

**TDOT
PROPOSED SCOPE OF WORK - CEI**

SCOPE OF SERVICES SUMMARY

This document is to define as clearly as possible the duties of the consultant with regard to administration of the TDOT construction contract. The intent of the document is to give the Consultant the same responsibility and authority as TDOT personnel when administering a state highway construction contract. The administration of the TDOT highway construction contract will be conducted by the consultant in full cooperation with the TDOT District Supervisor and/or their representative(s) assigned to the project. The TDOT District Supervisor will have the final word in regard to challenges of consultant authority by the contractor or decisions made by the consultant regarding the work. The ultimate goal of the Department and the Consultant should be to administer the contract in a highly professional manner, conducive of a cooperative relationship between the Consultant, contractors, and the Department, and to complete the work on budget and on time with a minimum inconvenience and maximum safety to the public.

The responsibilities of the Consultant on this project may include:

1. Project Management Meetings/Updates for transition to Consultant

Management and Inspections: Attend meetings and coordinate with the TDOT office currently overseeing the project in order to transition project management and inspection services. Meet with contractor to address consultant management roles and procedures.

2. Attend Weekly Meetings: Prepare the agenda, attend, and conduct meeting every week with TDOT personnel, contractor, sub-contractors, utility personnel and other agencies affected by the project. Be prepared to discuss recent progress, upcoming events in the schedule, and problems associated with the project. Record significant information revealed and discussed at the meeting and distributes typed minutes to the appropriate agencies and attendees.

3. Project Administration: Provide project administration and coordinate with the assigned TDOT District Supervisor. Prepare for and attend, when requested, any periodic or in-depth inspections that may be conducted on the project related to project work, progress or records. Prepare for, cooperate with, and assist auditors that may be assigned to review project records, payments, reports, etc. Provide ample inspectors and assistance to adequately oversee all work being done on the contract. Monitor Consultant hours worked on the project and justify need for overtime. Prior to starting work, submit to TDOT District Supervisor a listing of personnel assigned to the project for review and approval. In addition, a list of persons with emergency phone numbers should always be supplied to the TDOT District Supervisor and be available at any time in the case of an emergency on the project. The project Administrator should also obtain from the contractor a list of contractor's personnel that will be responsible for any occurrence that may arise on the project for the life of the project.

4. Provide Construction Inspection: Provide effective and qualified supervision of all inspection services being conducted by Consultant and sub-consultants. The Consultant is not charged with the role of safety regulator, but shall notify the contractor immediately when safety issues are identified. Ensure any safety issues identified are corrected by the Prime Contractor. Imminent safety issues shall be corrected by the Prime Contractor before work proceeds in the affected area. All field technicians must be certified in the applicable TDOT certification workshops listed below:

- OSHA 10 Safety Training Construction (All field personnel)
- TDOT:
 - Asphalt Roadway Paving Inspector
 - Class 1 Concrete Technician
 - Asphalt Plant Tech Certification
 - Soils and Aggregate Technician
- TDEC:
 - EPSC Level 1 – For inspectors conducting EPSC inspections
 - EPSC Level 2 – For supervisors of EPSC inspections
- Nuclear Gauge Training
- Work Zone Traffic Control and Flagger
- Bridge Coating Inspector Certification

Certification from another State Highway Department, nationally recognized institution, or other approved agency may be acceptable in lieu of the TDOT certification. Prior approval is required.

5. Conduct Field Surveys: Conduct and supervise surveying services to obtain original, final, as well as progress estimate quantities for payment of all earthwork pay items to the contractor. Establish horizontal and vertical control on the project to be utilized by the contractor for construction layout. Be prepared to justify quantities in case of discrepancies by contractors or the Department. Upon request, check construction layout when deemed necessary by the TDOT District Supervisor.

