mentioned above.

The Consultant shall provide all necessary personnel and equipment to perform all necessary Quality Acceptance inspection, monitoring, sampling, and on-site testing of incidental construction activities and items including, but not limited to installation of structural steel or pre-stressed girders, traffic signal installation, pavement markings, guardrail installation, seeding and erosion control measures, traffic control items, Mechanically Stabilized Earth Retaining Wall systems, welds, and clearing and grubbing. This also includes logging all samples into the project sample log, tracking test results, taking check samples as needed, addressing failing samples by arranging and assisting in alternate testing of materials through the SCDOT lab, and all other inspection duties as described in the SCDOT Construction Manual and Standard Specifications, latest edition. The Consultant shall provide sufficient staff to monitor all these activities independently and to sample and test materials in accordance with the sampling frequencies established by the special provisions, specifications, supplemental specifications, and the SCDOT Construction Manual.

6. Maintain field notes and compile Site Manager Daily Work Reports (DWR)

The Consultant shall maintain sufficient field notes and generate daily work reports within SiteManager for all activities assigned to the Consultant on a daily basis. These DWRs and field notes should be of sufficient detail to provide SCDOT the ability to reconstruct any or all activities of the project at a future date, if desired. Field notes should be prepared in conformance with the current editions of the SCDOT Construction Manual, Standard Drawings, and specifications.

7. Perform other associated duties typically assigned to Project Inspectors

The Consultant shall provide sufficient staff and equipment to complete general project duties not described elsewhere. These tasks may include delivering samples, such as rebar and concrete cylinders to the Office of Materials and Research Lab, delivering or picking up revised plan sheets, project documents etc, from SCDOT HQ or District Office, performing routine but limited QA verification surveying, establish construction limits, proposed grades, etc. for property owners, utilities, etc., and compilation of data and records necessary to produce final plans, satisfy the SCDOT Business Plan, facilitate requests from outside parties, or to support decisions made in the field. The Consultant may be asked to meet with contractor's representatives, SCDOT personnel, local interested parties, etc. to provide information or assistance.

8. Furnish all necessary equipment to facilitate Tasks 1-7

The Consultant shall furnish all necessary equipment, including cell phones, laptop computers, vehicles, and specialized testing equipment to fulfill their management, administration, testing, sampling, and inspection responsibilities. This equipment will include, but not limited to, nuclear density gauge and related supplies (proctor mold, moisture tester, etc.), concrete air meter(s), slump cones, infrared thermometer, paint thickness gauge, surveying equipment, and any other equipment as required by SCDOT.

Verification Survey

The Consultant shall provide survey crews and survey equipment to independently confirm layouts and geometry at key locations throughout the project construction. The survey crew will initially ensure that the project control points are correct and will monitor all primary control points periodically throughout the project duration to verify that they have not been disturbed. Verification surveys should be performed at the minimum frequency as listed in the SCDOT Construction Manual, latest edition.

Substructure elements to be checked shall include but are not limited to:

1. Drilled shaft plan locations and cut off elevations.
2. Pile group layout benchmarks.
3. Footing plan locations and elevations.
4. Pier plan locations, elevations, and verticality.
5. Pile cap/Pier cap elevations.

6. Bearing seat elevations.
7. Embedded items.

Superstructure elements to be checked shall include but are not limited to:

1. Girder placement plan and elevation
2. Deck elevations and profiles
3. Approach slab plan and elevation
4. Parapet wall plan and elevation

Furnish a Project Office for SCDOT and Consultant

As part of this project, SCDOT will require the Consultant to furnish a fully functional office for use by SCDOT and Consultant. This office shall be set up to support the daily management of the project. This office will be set up at a secure location within the project limits approved by SCDOT and will have electricity, water, sewer, high-speed internet (T1, cable or DSL) service, and phone service. All installation fees and monthly bills shall be the responsibility of the Consultant. The office shall be delivered in a “like new” condition and must be approved by SCDOT prior to occupancy. The Consultant and SCDOT shall agree upon minimum dimensions for the office prior to set-up. At a minimum, the office shall have two ½ baths, private office for Project Engineer, private office for SCDOT Resident Engineer, private office for SCDOT Assistant Resident Engineer and workspace for two SCDOT technicians and consultant support staff, including a plan table. The office shall be furnished to support the daily functions of the field staff as well as maintain and store all documentation related to the project including but not limited to desks, chairs, conference room with video/teleconference capabilities, file cabinets, computers, fax machine, copier, printers, digital cameras and video cameras, etc. The Consultant would be responsible for disposition of the office upon completion of the Project.

Public Relations and Informational Meetings

The Consultant shall assist SCDOT in any project public relations and informational meetings. The tasks may include:

1. SCDOT Leadership Updates
 - a. Provide one-page updates to local elected officials as well as State legislators, SCDOT leadership, the Governor’s office, and bridge mailing list as requested.
 - b. Periodic update presentations to SCDOT Leadership.
 - c. Host necessary site visits for leadership and elected officials.
 - d. Provide responses to the public and media on project inquiries