6. Change Order, Force Account, and VECP: Notify the TDOT District Supervisor of the necessity of any change orders. Negotiate prices for additional pay items with the contractor while adhering to the “Average Unit Price” listing when possible. Coordinate acceptance of prices with the TDOT District Supervisor. Prepare change orders on the supplied standard form and submit to the TDOT District Supervisor for final review and submittal for processing. The Change Order will also be required to be entered and tracked through SiteManager for final approval by TDOT Finance. Any work that cannot be negotiated with the prime contractor will be pursued by force account as defined in the Standard Specifications and recorded on forms supplied by the Department. Submit Value Engineering Change Proposals to the TDOT District Supervisor for analysis and distribution to the appropriate division(s).

7. Shop Drawings: See specification for road and bridge construction.

8. Quality Assurance, Testing for Acceptance, and Training: *(The intent is for the Consultant to provide all field testing normally provided by the Department with employees certified to perform the tests. Copies of all certifications should be filed in the project records for review by the Department at any time. Any temporary waivers of certification or licensing will be reviewed by the Department for the final decision.)* Provide certification training to Consultant personnel for all necessary field testing and inspection. Monitor the testing provided by the contractor in the field as defined in the Contract, Plans or Specifications. Document Consultant testing on standard forms provided by the Department and distribute as required. Monitor documentation of testing by the contractor. Field testing by the Consultant includes, but is not limited to, all ACI tests for concrete including concrete plant for acceptance by the Department, nuclear density testing of earthwork, base stone, asphalt, structural backfill, and pipe backfill as defined in the Standard Specifications and the Departments sampling and testing schedule. *(Note: All tests normally to be performed by TDOT project personnel will be performed by the consultant.)* Also, included, as the responsibility of the consultant is miscellaneous checking of application rates and dimensions and bearings to assure conformance to Plans and Specifications, the Consultant will submit the initial information on forms supplied by the Department and receive the final disposition of the material after review. Certifications of material submitted by the contractor will be reviewed by the Consultant for conformity to the Specifications. The certification documents submitted to the Department will also be reviewed for completeness and conformance to the Department's standard form of submission. A Final Materials and Tests Certification will be submitted to the Materials and Tests Manager with the Final Records.

9. Progress Payments: The Consultant will document and assemble accurate quantities for Monthly Progress Payments to the prime Contractor from actual project field records, as directed by the special provisions in the contract, from change orders or force accounts. The quantities for payment will be referenced to field records prior to submission for payment. Test reports will be on file prior to payment. The TDOT District Supervisor must approve any waiver of testing documents prior to payment. Pay quantities will be submitted to the TDOT District Supervisor for review and payment. Payments for stockpiled material may be made as defined in the Standard Specifications and approved by the District Supervisor. Estimate "cut-off" will be as follows:

Region 1: the 20th of each month (15th day for June, November, and December)

Region 2 & 3: the last day of each month, except for the month of June with the submission of the quantities to the TDOT District Supervisor for review and payment by the sixth of each month.

Region 4: the 15th of each month.

Copies of approved subcontracts as well as copies of actual DBE subcontractor's contracts should be on file prior to the first Progress Payment.

SiteManager will be utilized for all project records/documentation and estimate payments.

- 10. Revisions to the Contract Plans:** Any revisions to the contract plans or cross sections will be submitted to the TDOT District Supervisor for processing.
- 11. Distribution of Correspondence:** Submit to the TDOT District Supervisor a copy of all correspondence between the Consultant, contractor, subcontractor, or others concerning matters related to the project. Maintain an office file copy for submission with the project Final Records.
- 12. Inspection of Work:** Provide inspection services for conformance to Plans and Specifications for all roadway, structures, and specialty items that are being incorporated into the project. Observe, measure, and record all quantities for payment. Record field measurements in project records for review by the Department or auditors. The records will be recorded for review by the Department or auditors. The records will be recorded in SiteManager. Check traffic control daily, and additionally as required or requested. Notify the contractor of deficiencies or problems immediately. Document weekly (or as often as necessary) project traffic control on forms supplied by the Department and distribute as required. Inspect daily erosion control items for conformance to the plans as well as effectiveness in the field. Notify the contractor of deficiencies.

Assure that the QA/QC consultant is performing the duties described in the Contract and review documents required quarterly by the QA/QC consultant prior to submitting to the TDOT District Supervisor for forwarding. Verify the days the QA/QC consultant is on the project. Coordinate the recommendations of the QA/QC consultant with the prime contractor for conformance to TDEC policies. Prepare to justify any and all pay quantities in the case of questions by the contractor or Department. Prepare an accurate daily diary, signed by the inspector in SiteManager, consisting of:

- A record of the contractors on the project
- Their personnel (number and classification)
- Equipment (number and type or size)
- Location and work performed by each contractor or subcontractor
- Orders given the contractor
- Events of note on the project
- Accidents on the project and any details surrounding the accident such as police report numbers, fatalities, causes, time, etc. Obtain a copy of the police report for the project records whenever possible.
- Weather, amount of precipitation, temperature at morning, noon, and evening, cloudy, clear, etc.
- Days charged
- Equipment arriving or leaving the project, idle equipment
- Any other details that may be important later in the project life.

- 13. Contractor's Payrolls, Employee Interviews and Contract Compliance:** Receive and check the contractor's payrolls for conformance to state wage rates as defined in the contract. Late payrolls (two weeks late) are justification to withhold progress payment. Notify the prime contractor of late payrolls and request immediate submission. Notify the TDOT District Supervisor prior to withholding payments. Conduct employee interviews on the forms submitted by the department and compare to the submitted payrolls for accuracy. Notify the prime contractor of inaccuracies and resolve discrepancies. Adhere to Special Provisions concerning reports to be submitted to the Contract Compliance Office.
- 14. Reports:** There are numerous reports, documents, etc. that must be generated in the process of contract administration. A copy will be provided by the Department prior to construction, or as needed. Any questions regarding the requirements can be forwarded to the TDOT District Supervisor for clarification at any time.
- 15. Final Records:** Submit a compilation of project records in the Department's standard format to the Final Records Department after project completion. Make corrections when/if notified and resubmit the records and a final estimate for the project at the appropriate time. Submit all final forms (FHWA-47, CC3, etc.) with the final records. Coordinate consultant hours after the project completion with the TDOT District Supervisor for approval.
- 16. Project Claims:** Prepare documentation and assist in the defense of the Department, when requested, in preparation for Claims or possible Claims resulting in the execution of the contract.
- 17. Utility Relocations:** Utility relocations are subject to be a part of this contract. Relocations that are reimbursable will be inspected for quantities that will be reviewed and verified comparing utility company records prior to payment by the Department.
- 18. Utility Coordination:**
- **Coordinate with affected utilities to ensure timely utility relocation:**
 - a. Review utility relocation schedules and drawings.
 - b. Monitor utility relocation progress versus the schedule.
 - c. Meet with utility representatives to discuss the work progress and schedule changes.
 - d. Communicate frequently with the contractor and TDOT to provide updates on the progress and any problems. The vast majority of communications will be written in the form of emails and meeting minutes.
 - **Conduct weekly utility meetings as needed on-site or off-site:**
 - a. Prepare the agenda, attend, and conduct utility meetings weekly or biweekly as requested as well as record significant information and

distribute written minutes to the attendees. Meetings should include TDOT personnel, contractor, utility personnel and representatives of other agencies affected by the project. Discussion should include recent progress, upcoming events in the schedule, and project-related problems or roadblocks.

- **Prepare and distribute any necessary reports:**
 - a. Provide frequent utility time and money savings reports. Prepare and distribute meeting minutes which document discussions about proposed changes and their potential effects on time and money savings.
- **Verify that utilities are located in accordance with the plans:**
 - a. Compare utility relocation work versus the plans. Confirm the facilities are located in accordance with the plans and do not conflict with other work show on the plans.
- **Coordinate with utilities and contractors to resolve conflicts:**
 - a. Meet with the utility, contractor and TDOT representatives to discuss any unexpected conflicts. Propose cost effective solutions to resolve conflicts that will minimize the schedule impact and cost to the project.
- **Assist the utilities, design firms, and TDOT with issues involving supplemental agreements:**
 - a. Help streamline the process to keep construction moving along smoothly.
 - b. Follow up with TDOT, contractors, and utilities on paper work and drawing submittals where changes are required.
- **Provide professional consulting services**
 - a. The consultant will provide professional consulting services including research and administrative services related to utilities work on roadway construction projects as requested by TDOT.