NOTICE TO ALL CONSULTING ENGINEERING FIRMS

Revised Scope of Services with extended due date

Solicitation Number S-132-14

The **South Carolina Department of Transportation (SCDOT)** is seeking proposals from firms or individuals (hereinafter referred to as Consultants) capable of providing Construction Engineering and Inspection (CEI) for the Design/Build project of the Interstate 85/385 Interchange Improvements in Greenville County. **This solicitation was previous announced on 13th March 2014, however, the scope of services have been revised.** Work includes, but is not limited to; construction management, construction engineering, inspection, sampling, testing, construction survey verification and construction submittal coordination to determine compliance with the contract requirements and the design-builders plans and specifications. The Consultant will provide services that conform to current state policy and practice of construction engineering, including certification of personnel. For this project, the performance of the services will ensure that quality materials are being incorporated into the project, ensure that quality workmanship is utilized on the project, ensure that the work of the contractor is progressing in accordance with the proposed schedule, and ensure compliance with applicable state laws regarding environmental issues. Also included in the scope of services will be coordination with the design review of contractor's plans for project compliance. Other tasks may be added as deemed necessary by the SCDOT.

Supplemental information associated with this solicitation is located at the following link:

http://www.scdot.org/doing/constructionLetting_Services.aspx.

For questions, please contact the SCDOT Contracting Officer, Wendy Hollingsworth, at (803) 737-0746 or via email at Hollingswg@scdot.org. **Electronic Submissions have been extended one week and are now due no later than 2:00 PM, April 17, 2014.**

Supplemental Information for Interstate 85/385 Interchange Improvements CEI

Solicitation Number S-132-14

A detailed scope of services is located under this solicitation number (S-132-14) @ http://www.scdot.org/doing/constructionLetting_Services.aspx.

In consultant selection, the SCDOT will consider and conduct a comparative ranking of the firms submitting based upon the following:

35%	Experience, qualifications, and technical competence of the CE&I staff proposed for the type of work required
25%	Past performance of the proposing firm/team on similar type projects
15%	Responsiveness to SCDOT, including the availability and readiness of the proposed staff
10%	Team composition, the ability of firm/team to perform all aspects of the services
10%	Familiarity of the firm/team with SCDOT practices and procedures.
5%	DBE utilization plan

The proposal must contain the following: letter of interest, current resume of qualifications, a direct response to each of the selection criteria identified above, and Standard Form 330 (SF 330) as required by the Federal Acquisitions Regulations. All parts of the SF 330 must be completed in its entirety for the prime consultant, any sub-consultants and any sub-contractors. Additionally, all proposals must clearly list the percentage of work for prime consultant and subconsultant(s) that will be performing work as part of the project.

If the top ranking prime consultant has a sub-consultant or subcontractor listed that is a member of the successful design-build team, the prime consultant shall request approval from SCDOT to replace the sub-consultant or subcontractor only under the following conditions: (1) The prime consultant must remain, (2) a maximum of 25% of the original team may be substituted, and (3) key individuals cannot be substituted. Key individuals for this project include: Project Engineer and Materials Management Engineer if the selected prime consultant cannot meet the three (3) criteria above, the next highest ranked prime consultant will be reviewed for compliance. A prime consultant will be ineligible if they are a member of the successful design-build team.

Consultants are prohibited from submitting on multiple proposals as the prime consultant in response to this advertisement. The preceding, with the exception of SF 330, shall be limited to 20 double-spaced pages printed on one side only.

To qualify as a DBE on this project, the firm must be listed as approved for the type of work to be performed in the South Carolina Unified DBE Directory at the time of the bid submittal. The directory can be found at the following link:

http://www.scdot.org/doing/doingPDFs/businessDevelop/UCP_DBEDirectory.pdf.

All responding firms must utilize the SCDOT's new electronic proposal submission process. Information regarding Project Wise can be found at the following link: http://www.scdot.org/doing/constructionLetting_ProjectWise.aspx. Please contact Eric Stuckey at 803-737-1003 or StuckeyEC@scdot.org to set up an account to begin utilizing the electronic submittal process.

The SCDOT selection will be based on information submitted; however, additional information and/or an interview may be required.

All responders must visibly mark as "CONFIDENTIAL" each part of their submission that they consider to contain proprietary information the release of which would constitute an unreasonable invasion of privacy. All unmarked pages will be subject to release in accordance with law. Proposer should be prepared, upon request, to provide justification of why such materials should not be disclosed under the South Carolina Freedom of Information Act, S.C. Code Section 30-4-10, et seq.

Consultants and sub-consultants must have an SCDOT approved indirect cost rate prior to contract execution. Please refer to the following link for additional information: http://www.scdot.org/doing/contractor_Audit.aspx.

Consultants shall comply with Title VI of the Civil Rights Act of 1964. The SCDOT strongly encourages the use of and involvement of Disadvantaged Business Enterprises (DBE) on this project.

In accordance with FAR 36.209, no contract for the construction of a project shall be awarded to the firm that designed the project or its subsidiaries or affiliates, except as approved by SCDOT. In addition, where SCDOT identifies an organizational conflict of interest, as defined in 23 CFR §636.103, the consultant, its subsidiaries or affiliates, as well as applicable sub-consultants may be precluded from award of engineering or construction contracts.

The contract will be cost plus a fixed fee with a contract maximum, or lump sum, or approved unit cost at the discretion of the SCDOT.

All electronic proposal submissions and the letter of interest should be addressed to the Contracting Officer, Room 128, at the South Carolina Department of Transportation, P.O. Box 191, Columbia, South Carolina 29202 or 955 Park Street, Room 128, Columbia, South Carolina 29201, no later than 2:00 PM, April 17, 2014.