19. Erosion Control: This scope requires the provision of a qualified Erosion Prevention and Sediment Control (EPSC) Inspector with the capacity, upon request, to perform supplementary environmental engineering services associated with construction projects. The procedures contained within this scope follow the current National Pollution Discharge Elimination System (NPDES) Construction General Permit (CGP) and the TDOT Statewide Storm Water Management Plan (SSWMP) requirements.

The CONSULTANT shall be responsible for inspecting and reporting all EPSC activities and features within the project limits and affected areas during each site visit. All EPSC activities and features that occur between site visits shall be documented at the next site visit through inspection and/or information from the STATE project supervisor. The activities outlined below will be performed throughout the life of the specified roadway contract. The CONSULTANT shall report directly to the STATE project supervisor. All communications to the contractor will be through the STATE project supervisor, unless

otherwise specified by the STATE project supervisor. See - Delegation of Authority. If the STATE project supervisor specifies a designee, please provide the delegation of authority document, to the Contract Coordinator via email and posted on the STATE ftp site. See - Signature Form.

- Submit a written summary of qualifications for each inspector associated with the specific project assigned. Each inspector will be stated at the submittal of the estimate for services. No substitutions or additions to the original specified inspectors are allowed without written approval from the Contract Coordinator in the Headquarters Construction Division (HQ CD). The request to substitute and/or add inspectors must be made in writing to the Contract Coordinator, including no more than a one page summary of qualifications. Written approval must be received from the Contract Coordinator before these individuals are allowed to participate in the inspection services. If the inspector holds a Certified Professional in Erosion & Sediment Control (CPESC) certification, that certification must be specified.
- Copies of the project water quality permits, storm water coverage, the Storm Water Pollution Prevention Plan (SWPPP), and a half-size set of construction plans shall be made available to the CONSULTANT. The CONSULTANT shall obtain a copy of the contractor's permits and NOC for any off-site waste and/or borrow area for the STATE project supervisor.
- Participate in project meetings relative to EPSC, including pre-construction meeting, if possible, on-site meetings with the STATE and contractor, progress meetings, additional meetings required by the regulatory agencies and others as required. The STATE project supervisor may request participation by the CONSULTANT, in biweekly, or similar, meetings conducted by the STATE project supervisor to discuss progress, problems, (general, as well as specific), erosion control issues and their resolution.
- Make site visits to the construction site to:
 - a. Conduct a baseline evaluation, notes and pictures, at each outfall for
 - Documentation of the current conditions prior to road construction activities;
 - Inspection of changes related to siltation, in order to notify the STATE project supervisor of conditions that might negatively impact or have potential for erosion problems (i.e. stability of the bank, sediment deposition, and source impacts) to waters of the State;
 - b. Review and verify the proper installation, maintenance and effectiveness of EPSC devices/measures per project plans and the SWPPP, or as directed by the STATE project supervisor;
 - c. Review the completed installation of EPSC devices;
 - d. Review the effectiveness of EPSC devices;

- e. Recommend needed repairs, maintenance and additions to EPSC system;
 - f. Provide review of the contractor's repairs, maintenance and additions to the EPSC system. It shall be the responsibility of the STATE project supervisor to provide review of this work if reviews are required prior to the CONSULTANT'S routine inspection, except in emergency situations as deemed necessary by the STATE project supervisor. However, this review shall be documented by the CONSULTANT at the next routine site visit;
 - g. Review areas that have been seeded, mulched or otherwise stabilized for effectiveness and make recommendations for any deficient areas;
 - h. Review stabilization efforts which are to be completed as required by the current NPDES CGP and/or TDOT SSWMP after final grading or earth moving activities have ceased;
 - i. Review removal of vegetative ground cover occurring as required by the current NPDES CGP and/or TDOT SSWMP prior to grading or earth moving unless said area is seeded and/or mulched;
 - j. Review requirement of construction phasing for acreage of disturbance soil as required by the current NPDES CGP, the project SWPPP and/or TDOT SSWMP. If there is a discrepancy, please contact the STATE project supervisor for clarification.
 - k. Perform oversight of contractor's off-site waste and borrow areas for the project, as specified in the TDOT SSWMP;
 - l. Review compliance with the current NPDES Permit, TDOT SSWMP and any STATE (MS4) Municipal Separate Storm Water System NPDES permit requirements.
 - m. The frequency of the site visits shall be as follows:
 - Baseline evaluation prior to start of construction activities at outfalls;
 - As required by the current NPDES CGP and TDOT SSWMP;
 - As required for Quality Assurance (QA) Team compliance visits. The CONSULTANT will work in conjunction with or act as a part of the QA Team.
- Review and make recommendations on the EPSC plans, possibly prepared by others, so that:
 - a. All EPSC measures are modified to be effective at all times throughout the course of the project;
 - b. The EPSC plan shows all boundaries of right-of-way and/or easements, as well as, the cut and fill slopes, and the watercourse and wetland boundaries contained within the ecology information provided by the TDOT Environmental Division (ED);

- c. The timing of implementation regarding EPSC measures coincides with the construction of the road project;
 - d. Initial EPSC measures are in place before clearing, grubbing, excavation, grading, cutting or filling occurs;
 - e. EPSC measures for any relocation of utilities proposed are in place and provide protection for the project before clearing activities occurs if these activities are included as part of the roadway contract;
 - f. Phasing is appropriate for the EPSC measures and devices and EPSC plans and notes address phasing issues required to construct the project;
 - g. Stage construction of the EPSC measures is shown on projects and the most effective staging methods are used;
 - h. All conditions in Section 4 above are met;
 - i. If anything changes on the EPSC plans as shown in the field SWPPP it is documented in the field SWPPP. All revisions to the field SWPPP shall be made by the CONSULTANT at each field visit;
 - j. Documentation of all maintenance and repair items necessary on EPSC measures and the corrective action taken for it are shown in the SWPPP. All revisions to the field SWPPP shall be made by the CONSULTANT at each field visit.
- Provide comments, suggestions, and correspondence to the STATE project supervisor at each site visit. See – Circular Letter 209.01-02. The CONSULTANT shall follow-up site visit communications with the STATE project supervisor with a standard written summary within 48 hours of the site visit inspection, including a photo journal of areas. The CONSULTANT shall request from the STATE project supervisor a listing all other parties the CONSULTANT shall forward all appropriate information. In some cases, the STATE project supervisor will request that the CONSULTANT clarify any comments directly to the contractor. If this is the case, the CONSULTANT shall provide this service in the presence of the STATE project supervisor.
 - Maintain records, including documenting photographs (photo journal). See - Circular Letter 209.01-02.
 - Provide professional services related to the environmental engineering of roadway construction projects as requested by the STATE.
 - Prepare and submit reports to the STATE project supervisor, required by the NPDES CGP, the SWPPP, TDOT SSWMP, including:
 - a. Reports on deficiencies in the EPSC system and corrective actions undertaken. Information must be specific and recommendations for improvement must be made in the report. The report shall address specifically any items that are reoccurring from past reports;
 - b. TDOT Inspection reports See - Circular Letter 209.01-02;

- c. Summary of all site visits, including photos (See - Circular Letter 209.01-02);
- d. Quarterly reports;
- e. Other documentation required by SWPPP.

All documentation is to be placed on the STATE ftp site for viewing by others. A folder on this site will be set up for each of the CONSULTANT'S use. This folder must contain the name of the project including contract number for clarity. The file information and password, if needed, shall be supplied to the STATE project supervisor by email. All documentation shall be placed in a chronological series within these folders. Upon request, these reports shall be provided to the STATE construction office in paper form or via email.

Verbal reports shall be presented to the STATE project supervisor at each site visit and written reports within 48 hours, so that the contractor can install the necessary recommendations before the next anticipated rainfall event. An email notification shall be sent to the construction office within 48 hours after the inspection for their use.

- Any time the CONSULTANT becomes aware that sedimentation is occurring or has occurred in streams impacted by the project, the CONSULTANT shall evaluate the EPSC measures employed, make recommendations to the STATE project supervisor to repair or replace defective EPSC measures, and recommendations to install, as applicable, additional or other EPSC measures with the goal of eliminating future sedimentation. If a consensus is not reached between the STATE project supervisor, the contractor and the CONSULTANT on appropriate recommendations within 24 hours, the CONSULTANT shall notify the Regional Environmental Coordinator for elevation procedure. If authority has been delegated on this project, the STATE project supervisor shall be notified anytime a sediment release occurs.
- Acquire all appropriate signatures on EPSC inspection forms for these site visits when an inspection is completed. See - Signature Form. Appropriate signatures are required on all forms.
- The STATE and/or the Contractor shall install rain gauges at all sites where clearing, grubbing, excavation, grading, cutting or filling is being actively performed, or exposed soil has not yet been permanently stabilized. On specific projects, rain gauges may need to be installed at every mile within the project limits per the Environmental Permits Office. The STATE project supervisor may request the CONSULTANT check each gauge after every rainfall event occurring on these sites and maintain detailed records of rainfall events including dates, amounts of rainfall, and the approximate duration or starting and ending times. If the records are maintained by the STATE and/or the contractor, the CONSULTANT shall be responsible for reviewing these documents at each site visit.
- Prepare and submit any proposals for revision to the EPSC plan to the STATE project supervisor for review and approval in time to allow review prior to

implementation, except for recommendations for emergency repairs which will be submitted immediately.

- Maintain, within the SWPPP, a running index of revisions, dates, what occurred, and the page numbers of the EPSC sheets. The CONSULTANT shall make copies of this index for the STATE project supervisor each time a change is made. All implemented revisions shall be marked by the CONSULTANT in red within the field SWPPP, initialed, and dated for revision as soon as the STATE project supervisor, the contractor, and the CONSULTANT agree on changes as they are implemented in the field.
- If any revisions will interfere with any of the other water quality permits, the CONSULTANT shall contact the Manager of the Natural Resources Office within the ED for guidance before implementing.
- Be available, on call, to the STATE project supervisor in the event of an EPSC emergency.
- Keep a chronological log in sheet anytime a site visit, inspection, and/or attendance at meetings occurs. See – Log Sheet. This log in sheet must include the name of the individuals representing the STATE on behalf of the CONSULTANT, the date and time of inspection, and be signed by the STATE project supervisor. This log in sheet must be posted quarterly to the ftp site for inclusion in the STATE files.
- Comply with the evaluation process established by the STATE.
- Comply with any revisions to this scope proposed by the STATE.
- Comply with the cost proposal process established by the STATE.

The responsibilities of the Tennessee Department of Transportation – TDOT on this project are:

1. **TDOT District Supervisor:** Provide a District Supervisor to oversee and coordinate with CEI Supervisor.
2. **Public Information/Relations:** Manage public information/relations for project development.
3. **Materials Testing Laboratory:** Provide designated materials testing laboratory for all applicable testing requirements.
4. **Offsite Fabrication Inspection:** Provide inspection services for all materials manufactured off site (i.e. bridge beams, concrete pipe, etc.).
5. **Geotechnical Services:** Provide all Geotechnical services needed to complete project.

Delegation of Authority

I _____ (print name of TDOT project supervisor), delegate the reporting responsibility of coordination with the EPSC inspection services consultant to _____ (print name of TDOT delegate) for contract # _____.

I am providing delegation of authority as stated above and confirm that the TDOT delegate stated above has direct knowledge of the subject project and the ability to discuss the reports and recommendations from the EPSC inspection services consultant on the subject project directly to the contractor.

_____ (signature of TDOT Project Supervisor)

_____ (date)

